Nottingham Trent University

SOCIO-CULTURAL VALUATION OF URBAN PARKS: LESSONS FROM THE PHILIPPINES

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ORIGINAL PAPER

Examining ecosystem services and disservices through deliberative socio-cultural valuation

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Abstract

The deliberative socio-cultural valuation of ecosystem services (ES) and disservices (EDS) is an understudied area of ES and EDS research. Participatory methods have been applied to ES and EDS valuation, but little is known on how these approaches could reveal and form shared values and impact decision-making. This paper presents the deliberative socio-cultural valuation of the Jose Rizal Plaza in Calamba City, The Philippines. The study aimed to assess how stakeholders value the ES and EDS of the park and examine how these values change in different situations. Online focus groups were carried out, and in each, the participants were asked to distribute importance and concern points to the various park ES and EDS, respectively. The valuation exercise was performed six times, changing the source and constituency of the valuation, and introducing discussions. Results confirm significant differences in the values assigned to several ES and EDS across the valuation exercises. Varying the sources and constituencies proved useful in revealing the participants' shared assigned values. The participants share a high appreciation for enjoyment and spending free time, sports and physical fitness, relaxation and mental recreation, social relationships, and local identity and cultural heritage. For EDS, they share a significant concern only for the risk of anti-social behaviour. This type of valuation could be further explored using other parks and cities to test if it will have consistent results. For the Jose Rizal Plaza, spaces for sports should be maintained and security should be improved.

Keywords Deliberative socio-cultural valuation · Ecosystem services and disservices · Urban parks

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Article

Socio-Cultural Valuation of Urban Parks: The Case of Jose Rizal Plaza in Calamba City, The Philippines

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Abstract: The socio-cultural value of urban parks has rarely been studied, and this could be why they are undervalued and not given significant attention in city planning. This study presents the socio-cultural valuation (SCV) of the ecosystem services (ES) and disservices (EDS) of the Jose Rizal Plaza in Calamba City, The Philippines. Stakeholders were interviewed to assemble a list of the park's ES and EDS. An online survey was then conducted to examine how stakeholders assign values to the park ES and EDS. Finally, the configuration of conditions leading to the assigned values was analysed. The results suggest that respondents value the park's ES more than they worry about its EDS. They value cultural ES the highest, while they are most concerned with psychological EDS. The Fuzzy-set Qualitative Comparative Analysis (fsQCA) revealed that visiting the park is necessary for a high valuation to ES. For EDS, these are: not knowing the previous land use in the area and visiting the park. Overall, the paper concludes that SCV is an effective way to assess the value of urban parks, and fsQCA could aid in determining the combination of conditions leading to these values.

Keywords: socio-cultural valuation; ecosystem services and disservices; urban parks

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1. Introduction

Urban parks are semi-natural or human-made ecosystems comprised of a network of public open and green spaces in cities. They are known to provide a range of environmental, social, and economic benefits [1,2]. One way in which these benefits have been conceptualised is the concept of Ecosystem Services (ES) [3,4]. The ES concept became widely recognised as a tool for socio-ecological assessment of ecosystems after the Millennium Ecosystem Assessment (MEA) in 2005. The MEA suggested four categories of ES—provisioning, regulating, supporting, and cultural. Provisioning ES are direct ecosystem products such as food, timber, and water while regulating ES are the benefits that we get from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification, and pollination. Supporting (or Habitat) ES highlight the importance of ecosystems to provide habitat and to maintain genetic diversity. Cultural ES are the non-material benefits that people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences [5,6]. While considered a breakthrough in the study of the human–nature relationship, one of the critiques of the ES concept is that it gives the impression that nature only produces benefits [7]. It does not seem to acknowledge the presence of ecosystem disservices (EDS) or the ecosystem functions that are perceived to have a negative impact on human well-

Abstract

This research aimed to apply socio-cultural valuation to assess how stakeholders assign values to the ecosystem services (ES) and disservices (EDS) of Jose Rizal Plaza, an urban park in Calamba City, the Philippines. The study adopted a three-part methodology, incorporating key informant interviews, online valuation survey, and focus groups. The research first identified the stakeholders and investigated the value that they assign to the park's ES and EDS. This revealed a high valuation of the park's cultural ES and psychological EDS. The study then examined the factors that influence these values. Direct experience with the park emerged as a significant influencer, underlining the importance of park accessibility. The final part of the study investigated how values change in different contexts. The results revealed a shared appreciation for elements like enjoyment, sports, relaxation, and local culture. Anti-social behaviour emerged as a shared concern. These insights offer practical applications for Calamba City, suggesting tailored programs that focus on cultural events, psychological benefits, and community engagement. The city can also address common concerns like anti-social behaviour through targeted initiatives. The research bridges gaps in the existing literature by offering a nuanced valuation methodology and widening the scope to poorly explored dimensions like EDS. It emphasises the importance of stakeholder participation and responds to calls for methodological uniformity in socio-cultural valuation studies. The research was conducted online due to the pandemic, which posed challenges such as limited face-to-face interactions. Despite this, the study provides robust data that could guide future park improvements and methodological adaptations. The study not only offers actionable insights for urban park management in Calamba City but also contributes significantly to broader socio-cultural valuation literature. It advocates for a pluralistic and participatory approach, aligning with the trend towards sustainable urban development. By acting on these findings, Calamba City has the opportunity to lead in the adoption of a comprehensive and stakeholder-driven approach to urban park valuation. By following the outlined chronology and selecting appropriate valuation techniques, other cities can effectively gauge the socio-cultural significance of their green spaces and make well-informed decisions.

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CHAPTER 1: INTRODUCTION

The world is under pressure because of the impacts of climate change. Global temperatures are rising, resulting in more frequent extreme weather events and threats to biodiversity and food security. These hazards also lead to health risks from air and water pollution, diseases, hunger and malnutrition, forced displacement, and mental health pressures (IPCC, 2022). While these impacts are felt everywhere, they are intensified in cities where there is overcrowding and limited space. As the United Nations (2018) predicts that the percentage of people living in urban areas will increase from 50% to around 70% in 2050, there is a continuous effort to find adaptive mechanisms to lessen the impacts of climate change in cities.

Nature has always provided a cure – from plants that could remedy illnesses to solutions to soil infertility and even flood risks. There is also a global movement that advocates 'nature prescriptions', where physicians recommend patients to spend time in natural environments to alleviate chronic illnesses and mental stress (Kondo *et al.*, 2020). The current Coronavirus (COVID19) pandemic highlighted the need for and access to green spaces after worldwide lockdown measures took a toll on people's physical and mental health (Wortzel *et al.*, 2021; Addas and Maghrabi, 2022). Consequently, calls have amplified for a re-evaluation of urban green spaces, focusing on enhancing their design, accessibility, and distribution to foster better health outcomes (Davies and Sanesi, 2022; Marconi *et al.*, 2022). Acknowledging the benefits that people get from nature, city planners bring nature to the city through urban parks and other green spaces.

Urban parks are human-made ecosystems comprising a combination of green spaces and amenities for public use (Swanwick *et al.*, 2003). These public resources have been proven to provide many ecosystem services (ES). Urban parks provide a place for sports and recreation, socialisation, and getting in touch with nature, which all contribute to better health and well-being (Ulrich *et al.*, 1991; Tyrväinen *et al.*, 2014). Green spaces in these parks cool down the urban temperature and improve air quality (Bowler *et al.*, 2010; Xie *et al.*, 2019). They also provide habitats for organisms and increase the biodiversity in the area (Lepczyk *et al.*, 2017; Cameron *et al.*, 2020). The

presence of urban parks is also linked to an increase in the value of commercial and residential properties around them (Engström & Gren, 2017).

Despite these merits, these urban green spaces are becoming scarce and fragmented because of the twin challenges of urbanisation and densification. This is particularly true in Asia and Australia and, to a lesser degree, in North America and Europe (Haaland and van den Bosch, 2015). A gap exists in the comprehensive articulation of the many benefits these spaces contribute. Frequently, the vision of designers, who predominantly helm the development process, misaligns with the users' expectations and needs (Plieninger *et al.*, 2013). Knowing how humans interact with urban parks can provide insights into how they should be designed and managed. However, the way to gather this knowledge is still poorly understood and implemented.

Addressing this gap necessitates deploying an effective valuation process. At present, economic and ecological valuation dominate the literature when assessing the value of urban parks. Ecological valuation studies consider how urban parks enhance a city's biodiversity and provide indirect benefits through their ecosystem functions (Liu et al., 2021; Xie et al., 2019). In contrast, economic valuation provides information on how the benefits from the parks can translate into monetary gains (Hodgson *et al.*, 2012). Socio-cultural valuation (SCV), an emerging type of valuation, focuses on figuring out how people assign values to ES and EDS. It considers how ES values are culturally constructed (Ruiz-Frau *et al.*, 2018) and measures the assigned value expressed in non-monetary terms while incorporating a person's perceptions, held values, and preferences (Iniesta-Arandia et al., 2014).

Notwithstanding its potential, SCV remains scarcely utilised in urban parks' evaluation, resulting in a truncated representation of their full value to individuals and communities (Engström & Gren, 2017). Numerous park valuation studies have used economic and ecological techniques (see Chen & Qi, 2018; Cornelis & Hermy, 2004; Prather et al., 2018; Sutton & Anderson, 2016), but these under-represent the intangible ES and often disregard the EDS of parks. Moreover, these valuation strategies do not evaluate the value of urban parks to their users. This is also the case in the Philippines, where, of very few studies on urban parks (see Gonzales &

Magnaye, 2016; Gonzales & Magnaye, 2017; Membrebe et al., 2017; Abuan & Galingan, 2017), no one had studied EDS, and only one had tackled the social valuation of ES (Lagbas, 2019).

Given the lack of emphasis on SCV in assessing the importance of urban parks, this study attempts to bridge this gap by undertaking a comprehensive SCV of urban parks in the Philippines. It hopes that applying a socio-cultural lens to evaluate urban parks will provide a holistic understanding of their significance, shedding light on the intangible benefits and disbenefits these spaces provide. The methodology that was used encompassed both quantitative and qualitative data collection, focusing on individual and collective insights to gauge the diverse ways people assign value to these urban green spaces.

The study does not only contribute to the literature on the valuation of urban parks but also underlines the importance of user-centred and culturally relevant approaches in urban planning. It underscores the significance of viewing parks not just as infrastructural entities but as ecosystems that affect social interactions, cultural expressions, and overall human well-being. The study hopes to prompt a shift in policy and planning discourses towards more inclusive and sustainable urban development. The findings from this research could offer a pioneering framework for other cities and regions to consider, thereby making a global contribution to the field of urban studies and environmental management.

1.1 Aim and objectives

This study aims to apply SCV in assessing how stakeholders value the ES and EDS that they associate with urban parks through a case study in the Philippines. This research will help reveal the value of urban parks to people and help cities evaluate the need and demand for public open and green spaces. This research also addresses several gaps in previous SCV studies, thereby contributing to the development of methods for the emerging field of socio-cultural valuation of ES and EDS.

The objectives of the study are to:

1. identify stakeholders of the selected park;
2. identify and compare the park ES and EDS perceived by stakeholder groups;
3. examine the non-monetary values that stakeholders assign to the ES and EDS and attempt to relate these to their willingness to pay to keep the park;
4. identify the factors that influence how stakeholders value ES and EDS; and
5. investigate how the assigned values to the ES and EDS change.

1.2 Thesis structure

Figure 1.1 illustrates the thesis structure. The results and discussions for the study objectives are presented in three chapters: Chapter 4 (for objectives 1 and 2), Chapter 5 (for objectives 3 and 4), and Chapter 6 (for objective 5).

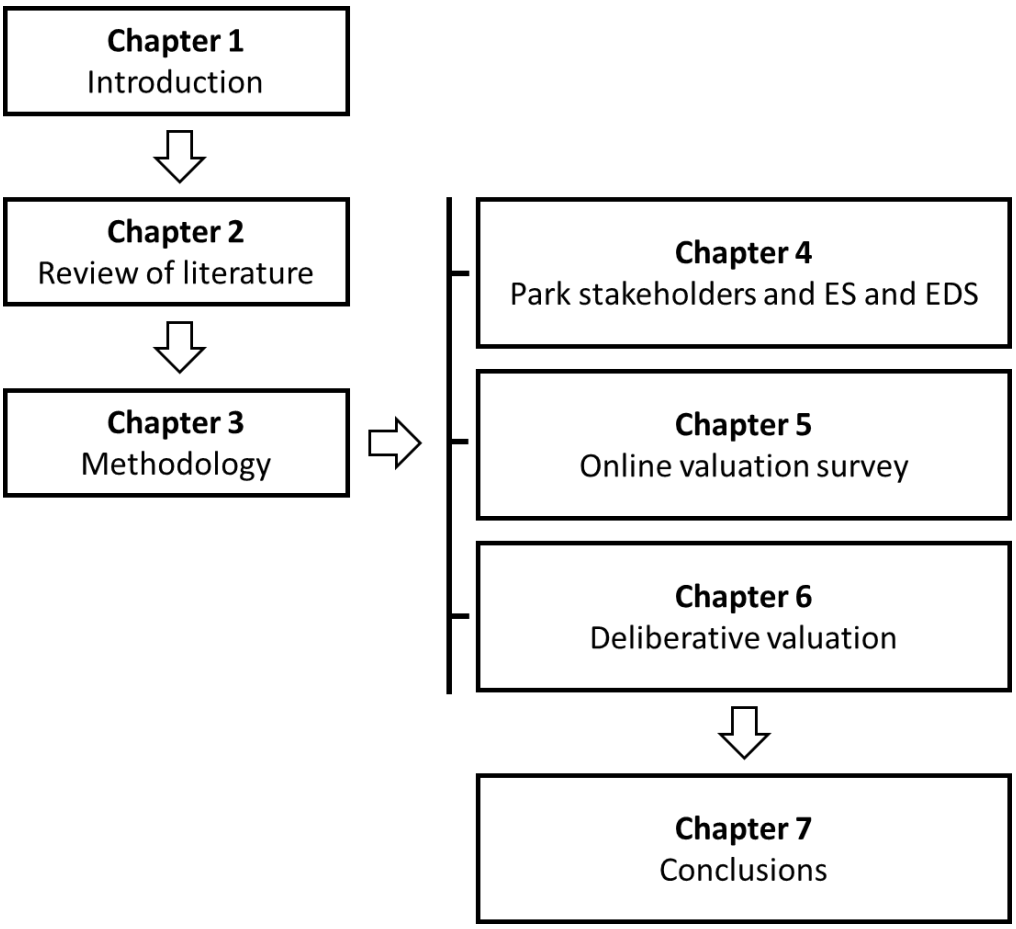


Figure 1.1 Thesis structure

CHAPTER 2: REVIEW OF LITERATURE

This chapter defines the concepts used in the study and gives an overview of the published research related to the socio-cultural valuation of urban parks.

2.1 Ecosystem services (ES) and disservices (EDS)

Ecosystem services (ES) are the tangible or intangible and direct or indirect benefits that people get from ecosystems (MEA, 2005; TEEB, 2010). The ES concept became widely recognised as a tool for the socio-ecological assessment of ecosystems after the Millennium Ecosystem Assessment (MEA) in 2005. The MEA suggested four categories of ES - provisioning, regulating, supporting, and cultural (Hirons et al., 2016; Small et al., 2017). Provisioning ES are the direct ecosystem products like food, timber, and water while regulating ES are the benefits that we get from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification, and pollination. Supporting (or Habitat) ES highlight the importance of ecosystems to provide habitat and to maintain genetic diversity. Cultural ES are the non-material benefits that people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences. These ES also include economic benefits that people get from the non-consumptive use of ecosystems, for example as a result of their aesthetic qualities and recreational desirability (MEA, 2005; Nesbitt et al., 2017). Cultural ES are intangible; and this makes them difficult to define and measure (Nesbitt et al., 2017) and more so quantify how their values may change through time (Thiagarajah et al., 2015). There are two other international ES typologies created by the The Economics of Ecosystems and Biodiversity (TEEB) and The Common International Classification of Ecosystem Services (CICES). These classifications do not include supporting services as they are considered to be a part of ecosystem processes and not ES themselves (MEA, 2005; Haines-Young and Potschin, 2012).

The concept of ES has faced criticism for predominantly highlighting nature's positive contributions, thus inadvertently neglecting the idea of ecosystem disservices (EDS) – these are aspects of the ecosystem that adversely affect human well-being (Lyytimäki and Sipilä, 2009; Schröter *et al.*, 2014). These disservices are multi-faceted, with

potential negative effects spanning ecological, economic, health, and psychological domains (Liu et al., 2018; Von Döhren & Haase, 2015).

Ecological disservices can involve elements like bio-emissions from vegetation impacting air quality or invasive species disrupting local biodiversity. Economic disservices can reflect in the substantial maintenance costs of green spaces or the potential devaluation of nearby property due to certain natural features. Health disservices may stem from allergenic plants or disease-spreading fauna present in parks and green spaces. Lastly, psychological disservices encompass natural aspects that trigger discomfort, anxiety, or fear among people, such as poorly lit, densely wooded areas or the presence of certain animals (Liu et al., 2018; Von Döhren & Haase, 2015).

2.2 Valuation of ES and EDS

ES and EDS valuation is the process of estimating the monetary or non-monetary value of the ES and EDS. According to Costanza (2014), valuation is undertaken for one or a combination of the following reasons: raising awareness and interest for a specific ecosystem, accounting for national income and well-being contribution of ecosystems, detailed policy analyses (i.e., to decide on management options), urban and regional land use planning, and payment for ecosystem services.

One of the earliest milestones of ES valuation is the work by Costanza et al. (1997) in their article "The value of the world's ecosystem services and natural capital", which estimated the economic value of 17 ecosystem services for 16 biomes. Based on their analyses, the value of these biomes is in the range of 16 - 54 trillion USD per year. The assessment was done to encourage policymakers to consider the value of these resources in policy and decision-making (Costanza *et al.*, 1997). Two other milestones in the ES valuation are the Millennium Ecosystem Assessment (MEA) in 2005 and the Economics of Ecosystems and Biodiversity (TEEB) report in 2010, in which the Total Economic Value (TEV) framework was highlighted. The MEA was conducted by the United Nations and involved over 1300 global experts, which aimed to assess the impact of ecosystem changes on human well-being. On the other hand, TEEB, a

worldwide initiative hosted by the United Nations Environment Programme (UNEP), was launched to underscore the global economic benefits of biodiversity and to bring attention to the increasing costs of biodiversity loss and ecosystem degradation (MEA, 2005; TEEB, 2010). TEV assesses two types of values – use and non-use. Use values arise from ES that support human consumption, while non-use values come from the intangible benefits from ES. Use values are subdivided into direct and indirect use values. Direct use values come from the extractive (e.g., raw materials, food) and non-extractive (e.g., recreation, tourism) use of resources. In contrast, indirect use values result from regulating and supporting services. For example, forests contribute to water recharge and purification (MEA, 2005; TEEB, 2010). Non-use values do not require a direct interaction between humans and ecosystems. These include bequest, existence, and option values. Bequest values are related to the belief that ecosystems will provide benefits to future generations; existence values come from the knowledge that ES continue to exist; and option values arise from knowing that the ecosystems and their services are around in case they are needed (MEA, 2005; TEEB, 2010).

According to MEA (2005) and TEEB (2010), five sets of methods can be used to reveal the value of ES – market prices, cost methods, revealed preference methods, stated preference methods, and deliberative and participatory methods. The use of market prices involves research on the value of resources (e.g., fruits, timber) in traditional markets. Cost methods analyse the cost of losing a particular ES or restoring an ecosystem to enable it to provide ES. Revealed preference methods use observations to estimate the willingness of people to spend to experience an ecosystem and its benefits. Stated preference methods utilise surveys to ask people how much they are willing to pay to keep the ES. Deliberative processes make use of citizen juries to decide on the monetary value of ES (MEA, 2005; TEEB, 2010). While the MEA (2005) and TEEB (2010) appear to have provided a wide variety of options to estimate the value of ES, all the methods mentioned above transform the ES benefits into market values. They fit into a more general type of valuation called economic valuation. Economic valuation appraises the importance of ES or concern for EDS in monetary terms (Hodgson et al., 2012). Aside from market prices and cost methods, standard economic valuation techniques applied to ES and EDS include hedonic pricing, travel cost, and contingent valuation. In hedonic pricing, housing prices are assessed against

the ES and EDS of the ecosystems under study (Troy and Grove, 2008). The travel cost method measures stakeholders' willingness to spend money to travel to a particular place that provides the ES (Heberling and Templeton, 2009). For contingent valuation, stakeholders are asked how much they are willing to pay to change the quality or quantity of the ES or EDS (Bateman and Langford, 1997; Birol *et al.*, 2006). Although frequently used, economic valuation has several limitations. First, while helpful in presenting a quantifiable measure of nature's benefits, economic valuation can be seen as an incomplete approach because it does not inquire about people's shared values and collective preferences. These shared values and collective preferences often reflect societal norms, traditions, or shared experiences that shape a community's value on its local ecosystems (Wegner and Pascual, 2011; Kenter *et al.*, 2015a). For example, a community may value a forest highly not just because of the resources it provides but because it is a place of cultural significance or a site for community gatherings. Second, economic valuation often misses grasping the value of intangible and non-use ES, which do not have market values (Chiesura and De Groot, 2003; Kenter *et al.*, 2015a). Third, economic valuation promotes the commodification of nature, which could lead to exploitation. Valuing nature through monetary terms could legitimise the destructive economic use of resources (Kallis *et al.*, 2013).

Despite focusing on economic valuation, the MEA (2005) and TEEB (2010) reports also mentioned another type of valuation that natural scientists do – ecological valuation. Ecological valuation assesses an ecosystem's functional integrity, health, or resilience to sustain life, done by measuring biophysical indicators such as diversity or carbon stock (Small et al., 2017). It is undertaken for various purposes, such as examining the importance of an organism to an ecosystem or vice-versa and elucidating the benefits of an ecosystem to call for conservation efforts. For example, Barlow et al. (2007) studied the importance of primary, secondary and plantation forests in the Brazilian Amazon for fruit-feeding butterflies. In another study, Barbier et al. (2011) summarised the benefits that people get from estuarine and coastal ecosystems.

2.3. Socio-cultural valuation

Socio-cultural valuation (SCV) is an emerging type of valuation that focuses on the non-monetary value of ES and EDS. It considers value as a social construction from the cultural contexts of a time and place. According to Brown (1984), these values can be categorised as "held" or "assigned". "Held values" are modes of conduct (e.g., generosity, courage, obedience) or end-states and qualities (e.g., wisdom, happiness, freedom) which serve as the basis for evaluative judgment (Brown, 1984). "Assigned values" express the importance of an object relative to other objects (Brown, 1984; Sánchez-Fernández and Iniesta-Bonillo, 2007). Values are developed and how things are valued evolves. Groups of people share values, and these are often complex, overlapping, conflictual, and positive or negative (Kobryn et al., 2018). SCV can be accomplished by asking about individual values or allowing people to deliberate and decide on the values (Bullock et al., 2018).

SCV considers how ES and EDS values are culturally constructed (Ruiz-Frau et al., 2018) and measures the assigned value expressed in non-monetary terms while incorporating a person's perception, their held values, and associated preferences (Iniesta-Arandia et al., 2014). SCV allows for the inclusion of social values in ES valuation (Lin *et al.*, 2017) and unravels shared or conflicting perceptions among diverse stakeholders (Bernués *et al.*, 2014). It can also be used to identify ES that people desire in the future (Schmidt *et al.*, 2017). Bullock et al. (2018) suggest that SCV is becoming more relevant as there is still a gap for studies that aim to articulate what is important to people and communicate this to decision-makers. This research utilised SCV, and the conceptual framework is discussed in Section 3.1.

2.4 Urban parks

Urban parks are semi-natural or human-made ecosystems comprised of a network of public open and green spaces in cities. These public open spaces are combinations of civic grey spaces like town squares or plazas and urban green areas. The types of urban green areas could be described as linear (e.g., river and canal banks, walking routes), semi-natural (e.g., wetlands, woodlands), functional (e.g., farmlands, churchyards), or amenity (e.g., gardens, sports areas) (Swanwick *et al.*, 2003). These parks are usually

established and managed by local government agencies or private organisations. Urban parks provide a range of environmental, social, and economic benefits (Figure 2.1) (Ives et al., 2017; Olbińska, 2018).

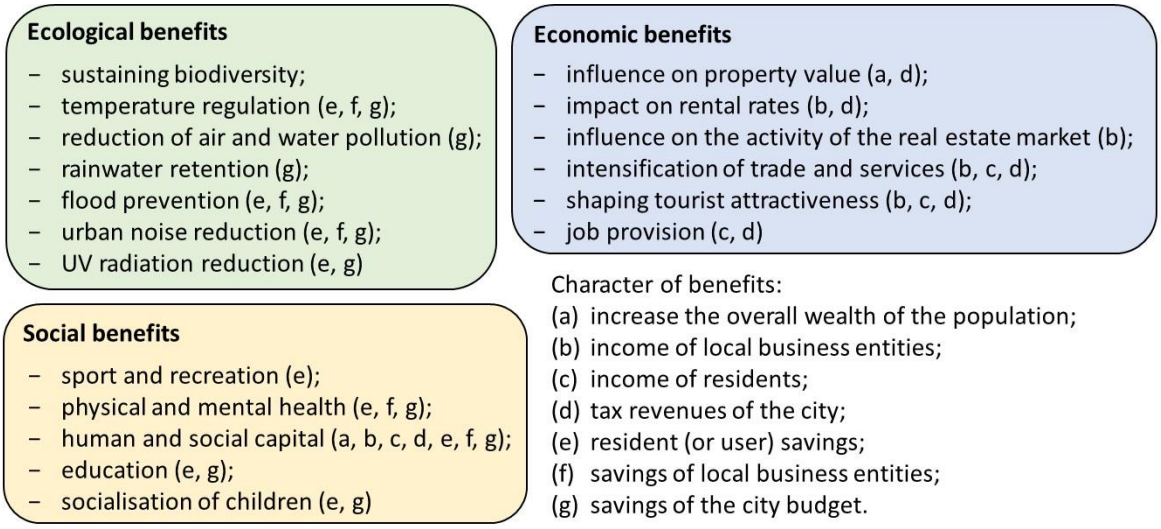


Figure 2.1. Ecological, economic, and social benefits of urban parks (Olbińska, 2018). Letters in parentheses correspond to the character of benefits.

There are very few published studies on the history of urban parks in the developed world, while they are almost non-existent in the Global South. This may be the case since urban development in the Global South focuses more on building infrastructure that responds to economic and population demands. Some studies (see Abdelhamid & Elfakharany, 2020; Shackleton & Cocks, 2020; Shackleton & Gwedla, 2021) point out that the design and establishment of urban parks in the Global South were influenced by their previous colonisers or western countries like the United States (US) and the United Kingdom (UK). Figure 2.2 presents the progression of urban parks in the United States (US) and the United Kingdom (UK). The evolution of urban parks in the US had been described by Cranz (1989) in four stages. The first stage, “pleasure ground”, covers the period from 1850 to 1900. This period was when urban parks were situated at the edge of cities and were made to showcase how society has tamed nature. These areas became playgrounds for wealthy people as they were made far from industrial areas where the working class reside (Cranz, 1989). The “small park movement” happened toward the end of the 19th century when efforts were made to build small parks near the tenement areas where workers live. This movement merged with the intention to establish safe playing fields for children and led to the second stage –

"reform park". During this stage, the planners aimed for social reform and bringing everyone together amid increasing immigration. A field house structure was placed within parks to enable people to meet and learn how to fill out government forms and speak English (Cranz, 1989). The third stage (1930 -1965), "recreational facility", was when parks were viewed as facilities that provide a venue for recreational activities. This period was when stadiums were built and managed by the parks department (Cranz, 1989). The "open space system" represents the last stage (1965 to present) where the idea that all open spaces could potentially provide a place for recreation depending on the features built within them came about. People began to use parks for concerts, meetings, ceremonies, and other gatherings during this stage (Cranz, 1989).

In the UK, urban parks started as royal hunting parks (e.g., Hyde Park and Richmond Park) in the 16th century (Rudd-Jones, 2015; Jones, 2018). The French idea of "*rus in urbe*" or countryside within a city then reached the country and inspired the aristocrats to build "squares" to provide them with fresh air and remind them of their countryside properties. St James's Square was the first one built through an Act of Parliament in 1726 (Rudd-Jones, 2015). The industrialisation in the 19th century widened the gap between the living conditions in cities and the countryside. People also realised how the crowded and compressed city environment could affect their health. This realisation led to the rise of a group of reformers (e.g., Joseph Chamberlain in Birmingham, Joseph Cowen in Newcastle) who advocated improving the city dwellers' environment. They envisioned it through better sanitation and the establishment of open spaces (Rudd-Jones, 2015). In 1833, the Report of the Select Commission on Public Walks was published, and it promoted the provision of public parks in cities to improve urban living standards (Rudd-Jones, 2015; Jones, 2018). From an enclave of aristocratic sport and enjoyment, the park began to appear as a public landscape for leisure, health, and socialisation (Jones, 2018). During the Second World War (1935 to 1945), the function of urban parks shifted more to recreation and sports as the youth were trained for battle. Some parks were also used to grow food (Gordon and Shirley, 2003). There was a brief period of renovations after the war, but the new way of life left the parks empty, and the spread of anti-social behaviour negatively affected people's perception of them (Gordon and Shirley, 2003). This continued until

the late 1980s when several research projects and initiatives were undertaken to improve and standardise public open spaces' design, functionality, accessibility, and management. Some of these initiatives were the creation of the London Planning Advisory Committee in 1992, Sheffield Parks Regeneration Strategy in 1993, and the standards for access to urban greenspace. It was also when the multi-functional values of open spaces in urban areas were recognised (as cited in Gordon & Shirley, 2003; Rudd-Jones, 2015).

It is important to note that it was also in the late 19th century when Sir Ebenezer Howard proposed the Garden City concept. He envisioned a transformative new style of urban living that combined the benefits of city and country life. His perspective was inspired by contemporary cities' overcrowding and unacceptable conditions, giving birth to an innovative design to enhance the quality of life and drive social reform. In Howard's plan, the Garden City would ideally be a self-contained entity housing around 32,000 individuals on a 6,000-acre property, featuring a broad spectrum of residences, industries, and farms to cater to the inhabitants' needs. Greenbelts, permanent agricultural lands or green spaces, would envelop each Garden City, restraining urban sprawl while supplying fresh produce. The city's design would prioritise residents' health and happiness, with low-density housing and copious green spaces. These cities would practice self-governance, with the residents making cooperative decisions on city management. By fusing the best elements of town and country - such as social interaction opportunities and easy access to goods, services, and nature - Howard hoped to create a balanced and idyllic living environment. This revolutionary concept profoundly influenced 20th-century urban planning, establishing garden cities like Welwyn and Letchworth in England and inspiring suburban development worldwide, including in the United States (Howard, 2003).

The history of parks in the Philippines spans six eras. During the Spanish colonial era (1521-1945), public spaces like plazas and town squares were set up, frequently near churches. They hosted religious, civic, and social events. Influenced by demands in Spain and Europe for better public spaces due to the Industrial Revolution's challenges, similar steps were taken in the Philippines, with places like the Jardin Botanico and Bagumbayan emerging (Forest Foundation Philippines *et al.*, 2019). New parks were

created during the American colonial era (1898-1946), and existing ones improved, including Rizal Park and Fort Santiago in Manila. Additionally, Paco Park gained significance, being refurbished post-war into a tourist attraction. During the Commonwealth era (1935-1946), reserved parks were declared to conserve resources and provide leisure spaces, highlighted by the Quezon Memorial Circle, emphasising the importance of public spaces for citizens' well-being (Forest Foundation Philippines *et al.*, 2019). World War II brought significant changes, with many parks damaged or used for military purposes, requiring post-war rebuilding efforts, such as the establishment of the Philippine Veterans Memorial Park. In the Third Republic (1946-1973), public park growth continued with popular spots like Nayong Pilipino and protected areas like Mount Makiling Forest Reserve being established. The 1960s-1980s featured nation-building initiatives, such as public space beautification led by First Lady Imelda Marcos. Major projects were constructed, including the Cultural Center of the Philippines Complex. Post-1986, the government and civil society aimed to revitalise public spaces, resulting in creations like the Manila Baywalk and La Mesa Eco Park. However, rapid urbanisation has threatened some parks. Current efforts are geared towards accessible, sustainable, and inclusive public space development (Forest Foundation Philippines *et al.*, 2019).

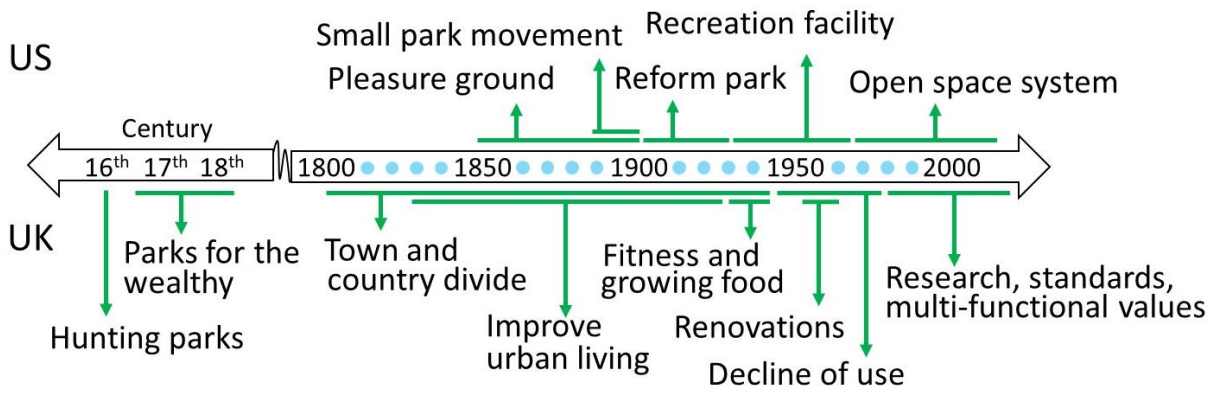


Figure 2.2. Timeline of urban parks in the US and the UK

2.5 Studies on the valuation of parks

To get an overview of how the valuation of parks have been conducted in previous studies, Scopus was used to search for articles that contained the following words in their titles: ("value*" OR "valuation*" OR "valuing") AND ("park" OR "parks"). The articles that did not aim to estimate the value or importance of the whole park or one of its elements were disregarded. The remaining articles were then categorised based on the type of parks assessed (national, regional, or urban) and the type of valuation technique used (ecological, economic, or socio-cultural). The articles were also grouped based on the country and continent where they were conducted.

A total of 209 articles were reviewed (see Appendix 1). They were from the 1960s to December 2021. Most of the studies assessed national and regional parks (65.55%), while 33.97% investigated urban parks (Figure 2.3). A national park is a natural or semi-natural area usually owned and managed by a state. It is maintained to conserve and preserve nature as a symbol of national pride (Dahlberg *et al.*, 2010). Regional parks are also built for the same reason as national parks, but they are managed by a local administration under the national government. Some regional parks are also made for recreational use or to highlight an area of historical significance (Bouyer *et al.*, 2007). Urban parks were previously established only to improve urban dwellers' quality of life by providing them with a place for recreation and relaxation. However, there is an increasing recognition that they could offer multiple environmental, economic, and social benefits (Chiesura, 2004; Olbińska, 2018).

Figure 2.4 shows the number of park valuation studies from 1962 to 2021. It can be noted that there was a general increase in the number of studies from 2001 to the present. Overall, there was more interest in studying national and regional parks than urban parks. Although there were few studies on urban parks in 1962, the 1980s, and early 2000s, it can be observed that their number increased more significantly after 2011.

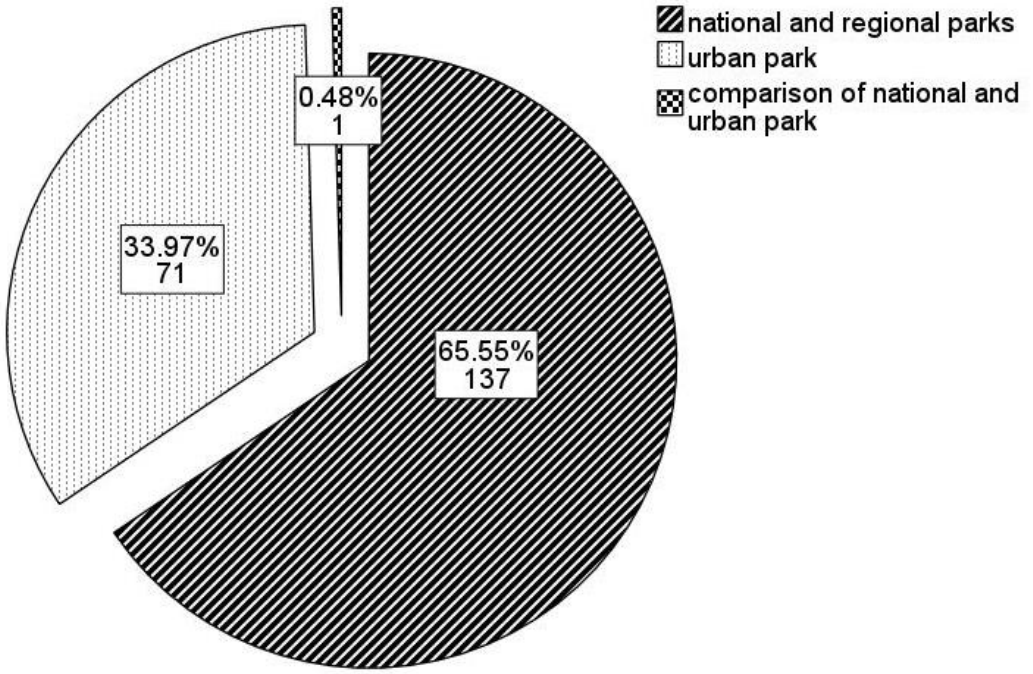


Figure 2.3. Types of parks assessed in the studies

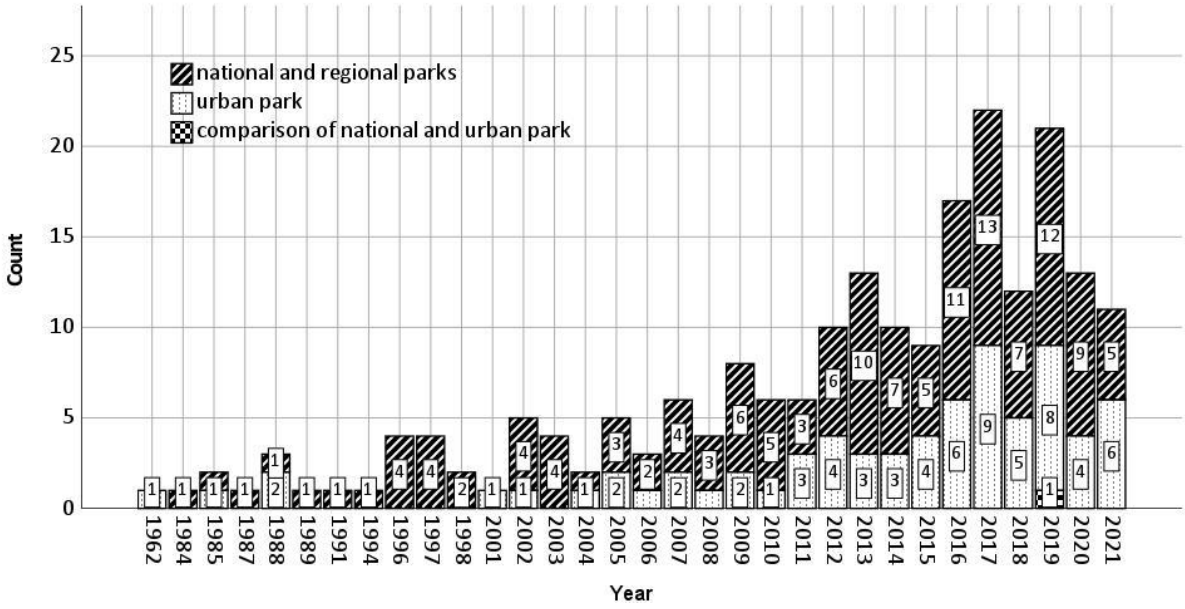


Figure 2.4. Number of park valuation studies based on the type of park assessed

A considerable percentage of the studies used economic valuation techniques, including hedonic pricing (e.g., Engström & Gren, 2017; Kim et al., 2017), travel cost (e.g., Neher et al., 2013; Juarez & Cañete, 2013), and contingent valuation (e.g., Baral et al., 2008; Giannelli et al., 2018) (75.60%). Ecological and socio-cultural valuation

were less utilised (Figure 2.5). Figure 2.6 illustrates the number of park valuation n studies according to the valuation method used per year from 1962 to 2021. It can be observed that studies have used economic and ecological valuation techniques since the 1980s, while socio-cultural valuation was first utilised in 2005. It can be generalised that the use of socio-cultural techniques in park valuation is recent as the number of these studies began to increase only from 2012. Out of the 71 studies on urban parks, 73.24% used economic valuation, while 12.68% and 9.86% used ecological valuation and socio-cultural valuation, respectively (Figure 2.7). Most of the studies were undertaken in Asia (40.19%), Europe (25.36%), and North America (14.35%) (Figure 2.8). Many of the studies in Asia were conducted in China (28.57%), Iran (15.48%), India (7%), South Korea (7.14%), and Malaysia (7.14%). Only one study has been done in the Philippines (Figure 2.9).

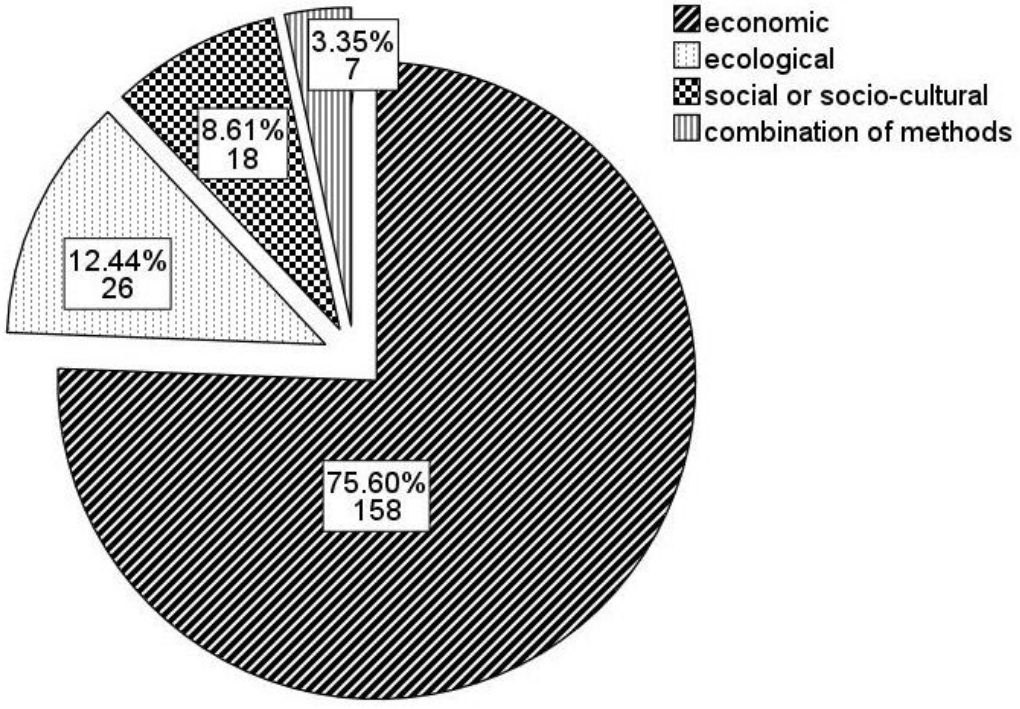


Figure 2.5. Type of valuation used in the studies

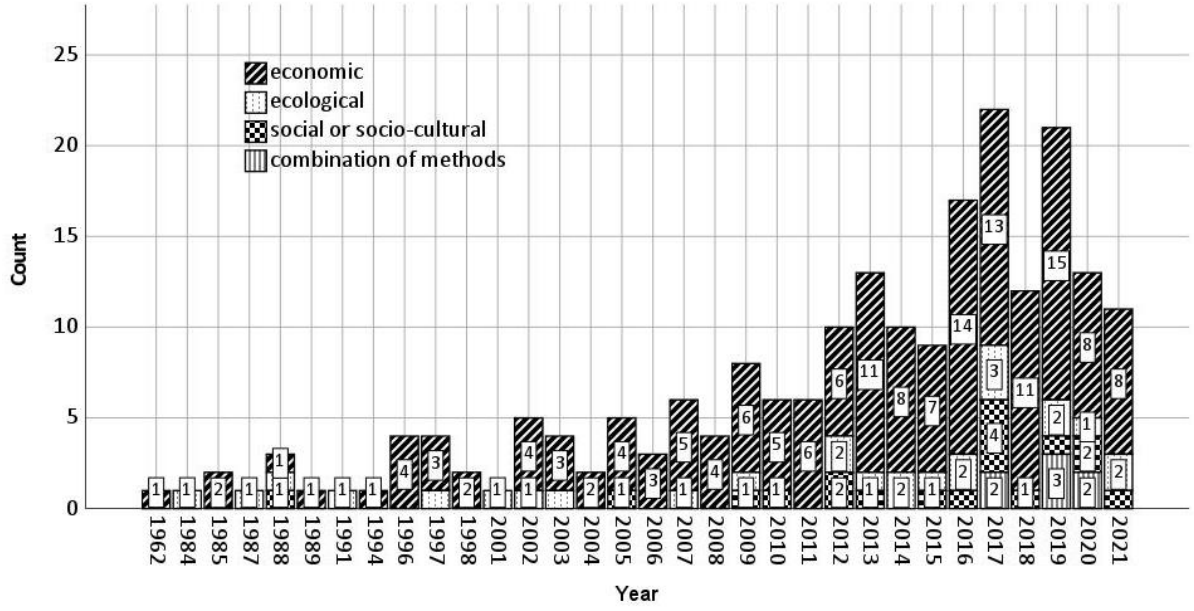


Figure 2.6. Number of park valuation studies based on the type of valuation used

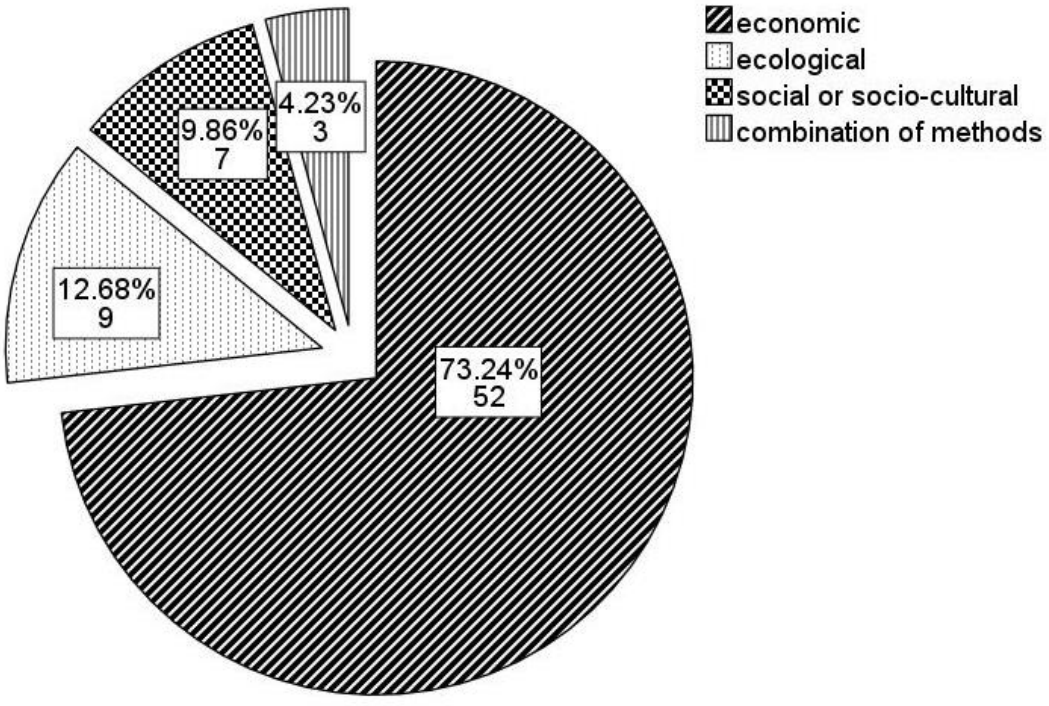


Figure 2.7. Type of valuation used in the studies involving urban parks

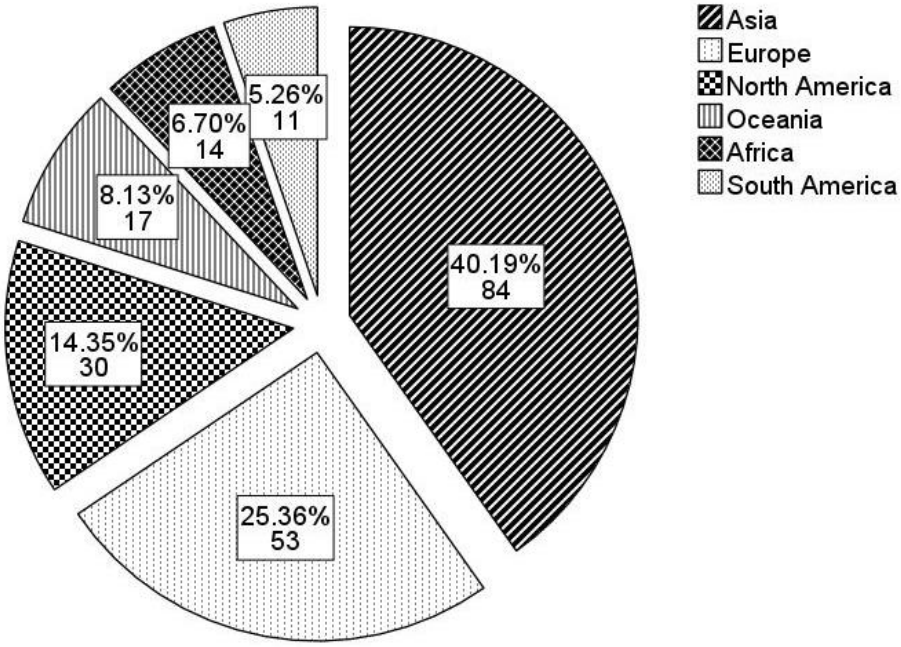


Figure 2.8. Regions where the studies have been conducted

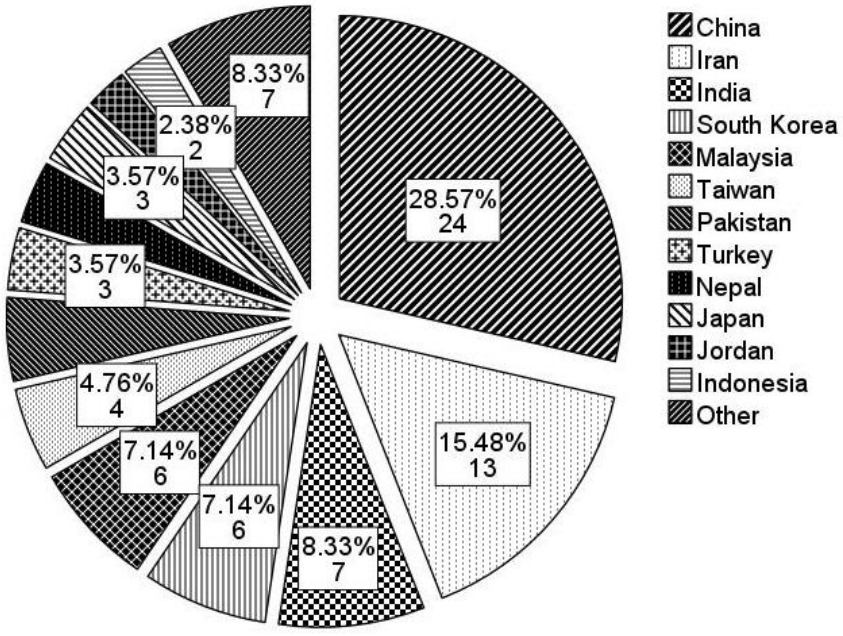


Figure 2.9. Asian countries where the studies have been conducted. “Other” reflects the seven studies done in the Philippines, Thailand, Sri Lanka, Myanmar, Georgia, Cambodia, and one comparative study in Malaysia and Indonesia.

2.5.1 Socio-cultural valuation of urban parks

Scopus was used to search for articles that contained the following words in their titles: ("soci*" AND "valu*" AND "ecosystem*"). The goals were to determine the ecosystem types to which socio-cultural valuation is applied and in which countries they were undertaken. The articles that did not aim to estimate the socio-cultural value of the whole ecosystem or one of its elements were disregarded.

A total of 49 articles were reviewed (see Appendix 2). Based on the keywords that were used, the first socio-cultural valuation study appeared in 2010. Figure 2.10 illustrates the number of socio-cultural valuation studies from 2010 to 2021. It can be noted that the highest number of socio-cultural valuation studies were recorded in 2019 and 2020. The highest percentage of the studies involved mountains and forests (26.53%). It was followed by a combination of different ecosystems (20.41%), marine and coastal areas (14.29%), urban parks and green spaces (12.24%), wetlands (8.16%), and drylands (4.08%) (Figure 2.11). The majority of the studies were from Asia (34.69%), Europe (28.57%), and North America (16.33%) (Figure 2.12). More than half of the studies done in Asia were undertaken in China (52.94%). Cyprus had two studies, while Vietnam, South Korea, the Philippines, Nepal, Israel, and India had one study each (Figure 2.13).

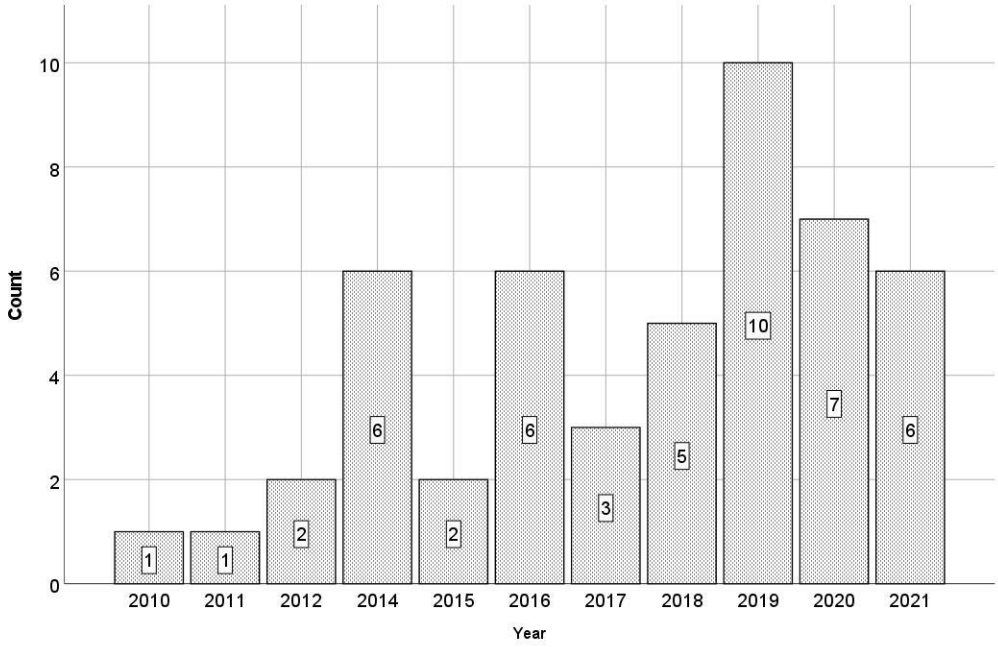


Figure 2.10. Number of socio-cultural valuation studies from 2010 to 2021

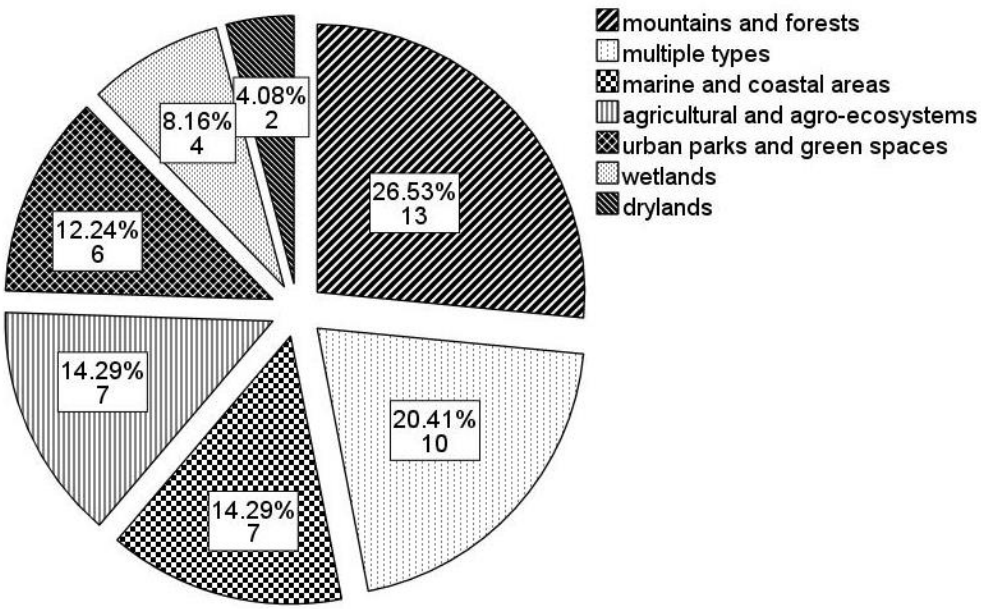


Figure 2.11. Ecosystem types where socio-cultural valuation was applied to in the articles

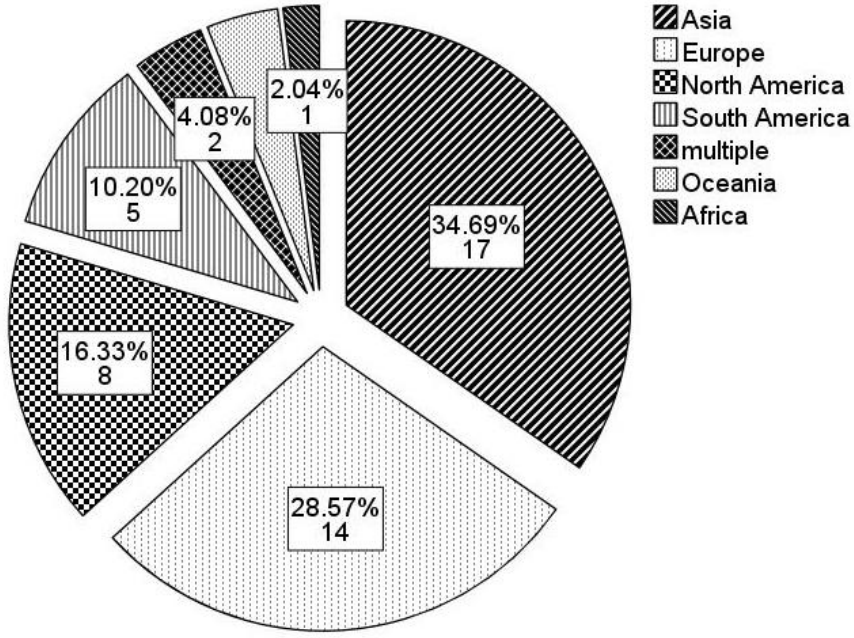


Figure 2.12. Regions where the sociocultural valuation studies were undertaken

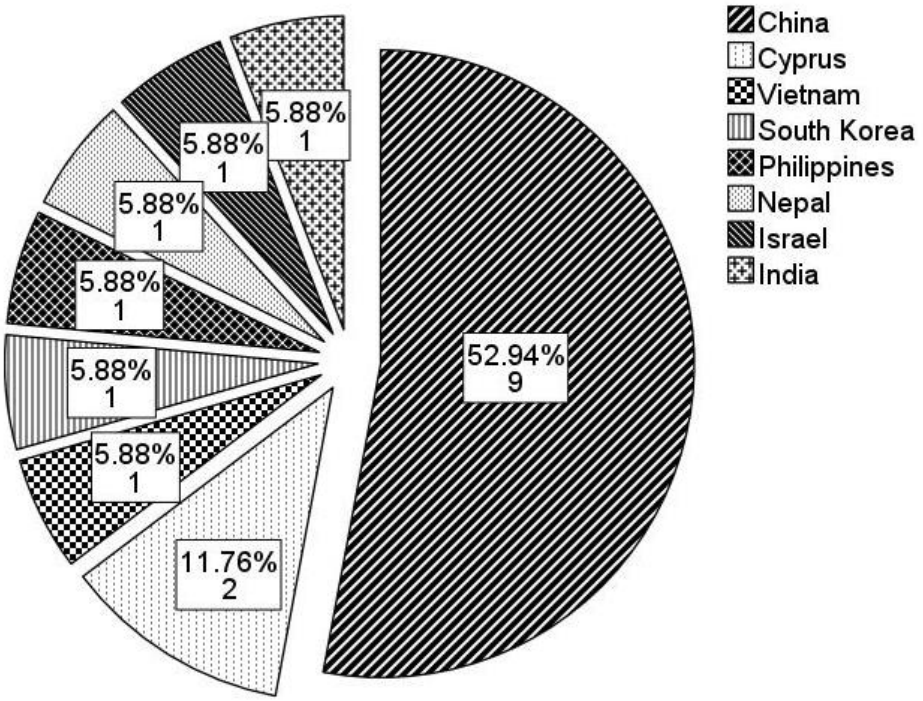


Figure 2.13. Countries where the sociocultural valuation studies were undertaken

To make the list of studies on the socio-cultural valuation of urban parks that were found through the first two literature searches more comprehensive, Scopus was used again to find articles with the following words in their titles: (“soci*” AND “valu*” AND “urban” AND (“park*” OR “green*”)). The keyword “green” was included since some studies term parks as urban green spaces. Six articles were found, but five were already present in the list from the first two literature searches.

A total of 12 articles tackling the socio-cultural valuation of urban parks were reviewed after the three literature searches (see Appendix 3). Figure 2.14 illustrates the number of these studies from when they first appeared in 1988 until 2021. It can be noted that 2019 had the highest number of articles (3). Half of the studies (6) were undertaken in Europe, while four were conducted in Asia, and two were in Oceania (Figure 2.15). Four countries had two studies each – United Kingdom, Finland, China, and Australia. Sweden, Spain, the Philippines, and Hongkong had one study each (Figure 2.16).

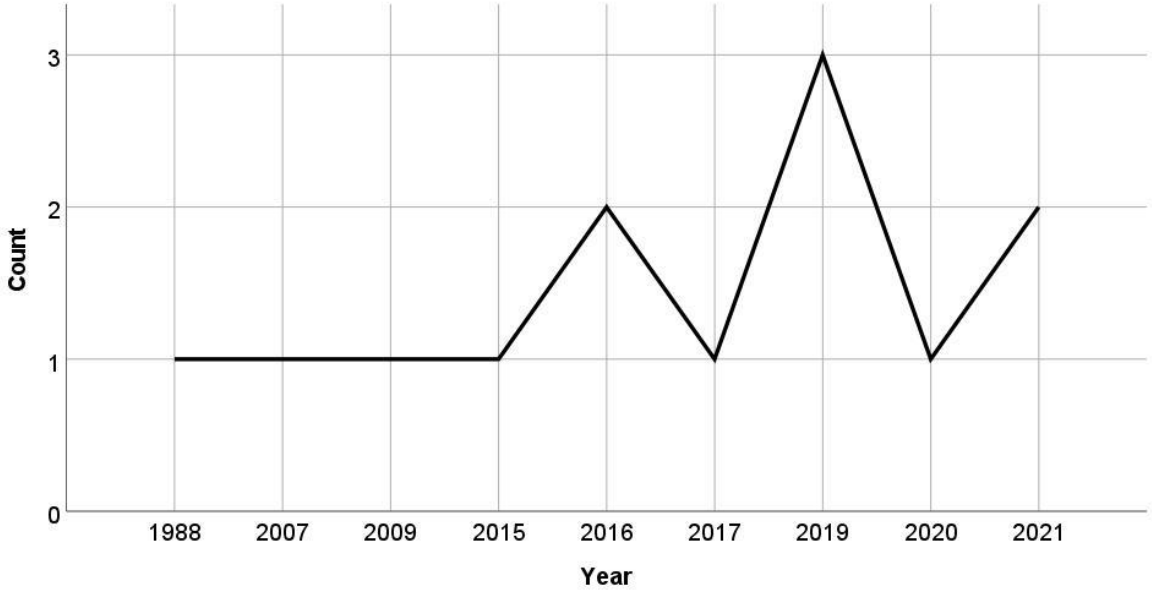


Figure 2.14. Number of studies on the socio-cultural valuation of urban parks from 1988 to 2021

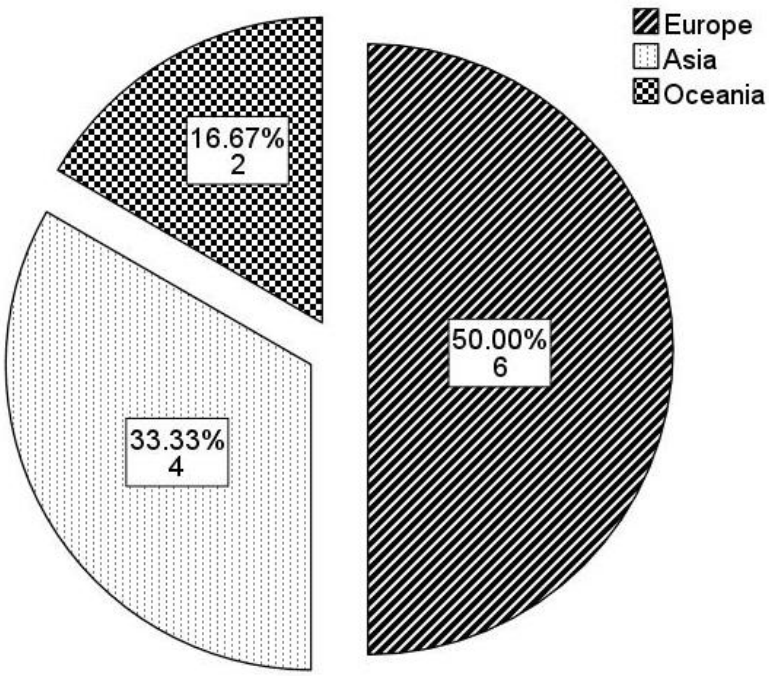


Figure 2.15. Regions where the studies on the socio-cultural valuation of urban parks were undertaken

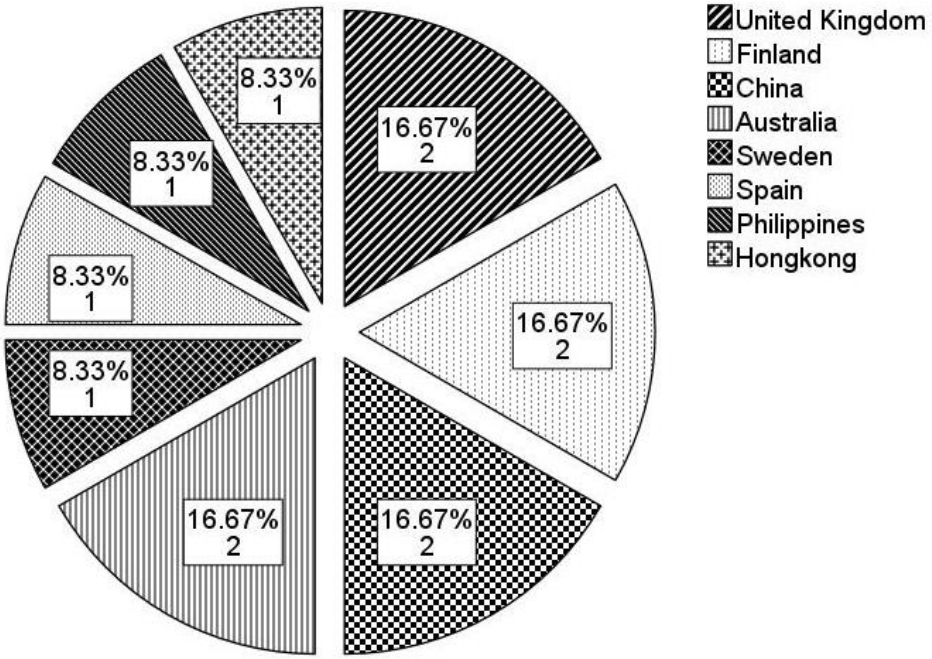


Figure 2.16. Countries where the studies on the socio-cultural valuation of urban parks were undertaken

Four general socio-cultural valuation methods were used and mentioned by the 12 studies that were reviewed – preference assessment, value mapping, deliberative techniques, and narrative approaches. The values were elicited through consultation, engagement, or observation. Consultation and observation are done through interviews, surveys, or discussion groups, while engagement could be undertaken only through discussion groups. Individuals or groups could express the values considering only themselves or other individuals or groups (Figure 2.17).

In preference assessment, the stakeholders are asked directly or indirectly about the importance of an ES or EDS. The direct methods include ranking, rating, or giving weights to the ES and EDS (e.g., Chen et al., 2020; M. Egerer et al., 2019). Indirect methods involve asking the stakeholders to take pictures of the park features that they like or dislike or how much time they are willing to give to improve an ES or lessen an EDS (Sun et al., 2019; Wan et al., 2021). Sometimes, stakeholders are also requested to share the motivations behind their preferences. Value mapping involves presenting the stakeholders a map of the park and asking them to mark areas of value and concern to evaluate the spatial distribution of ES and EDS (e.g., Chen et al., 2020; Tyrväinen et al., 2007). Deliberative techniques require inviting stakeholder representatives and

allowing them to discuss the value of ES and EDS and come up with values that they agree with (Kenter et al., 2016). Finally, in narrative approaches, researchers observe stakeholders or analyse interview or focus group transcripts, video recordings, and artworks to understand how stakeholders value the ES or EDS (e.g., Burgess et al., 1988; Ernstson & Sörlin, 2009). These methods could be combined for a more comprehensive study. For example, Chen et al. (2020) and F. Sun et al. (2019) combined a Geographic Information System (GIS) application called SolVES (Social Values of Ecosystem Services) with preference assessment (ratings or ranking) to assess the value of urban green spaces in China.

Figure 2.17 illustrates the methods used in the studies that were reviewed. It can be noted that the studies used more quantitative socio-cultural valuation methods and focused more on the individual, self-oriented values. Only Schmidt et al. (2017) mentioned others-oriented values, and only Burgess et al. (1988) and Ernstson & Sörlin (2009) utilised narrative approaches. This is the case not only for socio-cultural valuation studies involving urban parks but the ES valuations in general (Maestre-Andrés *et al.*, 2016).

The reviewed papers highlight the fundamental socio-cultural benefits that urban parks offer. These parks serve as crucial areas for relaxation, socialisation and supporting mental health (Wan *et al.*, 2021). A profound understanding of users' preferences and values is central to formulating strategies that enhance the usability and appeal of these urban spaces (Wan *et al.*, 2021). The study by Chen *et al.* (2020) discusses the disparity in perceptions of social values for ecosystem services of urban green space in Wuhan's East Lake Scenic Area between urban inhabitants and tourists. It argues that integrating different data sources could potentially visualise the temporal dynamics of social values in the long run. The study emphasises the social value discrepancies between residents and tourists to provide insight into how the demands of different stakeholder groups can be incorporated into urban planning and green space management processes. The research also highlights the importance of intangible social values of urban green space and suggests that similar research in other regions of the world is necessary to examine how different data sources and

different stakeholders' categories could contribute to urban green space planning (Chen *et al.*, 2020).

Langemeyer *et al.* (2015) underscore the importance of urban green infrastructure and its potential to improve the quality of life through ES, with a focus on cultural ES. Their research says that testing ES can help understand the condition of city parks and green areas, which can also help make better plans for these green spaces. The study suggests the necessity for combined, hybrid or integrated assessments of different value dimensions, and calls for a stronger consideration and justification of the kind of values assessed. Finally, the study highlights the need for general agreement on standardised methodological approaches to ensure comparability between different assessments and to provide sound advice to urban policy-making (Langemeyer *et al.*, 2015). This sentiment is mirrored by Kati and Jari (2016), who emphasise the need to recognise socio-cultural values in managing urban aquatic ecosystems. Their research discusses the importance of small urban aquatic ecosystems and how they support human health and well-being. It suggests that with a growing public and political focus on brooks and ponds, the likelihood of environmental disputes over managing these urban water features is increasing. Consequently, socio-cultural values should be factored into strategies that are predominantly based on techno-ecological data. Their paper also highlights the importance of making careful value mapping to identify socio-cultural values of key stakeholders and define ES that are linked with demands before preparing the actual storm-water management plan. The case study of Kumpulanpuro in Helsinki, Finland, is used to illustrate the importance of considering socio-cultural meanings and values that emerge from the sense of place (Kati and Jari, 2016).

Further expanding on socio-cultural valuation, Lagbas (2019) delves into the social valuation of regulating and cultural ES in urban spaces while shedding light on sustainable adaptation strategies for climate change mitigation in densely urbanised settings. Complementing this, Egerer et al. (2019) investigate the importance of urban nature spaces, such as community gardens, parks, and trees, for promoting well-being and social inclusion among diverse communities. The authors argue that these spaces provide a range of benefits, including opportunities for physical activity, social interaction, and connection with nature, which can contribute to improved mental and

physical health outcomes. Their paper also highlights the need for more research to explore the complex relationships between cultural identity, social inclusion, and well-being in the context of urban nature spaces. Finally, the authors argue that inclusive planning and design of urban nature spaces can help promote equitable access and use by diverse communities (Egerer *et al.*, 2019).

Contrasting socio-cultural valuations are discussed by Schmidt et al. (2016), who illustrated the socio-cultural value of upland regions in the vicinity of cities compared to urban green spaces. They contend that including socio-cultural valuation in ES assessments can facilitate socially approved methods for restoring natural ecosystems, enhancing conservation efforts, reducing strain on ecosystems, and ultimately aiding in sustainable ecosystem management. Their paper also draws attention to the methodological uncertainties in socio-cultural valuation, pointing out the challenges in comparing different regions and surveys (Schmidt *et al.*, 2016). Similarly, Sun et al. (2019) highlight the need for a more diverse demographic sample when evaluating social values for urban ES. The authors argue that considering social values for ES is essential for understanding the relationship between people and nature and making informed decisions about urban green space management. They also say that mapping tools and visitor-employed photography methods are effective in assessing social values for ES in urban green spaces (Sun *et al.*, 2019).

Exploring international perspectives, Swapan et al. (2017) note the contextual variations in perceived social values of ES of urban parks in China and Australia. They say that while city parks offer many ES that people in both countries like, how people in these countries perceive these benefits can differ. The paper also highlights the importance of designing parks to satisfy diverse stakeholders (Swapan *et al.*, 2017). Lastly, Tyrväinen et al. (2007) discuss several arguments related to mapping the social values of urban woodlands and green areas. These include the importance of understanding the relationship between green areas and well-being, the need for effective methods of studying different age groups, and the potential for using social value mapping in strategic green area planning (Tyrväinen *et al.*, 2007).

The reviewed studies underline the socio-cultural benefits urban parks provide, notably acting as vital spaces for relaxation, enhancing well-being, and fostering social interactions. Different methods like preference assessment, value mapping, deliberative techniques, and narrative approaches are used to grasp stakeholders' values and preferences concerning the ES and EDS offered by these green spaces. Studies like Chen et al. (2020) and Sun et al. (2019) have combined various techniques to evaluate the value of urban green spaces better, suggesting a need for more comprehensive approaches in future research. Moreover, there is a call for a consensus on standard methodological approaches to facilitate more comparable assessments and sound policy advice, emphasising the need to incorporate different stakeholder groups' opinions in urban planning. The papers further highlight the significance of considering socio-cultural values in managing different urban ecosystems, including small aquatic ecosystems, to prevent potential environmental conflicts and promote social inclusion and well-being through well-planned urban nature spaces. A consistent suggestion across the reviewed studies is the need for inclusive, careful planning, and the integration of diverse data sources to foster sustainable, beneficial urban green infrastructures that cater to various stakeholders.

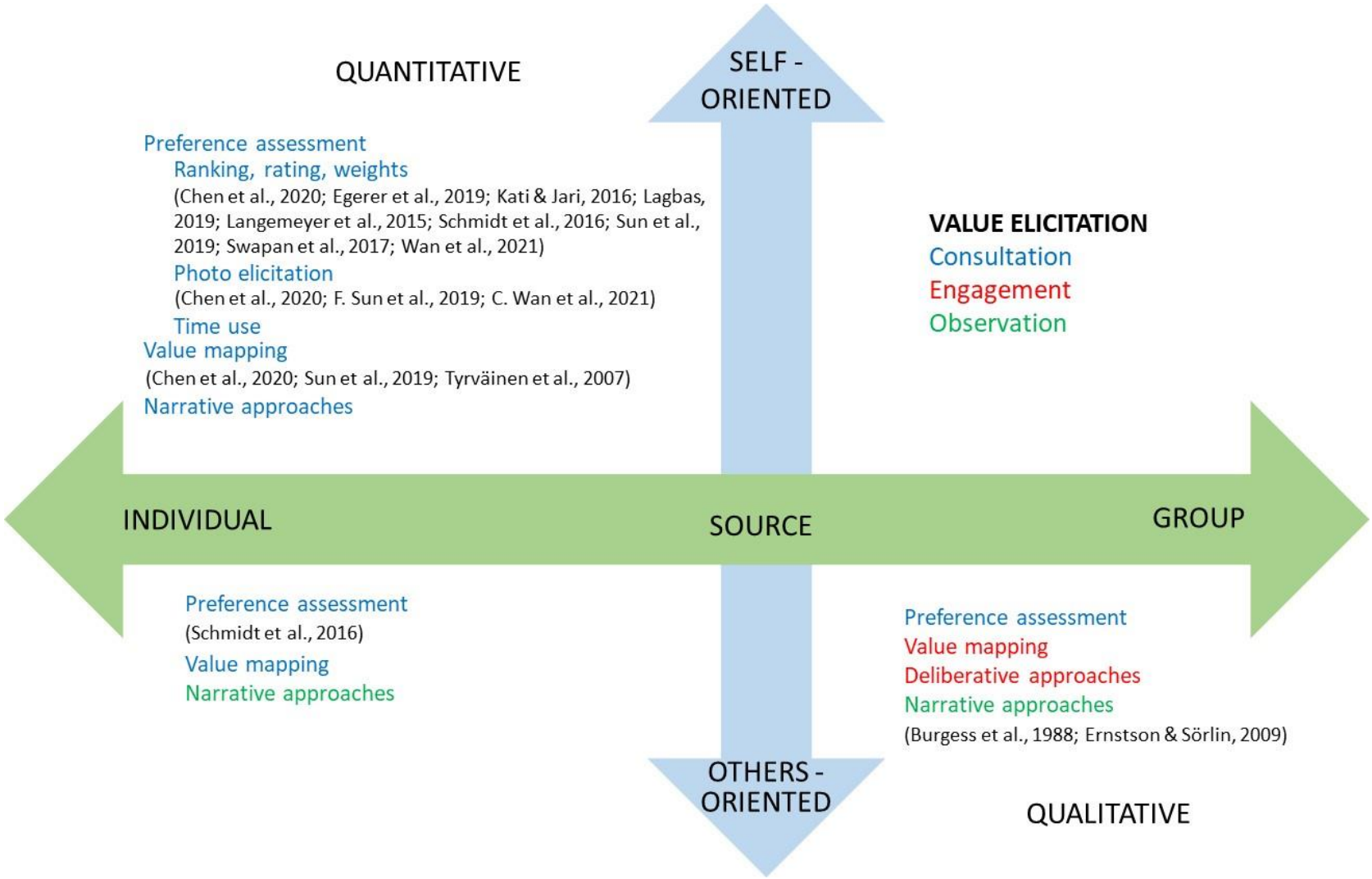


Figure 2.17. Studies grouped by the method used for the socio-cultural valuation of urban parks. Diagram adapted from Santos-Martín et al., (2017)

2.5.2 Research gaps

It can be generalised from the review that the literature is dominated with studies on the valuation of bigger national and regional parks. This might be because of the perceived larger scale of the benefits that they provide. The valuation of urban parks has increased in recent years probably because of the rapid urbanisation and densification that has led to risks in urban living. Urban parks present a potential to become a resource to improve living conditions in cities. It can also be noted that the majority of the studies used economic and ecological valuation techniques. They might have been influenced by the limited ES valuation approaches outlined by the MEA (2005) and TEEB (2020). The concept of ES has been contested for its focus on economic valuation and promoting the commodification of nature (Schröter *et al.*, 2014).

Results of the review suggest that the socio-cultural valuation of parks is fairly recent - first appearing in 2010 and gaining more interest in 2019 and 2020. Most of the studies focused on natural ecosystems like mountains and forests and marine and coastal areas. It can also be generalised that there are still very few studies on the socio-cultural valuation of urban parks, and most of them were undertaken in the last five years. According to Maestre-Andrés et al. (2016), socio-cultural values are still missing in the study of ES, and Scholte et al. (2015) considers socio-cultural valuation as a serious gap in the ES research. This type of valuation also has not formalised a methodological framework (Santos-Martín *et al.*, 2017).

There were also several limitations of the studies that were reviewed. Wan et al. (2021) assert that their study's sole reliance on Instagram data might not reflect the broader population's views, thus underscoring the necessity for a more comprehensive data collection method. They also note the inherent limitations of automated text analysis, which might not wholly capture the intricate nuances of users' preferences and values. Insufficient insight into the reasons behind users' preferences and values leaves a crucial research gap unexplored. These researchers also advocate for a mixed-methods approach to deliver more generalisable results (Wan *et al.*, 2021). A similar concern for generalisability is echoed by S. Chen *et al.* (2020), who highlight the

limitations of conducting their on-site survey just once. A broader temporal study spanning various seasons could furnish a more balanced understanding of public perception. The potential for sampling bias in on-site surveys and social media data collection, and the focus on limited age categories in their study, identify future avenues for research expansion.

Langemeyer et al. (2015) lament the lack of understanding regarding the linkages between land uses, management regimes, and the production of ES. Furthermore, they mention that trade-offs between providing competing services is another knowledge gap that requires further exploration. The need for combined or integrated assessments of different value dimensions is highlighted, along with a call for a universally accepted methodological approach to ensure comparability between various assessments (Langemeyer *et al.*, 2015). Ernstson and Sörlin (2009) concede the limitations presented by their small sample size and the potential for bias in selecting the most-cited activists. This raises questions about the generalisability of their findings beyond the National Urban Park in Stockholm. Likewise, Kati and Jari (2016) reveal the localised focus of their study, concentrating on an environmental conflict in Helsinki, Finland. In a distinct context, Lagbas (2019) recognises the scarcity of research investigating the social valuation of urban vegetation ES from the perspective of Manila's college students. This study's sample is confined to students of four universities, pointing to a clear need for a broader population study to achieve representativeness.

Egerer et al. (2019) highlight similar generalisability issues due to small sample size, limited geographic scope, potential selection bias, and the absence of a control group. They caution about the subjective nature of well-being measures, limiting the application of their findings. Future research must delve into the interplay between cultural identity, social inclusion, and well-being within urban nature spaces. Schmidt et al. (2016) identify a host of research gaps and limitations, such as methodological uncertainties in socio-cultural valuation and difficulties in comparing areas and surveys. The limitations related to the interview situations and the study's narrow focus on the motivations to visit and preferences for management suggest potential areas of expansion.

Sun et al. (2019) report a narrow age span and similar education levels among their participant group, limiting the generalisability of their findings. Moreover, focusing on a few types of urban ES, primarily cultural services, marks an opportunity for future studies to consider more ES types. Swapan et al. (2017) acknowledge the limitations of their survey-based methodology and advocate for complementing it with observational methods and secondary user statistical analysis. The limitations presented by the small sample size and the confinement to a select few sites underscore the need for a larger, more diverse sample. Lastly, Tyrväinen et al. (2007) acknowledge potential bias towards middle-aged individuals in their survey, identifying the need for more inclusive methods to canvass different age groups. The limited scope of the study area, specific to certain housing areas in Helsinki, further reduces the potential for generalisability of the findings.

The discussed limitations and research gaps point to a pressing need for broader, more inclusive sample selection, diversified methodological approaches, and expanded geographical focus in studies on the socio-cultural valuation of urban parks. This research acknowledges that there is work that needs to be done to address the gaps of the previous research. Ecosystem disservices of urban parks should be assessed as they are still poorly studied (Oteros-Rozas *et al.*, 2014), but could explain why urban parks are underutilised. Stakeholders are also generally not well-represented in ES studies (Bogdan *et al.*, 2019; Sun *et al.*, 2019) which could lead to poor support and participation to initiatives. Participatory and deliberative methods are underutilised in the study of ES, but these strategies could better grasp the value of non-material ES (Small *et al.*, 2017) and reveal and discuss shared values (Kobryn *et al.*, 2018). The list of ES used in studies are usually out of literature or experts (Bogdan *et al.*, 2019) and so does not reflect the perception of stakeholders. There has long been a call for the inclusion of social value in ES valuation (Lin et al., 2017) as it can better articulate the relevance of ES to people (Bernués et al., 2014).

CHAPTER 3: METHODOLOGY

This chapter describes the conceptual framework of the study, the selection of the study park, and the overview of the research design.

3.1 Conceptual framework

Brown's (1984) work on the concept of value was chosen as the conceptual framework as it is arguably the basis of the idea of SCV (Figure 3.1). There are also no other established frameworks for SCV. Brown's (1984) coined the terms *held* and *assigned values*. He proposed that held values lead to the expression of assigned values through preferences and the relationship between the individual and the object being valued. He also emphasised the three value realms – conceptual, relational, and object. The conceptual realm is where value can be considered as ideals or long-term viewpoints of the preferable that influence choice and action. A person's held values represent this realm. The relational realm represents the preference relationship between a subject and an object. In this realm, value is not an inherent quality of something and is not observable; it is only at the feeling level. In the object realm, value is the stated relative importance of an object to an individual or group in a specific context. It is not an attribute of the object but its standing relative to other objects. This realm is observable and can be represented by the assigned values (Brown, 1984). Brown (1984) also claimed that assigned values could change depending on the social setting and the constituency (to whom the value is assigned) of the valuation. This change of constituency is discussed in section 5.1.1.

Socio-economic variables were assessed in the study since individuals perceive and, therefore, value ES differently according to their socio-cultural backgrounds (Hirons et al., 2016; Iniesta-Arandia et al., 2014; Oteros-Rozas et al., 2014). These variables were also included since they will be used to determine the combination of factors that influence the valuation of ES and EDS. Since urban parks are common resources, the respondents' social value orientation (SVO) was also measured to represent their concern for others when making decisions about allocating resources (Murphy & Ackermann, 2013). Environmental knowledge, perception, and behaviour were assumed to influence people's preferences and their relationship to nature.

Environmental knowledge represents an individual's awareness and understanding of ecological principles and concepts, including their interconnectedness and consequences (Frick et al., 2004). This understanding often translates into recognising the benefits of environmental features such as urban parks (Kollmuss and Agyeman, 2002). By including environmental knowledge in the survey, the study could discern the extent to which awareness of environmental concepts influences respondents' valuations. On the other hand, perception refers to the individual's cognitive interpretation of the environment, often shaped by personal values, cultural norms, and past experiences (Milfont and Duckitt, 2010). It provides a context for how people interact with and relate to their surroundings, affecting their appreciation and valuation of ES and EDS. The inclusion of perception in the survey allowed the study to explore how individual and community beliefs shape attitudes towards urban parks and their associated benefits and disbenefits (Satterfield *et al.*, 2013). Behaviour denotes the tangible actions an individual takes, reflecting their environmental consciousness and willingness to act in an environmentally responsible manner (Stern, 2000). Understanding environmental behaviour helps reveal the translation of knowledge and perceptions into real-world actions, offering insights into using and conserving common resources such as urban parks (Kaiser et al., 1999). Assessing environmental behaviour in the survey enriched the understanding of how theoretical preferences and values translate into practical engagement with the environment. Detailed methods can be found in Section 5.1.1.

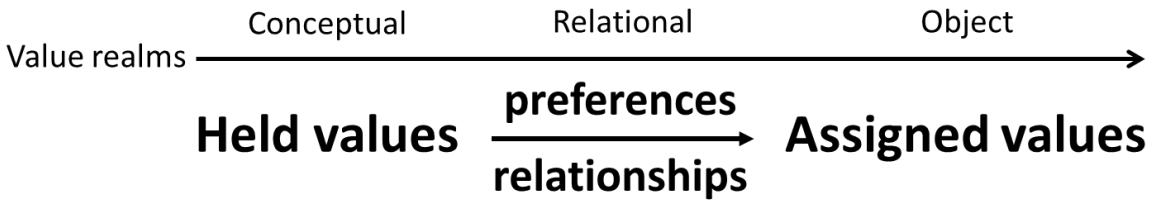


Figure 3.1. The conceptual framework of the study, modified from Brown (1984)

3.2 Selection of study park

The Philippines was chosen as the study area because it has one of the largest urban populations in Asia (50 million) (World Bank, 2019) but is deficient in the supply of public parks and green, open spaces (Forest Foundation Philippines et al., 2019). In addition, planning guidelines and regulations on the creation and management of urban parks are also missing. To choose the study park, the level of urbanisation (percentage of the population living in urban areas) in the Philippines was first reviewed, and the top two regions with the highest levels were selected. The cities with more resources to invest in urban parks in the two regions were then noted. Finally, a list of all the parks managed by these cities was created to select a suitable park.

The Philippine Statistics Authority (PSA) released a report in 2019 to detail the level of urbanisation in the whole country in 2015 – 51.2%. This report mentioned the top two regions with the highest level of urbanisation: Metropolitan Manila Region (100%) and Region IV-A (66.4%) (PSA, 2019). According to the report by the Philippine Commission of Audit (COA), Makati City has the highest value of assets (PhP 196.57 billion) in the Metropolitan Manila Region, while Calamba City has the highest value of assets (PhP 12.41 billion) in Region IV-A (COA, 2017). The largest parks in the two cities Makati Park and Garden and the Jose Rizal Plaza were initially selected. The Jose Rizal Plaza became the study park because Makati City refused the invitation to become part of the study.

The study was initially planned to include two case studies – one in Calamba City and one in Makati City. When Makati City refused to cooperate, it was replaced by Manila City, the capital city of the Philippines and the third top city with the highest value of assets in the Metro Manila Region (PhP 38.68 billion). However, because of the coronavirus disease (COVID-19) outbreak, coordination with the city became difficult and initial stakeholder interviews impossible.

3.2.1 Calamba City and The Jose Rizal Plaza

Calamba is one of the six component cities of Laguna Province in the Philippines. The city has an area of 144.80 square kilometres and is the second-largest city in the province. It is about 45 kilometres away from the Metro Manila Region and is located at the southwest side of Laguna de Bay, the biggest lake in the country (Figure 3.2). The city is politically subdivided into 54 *barangays* (villages) (Calamba City, 2017). The city has flat to hilly and mountainous slopes from zero to higher than 18%. The top three land uses in the city are built-up areas which cover about 43 per cent of the city, annual crops that cover 25.81 per cent, and grasslands that cover 10.14 per cent. Calamba City has two pronounced seasons - dry from December to April and wet for the rest of the year. In the last four census years (2000, 2007, 2010, 2015), Calamba City has had the highest population in the Laguna Province. In 2015, its total population of 454,486 accounted for almost 15 per cent of the province's total population (Calamba City, 2017).

The Jose Rizal Plaza is a 7-hectare park located at Barangay Real in Calamba City. It was built in 2011 and houses one of the tallest monuments of Dr Jose Rizal, the national hero of the Philippines. Rizal is a native of Calamba City, and his monument in the park was built to honour his 150th birthday. As of January 2020, the park has the following amenities: football field, gardens, lounge (that has not been opened yet to the public), and activity area (used for Zumba classes, jogging, and different kinds of events) (Figure 3.3). A coliseum, shaped like a clay pot or *banga* (where the city derived its name), is also currently being constructed in the area. Some pictures from the park are in Figure 3.4.

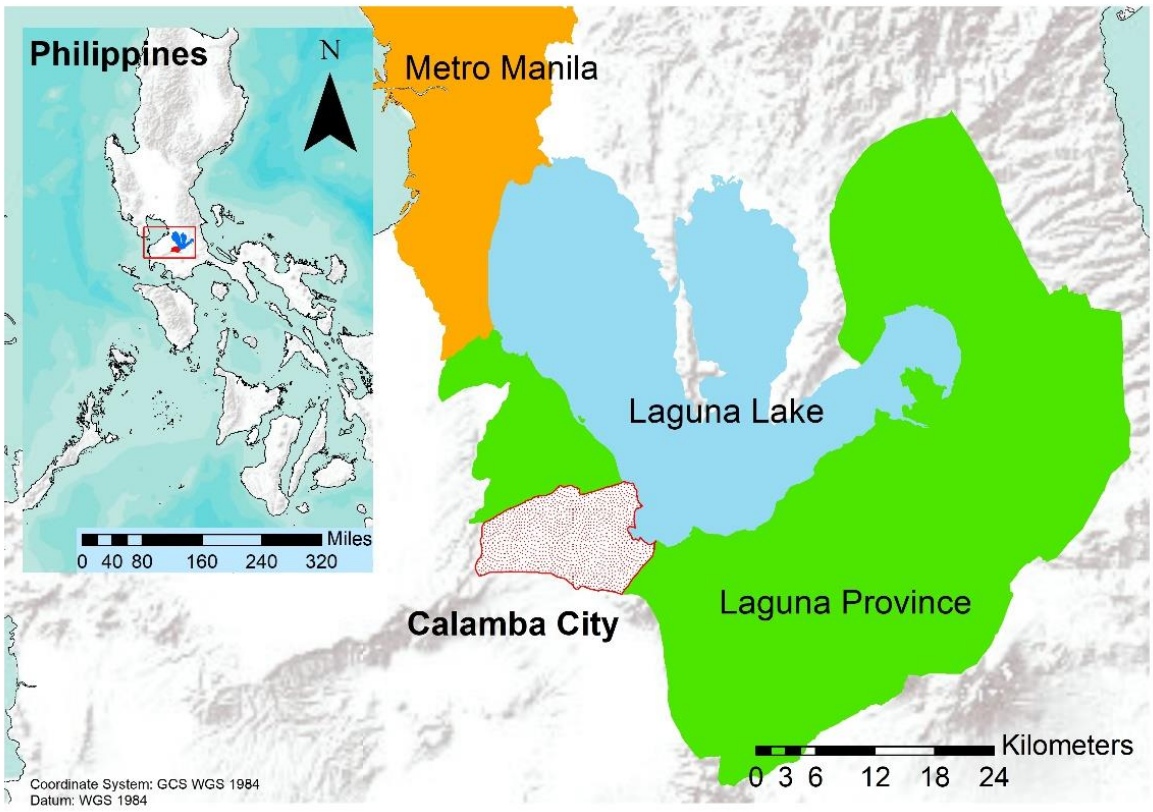


Figure 3.2. Location of Calamba City in the Laguna Province, Philippines

Figure 3.3. Jose Rizal Plaza's amenities as of January 2020. Satellite image (captured in March 2016) from Google Earth Version 3.3.3.7699 (2016)

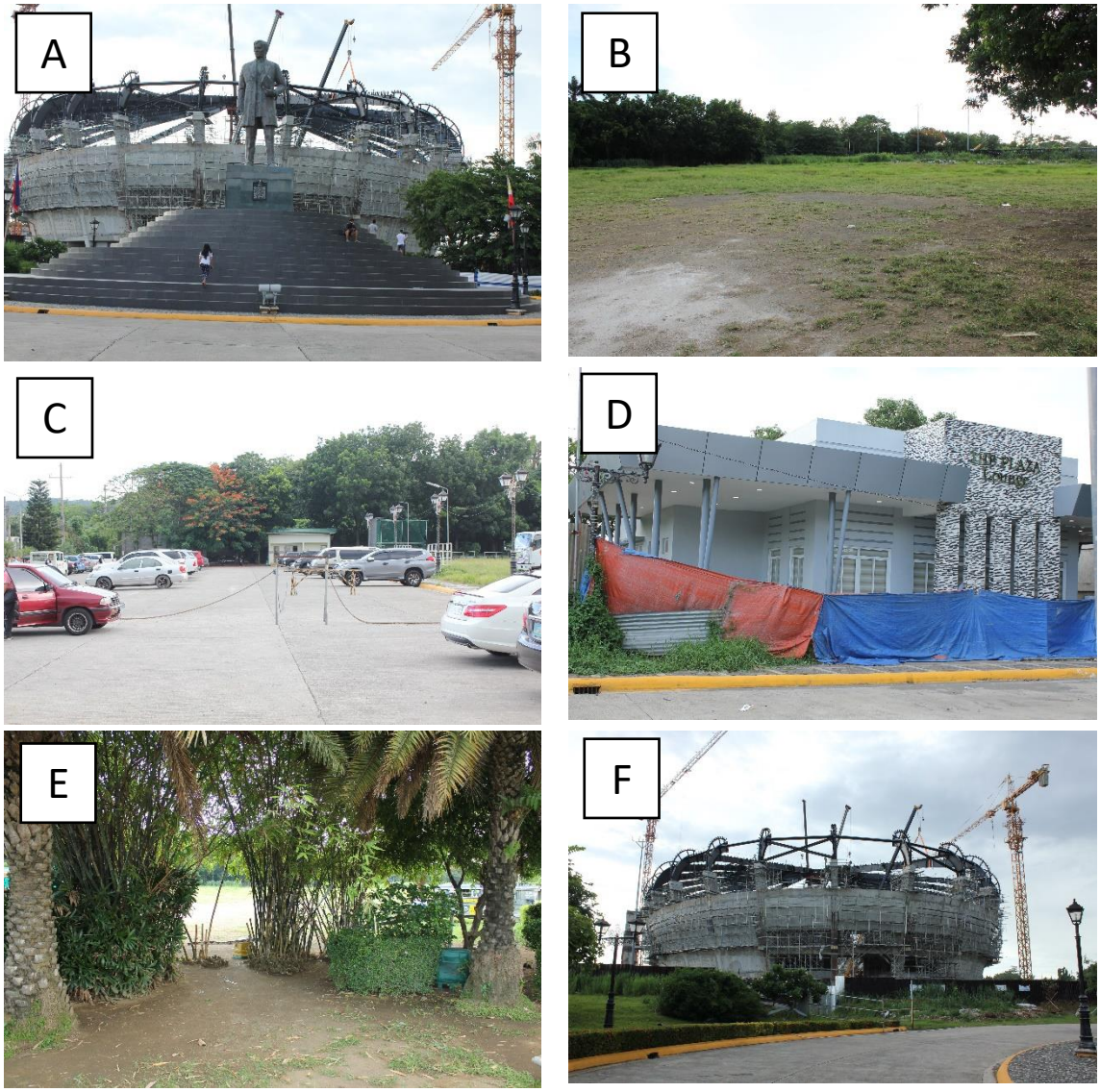


Figure 3.4. Pictures from the park showing the A: Jose Rizal monument; B: open field; C: activity area; D: lounge; E: gardens; and F: coliseum being constructed.

3.3 Overview of the research design

Figure 3.5 presents the overview of the research design. The research utilised an embedded mixed methods design in which qualitative and quantitative research methods are embedded in a more extensive research strategy (Creswell and Creswell, 2018). For this research, key informant interviews were used to identify the stakeholders of the park and develop a comprehensive list of its ES and EDS. An online survey was then employed to elicit the values that stakeholders assign to the park ES and EDS. Finally, online focus groups were held to study the dynamics of assigned values (Table 3.1). The interview guides, online survey questions, and focus group procedures and materials were approved by the Nottingham Trent University Ethical Review Committee under project number ARE917. Informed consent was obtained from all individual participants involved in the study. The details of the methods used in each section of the research can be found in the following chapters.

Table 3.1 Data collection and analysis methods used in each data chapter

Chapter	Data collection methods	Analysis methods
4	Key informant interviews to identify the stakeholders of the Jose Rizal Plaza and determine the ES and EDS that they associate with it.	Summative content analysis, socio-ecological network analysis by Kati & Jari (2016).
5	An online survey with a five-section questionnaire asking about park use, environmental knowledge, perception, behaviour, social value orientation, valuation of ecosystem services (ES) and disservices (EDS), and socio-economic characteristics.	Parametric and non-parametric tests (e.g., Mann-Whitney U, Kruskal-Wallis, Kendall's (1945) tau-b), Fuzzy-set Qualitative Analysis (Ragin & Davey, 2019).
6	Online focus groups	Summative content analysis, Parametric and non-parametric tests (e.g., Friedman, Wilcoxon, Kendall's W)

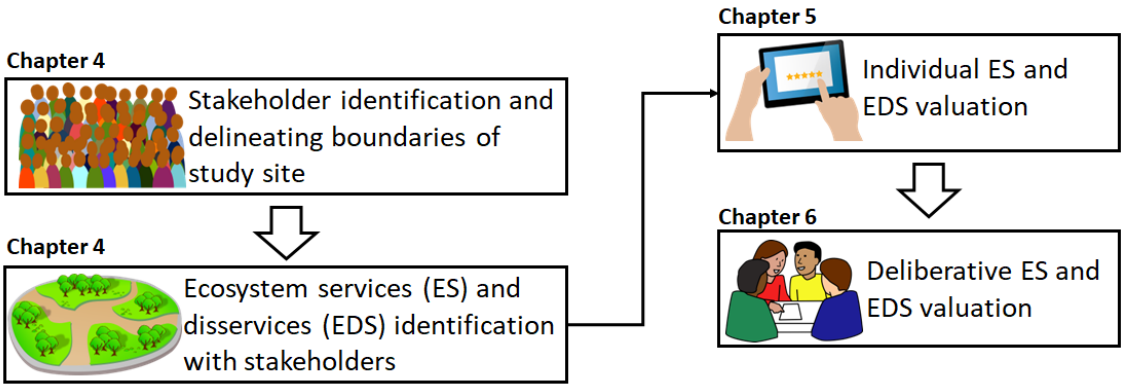


Figure 3.5. Overview of the research design

CHAPTER 4: PARK STAKEHOLDERS AND ECOSYSTEM SERVICES AND DISSERVICES

This chapter presents the specific methods used to achieve the first and second objectives of the study – identifying the stakeholders of the park and comparing the park ES and EDS perceived by different stakeholder groups. It also presents and discusses the results of the key informant interviews and their value.

4.1 Methods

4.1.1 Identifying the stakeholders of the park

The office of the city administrator was first approached to ask which departments are involved in the establishment and management of the park. The city administrator identified four departments - the General Services Office (GSO), Tourism Office (TO), Planning and Development Office (PDO), and Engineering Services Office (ESO). The GSO oversees the overall management of the park. This department issues permits to public and private organisations wanting to use the park, organises the events in the park, and provides personnel to maintain the park's security and cleanliness. The TO's only role at present is to help in the promotion of the park. The P DO and ESO were involved in the planning and construction of the park. These two offices now monitor the construction of the coliseum in the park and design the additional amenities that will eventually be built there. Semi-structured interviews with representatives from these departments were carried out from December 2019 to January 2020. The interviews were conducted in Filipino, audio-recorded, transcribed, and translated. A copy of the interview guide for this first set of key informant interviews can be found in Appendix 4.

4.1.2 Identifying and comparing the park ES and EDS perceived by stakeholders

Semi-structured interviews with representatives of the different stakeholder groups using a combination of open-ended and closed questions were carried out from January to February 2020. The respondents were asked how they make use of the park and what benefits and disbenefits they think the park has. To make sure not to miss

any ES and EDS, common park ES and EDS from literature were compiled, and respondents were asked if they think that the park has them. The ES statements and their types were derived from studies by Maestre-Andrés et al. (2016), Kati & Jari (2016), Thiagarajah et al. (2015), and Forest Foundation Philippines et al. (2019), while the EDS statements and types were from Von Döhren & Haase (2015), Liu et al. (2018), Conway & Yip (2016), and Lyytimäki et al. (2008) (Table 4.1). A copy of the interview guide for this second set of key informant interviews can be found in Appendix 4.

The interviews were conducted in Filipino and were audio-recorded. Answers to the closed questions were encoded in a spreadsheet while responses to the open-ended questions were transcribed. Summative content analysis (Hsieh & Shannon, 2005; Kondracki et al., 2002) was used to analyse the transcripts. This process involves the quantitative and qualitative examination of the transcripts to identify patterns and themes. It is used to provide a descriptive summary or an overview of the content being analysed and to make inferences about the prevalence and distribution of certain themes or ideas (Hsieh & Shannon, 2005; Kondracki et al., 2002). Keywords from the answers were identified and coded according to their question number using the comment function in Microsoft Word. They were then extracted and collated into a spreadsheet after which their general themes were identified. The data collected from the interviews were anonymised and then analysed through IBM SPSS Statistics for Windows, Version 26.0. A diagram similar to the socio-ecological network described by Kati & Jari (2016) was constructed to compare the benefits and disbenefits identified by different stakeholder groups.

Table 4.1. ES and EDS statements from literature. 1 - 34 are ES statements, and 35 - 48 are EDS statements.

No.	Type	ES and EDS statements
1	provisioning	The park is a source of food for people (e.g., fruits, vegetables).
2	provisioning	The park is a source of water for people.
3	provisioning	The park is a source of raw materials for people (e.g., wood, fibre).
4	regulating	The park helps in air purification (or controlling air pollution) through the trees and other vegetation present in it.
5	regulating	The park helps to reduce heat island effect (the increased temperature in urban areas because of hardscapes – surfaces made out of concrete, bricks, and stones).
6	regulating	The park helps in preventing flood (e.g., plant roots that absorb water, storage areas like ponds).
7	regulating	The park serves as a water recharge area (a place where water can seep into the ground and refill an aquifer).
8	regulating	The park helps in purifying water (that enters the soil) because of the vegetation present in it.
9	regulating	The park prevents soil erosion (wearing-away of a field's topsoil by water and wind).
10	regulating	The park enables pollination.
11	regulating	The park enables seed dispersal.
12	regulating	The park conserves biodiversity (of plants and animals).
13	regulating	The diversity of plants and animals in the park prevents or moderates the impacts of pests and diseases.
14	cultural	The park enables (eco) tourism.
15	cultural	The park provides a place for enjoyment and spending free time.
16	cultural	The park offers opportunities for practising different sports and keeping fit.
17	cultural	The park provides a place to disconnect, relax, and diminish stress (mental recreation).
18	cultural	The park provides unique and attractive landscapes (aesthetic information).
19	cultural	The park provides inspiration for culture, art, and design.
20	cultural	The park provides a place for direct connection with nature (spiritual experience).
21	cultural	The park provides a place to pray and practice religious beliefs.
22	cultural	The park provides a place for research on and education about nature (information for cognitive development).
23	cultural	The park helps in the maintenance and exposure of traditional countryside activities and skills (traditional knowledge).

Table 4.1 continued.

No.	Type	ES and EDS statements
24	cultural	The park provides a space where you can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation).
25	cultural	The park enables the expression of local identity and cultural heritage.
26	economic	The park is a source of revenue for locals.
27	economic	The park provides jobs to locals.
28	economic	The park increases property values.
29	security	The park lowers crime rates. It encourages more people to spend time outside their homes and in those spaces, leading to greater degree of informal surveillance of the area and deterring crime.
30	security	The park provides a notion of government presence/good governance.
31	security	The park lowers road rage incidents (by slowing vehicles).
32	existence	I am satisfied knowing that the park exists, with or without its benefits.
33	option	I am satisfied knowing that I can use the park anytime in the future for whatever benefit it can provide me.
34	bequest	The park will be beneficial to future generations.
35	health	The plants in the park and their pollens cause allergies or poisoning.
36	psychological	Green areas (with grass and dense vegetation) in the park that are not intensively managed are unpleasant, ugly, and unsafe.
37	ecological	The plants in the park emit polluting gases and dust (in the course of maintenance) that reduce air quality or contribute to air pollution.
38	psychological	There is too much noise from the park when there are events.
39	psychological	Some plants and animals in the park smell unpleasant.
40	economic	The park is expensive to create and maintain. Funds can be used for other projects.
41	ecological	Some aspects of the park cause damage to structures/people (decomposition of construction wood by microbial activity, bird excrements accelerating corrosion, tree roots damaging pavements, or animals digging nesting holes).
42	health	Animals in the park can become disease vectors.
43	psychological	Trees and other plants in the park block the view from houses or when walking.

Table 4.1 continued.

No.	Type	ES and EDS statements
44	psychological	The park obstructs fast and comfortable transportation (motorists slow down to take a peek of the park).
45	ecological	The park gives access to invasive species.
46	psychological	Animals searching for food in the trash bins in the park litter the environment.
47	psychological	Wild or semi-wild animals like bats or rats in the park cause fear and inconvenience.
48	psychological	The park provides space for crime/illegal activities and anti-social behaviour.

4.2 Results and discussion

4.2.1 Identifying the stakeholders of the park

Socio-cultural valuation studies often define stakeholders as the people affected by, the people responsible for, or the decision-makers involved in the ecosystem under study (Walz *et al.*, 2019). In this study, the intended beneficiaries of the park, according to the city office departments, were assumed to be its stakeholders:

a) the city office and its employees;

b) the businesses around the park (specifically in Barangays Real and Halang);

c) students; and

d) the residents from all *barangays* (near and far from the park).

They were expected to have overlapping characteristics as they were not identified through power relations or management responsibilities but by the city office's perception of how they use the park. According to GSO, the city office benefits from the park by providing a space for the events hosted by the city and by serving as an extended parking space for city office employees. The predicted increase in the number of tourists and visitors, on the other hand, is expected to boost the income of the businesses around its vicinity, especially the closest ones. The TO mentioned that the park serves as a venue for student activities (e.g., cultural events, sports training and competitions). There was also an agreement among respondents that all the *barangays* in the city, near or far, are going to benefit from the park from tourism and

recreation. The respondents suggested that one 4-km jeepney-ride (public transportation) could be considered as the threshold in assigning “near” and “far” *barangays*. The *barangays* that are within a 4-km radius from the park could be regarded near, while those that are outside could be considered far.

During the interviews, the respondents mentioned several benefits that they associate with the Jose Rizal Plaza (Table 4.2). These were added to the ES and EDS statements from the literature (Table 4.1). The complete list of ES and EDS from literature and the first set of key informant interviews can be found in Appendix 5.

Table 4.2. Functions and benefits of the Jose Rizal Plaza cited by the respondents during the first set of key informant interviews

No.	Type	Statements
1	cultural	The park enables the commemoration of the national hero, Jose Rizal.
2	cultural	The park promotes the local identity of the city.
3	cultural	The park stimulates the interest of the residents to the city’s history and cultural heritage (including Jose Rizal).
4	economic	The park provides a place where city events (e.g., festivals, competitions, assemblies) can be held, enabling the city to save resources.
5	economic	The park serves as an extended parking space for city office employees and residents.
6	economic	The park is a source of revenue for the city (as the activity area can be rented).
7	cultural	The park serves as a meeting place for different groups.
8	cultural	The park serves as an exercise area (e.g., Zumba classes, jogging, walking).
9	cultural	The park provides a venue for sports (e.g., football, baseball).
10	cultural	The park serves as an additional tourist destination (as tourists mostly visit the resorts in the city).

Selecting stakeholder group representatives

With the help of the office of the mayor, five departments were selected to represent the city office in the second round of interviews. The City College of Calamba was chosen to provide student representatives because the city subsidises this college, and as such will be easier to collaborate with, through the city office. Five businesses in Barangay Halang and Real were also selected, but unfortunately, they refused the interviews, citing lack of time as a reason.

Studies suggest that proximity to the green infrastructure or green spaces influences how people perceive their benefits (Grahn & Stigsdotter, 2003; Nielsen & Hansen, 2007; Wright Wendel et al., 2012). So, to select which of the 54 *barangays* to include in the study, the *barangays* were first separated into those within and outside the 4-km distance from the park using ArcGIS Version 10.1 and with the help of the respondents (Figure 4.1). From this point onward, those within the 4-km radius will be called "*barangays* near the park", and those outside "*barangays* far from the park". Out of the 54 *barangays*, 32 are near the park, and 22 are far from it. Consistent with how the study site was chosen, the top two *barangays* in each group with the highest level of urbanisation, as reflected by the high percentage of their residential area were selected. Two *barangays* in each group with high levels of urbanisation but also held a part of the city's upland conservation zone were also chosen. This zone is meant to protect and conserve the environmentally-sensitive upland areas of Calamba City. It also defines the urban edge of the city and is proposed to be maintained in a low development density, rural state (Calamba City, 2017). The two *barangays* closest to the park were also included to represent areas with which the park has immediate benefits and disbenefits. Five representatives from each selected *barangay* were interviewed. The stakeholder groups and the number of representatives interviewed are in

Table 4.3.

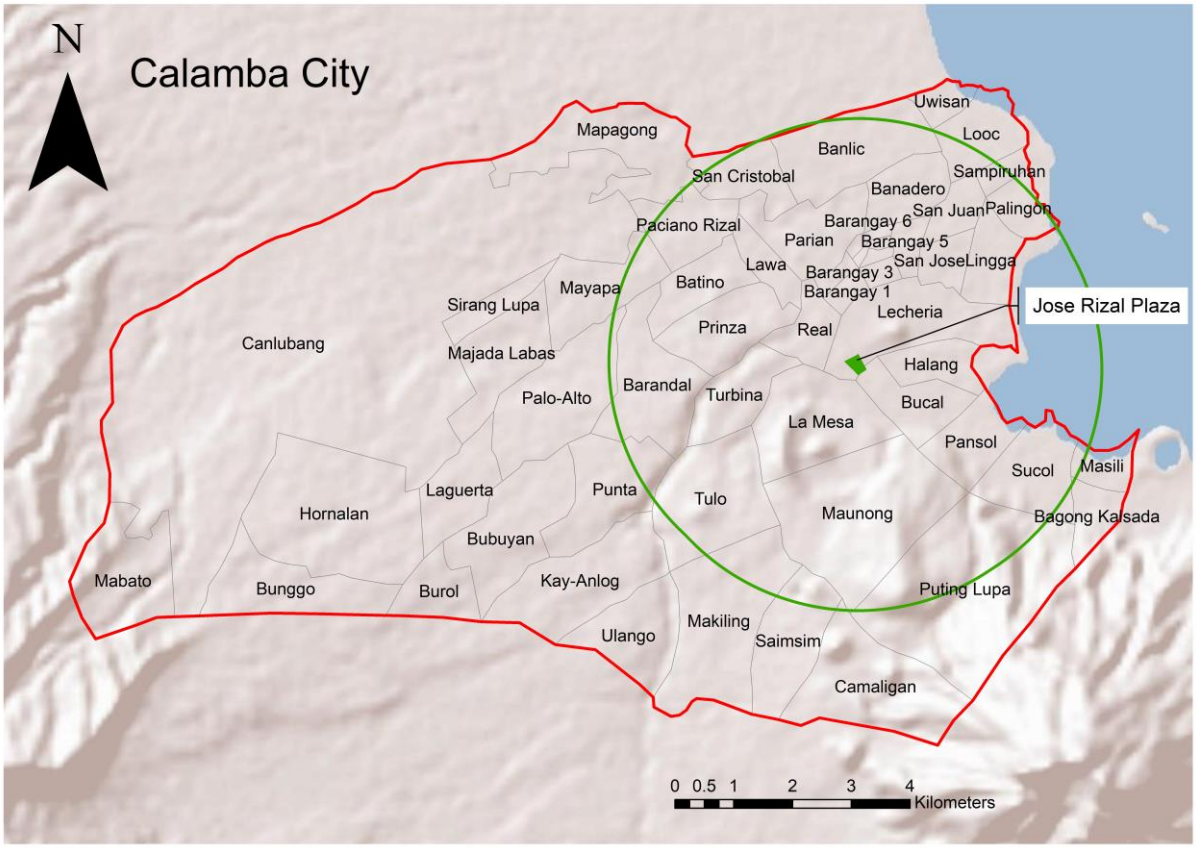


Figure 4.1. Barangays in Calamba City within and outside the 4-km radius (indicated by the green circle)

Table 4.3. Stakeholder groups and the number of representatives that were interviewed

No.	Stakeholder group	Number interviewed
1	Barangays closest to the park: Real, Halang	10
2	Barangays far from the park *With an upland conservation area*: Canlubang, Camaligan *Without an upland conservation area*: Mayapa, Masili	20
3	Barangays near the park *With an upland conservation area:* Bucal, La Mesa *Without an upland conservation area*: San Juan, Barangay 4	20
4	City office employees from the following departments: General Services Office, Engineering Services Office, Planning and Development Office, Tourism Office, and Environment and Natural Resources Office	5
5	College students from the City College of Calamba	5
	TOTAL	60

4.2.2 Identifying and comparing the park ES and EDS perceived by stakeholders

All the respondents have already visited the Jose Rizal Plaza. The majority of them (45%) remember going to the park annually, while 25% and 8% remember coming to the park monthly and weekly, respectively. For those who come annually, they visit the park at an average of 3 times (*SD* = 2.53) per year; those who come monthly, 4 times (*SD* = 3.52); and those who come weekly, 2 times (*SD* = 1.36) (Table 4.4). Most of the respondents from barangays closest to the park (80%) visit the area either monthly or annually. In comparison, a higher percentage of respondents from barangays far from the park (70%) visit the area annually. More college students and respondents from barangays near the park visit the area monthly (60% and 12%, respectively), while more city office employees visit it weekly (60%) (Figure 4.2).

Table 4.4. Summary of the respondents' answers to the question "How often do you visit the park?"

Unit of visit	Number	Percentage (%)	Mean	Minimum	Maximum	Std. Dev.
week	8	13.3	2	1	5	1.36
month	25	41.7	4	1	15	3.52
year	27	45	3	1	10	2.53

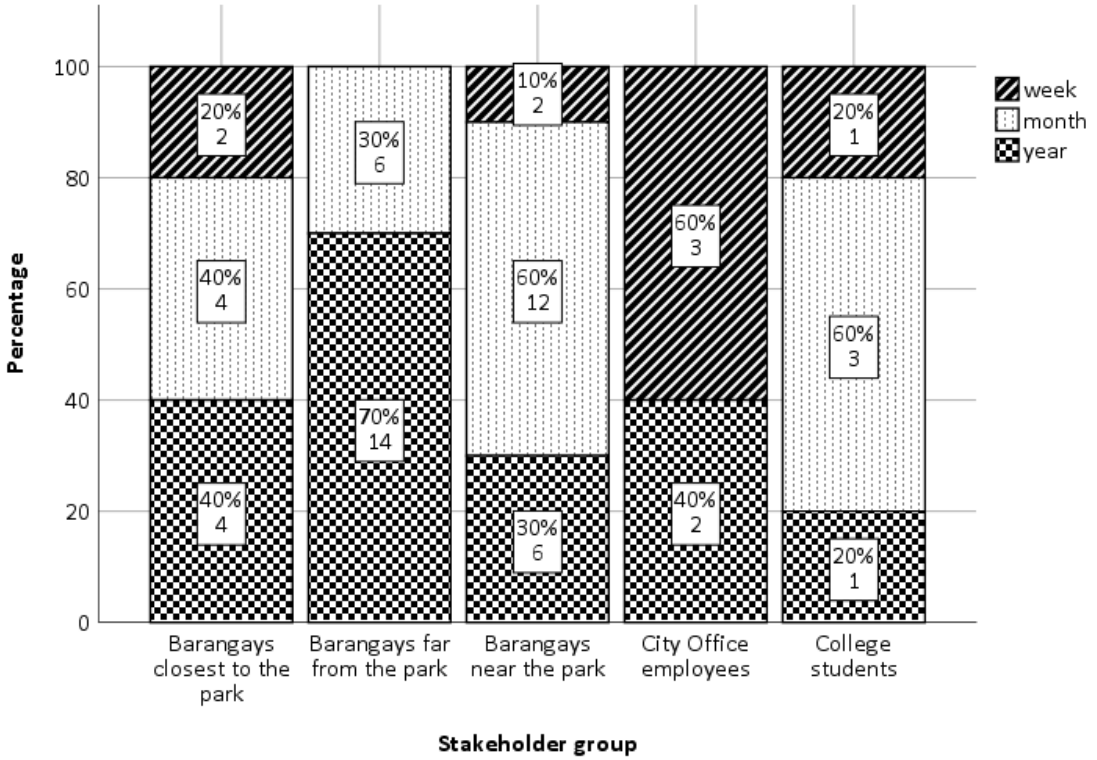


Figure 4.2. Percentage of respondents who visited the park weekly, monthly, and annually, by stakeholder group

Ecosystem services

When the respondents were asked if they thought the park had benefits, 93.3% answered “yes”, while 5% and 1.7% answered “no” and “do not know”, respectively (Figure 4.3). Their responses by stakeholder group are in Figure 4.4, while the comparison of *barangays* with and without conservations zones is in Figure 4.5.

The stakeholders mentioned a total of 200 keywords with 21 themes when asked about the benefits of the park. The overall top five answers were the following: “serves as an open space for events, meetings, and training” (21%); “a venue for exercise” (18.5%) and “sports” (10%); and “a place for relaxation” (7.5%), “recreation” (7%), and “happiness and enjoyment” (7%) (Table 4.5). The benefits mentioned by the stakeholders were related to 13 (statements number 14, 15, 16, 17, 18, 22, 24, 25, 26, 28, 29, 32, and 33) out of the 39 ES statements from literature and the first set of key informant interviews (see Appendix 5). Nine out of the thirteen ES statements were cultural, while the rest were economic.

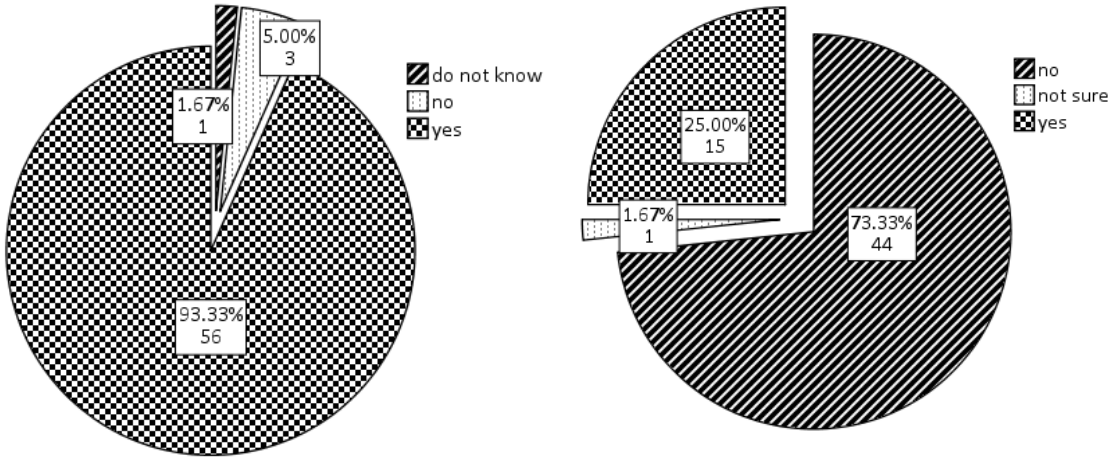


Figure 4.3. Respondents' answers to the questions "Do you think the park has benefits?" (left) and "Do you think the park has disbenefits?" (right)

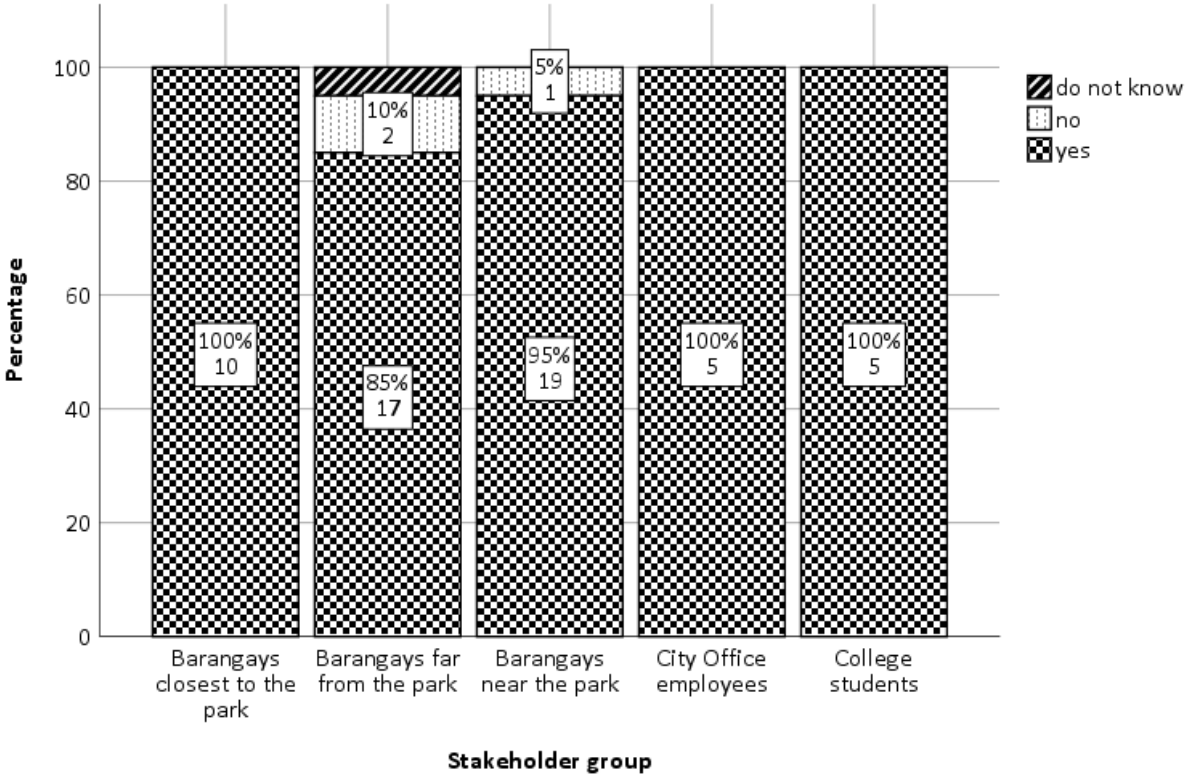


Figure 4.4. Respondents' answers to the question "Do you think the park has benefits?" by stakeholder group

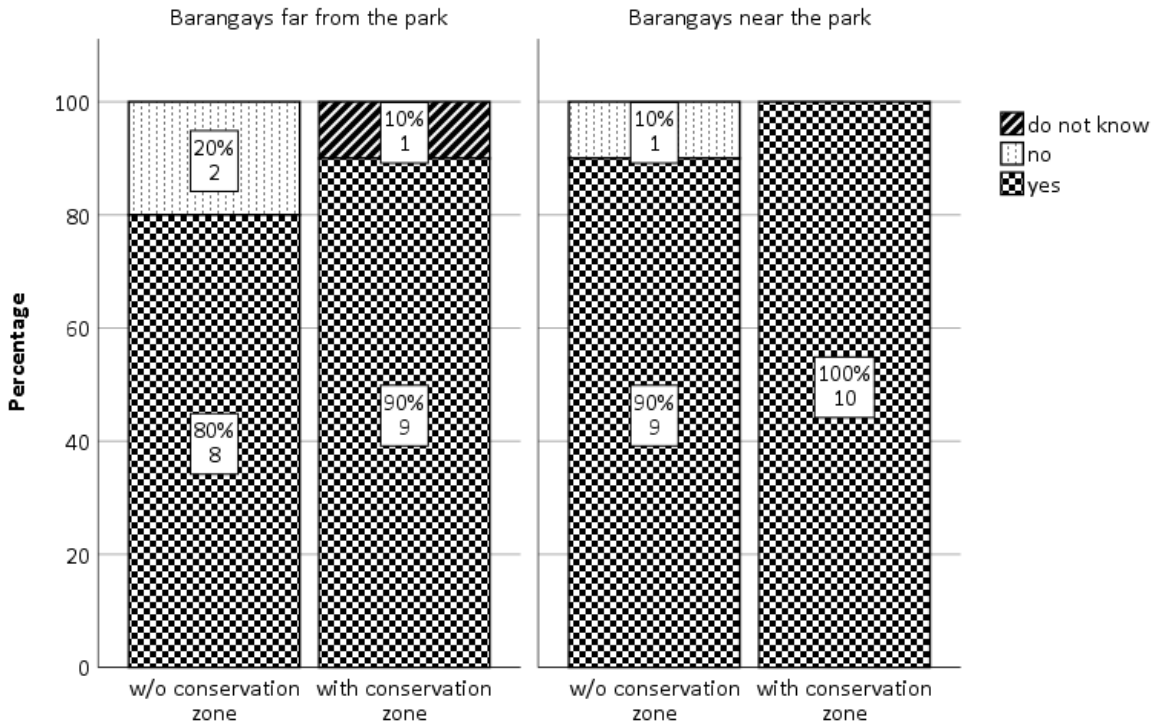


Figure 4.5. Answers of the respondents from *barangays* far from and near the park, with and without conservation zones, to the question "Do you think the park has benefits?"

Table 4.5. Benefits of the park according to the respondents. Actual responses are in Appendix 6.

No.	Benefits	Related ES statement(s)*	Type	No. of mentions	Percentage (%)
1	open space for events, meetings, and training	24, 32	cultural, economic	42	21
2	exercise	16	cultural	37	18.5
3	sports	16	cultural	20	10
4	relaxation	17	cultural	15	7.5
5	recreation	15	cultural	14	7
6	happiness and enjoyment	17	cultural	14	7
7	contribute to city's improvement	25, 28	cultural, economic	11	5.5
8	tourism	14	cultural	10	5
9	place to have a stroll	15	cultural	8	4
10	improves mental health	17	cultural	7	3.5

No.Benefits	Related ES statement(s)*	Type	No. of mentions	Percentage (%)
11 family bonding	24	cultural	4	2
12 parking space	33	economic	3	1.5
13 source of income for locals	29	economic	3	1.5
14 socialisation	24	cultural	3	1.5
15 nice views	18	cultural	2	1
16 general health	16	cultural	2	1
17 shopping	15	cultural	1	.5
18 increase awareness of people about the history of the city	26	cultural	1	.5
19 increase (non-economic) quality of life city residents	**	cultural	1	.5
20 environmental awareness for children	22	cultural	1	.5
21 dining out	15	cultural	1	.5
Total			200	100

* ES statements from literature that the keywords are related to (see Appendix 6); ** additional ES mentioned by a respondent.

Figure 4.6 shows the benefits of the park that the five stakeholder groups share. The sizes of the circles represent the average number of keywords each stakeholder group had stated to identify the benefits of the park. This value was computed by dividing the total number of the keywords mentioned by a stakeholder group by the number of respondents who answered the question in that group. The city office employees cited the highest average number of keywords as a group – 6, while the *barangays* far from the park and college students cited the lowest at 3 (Table 4.6). The numbers between each line connecting the stakeholder groups tell the number of benefits they both mentioned. The *barangays* near the park and the *barangays* far and closest to the park had the highest number of shared benefits (12) while the college students and the city office employees had the smallest number of shared benefits (5). The specific benefits that the stakeholder groups share and the benefits shared by *barangays* with and without conservation zones are in Appendix 7.

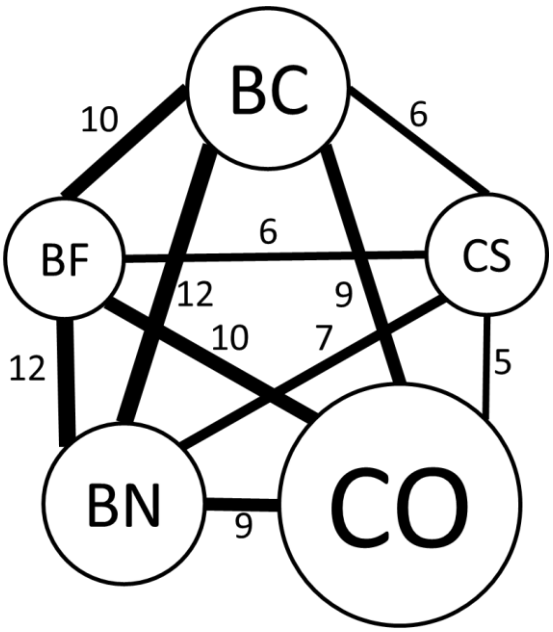


Figure 4.6. Number of benefits shared by the five stakeholder groups – BC: Barangays closest to the park; CS: College students; CO: city office employees; BN: Barangays near the park; and BF: Barangays far from the park. The diameter of each circle represents the average number of keywords a stakeholder group mentioned for the park ES (Table 4.6), while the numbers between each line connecting the stakeholder groups tell the number of benefits they both mentioned.

Table 4.6. Summary of the number of keywords mentioned by each stakeholder group when asked about the benefits of the Jose Rizal Plaza

Stakeholder groups	**No. of resp.**	**Total no. of keywords**	**No. of resp. who answered**	**Average number of keywords**
Barangays closest to the park	10	38	10	4
Barangays far from the park (all)	20	42	17	3
w/o conservation zone	10	28	8	4
with conservation zone	10	14	9	2
Barangays near the park (all)	20	75	19	4
w/o conservation zone	10	36	9	4
with conservation zone	10	39	10	4
City office employees	5	32	5	6
College students	5	13	5	3
TOTAL	60	200		

Ecosystem disservices

When asked if they thought the park had disbenefits, 73.3% of the respondents said "no", while 25% and 1.7% said "yes" and "not sure", respectively (Figure 4.3). Their responses by stakeholder group are in Figure 4.7, while the comparison of *barangays* with and without conservations zones is in Figure 4.8.

Those who believed that the park had disbenefits stated a total of 23 keywords with 10 themes (Table 4.7). The top theme was "anti-social activities or behaviour" which include the formation of gangs, drug use, and other issues involving the youth. Part of the top five were security issues (related to the park having poor-lit areas and being located near illegal settlements), crime, traffic, and costs. The disbenefits mentioned by the stakeholders were related to only 3 (45, 49, and 53) out of the 14 EDS statements from literature and the first set of key informant interviews (see Appendix 5). Two of the three EDS statements were psychological disbenefits, while one was economic.

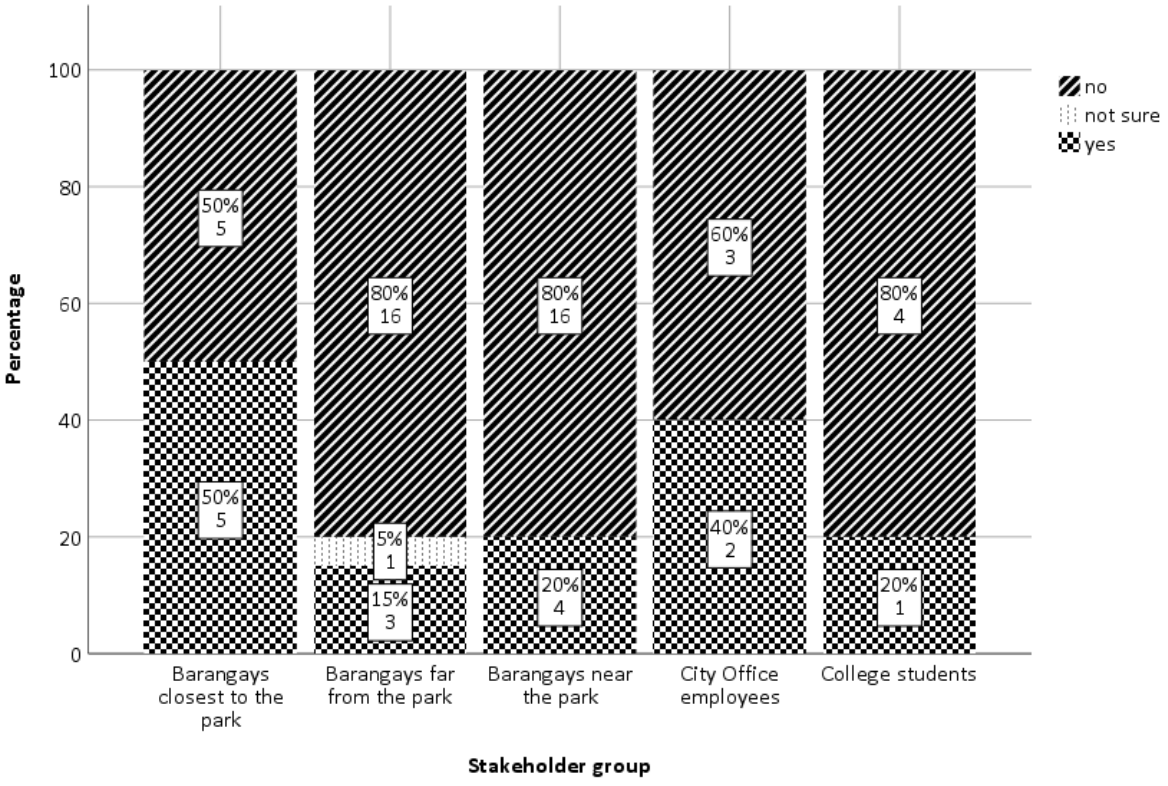


Figure 4.7. Respondents' answers to the question "Do you think the park has disbenefits?" by stakeholder group

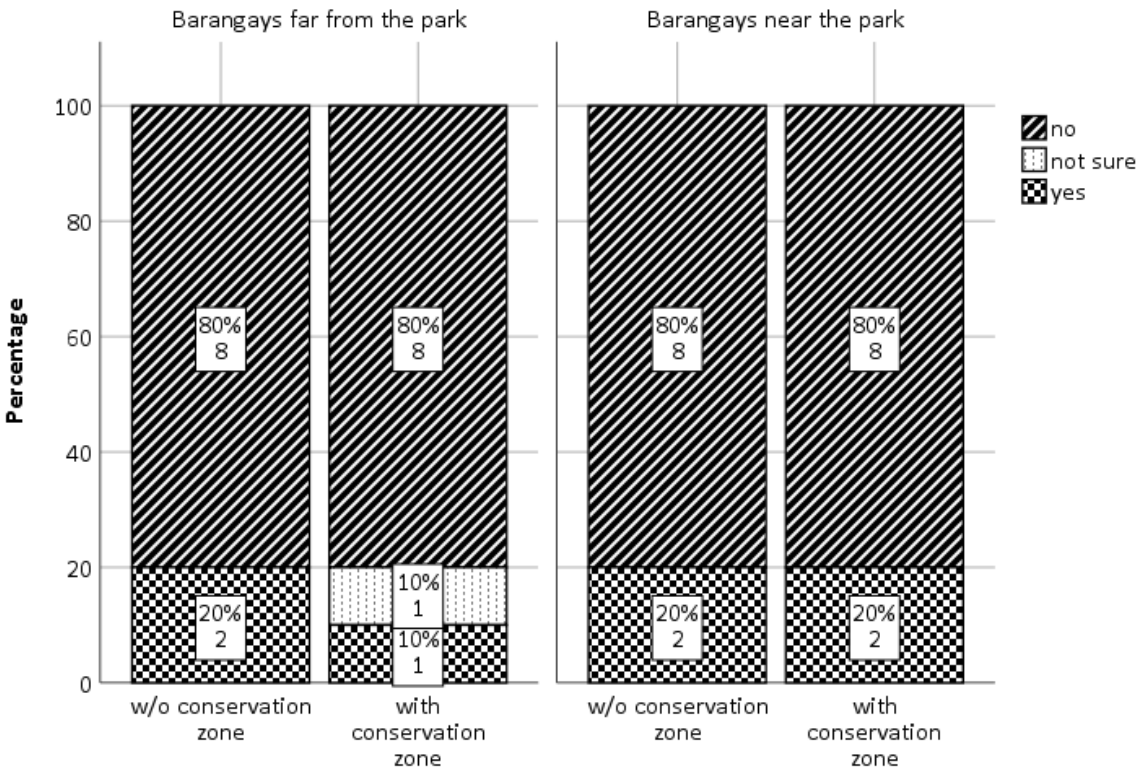


Figure 4.8. Answers of the respondents from *barangays* far and near the park, with and without conservation zones, to the question “Do you think the park has disbenefits?”

Table 4.7. Disbenefits of the park according to the respondents. Actual responses are in Appendix 6.

No.	Disbenefits	Related ES statement(s)*	Type	No. of mentions	Percentage (%)
1	anti-social activities	53	psychological	10	43.48
2	security issues	53	psychological	2	8.7
3	crime	53	psychological	2	8.7
4	causes traffic	49	psychological	2	8.7
5	additional cost for the city	45	economic	2	8.7
6	some spaces are wasted	**	psychological	1	4.35
7	lack of parking	**	psychological	1	4.35
8	incomplete facilities	**	psychological	1	4.35
9	exposure to pollution	**	health	1	4.35
10	conflict on users	**	psychological	1	4.35
	Total			23	100

* EDS statements from literature that the keywords are related to (see Appendix 5); ** additional EDS mentioned by the respondents.

The disbenefits shared by the stakeholder groups are in Figure 4.9. Only the *barangays* near the park and the *barangays* closest to and far from the park shared two disbenefits. The rest only shared one. The city office employees had the highest average number of keywords (3); followed by *barangays* near the park (2) and the *barangays* closest to the park, far from the park, and college students (1) (Table 4.8). The specific disbenefits that the stakeholder groups share and the disbenefits shared by *barangays* with and without conservation zones are in Appendix 7.

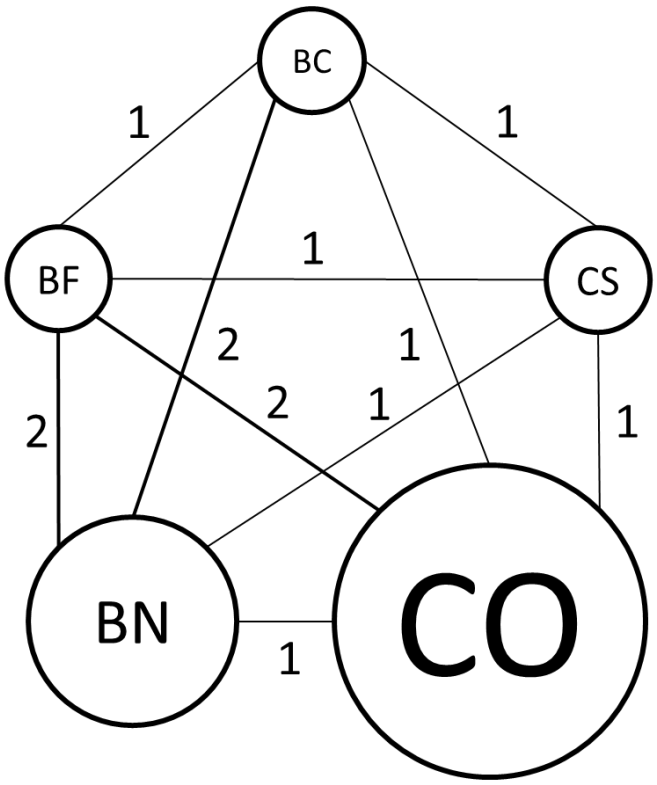


Figure 4.9. Number of disbenefits shared by the five stakeholder groups – BC: Barangays closest to the park; CS: College students; CO: city office employees; BN: Barangays near the park; and BF: Barangays far from the park. The diameter of each circle represents the average number of keywords a stakeholder group mentioned for the park EDS (Table 4.8) multiplied by two (for visualisation), while the numbers between each line connecting the stakeholder groups tell the number of disbenefits they both mentioned.

Table 4.8. Summary of the number of keywords mentioned by each stakeholder group when asked about the disbenefits of the Jose Rizal Plaza

Stakeholder groups	No. of resp.	Total no. of keywords	No. of resp. who answered	Average number of keywords
Barangays closest to the park	10	7	5	1
Barangays far from the park (all)	20	3	3	1
w/o conservation zone	10	3	2	2
with conservation zone	10	0	1	0
Barangays near the park (all)	20	6	4	2
w/o conservation zone	10	2	2	1
with conservation zone	10	4	2	2
City office employees	5	6	2	3
College students	5	1	1	1
TOTAL	60	23		

Additional ES and EDS

Respondents mentioned ES and EDS that were not in the list from literature (Table 4.9). These ES and EDS statements will be added to the list that will be used in the valuation survey in the next stage of the research.

Table 4.9. ES and EDS mentioned by the respondents that are not related to the list from literature. 1 and 2 are ES statements, while 3 – 6 are EDS statements.

No.	Type	Statements
1	cultural	The park enhances the non-economic quality of life of the city residents.
2	cultural	The park contributes to increasing the green areas in the city.
3	psychological	The park can stir up conflict among users - who should be prioritised to use the open space?
4	economic	The park wastes the land that could have been used for other purposes.
5	health	The park exposes visitors to air pollution since it is beside the road.
6	psychological	The incomplete features of the park bring frustration to the residents.

The results in this section strongly suggest that the stakeholders regard the park as beneficial, and this is whether they have a direct role in its maintenance, living near to or far from it, or with or without conservation zones. The benefits that respondents mentioned were mostly cultural ES. This finding broadly confirms that urban parks primarily provide two ES types – cultural and regulating (Dai et al., 2019; Giedych & Maksymiuk, 2017). However, cultural ES could outweigh the value of other ES in the urban setting where well-being is much more important to stakeholders (Thiagarajah et al., 2015).

It can also be inferred from the results that the city office employees are the most knowledgeable when it comes to the park's benefits. The *barangays* near the park are the most similar to the *barangays* closest to and far from the park when it comes to identifying the benefits of the park. This finding could confirm that the benefits of the park extend not only to the ones immediately around it but to farther *barangays* as well. The *barangays* far from the park and the college students identified the least number of benefits, but the students appear to have the least similarity to all other stakeholders in identifying the benefits of the park. It could well be because of their majors or their disinterest in parks as they frequent malls, sports complexes, and other recreational places more. It could also be because the park does not have the amenities that appeal to them. Baran et al. (2013) and Veitch et al. (2016) suggest that park amenities are essential factors in encouraging park use for adolescents. The students' similarity to the *barangays* closest to, near, and far from the park, however, should be interpreted with caution since the number of respondents for the college students was lower than the three other groups. Nevertheless, the results point out that asking only students or a single stakeholder group to elucidate the benefits of a particular park might lead to missing a lot of benefits that the park has. This has been emphasised in several researches – the importance of involving as many stakeholder groups as possible in determining the benefits of parks (see Bullock et al., 2018; Langemeyer et al., 2015).

The park's disbenefits seemed to be most felt by the *barangays* closest to the park and least felt by the college students and *barangays* far from and near the park. Their answers suggest that they have observed numerous anti-social activities in the park.

Analysing the disbenefits that the stakeholders share, it can be said that the city office employees have the most knowledge about the park's disbenefits, while the college students and the *barangays* far from the park have the least knowledge about them. Similar to the findings of the benefits of the park, the *barangays* near the park are also the most similar to the *barangays* closest to and far from the park when it comes to identifying the disbenefits of the park. Students also appear to have the least similarity to all other stakeholders in identifying the disbenefits of the park.

Overall, the findings from this section provide a diverse perspective on the role and value of Jose Rizal Plaza. It has been recognised that urban parks predominantly offer cultural and regulating ES (Giedych and Maksymiuk, 2017; Dai *et al.*, 2019), aligning with the local perceptions of Jose Rizal Plaza as revealed in this research. This affinity for cultural ES echoes the emphasis on well-being in urban areas noted by Thiagarajah *et al.* (2015) in their work about the cultural ES of parks in Singapore. The diverse responses across stakeholder groups, such as city office employees, barangays, and college students, underscore the importance of inclusivity, reflecting the significance of involving various stakeholders in ES assessment, as emphasised by Bullock *et al.* (2018) and Langemeyer *et al.* (2015). These insights will be crucial in informing the subsequent chapters of this thesis, specifically the online valuation and focus groups, allowing for a more holistic evaluation of the urban park's impact on the community.

Agreement to ecosystem services and disservices statements from literature

The respondents agreed or strongly agreed to 34 (out of 39) ES and 3 (out of 14) EDS statements. The number of ES and EDS agreed or strongly agreed by the stakeholder groups are in Table 4.10.

The barangays closest to the park agreed or strongly agreed to the highest number of ES statements (35), while college students agreed or strongly agreed to the least number of ES statements (21). The city office employees agreed or strongly agreed to 33, while the barangays far from and near the park agreed or strongly agreed to 31. In barangays far from the park, those with conservation zones agreed to a higher number of ES statements (33 vs 26). It was the opposite for the barangays near the park (30 vs

33). For the EDS, barangays near the park agreed or strongly agreed to the highest number of statements (6), while the barangays far from the park and the city office employees agreed to none. College students and barangays closest to the park agreed or strongly agreed to three. In barangays far from the park, those without conservation zones agreed to none, while the ones with conservation zones agreed to only one. In barangays near the park, those without conservation zones agreed to five while those without agreed to four (Table 4.10).

Table 4.10. Number of ES and EDS agreed or strongly agreed by the stakeholder groups

	Number of ES and EDS statements that they agree or strongly agree with (modes of 4 and 5)		
Stakeholder groups	**ES**	**EDS**	**Total**
Overall	34	3	37
Barangays closest to the park	35	3	38
Barangays far from the park (overall)	31	0	31
with conservation zone	26	0	26
w/o conservation zone	33	1	34
Barangays near the park (overall)	31	6	37
with conservation zone	33	4	37
w/o conservation zone	30	5	35
City office employees	33	0	33
College students	21	3	24

Figure 4.10 to Figure 4.13 show the types of ES and EDS that the different stakeholder groups recognised from the park by agreeing to the ES and EDS statements. Values of the radius (0 - 1) represent the proportion of the statements that the stakeholder group agreed or strongly agreed with for a specific type of ES or EDS (see Appendix 8 for the computation). The existence, option, and bequest ES were aggregated to “non-use” ES, which are the benefits that people get from ecosystems even without physical interaction with them (Kati and Jari, 2016).

The barangays closest to the park recognised the broadest range of ES types in the park, while the college students identified the most limited variety of ES types. Overall, the stakeholder groups observed more of the park's cultural and non-use ES and almost none of the provisioning ES. The regulating ES were recognised to a greater extent by the city office employees and the barangays closest to and near the park. The barangays closest to the park saw most of the park's cultural ES, along with the barangays near the park and city office employees. Two groups recognised, to a greater extent, the economic ES of the park – city office employees and barangays closest to the park. Security ES were mostly known to barangays near and closest to the park, while non-use ES were known to all stakeholder groups, a little less for college students (Figure 4.10).

There is almost no difference in how the barangays with and without conservation zones within barangays near the park acknowledged the different ES types. Both mostly noticed the park's non-use and cultural ES. In the far barangays, both with and without conservation zones also identified the park's non-use and cultural ES, but the ones with conservation zones identified a more limited range of ES types (Figure 4.11).

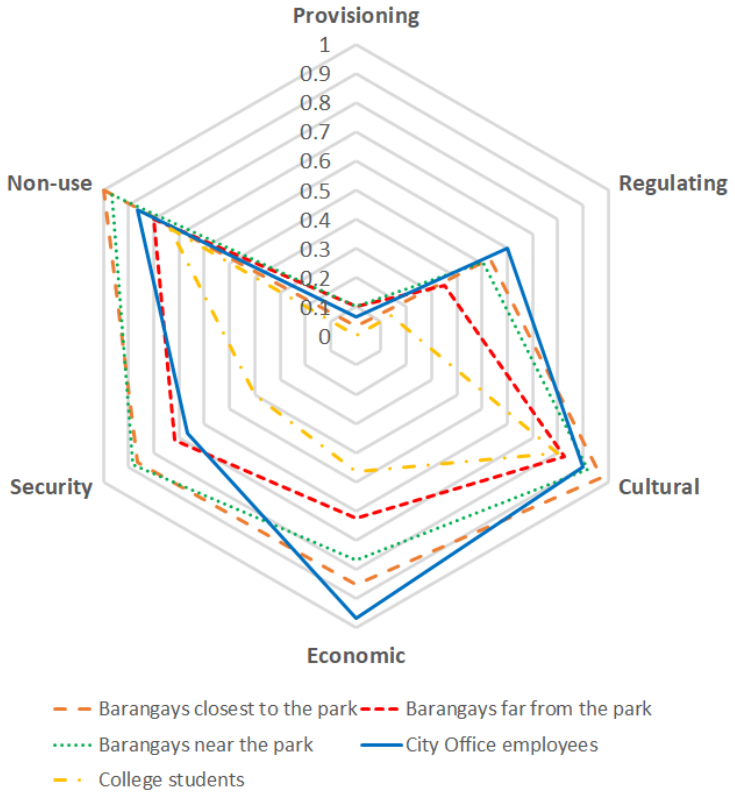


Figure 4.10. Agreement of the stakeholder groups to the different ES types

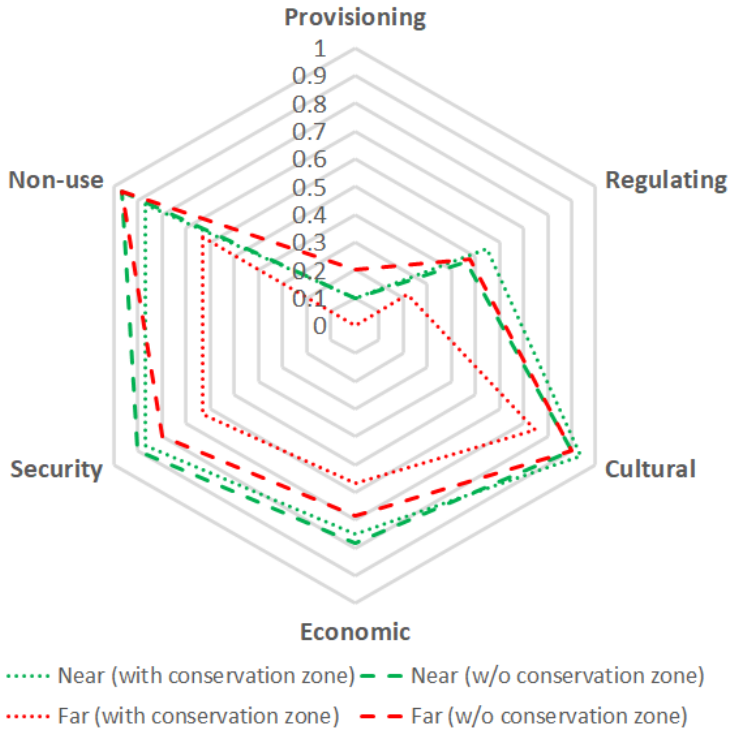


Figure 4.11. Agreement of the barangays with and without conservation zones within barangays far from and near the park to the different ES types

The barangays near the park identified the broadest range of EDS types in the park, while the city office employees identified the most limited variety of EDS types. The stakeholder groups generally observed more of the park's psychological and economic EDS. The health EDS were noticed to a greater extent by the barangays near the park. College students and the barangays near the park saw most of the park's ecological EDS. The barangays near the park was also drawn to a greater extent to the economic EDS of the park. Barangays near the park and college students better noticed psychological EDS (Figure 4.12).

In near barangays, those with conservation zones identified a more limited range of EDS types and mainly saw the park's psychological EDS. The ones without conservation zones were more drawn to the park's economic EDS. In the far barangays, those with conservation zones also identified a more limited range of EDS types and saw more of the park's psychological EDS. The ones without conservation zones were more drawn to the park's health EDS (Figure 4.13).

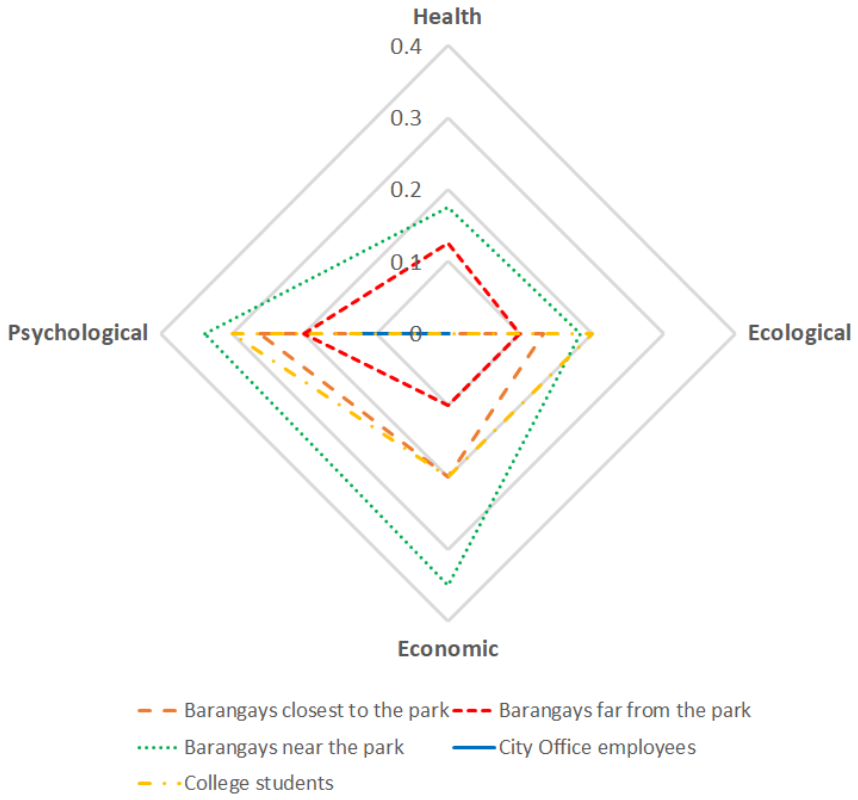


Figure 4.12. Agreement of the stakeholder groups to the different EDS types

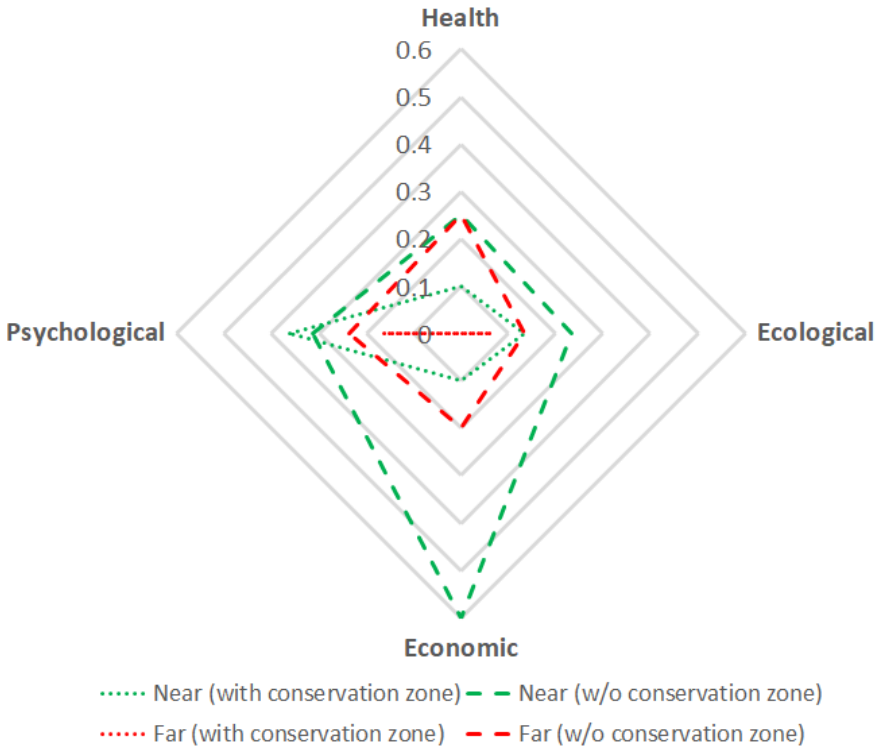


Figure 4.13. Agreement of the barangays with and without conservation zones within barangays far from and near the park to the different EDS types

Results from this part of the interview suggest that the stakeholders believe that the park has more ES than EDS. The barangays closest to the park might have recognised more park ES than any other stakeholder group because of their familiarity with the place because of its proximity. The same reason could explain why the barangays near the park identified the highest number of park EDS. College students seemed to be the most detached to the park as having been presented a list, still identified the least number of ES and EDS. It is difficult to generalise the effect of the presence of conservation zones when it comes to the recognition of ES as it seemed to have influenced the responses in the far barangays positively while otherwise in the near barangays. When it comes to the EDS, their presence seemed to reduce the number of EDS that the respondents acknowledged.

The stakeholders identified more of the park's cultural ES. Interestingly, all the stakeholder groups acknowledged that the park has non-use ES (existence, option, and bequest), but no one mentioned them during the interviews. This finding suggests that this ES type is more difficult to express, probably not only because it is non-material

like the cultural ES, but also since it does not involve interaction with the park. This finding also illustrates the importance of utilising multiple methods when eliciting the ES and EDS that stakeholders associate with parks. Had the stakeholders were just asked and not given a list of potential park ES and EDS, these non-use ES could have been easily missed and excluded in the analysis.

Their proximity to the area and the higher frequency of their visits might have been the reason why the barangays closest to the park had the broadest awareness of the ES types in it. The results generally suggest that the barangays closest to and near the park are very similar in how they perceive the benefits of the park – seeing more of its non-use, cultural, and security ES. The barangays far from the park observed these ES too, but to a lesser extent, probably because of their distance. Aside from the non-use ES, the barangays closest to and near the park also knew the security ES better than other stakeholder groups, and this might be because they see and experience these ES. The higher awareness of city office employees to the economic ES than other stakeholders was expected since they operate the park and assess its economic impacts. The city office employees also seemed more informed of environmental concepts, as they knew the regulating ES more than other stakeholders. The presence of conservation zones did not seem to affect how stakeholders perceive the park's ES, as they had a similar pattern.

Concerning the perception of EDS, the barangays near the park had the broadest awareness of the park's EDS, again possibly because of their proximity and more frequent visits to it. In contrast, the city office employees seem to deny that the park has any EDS. The stakeholders observed more of the park's psychological ES, possibly because these are the ones directly felt. The barangays closest to the park and college students did not believe that the park had any health ES. The presence of conservation zones seemed to widen the EDS types that stakeholders could identify.

The results from the second part of the analysis deepen understanding of stakeholder perceptions of the park's ES and EDS. The emphasis on cultural ES aligns with a broader shift towards recognising non-material benefits in urban areas (Dai et al., 2019). The varying perceptions among stakeholders concerning proximity and conservation zones

reflect a complex interplay of factors similar to the findings of other urban park studies (Baran *et al.*, 2013; Veitch *et al.*, 2015). The discovery that particular non-use ES are more difficult to express resonates with the challenges found in ES valuation and communication (Chan et al., 2012). The study recognises that there might be limitations in generalising the findings from the key informant interviews due to the limited number of stakeholder representatives interviewed. However, the data collected is sufficient to underpin the subsequent stages of this thesis - the online valuation and focus groups.

CHAPTER 5: VALUATION SURVEY

This chapter presents the specific methods used to achieve the third and fourth objectives of the study – examining the non-monetary values that stakeholders assign to the ES and EDS and identifying the factors that influence their valuation. It also presents and discusses the results of the valuation survey and their value to the project.

5.1 Methods

5.1.1 Questionnaire structure and administration

The questionnaire consisted of five sections – 1) Park use; 2) Environmental knowledge, perception, and behaviour; 3) Social value orientation; 4) Valuation of ecosystem services (ES) and disservices (EDS) and willingness-to-contribute; and 5) Socio-economic characteristics. A copy of the questionnaire is in Appendix 9.

The first section asked the respondents how they utilise the park – if they had visited it before and the frequency and purpose of their visits. In the second section, environmental knowledge was measured through common environmental concepts and the environmental laws in the Philippines. Respondents were asked to choose from a group of words, the environmental concepts described in seven statements (Frick et al., 2004; Zsóka et al., 2013). The total number of correct answers was used to represent the respondents' knowledge of environmental concepts. They were then asked to gauge how much they know about the three primary environmental laws in the Philippines through a Likert scale from 0 (practically no knowledge) to 3 (a lot). The three laws that were included are the following: Clean Water Act (Republic Act No. 9275), Clean Air Act (Republic Act No. 8749), and the Ecological Solid Waste Management Act (Republic Act No. 9003). The respondents' environmental perception was assessed by asking them how they think local environmental issues have become since they have lived in Calamba City (Carlsen & Bruggemann, 2020; Dlamini et al., 2020). They were asked to choose from a Likert scale of from 1 (much worse) to 5 (much better). They were also given a choice to answer 0 if they think they do not have enough knowledge to provide a rating. Environmental behaviour was measured by asking the respondents how frequent they practice nine positive environmental

behaviours (Murphy and Fredin, 2004; Liang *et al.*, 2018). They were asked to rate each action from 1 (never) to 5 (always). They were allowed asked to answer 0 if they wanted to skip a number. The scales used to measure the knowledge of environmental laws, environmental perception, and environmental behaviour had high levels of internal consistency (Cronbach's alpha of 0.878, 0.829, and 0.813, respectively).

The respondents' social value orientation (SVO) (*i.e.* the magnitude of their concern to others when it comes to allocating resources) was measured in the third section using a tool developed by Murphy & Ackermann (2013). Respondents were asked to imagine being paired with another person unrelated to them. They were then asked to choose one resource (cash) allocation between him or her and the other person out of nine options six times. The set of responses were then transformed into a degree score which determines the respondents' SVO using the formula:

$$\text{SVO} = \tan^{-1}\left(\frac{\bar{A}_o - 50}{\bar{A}_s - 50}\right)$$

where $\bar{A}_o$ and $\bar{A}_s$ are the mean allocation for the other person and to self, respectively. The SVO angles are illustrated in Figure 5.1 (Murphy & Ackermann, 2013). An angle of less than -12.04 would mean that an individual is competitive while angles between -12.04 and 22.45 would mean that they are an individualist. A prosocial would have an angle between 22.45 and 57.15, while an altruist would have greater than 57.15. A competitive individual is someone who aims to maximise the difference between what they have and what the other person has. Individualists aim to maximise resources for themselves. A prosocial values the equality of resource distribution, while an altruist endeavour to maximise others' resources or benefits (Murphy & Ackermann, 2013). As an example, we will assume a respondent has made their selections, and we have calculated the mean allocations to be $\bar{A}_o$ = 60 and $\bar{A}_s$ = 70. To find the SVO angle, we substitute these values into the formula:

$$\text{SVO} = \tan^{-1}\left(\frac{60 - 50}{70 - 50}\right)$$

$$= \tan^{-1}\left(\frac{10}{20}\right)$$

$$= \tan^{-1}(0.50)$$

$$A = 26.57^{o}$$

Referring to Figure 5.1 and the categorisations outlined by Murphy & Ackermann (2013), this angle places the respondent in the prosocial category, as it falls between 22.45° and 57.15°. This suggests that the respondent values a fair distribution of resources between themselves and others.

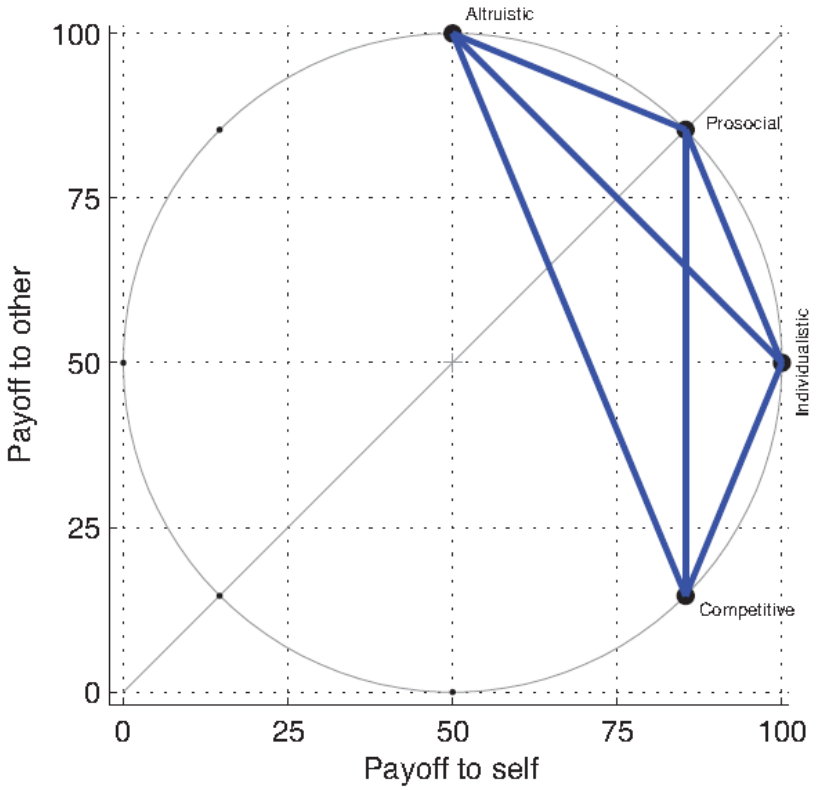


Figure 5.1. SVO angles and their descriptive equivalents in a location plane by (Murphy & Ackermann, 2013)

In the fourth section, the respondents were asked to rate the importance of the ES and the worry they have for the EDS of the park using a continuous scale slider from 0 – 10 (with one decimal place) (Langemeyer et al., 2015; Schmidt et al., 2017). The ES and EDS that were included in the survey came from the benefits and disbenefits cited by the respondents during the key informant interviews (see Chapter 4, section 4.2.2) (Table 5.2). The values that the respondents assigned to ES (statements 1 to 36) and EDS (statements 37 to 44) were averaged. The fifth section summarises the respondents' socio-economic characteristics.

The survey was initially planned to be administered online, by mail, and face-to-face, but because of the COVID-19 outbreak, it was only administered online through the Qualtrics Core XM Survey Tool. The survey was launched on the 17th of April 2020 and was closed on the 31st of July 2020. The link to the survey was distributed using social media and emails. The survey data from Qualtrics was exported as an SPSS data set for analysis.

Table 5.1. ES and EDS statements used in the online survey.

No	Type	Statements
1	regulating	The ability of the park to help in air purification (or controlling air pollution) through the trees and other vegetation present in it.
2	regulating	The ability of the park to help reduce heat island effect (the increased temperature in urban areas because of hardscapes – surfaces made of concrete, bricks, and stones).
3	regulating	The ability of the park to help in preventing flood (e.g., plant roots that absorb water, storage areas like ponds).
4	regulating	The ability of the park to serve as a water recharge area (a place where water can seep into the ground and refill an aquifer).
5	regulating	The ability of the park to help in purifying water that enters the soil because of the vegetation present in it.
6	regulating	The ability of the park to prevent soil erosion (wearing away of a field's topsoil by water and wind).
7	regulating	The ability of the park to enable pollination.
8	regulating	The ability of the park to enable seed dispersal.
9	cultural	The ability of the park to enable (eco) tourism.
10	cultural	The ability of the park to provide a place for enjoyment and to spend free time.
11	cultural	The ability of the park to offer opportunities for practising different sports and keeping fit.
12	cultural	The ability of the park to provide a place to disconnect, relax, and diminish stress (mental recreation).
13	cultural	The ability of the park to provide unique and attractive landscapes (aesthetic information).

No	Type	Statements
14	cultural	The ability of the park to provide inspiration for culture, art, and design.
15	cultural	The park provides a place for direct connection with nature (spiritual experience).
16	cultural	The ability of the park to provide a place to pray and practice religious beliefs.
17	cultural	The ability of the park to provide a place for research on and education about nature (information for cognitive development).
18	cultural	The ability of the park to help in the maintenance and exposure of traditional countryside activities and skills (traditional knowledge).
19	cultural	The ability of the park to provide a space where you can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation).
20	cultural	The ability of the park to enable the expression of local identity and cultural heritage.
21	cultural	The ability of the park to stimulate the interest of the residents to the city's history and cultural heritage (including Jose Rizal).
22	cultural	The ability of the park to provide a way to commemorate our national hero, Jose Rizal.
23	economic	The ability of the park to provide revenue for the city (renting the activity area and other facilities).
24	economic	The ability of the park to provide revenue for locals.
25	economic	The ability of the park to provide jobs to locals.
26	economic	The ability of the park to increase property values.
27	economic	The ability of the park to become a place where different kinds of events in the city (e.g., celebrations, concerts, competitions) can be held.
28	economic	The ability of the park to serve as an extra parking space for city office employees and residents.
29	security	The ability of the park to lower crime rates. It encourages more people to spend time outside their homes and in those spaces, leading to a greater degree of informal surveillance of the area and deterring crime.

No	Type	Statements
30	security	The ability of the park to provide a notion of government presence/good governance.
31	security	The ability of the park to lower road rage incidents (by slowing vehicles).
32	existence	The mere existence of the park, with or without its benefits.
33	option	The idea that the park is there for me to use in the future for whatever benefit it can provide me.
34	bequest	The benefits that the park will provide to future generations.
35	cultural	The ability of the park to enhance the non-economic quality of life of the city residents.
36	cultural	The contribution of the park to increasing the green areas in the city.
37	psychological	The unpleasant, ugly, and unsafe appearance of the green areas (with grass and dense vegetation) in the park that are not intensively managed.
38	psychological	The obstruction of fast and comfortable transportation because of the park (motorists slow down to peek of the park).
39	psychological	The too much noise from the park when there are events.
40	psychological	The risk of the park providing space for anti-social behaviour, crime, and other illegal things.
41	psychological	The park causing conflict among users - who should be prioritised to use the open space?
42	economic	The park wasting the land that could have been used for other purposes.
43	health	The park exposing visitors to air pollution since it is beside the road.
44	psychological	The frustration that the park brings to residents because of its incomplete features.

5.1.2 Data analysis

Answers to the fifth section of the questionnaire (socio-economic characteristics) were analysed first to summarise the demographics of the respondents and to categorise them according to the stakeholder groups that were identified in the earlier stages of

the research (see Chapter 4, section 4.2.1). The first four sections were then subsequently analysed. All the analyses were conducted through IBM SPSS Statistics for Windows, Version 26.0, except for the Fuzzy-set Qualitative Analysis, which was run through the fs/QCA software Version 3.1b (Ragin & Davey, 2019).

5.2 Results and discussion

5.2.1 Socio-economic characteristics

A total of 675 people completed the survey through the Qualtrics link. More than half of the respondents (55.85%) found out about the survey from a colleague, friend, or a relative, and 30.07% found it through social media posts (Figure 5.2). The top five barangays with the highest number of respondents were Canlubang (11.9%), La Mesa (9.2%), Mayapa (7.7%), Bucal (7.7%), and Halang (5.8%) (Table 5.2). The mean age of the respondents is 25.97 (*SD* = 9.87), with a mode of 19. The youngest respondent is 18, and the oldest is 65. More than half of the respondents were female (58.52%), while 32% were males. About 8% were members of the LGBTQI (Figure 5.3).

The majority of the respondents were single (75.56%) while 17.78% were married (Figure 5.4). Almost half of them (47.85%) own their houses, while 22% and 17% share with their relatives and rent, respectively (Figure 5.5). In terms of educational attainment, 36.15% of the respondents completed their college education, while 32.89% completed their high school education. About 20% had an incomplete college education, while 8% had reached graduate studies (Figure 5.6). The majority of the respondents (73.30%) were locals (Figure 5.7). The respondents were categorised according to the stakeholder groups that were identified in the earlier stages of the research (see Chapter 4, section 4.2.1). This was accomplished through their answers to the first question in the socio-economic section of the questionnaire (stakeholder groups) and the barangays where they currently live. A considerable percentage of the respondents are college students (42.67%), residents from barangays near the park (28.30%), and residents far from the park (12%). Less than 15% are owners or employees of businesses in Calamba City, barangays closest to the park, and city office employees (Figure 5.8).

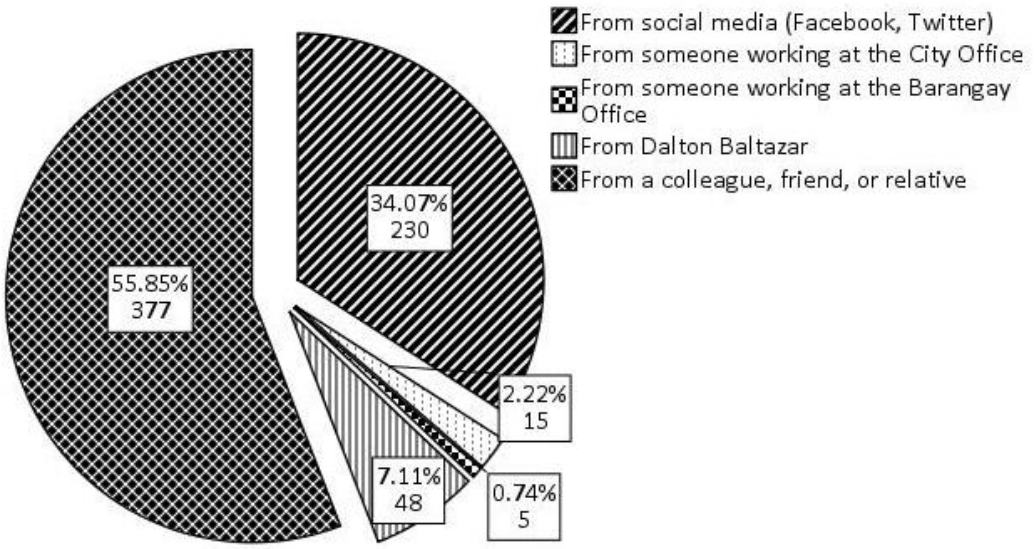


Figure 5.2. Respondents' answers to the question "How did you find out about this survey?"

Table 5.2. Barangays (villages) where the respondents live

Barangay	Frequency	Percentage (%)	Barangay	Frequency	Percentage (%)
Canlubang	80	11.9	Lawa	8	1.2
La Mesa	62	9.2	Majada Labas	8	1.2
Mayapa	52	7.7	Barangay 5	8	1.2
Bucal	52	7.7	Milagrosa	7	1
Halang	39	5.8	Sirang Lupa	6	0.9
Barangay 4	38	5.6	Kay-Anlog	5	0.7
San Juan	37	5.5	San Jose	5	0.7
Real	31	4.6	Makiling	5	0.7
Camaligan	29	4.3	Lingga	4	0.6
Looc	17	2.5	Bagong Kalsada	4	0.6
Parian	16	2.4	Sucol	4	0.6
Barangay 3	15	2.2	Prinza	4	0.6
Bañadero	14	2.1	Masili	3	0.4
Banlic	14	2.1	San Cristobal	3	0.4
Barangay 1	11	1.6	Mapagong	3	0.4
Palo-Alto	11	1.6	Uwisan	2	0.3
Sampiruhan	11	1.6	Burol	2	0.3
Barangay 7	11	1.6	Barangay 6	2	0.3
Barangay 2	10	1.5	Palingon	2	0.3
Paciano Rizal	10	1.5	Batino	1	0.1
Pansol	9	1.3	Puting Lupa	1	0.1
Barandal	9	1.3	Bunggo	1	0.1
Lecheria	9	1.3	Total	675	100

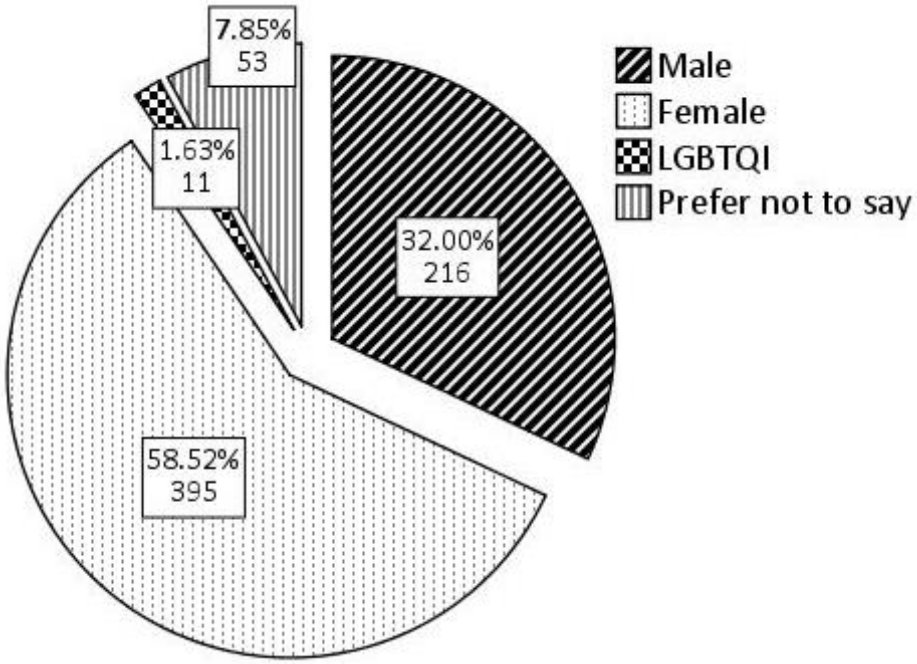


Figure 5.3. Respondents' gender

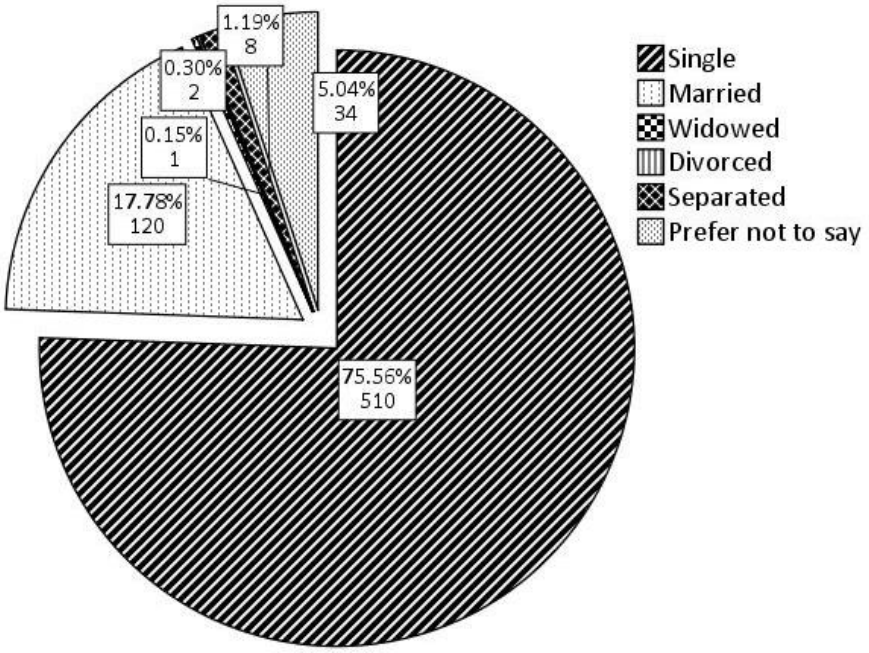


Figure 5.4. Respondents' marital status

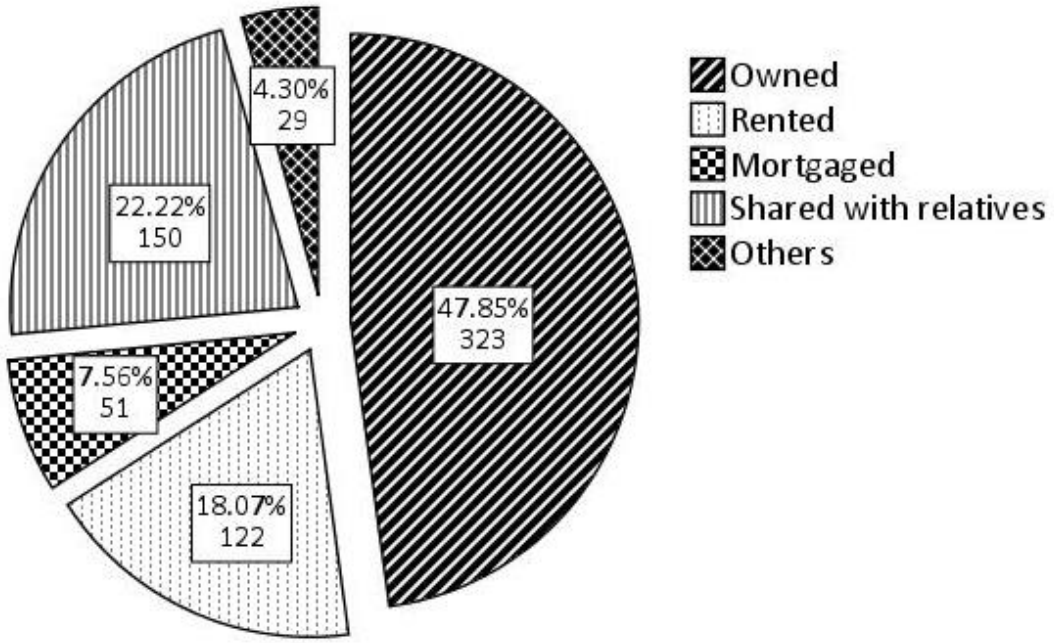


Figure 5.5. Respondents' house ownership

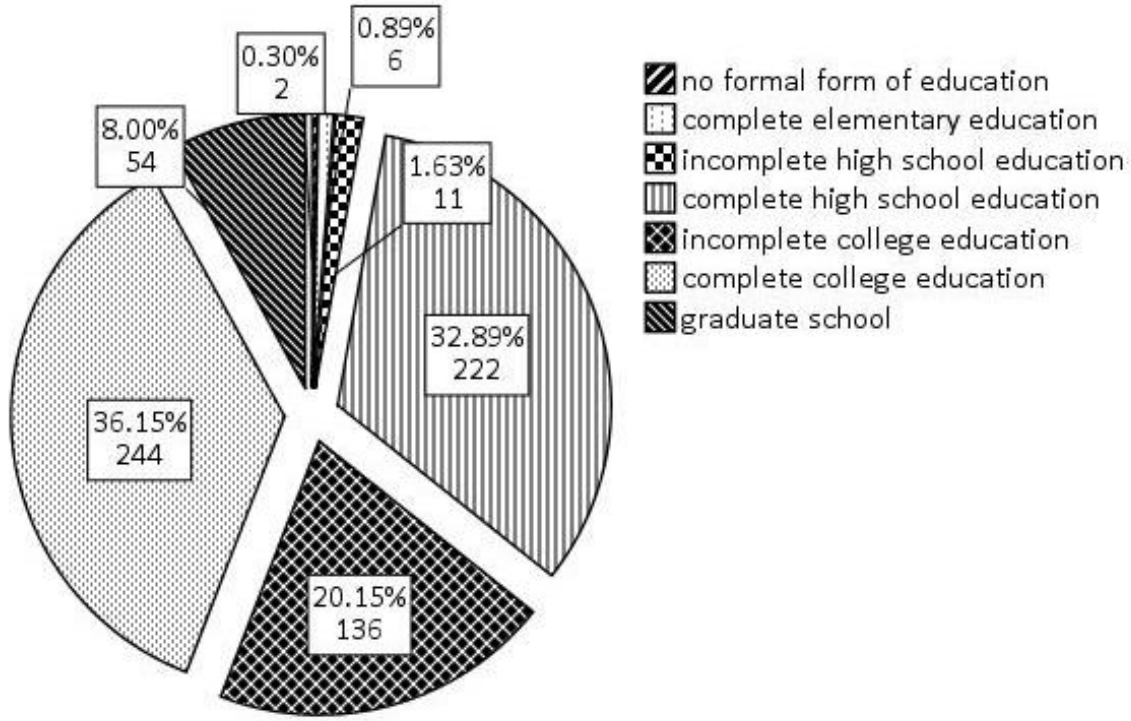


Figure 5.6 Respondents' educational attainment

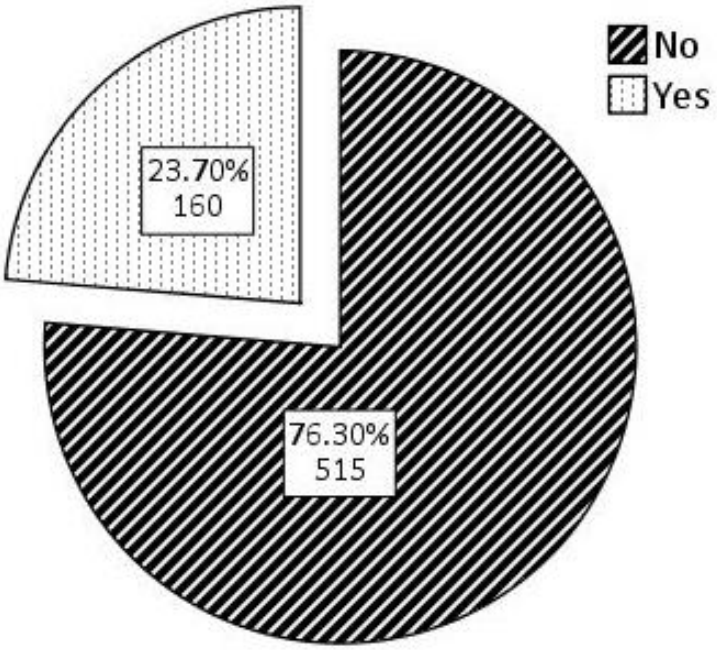


Figure 5.7. Respondents' answers to the question "Are you a migrant in Calamba City?"

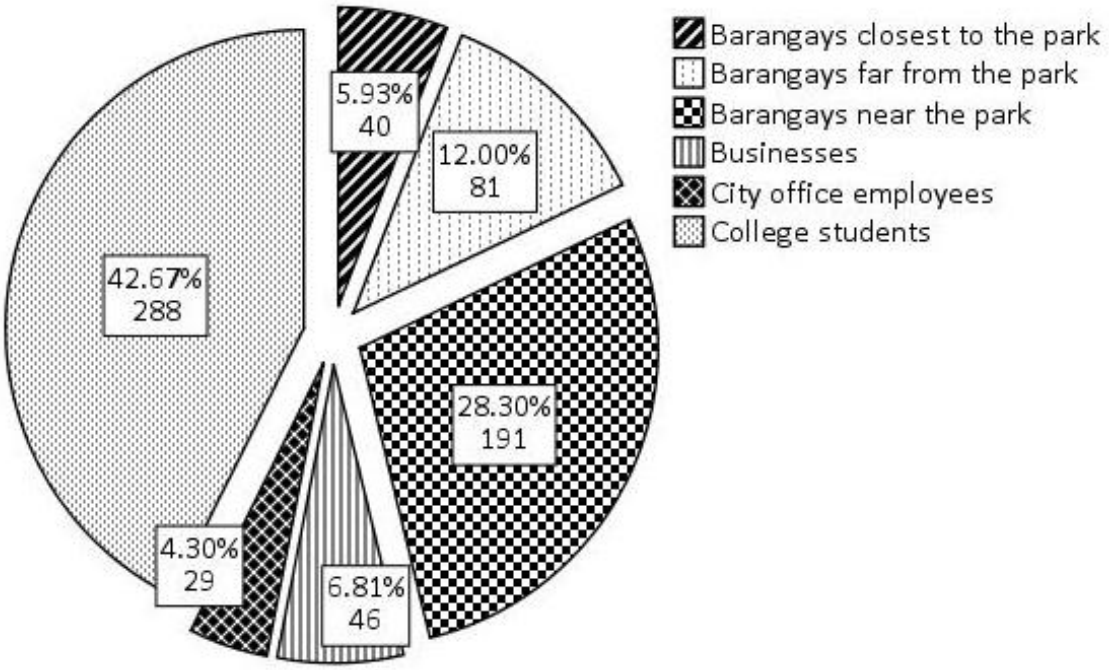


Figure 5.8. Respondents categorised by stakeholder groups

5.2.2 Park use

Almost all the respondents (96.4%) have visited the Jose Rizal Plaza (Figure 5.9). Figure 5.10 illustrates the proportion of respondents who have visited the park by stakeholder group. It can be noted the college students had the highest proportion of respondents who have not visited the park (6%). When asked how frequently they visited the park in the previous year, majority of the respondents chose to report their visits per year (53.3%), while 32.7% and 14% decided to report their visits per month and per week, respectively (Figure 5.9. Right). Those who reported their visits per year came to the park from 0 to 20 times, with a mean of 3 (*SD* = 2.5) and a mode of 1. Those who reported their visits per month visited from 1 to 10 times, with a mean of 2.4 (*SD* = 1.6) and a mode of 1 and 2, and those who reported their visits per week came there from 1 to 7 times, with a mean of 3 (*SD* = 1.8) and a mode of 2.

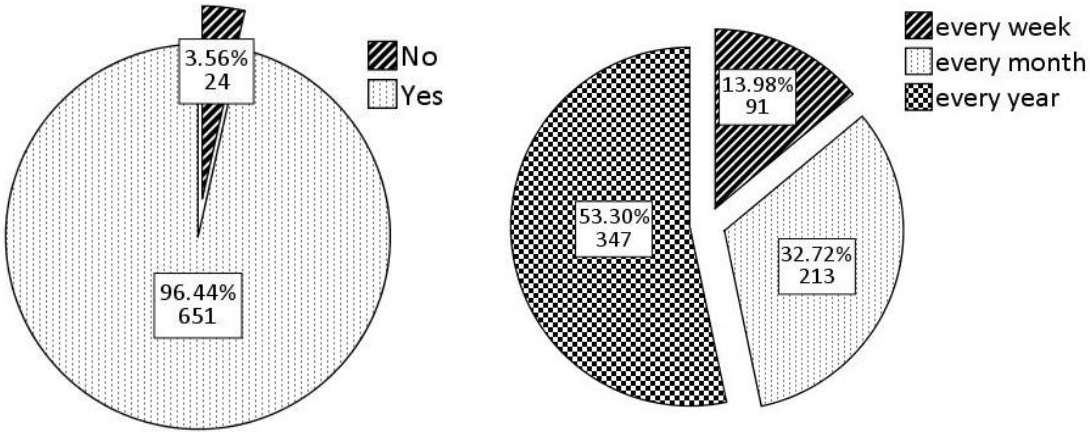


Figure 5.9. Respondents' answers to the questions "Have you visited the Jose Rizal Plaza?" (Left) and "Last year, how frequently did you visit the park?" (Right)

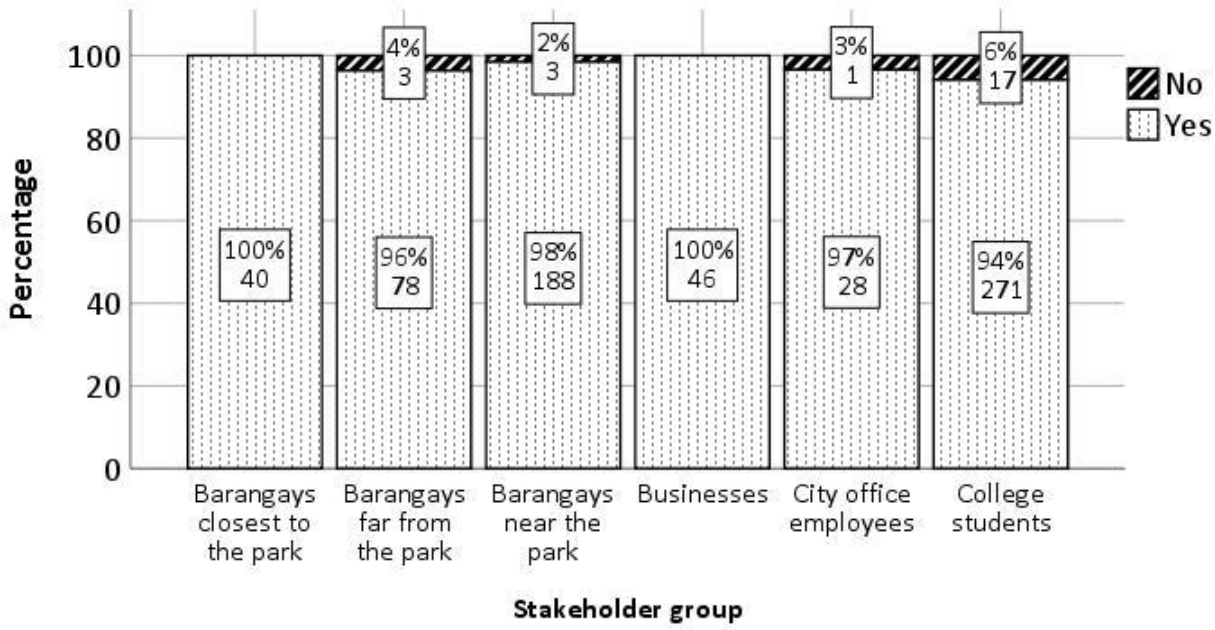


Figure 5.10. Respondents' answer to the question "Have you ever visited the Jose Rizal Plaza?" by stakeholder group

A little more than half of the respondents visit the park to watch or participate in events (50.7%) or to relax or unwind (48.7%). Other more common purposes include enjoying the scenery (35%), photography (34.6%), and fresh air and pleasant weather (33.6%) (Table 5.3). Other reasons mentioned by the respondents include going to the Christmas carnival, eating, family-bonding, attending meetings, school activities, and strolling.

The majority of the respondents (60.74%) do not know the previous land use in the area where the park is built (Figure 5.11 Left). Out of the 265 who said they knew the previous land use, only 177 (66.79%) answered correctly – an idle or vacant lot, grassland, or plant stalls. Correct answers to the previous land use by stakeholder group are presented in Figure 5.12. Barangays closest to the park had the highest percentage of the correct answer (80.95%), followed by barangays near the park (73.68%), city employees (68.75%), college students (60.44%), and barangays far from the park (60%).

A little less than half of the respondents (47.63%) visit other parks in Calamba or nearby areas (Figure 5.11 Right). Figure 5.13 presents the respondents' answer to the

question “Do you visit other parks?” by stakeholder group. Barangays near the park had the highest percentage of respondents visiting other parks (59.69%), followed by businesses (52.17%), city office employees (51.72%), barangays far from the park (45%), college students (40.63%), and barangays closest to the park (37.5%). Some parks that they visit include the old plaza and bay walk area in Calamba City, Luneta Park in Manila, the open field at the University of the Philippines Los Banos, and Nuvali Park in Sta. Rosa City. When it comes to engaging with the environment, more respondents had visited parks in towns or cities (58.7%) and playing fields or other recreational areas (50.8%) in the last six months before the Coronavirus 2019 (COVID-19) outbreak (Table 5.4).

Table 5.3 Respondents’ purpose when visiting the Jose Rizal Plaza (*n* = 651).

Purpose	**Responses**		**Percentage of cases (%)**
	Number	**Percentage (%)**	
Health/exercise	190	11.3	29.2
Walking the dog	36	2.1	5.5
Relax/unwind	317	18.9	48.7
Fresh air/pleasant weather	219	13.1	33.6
Enjoy scenery	228	13.6	35
Photography	225	13.4	34.6
Watch or participate in events	330	19.7	50.7
Others	131	7.8	20.1
Total	1676	100	257.5

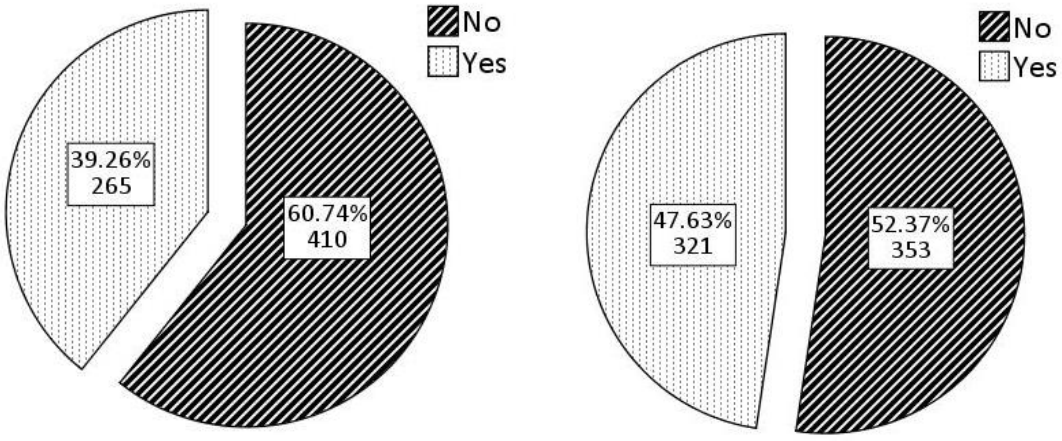


Figure 5.11. Respondents' answers to the question "Do you know the previous land use in the area where the Jose Rizal Plaza is now built?" (Left) and "Do you visit other parks"? (Right)

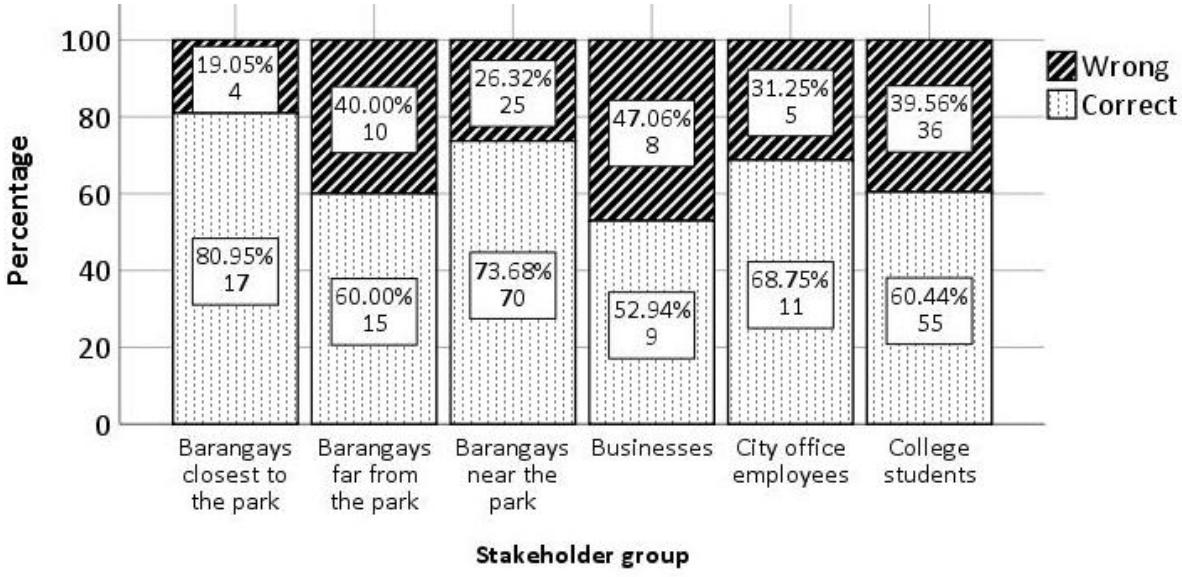


Figure 5.12. Correct answers to the question "Do you know the previous land use in the area where the Jose Rizal Plaza is now built?" by stakeholder group

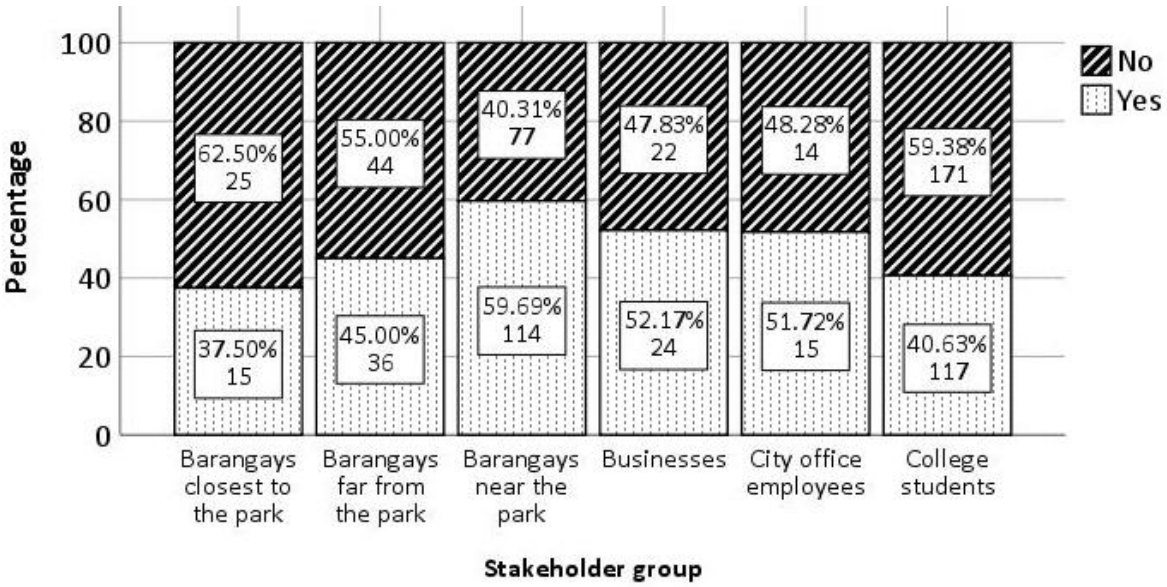


Figure 5.13. Respondents' answer to the question "Do you visit other parks?"

Table 5.4. Respondents' engagement with the environment (*N* = 675).

Place	Responses		Percentage of cases* (%)
	Number	Percentage (%)	
Park in a town or city	396	25.1	58.7
Woodland or forest	102	6.5	15.1
River, lake, or canal	125	7.9	18.5
National park	112	7.1	16.6
Playing field or recreational area	343	21.7	50.8
A rural village	141	8.9	20.9
A beach/coastline area	209	13.2	31.0
Children's playground	151	9.6	22.4
Total	1579	100	233.9

The respondents of the survey were mostly students. This might have been the case because students were more active online during the time of the survey as they were preparing for online classes. The majority of the respondents have visited the park but do not visit it frequently. For most respondents, the park is where they watch and participate in events, relax and unwind, enjoy scenery, practice photography, and breathe fresh air. Most of them do not know the previous land use in the area where

the park is now built. Unsurprisingly, most of the respondents from the barangays closest to the park knew the previous land use. About half of the respondents visit other parks. An interesting finding is that the lowest percentage of respondents that visit other parks came from the barangays closest to the park. A possible explanation could be because Jose Rizal Plaza is very accessible to them, and they deem the amenities present in it enough to fulfil their needs. The respondents generally engaged with nature through urban parks and playing fields.

5.2.3 Environmental knowledge, perception, and behaviour

For environmental concepts, the respondents had an overall mean score of 4.28 (*SD* = 1.72). Respondents from barangays near the park had the highest mean score of 4.46 (*SD* = 1.70), while city office employees had the lowest mean score of 4.10 (*SD* = 1.70) (Table 5.5.). Figure 5.14 shows the percentage of respondents getting correct and wrong answers for each environmental concept. It can be noted that the respondents got more correct answers for concepts like climate change (88.15%), green spaces (81.04%), biodiversity (69.19%), and pollution (67.11%), while they got least correct answers for urban sprawl (33.78%).

The respondents shared that they have little to a fair amount of knowledge about the three major environmental laws in the Philippines (Figure 5.15). Respondents from the barangays closest to the park answered that they knew a fair amount of the laws, while respondents from barangays far and near the park and college students responded that they knew little about the laws (Table 5.6).

Table 5.5 Respondents' knowledge of environmental concepts

Stakeholder groups	N	Mean	Std. Deviation
Overall	675	4.28	1.72
Barangays closest to the park	40	4.15	1.70
Barangays far from the park	81	4.40	1.92
Barangays near the park	191	4.46	1.70
Businesses	46	4.17	1.76
City office employees	29	4.10	1.96
College students	288	4.19	1.64

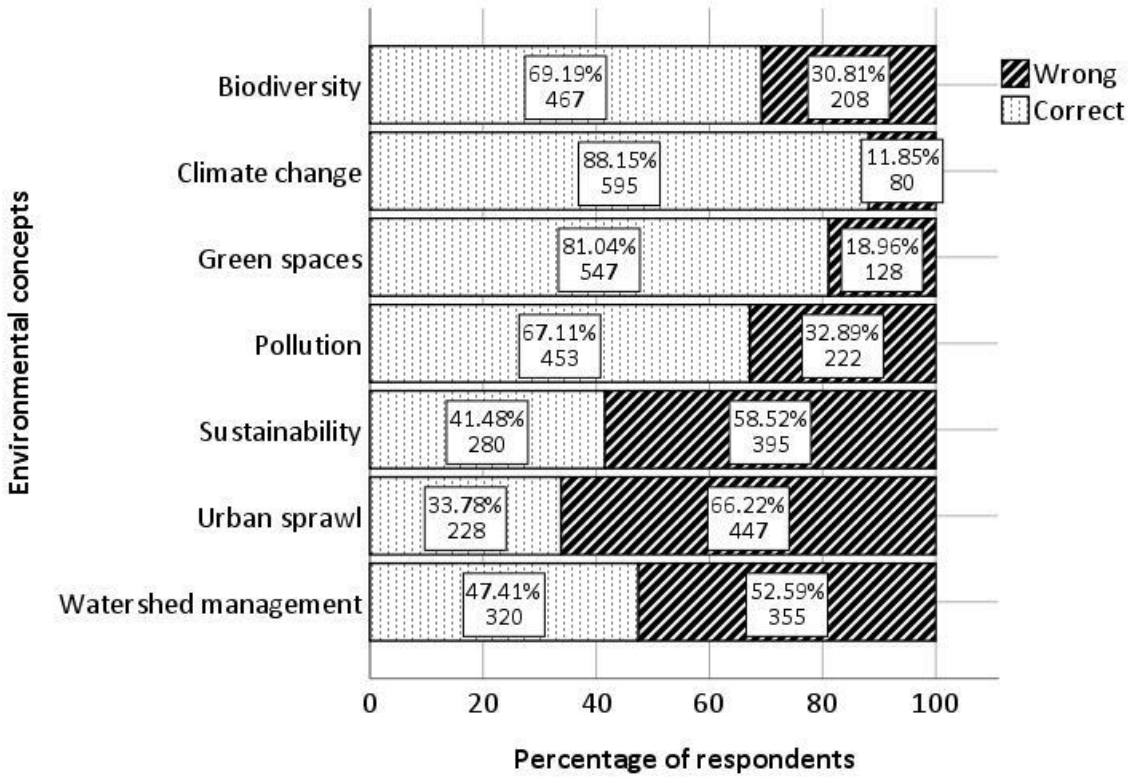


Figure 5.14. Percentage of correct and wrong answers for environmental concepts

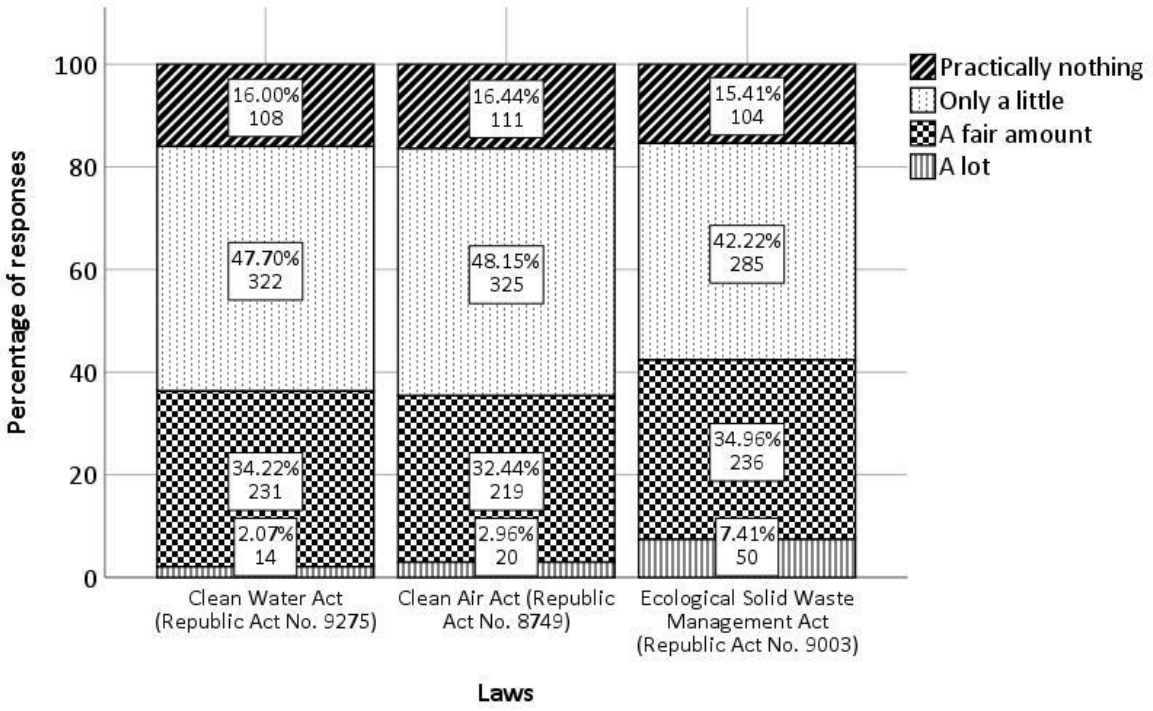


Figure 5.15. Respondents' knowledge of three major environmental laws in the Philippines

Table 5.6. Respondents' knowledge of the major environmental laws in the Philippines by stakeholder group. Knowledge levels were based on the most common answer per stakeholder group in each law. A detailed summary of responses can be found in Appendix 10.

Stakeholder groups	Clean Air Act	Clean Water Act	Solid Waste Act
Barangays closest to the park	a fair amount	a fair amount	a fair amount
Barangays far from the park	a little	a little	a little
Barangays near the park	a little	a little	a little
Businesses	a little	a little	a fair amount
City office employees	a little	a little	a little, a fair amount
College students	a little	a little	a little

The respondents' answers to how environmental conditions in Calamba City have become since they have lived in the area are in Figure 5.16. Overall, respondents answered that environmental conditions have become worse, except for water shortage and the quality of public, green, and open spaces which according to them has stayed the same and has become better, respectively. Table 5.7 contains the

respondents' environmental perception by stakeholder group. All the stakeholder groups except for those from barangays closest to the park think that the water quality in local streams has become worse. Air quality has stayed the same, according to city office employees and college students, while the rest of the stakeholder groups think that it has become worse. All the stakeholder groups believe that the level of pollution from businesses and farms has become worse. Water shortage, according to all groups, has stayed the same. According to barangays closest to the park and college students, weather-related disasters have stayed the same, while according to the rest of the stakeholder groups, they have become worse. The conversion of farms and other green areas to residential and commercial spaces has become worse according to all the stakeholder groups. Only the college students think that the population of native animals has stayed the same – all other stakeholder groups believe that it has become worse. According to the businesses, city office employees, and college students, the quality of public, green, and open spaces has become better, while the barangays closest to the park think that it has become worse. Barangays far from and near the park were divided – some believe that it has improved, while some believe that it has become worse. Only the college students and some businesses think that the overall environmental quality of the city has stayed the same. All other stakeholders feel that it has become worse.

The respondents' answers to environmental behaviour are in Figure 5.17. Overall, respondents answered that they encourage people to protect the environment often, while they never join or donate money or time to environmental or conservation organisations. They do the rest of the positive environmental behaviour sometimes. Table 5.8 shows the respondents' environmental behaviour by stakeholder group. All the stakeholder groups sometimes prefer to walk and cycle than to use a car when going out, try to reduce waste by repairing, reusing, and recycling, buy eco-friendly products, and take the initiative to know more information about environmental issues. All the stakeholder groups except for barangays far from the park often encourage people to protect the environment. Only the barangays closest to the park and college students rarely or never sign conservation petitions or campaigns. All other stakeholders do this sometimes. College students and a part of the barangays closest to the park sometimes donate money or time for environmental organisations, while

the rest rarely or never do this. All the stakeholders never or rarely join environmental organisations. All the stakeholders except for a part of the barangays far from the park and businesses do voluntary work to help care for the environment sometimes.

On average, the respondents know four environmental concepts. Respondents were more familiar with the concept of climate change and green spaces. Respondents also think that they have little to fair knowledge about environmental laws in the Philippines. Generally, respondents feel that environmental conditions in the city have become worse over the years except for the quality of public, green, and open spaces, which they feel has become better. Interestingly, respondents from barangays closest to the park think that the quality of these green spaces has become worse. It might have been because they see first-hand, the deterioration of the amenities of the park or because they have higher standards of green spaces as they live near one. Generally, respondents encourage people to protect the environment often, while they never join or donate money or time to environmental or conservation organisations. It was surprising to find out that the barangays closest to the park and college students rarely or never sign conservation petitions or campaigns.

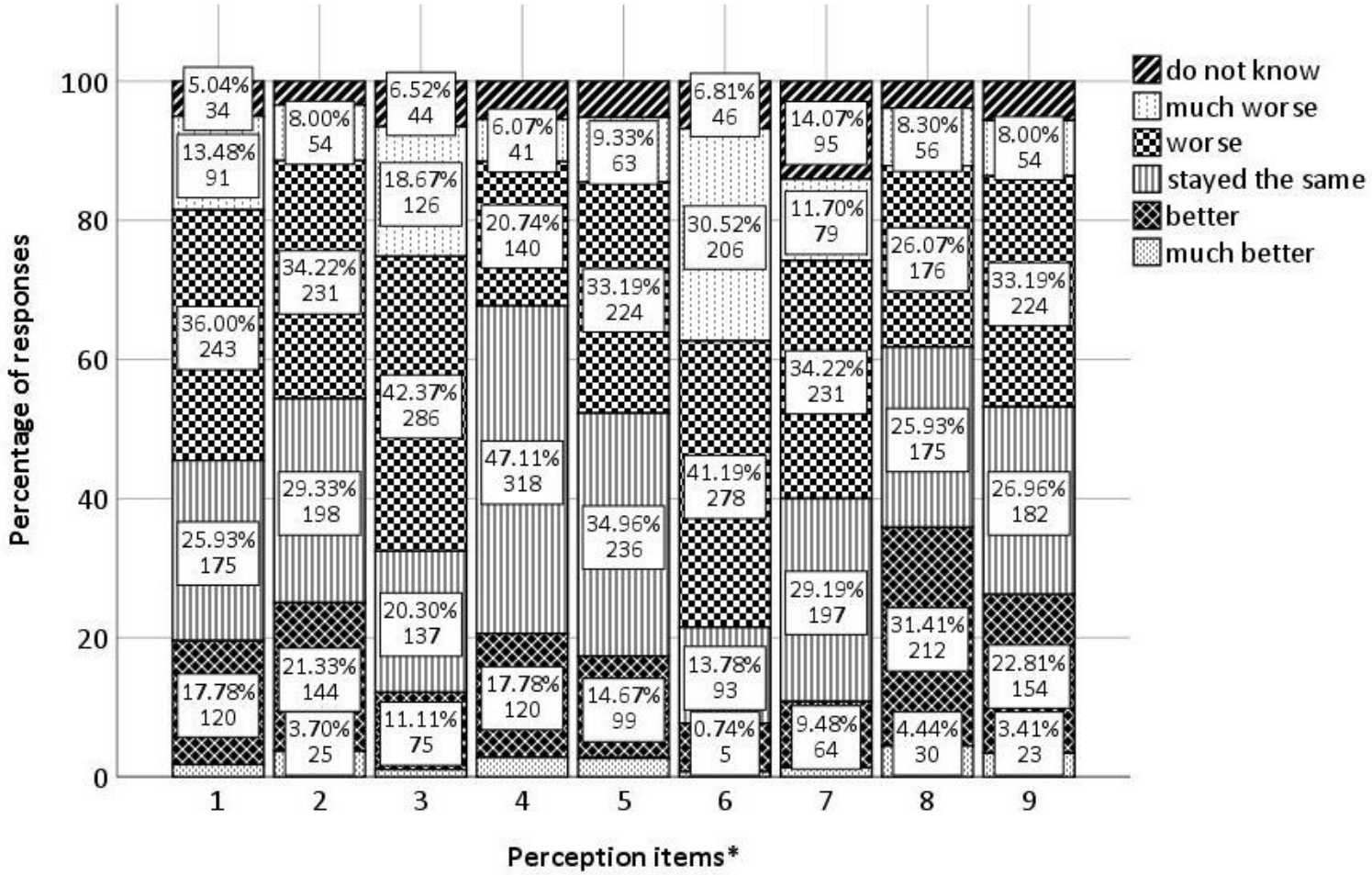


Figure 5.16 Respondents' environmental perception

* 1 = The water quality in local streams, rivers, and lakes; 2 = The general air quality; 3 = The level of pollution or waste produced by nearby businesses, farms, and industries; 4 = Water shortage; 5= Weather-related disasters; 6 = Conversion of farms and other green areas to residential and commercial areas; 7= The population of native animals, such as fish, birds, and mammals; 8 = The quality of public, green, and open spaces (e.g., parks, plazas); 9 = The overall environmental state of the city.

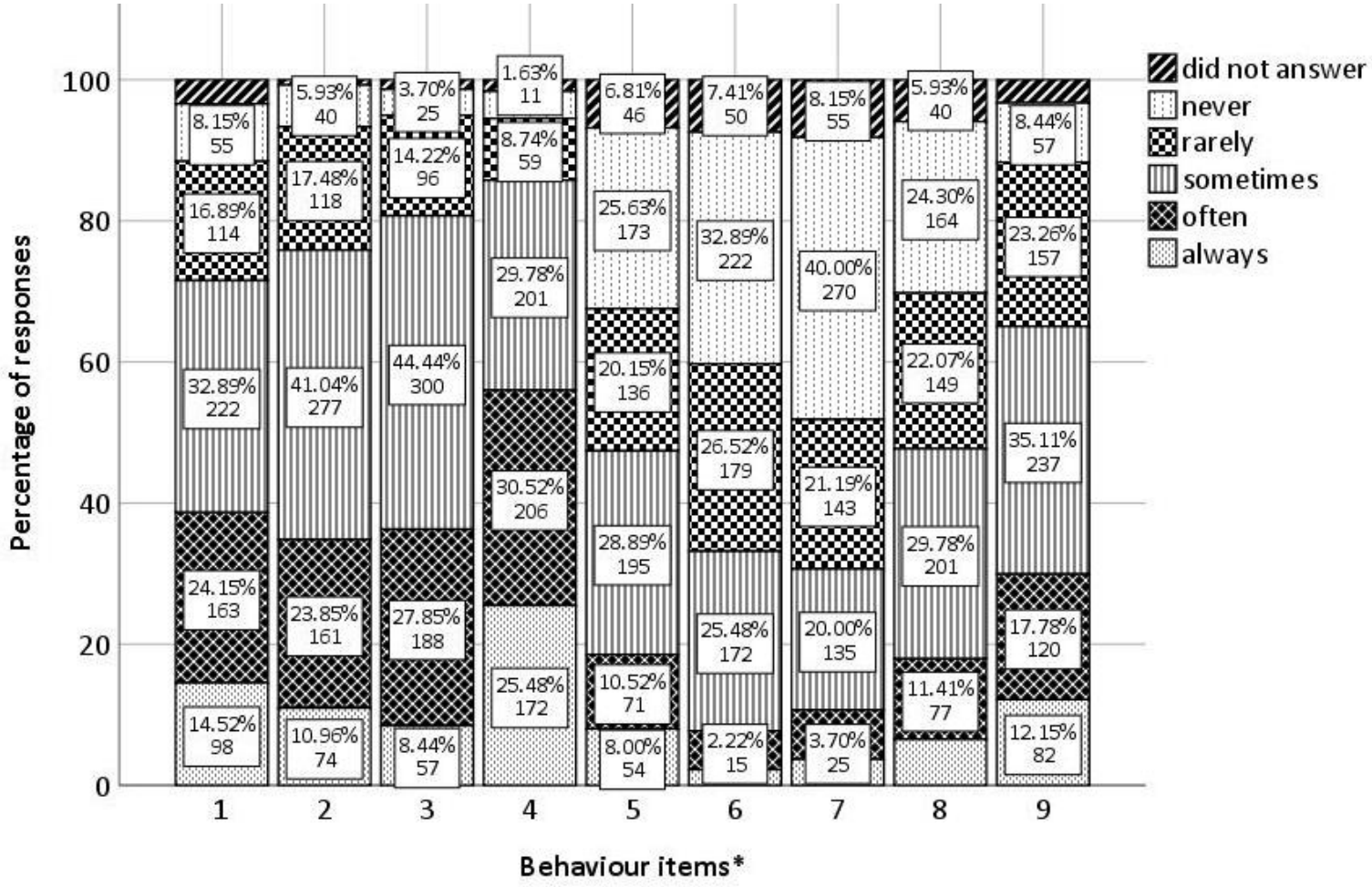


Figure 5.17. Respondents' environmental behaviour

1 = When I go out, I prefer walking and cycling, instead of using a car; 2 = I try to reduce my waste by repairing, reusing, and recycling; 3 = I usually buy eco-friendly products and brands; 4 = I encourage other people to protect the environment; 5 = I sign conservation petitions or participate in online/other conservation campaigns; 6 = I donate money or time to support environmental or conservation organisations; 7 = I join environmental or conservation organisations; 8 = I do voluntary work to help care for the environment; 9 = I take the initiative to know more information about environmental issues.

Table 5.7. Respondents' environmental perception by stakeholder group. The detailed summary of responses can be found in Appendix 11.

Stakeholder group	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Barangays closest to the park	same	worse	worse	same	same	worse	worse	worse	worse
Barangays far from the park	worse	worse	worse	same	worse	worse	worse	worse, better	worse
Barangays near the park	worse	worse	worse	same	worse	worse	worse	worse, better	worse
Businesses	worse	worse	worse	same	worse	worse	worse	better	worse, same
City office employees	worse	same	worse	same	worse	much worse	worse	better	worse
College students	worse	same	worse	same	same	worse	same	better	same

* 1 = The water quality in local streams, rivers, and lakes; 2 = The general air quality; 3 = The level of pollution or waste produced by nearby businesses, farms, and industries; 4 = Water shortage; 5= Weather-related disasters; 6 = Conversion of farms and other green areas to residential and commercial areas; 7= The population of native animals, such as fish, birds, and mammals; 8 = The quality of public, green, and open spaces (e.g., parks, plazas); 9 = The overall environmental state of the city.

Table 5.8. Respondents' environmental behaviour by stakeholder group. The detailed summary of responses can be found in Appendix 12.

Stakeholder group	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Barangays closest to the park	sometimes	sometimes	sometimes	often	rarely	rarely, sometimes	never	sometimes	sometimes
Barangays far from the park	sometimes	sometimes	sometimes	sometimes	sometimes	never	never	rarely, sometimes	sometimes
Barangays near the park	sometimes	sometimes	sometimes	often	sometimes	never	never	sometimes	sometimes
Businesses	sometimes	sometimes	sometimes	often	sometimes	rarely	never	never, sometimes	sometimes
City office employees	sometimes	sometimes	sometimes	often	sometimes	sometimes	rarely	sometimes	sometimes
College students	sometimes	sometimes	sometimes	often	never	never	never	sometimes	sometimes

1 = When I go out, I prefer walking and cycling, instead of using a car; 2 = I try to reduce my waste by repairing, reusing, and recycling; 3 = I usually buy eco-friendly products and brands; 4 = I encourage other people to protect the environment; 5 = I sign conservation petitions or participate in online/other conservation campaigns; 6 = I donate money or time to support environmental or conservation organisations; 7 = I join environmental or conservation organisations; 8 = I do voluntary work to help care for the environment; 9 = I take the initiative to know more information about environmental issues.

5.2.4 Social value orientation

In general, the respondents were prosocial (78.37%) and individualistic (19.41%). A small proportion of them were competitive (1.19%) and altruistic (1.04%) (Figure 5.18). The respondents' SVOs by stakeholder group are shown in Figure 5.19. The majority of all the stakeholder groups were prosocial and individualistic. Businesses had the highest percentage of prosocial respondents (84.78%) and the lowest percentage of individualistic respondents (15.22%). City office employees had the lowest percentage of prosocial respondents (68.97%) with the highest level of individualistic respondents (27.59%).

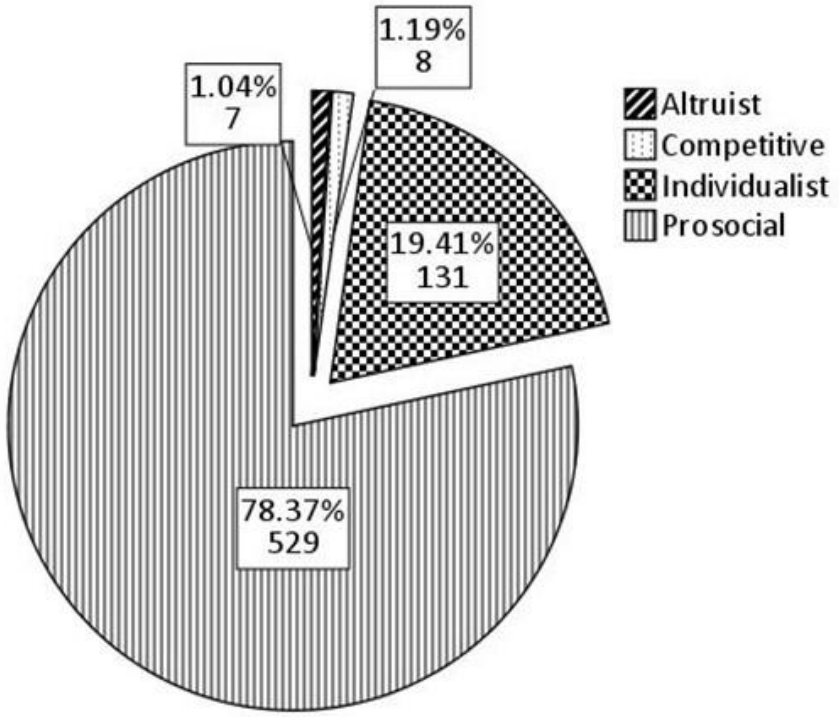


Figure 5.18. Respondents' social value orientation

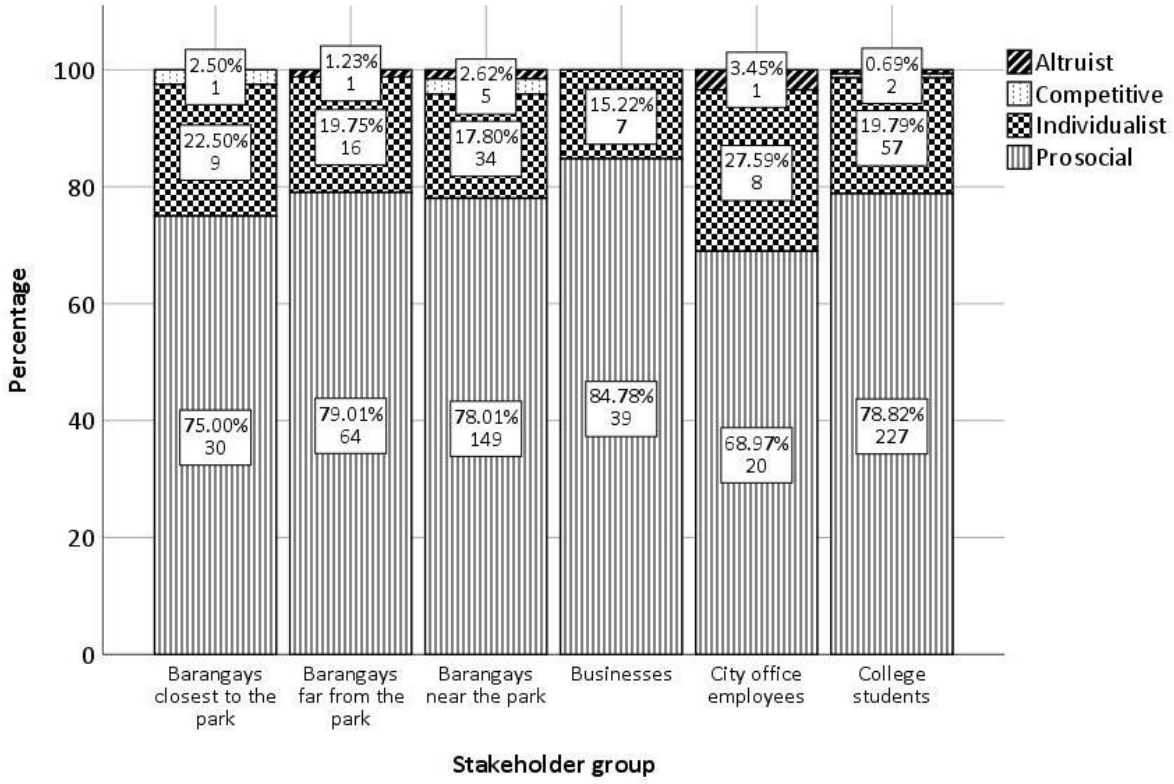


Figure 5.19. Respondents' social value orientation by stakeholder group

5.2.5 Valuation of ecosystem services (ES) and disservices (EDS)

The respondents assigned a mean value of 7.25 (N = 675, SD = 2.1) to ES and a mean value of 5.85 (N = 675, SD = 2.4) to EDS (Figure 5.20). The mean values given to ES and EDS were not normally distributed according to a Shapiro-Wilk's test (Shapiro & Wilk, 1965) ($p < .05$). A Mann-Whitney U test (Mann & Whitney, 1947) was conducted to determine if there were differences in the mean values given to ES and EDS. Distributions of the mean ES and EDS values were similar, as assessed by a visual inspection of their histograms (Figure 5.21). The median of ES means (7.78) was statistically significantly higher than the median of EDS means (5.95), U = 150765.5, z = -10.76, $p < .001$.

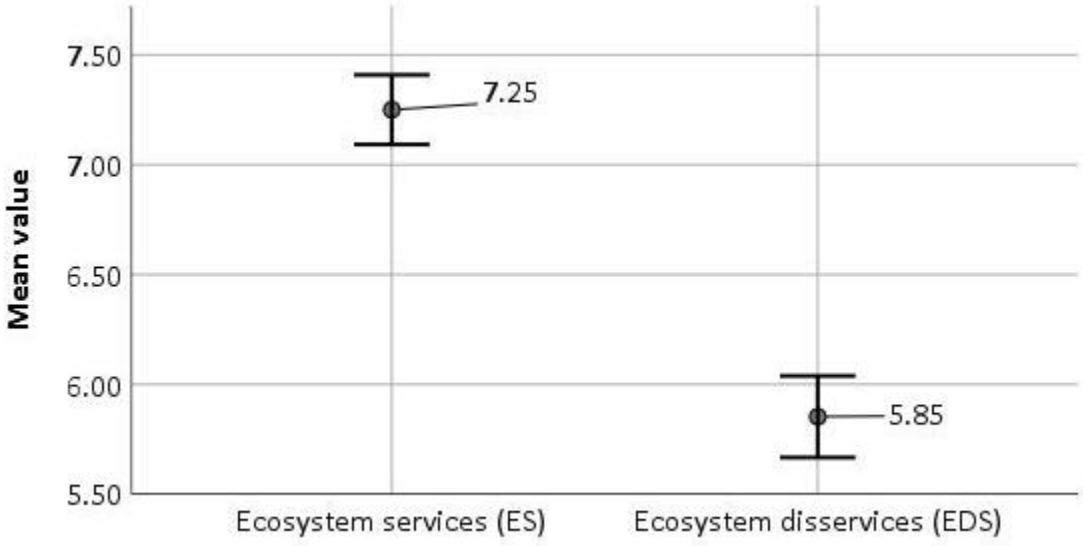


Figure 5.20. Mean values assigned to ES and EDS. Error bars = 95% confidence interval

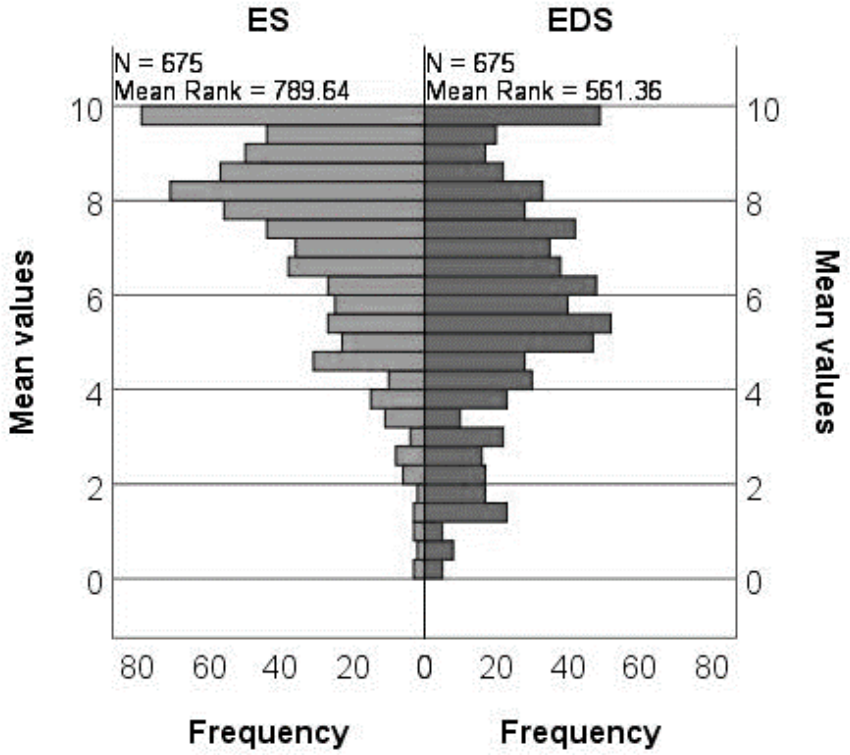


Figure 5.21. Histograms of the mean ES and EDS values with mean ranks from the Mann-Whitney U test

Ecosystem services (ES)

Figure 5.22 illustrates the mean of the values that the respondents assigned to individual park ES. The top five ES with the highest mean values were the following: the ability of the park to provide a place for enjoyment and spending free time (*N* = 675, *M* = 8.32, *SD* = 2.23); the ability of the park to provide a place to disconnect, relax, and diminish stress (mental recreation) (*N* = 675, *M* = 8.32, *SD* = 2.27); the ability of the park to offer opportunities for practising different sports and keeping fit (*N* = 675, *M* = 8.31, *SD* = 2.20); the ability of the park to provide a way to commemorate the national hero, Jose Rizal (*N* = 675, *M* = 8.26, *SD* = 2.33); and the ability of the park to become a place where different kinds of events in the city (e.g., celebrations, concerts, competitions) can be held (*N* = 675, *M* = 7.98, *SD* = 2.44). The five ES with the lowest mean values were the following: the ability of the park to serve as a water recharge area (*N* = 675, *M* = 6.16, *SD* = 3.08); the ability of the park to help in purifying water (that enters the soil) because of the vegetation present in it (*N* = 675, *M* = 6.24, *SD* = 3.04); the ability of the park to enable seed dispersal (*N* = 675, *M* = 6.35, *SD* = 3.02); the ability of the park to serve as an extra parking space for city office employees and residents (*N* = 675, *M* = 6.36, *SD* = 3.18); and the ability of the park to help in preventing flood (*N* = 675, *M* = 6.38, *SD* = 3.12).

The overall mean values assigned to the different types of ES are in Figure 5.23. Cultural ES had the highest mean (*N* = 675, *M* = 7.69, *SD* = 2.7). It was followed by non-use ES (*N* = 675, *M* = 7.43, *SD* = 2.38); economic ES (*N* = 675, *M* = 7.2, *SD* = 2.15); security ES (*N* = 675, *M* = 6.68, *SD* = 2.6); and regulating ES (*N* = 675, *M* = 6.54, *SD* = 2.7). The mean values given to the different types of ES were not normally distributed (Shapiro-Wilk's test, $p < .05$). A Kruskal-Wallis test (Kruskal & Wallis, 1952) was performed to determine if there were differences in the mean values assigned by stakeholders to the different types of ES. Distributions of the mean values were similar for all ES types, as assessed by visual inspection their boxplots (Vargha & Delaney, 1998) (Figure 5.24). Median ES values scores were statistically significantly different among the different ES types, $\chi^2(4) = 92.283$, $p = < .001$. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted *p*-values are presented. This post hoc

analysis revealed statistically significant differences in median values between regulating (6.88) and economic ES (7.57) (p = .003), regulating (6.88) and non-use ES (8.00) (p < .001), regulating (6.88) and cultural (8.31) ES (p < .001), security (7.07) and non-use ES (8.00) (p < .001), security (7.07) and cultural ES (8.31)(p < .001), economic (7.57) and non-use ES (8.00) (p < .001), and economic (7.57) and cultural ES (8.31) (p < .001). There were no statistically significant differences in the median values between regulating and security ES (p = 1), security and economic ES (p = .060), and non-use and cultural ES (p = 1) (Table 5.9).

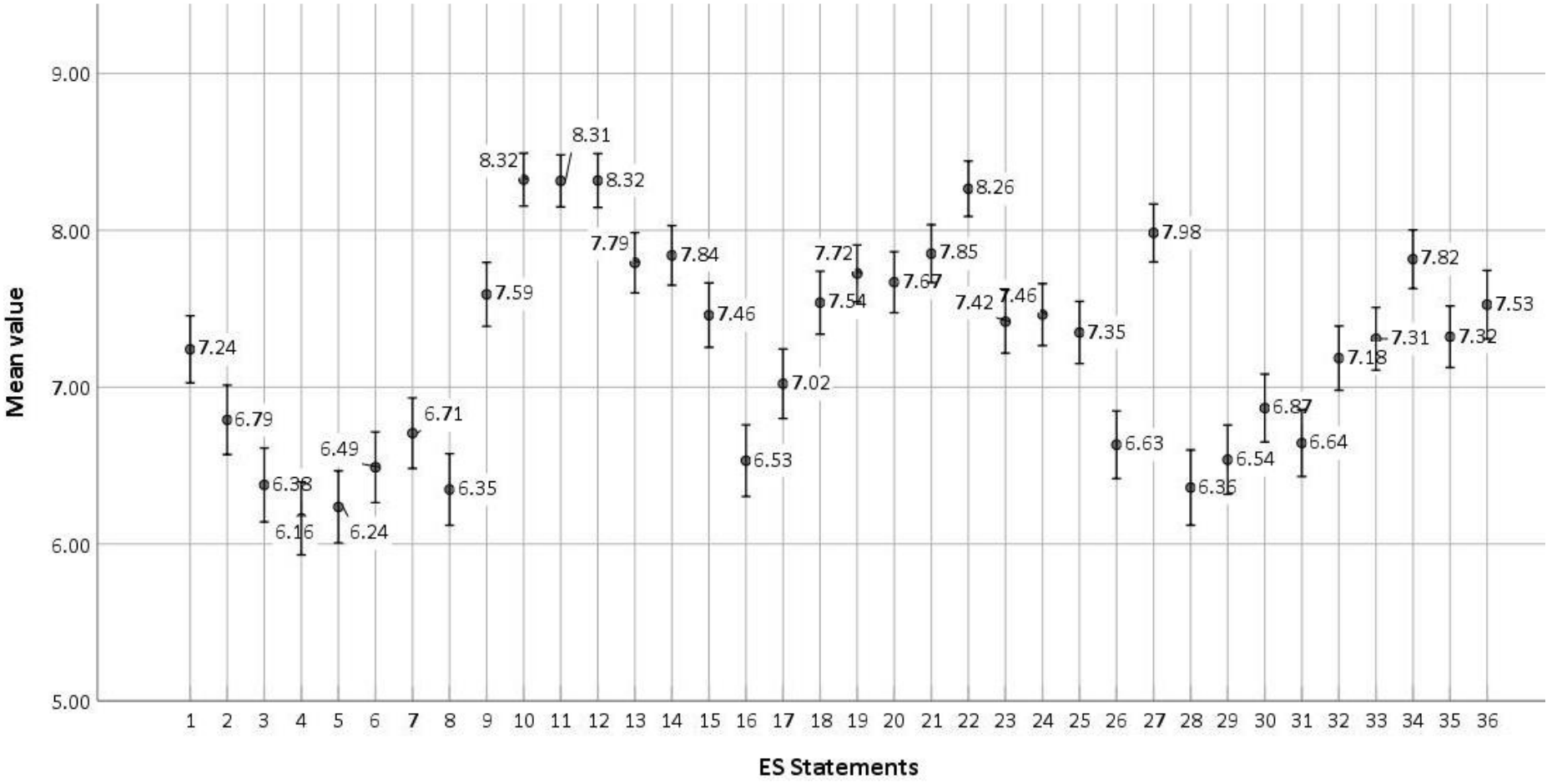


Figure 5.22. Mean values assigned to individual park ecosystem services (ES). ES statements can be found in Table 5.1. Error bars represent 95% confidence interval

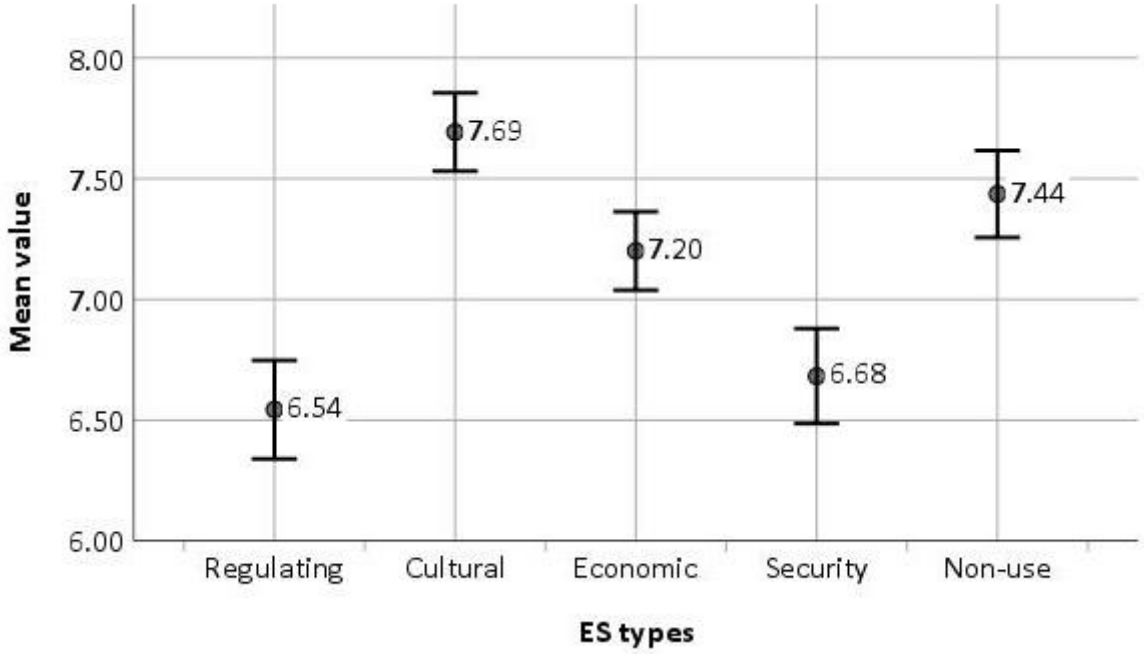


Figure 5.23. Mean values given to the different types of ecosystem services (ES). Error bars represent 95% confidence interval

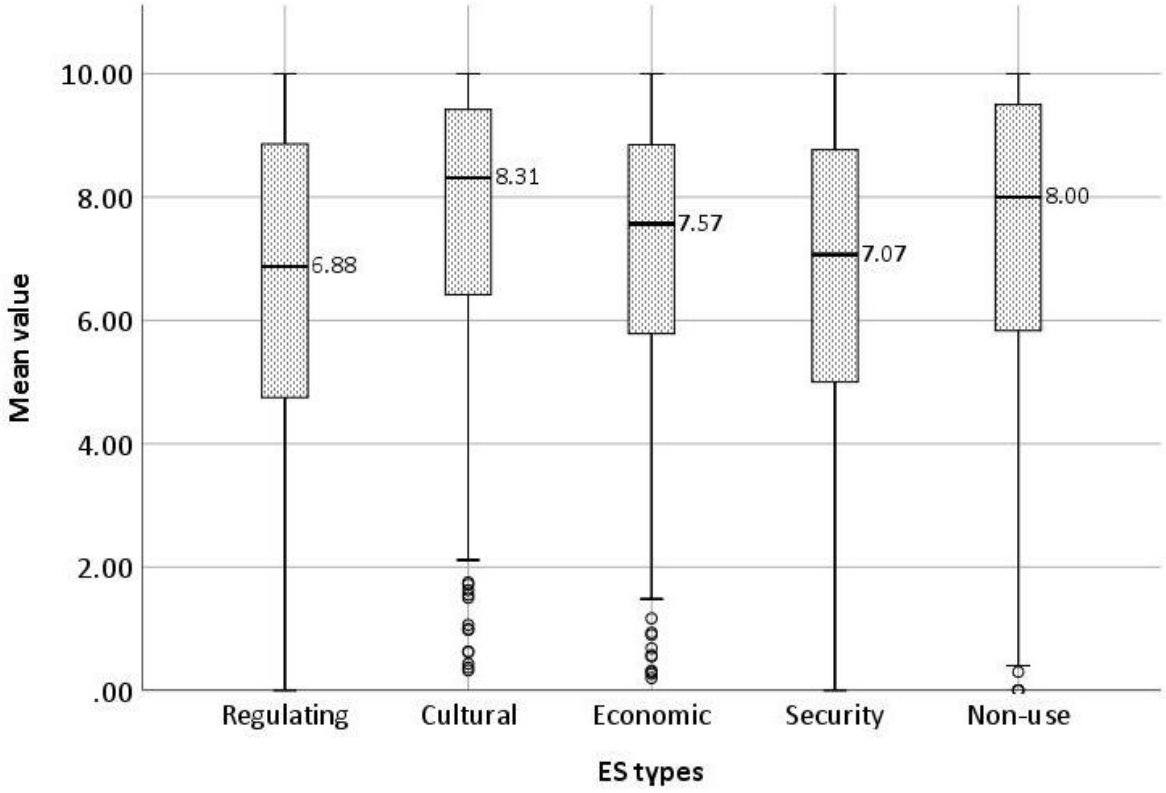


Figure 5.24. Boxplots of the values assigned to the different ecosystem services (ES) types. Labelled midpoints are medians.

Table 5.9. Pairwise comparisons of the values assigned to the different types of ES. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Regulating-Security	-44.748	52.970	-.845	.398	1.000
Regulating-Economic	-190.393	52.970	-3.594	.000	**.003**
Regulating-Non-use	-344.552	52.970	-6.505	.000	**.000**
Regulating-Cultural	-410.699	52.970	-7.753	.000	**.000**
Security-Economic	145.645	52.970	2.750	.006	.060
Security-Non-use	-299.804	52.970	-5.660	.000	**.000**
Security-Cultural	365.951	52.970	6.909	.000	**.000**
Economic-Non-use	-154.159	52.970	-2.910	.004	**.036**
Economic-Cultural	220.306	52.970	4.159	.000	**.000**
Non-use-Cultural	66.147	52.970	1.249	.212	1.000

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

The mean values assigned to each type of ES by different stakeholder groups are in Figure 5.25. The regulating services were valued the highest by the barangays closest to the park (*n* = 40, *M* = 6.97, *SD* = 2.9) and the lowest by businesses (*n* = 46, *M* = 6.22, *SD* = 2.53). The cultural services were valued the highest by the barangays far from the park (*n* = 81, *M* = 8.07, *SD* = 1.96) and the lowest by the city office employees (*n* = 29, *M* = 7.36, *SD* = 2.27). The economic services were valued the highest by the barangays closest to the park (*n* = 40, *M* = 7.35, *SD* = 2.27) and lowest by the businesses (*n* = 46, *M* = 7.09, *SD* = 2.08). The security services were valued the highest by the barangays closest to the park (*n* = 40, *M* = 7.19, *SD* = 2.72) and the lowest by the barangays near the park (*n* = 191, *M* = 6.49, *SD* = 2.72). The non-use services were valued the highest by the barangays closest to the park (*n* = 40, *M* = 7.6, *SD* = 2.61) and lowest by the businesses (*n* = 46, *M* = 7.31, *SD* = 2.17).

Shapiro-Wilk's tests were run to determine if the values assigned to each type of ES by different stakeholder groups follow a normal distribution. The values assigned by businesses to all ES types follow a normal distribution ($p > .05$). In contrast, only the values from the city office employees for regulating services and the values from the city office employees and barangays far from the park for security services follow a normal distribution ($p > .05$). Kruskal-Wallis H tests were run to determine if there were differences in how different stakeholder groups valued each type of ES. Distributions of the values from the different stakeholder groups for each type of ES were not similar, based on their boxplots (Figure 5.26). There were no statistically significant differences on the values given by the different stakeholders to each type of ES: regulating, $\chi^2(5) = 5.033$, $p = 0.412$; cultural, $\chi^2(5) = 7.226$, $p = 0.204$; economic, $\chi^2(5) = 2.274$, $p = 0.81$; security, $\chi^2(5) = 3.144$, $p = 0.678$; and non-use $\chi^2(5) = 1.514$, $p = 0.911$.

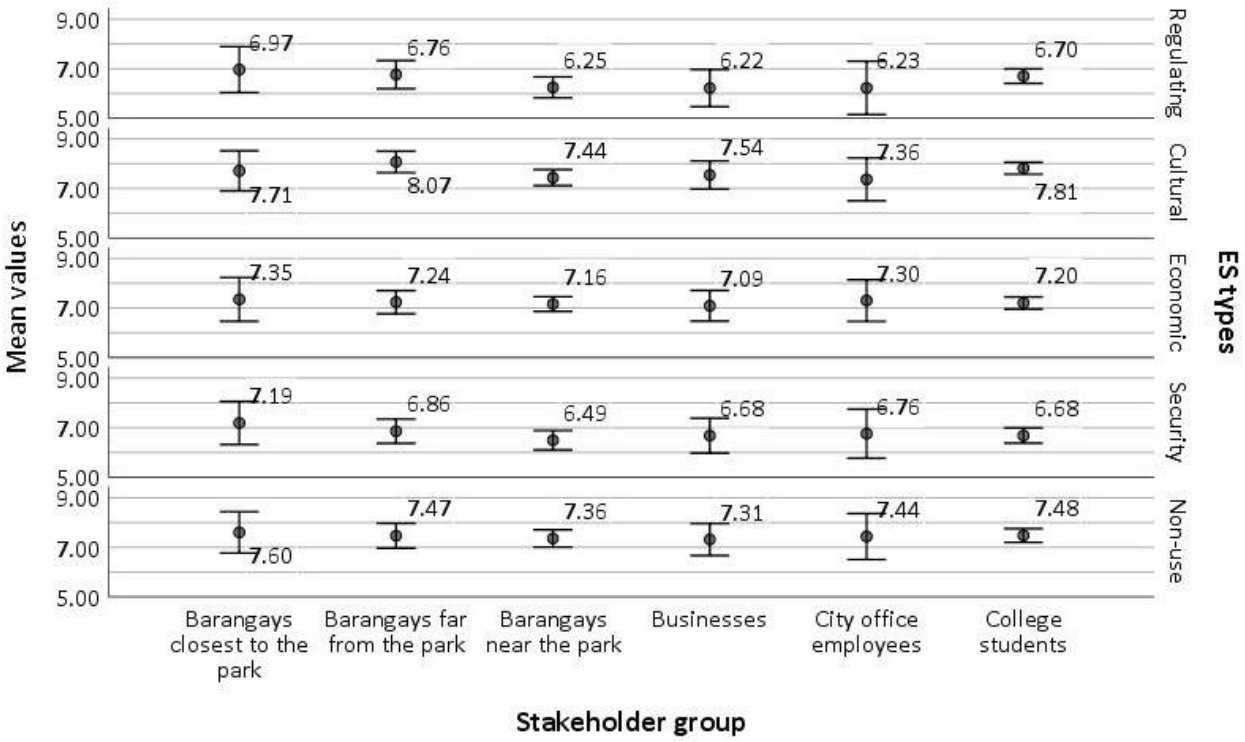


Figure 5.25. Mean values assigned by stakeholder groups to the different ecosystem services (ES) types. Barangays closest to the park: $n = 40$; barangays far from the park: $n = 81$; barangays near the park: $n = 191$; businesses: $n = 46$; city office employees: $n = 29$; college students: $n = 288$. Error bars represent 95% confidence interval

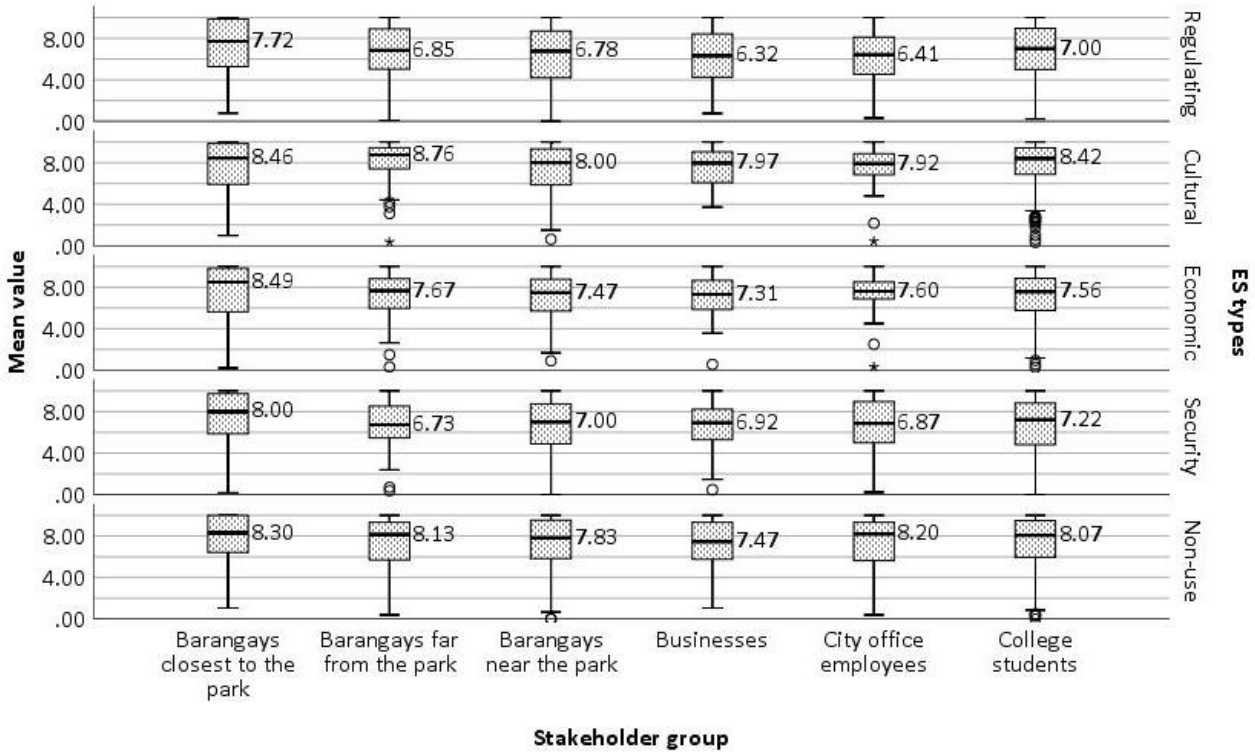


Figure 5.26. Boxplots of the values assigned by stakeholder groups to the different ecosystem services (ES) types. Labelled midpoints are medians.

A comparison of how each stakeholder group values the different types of ES is in Figure 5.27. All the stakeholder groups except for city office employees assigned the highest values to cultural ES, followed by non-use, economic, security, and regulating ES. City office employees assigned higher values to non-use than cultural ES, followed by economic, security, and regulating ES. Kruskal-Wallis H tests were applied to the values assigned by barangays closest to, near, and far from the park, city office employees, and college students to the five types of ES. Distributions of the values from the different stakeholder groups for the five ES types were not similar, based on their boxplots (Figure 5.26). There was no significant difference in how barangays closest to the park value the different types of ES, $\chi^2(4) = 1.345$, $p = .854$. It was the same for city office employees, $\chi^2(4) = 4.809$, $p = .307$. There was a significant difference in how the barangays far from the park value the different types of ES, $\chi^2(4) = 17.420$, $p = .002$). Pairwise comparisons using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons revealed statistically significant differences in the values given by barangays far from the park to security (mean rank = 178.59) and cultural ES (244.65) ($p = .003$) and regulating (181.27) and cultural ES (244.65) ($p = .006$) (

Table 5.10).

There was also a significant difference in how the barangays near the park value the different types of ES, $\chi^2(4) = 24.753$, $p < .001$. Pairwise comparisons using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons revealed statistically significant differences in the values given barangays near the park to regulating (mean rank = 418.88) and cultural ES (523.11) ($p = .002$), regulating (418.88) and non-use ES (527.13) ($p = .001$), security (435.20) and cultural ES (523.11) ($p = .018$), and security (435.20) and non-use ES (527.13) ($p = .011$) (

Table 5.11). College students also value the different types of ES differently, $\chi^2(4) = 43.740$, $p < .001$. Pairwise comparisons using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons revealed statistically significant differences in the values given by college students to regulating (mean rank = 639.98) and economic ES (705.87) ($p < .001$), regulating (639.98) and cultural ES (832.40) ($p < .001$), security (649.96) and non-use ES (783.28) ($p = .001$), security (649.96) and cultural ES (823.40) ($p < .001$), and economic (705.87) and cultural ES (823.40) ($p = .007$) (Table 5.12).

One-way analysis of variance (ANOVA) was applied to the values given by businesses, since the data follow a normal distribution. Values increased from regulating ($n = 46$, $M = 6.22$, $SD = 2.53$) to security ($n = 46$, $M = 6.68$, $SD = 2.37$), economic ($n = 46$, $M = 7.09$, $SD = 2.08$), non-use ($n = 46$, $M = 7.31$, $SD = 2.17$) to cultural ($n = 46$, $M = 7.54$, $SD = 1.91$). There was a homogeneity of variances, as assessed by Levene's test for equality of variances ($p = .277$). The values given by businesses to the different ES were statistically significantly different $F(4, 225) = 2.575$, $p = .039$, $\omega^2 = 0.027$. However, only the difference between the values for cultural and regulating ES of 1.32 (95% CI, 0.04 to 0.59) was significant ($p = .038$).

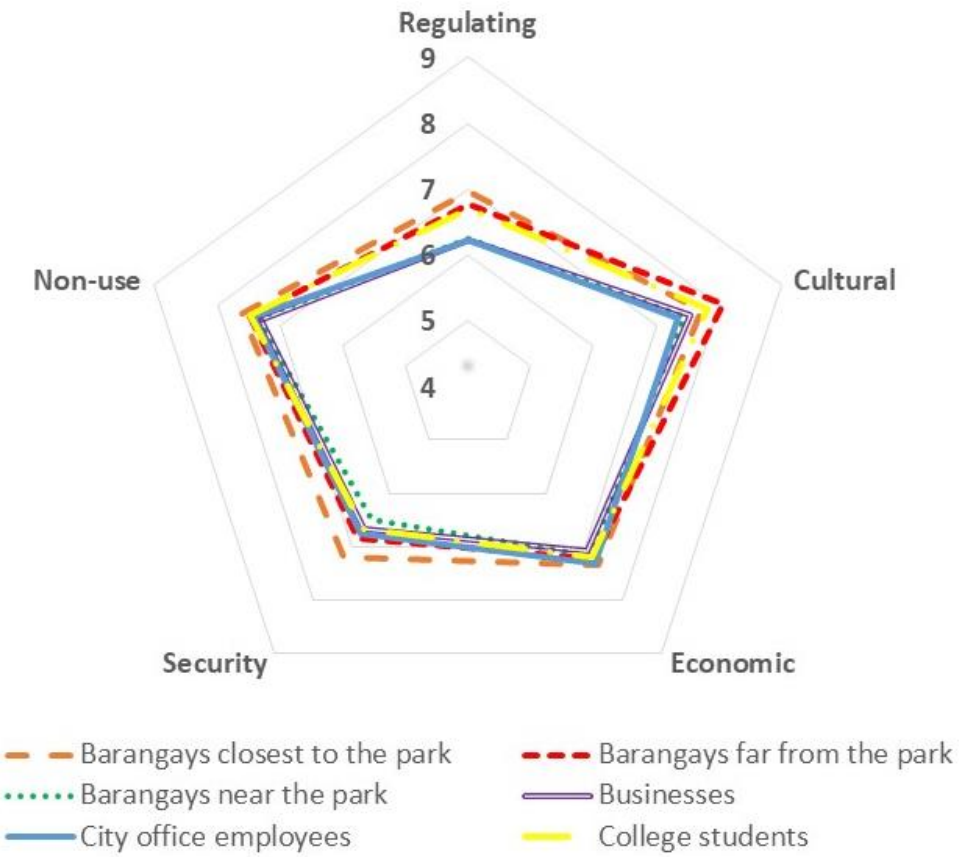


Figure 5.27. Comparison of the mean values assigned by stakeholder groups to the five types of ES

Table 5.10. Pairwise comparisons of the values assigned by barangays far from the park to the five ES types. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Security-Regulating	2.673	18.371	.145	.884	1.000
Security-Economic	18.710	18.371	1.018	.308	1.000
Security-Non-use	-34.593	18.371	-1.883	.060	.597
Security-Cultural	66.062	18.371	3.596	.000	**.003**
Regulating-Economic	-16.037	18.371	-.873	.383	1.000
Regulating-Non-use	-31.920	18.371	-1.738	.082	.823
Regulating-Cultural	-63.389	18.371	-3.451	.001	**.006**
Economic-Non-use	-15.883	18.371	-.865	.387	1.000
Economic-Cultural	47.352	18.371	2.578	.010	.099
Non-use-Cultural	31.469	18.371	1.713	.087	.867

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 5.11. Pairwise comparisons of the values assigned by barangays near the park to the five ES types. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Regulating-Security	-16.322	28.189	-.579	.563	1.000
Regulating-Economic	-66.809	28.189	-2.370	.018	.178
Regulating-Cultural	-104.236	28.189	-3.698	.000	**.002**
Regulating-Non-use	-108.249	28.189	-3.840	.000	**.001**
Security-Economic	50.487	28.189	1.791	.073	.733
Security-Cultural	87.914	28.189	3.119	.002	**.018**
Security-Non-use	-91.927	28.189	-3.261	.001	**.011**
Economic-Cultural	37.427	28.189	1.328	.184	1.000
Economic-Non-use	-41.440	28.189	-1.470	.142	1.000
Cultural-Non-use	-4.013	28.189	-.142	.887	1.000

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 5.12. Pairwise comparisons of the values assigned by college students to the five ES types. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Regulating-Security	-9.979	34.615	-.288	.773	1.000
Regulating-Economic	-65.891	34.615	-1.904	.057	.570
Regulating-Non-use	-143.302	34.615	-4.140	.000	**.000**
Regulating-Cultural	-183.424	34.615	-5.299	.000	**.000**
Security-Economic	55.911	34.615	1.615	.106	1.000
Security-Non-use	-133.323	34.615	-3.852	.000	**.001**
Security-Cultural	173.444	34.615	5.011	.000	**.000**
Economic-Non-use	-77.411	34.615	-2.236	.025	.253
Economic-Cultural	117.533	34.615	3.395	.001	**.007**
Non-use-Cultural	40.122	34.615	1.159	.246	1.000

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

Ecosystem disservices (EDS)

Figure 5.28 illustrates the mean values that the respondents assigned to individual park EDS. The three EDS with the highest mean values were the following: the risk of the park providing space for anti-social behaviour, crime, and other illegal things (*N* = 675, *M* = 6.41, *SD* = 3.12); the unpleasant, ugly, and unsafe appearance of the green areas (with grass and dense vegetation) in the park that is not intensively managed (*N* = 675, *M* = 6.09, *SD* = 3.1); and the park causing conflict among users - who should be prioritised to use the open space? (*N* = 675, *M* = 5.96, *SD* = 3.03). The three EDS with the lowest mean values were the following: the park wasting the land that could have been used for other purposes (*N* = 675, *M* = 5.18, *SD* = 3.29); the park exposing visitors to air pollution since it is beside the road (*N* = 675, *M* = 5.74, *SD* = 3.09); and the obstruction of fast and comfortable transportation because of the park (*N* = 675, *M* = 5.77, *SD* = 3).

The overall mean values for the different types of EDS are in Figure 5.29. Psychological EDS had the highest mean (*N* = 675, *M* = 5.98, *SD* = 2.45). It was followed by health EDS (*N* = 675, *M* = 5.74, *SD* = 3.09) and economic EDS (*N* = 675, *M* = 5.18, *SD* = 3.29). The mean values assigned to the different types of EDS were not normally distributed as assessed by a Shapiro-Wilk's test ($p < .05$). A Kruskal-Wallis test was conducted to determine if there were differences in the mean values assigned to the different types of EDS. Distributions of mean values were not similar for all EDS types, as assessed by a visual inspection of their boxplots (Figure 5.30). The mean ranks of the EDS values were statistically significantly different among the different types, $\chi^2(2) = 18.309$, $p = < .001$. Pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted *p*-values are presented. This post hoc analysis revealed statistically significant differences between economic (mean rank = 936.62) and health (1035.28) EDS ($p = .006$) and economic (936.62) and psychological (1067.11) EDS ($p < 0.001$). There was no statistically significant difference in median values between health (1035.28) and psychological EDS (1067.11) ($p = .951$) (Table 5.13).

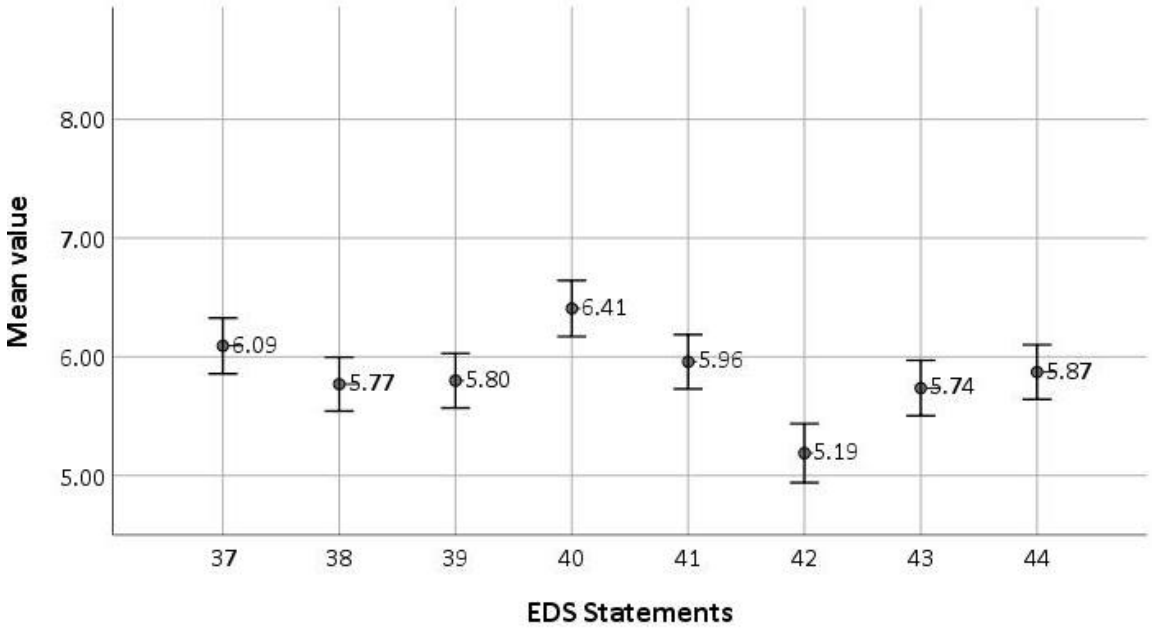


Figure 5.28. Mean values assigned to individual park ecosystem services (EDS). EDS statements can be found in Table 5.1. Error bars represent 95% confidence interval

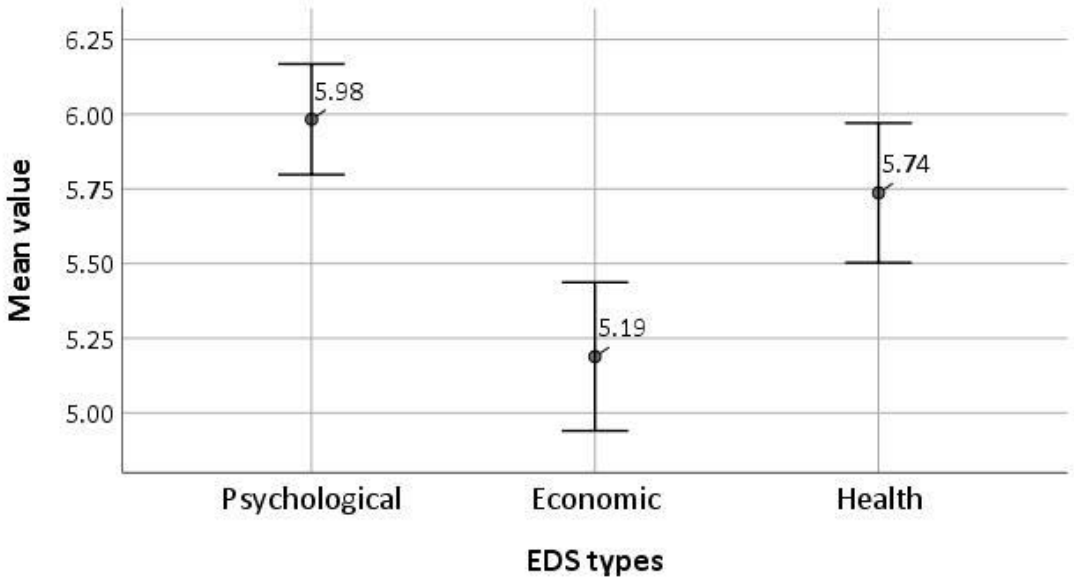


Figure 5.29. Mean values given to the different types of ecosystem disservices (EDS). Error bars represent 95% confidence interval

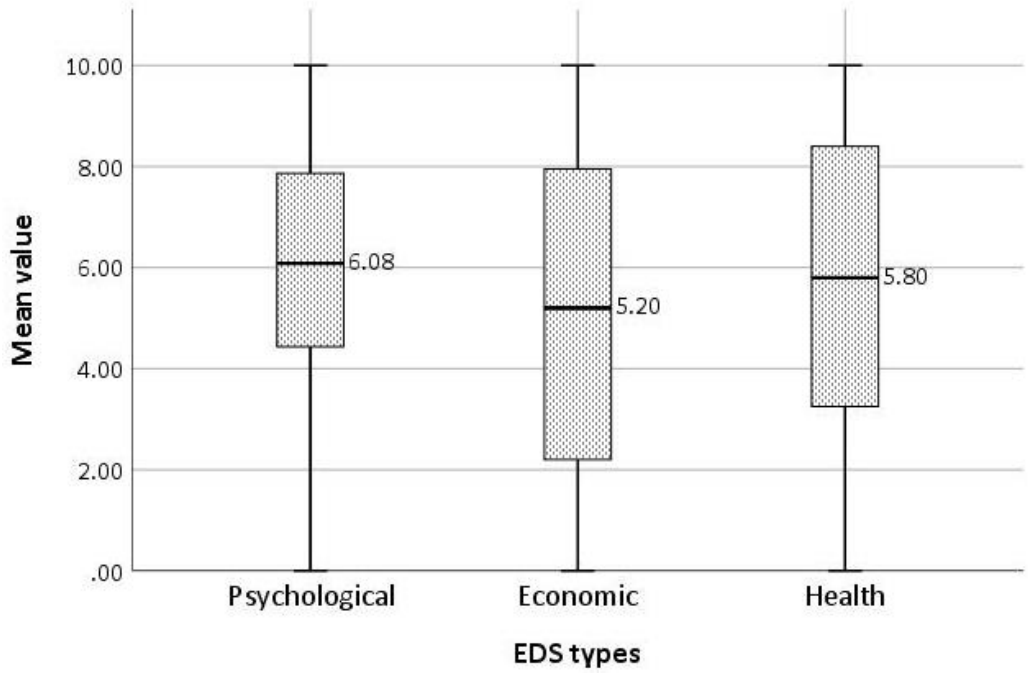


Figure 5.30. Boxplots of the values assigned to the different ecosystem disservices (EDS) types. Labelled midpoints are medians.

Table 5.13. Pairwise comparisons of the values assigned to the different types of EDS. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Economic-Health	-98.659	31.801	-3.102	.002	**.006**
Economic-Psychological	130.487	31.801	4.103	.000	**.000**
Health-Psychological	31.828	31.801	1.001	.317	.951

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

The mean values assigned to each type of EDS by different stakeholder groups are in Figure 5.31. The psychological disservices were valued the highest by the barangays closest to the park (*n* = 40, *M* = 6.75, *SD* = 2.99) and the lowest by barangays near the park (*n* = 191, *M* = 5.79, *SD* = 2.52). The economic disservices were valued the highest by the barangays closest to the park (*n* = 40, *M* = 6.13, *SD* = 1.96) and the lowest by the city office employees (*n* = 29, *M* = 4.36, *SD* = 3.26). The health disservices were valued

the highest by the barangays closest to the park (n = 40, M = 6.52, SD = 3.31) and lowest by the city office employees (n = 29, M = 4.58, SD = 3.08).

Shapiro-Wilk's tests were run to determine if the values assigned by different stakeholder groups to the three types of EDS follow a normal distribution. Only the values from barangays far from the park, businesses, and city office employees for psychological EDS; values from businesses for economic EDS; and values from city office employees for health EDS were normally distributed (p > .05). Kruskal-Wallis H tests were performed to determine if there were differences in the values assigned by different stakeholder groups to the three EDS types. Distributions of the values from the different stakeholder groups for each type of ES were not similar, based on their boxplots (Figure 5.32). There were no statistically significant differences on the values given by the different stakeholders to each type of EDS: psychological, $\chi^2(5) = 7.025$, p = .219); economic, $\chi^2(5) = 5.702$, p = .336; health, $\chi^2(5) = 7.833$, p = .166.

A comparison of how each stakeholder group values the different types of EDS is in Figure 5.33. All the stakeholder groups assigned higher values to psychological EDS, followed by economic, and health EDS. To determine if stakeholder groups value the three types of EDS differently, Kruskal-Wallis H tests were applied to the values that they assigned to each type of EDS. Distributions of the values from the different stakeholder groups for each type of EDS were not similar, based on their boxplots (Figure 5.32). There was no significant difference in how barangays closest to the park value the different kinds of EDS, $\chi 2(4) = .408$, p = .816. It was the same for barangays near the park, $\chi^2(2) = 4.161$, p = .125; businesses, $\chi^2(2) = 1.051$, p = .591; and city office employees, $\chi^2(2) = 4.164$, p = .125. In contrast, there was a significant difference in how the barangays far from the park value the different types of ES, $\chi^2(2) = 6.086$, p = .048. Pairwise comparisons using Dunn's (1964) procedure with a Bonferroni correction revealed that there were no statistically significant differences in the values assigned by barangays far from the park to economic (mean rank = 106.57) and health ES (127.07) (p = .190), economic (106.57) and psychological ES (132.35) (p = .059), health (127.07) and psychological ES (132.35) (p = 1) (Table 5.14). There was a significant difference in how college students value the different types of ES, $\chi^2(2)$ = 7.021, p = .030. Pairwise comparisons were performed using Dunn's (1964) procedure

with a Bonferroni correction for multiple comparisons revealed that there was a statistically significant difference in the values assigned by college students to economic (mean rank = 401.90) and health ES (440.31) (p = .031) (Table 5.15).

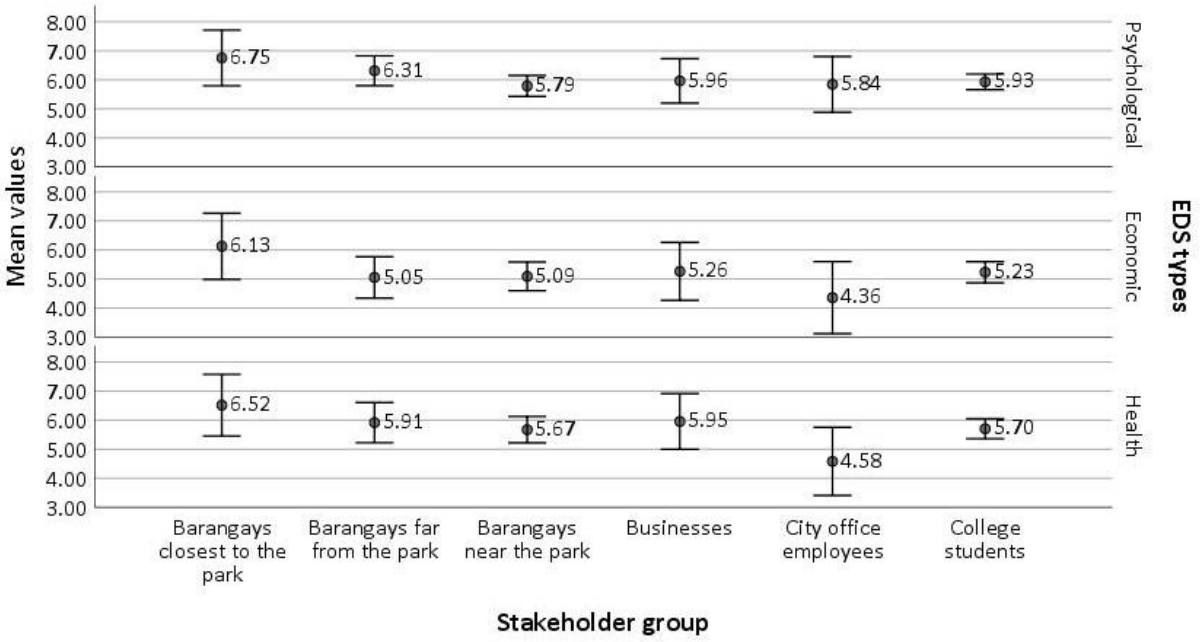


Figure 5.31. Mean values assigned by stakeholder groups to the different ecosystem disservices (EDS) types. Barangays closest to the park: *n* = 40; barangays far from the park: *n* = 81; barangays near the park: *n* = 191; businesses: *n* = 46; city office employees: *n* = 29; college students: *n* = 288. Error bars represent 95% confidence interval

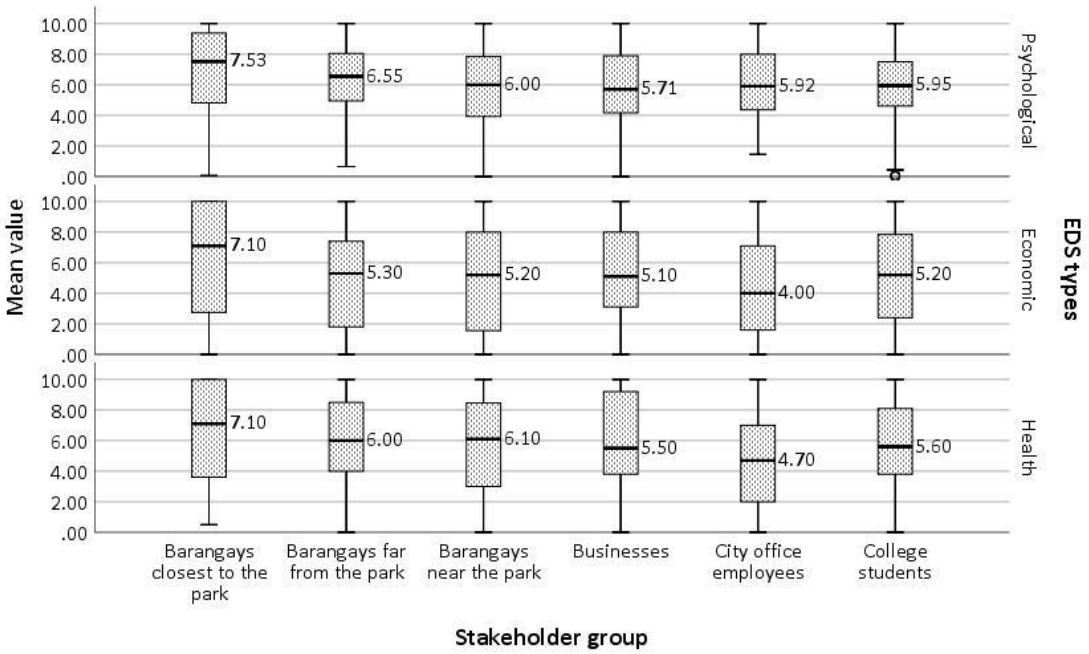


Figure 5.32. Boxplots of the values assigned by stakeholder groups to the different ecosystem services (ES) types. Labelled midpoints are medians.

Figure 5.33. Comparison of the mean values assigned by stakeholder groups to the five types of EDS

Table 5.14. Pairwise comparisons of the values assigned by barangays far from the park to the three EDS types. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Economic-Health	-20.500	11.040	-1.857	.063	.190
Economic-Psychological	25.778	11.040	2.335	.020	.059
Health-Psychological	5.278	11.040	.478	.633	1.000

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 5.15. Pairwise comparisons of the values assigned by college students to the three EDS types. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.*
Economic-Health	-38.408	20.784	-1.848	.065	.194
Economic-Psychological	53.384	20.784	2.568	.010	**.031**
Health-Psychological	14.976	20.784	.721	.471	1.000

*Significance values have been adjusted by the Bonferroni correction for multiple tests.

Results suggest that respondents value the park's ES more than they worry about its EDS. In terms of the ES, the highest valued ones were related to the park's being a place for enjoyment, relaxation, practising sports and keeping fit, and commemorating the national hero, Jose Rizal. The least valued park ES were related to its contribution to water recharge, purifying water, enabling seed dispersal, preventing flood, and as a parking space. Overall, respondents value cultural ES the highest, while regulating ES the lowest. Zhang et al. (2020) and Schmidt et al. (2016) also found that cultural ES are the most valued services in urban green spaces in China and Scotland, respectively.

Regulating ES might have been valued the least because respondents understand the park experientially and not functionally (van Vliet and Hammond, 2020). This pattern aligns with findings in various studies. For example, Zagarola et al. (2014) found that people most readily understood the cultural ES of watersheds, whereas the regulating ES were less comprehensible. This disparity could also be attributed to the tangible and immediate benefits that cultural ES provide, such as recreation, aesthetic enjoyment, and cultural heritage (Daniel *et al.*, 2012). It was interesting to note that one of the highly valued ES for the park was for commemorating the national hero. Connecting historical figures to parks can significantly elevate their cultural and historical value. Parks named after or associated with renowned individuals can serve as an educational tool and foster a sense of historical continuity. They can serve as spaces that encapsulate the legacy of those individuals, thereby providing a tangible

connection to history (Svendsen et al., 2016; Silva et al., 2022). People directly experience these benefits and are, therefore, more accessible and valued. In contrast, regulating ES, such as air purification, climate regulation, and flood control, are often invisible or taken for granted (Daniel *et al.*, 2012). They contribute to broader ecological functioning but are rarely perceived at the individual level (Nahuelhual *et al.*, 2013). The implications of this difference in understanding might extend to policy-making and park management. Suppose the public and specific stakeholders are unable to recognise or appreciate the value of regulating ES. In that case, it may lead to a lack of support for policies or practices that protect or enhance these functions (Scholte et al., 2015). The challenge then becomes communicating the importance of these less tangible but crucial services. Educational and awareness-raising initiatives could play a role in bridging this gap. By incorporating educational elements into park design, signage, and programmes, visitors might become more aware of the regulating services that urban parks provide (Bennett *et al.*, 2015). Such efforts could lead to a broader understanding of the multi-dimensional values that urban parks offer and promote a more holistic appreciation of their benefits. The issue also brings forward the importance of interdisciplinary research that incorporates social sciences in ecological studies (Miller *et al.*, 2014). By understanding how different stakeholder groups perceive and value ES, more targeted and effective strategies can be developed to conserve and enhance these services.

While there were no statistically significant differences on how each stakeholder group value a specific type of ES, it is worth mentioning that all the types of ES, except for cultural ES were valued the highest by barangays closest to the park. These findings suggest that people's appreciation of the park's ES is related to their proximity to the area. A similar point is made by Bogdan et al. (2019), Johnson et al. (2019) and Swapan et al. (2017). Bogdan et al. (2019) aimed to quantify and assess the spatial distribution of cultural ES of Romanian Carpathians using the perceived social values that tourists attribute to ecosystems and landscapes. They found that the perceived aesthetic value decreases overall as the distance to trails and prominent peaks increases. The recreation value decreases steadily as the distance to trails, buildings, and rivers increases. Additionally, increased distance to trails and facilities decreases the education and learning value. Johnson et al. (2019) compared the social values of ES in

two marine protected areas, Santa Cruz Island in the USA and Hinchinbrook Island in Australia. They argued that people's appreciation of ES is related to their proximity to the area. They observed similar social value patterns that decreased with increasing distance to infrastructure and coastline in both protected areas. Swapan et al. (2017) aimed to compare the perceptions of ES of urban parks between China and Australia. They found that distance impacted the importance scores assigned to historical and educational services. The closer the respondents live, the more likely they will attach a higher score for these services.

The association between proximity and valuation may be rooted in increased accessibility and a more immediate connection to the benefits provided by the park. As argued by Andersson *et al.* (2014), those living closer to natural areas often have greater opportunities for recreational activities and aesthetic enjoyment and thus may be more aware of the non-material benefits. Additionally, they are more likely to directly experience regulating ES, such as microclimate regulation or pollution mitigation (Ernstson, 2013). However, this relationship is complex and not solely defined by physical proximity. Cultural background, social values, and individual experiences can significantly influence ES's perception and value (Chan et al., 2012). For example, education and awareness-raising initiatives might enhance understanding and appreciation of ES, even those located further from the park (Russell *et al.*, 2013).

Cultural ES were valued the highest by barangays far from the park, suggesting that the appreciation of this type of ES extends beyond the proximity to the park. Unexpectedly, economic ES were valued the lowest by businesses. It might have been because the economic ES that were included in the survey were not directly related to a possible increase in the revenue of the businesses. It is important to note too that businesses were not able to contribute to the list of ES and EDS of the park since they refused interviews during the early stages of the research. These findings highlight the importance of involving the different stakeholder groups in developing a list of ES and EDS for a valuation survey (Maestre-Andrés et al., 2016; Sun et al., 2019). All the stakeholder groups, except for city office employees, assigned the highest value to the cultural ES. The city office employees assigned the highest value to non-use ES. All the stakeholder groups assigned the least value to the regulating ES. Based on the results,

barangays closest to the park and city office employees value each ES type equally, while other stakeholder groups favour cultural ES over regulating ES and other ES types.

Based on the results, the respondents were most worried about the following park EDS: risk of anti-social behaviour, the unpleasant appearance of unmaintained areas in the park, and conflict among users. They were least worried about the thoughts of the land being wasted, exposure to air pollution, and traffic. Overall, the respondents were most concerned with psychological EDS and least worried about economic EDS. Psychological EDS are negative feelings (e.g., anxiety, discomfort, disgust) that ecosystem properties cause (Liu et al., 2018; Lyytimäki & Sipilä, 2009). They can be considered very similar to cultural ES as they are also intangible and sometimes abstract. There were also no statistically significant differences in how each stakeholder group value a specific type of EDS. Still, it was found that all the types of EDS were valued the highest by barangays closest to the park. This result seems to suggest that similar to ES, people's concern about the park's ES is related to their proximity to the area. All the stakeholder groups assigned the highest value to the psychological EDS and the least value to health EDS. Based on the results, all the stakeholder groups, except for barangays far from the park value each EDS type equally.

5.2.6 Willingness to contribute

The majority of the respondents (81.87%) were willing to contribute something to keep the park (Figure 5.34 Left). Out of those who were willing to contribute, 81.5% were willing to give time, while 20.8 % were willing to give money (Table 5.16). Some respondents were willing to contribute by coming up with ideas for the design and maintenance of the park, proper use of the park's facilities, boosting the park's popularity through social media, encouraging people to participate park events, and donating plants and trash bins. On the other hand, more than half of those not willing to contribute (52.03%) said that they currently do not have extra time and money, while 29.27% think that it is the responsibility of the city to keep and maintain the park. About 5% said that they do not use the park and that those who use it should be the ones to contribute, and 2% think that parks are not important. Some respondents also believe that the tax that they pay is enough to maintain the park and that Calamba City has enough resources to keep the park (Figure 5.34 Right).

Descriptive statistics of the minimum number of hours the stakeholder groups were willing to give per month are in Table 5.17. Values above 40 hours (10 hours a week) were considered outliers and were not included in the analysis. The distributions of values given by stakeholder groups for the minimum number of hours per month they are willing to give were not normally distributed according to a Shapiro-Wilk's test ($p < .05$). There were also no significant differences in the mean values the stakeholder groups had given, according to a Kruskal-Wallis H test, $\chi^2(5) = 4.911$, $p = .427$.

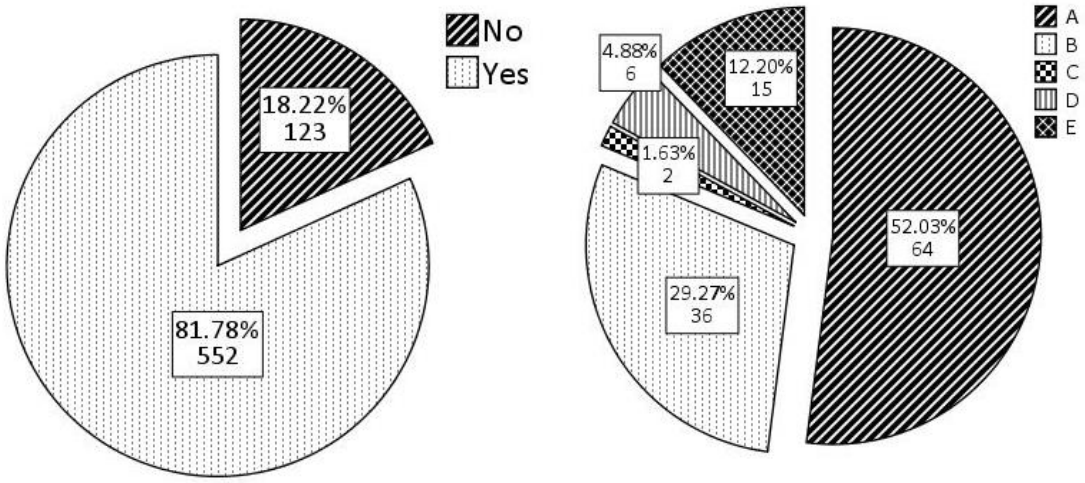


Figure 5.34. Respondents' answers to the questions "If you were asked to contribute something to keep the park, would you be willing to make this contribution?" (Left) and "If you are not willing to contribute, kindly indicate the reason." (Right) - A = I don't have extra time and money but otherwise would contribute; B = It is the responsibility of the city to keep and maintain the park; C = Parks are not important; D = I don't use the park. Those that use it should contribute; E = Other reasons

Table 5.16. Respondents' answers to the question "What are you willing to contribute to keep the park?"

Contribution	Responses		Percent of Cases
	N	Percentage	
Time	450	68.4	81.5
Money	115	17.5	20.8
Others	93	14.1	16.8
Total	658	100	119.2

Table 5.17. Descriptive statistics of the minimum number of hours the stakeholder groups are willing to give per month to keep the park

Stakeholder groups	N	Min.	Max.	Mean	Std. Dev.	Median
Barangays closest to the park	23	1	30	6.65	7.41	4
Barangays far from the park	45	.5	30	7.28	7.45	5
Barangays near the park	121	1	40	6.46	6.71	4
Businesses	32	1	30	10.03	8.95	8
City office employees	17	2	24	7.47	6.38	4
College students	162	1	36	7.33	7.92	4
Total	400	.5	40	7.24	7.53	4

Descriptive statistics of the maximum number of hours stakeholder groups were willing to give per month are in Table 5.18. Similar to the minimum number of hours, values above 40 hours (10 hours a week) were considered outliers and were not included in the analysis. Only the values given by the barangays closest to the park and the city office employees are normally distributed according to a Shapiro-Wilk's test ($p > .05$). There were no significant differences in the maximum number of hours stakeholder groups were willing to give per month, according to a Kruskal-Wallis H test, $\chi^2(5) = 4.268$, $p = .511$.

Table 5.18. Descriptive statistics of the maximum number of hours the stakeholder groups are willing to give per month to keep the park

Stakeholder group	N	Min.	Max.	Mean	Std. Dev.	Median
Barangays closest to the park	20	1	24	8.55	6.39	7
Barangays far from the park	42	1	40	10.14	8.65	8
Barangays near the park	120	1	40	10.75	9.12	8
Businesses	31	1	40	14.26	11.20	10
City office employees	16	2	20	9.06	5.53	8
College students	152	1	40	10.91	9.17	8
Total	381	1	40	10.85	9.06	8

Descriptive statistics of the minimum amount stakeholder groups were willing to give per month are in Table 5.19. Amounts above PhP 10,000 (~ USD 208) were considered outliers and were not included in the analysis. The distributions of values given by stakeholder groups for the minimum amount per month they are willing to give were not normally distributed according to a Shapiro-Wilk's test ($p < .05$). There were also no significant differences in the mean minimum amounts the stakeholder groups were willing to give per month, according to a Kruskal-Wallis H test, $\chi^2(5) = 8.513$, $p = .130$.

Descriptive statistics of the maximum amount stakeholder groups were willing to give per month are in Table 5.20. Amounts above PhP 10,000 (~ USD 208) were also considered outliers and were not included in the analysis. The distributions of values given by stakeholder groups for the maximum amount per month they are willing to give were not normally distributed according to a Shapiro-Wilk's test ($p < .05$). There were also no significant differences in the mean maximum amounts the stakeholder groups were willing to give per month, according to a Kruskal-Wallis H test, $\chi^2(5) = 4.634$, $p = .462$.

Table 5.19. Descriptive statistics of the minimum amount the stakeholder groups are willing to give per month to keep the park. Amounts are in Philippine Peso (PhP). PhP 1 = ~ USD 0.021.

Stakeholder group	**N**	**Min.**	**Max.**	**Mean**	**Std. Dev.**	**Median**
Barangays closest to the park	5	20	1,000	268	415.84	100
Barangays far from the park	17	1	7,000	893.71	1,972.86	100
Barangays near the park	36	1	10,000	628.75	1,675.95	150
Businesses	11	100	10,000	1,500	2,877.85	500
City office employees	6	100	5,000	1,450	1,879.10	750
College students	38	20	10,000	804.21	1,905.04	150
Total	113	1	10,000	840.07	1,904.87	200

Table 5.20. Some descriptive statistics of the maximum amount the stakeholder groups are willing to give per month to keep the park. Amounts are in Philippine Peso (PhP). PhP 1 = ~ USD 0.021.

Stakeholder group	N	Min.	Max.	Mean	Std. Dev.	Median
Barangays closest to the park	5	50	3,000	830	1,231.67	500
Barangays far from the park	16	2	8,000	917.06	1,928.84	500
Barangays near the park	35	1	4,000	690.57	831.66	500
Businesses	10	1	10,000	1,825.1	2,965.78	1,000
City office employees	6	100	10,000	2,791.67	3,674.84	2,000
College students	37	20	5,500	1,072.16	1,533.56	500
Total	109	1	10,000	1,079.49	1,789.68	500

Willingness-to-contribute and values assigned to ES and EDS

A Kendall's (1945) tau-b correlation was performed to determine the relationship between the minimum and the maximum number of hours the respondents were willing to contribute to the park and the overall values that they have assigned to ES and EDS and their types. There were weak positive associations between the minimum number of hours and the mean value assigned to all ES, $\tau_b = .010$, $p = .785$; regulating ES, $\tau_b = .023$, $p = .530$; cultural ES, $\tau_b = .014$, $p = .639$; security ES, $\tau_b = .009$, $p = .806$; and non-use ES, $\tau_b = .002$, $p = .995$. It was a weak negative association for economic ES, $\tau_b = -.011$, $p = .771$. All the associations were not statistically significant. There were also weak positive associations between the maximum number of hours and the mean value assigned to all ES, $\tau_b = .052$, $p = .144$; regulating ES, $\tau_b = .058$, $p = .106$; cultural ES, $\tau_b = .051$, $p = .156$; economic ES, $\tau_b = .015$, $p = .648$; security ES, $\tau_b = .039$, $p = .283$; and non-use ES, $\tau_b = .053$, $p = .146$. All these associations were also not statistically significant (

Table 5.21).

There were weak positive associations between the minimum number of hours and the mean value assigned to all EDS, $\tau_b = .032$, $p = .376$ psychological EDS, $\tau_b = .036$, $p = .322$; economic EDS, $\tau_b = .022$, $p = .548$; and health EDS, $\tau_b = .031$, $p = .395$. None of the associations was significant. There were also weak positive associations between the maximum number of hours and the mean value given to all EDS, $\tau_b = .053$, $p = .140$; psychological EDS, $\tau_b = .059$, $p = .102$; economic EDS, $\tau_b = .022$, $p = .550$; and health EDS, $\tau_b = .036$, $p = .328$. All the associations were not statistically significant (

Table 5.22).

A Kendall's tau-b correlation was also performed to determine the relationship between the minimum and maximum amount the respondents were willing to contribute to the park and the overall values that they have assigned to ES and EDS and their types. There were weak positive associations between the minimum number of hours and the mean value assigned to all ES, $\tau_b = .053$, $p = .442$; regulating ES, $\tau_b = .054$, $p = .439$; cultural ES, $\tau_b = .053$, $p = .451$; economic ES, $\tau_b = .054$, $p = .438$; and non-use ES, $\tau_b = .028$, $p = .699$. It was a weak negative association with security ES, $\tau_b = -.006$, $p = .983$. All the associations were not statistically significant. There were also weak positive associations between the maximum amount and the mean value assigned to all ES, $\tau_b = .066$, $p = .334$; regulating ES, $\tau_b = .073$, $p = .288$; cultural ES, $\tau_b = .079$, $p = .250$; economic ES, $\tau_b = -.053$, $p = .441$; and non-use ES, $\tau_b = .010$, $p = .886$. It was a weak negative association with security ES, $\tau_b = -.015$, $p = .833$. None of the associations was statistically significant (

Table 5.21).

There were weak positive associations between the minimum amount and the mean value assigned to all EDS, $\tau_b = .084$, $p = .224$ psychological EDS, $\tau_b = .097$, $p = .160$; economic EDS, $\tau_b = .034$, $p = .629$; and health EDS, $\tau_b = .053$, $p = .449$. All the associations were not statistically significant. There were weak positive associations between the maximum amount and the mean value assigned to all EDS, $\tau_b = .124$, $p = .069$; psychological EDS, $\tau_b = .136$, $p = .045$; economic EDS, $\tau_b = .044$, $p = .522$; and health EDS, $\tau_b = .095$, $p = .171$. Only the association with psychological EDS was statistically significant (

Table 5.22).

Table 5.21. Results of Kendall's tau-b correlation to determine associations among the minimum and the maximum number of hours and the amount the stakeholders are willing to give and the values that they assigned to ES and its types. The significance level is .05. Significant results are in bold.

		Values for all ES and ES types					
	Kendall tau b	**All ES**	**Reg.**	**Cul.**	**Econ.**	**Sec.**	**Non.**
Minimum hours/month	Coefficient	0.01	0.023	0.014	-0.011	0.009	0.002
	Sig. (2-tailed)	0.785	0.53	0.693	0.771	0.806	0.955
	N	376	376	376	376	376	376
Maximum hours/month	Coefficient	0.052	0.058	0.051	0.015	0.039	0.053
	Sig. (2-tailed)	0.144	0.106	0.156	0.684	0.283	0.146
	N	376	376	376	376	376	376
Minimum amount/month	Coefficient	0.053	0.054	0.053	0.054	-0.006	0.028
	Sig. (2-tailed)	0.442	0.439	0.451	0.438	0.938	0.699
	N	109	109	109	109	109	109
Maximum amount/month	Coefficient	0.066	0.073	0.079	0.053	-0.015	0.01
	Sig. (2-tailed)	0.334	0.288	0.25	0.441	0.833	0.886
	N	109	109	109	109	109	109

Table 5.22. Results of Kendall's tau-b correlation to determine associations among the minimum and the maximum number of hours and the amount the stakeholders are willing to give and the values that they assigned to EDS and its types. The significance level is .05. Significant results are in bold.

		Values for all EDS and EDS types			
	Kendall tau b	**All EDS**	**Psychological**	**Economic**	**Health**
Minimum hours/month	Coefficient	0.032	0.036	0.022	0.031
	Sig. (2-tailed)	0.376	0.322	0.548	0.395
	N	376	376	376	376
Maximum hours/month	Coefficient	0.053	0.059	0.022	0.036
	Sig. (2-tailed)	0.14	0.102	0.55	0.328
	N	376	376	376	376
Minimum amount/month	Coefficient	0.084	0.097	0.034	0.053
	Sig. (2-tailed)	0.224	0.16	0.629	0.449
	N	109	109	109	109
Maximum amount/month	Coefficient	0.124	0.136	0.044	0.095
	Sig. (2-tailed)	0.069	**0.045**	0.522	0.171
	N	109	109	109	109

Based on the results, most of the respondents were willing to contribute something to keep the park. The majority of them, too, were willing to give time instead of money. This finding has intriguing implications. It may reflect an underlying sense of ownership or personal connection to the park rather than a utilitarian valuation of the space. This inclination aligns with the theory that people's relationship with nature is not purely transactional but embedded in social, emotional, and ethical dimensions (Chan *et al.*, 2012; Kenter *et al.*, 2015b). The findings could also be linked to a growing trend of volunteering and community participation in environmental stewardship (Kingsley et al., 2009). This trend emphasises collaboration and co-management and offers an alternative pathway to contributing to urban sustainability beyond financial investments.

According to the statistical tests performed, only the psychological EDS and the maximum amount the respondents were willing to give had a significant positive correlation. This suggests that the more concerned the respondents are with the park's psychological EDS, the higher the maximum amounts they were willing to contribute. These results contradict the findings of Tian et al. (2020) – they found that people's perception of EDS negatively affects their willingness to contribute. This disparity might be understood through cultural or contextual factors influencing the respondents' perceptions and values. For example, a strong community bond to the park may foster a willingness to tackle these disservices proactively (Rall *et al.*, 2017). Furthermore, this correlation might indicate an increased awareness of mental health benefits and potential disservices related to urban green spaces. As emphasised by Hartig *et al.* (2014), urban parks can offer critical opportunities for restorative experiences, but they can also potentially contribute to stress if poorly maintained or associated with antisocial activities.

Overall, the findings underline the multifaceted nature of human-environment interactions shaped by psychological, cultural, and socio-economic factors. They reinforce the need for pluralistic approaches that recognise the diversity of stakeholders' values and perceptions and the necessity for tailored management and community engagement strategies.

5.2.7 Conditions leading to the high valuation of ES and EDS

Fuzzy-set Qualitative Comparative Analysis (fsQCA) was used to deduce the configuration of conditions that lead to a high valuation of ES and EDS and their types. Qualitative Comparative Analysis (QCA) is a comparative method that examines the set-theoretic relationships between causally relevant conditions and a specified outcome. These set-theoretic relationships are then interpreted in terms of necessity and sufficiency. A condition can be interpreted as sufficient, if always when the condition is present, the outcome is also present. A sufficient condition can be said to be a sub-set of the outcome. By contrast, a condition is necessary if always when the outcome is present, the condition is also present. The outcome can be said to be a sub-set of the necessary condition (Rihoux and Ragin, 2009).

QCA highlights the following aspects of causal complexity: conjunctural causation, equifinality, and asymmetry. Conjunctural causation emphasises how conditions combine to cause an outcome, while equifinality relates to the possibility that more than one condition or set of conditions could lead to an outcome of interest. QCA also recognises that the conditions for the occurrence of the outcome might not exactly be the opposite of the conditions for its non-occurrence. One cannot explain the non-occurrence of the outcome based on the conditions that led to the outcome (Ragin, 2014; Schneider & Wagemann, 2010). Ragin (2008) described three types of QCA – crisp set, fuzzy set, and multi-value, which differ in the kind of data or information used as outcomes and conditions. Crisp set QCA (csQCA) can only utilise binary data, *i.e.,* information that can only take two forms, while fuzzy-set QCA (fsQCA) can make use of both binary and continuous data as outcomes and conditions. Multi-value QCA (mvQCA) can have multinomial data as conditions but only binary data as outcomes (Ragin, 2008; Schneider & Wagemann, 2010).

The set relations (in the form of configurations) produced by any type of QCA is assessed using two measures – consistency and coverage. Consistency is the agreement among cases sharing a specific causal configuration (a combination of conditions). In other words, it measures the consistency of the causal configurations in causing or not causing an outcome. If a causal configuration has a low consistency, it means that this combination of conditions is not supported by empirical evidence. Causal configurations with low consistencies are considered less relevant than others with higher consistencies. Coverage measures the proportion of cases that has a specific causal configuration. Unlike consistency, low coverage does not mean that a configuration is not supported by empirical evidence or is less relevant (Ragin, 2008).

Outcomes and conditions

The outcomes of interest in the fsQCA are the high valuation to park ES and EDS. The values that each case (respondent) assigned to individual ES and EDS were averaged to represent their overall valuation to ES and EDS, respectively. The conditions that were used for these outcomes were separated into three groups to keep a modest number

of conditions per analysis (Ragin, 2008b; Schneider & Wagemann, 2010). These three groups of conditions are a) park knowledge and use; b) socio-economic characteristics; and c) environmental knowledge, perception, and behaviour. Only questionnaire responses without missing information in any of the outcomes and conditions were included in the fsQCA (Paykani et al., 2018; Ragin, 2008b). The total number of cases that were analysed was 441. Descriptive statistics of the outcomes and conditions and the thresholds used for calibration are in Table 5.23.

Park knowledge and use contained information on the knowledge about the previous land use in the area, park visits and frequency, and visiting other parks. Knowledge about the previous land use was included in the set of conditions as it is hypothesised to aid in the respondents' comparison between the previous and present ES and EDS of the area. Information on visiting Jose Rizal Plaza and its frequency and visiting other parks were included because studies (Duan et al., 2018; Lafortezza et al., 2009; Lo & Jim, 2010) suggest that using green spaces can improve people's perception of the benefits of green infrastructure. Respondents who answered the correct previous land use in the area were given a set membership score of 1, while those who did not were given 0. A set membership of 1 means that the case completely belongs to the set of cases having a specific characteristic of interest (in this case knowing the previous land use in the area), while a set membership of 0 means that the case completely does not belong to the set of cases with the characteristic of interest. Respondents who have visited the park were given a set membership of 1 while those who have not were given 0. It was the same for visiting other parks – those who visit other parks were given 1, while those who do not were given 0. Weekly visits to the Jose Rizal Plaza was considered frequent and was given 1; monthly and yearly visits were given 0.

Previous studies suggest that the distance from green spaces (Grahn & Stigsdotter, 2003; Schipperijn et al., 2010), house ownership (Gashu et al., 2020), level of education (Baptiste et al., 2015; Gashu et al., 2020) and length of stay in an area (Wright Wendel et al., 2012; Zhang et al., 2020) all contribute to how people use and perceive green infrastructure. Hence, these factors were included in the set of conditions for socio-economic characteristics. Recent studies also attempted to link exposure to green spaces and prosocial behaviour, especially among children and adolescents (Van Aart

et al., 2018; Putra *et al.*, 2020). Although the results of these studies are mixed (Putra *et al.*, 2020), it is interesting to get insights on how prosocial SVO, in turn, affect the value assigned to ES and EDS of green spaces. Respondents from barangays near (within a 4km radius from the park) were given a set membership score of 1, while those far (outside a 4km radius from the park) were given 0. Those who own their house were given 1, while those who do not were given 0. Reaching college was assumed to be the threshold for a high level of education and was given a set membership of 1. Locals were given a set membership of 1, while migrants were given 0. Actual SVO angle scores were used for prosocial orientation. Since these angle scores are continuous values, they should first be transformed into membership scores from 0 to 1. This can be accomplished through a process called calibration (Ragin, 2008). The process of calibration is discussed in the following section.

The last set of conditions include environmental knowledge, perception, and behaviour, which are assumed to influence and reflect people's relationship with nature. Correct answers were summed to represent knowledge of environmental concepts. Ratings were also totalled for knowledge on environmental laws and environmental perception and behaviour. These scores also need to be calibrated before they can be used for fsQCA.

Table 5.23. Descriptive statistics and membership thresholds set for outcomes and causal conditions in the fsQCA

Outcomes and conditions and their notations	**Descriptive statistics (*N* = 441)**	**Non - membership**	**Cross - over**	**Full membership**
Outcomes				
High valuation to ES	*M* =7.35; *SD* = 2.08	3	4	7
High valuation to EDS	*M* = 5.92; *SD* = 2.46	2	3	6
Park knowledge and use				
Knowledge on previous land use (pre)	Yes = 41.7%; No =58.3%	0	-	1
Visited the park (vis)	Yes =97.3%; No = 2.7%	0	-	1
Frequent visitor (fre)	Yes = 13.6%; No =86.4%			
Visit other parks (oth)	Yes = 49.7%; No = 50.3%	0	-	1
Socio-economic characteristics				
Prosocial orientation (pro)	*M* = 30.15; *SD* = 12.47	22.45	37.09	37.48
Living near the park (nea)	Yes = 69.6%; No =30.4%	0	-	1
Own their house (own)	Yes = 51.7%; No = 48.3%	0	-	1
High educational attainment (edu)	Yes = 67.1%; No = 32.9%	0	-	1
Local (loc)	Yes = 76.4%; No = 23.6%	0	-	1
Environmental knowledge, perception, and behaviour				
High knowledge of environmental concepts (enc)	*M* = 4.34; *SD* = 1.7	2	4	5
High knowledge of environmental laws (enl)	*M* = 3.97; *SD* = 2.07	3	4	6
Positive perception (enp)	*M* = 22.83; *SD* =6.18	18	27	36
Positive behaviour (enb)	*M* = 25.97; *SD* = 6.42	18	27	36

Calibration

Calibration is the process of transforming discrete or continuous raw scores for the outcome and causal conditions into fuzzy membership scores (Ragin, 2000; Rihoux & Ragin, 2009). The direct method of calibration described by Ragin (2000) was used in this study. This method uses estimates of the log of the odds of full membership in a set as an intermediate step. The verbal labels and metrics that Ragin (2000) suggests for this method are in Table 5.24. The log of odds is computed by taking the natural log of the odds of membership. The odds of membership is calculated using the formula:

$$odds\ of\ membership = \frac{\text{degree of membership}}{1 - \text{degree of membership}}$$

According to Ragin (2000), the metric of log odds is useful because it is entirely symmetric around 0 (an odds of 50/50) and does not suffer from floor and ceiling effects. Another important advantage of this metric is that it always results in set membership scores from 0 to 1 - a core requirement of fuzzy membership scores.

Table 5.24. Verbal labels and set membership scores from Ragin (2000)

Verbal Label	Degree of membership	Associated odds	Log odds of full membership
Full membership	0.993	148.41	5.0
Threshold of full membership	0.953	20.09	3.0
Mostly in	0.881	7.39	2.0
More in than out	0.622	1.65	0.5
Cross-over point	0.500	1.00	0.0
More out than in	0.378	0.61	-0.5
Mostly out	0.119	0.14	-2.0
Threshold of full non membership	0.047	0.05	-3.0
Full non membership	0.007	0.01	-5.0

To begin the calibration, three important thresholds for the raw scores are first set – the threshold for full non-membership, cross-over point, and the threshold for full membership. The cross-over point is the value of the raw scores where there is maximum ambiguity as to whether a case is more in or more out of the target set. The deviations of the raw scores from the cross-over points are then calculated, after which they are translated into the metric of log odds:

a. For deviation values above the cross-over point, this translation is accomplished by multiplying the relevant deviation values by the ratio of the log odds associated with the verbal label for the threshold of full membership (Table 5.23) to the deviation score designated as the threshold of full membership.
b. For deviation scores below the cross-over point, this translation is accomplished by multiplying the relevant deviation values by the ratio of the log odds associated with the verbal label for the threshold of full non-membership (Table 5.23) to the deviation score designated as the threshold of full non-membership.

Finally, the formula below is applied to convert the log odds to scores that range from 0 to 1. In this study, the calibration process was accomplished using a Microsoft Excel function called Fuzz created by Rubinson (2013).

$$degree\ of\ membership = \frac{e^{\log odds}}{1 + e^{\log odds}}$$

Only the ES and EDS values, the SVO scores, and the ratings for environmental knowledge, perception, and behaviour were calibrated as the other conditions are already in 0 (no) and 1 (yes) form. Full membership threshold was set to 7 for ES values. It was set to 6 for EDS – a point lower since the survey data shows that the respondents assigned lower values to EDS. For the prosocial SVO, full membership threshold was set to 37.48, the value that corresponds to a prosocial person with

inequality aversion. The cross-over point was set to 37.09, the lower limit to describe a prosocial who is inequality tolerant. The full non-membership threshold was set to 22.45, the upper limit to represent an individualist (Murphy & Ackermann, 2013). Full membership threshold for high knowledge on environmental concepts was set to 5, while it was set to 6 for high knowledge on environmental laws (rating of 2 in all three laws, rating of 3 in two laws, rating of 3 in one law and 2 and 1 in the other laws). The cross-over and full non-membership thresholds for high knowledge on environmental concepts and high knowledge on environmental laws were set to 4 and 2, and 4 and 3, respectively. Full membership threshold to positive environmental perception and behaviour was set to 36 (at least a mean of 4 for the nine environmental conditions and behaviour) while the cross-over and full non-membership thresholds were set to 27 and 18, respectively (Table 5.23).

fs/QCA software

Once the outcome and causal conditions have been calibrated into fuzzy set membership scores, the scores were directly keyed to fs/QCA software Version 3.1b (Ragin & Davey, 2019). The software generates a truth table once the outcome and the causal conditions are specified. The resulting truth table has 2^k rows (k = number of causal conditions), reflecting the different configuration of conditions and their outcomes. Column names in the truth table and their descriptions are in Table 5.25.

Table 5.25. Truth table column names and their descriptions (Ragin & Davey, 2019)

Column Name	Description
number	the number of cases displaying the combination of conditions
raw consist.	proportion of cases in each truth table row that display the outcome.
PRI consist.	an alternative measure of consistency (developed for fuzzy sets) based on a quasi-proportional reduction in error calculation. In crisp set analyses this will be equal to raw consist.
SYM consist.	an alternative measure of consistency for fuzzy sets based on a symmetrical version of PRI consistency.

After the truth tables were generated, they were reduced by setting frequency and consistency thresholds. It was assumed that at least 10 cases are enough to represent a configuration of conditions and its outcome. The consistency threshold was set to 0.80, as suggested by Ragin & Davey (2019). The software then applies Boolean minimisation rules to simplify the configurations. It produces three types of solutions, namely, complex, parsimonious, and intermediate. The complex solution does not include any remainders or configurations that lack empirical instances or cases in the analysis. The parsimonious solution allows the incorporation of remainders to generate a simpler solution regardless of their empirical possibility and the existing substantive knowledge. The intermediate solution also allows the incorporation of remainders, but only those that are expected to affect the outcome based on previous empirical findings (Paykani et al., 2018; Ragin, 2000). Only the complex solutions are presented in the results as the study does not aim to make assumptions on how the conditions could affect the outcomes. Analyses on the negated outcomes (*i.e.,* low valuation to ES and EDS) were also not performed because of the limited number of cases with those outcomes.

High valuation to ecosystem services (ES)

Table 5.26 presents the reduced truth table generated by fs/QCA for the first ES set-up: high valuation to ES as the outcome and knowledge on the previous land use, having had an experience visiting the park, frequently visiting the park, and visiting other parks as the conditions. The software produced a total of 16 configurations (2^4), but only eight remained after the frequency cut-off of 10 and the consistency cut-off of 0.80 were applied. There was a limited diversity of the cases as all the configurations led to a high valuation to ES.

The Boolean minimisation applied by the software resulted in a solution with four configurations that lead to a high valuation to ES (

Table 5.27). The overall solution coverage is 98%, while the overall solution consistency is 87%. The software also gives raw and unique coverage and consistency for each configuration. Raw coverage is the proportion of cases (that led to the outcome) covered by a configuration. Unique coverage, in contrast, is the proportion of cases (that led to the outcome) covered exclusively by a configuration. It can be generalised that for the study's 441 respondents, the following combinations of characteristics were sufficient to have caused them to value the ES of Jose Rizal Plaza highly:

a. visited the park and not visiting other parks
b. visited the park and not frequently visiting the park
c. visited the park and knowing the previous land use in the area
d. visited the park, knowing the previous land use, not frequently visiting the park, and not visiting other parks

It can be noted that visiting the park is present in all the configurations. It means that visiting the park is a necessary condition for the cases to value the park highly.

Table 5.26. Truth table for the high valuation to ES as the outcome and knowledge on the previous land use (prev), having had an experience visiting the park (vis), frequently visiting the park (fre), and visiting other parks (oth) as the conditions. Actual frequency and consistency cut-off used by the software were 11 and 0.811, respectively.

prev	vis	fre	oth	number	es	raw consist.	PRI consist.	SYM consist.
1	1	1	0	17	1	0.952	0.949	1
1	1	1	1	23	1	0.935	0.930	1
0	1	1	0	14	1	0.915	0.914	0.928
0	1	0	0	124	1	0.901	0.893	0.965
0	1	0	1	101	1	0.868	0.858	0.930
1	1	0	1	88	1	0.855	0.842	0.924
0	0	0	0	11	1	0.826	0.817	0.863
1	1	0	0	56	1	0.811	0.791	0.885

Table 5.27. fsQCA results for the high valuation to ES as the outcome and knowledge on the previous land use (prev), having had an experience visiting the park (vis), frequently visiting the park (fre), and visiting other parks (oth) as the conditions.

Configurations	**Raw coverage**	**Unique coverage**	**Consistency**
vis*~oth	0.483	0.033	0.882
vis*~fre	0.830	0.228	0.867
prev*vis	0.411	0.056	0.860
Vis*~prev*~fre*~oth	0.313	0.024	0.895
solution coverage: 0.985			
solution consistency: 0.875			

Note: * = AND; ~ = negation of condition.

Table 5.28 presents the reduced truth table generated by fs/QCA for the second ES set-up: high valuation to ES as the outcome and prosocial orientation (pro), living near the park (nea), owning a house (own), high educational level (edu), and being a local (loc) as conditions. The software produced a total of 32 configurations (2^5), but only 17 remained after the frequency cut-off of 10 and the consistency cut-off of 0.80 were applied. There was also a limited diversity of the cases as all the configurations, except for one, led to a high valuation to ES.

The Boolean minimisation applied by the software resulted in a solution with five configurations that lead to a high valuation to ES (Table 5.29). The overall solution coverage is 80%, while the overall solution consistency is 88%. It can be generalised that for the study's 441 respondents, the following combinations of characteristics were sufficient to have caused them to value the ES of Jose Rizal Plaza highly. No condition was necessary for the outcome.

a. not having a prosocial orientation and being a local
b. not having a prosocial orientation, living near the park, and not owning a house
c. not having a prosocial orientation, living near the park, and having a high level of education
d. having a high level of education and being a local

e. living near the park, not owning a house, and being a local

Table 5.28. Truth table for the high valuation to ES as the outcome and prosocial behaviour (pro), living near the park (nea), owning a house (own), high educational level (edu), and being a local (loc) as conditions. Actual frequency and consistency cut-off used by the software were 10 and 0.905, respectively.

pro	nea	own	edu	loc	num.	es	raw consist.	PRI consist.	SYM consist
0	0	1	0	1	20	1	0.999	0.999	1
0	1	0	0	1	16	1	0.993	0.992	1
0	0	1	1	1	26	1	0.963	0.960	1
0	1	0	1	0	27	1	0.936	0.931	0.956
1	1	1	1	1	25	1	0.926	0.914	0.962
1	0	1	1	1	12	1	0.912	0.904	0.925
0	0	0	0	1	10	1	0.905	0.898	0.932
1	1	0	1	1	19	1	0.905	0.887	0.969
0	1	0	1	1	64	1	0.898	0.889	0.918
0	1	1	0	1	31	1	0.883	0.870	0.927
0	1	1	1	0	14	1	0.875	0.858	0.916
0	0	0	1	1	17	1	0.873	0.862	0.896
0	1	0	0	0	10	1	0.869	0.858	0.898
1	1	0	0	1	11	1	0.864	0.843	0.910
1	0	0	1	1	12	1	0.856	0.842	0.881
0	1	1	1	1	56	1	0.848	0.825	0.884
0	1	1	0	0	10	0	0.773	0.734	0.803

Table 5.29. fsQCA results for the high valuation to ES as the outcome and prosocial orientation (pro), living near the park (nea), owning a house (own), high educational level (edu), and being a local (loc) as conditions.

Configurations	**Raw coverage**	**Unique coverage**	**Consistency**
~pro*loc	0.470	0.124	0.905
~pro*nea*~own	0.221	0.018	0.917
~pro*nea*edu	0.294	0.025	0.884
edu*loc	0.517	0.138	0.863
nea*~own*loc	0.250	0.028	0.875
solution coverage: 0.798			
solution consistency: 0.879			

Note: * = AND; ~ = negation of condition.

Table 5.30 presents the reduced truth table generated by fs/QCA for the third ES set-up: high valuation to ES as the outcome and high knowledge of environmental concepts (enc), high knowledge of environmental laws (enl), positive environmental perception (enp), and environmental behaviour (enb) as conditions. The software produced a total of 16 configurations (2^4), but only nine remained after the frequency cut-off of 10, and the consistency cut-off of 0.80 were applied. Like the first two set-ups, there was a limited diversity of the cases as all the configurations led to a high valuation to ES.

The Boolean minimisation applied by the software resulted in a solution with four configurations that lead to a high valuation to ES (Table 5.31). The overall solution coverage is 73%, while the overall solution consistency is 91%. It can be generalised that for the study's 441 respondents, the following combinations of characteristics were sufficient to have caused them to value the ES of Jose Rizal Plaza highly. No condition was necessary for the outcome.

a. not having a positive environmental perception and not having a positive environmental behaviour

b. high knowledge of environmental concepts and not having a positive environmental perception
c. high knowledge of environmental concepts, not having a high knowledge of environmental laws and not having a positive environmental behaviour
d. not having a high knowledge of environmental concepts, high knowledge on environmental laws, and positive environmental behaviour

Table 5.30. Truth table for the high valuation to ES as the outcome and high knowledge of environmental concepts (enc), high knowledge of environmental laws (enl), positive environmental perception (enp), and environmental behaviour (enb) as conditions. Actual frequency and consistency cut-off used by the software were 11 and 0.811, respectively.

enc	enl	enp	enb	number	es	raw consist.	PRI consist.	SYM consist
0	1	1	1	12	1	0.980	0.975	0.975
1	1	0	0	29	1	0.965	0.956	0.957
0	1	0	1	22	1	0.957	0.948	0.948
1	0	1	0	10	1	0.955	0.939	0.945
1	0	0	1	28	1	0.953	0.939	0.944
0	1	0	0	13	1	0.949	0.936	0.940
1	0	0	0	54	1	0.939	0.926	0.936
1	1	0	1	41	1	0.931	0.915	0.928
0	0	0	0	25	1	0.905	0.880	0.891

Table 5.31. fsQCA results table for the high valuation to ES as the outcome and high knowledge on environmental concepts (enc), high knowledge on environmental laws (enl), positive environmental perception (enp), and environmental behaviour (enb) as conditions.

Configurations	Raw coverage	Unique coverage	Consistency
~enp*~enb	0.481	0.099	0.916
enc*~enp	0.522	0.149	0.914
enc*~enl*~enb	0.281	0.028	0.928
~enc*enl*enb	0.146	0.063	0.967
solution coverage: 0.734			
solution consistency: 0.905			

Note: * = AND; ~ = negation of condition.

High valuation to ecosystem disservices (EDS)

Table 5.32 presents the reduced truth table generated by fs/QCA for the first EDS set-up: high valuation (worry) to EDS as the outcome and knowledge on the previous land use, having had an experience visiting the park, frequently visiting the park, and visiting other parks as the conditions. The software produced a total of 16 configurations (2^4), but only eight remained after the frequency cut-off of 10 and the consistency cut-off of 0.80 were applied. The Boolean minimisation applied by the software resulted in a solution with two configurations that lead to a high valuation to EDS (Table 5.33). The overall solution coverage is 57%, while the overall solution consistency is 84%. It can be generalised that for the study's 441 respondents, the following combinations of characteristics were sufficient to have caused them to value the EDS of Jose Rizal Plaza highly:

a. not knowing the previous land use, visited the park, and not visiting other parks
b. not knowing the previous land use, visited the park, and not frequently visiting the park

Not knowing the previous land use in the area and visiting the park are necessary conditions for the high valuation of the EDS of Jose Rizal Plaza.

Table 5.32. Truth table for the high valuation to EDS as the outcome and knowledge on the previous land use (prev), having had an experience visiting the park (vis), frequently visiting the park (fre), and visiting other parks (oth) as the conditions. Actual frequency and consistency cut-off used by the software were 11 and 0.825, respectively.

prev	vis	fre	oth	numbe r	eds	raw consist.	PRI consist.	SYM consist
0	1	0	1	101	1	0.856	0.846	0.911
0	1	1	0	14	1	0.850	0.834	0.933
0	1	0	0	124	1	0.825	0.810	0.885
1	1	0	0	56	0	0.796	0.781	0.844
1	1	1	0	17	0	0.773	0.758	0.812
0	0	0	0	11	0	0.756	0.738	0.799
1	1	1	1	23	0	0.746	0.723	0.794
1	1	0	1	88	0	0.736	0.707	0.793

Table 5.33. fsQCA results for the high valuation to EDS as the outcome and knowledge on the previous land use (prev), having had an experience visiting the park (vis), frequently visiting the park (fre), and visiting other parks (oth) as the conditions.

Configurations	Raw coverage	Unique coverage	Consistency
~prev*vis*~oth	0.324	0.034	0.827
~prev*vis*~fre	0.536	0.246	0.839
solution coverage: 0.57			
solution consistency: 0.84			

Table 5.34 presents the reduced truth table generated by fs/QCA for the second EDS set-up: high valuation to EDS as the outcome and prosocial orientation (pro), living near the park (nea), owning a house (own), high educational level (edu), and being a local (loc) as conditions. The software produced a total of 32 configurations (2^5), but only 17 remained after the frequency cut-off of 10 and the consistency cut-off of 0.80 were applied. The Boolean minimisation applied by the software resulted in a solution with four configurations that lead to a high valuation to ES (Table 5.35). The overall

solution coverage is 73%, while the overall solution consistency is 83%. It can be generalised that for the study's 441 respondents, the following combinations of characteristics were sufficient to have caused them to value the EDS of Jose Rizal Plaza highly. No condition was necessary for the outcome.

a. not having a prosocial orientation and being local
b. not having a prosocial orientation, living near the park, and not owning a house
c. living near the park, having a high level of education, and being local
d. owning a house, having a high level of education, and being local

Table 5.34. Truth table for the high valuation to EDS as the outcome and prosocial orientation (pro), living near the park (nea), owning a house (own), high educational level (edu), and being a local (loc) as conditions. Actual frequency and consistency cut-off used by the software were 10 and 0.808, respectively.

pro	nea	own	edu	loc	num.	eds	raw consist.	PRI consist.	SYM consist
0	0	1	0	1	20	1	0.920	0.914	0.934
0	1	1	0	1	31	1	0.919	0.910	0.958
0	0	0	1	1	17	1	0.898	0.887	0.895
0	0	1	1	1	26	1	0.871	0.860	0.884
0	1	0	1	1	64	1	0.861	0.845	0.877
0	1	0	0	1	16	1	0.858	0.835	0.879
0	0	0	0	1	10	1	0.855	0.829	0.940
1	0	1	1	1	12	1	0.846	0.826	0.854
0	1	0	1	0	27	1	0.845	0.826	0.866
1	1	0	1	1	19	1	0.839	0.809	0.857
0	1	0	0	0	10	1	0.817	0.771	0.892
1	1	1	1	1	25	1	0.809	0.770	0.843
0	1	1	1	1	56	1	0.808	0.785	0.813
0	1	1	0	0	10	0	0.779	0.742	0.805
1	0	0	1	1	12	0	0.726	0.674	0.722
0	1	1	1	0	14	0	0.698	0.686	0.700
1	1	0	0	1	11	0	0.691	0.636	0.684

Table 5.35. fsQCA results for the high valuation to EDS as the outcome and prosocial orientation (pro), living near the park (nea), owning a house (own), high educational level (edu), and being a local (loc) as conditions.

Configurations	**Raw coverage**	**Unique coverage**	**Consistency**
~pro*loc	0.492	0.173	0.865
~pro*nea*~own	0.225	0.068	0.853
nea*edu*loc	0.367	0.067	0.789
own*edu*loc	0.266	0.032	0.786
solution coverage: 0.73			
solution consistency: 0.826			

Note: * = AND; ~ = negation of condition.

Table 5.36 presents the reduced truth table generated by fs/QCA for the third EDS set-up: high valuation to EDS as the outcome and high knowledge of environmental concepts (enc), high knowledge of environmental laws (enl), positive environmental perception (enp), and environmental behaviour (enb) as conditions. The software produced a total of 16 configurations (2^4), but only nine remained after the frequency cut-off of 10 and the consistency cut-off of 0.80 were applied. Like the first two set-ups, there was a limited diversity of the cases as all the configurations led to a high valuation to EDS. The Boolean minimisation applied by the software resulted in a solution with four configurations that lead to a high valuation to ES (Table 5.37). The overall solution coverage is 75%, while the overall solution consistency is 84%. It can be generalised that for the study's 441 respondents, the following combinations of characteristics were sufficient to have caused them to value the ES of Jose Rizal Plaza highly. No condition was necessary for the outcome.

a. not having a positive environmental perception and not having a positive environmental behaviour
b. high knowledge of environmental concepts and not having a positive environmental perception
c. high knowledge of environmental concepts, not having a high knowledge of environmental laws and not having a positive environmental behaviour

d. not having a high knowledge of environmental concepts, high knowledge on environmental laws, and positive environmental behaviour

Table 5.36. Truth table for the high valuation to EDS as the outcome and high knowledge on environmental concepts (enc), high knowledge on environmental laws (enl), positive environmental perception (enp), and environmental behaviour (enb) as conditions. Actual frequency and consistency cut-off used by the software were 10 and 0.847, respectively.

enc	enl	enp	enb	number	eds	raw consist.	PRI consist.	SYM consist
0	1	0	1	22	1	0.954	0.940	0.945
0	1	0	0	13	1	0.912	0.886	0.887
0	1	1	1	12	1	0.906	0.874	0.882
1	1	0	0	29	1	0.898	0.866	0.867
1	0	0	1	28	1	0.892	0.853	0.855
1	0	0	0	54	1	0.885	0.853	0.866
0	0	0	0	25	1	0.871	0.837	0.843
1	0	1	0	10	1	0.853	0.783	0.794
1	1	0	1	41	1	0.847	0.803	0.813

Table 5.37. fsQCA results table for the high valuation to EDS as the outcome and high knowledge on environmental concepts (enc), high knowledge on environmental laws (enl), positive environmental perception (enp), and environmental behaviour (enb) as conditions.

Configurations	Raw coverage	Unique coverage	Consistency
~enp*~enb	0.502	0.108	0.874
enc*~enp	0.526	0.143	0.841
enc*~enl*~enb	0.287	0.027	0.866
~enc*enl*enb	0.153	0.064	0.930
solution coverage: 0.75			
solution consistency: 0.844			

Note: * = AND; ~ = negation of condition.

Results from the fsQCA indicated that visiting the park is necessary to cause a respondent to value the ES of Jose Rizal Plaza highly. This result suggests that a person needs to have a direct experience with the park to appreciate its ES. Visiting the park can also combine with not visiting other parks, not frequently visiting the park, and knowing or not knowing the previous land use in the area to cause the outcome. When it comes to the high valuation of EDS, two conditions were necessary – not knowing the previous land use in the area where the park is built and visiting the park. This result suggests that direct experience is also necessary to assign worries to the park EDS and that knowledge about the previous land use does not influence the high valuation of park EDS. There are no previous studies to directly compare these results with, as this study pioneers the use of fsQCA in determining the configuration of conditions that lead to a high valuation for ES and EDS. However, in a study by Zhang et al. (2016), they also concluded that a direct experience with land use could result in high recognition of its ES. On the other hand, Swapan et al. (2017) found that the frequency of visits to an urban park influences users' perception of the importance of its ES. While the findings align with the concept of "connectedness to nature", which has been shown to increase appreciation of environmental features (Mayer and Frantz, 2004), it also raises interesting questions about the relative insignificance of historical land-use knowledge in shaping these values. The results may prompt policymakers and urban planners to focus on facilitating more immediate and accessible experiences with urban green spaces. The results also open avenues for future research into how different facets of engagement with the park, such as frequency, type of activity, and comparative experiences with other parks, shape these valuations. Further exploration into the interplay between present experience and historical context could enrich the understanding of human-nature relationships in urban environments.

The top two configurations of socio-economic characteristics with the highest consistencies in causing a high valuation to ES and EDS were the same – not having a prosocial orientation and being a local resident and not having a prosocial orientation, living near the park, and not owning a house. These findings demonstrate that while exposure to green areas could influence the adoption of prosocial behaviours (as cited in Putra et al., 2020; Van Aart et al., 2018) this prosocial orientation does not, in turn, lead to the high valuation of the park's ES or even deep concern about its EDS. A

person does not need to have a prosocial orientation to appreciate the park's ES highly and worry much about the park's EDS. Moreover, the presence of conditions such as being a local resident and living near the park suggest the influence of place attachment to how respondents gauge the importance of ES and their concern for EDS. Place attachment is a person's unique connection with nature or a certain area, which develops when the place can supply or support his or her demands or intentional use and activities. Studies have shown that place attachment increases people's concern about ecological values (as cited in Kati & Jari, 2016). Not owning a house appears to be sufficient in causing a high valuation to ES and EDS when it is combined and with a non - prosocial orientation and living near the park. A related study by Gashu et al. (2020) found the opposite - owning a house positively influences the perception of the presence or absence of green infrastructure ES. However, it did not discuss how it can combine with other socio-economic characteristics. Another condition appearing in both solutions for high ES and EDS is high educational level. Several studies support that people with higher educational attainment tend to value ES more (Chen et al., 2020; Maestre-Andrés et al., 2016; Miller & Montalto, 2019). They are also more willing to use green infrastructure and participate in urban green infrastructure development (Gashu *et al.*, 2020).

The configurations of environmental knowledge, perception, and behaviour leading to the high valuation of ES were the same as that of the EDS. In other words, the same combinations of conditions lead to a high appreciation for the park's benefits and a deep concern for the park's EDS. Results suggest that those who believe that environmental conditions in the city are getting worse and who also admit that they have not been practising pro-environmental activities cause them to appreciate the current park ES and to worry that park EDS will get worse. Duan et al. (2018) also found that negative perceptions about how environmental issues are progressing could lead to an appreciation of the benefits from green infrastructure. The combination of high knowledge about environmental concepts and the belief that environmental conditions in the city are worsening also caused high ES and EDS values. Studies by Miller & Montalto (2019) and Ruiz-Frau et al. (2018) also asserted that environmental knowledge increases the importance value the public assigns to ES. The other two configurations suggest that the power of knowing environmental concepts

in causing a high valuation to ES and EDS is equivalent to having knowledge of environmental laws and practising pro-environmental activities.

The underlying convergence between the configurations for valuing both ES and EDS highlights the intricate connection between environmental awareness, perception, and action. This may indicate a broader societal trend, where increased environmental literacy amplifies both appreciation for ES and concerns over potential EDS. The shared determinants for the high valuation of both ES and EDS demonstrate that community engagement, education, and awareness-raising are essential for encouraging environmental stewardship. Such insights align with the works of researchers like Hawcroft and Milfont (2009), who argue that advancing environmental consciousness is essential in promoting sustainable urban development. The ability of knowledge about environmental concepts to parallel other aspects, such as awareness of laws and pro-environmental behaviours, further illustrates the complexity of human-environment interactions and supports the call for holistic approaches in urban planning (Soga and Gaston, 2016).

5.2.8 Survey value and limitations

The academic value of the survey comes from filling in the gaps of previous socio-cultural valuation studies and the novel way of analysing conditions that cause a high valuation to ES and EDS. The survey was able to involve as many types of stakeholder groups as possible, a characteristic that is usually missing in previous socio-cultural valuation studies (Bogdan et al., 2019; Bullock, Joyce, & Collier, 2018). EDS, which are typically overlooked in valuation studies (Oteros-Rozas *et al.*, 2014), were included in the assessment. Also, stakeholder groups were involved in the creation of ES and EDS of the park through interviews. Some studies in the past only used predetermined lists from literature (Bogdan et al., 2019; Johnson et al., 2019). For the analysis, it was the first time that fsQCA was used in the analysis of conditions affecting the valuation to ES and EDS. It proved useful as it highlights that the assigned values to ES and EDS are not caused by individual factors, but a complex combination of conditions. Another value of the survey is that it was able to capture the values assigned to the ES and EDS of an

urban park during a global pandemic, which limited people's ability to visit such important urban resources.

For the city, the results of the survey provided baseline information on how residents utilise the park and which ES and EDS they value most. The survey provided insights as to which amenities they could maintain and enhance and which to improve. Results of the survey also inform the city about the importance of making sure that the park is accessible to residents, as a direct experience with the park enhances the residents' appreciation of its ES and EDS. Moreover, residents were generally willing to contribute to the park, so the city could launch volunteer programs to help maintain the park and to involve residents in designing the park's future. The survey also provides information on the combination of conditions leading to a high valuation of ES and EDS. This information could help the city in developing strategies to improve residents' appreciation to parks and even their participation in initiatives related to green spaces or urban infrastructure.

While the survey has outstanding value, it also has several limitations. First, since it was only administered online because of the pandemic, the respondents were limited to those who can use mobile phones, tablets, laptops, or computers and those who have access to the internet. Thus, it might not have been able to capture a representative sample of the stakeholders of the park. Second, because the survey was conducted when the residents of the city were restricted to visit parks due to the pandemic, their opinions about ES and EDS and their willingness to contribute might have been skewed. The third set of limitations is typical of self-administered surveys – questions could be misinterpreted, and answers could exclusively be stated preferences and not how they are in real life.

CHAPTER 6: DELIBERATIVE VALUATION

This chapter presents the specific methods used to achieve the fifth objective of the study – investigating how the assigned values to the ES and EDS change. It also presents and discusses the results of the focus groups and their value.

6.1 Methods

6.1.1 Recruitment of participants

The focus group participants were recruited through the online valuation survey conducted in another part of this study (see Chapter 5, section 5.1.1) and through social media posts. The focus groups were initially planned to be conducted face-to-face, but because of the COVID-19 outbreak, they were carried out online through Zoom Videoconferencing Software (Zoom Video Communications Inc, 2016). The focus groups were conducted from July to August 2020 and were all facilitated by Dalton Erick Baltazar.

6.1.2 Focus group structure and procedure

In each focus group, the participants were first sent a link to an online consent form and entry questionnaire. The entry questionnaire was similar to the online valuation survey (see Chapter 5, section 5.1.1), except it did not have the section on environmental knowledge, perception, and behaviour, and the valuation of ES and EDS. The participants were then asked to listen to a brief presentation about the concept of ES and EDS, the characteristics of the Jose Rizal Plaza, and the ES and EDS of the park according to the key informant interviews conducted during the initial stages of the research (see Chapter 4, section 4.2.2). Only the ES and EDS directly mentioned by the key informants were included in the lecture to keep the ES and EDS number to a minimum (Table 6.1).

The participants of each focus group were then asked to distribute 100 hypothetical "importance points" to the various park ES and 100 hypothetical "concern points" to the park EDS (Schmidt *et al.*, 2016; Johnson *et al.*, 2019). This valuation exercise was performed six times - four times individually and two times as a group, in different

situations (Table 6.2). The situations were based on the changes in the source and constituency of their valuation and their interaction among the participants. The interaction was introduced by asking the participants to distribute the points as a group and letting them discuss trade-offs and future generations. Participants were informed that trade-offs arise from the deliberate or unintended optimisation of a few ES, leading to the deterioration of other ES because of human management choices (Rodríguez *et al.*, 2006). The constituency is the subject to which the valuation is performed. According to Brown (1984), there are four value source and constituency combinations, namely, individual to self, individual to group, group to individual, and group to group. This study included only the first three since it is challenging to manage multiple groups in an online setting. Two additional value source and constituency combinations were added, individual to future generations and group to future generations, to assess how participants respond when asked to make choices on behalf of the future generations. Individual to future generation valuations were repeated after group deliberations to determine how discussions could affect the values assigned to ES and EDS. For the individual valuations, the participants were given links to valuation forms. For the group valuations, the participants were asked to voice out the ES and EDS that they think are important or concerning. They were then asked to cast votes for the ES and EDS that were put forward, after which the percentage of votes were computed to represent the importance and concern points for ES and EDS, respectively.

After the valuations, a debriefing session was carried out to ask the participants how they think the different situations affected how they distributed points among the park ES and EDS and what they learned from the focus group. The focus group was concluded by an exit questionnaire which asked the participants the concepts they learned through the focus group and to verify if the focus group has influenced their social value orientation and willingness to contribute. The focus group guidelines, questionnaires, and valuation forms are in Appendix 13. All the questionnaires and valuation forms were made available online through the Qualtrics Core XM Survey Tool. The discussions were video recorded and transcribed, and the valuation data from Qualtrics was exported as an SPSS data set for analysis.

Table 6.1. ES and EDS statements used in the focus groups.

Number	Statements
ES - 1	The ability of the park to enable (eco) tourism
2	The ability of the park to provide a place for enjoyment and spending free time
3	The ability of the park to offer opportunities for practising different sports and keeping fit
4	The ability of the park to provide a place to disconnect, relax, and diminish stress (mental recreation)
5	The ability of the park to provide unique and attractive landscapes (aesthetic information)
6	The ability of the park to provide a place for research on and education about nature (information for cognitive development)
7	The ability of the park to provide a space where one can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation)
8	The ability of the park to enable the expression of local identity and cultural heritage
9	The ability of the park to stimulate the interest of the residents in the city's history and cultural heritage (including Jose Rizal)
10	The ability of the park to provide revenue for the city (renting the activity area and other facilities)
11	The ability of the park to provide revenue for locals
12	The ability of the park to become a place where different kinds of events in the city (e.g., celebrations, concerts, competitions) can be held
13	The ability of the park to serve as an extra parking space for city office employees and residents
14	The ability of the park to enhance the non-economic quality of life of the city residents
15	The contribution of the park to increasing the green areas in the city
EDS - 1	The expensive maintenance of the park - funds could be used for other projects
2	The obstruction of fast and comfortable transportation because of the park.
3	The risk of the park providing space for anti-social behaviour, crime, and other illegal things
4	The park causing conflict among users - who should be prioritised to use the open space?
5	The park wasting the land that could have been used for other purposes.
6	The park exposing visitors to air pollution since it is beside the road
7	The frustration that the park brings to residents because of its incomplete features

Table 6.2. Value source and constituency of the valuation exercises performed by the focus group participants.

Valuation	Value source	Value constituency
1	individual	self
2	group	individual
3	individual	group
4	individual	future generations
5	group	future generations
6	individual	future generations (after discussions)

6.1.2 Data analysis

Responses from the entry and exit questionnaires and the valuation forms were anonymised and then analysed using IBM SPSS Statistics for Windows, Version 26.0. The discussion transcripts were analysed through summative content analysis (Hsieh & Shannon, 2005; Kondracki et al., 2002). Keywords from the participants' comments were identified and coded according to the ES or EDS that they referred to and the specific questions during the debriefing session using Microsoft Word's comment function. They were then extracted and collated into a spreadsheet after which their general themes were identified.

6.2 Results and discussion

6.2.1 Entry questionnaire

Socio-economic characteristics

A total of eight online focus groups with three participants each were carried out. A little more than half of the participants (54.17%) found out about the focus groups from a friend or a relative, and about 23% found it through the author and social media posts (Figure 6.1). The majority of the participants (70.8%) took part in the online valuation survey. A significant number of participants come from the following barangays – Barangay 2, Barangay 3, Bucal, Halang, Looc, and Pansol (Table 6.3). Other socio-economic characteristics of the participants are listed in

Table 6.4. The participants' mean age is 28.25 (*SD* = 8.48), with the most common ages being 18, 30, and 32. The youngest participant is 18, and the oldest is 56. More than half of the participants were female (54.2%), while 45.8% were males. The majority of them were single (70.8%), while 29.2% were married. A huge percentage of the participants (41.7%) own their houses, while 33.3% pay rent. In terms of educational attainment, most participants had completed their college education (41.7%) or had reached graduate school (37.5%). Most of them (75%) were locals. Categorising the participants according to the stakeholder groups that were identified in the earlier stages of the research (see Chapter 4, section 4.2.1), most of them come from barangays near the park (41.67%) and college students (37.50%) (Figure 6.2).

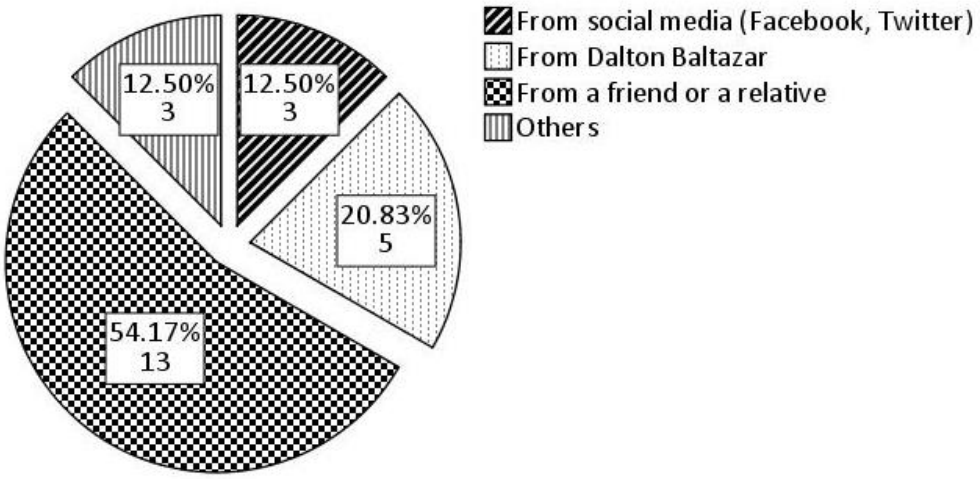


Figure 6.1. Participants' answers to the question "How did you find out about this focus group?"

Table 6.3. Barangays (villages) where the participants live

Barangay	**Frequency**	**Percentage %**
Bañadero	1	4.2
Barangay 2	2	8.3
Barangay 3	3	12.5
Barangay 4	1	4.2
Barangay 5	1	4.2
Bucal	2	8.3
Halang	2	8.3
La Mesa	1	4.2
Lecheria	1	4.2
Lingga	1	4.2
Looc	2	8.3
Palo-Alto	1	4.2
Pansol	3	12.5
Real	1	4.2
San Jose	1	4.2
San Juan	1	4.2
Total	24	100.0

Table 6.4. Socio-economic characteristics of the focus group participants

Socio-economic characteristics	**Categories**	**Statistics (*N* = 24)**
Age		*M* = 28.25; *SD* = 8.48
Gender	Female	13 (54.2%)
	Male	11 (45.8%)
Marital status	Single	17 (70.8%)
	Married	7 (29.2%)
House ownership	Owned	10 (41.7%)
	Rented	8 (33.3%)
	Shared	3 (12.5%)
	Mortgaged	2 (8.3%)
	Others (not specified)	1 (4.2%)
Educational attainment	complete college	10 (41.7%)
	graduate school	9 (37.5%)
	complete high school	2 (8.3%)
	incomplete college	2 (8.3%)
	incomplete high school	1 (4.2%)
Migrant	No	18 (75%)
	Yes	6 (25%)

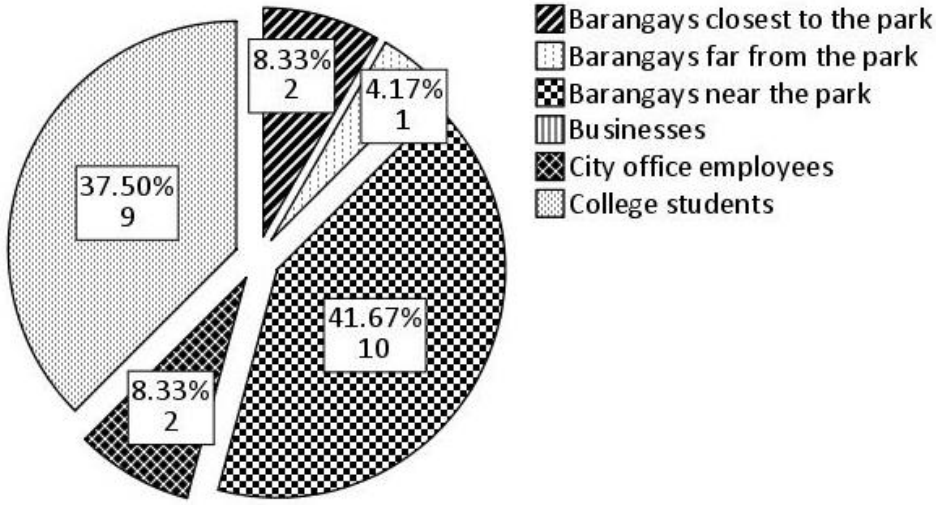


Figure 6.2. Participants categorised by stakeholder group

Park use

All the participants, except for one, have visited the Jose Rizal Plaza. Most of the participants who have visited the park chose to report the frequency of their visit every month (43.48%) and every year (39.13%) (Figure 6.3). Those who reported their visits per month came to the park from 1 to 5 times, with a mean of 2.7 (*SD* = 1.33) and a mode of 2. Those who reported their visits per year visited from 1 to 3 times, with a mean of 2.67 (*SD* = 0.71) and a mode of 3, and those who reported their visits per week came there from 1 to 5 times, with a mean of 2.75 (*SD* = 1.71). Most of the participants visit the park to watch or participate in events (82.6%), for health and exercise (60.9%), and to relax and unwind (60.9%) (Table 6.5). Other reasons mentioned by the participants are attending meetings, school activities, and family bonding.

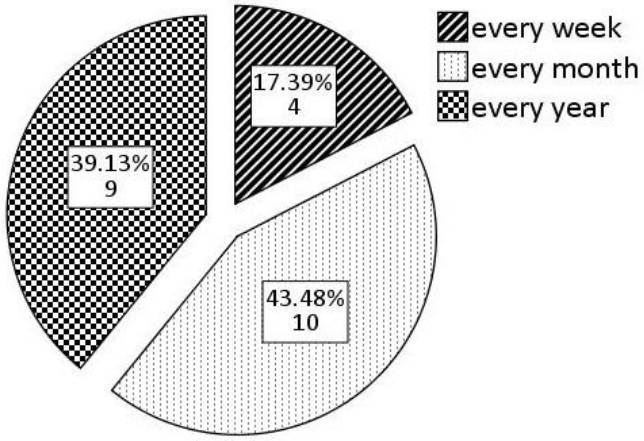


Figure 6.3. Participants' answer to the question "Last year, how frequently did you visit the park?"

Table 6.5 Participants' purpose when visiting the Jose Rizal Plaza (*n* = 23).

Purpose	Responses		Percentage of cases (%)
	Number	Percentage (%)	
Health/exercise	14	18.9	60.9
Walking the dog	2	2.7	8.7
Relax/unwind	14	18.9	60.9
Fresh air/pleasant weather	8	10.8	34.8
Enjoy scenery	9	12.2	39.1
Photography	3	4.1	13.0
Watch or participate in events	19	25.7	82.6
Others	5	6.8	21.7
Total	74	100	321.7

Willingness to contribute

Twenty-two out of the twenty-four of the participants (91.67%) were willing to contribute something to keep the park. Two participants were unwilling to contribute because they do not have extra time and money, and they think it is the city's responsibility to keep and maintain the park. Out of those willing to contribute, 86.4% were willing to give time, while 18.2 % were willing to give money (Table 6.6). Some participants were willing to contribute by being a responsible resident of the city, creating awareness about the park, and participating in environmental initiatives. Those who were willing to contribute time were willing to give, on average, a minimum of 5.74 hours (*SD* = 10.54) and a maximum of 10.21 hours (*SD* = 20.95) per month. Those who were willing to contribute money were willing to give, on average, a

minimum of PhP 155 (~USD 3.26) (*SD* = PhP 121.52 or ~USD 2.55) and a maximum of PhP 437.5 (~USD 9.19) (*SD* = PhP 415.08 or ~USD 8.72) per month (Table 6.7).

Table 6.6. Participants' answers to the question "What are you willing to contribute to keep the park?"

Contribution	Responses		Percentage of cases (%)
	N	Percentage (%)	
Time	19	70.4	86.4
Money	4	14.8	18.2
Others	4	14.8	18.2
Total	27	100	122.7

Table 6.7. Descriptive statistics of the number of hours and money the participants are willing to give per month to keep the park

Contribution per month	N	Min.	Max.	Mean	Std. Dev.	Median
Minimum number of hours	19	1	48	5.74	10.54	3
Maximum number of hours	19	2	96	10.21	20.95	5
Minimum amount	4	20	300	155	121.52	150
Maximum amount	4	100	1000	437.5	415.08	325

Note: Amounts are in Philippine Peso (PhP). PhP 1 = ~ USD 0.021.

Social value orientation

More than half of the participants were prosocial (62.5%), while 37.5% were individualistic (Figure 6.4).

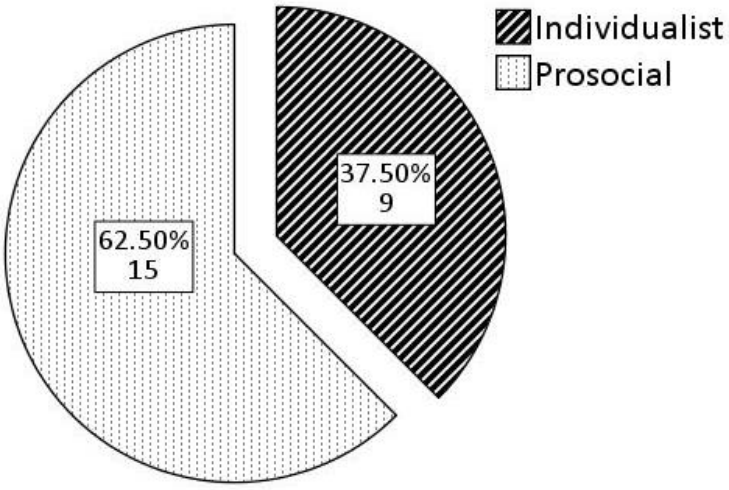


Figure 6.4. Participants' social value orientation

Most of the focus group participants come from barangays near (within a 4-km radius) the park. The majority of them also participated in the online valuation survey that was conducted to assess how residents value the park's ES and EDS. It can be observed that the participants were relatively young and had high educational attainment. This was deemed to be the consequence of promoting and administering the focus groups online. Younger people and those who are well-educated can be assumed to have more knowledge about mobile phones, computers, and the internet, which became a requirement in participating in the online focus groups. This is a limitation that the author recognise, having been compelled to administer the focus group online because of the COVID-19 pandemic.

The majority of the participants visit the park monthly or at least once a year before the pandemic. Their primary motivation for visiting the park is to participate in events. Nearly all the participants were willing to contribute something to keep the park, and most of them were willing to contribute time instead of money or other things. Most of the participants were also prosocials who value equality and aim to benefit others or the whole society (Murphy & Ackermann, 2013).

6.2.2 Deliberative valuation of ecosystem services (ES) and disservices (EDS)

Individual to self

Overall, when the participants were asked to think only about their own interests in distributing 100 points among the park's ES, they assigned higher points to those related to ecotourism (*M* = 16.42, *SD* = 9.69), sports and physical fitness (*M* = 15.79, *SD* = 12.37), enjoyment (*M* = 13.04, *SD* = 12.02), and relaxation and mental recreation (*M* = 12.67, *SD* = 10.80) (Figure 6.5). The reasons given by the participants in assigning higher points to ecotourism come from their opinions and personal experiences. For example, some participants mentioned that they believe ecotourism could lead to other park ES like revenue for the city and additional income for the residents:

> *"Ecotourism; because it can create a domino effect. If you have ecotourism, you can promote relaxation… More people will visit the park, and the city office will benefit from the tax [coming from vendors]."*

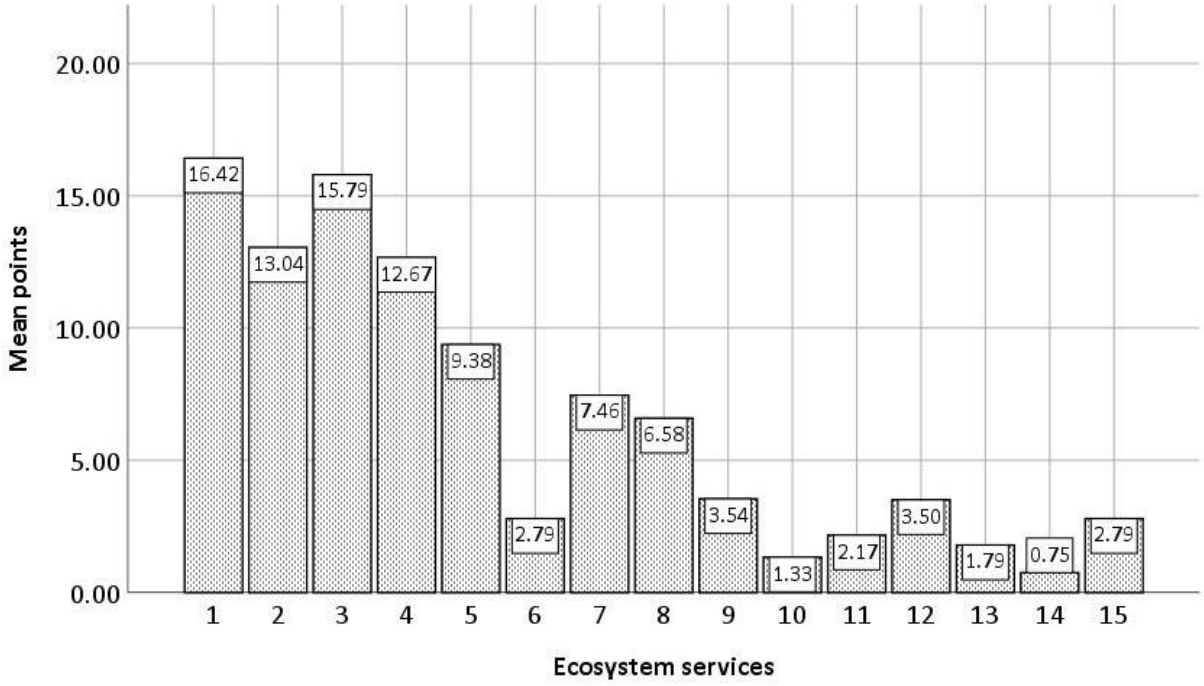
Some said that ecotourism could aid in the city's promotion and income generation, while others thought it was important because it enables their relatives from other cities to visit the park. Participants' reasons for assigning higher points to sports, enjoyment, and relaxation were based more on their personal experiences. Some value the ES related to sports and physical fitness because they are members of sports organisations that run their events in the park. Some jog, run, play sports, and attend Zumba lessons in the park. The park's ability to serve as a place for enjoyment and relaxation was important to them because they come to the park to de-stress, meet with friends and family, and enjoy the scenery, especially during holidays.

Participants assigned lower points to ES related to improving the residents' non-economic quality of life (M = 0.75, SD = 2.17), city revenue (M = 1.33, SD = 2.75), the park's use as a parking space (M = 1.79, SD = 4.46), and revenue for locals (M = 2.17, SD = 3.73) (Figure 6.5). They did not mention specific reasons in assigning lower points to the ES mentioned, but one participant expressed disappointment that the park is being used as a parking space:

"It [the park] should be serving the public… Unfortunately, now, you can only see it being used as a parking space, which defeats its purpose."

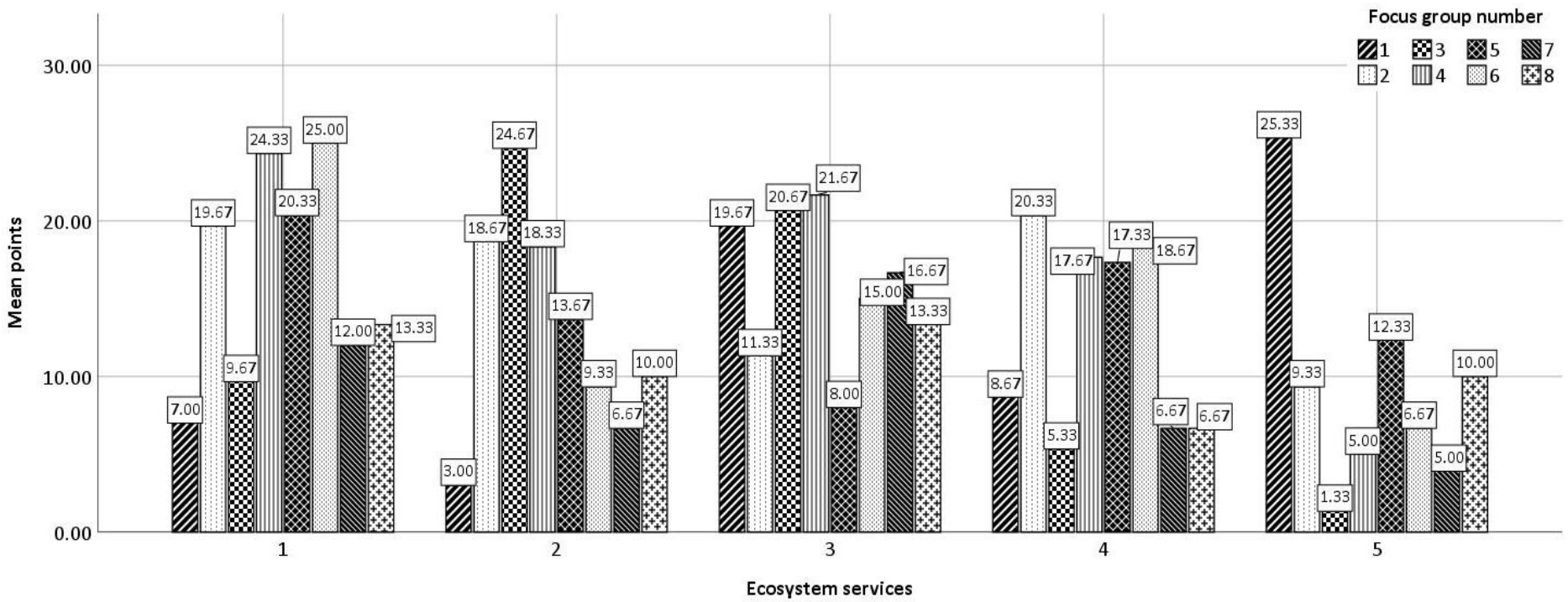
The complete list of reasons given by the participants in assigning points to specific ES in the first valuation exercise can be found in Appendix 14.

Figure 6.6 compares the mean points assigned by the focus groups to each of the park ES. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different ES. It was determined that the focus groups did not agree on how they assigned points to the different ES, $W = .686$, $p < .001$.



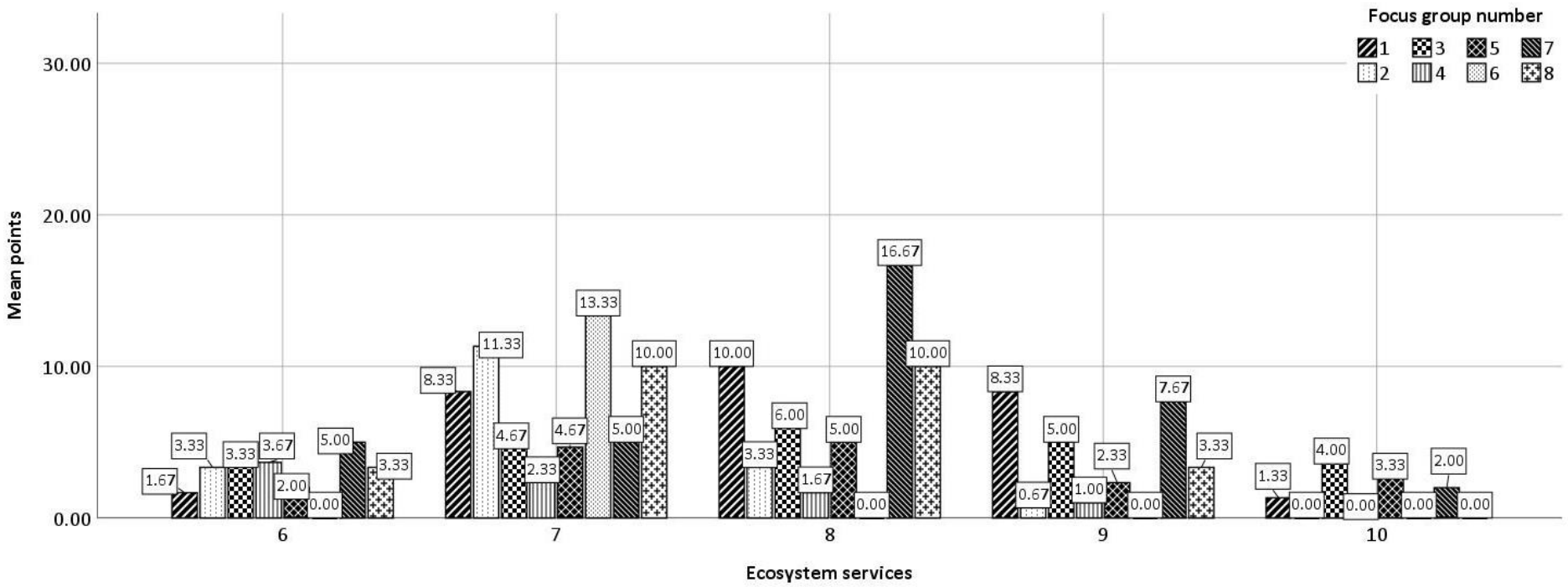
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.5 Mean points assigned to the park ecosystem services (ES) by participants in all focus groups in the first valuation - value source: individual, constituency: self



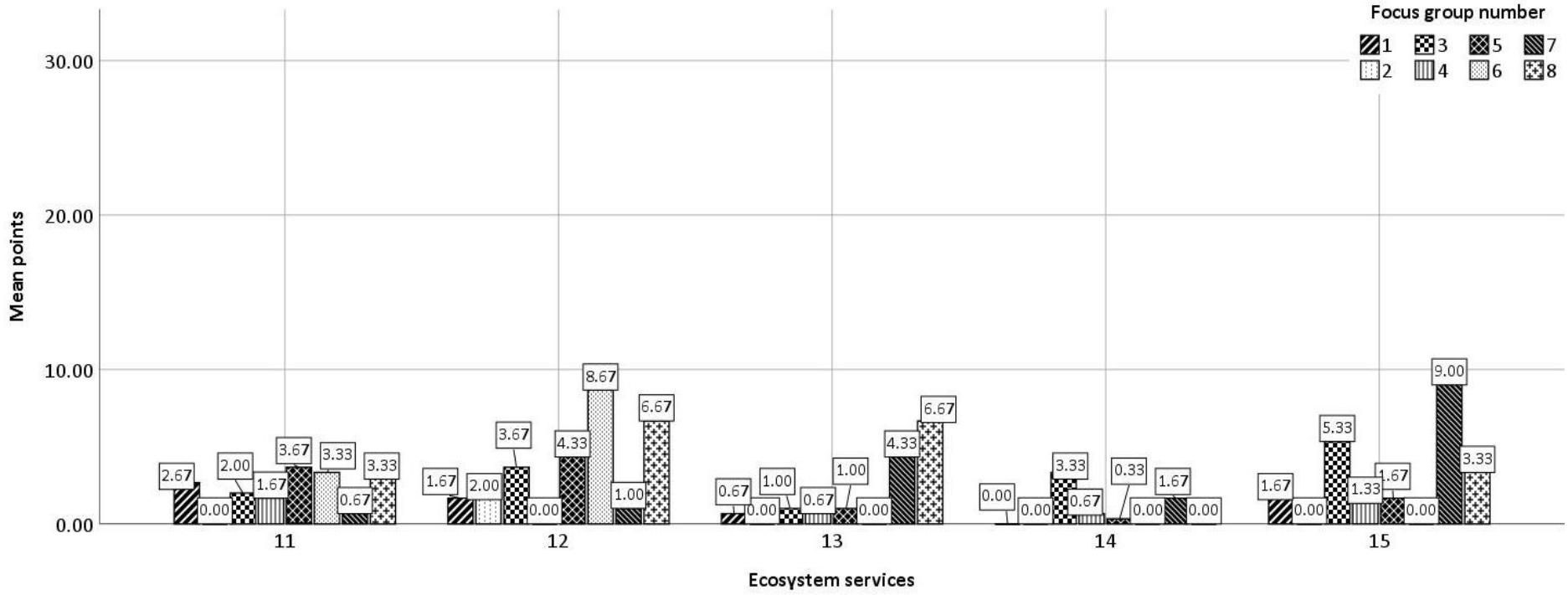
ES: 1 – ecotourism; 2 – enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information

Figure 6.6 A Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the first valuation - value source: individual, constituency: self



ES: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

Figure 6.6 B Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the first valuation - value source: individual, constituency: self



ES: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas.

Figure 6.6 C Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the first valuation - value source: individual, constituency: self

In terms of the EDS, participants were generally more worried about anti-social behaviour (*M* = 25.71, *SD* = 27.30) and the park's expensive maintenance (*M* = 20.92, *SD* = 22.25). They were less concerned about the conflict among users (*M* = 6.08, *SD* = 8.62) and the thought of the land being wasted because of the park's construction (*M* = 7.92, *SD* = 14.58) (Figure 6.7). Participants reported personal encounters of anti-social behaviour in the park, like bullying, gang fights, littering, vandalising, and crimes, that they think were primarily caused by the park's poor security and allowing late-night gatherings in the area. They also expressed their concerns about the expensive maintenance of the park. Some fear that there is corruption in the city office, while others say that this could have been caused by not consulting the public about the facilities that they would like to have in the park:

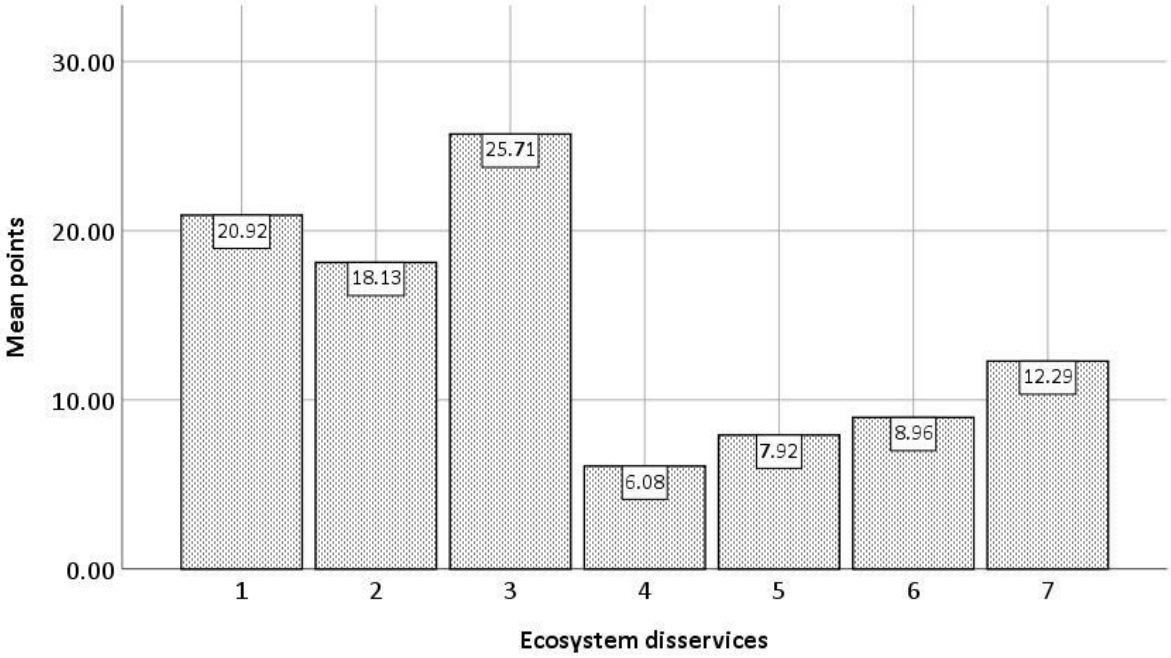
> *"Expensive construction and maintenance because the city spend a huge amount there.. and the corruption is always there…I know that because I grew up with some politicians."*

> *"When the coliseum was built, I and many people I know became worried because the city office spent a lot for it, but it made space [in the park] seem smaller. We thought that they could have just improved the park and not spent a lot for it [coliseum], because people were not consulted. Nobody consulted the people of Calamba if they really wanted this, only those 'decision makers' in the government decided that."*

Some said that they heard rumours of the huge amount of money that the city spent on the park, but they claim that this did not translate into functional facilities as they could not even use the comfort rooms there because of their poor condition. The complete list of reasons given by the participants in assigning points to specific EDS in the first valuation exercise can be found in Appendix 14.

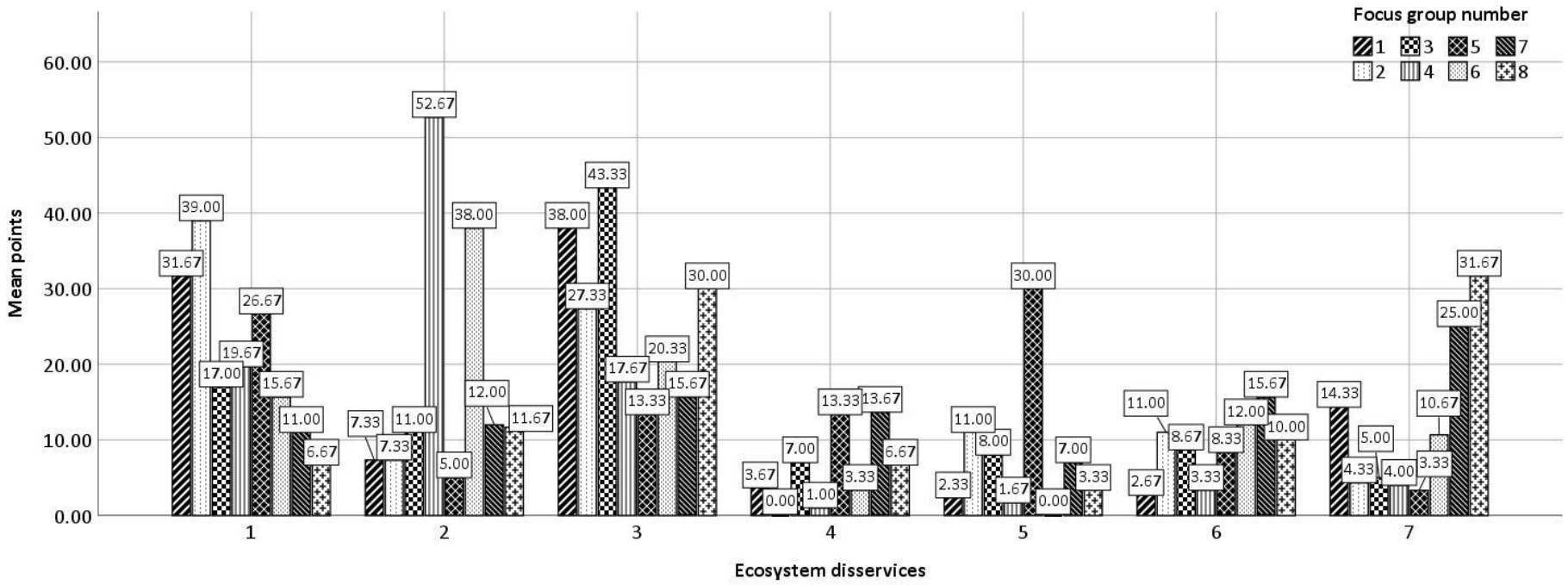
Figure 6.8 compares the mean points assigned by focus groups to each of the park EDS. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different EDS. It was determined that the

focus groups did not agree on how they assigned points to the different EDS, W = .336, p = .013.



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.7 Mean points assigned to the park ecosystem disservices (EDS) by participants in all focus groups in the first valuation - value source: individual, constituency: self



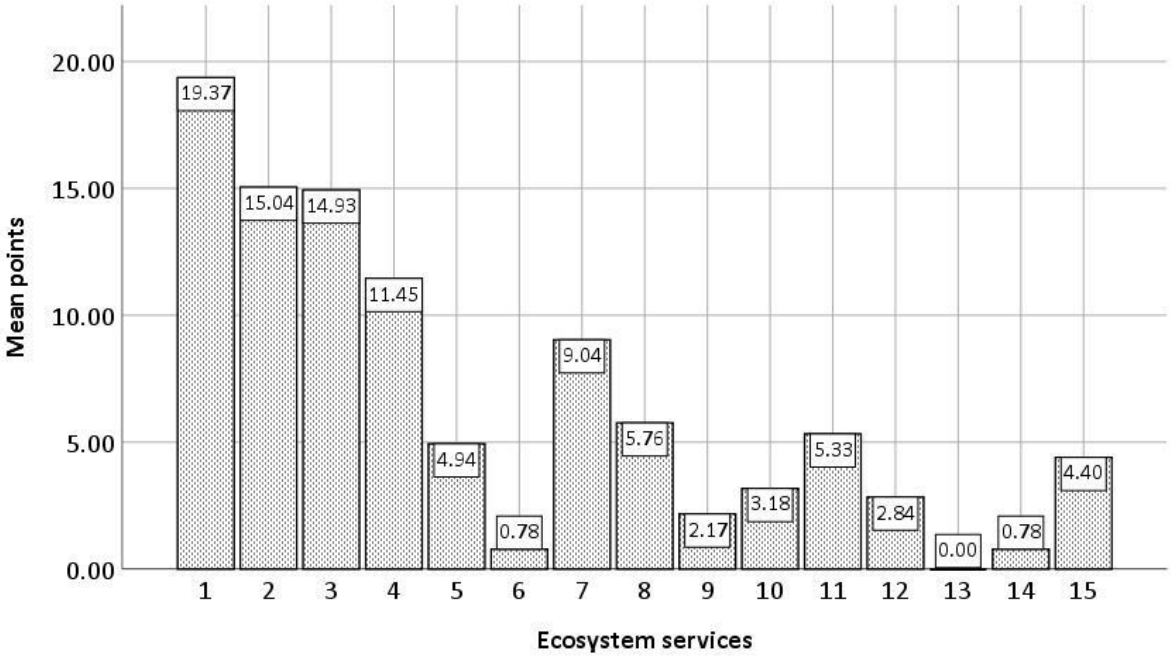
EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.8 Comparison of mean points assigned by participants in each focus group to park ecosystem disservices (EDS) in the first valuation - value source: individual, constituency: self

Group to individual

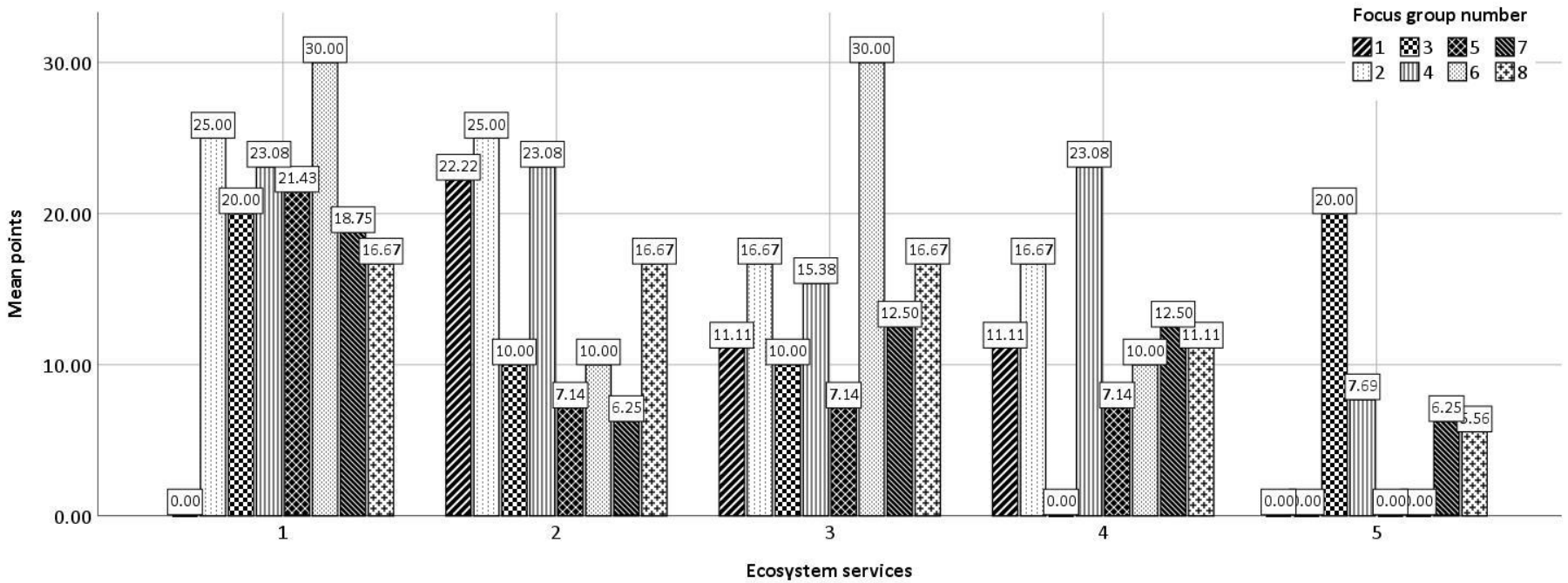
Overall, when the participants were asked to distribute the points to the park ES as a group, considering each other's opinions, they assigned higher points to those related to ecotourism (*M* = 19.37, *SD* = 8.44), enjoyment and spending free time (*M* = 15.04, *SD* = 7.30), sports and physical fitness (*M* = 14.93, *SD* = 6.65), and relaxation and mental recreation (*M* = 11.45, *SD* = 6.42). In contrast, they assigned lower points to ES related to the use of the park as a parking space (*M* = 0) and its ability to improve the residents' non-economic quality of life (*M* = 0.78, *SD* = 2.11), provide information for cognitive development (*M* = 0.78, *SD* = 2.11), and stimulate residents' interest to history and culture (*M* = 2.17, *SD* = 4.04) (Figure 6.9).

Figure 6.10 compares the mean points assigned by participants (in groups) in each focus group to each park ES. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different ES when conducting the valuation. It was determined that the focus groups did not agree on how they assigned to the different ES, $W = .505$, $p < .001$.



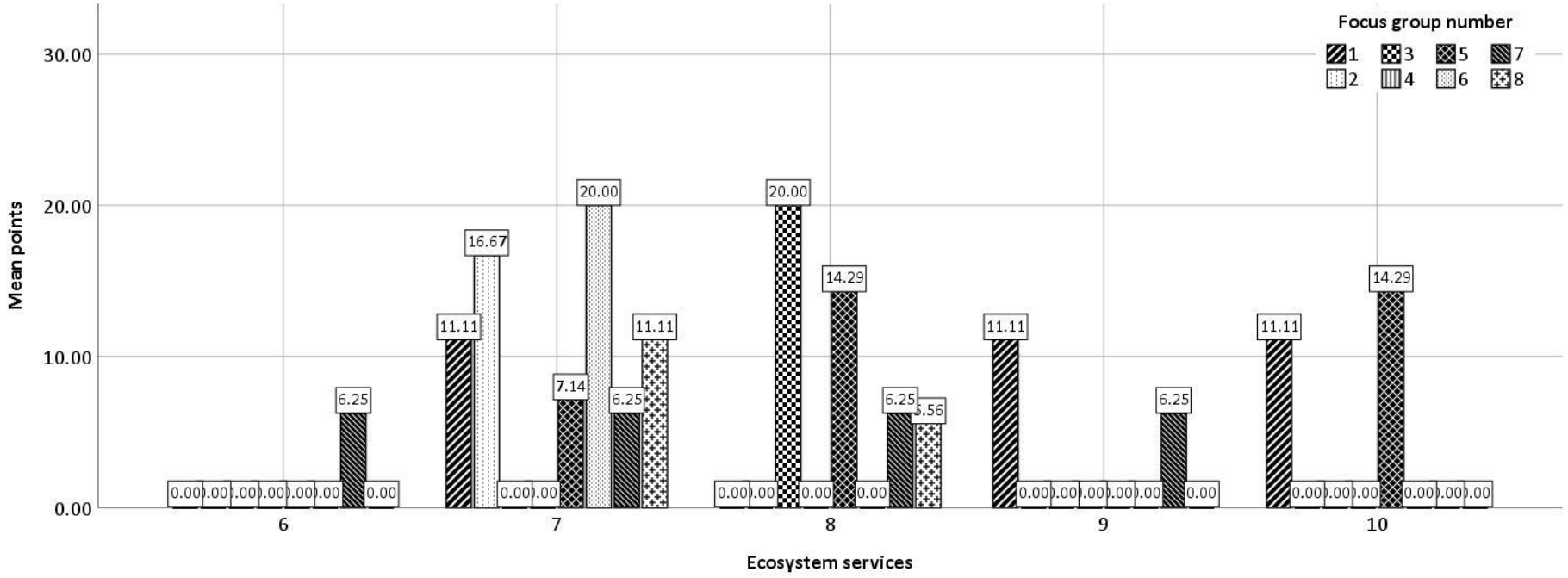
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas.

Figure 6.9 Mean points assigned to the park ecosystem services (ES) by participants in all focus groups in the second valuation - value source: group, constituency: individual.



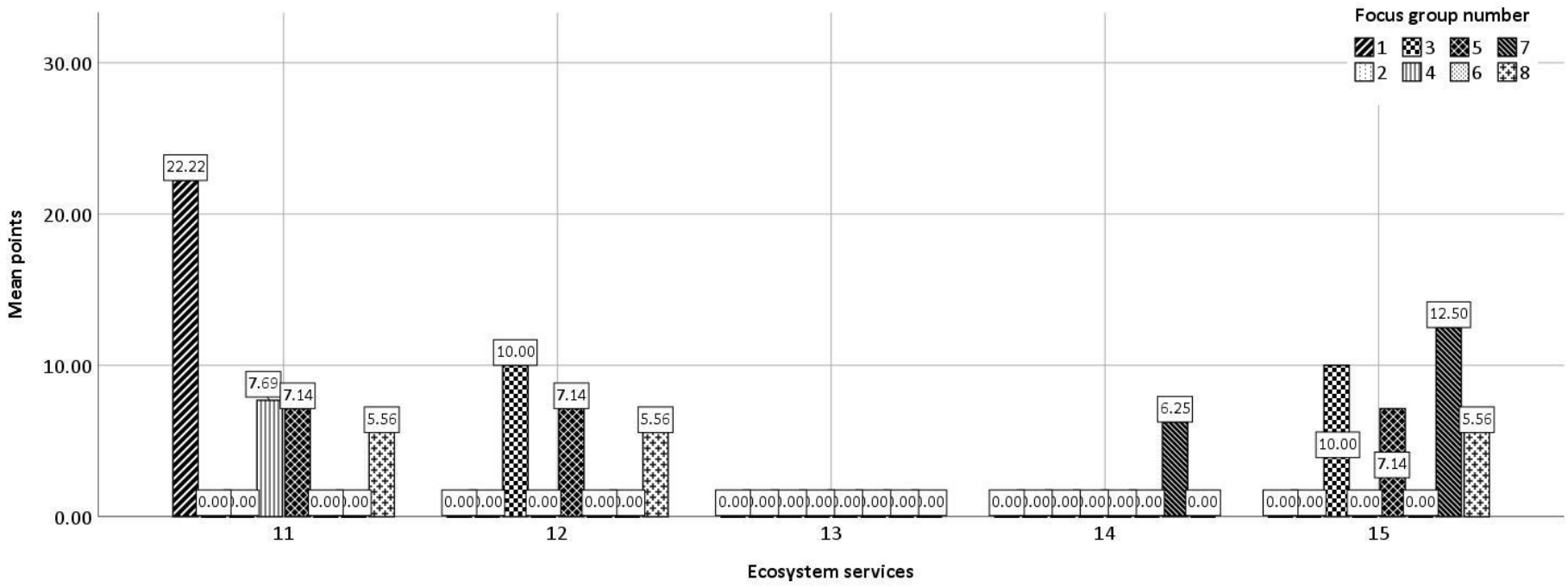
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information

Figure 6.10 A Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the second valuation - value source: group, constituency: individual



ES: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

Figure 6.10 B Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the second valuation - value source: group, constituency: individual

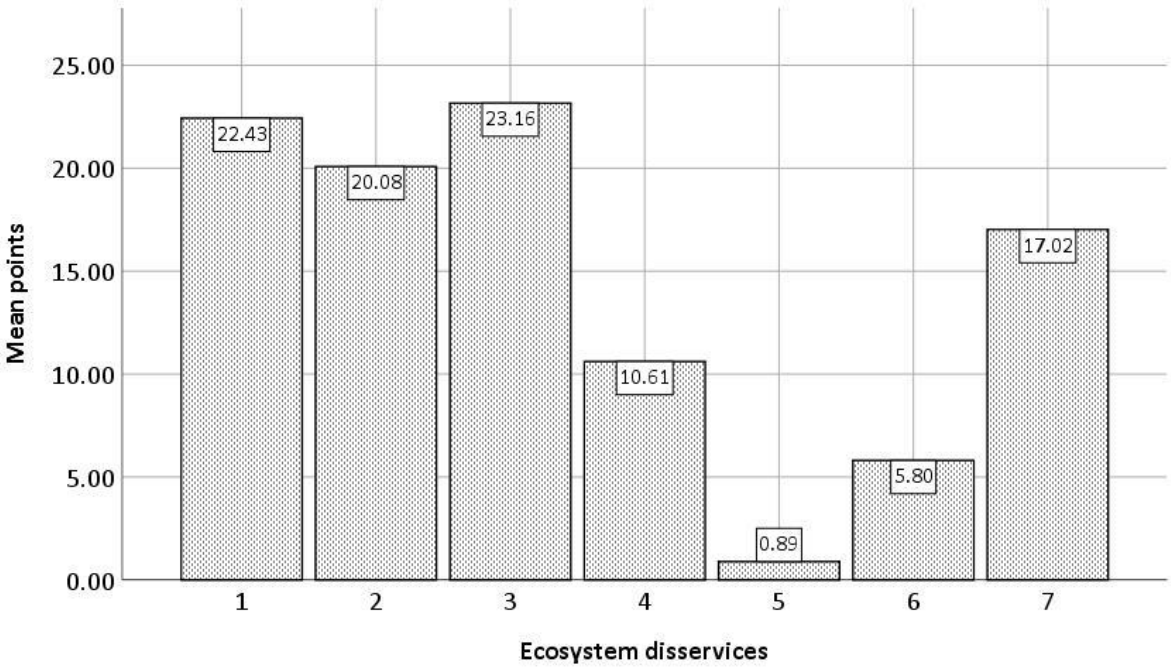


ES: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green area

Figure 6.10 C Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the second valuation - value source: group, constituency: individual

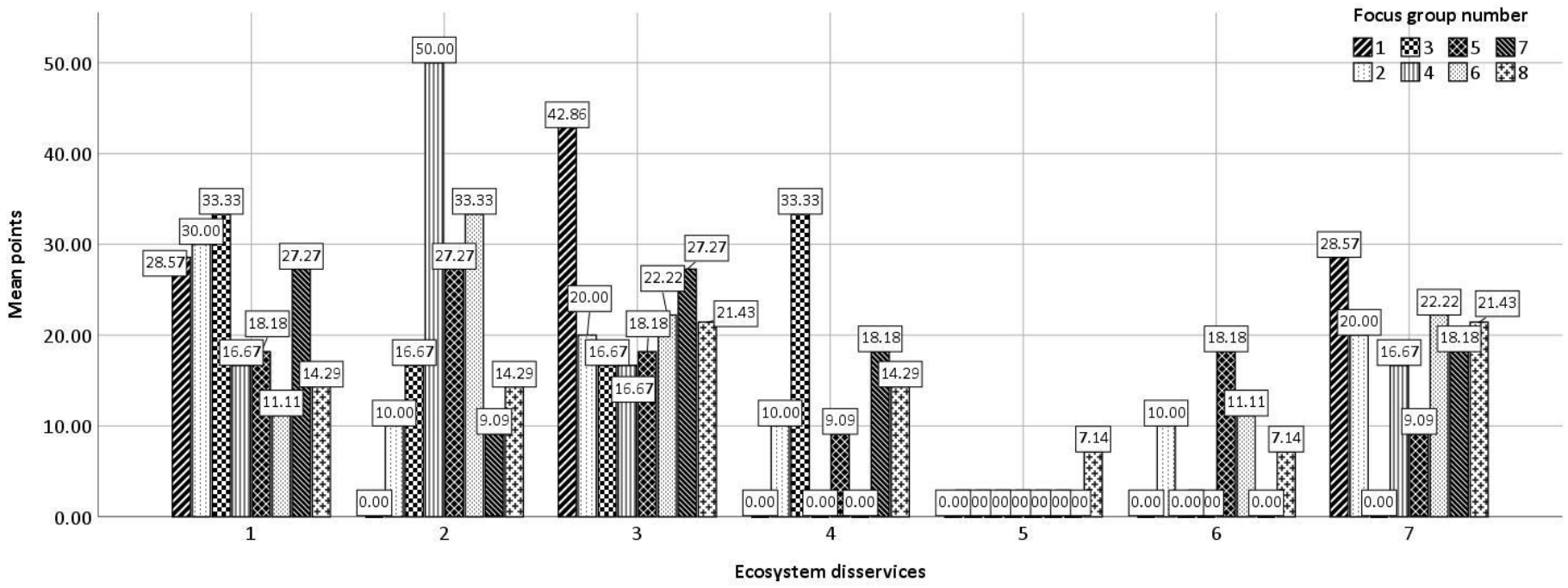
In terms of the EDS, as groups, they assigned higher points to anti-social behaviour (*M* = 23.16, *SD* = 8.30) and the expensive maintenance of the park (*M* = 22.43, *SD* = 7.94), and lower points to the thought of the land being wasted with the construction of the park (*M* = 0.89, *SD* = 2.41) and exposure to air pollution (*M* = 5.8, *SD* = 6.61) (Figure 6.11).

Figure 6.12 compares the mean points assigned by participants (as groups) in each focus group to each park EDS. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different EDS. It was determined that the focus groups did not agree on how they assigned points to the different EDS, $W = .546$, $p < .001$.



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.11 Mean points assigned to the park ecosystem disservices (EDS) by participants in all focus groups in the second valuation - value source: group, constituency: individual

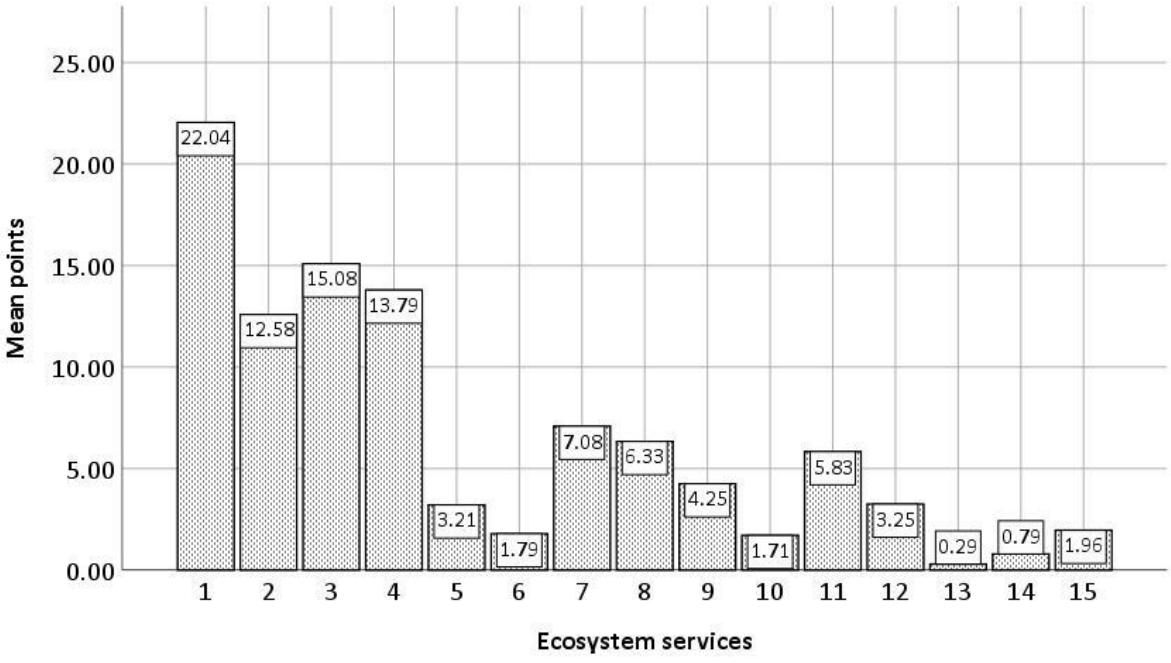


EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.12 Comparison of mean points assigned by participants in each focus group to park ecosystem disservices (EDS) in the second valuation - value source: group, constituency: individual

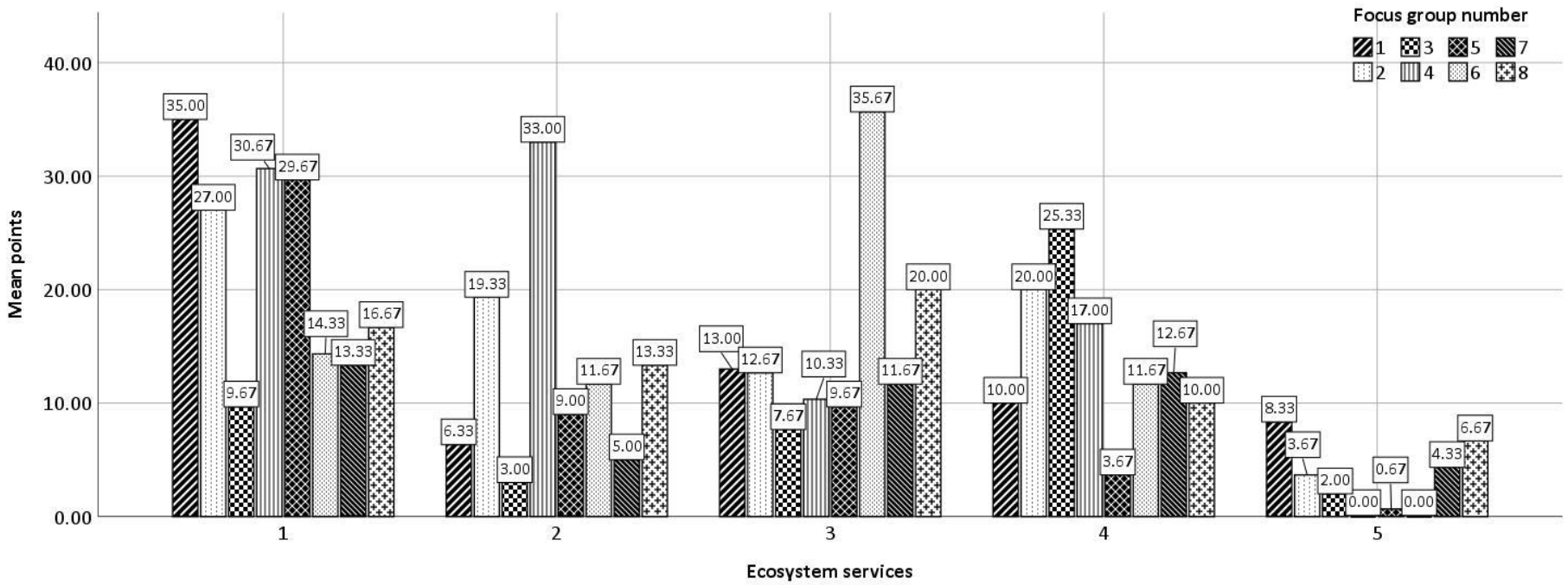
Individual to group

Overall, when the participants were asked to distribute the points to the park ES again individually, they assigned higher points to those related to ecotourism (*M* = 22.04, *SD* = 13.47), sports and physical fitness (*M* = 15.08, *SD* = 12.42), relaxation and mental recreation (*M* = 13.79, *SD* = 14.53), and enjoyment and spending free time (*M* = 12.58, *SD* =11.08). In contrast, they assigned lower points to ES related to the use of the park as a parking space (*M* = 0.29, *SD* = 0.75), its ability to improve the non-economic quality of life of the residents (*M* = 0.79, *SD* = 2.26), revenue for the city (*M* = 1.71, *SD* = 4.57), and information for cognitive development (*M* = 1.79, *SD* = 5.43) (Figure 6.13). Figure 6.14 compares the mean points assigned by each focus groups to each park ES. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different ES. It was determined that the focus groups did not agree on how they assigned points to the different ES, *W* = .588, *p* < .001.



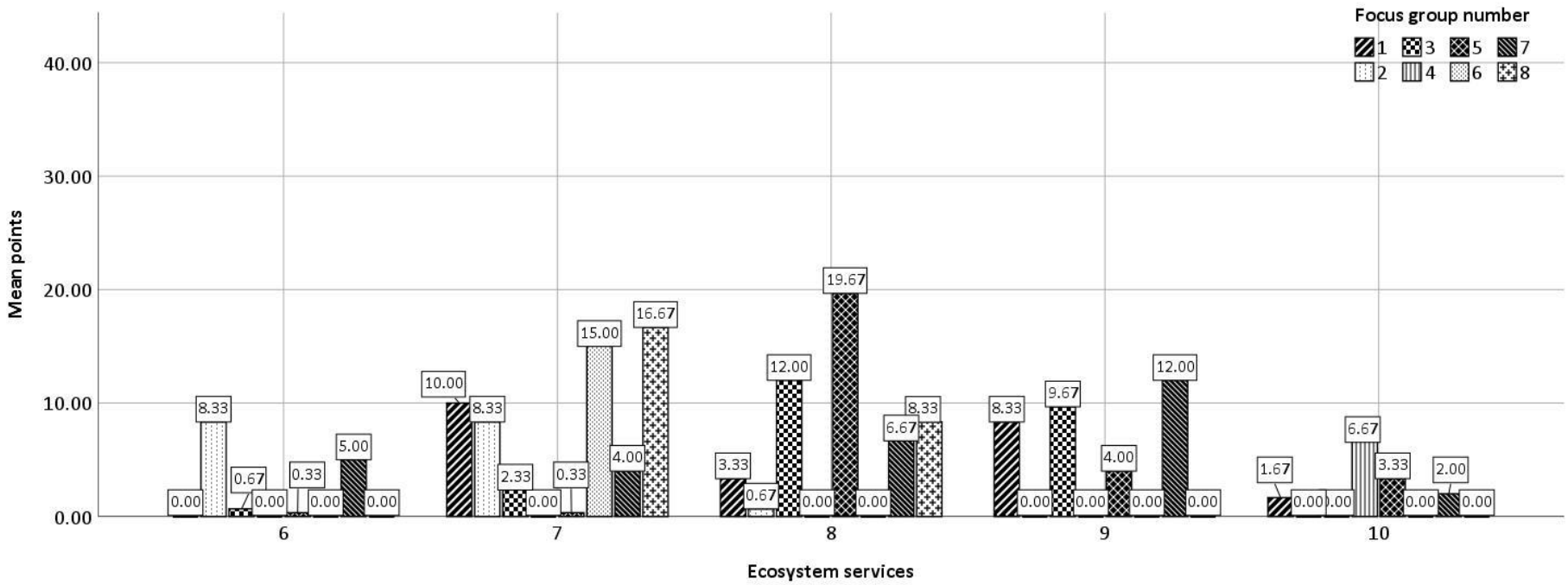
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.13 Mean points assigned to the park ecosystem services (ES) by participants in all focus groups in the third valuation - value source: individual, constituency: group



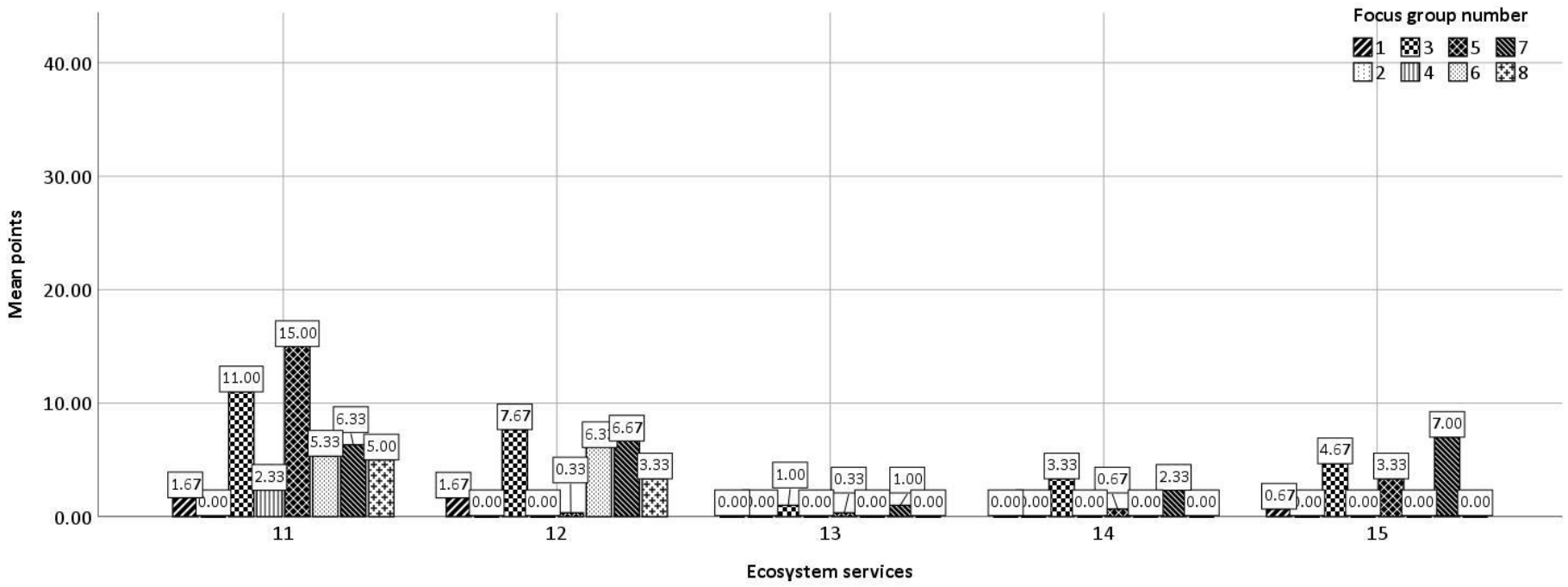
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information

Figure 6.14 A Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the third valuation - value source: individual, constituency: group



ES: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

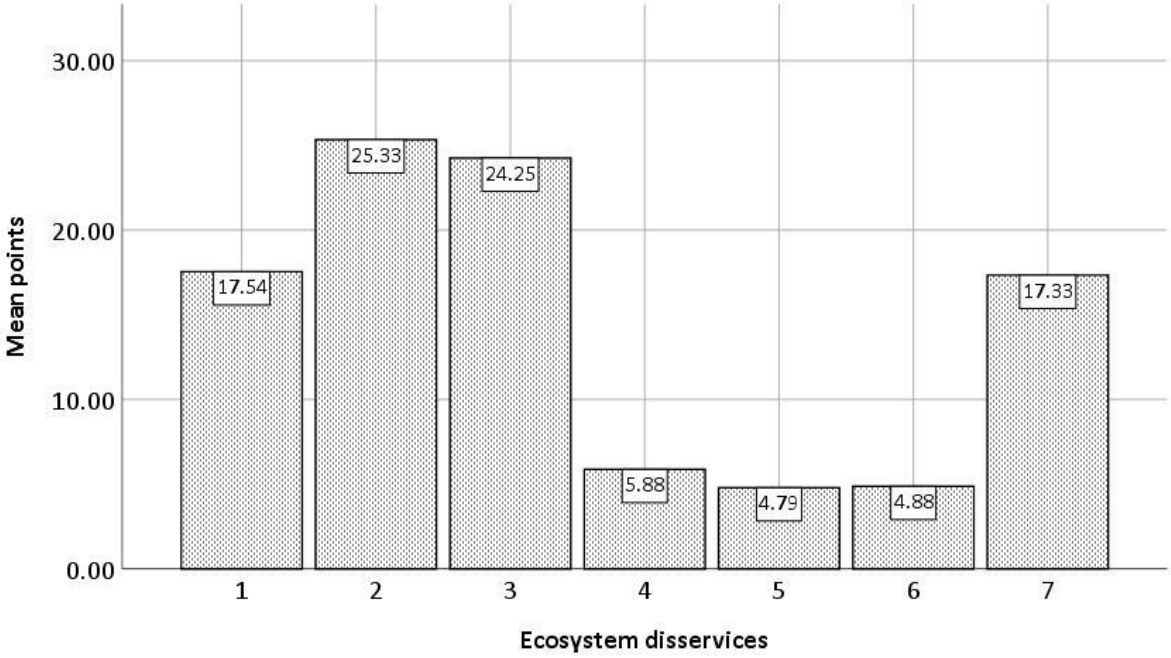
Figure 6.14 B Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the third valuation - value source: individual, constituency: group



ES: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

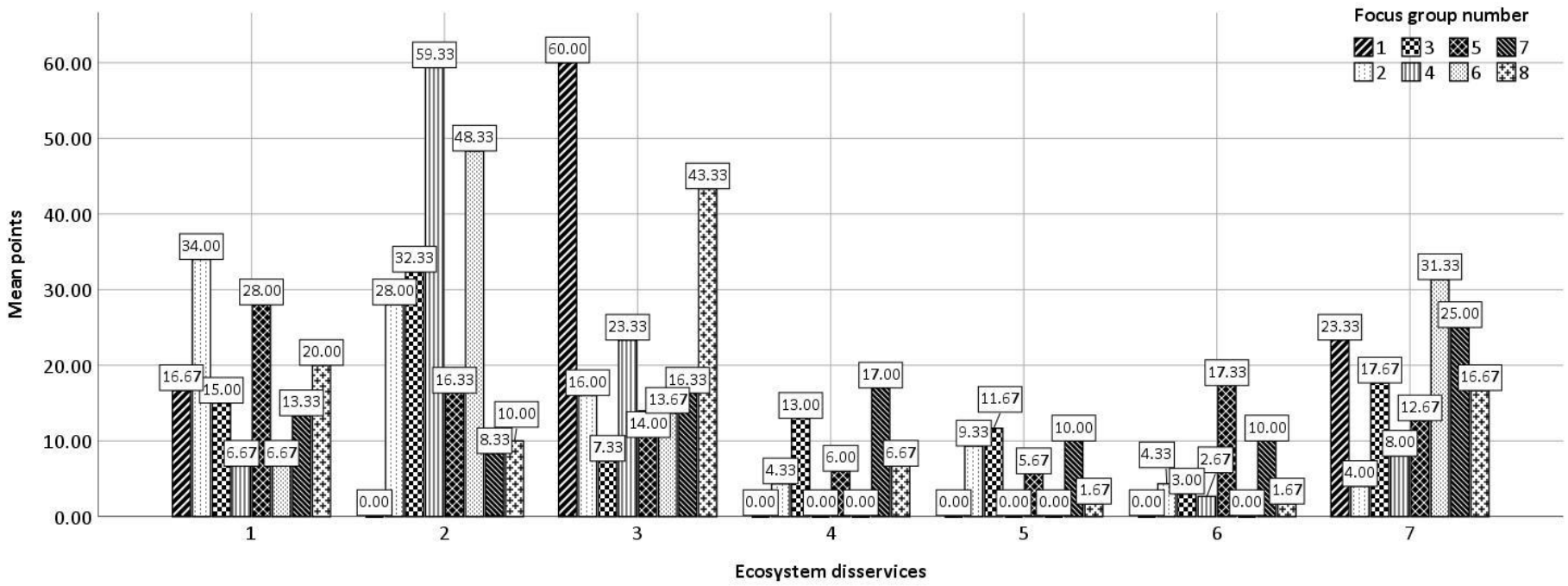
Figure 6.14 C Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the third valuation - value source: individual, constituency: group

In terms of the EDS, participants were generally more worried about traffic (*M* = 25.33, *SD* = 24.71) and anti-social behaviour (*M* = 24.25, *SD* = 24.92) and less worried about the thought of the land being wasted because of the park's construction (*M* = 4.79, *SD* = 8.03) and exposure to air pollution (*M* = 4.88, *SD* = 6.96) (Figure 6.15). Figure 6.16 compares the mean points assigned by participants in each focus group to each park EDS. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different EDS. It was determined that the focus groups did not agree on how they assigned points to the different ES, *W* = .393, *p* = .004.



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.15 Mean points assigned to the park ecosystem disservices (EDS) by participants in all focus groups in the third valuation - value source: individual, constituency: group



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.16 Comparison of mean points assigned by participants in each focus group to park ecosystem disservices (EDS) in the third valuation - value source: individual, constituency: group

Individual to future generations

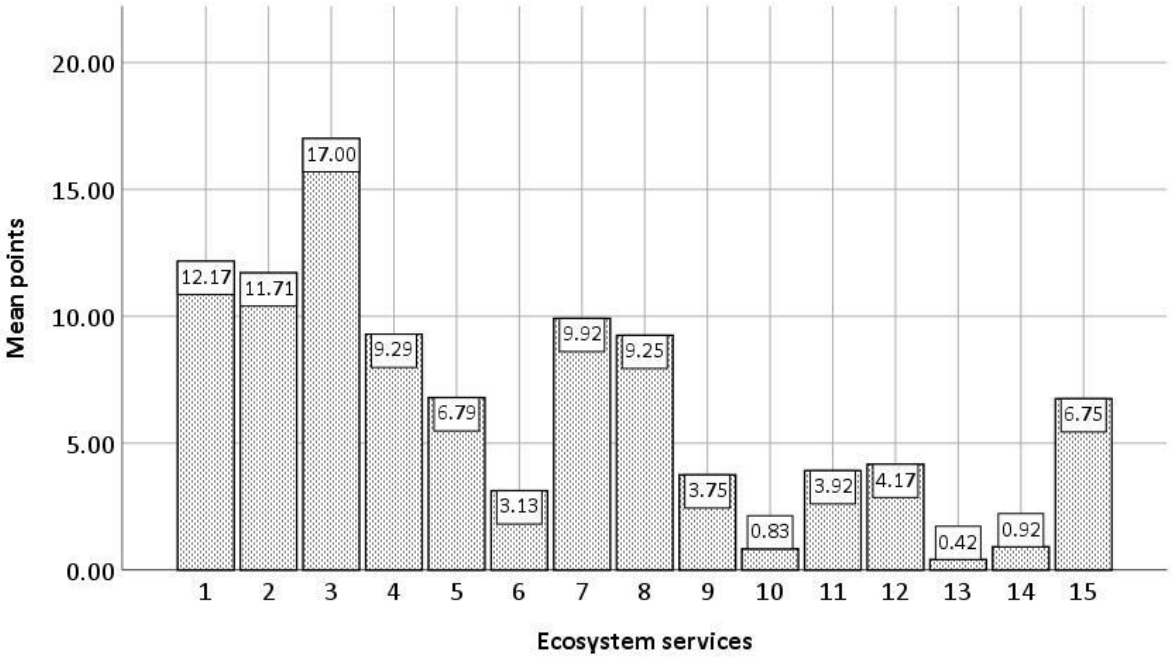
Overall, when the participants were asked to distribute the points to the park ES while thinking about the future generations, they assigned higher points to those related to sports and physical fitness (*M* = 17, *SD* = 16.68), ecotourism (*M* = 12.17, *SD* =10.21), enjoyment and spending free time (*M* = 11.71, *SD* = 13.13), and social relationships (*M* = 9.92, *SD* = 14.06). In contrast, they assigned lower points to ES related to the use of the park as a parking space (*M* = 0.42, *SD* = 1.21), revenue for the city (*M* = 0.83, *SD* = 2.68), its ability to improve the non-economic quality of life of the residents (*M* = 0.92, *SD* = 2.19), and provide information for cognitive development (*M* = 3.13, *SD* = 4.57) (Figure 6.17). Some participants said that they assigned higher points to sports and physical fitness because they predicted that future generations would value fitness. They also assigned higher points to enjoyment and relaxation because they believe that future generations will be more prone to stress. Participants also highlighted that the park's ability to promote local identity and cultural heritage, stimulate residents' interest in history and culture, serve as a place for city events, provide information for cognitive development, increase the green areas in the city, and provide revenue for locals are also important. Some participants expect that the completion of the coliseum (shaped like a pot or "*banga"* in Filipino, where the city got its name) would lead to the promotion of the city's local identity and stimulate the locals' interest in the city's history and culture. Some of them also believe that there is a need for more research about nature and parks and that the future needs more greens because of climate change:

> *"Studies and research about the environment; because as the world becomes more modernised, we lose our trees [greens]."*

> *"I gave more points to the addition of greens because I think in the future, we need to value greens like trees more because of climate change."*

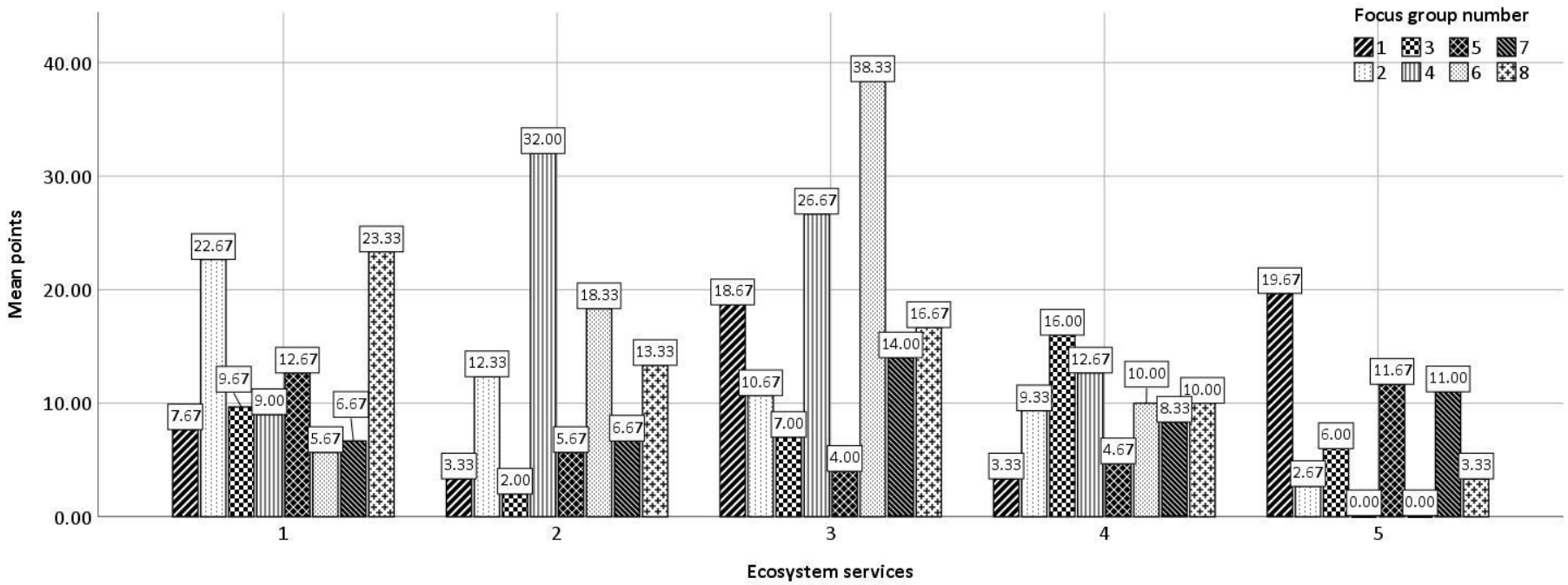
The complete list of reasons given by the participants in assigning points to specific ES in the fourth valuation exercise can be found in Appendix 15.

Figure 6.18 compares the mean points assigned by participants in each focus group to each park ES for future generations. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different ES. It was determined that the focus groups did not agree on how they assigned points to the different ES, $W = .470$, $p < .001$.



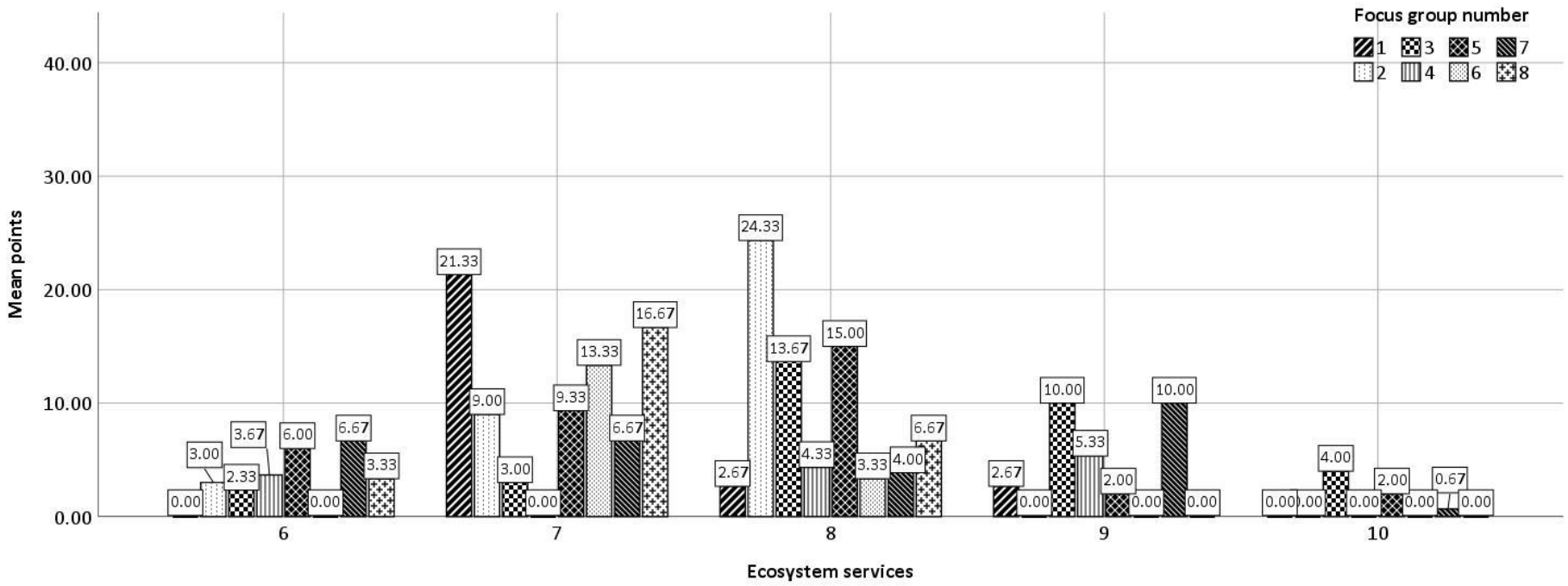
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.17 Mean points assigned to the park ecosystem services (ES) by participants in all focus groups in the fourth valuation - value source: individual, constituency: future generations



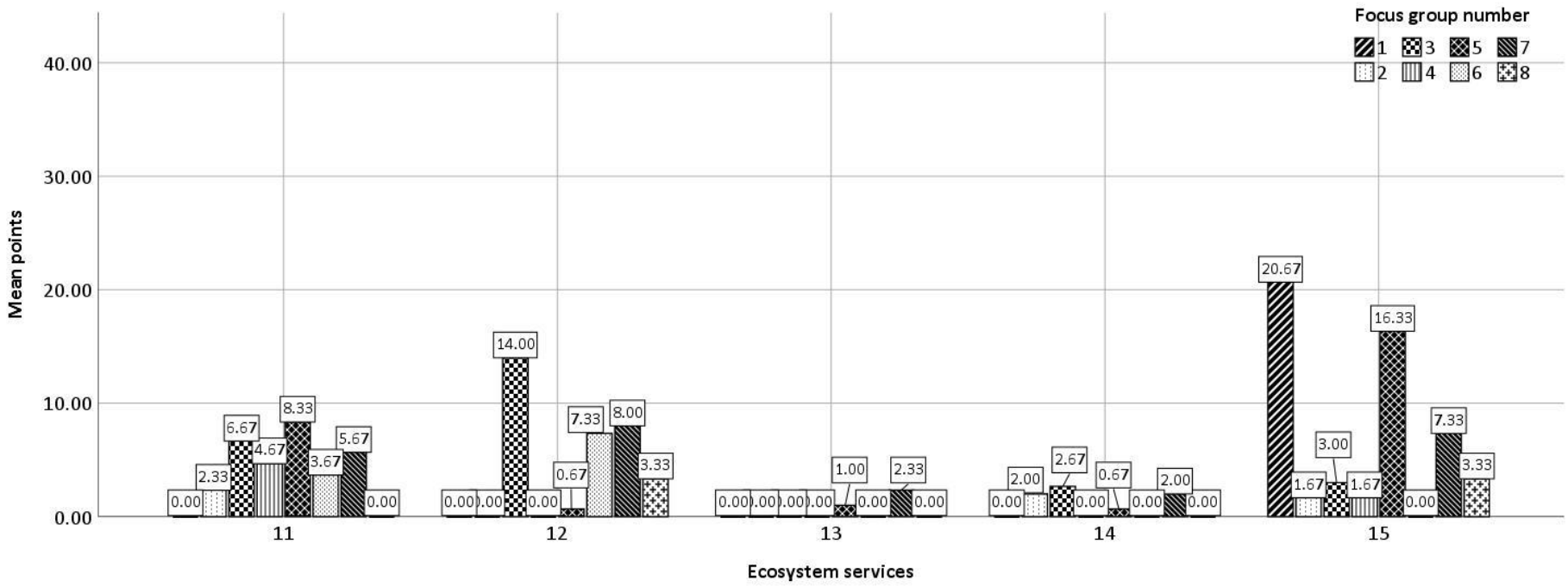
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information

Figure 6.18 A Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the fourth valuation - value source: individual, constituency: future generations



ES: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

Figure 6.18 B Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the fourth valuation - value source: individual, constituency: future generations

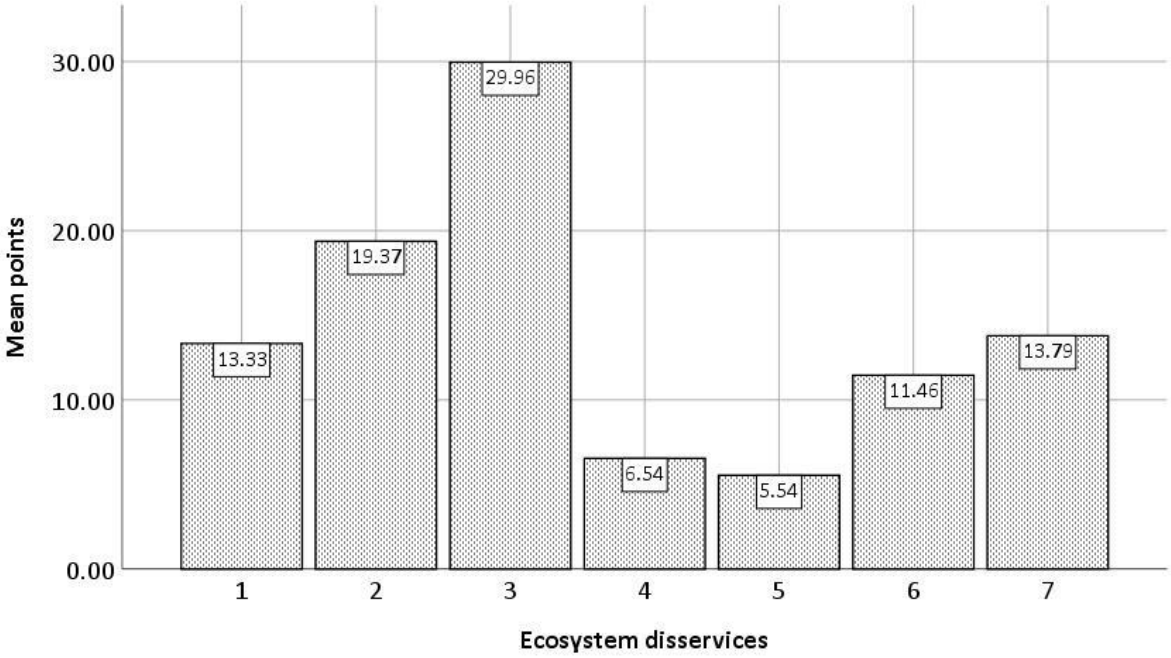


ES: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.18 C Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the fourth valuation - value source: individual, constituency: future generations

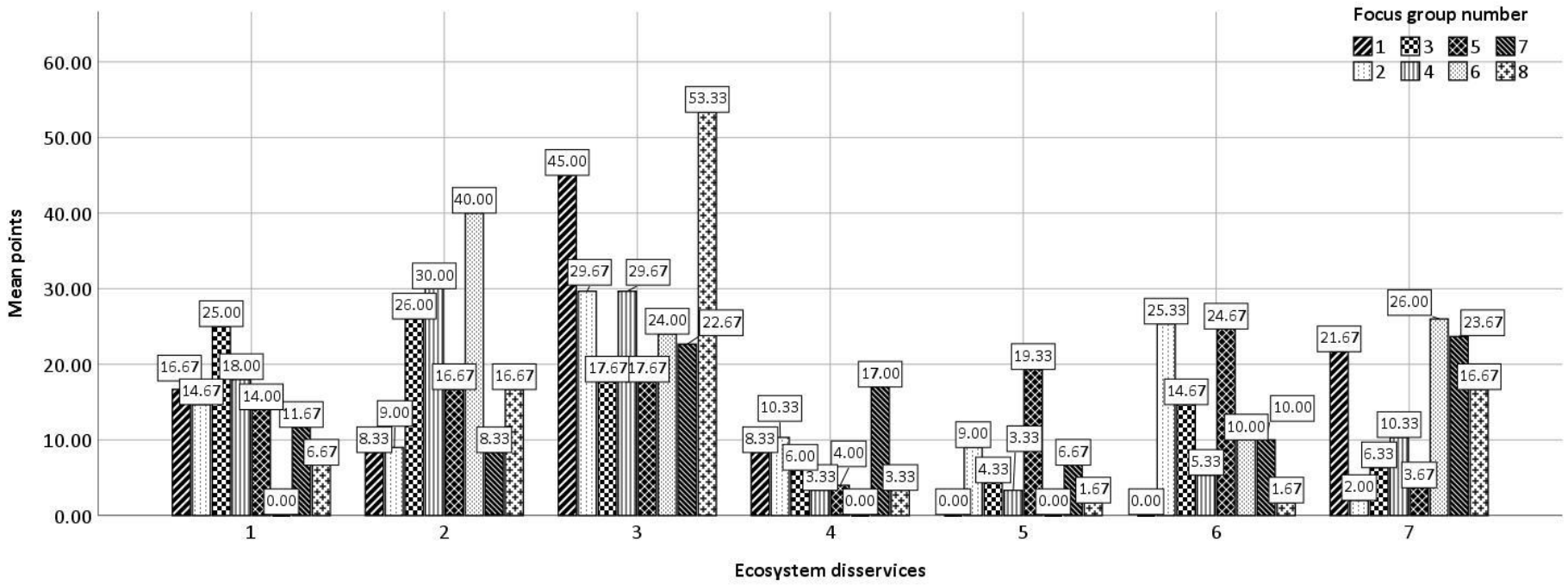
In terms of the EDS, participants were generally more worried about anti-social behaviour (*M* = 29.96, *SD* = 19.49) and traffic (*M* = 19.37, *SD* = 15.73) and less concerned about the thought of the land being wasted with the park's construction (*M* = 5.54, *SD* = 11.52) and conflict among users (*M* = 6.54, *SD* = 8.89) (Figure 6.19). Participants expressed that they imagine gangs and youth staying late in the park at night will still be present in the future; thus, they still worry about anti-social activities. They also predict that the park will get more popular with the coliseum's completion, attracting more people and vehicles and causing traffic. They were less worried about the conflict among users as they anticipate that a booking system will have been created in the future. Some participants asserted that they increased points for incomplete facilities since they are not sure if the park's facilities will be able to accommodate the expected increase in visitors. The complete list of reasons given by the participants in assigning points to specific EDS in the fourth valuation exercise can be found in Appendix 15.

Figure 6.20 compares the mean points assigned by participants in each focus group to each park EDS. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different EDS. It was determined that the focus groups did not agree on how they assigned points to the different ES, $W = .351$, $p = .010$.



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.19 Mean points assigned to the park ecosystem disservices (EDS) by participants in all focus groups in the fourth valuation - value source: individual, constituency: future generations

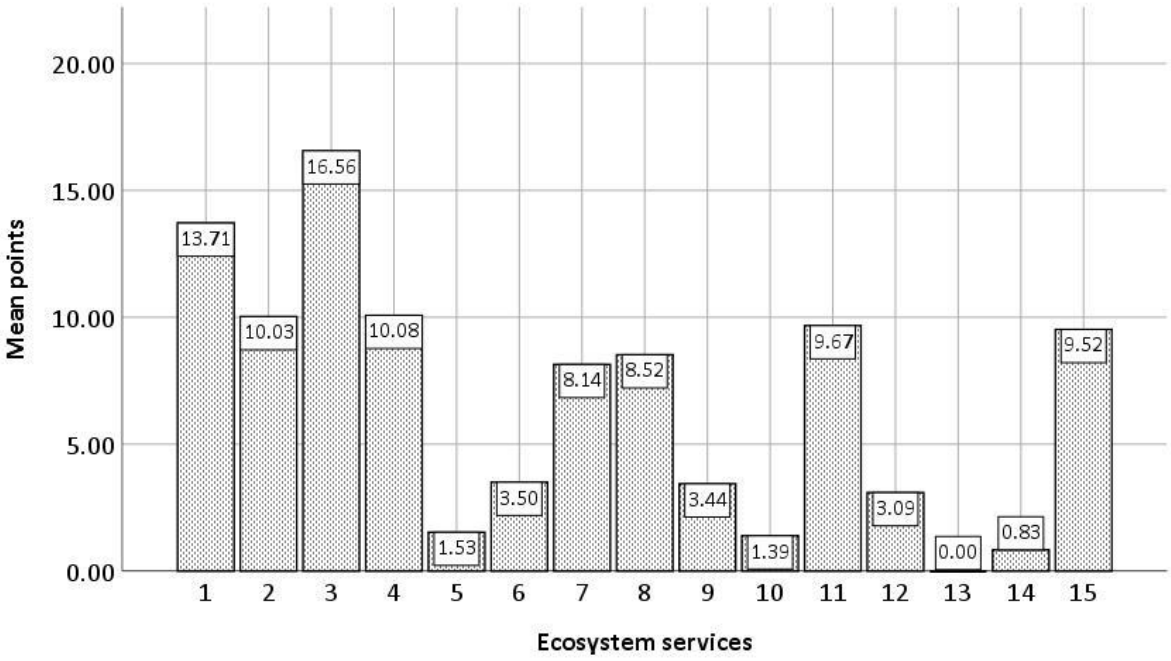


EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.20 Comparison of mean points assigned by participants in each focus group to park ecosystem disservices (EDS) in the fourth valuation - value source: individual, constituency: future generations

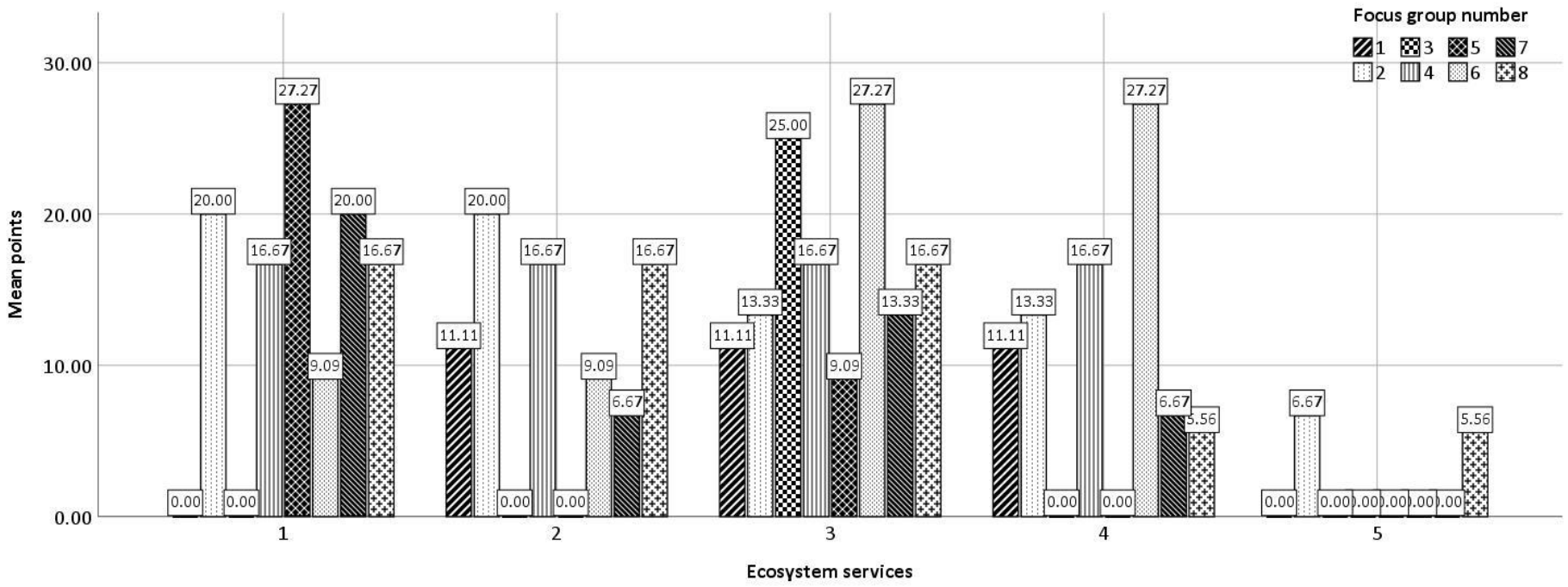
Group to future generations

Overall, when the participants were asked to distribute the points to the park ES as a group, thinking about the future generations and considering each other's opinions, they assigned higher points to those related to sports and physical fitness (*M* = 16.56, *SD* = 6.17), ecotourism (*M* = 13.71, *SD* = 9.40), relaxation and mental recreation (*M* = 10.08, *SD* = 8.74), and enjoyment and spending free time (*M* = 10.03, *SD* = 7.24). In contrast, they assigned lower points to ES related to the use of the park as a parking space (*M* = 0) and the park's capacity to improve the non-economic quality of life of the residents (*M* = 0.83, *SD* = 2.25), bring revenue for the city (*M* = 1.39, *SD* = 3.75), and provide aesthetic information (*M* = 1.53, *SD* = 2.72) (Figure 6.21). Figure 6.22 compares the mean points assigned by participants (in groups) in each focus group to each park ES. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different ES. It was determined that the focus groups did not agree on how they assigned points to the different ES, $W = .421$, $p < .001$.



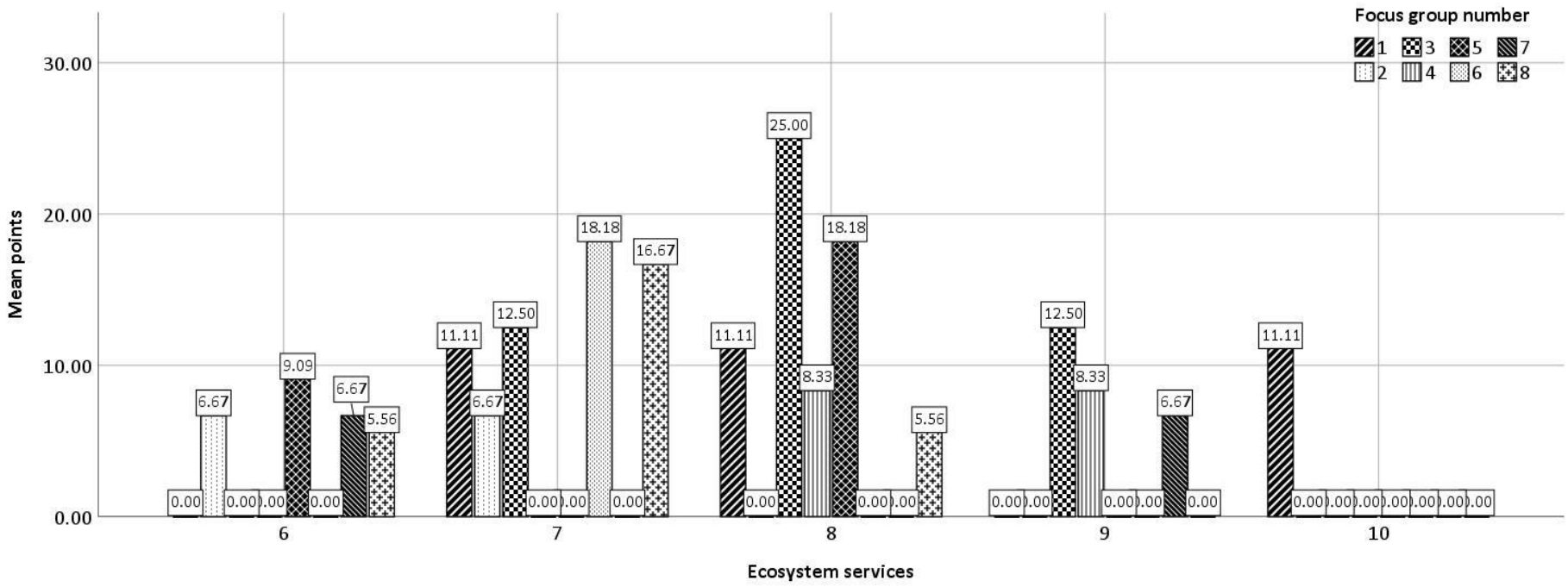
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.21 Mean points assigned to the park ecosystem services (ES) by participants in all focus groups in the fifth valuation - value source: group, constituency: future generations.



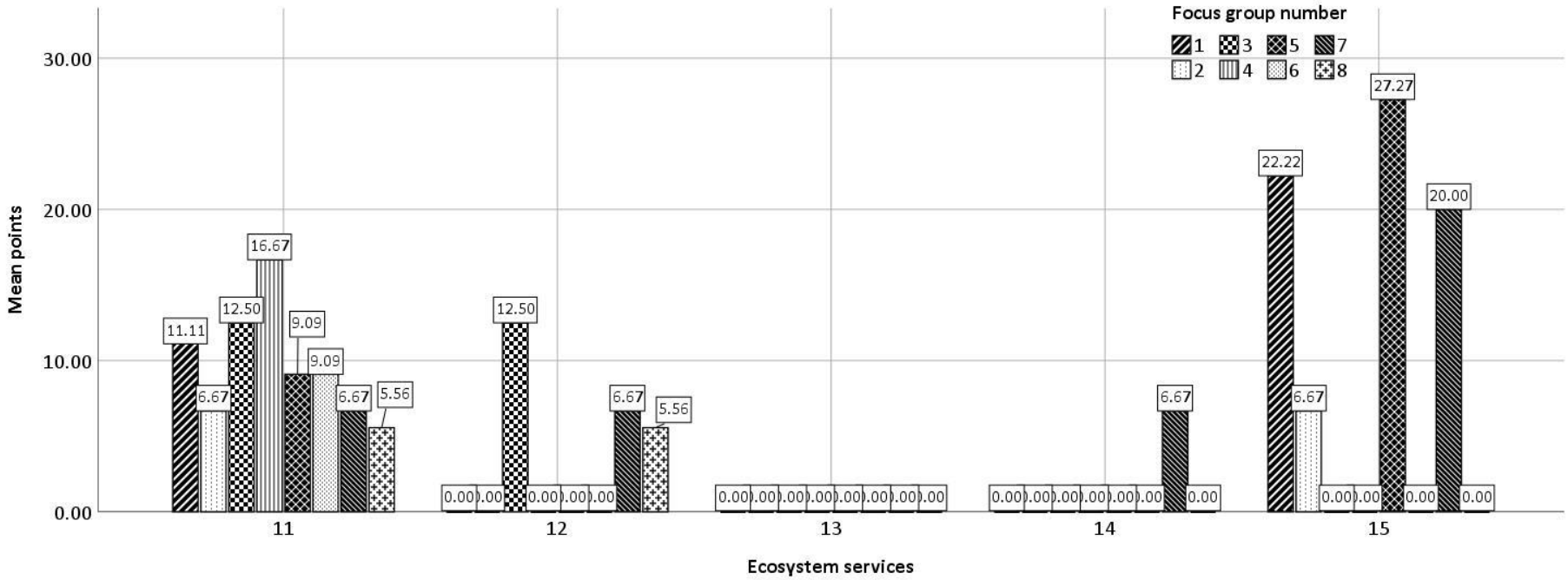
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information

Figure 6.22 A Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the fifth valuation - value source: group, constituency: future generations



ES statements: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

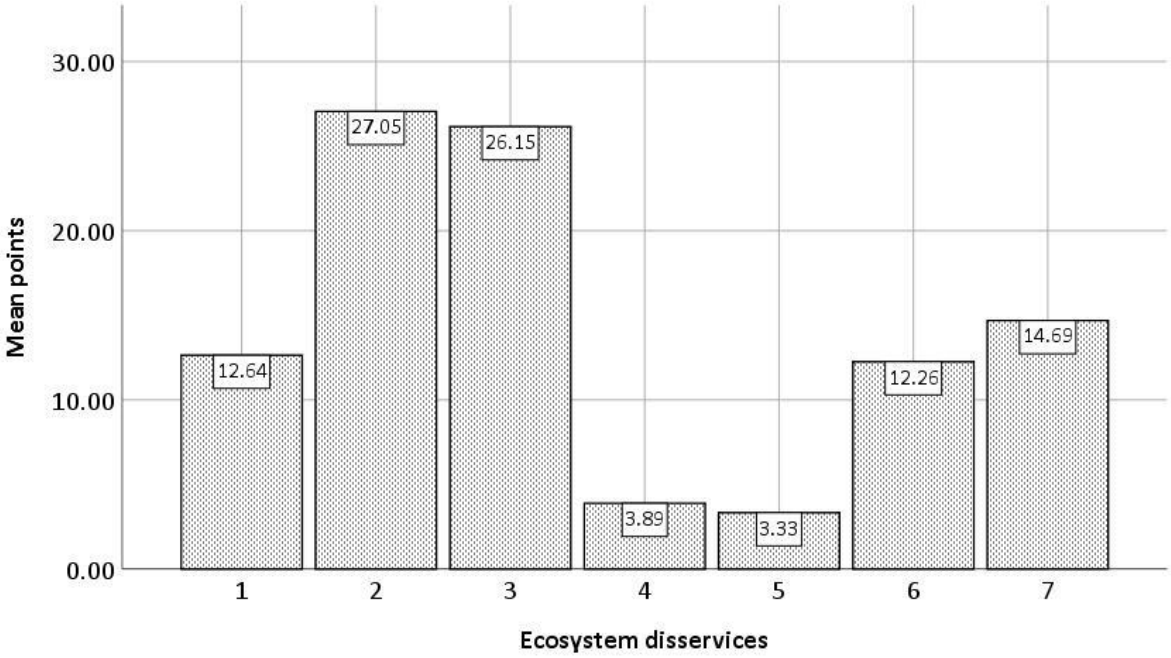
Figure 6.22 B Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the fifth valuation - value source: group, constituency: future generations



ES statements: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

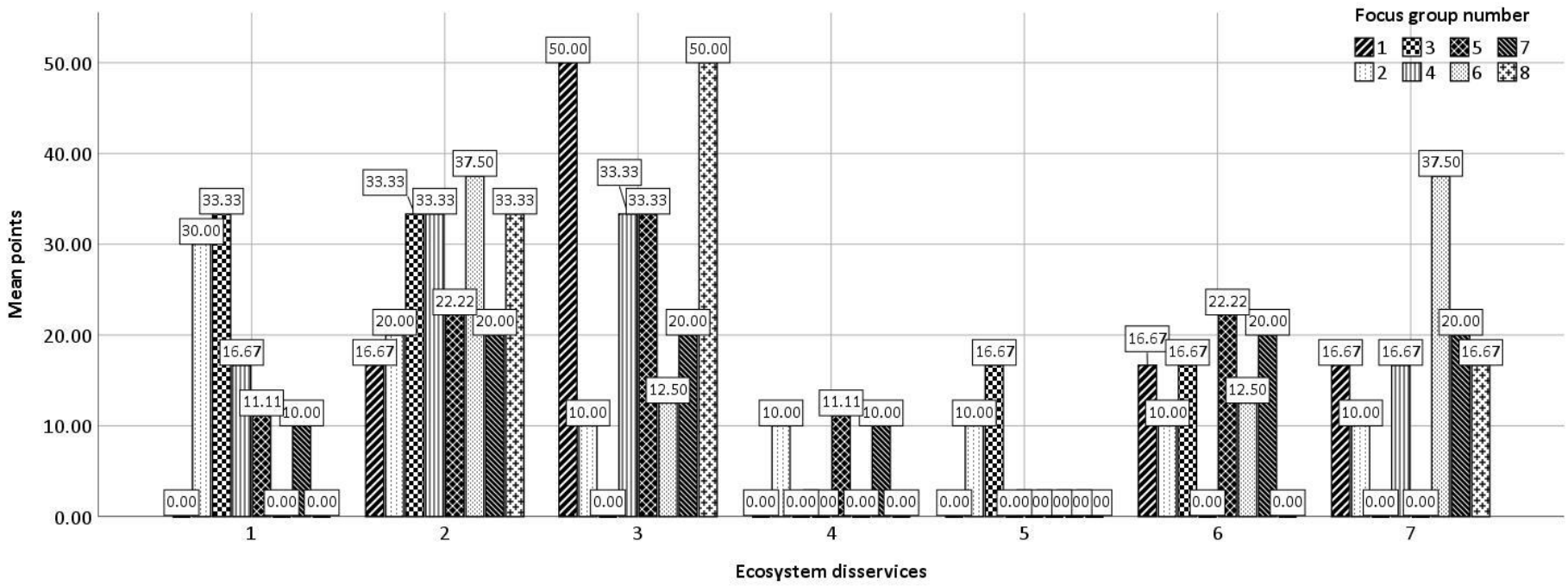
Figure 6.22 C Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the fifth valuation - value source: group, constituency: future generations

In terms of the EDS, participants were generally more worried about traffic (*M* = 27.05, *SD* = 7.73) and anti-social behaviour (*M* = 26.15, *SD* = 17.73) and less concerned about the thought of the land being wasted with the construction of the park (*M* = 3.33, *SD* = 6.14) and the conflict among users (*M* = 3.89, *SD* = 5.14) (Figure 6.23). Figure 6.24 compares the mean points assigned by participants in each focus group to each park EDS. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different EDS. It was determined that the focus groups did not agree on how they assigned points to the different ES, *W* = .458, *p* = .001.



EDS statements: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.23 Mean points assigned to the park ecosystem disservices (EDS) by participants in all focus groups in the fifth valuation - value source: group, constituency: future generations

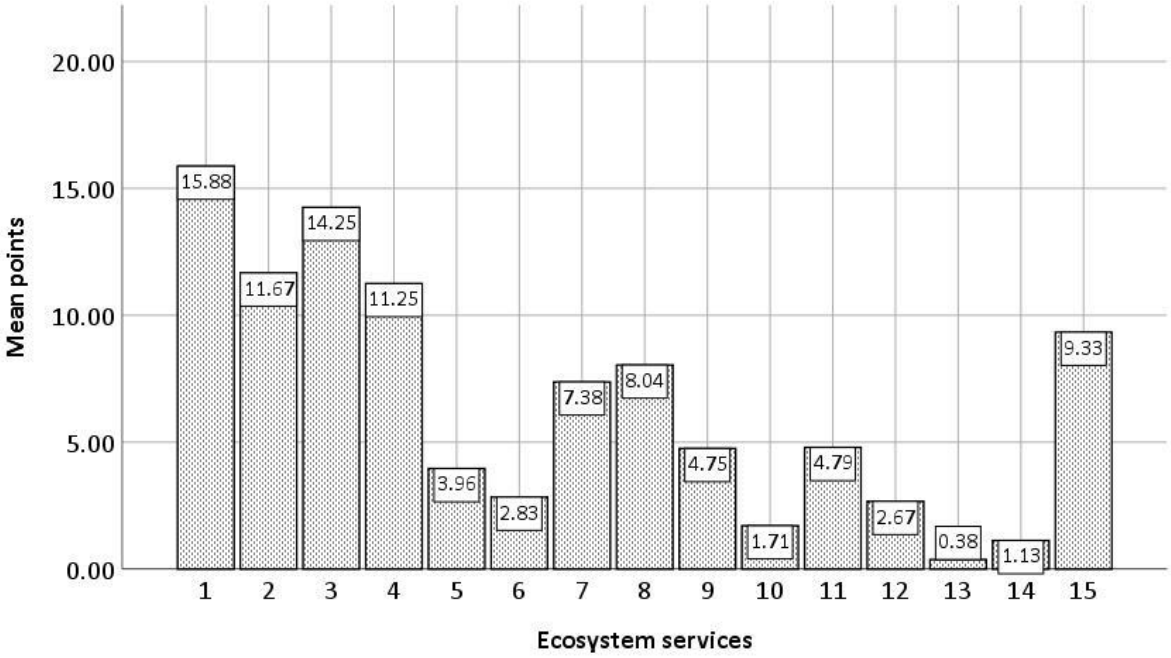


EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.24 Comparison of mean points assigned by participants in each focus group to park ecosystem disservices (EDS) in the fifth valuation - value source: group, constituency: future generations

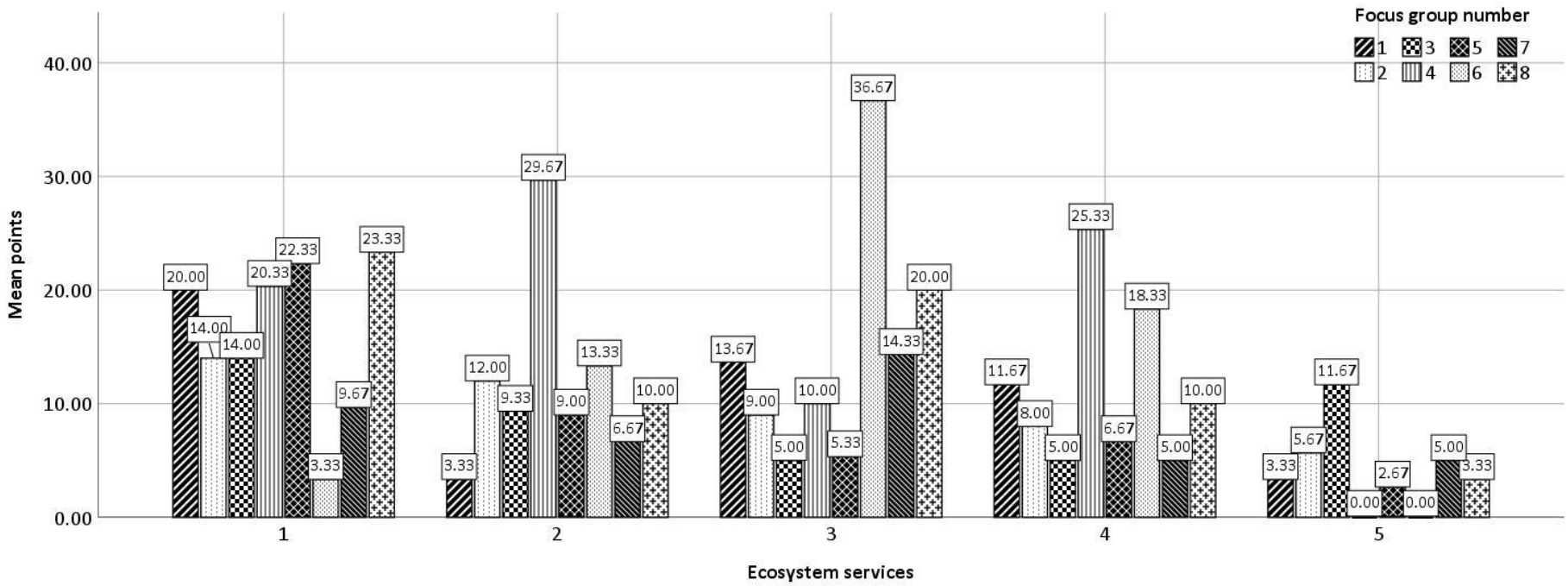
Individual to future generations (after discussions)

Overall, when the participants were asked to distribute the points to the park ES again after their valuation as a group and considering future generations, they assigned higher points to those related to ecotourism (*M* = 15.88, *SD* = 12.89), sports and physical fitness (*M* = 14.25, *SD* = 13.99), enjoyment and spending free time (*M* = 11.67, *SD* = 10.74), and relaxation and mental recreation (*M* = 11.25, *SD* = 9.15). In contrast, they assigned lower points to ES related to the use of the park as a parking space (*M* = 0.38 *SD* = 1.24) and the park's ability to improve the non-economic quality of life of the residents (*M* = 1.13, *SD* = 3.44), provide revenue for the city (*M* = 1.71, *SD* = 5.08), and provide space for events (*M* = 2.67, *SD* = 5.60) (Figure 6.25). Figure 6.26 compares the mean points assigned by focus groups to each park ES. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different ES. It was determined that the focus groups did not agree on how they assigned points to the different ES, $W = .463$, $p < .001$.



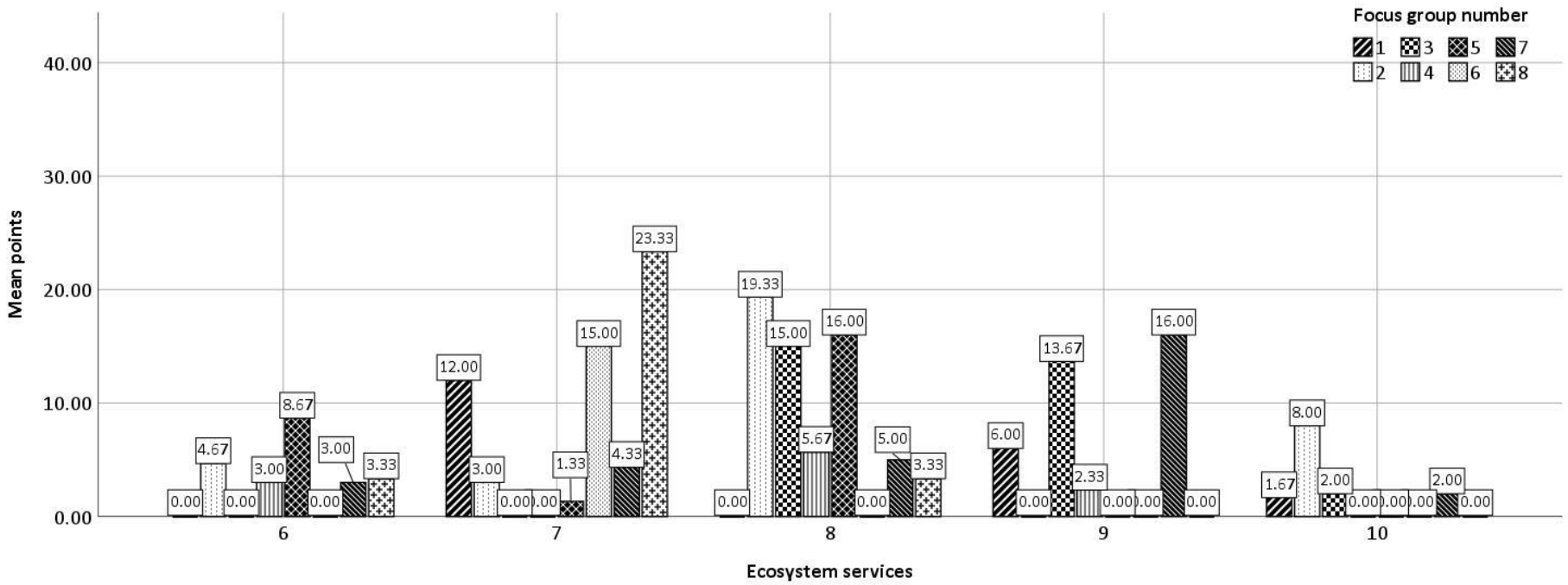
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.25 Mean points assigned to the park ecosystem services (ES) by participants in all focus groups in the sixth valuation - value source: individual, constituency: future generations (after discussions)



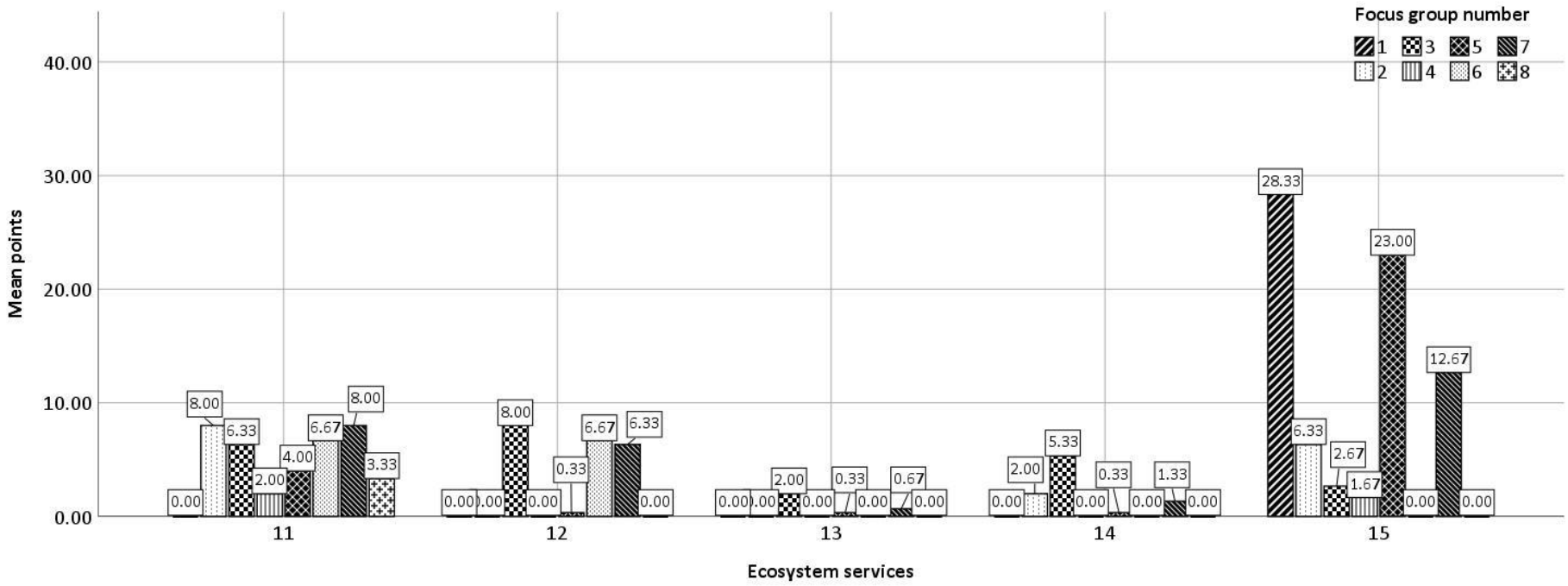
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information

Figure 6.26 A Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the sixth valuation - value source: individual, constituency: future generations (after discussions)



ES: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

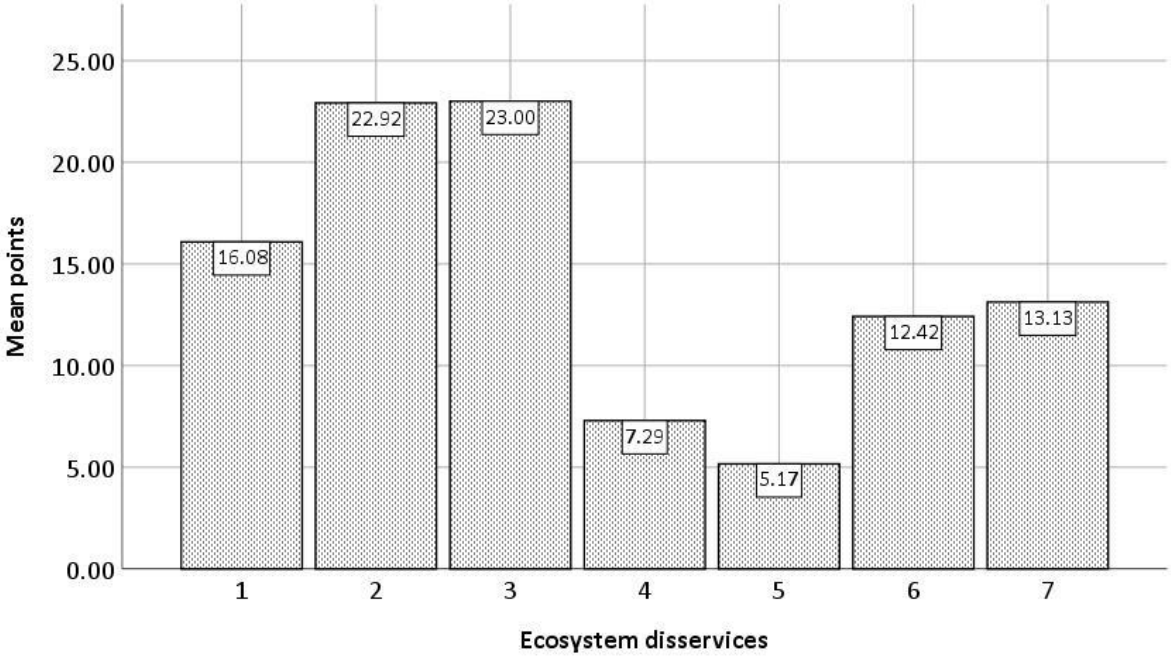
Figure 6.26 B Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the sixth valuation - value source: individual, constituency: future generations (after discussions)



ES: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

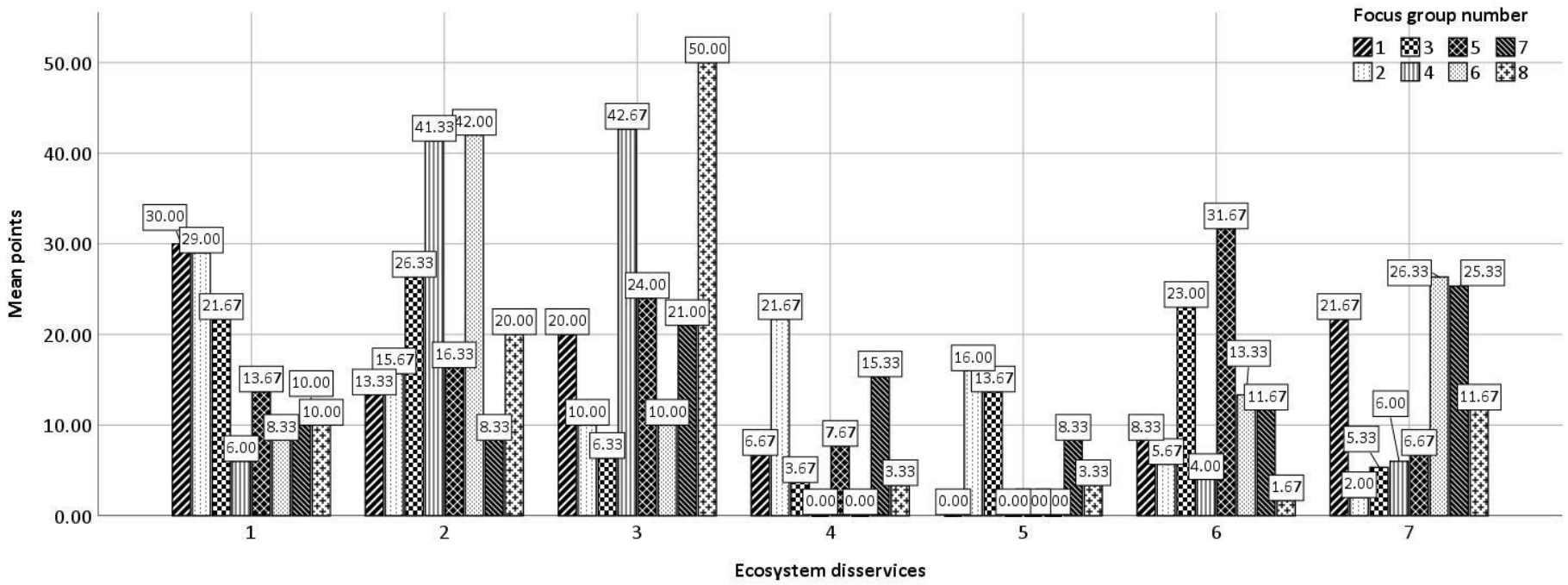
Figure 6.26 C Comparison of mean points assigned by participants in each focus group to park ecosystem services (ES) in the sixth valuation - value source: individual, constituency: future generations (after discussions)

In terms of the EDS, participants were generally more worried about anti-social behaviour (*M* = 23, *SD* = 22.50) and traffic (*M* = 22.92, *SD* = 22.13) and less concerned about the thought of the land being wasted with the construction of the park (*M* = 5.17, *SD* = 9.02) and conflict among users (*M* = 7.29, *SD* = 11.97) (Figure 6.27). Figure 6.28 compares the mean points assigned by participants in each focus group to each of the park EDS. A Kendall's W (Kendall, 1945) was run to determine if there was an agreement on how the focus groups assigned points to the different EDS. It was determined that the focus groups did not agree on how they assigned points to the different ES, *W* = .267, *p* = .046.



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.27 Mean points assigned to the park ecosystem disservices (EDS) by participants in all focus groups in the sixth valuation - value source: individual, constituency: future generations (after discussions)



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.28 Comparison of mean points assigned by participants in each focus group to park ecosystem disservices (EDS) in the sixth valuation - value source: individual, constituency: future generations (after discussions)

Comparison of valuation exercises

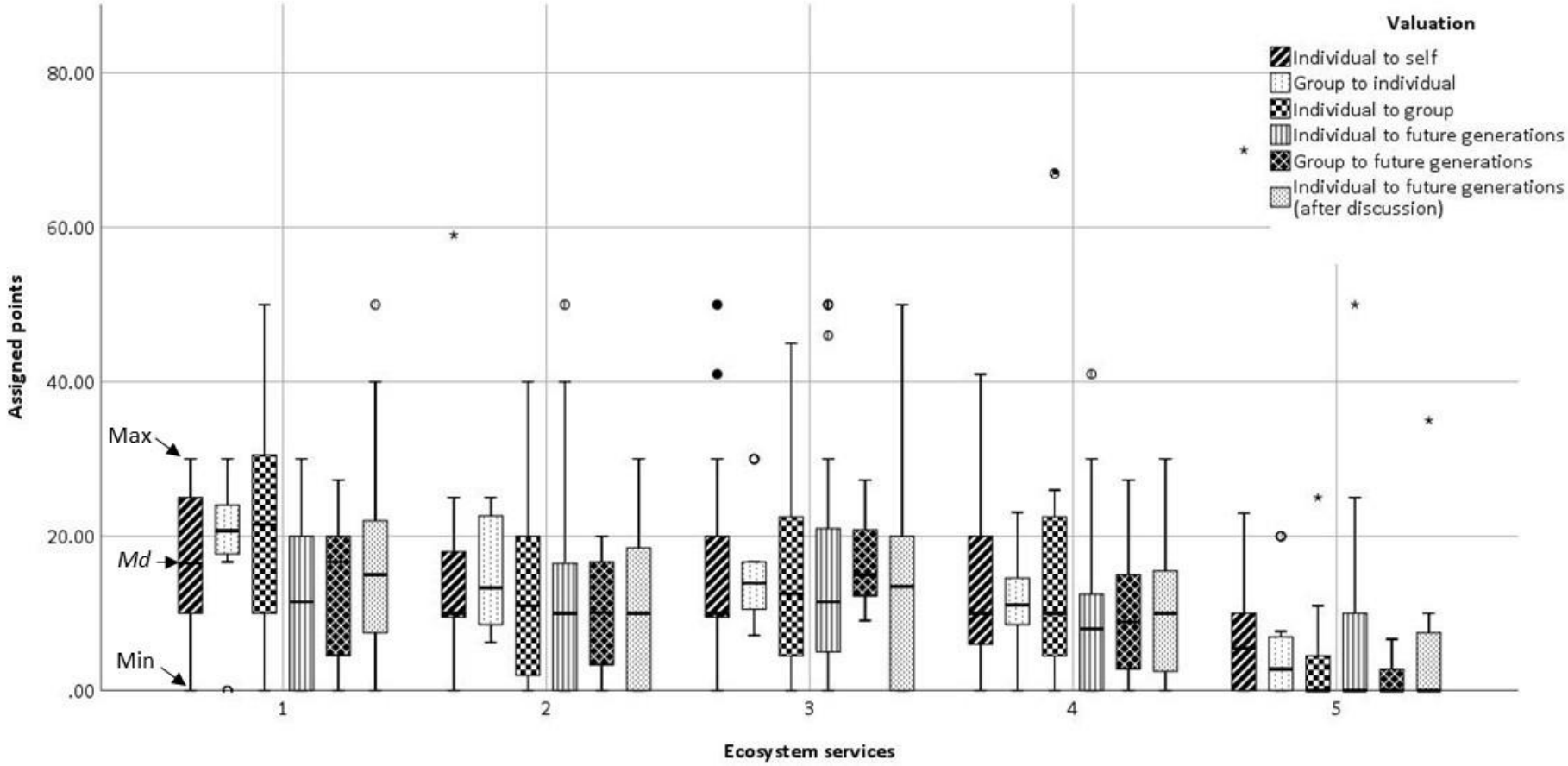
Value source and constituency

Shapiro-Wilk's tests (Shapiro & Wilk, 1965) were applied to the various park ES and EDS points in the six valuation exercises. It was found that only a few follow a normal distribution ($p > .05$). These are points given to ES1 (ecotourism) in the first valuation (individual to self); ES1 (ecotourism) and ES4 (relaxation and mental recreation) in the third valuation (individual to group); EDS2 (traffic) in the fourth valuation (individual to future generations); and ES1 (ecotourism) in the sixth valuation. For this reason, non-parametric tests were used to compare the distributions.

Figure 6.29 and Figure present boxplots comparing the points assigned by participants to the different park ES and EDS, respectively, in the six valuation exercises. Friedman tests were run to determine if there were differences in how participants assigned points to each ES and EDS in the first five valuation events, where the combinations of valuation source and constituency were modified. For the ES, it was found that there were significant differences in the points assigned by the participants to ES1 (ecotourism) ($\chi^2(2) = 12.455$, $p = .014$), ES5 (aesthetic information) ($\chi^2(2) = 15.038$, $p = .005$), ES6 (information for cognitive development) ($\chi^2(2) = 14.836$, $p < .005$), ES11 (revenue for locals) ($\chi^2(2) = 21.703$, $p < .001$), ES13 (parking space) ($\chi^2(2) = 21.4$, $p < .001$), and ES15 (increasing green areas) ($\chi^2(2) = 13.141$, $p = .011$) across the five valuation exercises (Table 6.8). Pairwise comparisons were performed with a Bonferroni correction for multiple comparisons. Post hoc analysis revealed no statistically significant differences on the points that participants assigned to ES1 (ecotourism) (Table 6.9), ES6 (information for cognitive development) (Table 6.11), ES13 (parking space) (Table 6.13), and ES15 (increasing green areas) (Table 6.14). However, there were statistically significant differences on the points that they assigned to ES5 (aesthetic information) in the fifth (group to future generations) (*Mdn* = 0) and first (individual to self) (*Mdn* = 5.50) valuation exercise ($p = .022$) (Table 6.10). There were also statistically significant differences on the points that they assigned to ES11 (revenue for locals) in the first (individual to self) (*Mdn* = 0) and fifth (group to future generations) (*Mdn* = 9.09) ($p = .002$), fourth (individual to future generations) (*Mdn* = 0) and fifth (group to future generations) (*Mdn* = 9.09) ($p = .007$), and second

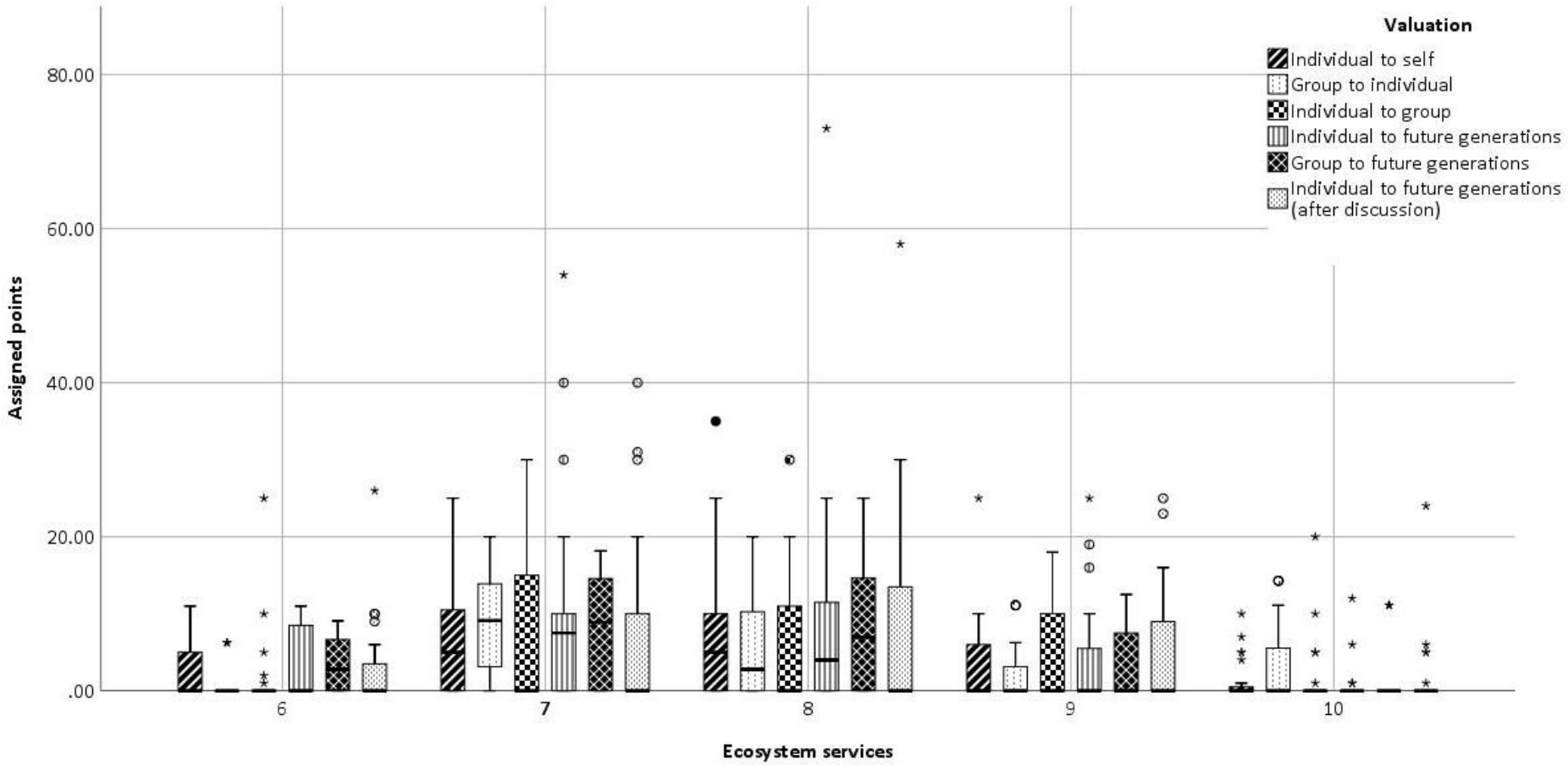
(group to individual) (*Mdn* = 2.78) and fifth (group to future generations) (*Mdn* = 9.09) valuation exercise (p = .014) (Table 6.12).

For EDS, it was found that there were significant differences in the points assigned to EDS1 (expensive maintenance) ($\chi^2(4) = 18.248$, p = .001), EDS2 (traffic) ($\chi^2(4) = 14.688$, p = .005), EDS5 (thought of the land being wasted) ($\chi^2(4) = 12.558$, p = .014), and EDS6 (exposure to pollution) ($\chi^2(4) = 16.223$, p = .003) across the five valuation exercises (Table 6.15). Pairwise comparisons were performed with a Bonferroni correction for multiple comparisons. Post hoc analysis revealed statistically significant differences on the values that participants assigned to EDS1 (expensive maintenance) in the fourth (individual to future generations) (*Mdn* = 8) and second (group to individual) (*Mdn* = 22.73) (p = .003) and in the fifth (group to future generations) (*Mdn* = 10.56) and second (group to individual) (*Mdn* = 22.73) valuation exercise (p = .019) (Table 6.16). There were also statistically significant differences on the values that they assigned to EDS2 (traffic) in the first (individual to self) (*Mdn* = 12) and fifth (group to future generations) (*Mdn* = 27.78) valuation exercises (p = .005) (Table 6.17) and to EDS6 (exposure to pollution) in the third (individual to group) (*Mdn* = 3.57) and fifth (group to future generations) (*Mdn* = 14.59) valuation exercises (p = .026) (Table 6.19). There were no statistically significant differences on the points that participants assigned to EDS5 (thought of the land being wasted) (Table 6.18).



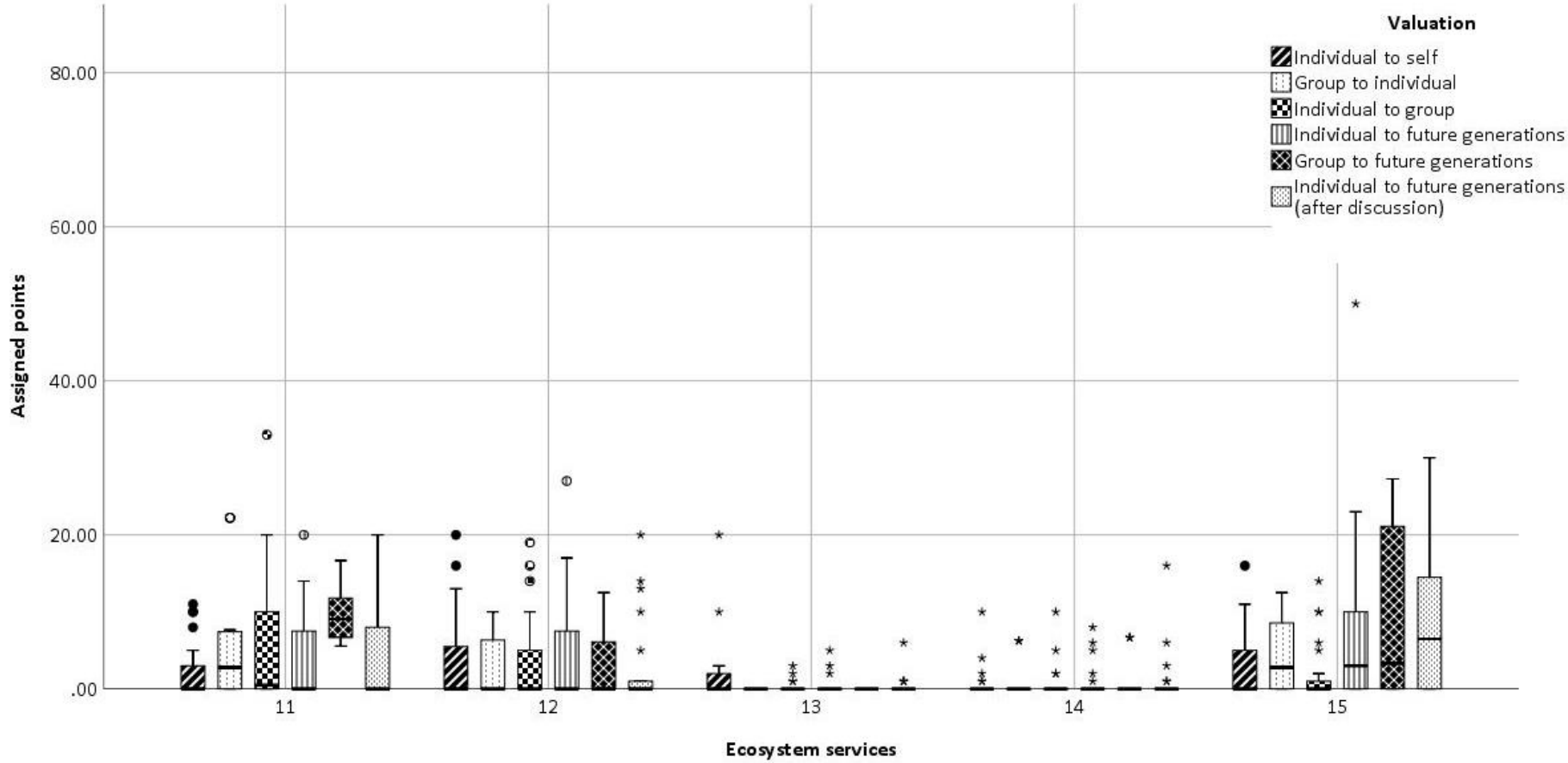
ES: 1 – ecotourism; 2- enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information.

Figure 6.29 A. Boxplots comparing the points assigned by participants to the different park ecosystem services (ES) in the six valuation exercises. Outliers and extreme values are represented by circles and asterisks, respectively.



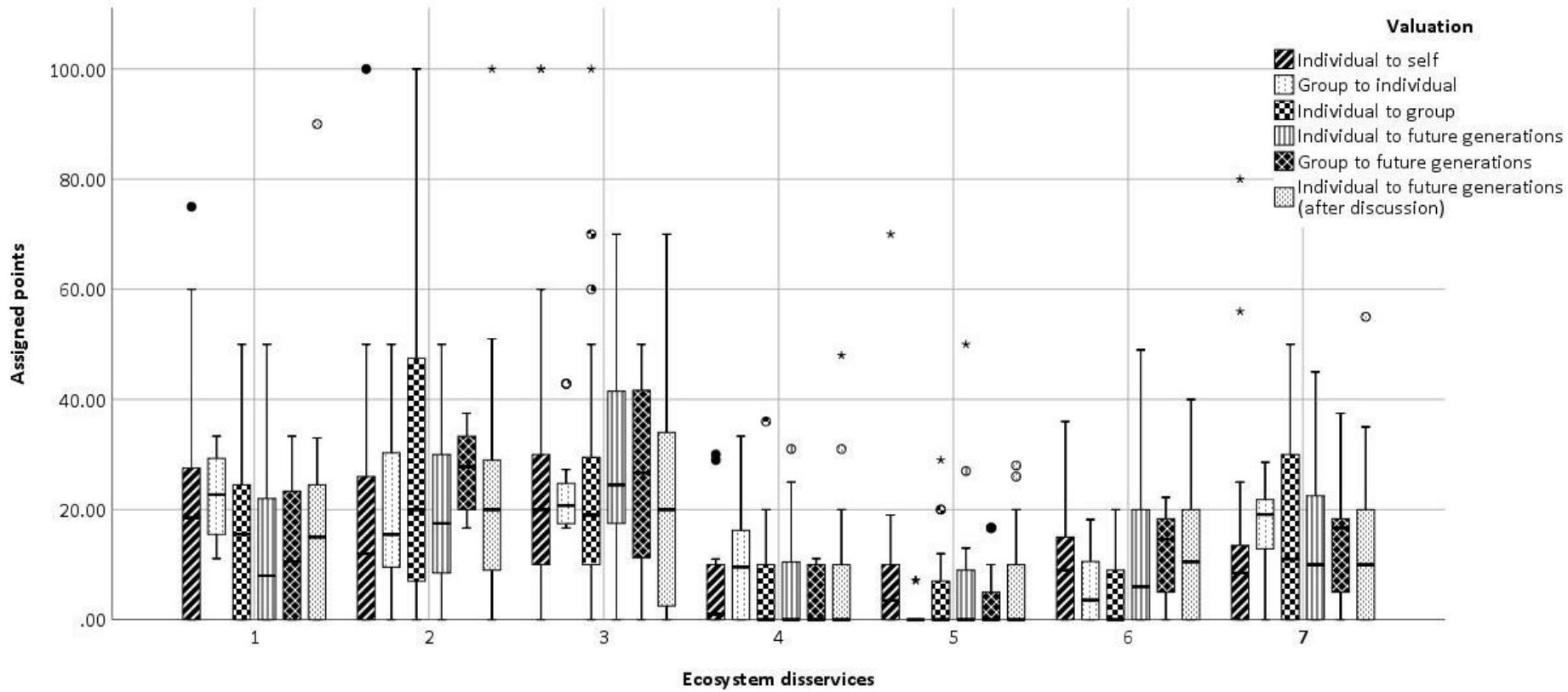
ES: 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city

Figure 6.29 B. Boxplots comparing the points assigned by participants to the different park ecosystem services (ES) in the six valuation exercises. Outliers and extreme values are represented by circles and asterisks, respectively.



ES: 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas

Figure 6.29 C Boxplots comparing the points assigned by participants to the different park ecosystem services (ES) in the six valuation exercises. Outliers and extreme values are represented by circles and asterisks, respectively.



EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Figure 6.30 Boxplots comparing the points assigned by participants to the different park ecosystem disservices (EDS) in the six valuation exercises. Outliers and extreme values are represented by circles and asterisks, respectively.

Table 6.8. Results of the Friedman tests comparing points assigned by participants to different park ecosystem services (ES) across the five valuation exercises. The significance level is .05. Significant results are in bold.

ES*	N	Test statistic	Deg. of freedom	Asymptotic sig.
1	24	12.455	4	**0.014**
2	24	8.457	4	.076
3	24	.868	4	.929
4	24	7.028	4	.134
5	24	15.038	4	**.005**
6	24	14.836	4	**.005**
7	24	2.634	4	.621
8	24	4.743	4	.315
9	24	4.151	4	.386
10	24	3.329	4	.504
11	24	21.703	4	**< .001**
12	24	.310	4	.989
13	24	21.4	4	**< .001**
14	24	.545	4	.969
15	24	13.141	4	**.011**

*ES: 1 – ecotourism; 2 – enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas.

Table 6.9. Pairwise comparisons of the points assigned by the participants to ES1 (ecotourism) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
4 – 5	-.125	.456	-.274	.784	1.000
4 – 1	.458	.456	1.004	.315	1.000
4 – 2	.979	.456	2.145	.032	.319
4 – 3	1.250	.456	2.739	.006	**.062**
5 – 1	.333	.456	.730	.465	1.000
5 – 2	.854	.456	1.871	.061	.613
5 – 3	1.125	.456	2.465	.014	.137
1 – 2	-.521	.456	-1.141	.254	1.000
1 – 3	-.792	.456	-1.734	.083	.828
2 – 3	-.271	.456	-.593	.553	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.10. Pairwise comparisons of the points assigned by the participants to ES5 (aesthetic information) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
5 – 3	.354	.456	.776	.438	1.000
5 – 2	.729	.456	1.598	.110	1.000
5 – 4	.854	.456	1.871	.061	.613
5 – 1	1.396	.456	3.058	.002	**.022**
3 – 2	.375	.456	.822	.411	1.000
3 – 4	-.500	.456	-1.095	.273	1.000
3 – 1	1.042	.456	2.282	.022	.225
2 – 4	-.125	.456	-.274	.784	1.000
2 – 1	.667	.456	1.461	.144	1.000
4 – 1	.542	.456	1.187	.235	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.11. Pairwise comparisons of the points assigned by the participants to ES6 (information for cognitive development) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
2 – 3	-.229	.456	-.502	.616	1.000
2 – 1	.792	.456	1.734	.083	.828
2 – 4	-.875	.456	-1.917	.055	.552
2 – 5	-1.021	.456	-2.237	.025	.253
3 – 1	.563	.456	1.232	.218	1.000
3 – 4	-.646	.456	-1.415	.157	1.000
3 – 5	-.792	.456	-1.734	.083	.828
1 – 4	-.083	.456	-.183	.855	1.000
1 – 5	-.229	.456	-.502	.616	1.000
4 – 5	-.146	.456	-.320	.749	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.12. Pairwise comparisons of the points assigned by the participants to ES11 (revenue for locals) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
1 – 4	-.187	.456	-.411	.681	1.000
1 – 2	-.271	.456	-.593	.553	1.000
1 – 3	-.521	.456	-1.141	.254	1.000
1 – 5	-1.729	.456	-3.788	.000	**.002**
4 – 2	.083	.456	.183	.855	1.000
4 – 3	.333	.456	.730	.465	1.000
4 – 5	-1.542	.456	-3.378	.001	**.007**
2 – 3	-.250	.456	-.548	.584	1.000
2 – 5	-1.458	.456	-3.195	.001	**.014**
3 – 5	-1.208	.456	-2.647	.008	.081

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.13. Pairwise comparisons of the points assigned by the participants to ES13 (parking space) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
2 – 1	.833	.456	1.826	.068	.679
5 – 1	.833	.456	1.826	.068	.679
2 – 5	.000	.456	.000	1.000	1.000
2 – 3	-.312	.456	-.685	.494	1.000
2 – 4	-.312	.456	-.685	.494	1.000
5 – 3	.313	.456	.685	.494	1.000
5 – 4	.313	.456	.685	.494	1.000
3 – 1	.521	.456	1.141	.254	1.000
4 – 1	.521	.456	1.141	.254	1.000
3 – 4	.000	.456	.000	1.000	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.14. Pairwise comparisons of the points assigned by the participants to ES15 (increasing green areas) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
3 – 1	.208	.456	.456	.648	1.000
3 – 4	-.625	.456	-1.369	.171	1.000
3 – 2	.688	.456	1.506	.132	1.000
3 – 5	-1.187	.456	-2.602	.009	.093
1 – 4	-.417	.456	-.913	.361	1.000
1 – 2	-.479	.456	-1.050	.294	1.000
1 – 5	-.979	.456	-2.145	.032	.319
4 – 2	.063	.456	.137	.891	1.000
4 – 5	-.562	.456	-1.232	.218	1.000
2 – 5	-.500	.456	-1.095	.273	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.15. Results of the Friedman tests comparing points assigned by participants to different park ecosystem disservices (EDS) across the five valuation exercises. The significance level is .05. Significant results are in bold.

EDS*	N	Test statistic	Deg. of freedom	Asymptotic sig.
1	24	18.248	4	**0.001**
2	24	14.688	4	**.005**
3	24	4.193	4	.381
4	24	6.811	4	.146
5	24	12.558	4	**0.014**
6	24	16.233	4	**.003**
7	24	6.746	4	.150

*EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Table 6.16. Pairwise comparisons of the points assigned by the participants to EDS1 (expensive maintenance) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
4 – 5	-.229	.456	-.502	.616	1.000
4 – 3	.729	.456	1.598	.110	1.000
4 – 1	.938	.456	2.054	.040	.400
4 – 2	1.646	.456	3.606	.000	**.003**
5 – 3	.500	.456	1.095	.273	1.000
5 – 1	.708	.456	1.552	.121	1.000
5 – 2	1.417	.456	3.104	.002	**.019**
3 – 1	.208	.456	.456	.648	1.000
3 – 2	.917	.456	2.008	.045	.446
1 – 2	-.708	.456	-1.552	.121	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.17. Pairwise comparisons of the points assigned by the participants to EDS2 (traffic) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
1 – 2	-.458	.456	-1.004	.315	1.000
1 – 4	-.458	.456	-1.004	.315	1.000
1 – 3	-.833	.456	-1.826	.068	.679
1 – 5	-1.583	.456	-3.469	.001	**.005**
2 – 4	.000	.456	.000	1.000	1.000
2 – 3	-.375	.456	-.822	.411	1.000
2 – 5	-1.125	.456	-2.465	.014	.137
4 – 3	.375	.456	.822	.411	1.000
4 – 5	-1.125	.456	-2.465	.014	.137
3 – 5	-.750	.456	-1.643	.100	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.18. Pairwise comparisons of the points assigned by the participants to EDS5 (waste of land) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
2 – 5	-.250	.456	-.548	.584	1.000
2 – 4	-.479	.456	-1.050	.294	1.000
2 – 3	-.542	.456	-1.187	.235	1.000
2 – 1	1.125	.456	2.465	.014	.137
5 – 4	.229	.456	.502	.616	1.000
5 – 3	.292	.456	.639	.523	1.000
5 – 1	.875	.456	1.917	.055	.552
4 – 3	.063	.456	.137	.891	1.000
4 – 1	.646	.456	1.415	.157	1.000
3 – 1	.583	.456	1.278	.201	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 6.19. Pairwise comparisons of the points assigned by the participants to EDS6 (exposure to air pollution) across the five valuation exercises. Each row tests the null hypothesis that Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significant results are in bold.

Sample 1-Sample 2*	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.**
3 – 2	.250	.456	.548	.584	1.000
3 – 1	.479	.456	1.050	.294	1.000
3 – 4	-1.021	.456	-2.237	.025	.253
3 – 5	-1.375	.456	-3.012	.003	**.026**
2 – 1	.229	.456	.502	.616	1.000
2 – 4	-.771	.456	-1.689	.091	.913
2 – 5	-1.125	.456	-2.465	.014	.137
1 – 4	-.542	.456	-1.187	.235	1.000
1 – 5	-.896	.456	-1.963	.050	.497
4 – 5	-.354	.456	-.776	.438	1.000

* 1 – individual to self; 2 – group to individual; 3 – individual to group; 4 – individual to future generations; 5 – group to future generations

**Significance values have been adjusted by the Bonferroni correction for multiple tests.

Discussions

Wilcoxon signed-rank tests were performed to determine if there are differences in the points assigned by the participants to the different park ES and EDS before and after deliberating with other participants. Data from the fourth and sixth valuation exercises were used for this analysis since both have the individual as the source and future generations as the constituency of the valuation. It was found that there were no significant differences between the points that the participants assigned to the different park ES and EDS before and after discussions with other participants when considering the future generations (Table 6.20 and Table 6.21).

Table 6.20. Results of the Wilcoxon signed rank tests comparing points assigned by participants to different park ecosystem services (ES) when they were asked to consider future generations before and after discussions with other participants. The significance level is .05. Significant results are in bold.

		Median							Differences		
ES*	**N**	**Before**	**After**	**Difference**	**Test statistic**	**SE**	**Std. test statistic**	**Asymptotic sig.**	**Positive**	**Negative**	**Ties**
1	24	11.5	15	0	72.5	17.603	.710	.478	8	7	9
2	24	10	10	0	16.5	7.133	-.210	.833	3	5	16
3	24	15	13.5	0	28	12.694	-.867	.386	5	7	12
4	24	8	10	0	65	15.886	.787	.431	8	6	10
5	24	0	0	0	16	9.798	-1.174	.241	3	7	14
6	24	0	0	0	15	7.133	-.421	.674	2	6	16
7	24	7.5	0	0	24	12.723	-1.179	.238	4	8	12
8	24	4	0	0	20	11.231	-1.158	.247	5	6	13
9	24	0	0	0	20	5.916	1.014	.310	5	2	17
10	24	0	0	0	12.5	4.757	.420	.674	4	2	18
11	24	0	0	0	62.5	15.910	.629	.530	8	6	10
12	24	0	0	0	9	7.124	-1.263	.206	2	6	16
13	24	0	0	0	4	2.739	-.365	.715	1	3	20
14	24	0	0	0	3	1.871	0	1	1	2	21
15	24	3	6.5	0	76.5	15.902	1.509	.131	11	3	10

*ES: 1 – ecotourism; 2 – enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas.

Table 6.21. Results of the Wilcoxon signed rank tests comparing points assigned by participants to different park ecosystem services (EDS) when they were asked to consider future generations before and after discussions with other participants. The significance level is .05. Significant results are in bold.

		Median							Differences		
EDS*	**N**	**Before**	**After**	**Difference**	**Test statistic**	**SE**	**Std. test statistic**	**Asymptotic sig.**	**Positive**	**Negative**	**Ties**
1	24	8	15	0	89	19.274	1.090	.276	10	6	8
2	24	17.5	20	0	92.5	21.015	.761	.446	10	7	7
3	24	24.5	20	-6	51.5	24.706	-1.761	.078	6	13	5
4	24	0	0	0	19	9.779	-.869	.385	3	7	14
5	24	0	0	0	25	8.434	.296	.767	6	3	15
6	24	6	10.5	0	57	14.296	.804	.421	7	6	11
7	24	10	10	0	39.5	14.221	-.422	.673	5	8	11

*EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Future generations

Wilcoxon signed-rank tests were conducted to determine if there are differences in the points assigned by the participants to the different park ES and EDS when they were asked to consider the other participants in the focus group (third valuation) and when they were asked to consider the future generations (fourth valuation). For the ES, there was a statistically significant median decrease in the points that the participants assigned to ES1 (ecotourism) (z = -2.588, p = .010) and a statistically significant median increase in the points assigned to ES15 (increase in green areas) (z = 2.165, p = .030) when they were asked to consider the welfare of the future generations (Table 6.22). For the EDS, there was a statistically significant median increase in the points that the participants assigned to EDS2 (traffic) (z = 2.232, p = .026) and EDS6 (exposure to air pollution) (z = 2.666, p = .008) when they were asked to consider the welfare of the future generations (Table 6.23).

Table 6.22. Results of the Wilcoxon signed rank tests comparing points assigned by participants to different park ecosystem services (ES) between two valuation exercises – individual to group and individual to future generations. The significance level is .05. Significant results are in bold.

ES*	N	Median			Test statistic	SE	Std. test statistic	Asymptotic sig.	Differences		
		Individual to Group	Individual to future	Difference					Positive	Negative	Ties
1	24	21.5	11.5	-6.5	22	21.062	-2.588	**.010**	2	15	7
2	24	11	10	0	53	17.55	-.399	.690	7	8	9
3	24	12.5	11.5	0	71	19.31	.155	.877	8	8	8
4	24	10	8	0	47	21.083	-1.399	.162	8	9	7
5	24	0	0	0	45	9.792	1.838	.066	8	2	14
6	24	0	0	0	28	7.124	1.404	.160	7	1	16
7	24	0	7.5	0	49	11.214	1.427	.154	9	2	13
8	24	0	4	0	50	14.270	.315	.752	5	8	11
9	24	0	0	0	24.5	9.798	-.306	.759	5	5	14
10	24	0	0	0	4	3.691	-.948	.343	1	4	19
11	24	.5	0	0	21	14.265	-1.717	.086	4	9	11
12	24	0	0	0	36	11.219	.267	.789	6	5	13
13	24	0	0	0	4	1.871	.535	.593	2	1	21
14	24	0	0	0	3	1.871	0	1	1	2	21
15	24	0	3	0	66.5	12.703	2.165	**.030**	9	3	12

*ES: 1 – ecotourism; 2 – enjoyment and spending free time; 3 – sports and physical fitness; 4 – relaxation and mental recreation; 5 – aesthetic information; 6 – information for cognitive development; 7 – social relationships; 8 – local identity and cultural heritage; 9 – stimulate interest to history and culture; 10 – revenue for the city; 11 – revenue for locals; 12 – space for events; 13 – parking space; 14 – improve non-economic quality of life; 15 – increasing green areas.

Table 6.23. Results of the Wilcoxon signed rank tests comparing points assigned by participants to different park ecosystem services (EDS) between two valuation exercises – individual to group and individual to future generations. The significance level is .05. Significant results are in bold.

EDS*	N	Median			Test statistic	SE	Std. test statistic	Asymptotic sig.*	Differences		
		Individual to Group	Individual to future	Difference					Positive	Negative	Ties
1	24	15.5	8	-1.5	26	15.914	-1.665	.096	2	12	10
2	24	20	17.5	0	46.5	21.012	-1.428	.153	6	11	7
3	24	19	24.5	4.5	179.5	28.675	2.232	**.026**	15	6	3
4	24	0	0	0	33.5	11.231	.045	.964	5	6	13
5	24	0	0	0	18.5	7.133	.070	.944	4	4	16
6	24	0	6	0	45	8.441	2.666	**.008**	9	0	15
7	24	11	10	0	30	14.287	-1.085	.278	6	7	11

*EDS: 1 – expensive maintenance; 2 – traffic; 3 – anti-social behaviour; 4 – conflict among users; 5 – waste of land; 6 – exposure to air pollution; 7 – incomplete features

Considering only the mean points for each park ES, it can be generalised that the participants consistently assigned high values to four ES and low values to two ES. The high-valued ES were ecotourism, enjoyment and spending free time, sports and physical fitness, and relaxation and mental recreation, while the low-valued ones were the use of the park as a parking space and the park's capacity to improve the residents' non-economic quality of life. For EDS, participants consistently assigned high values to expensive maintenance and anti-social behaviour in the first and second valuation exercises and traffic and anti-social behaviour from the third to the sixth valuation exercise. The thought of land being wasted because of the park's construction was valued consistently low across the six valuation exercises. However, the Kendall' W test results reveal that the focus groups overall did not agree on how they distributed points to the different ES and EDS in each valuation exercise. These findings suggest that each focus group is unique in assigning values to the park's ES and EDS.

The analyses confirm significant differences in the values assigned to several ES and EDS across the first five valuation exercises where the source and constituency of the valuation were shifted. These findings support Brown's (1984) premise that assigned values depend on the source and the constituency of valuation and that *"even though one has a natural tendency to fall somewhere along the self-society continuum (i.e., thinking only of self-interests)…, the natural position along the continuum is altered by whomever the context of the valuation calls for the individual to represent".* These results then highlight the need to specify the source and constituency when conducting socio-cultural valuation and reporting and comparing assigned values to ES and EDS. This study is the first to test the different valuation source and constituency combinations suggested by Brown (1984), although Schmidt et al. (2017) also reported that other-oriented valuation results in higher assigned values to ES.

The valuation exercises with varying source and constituency proved useful in revealing the participants' shared assigned values. According to Irvine et al. (2016), shared values represent the significance given to ecosystems beyond individual utility, but they may also appear indistinguishable from the self-interests of some individuals. This study adds that shared values transcend changes in value source and constituency. In the case of Jose Rizal Plaza, shared values are represented by the ES

and EDS that were valued consistently high or low (*i.e.,* did not have significant differences) across the five valuation exercises. Those that were valued inconsistently could represent the ES and EDS that are unclear to the participants or the ones that could potentially cause stakeholder disagreements or active opposition from certain groups. The participants share a high appreciation for enjoyment and spending free time, sports and physical fitness, relaxation and mental recreation, social relationships, and local identity and cultural heritage. On the opposite, they share a low appreciation for stimulating interest in history and culture, revenue for the city, space for events, and improving the residents' non-economic quality of life. Anti-social behaviour is the only shared high-valued EDS, while low-valued ones were conflict among users and incomplete facilities. The participants have varying opinions about ecotourism, aesthetic information, information for cognitive development, revenue for locals, and increasing green areas. These are expensive maintenance, traffic, the thought of the land being wasted, and exposure to pollution for the EDS. It can be noted that the shared ES and EDS values differ considerably from the ones observed only through the examination of aggregated values (*i.e.,* means). Some ES and EDS (e.g., ecotourism, expensive maintenance of the park) may even be misinterpreted as a shared value. These findings illustrate the point raised by Irvine et al. (2016) and Kenter et al. (2015) that shared values cannot be determined simply by aggregating individual values. They underscore the complexity and nuance embedded in community values towards environmental assets. This resonates with the broader discourse in environmental economics and social science, where researchers emphasise the multi-dimensional nature of value (Chan et al., 2011; Manfredo et al., 2016). Irvine et al. (2016) and Kenter et al. (2015) advocate for participatory and deliberative approaches to capture shared values. They recognise that these values often manifest in cultural and community contexts rather than solely individual preferences. As illustrated in this study, the case of Jose Rizal Plaza further reinforces the need for methodologies that delve into communal dialogue, collective decision-making, and an understanding of the socio-cultural factors that bind values together.

Results of the study show that there are no differences in the values assigned by participants to the park ES and EDS before and after discussions. Specifically, this is when the value source and constituency are kept the same. Discussions or

deliberations have been shown to influence the assigned values to ES or EDS and even to policy options laid out to stakeholders (Bullock et al., 2018; Kenter et al., 2016a; Murphy et al., 2017; Raymond et al., 2014). The reason is that these activities allow for interaction, reasoning, and negotiations among stakeholders (Kenter et al., 2016b; Mavrommati et al., 2017). However, what is rarely mentioned explicitly in deliberative valuation studies is that discussions cause a shift in the value source and constituency, often from individual to self to group to individual or group to group. This shift then triggers a change in the set of held values that the stakeholders tap into when making preference decisions.

Results indicate a change in how the participants valued several ES and EDS when asked to consider future generations. These findings suggest that the "group" constituency could further be classified into those already known to the participants and those in the future. This opens the opportunity to incorporate intergenerational equity into the socio-cultural valuation of ES and EDS and, therefore, into policy considerations. This opportunity is valuable as there is no way to elicit future generations' preferences, and thus, they are consistently misrepresented in valuation studies (O'Neill, 2001; Mavrommati *et al.*, 2017). The integration of intergenerational equity into the valuation of ES and EDS introduces a vital ethical dimension to environmental policymaking and conservation strategies. By acknowledging the potential impacts of current decisions on future generations, policymakers and practitioners can strive towards a more sustainable and just approach to environmental management (Howarth and Norgaard, 1992). The recognition that values and preferences change when considering future generations aligns with the broader sustainability discourse that emphasises the importance of long-term thinking and the moral obligation to preserve the environment for the future (Solow, 2010). It also challenges the often narrow and short-term focus of economic valuation methods, calling for more inclusive and reflective practices that encompass time, ethics, and collective responsibility (Gowdy, 2008; Spash, 2011). This study's findings, therefore, not only contribute to the theoretical understanding of ES and EDS valuation but also offer practical insights for incorporating intergenerational concerns in policy design and the need for a holistic and ethically grounded approach to environmental stewardship.

6.2.3 Debriefing

Discussions

When the participants were asked how they think the discussions affected their decisions in distributing points to the park ES and EDS, all of those who commented stated that other participants' opinions influenced their decision-making. Some of their answers are below. The complete list of translated excerpts from the focus groups related to the impact of discussions on valuing the park ES and EDS is in Appendix 16.

> *"At first, I did not realise the importance of the park for sports, but after hearing another participant mentioned it, I added more points to it [ES for sports]."*
>
> *"They [other participants' opinions] somehow affected me. We have different experiences, but when other participants give examples, you realise that they have a point."*
>
> *"After hearing the other participants, I realised the importance of the other ES and EDS."*
>
> *"My perspective changed after [hearing other participants' opinions]. At first, I was just considering my own perspective, but when I heard them [other participants], I realised that they have a point."*
>
> *"… especially about anti-social behaviour. I changed how I answered [distributed points], after hearing about bullying and gangs."*

Future generations

When asked what influenced their decisions in assigning points to the different park ES and EDS for future generations, the participants indicated that they thought about how these would benefit or disbenefit their children, grandchildren, the youth of the city, and all residents of the city. Some expressed their worries about the maintenance of the park:

> *"I did not think about the people. I was more concerned with the maintenance, especially of the greens in the park... I wondered, 'how can*

they [city office] be able to maintain them [the greens]'... I wish to see more greens in the park in the future."

"I focused more on the EDS since I worry, 'what if the government funds get exhausted in trying to resolve the EDS?'."

The complete list of translated excerpts from the focus groups related to factors that influenced the participants' decisions when considering future generations is in Appendix 17.

COVID-19

The participants were asked about their opinions on whether the park should be opened or closed during the pandemic. Few of them answered that it should be closed to lessen people's movement and prevent the spread of the virus. Most of the participants think that it should be opened for the residents' physical and mental health. They said that health protocols could be implemented to make sure that people are safe in the park. Some even suggested that a part of the park be converted into a COVID-19 isolation facility to maximise the use of its space. Some of the participants' comments are below. The complete list of their comments related to the pandemic and the park can be found in Appendix 18.

"It [the park] should be closed until we find out how contagious this virus is… also to lessen the movement of the people."

"It should be closed for the people's safety, especially now that the number of cases here in our city is increasing."

"For me, people need the park for their mental health. The four corners of our houses are very small. We need the space [in the park] and greens."

"Instead of using the classrooms [which could pose risks to students when they come back to schools] for COVID-19 patients, a facility can be built in the park, where it is spacious."

"I believe in the concept of forest bathing, especially when people are stressed, and I think the park could help us with de-stressing and self-care."

Lessons from focus group

The general themes that emerged when the participants were asked what they have learned from the focus groups were the following: ES and EDS, appreciation of the park and the topic of the research, importance of discussions, the value of participation in decision-making, and future generations (

Table 6.24). Many of the participants mentioned that they had realised the unique benefits of the park to different kinds of people in the city because of the focus group. They also expressed their surprise to hear the benefits of the park that they never noticed before. They think that they now have a better understanding and awareness of the park's benefits and disbenefits. Participants also cited that the focus groups led to a new-found appreciation of the park and the motivation to visit it more when the pandemic is over. They also commended the research topic, saying that it tackles a relevant issue, especially now that the city is becoming more commercialised. Few participants mentioned that they developed a more comprehensive perspective on the park's value after the discussions. One participant pointed out the importance of research and participation in the city's decision-making (for the park's design). Participants also stated that the focus group sparked concern for future generations and prompted them to think about their welfare:

"This focus group stresses the importance of research [in decision-making]. There needs to be planning in decision-making… If there's no planning, there will be negative consequences or there will be some points that will be missed [not considered]."

"This focus group enabled me to consider the future generations or the future of the next generations. 'How will future generations know Calamba City? Is it going to be historical landmarks?' This focus group is an eye-opener for me.."

Table 6.24. General themes from the participants' answers to the question "What did you learn from the focus group?". Complete comments are in Appendix 19.

ES and EDS
• unique benefits of the park to different people
• unapparent benefits of the park
• increased awareness to the benefits and disbenefits
• how to value the park
Appreciation of the park
• valuing the park more
• motivation to visit the park
Appreciation of the research topic
• relevant issue
• willingness of people to participate
• challenge in eliciting opinions
• increased awareness to the topic [value of parks]
Importance of discussion
• wider perspective
• heard other opinions
Value of research and participation in decision-making
• research for proper planning
• societal relevance of decisions
Future generations
• concern for future generations
• thinking about what they could benefit from

Participants noted that other participants' opinions somehow influenced their preferences and that they learned lessons from the focus groups. These findings support the claims (see Irvine et al., 2016; Kenter et al., 2015) that deliberations lead to social learning and the formation of shared values (deliberation-influenced shared values). It also validates that socio-cultural valuation studies can also aid in information dissemination and awareness-raising (Walz *et al.*, 2019). Participants also expressed that the focus groups stimulated their concerns about the welfare of future generations. Mavrommati et al. (2020) also assert that deliberative approaches effectively integrate future considerations into the current environmental choices. It is also clear from the results that the park's closure due to the pandemic has influenced the participants' valuation. Most of the shared high-valued ES were the same ones that they reasoned why the park needs to be opened - enjoyment and spending free time, sports and physical fitness, relaxation and mental recreation, and social relationships.

6.2.4 Exit questionnaire

Willingness to contribute

After the focus groups, twenty-three out of the twenty-four participants were willing to contribute something to keep the park. One participant was not ready to contribute because he or she does not have extra time and money. Out of those willing to contribute, 91.3% were willing to give time, while 17.4% were willing to give money (Table 6.25). Other contributions suggested by the participants were being a responsible resident of the city and donating planting and cleaning materials. Those who were willing to contribute time were willing to give, on average, a minimum of 7.05 hours (*SD* = 11.25) and a maximum of 10.81 hours (*SD* = 14.75) per month. Those who were willing to contribute money were willing to give, on average, a minimum of PhP 125 (~USD 2.63) (*SD* = PhP 119.02 or ~USD 2.50) and a maximum of PhP 425 (~USD 9.19) (*SD* = PhP 427.2 or ~USD 8.97) per month (Table 6.26).

Table 6.25. Participants' answers to the question "What are you willing to contribute to keep the park?"

Contribution	Responses		Percentage of Cases (%)
	N	Percentage (%)	
Time	21	72.4	91.3
Money	4	13.8	17.4
Others	4	13.8	17.4
Total	29	100.0	126.1

Table 6.26. Descriptive statistics of the number of hours and money the participants are willing to give per month to keep the park

Contribution per month	N	Min.	Max.	Mean	Std. Dev.	Median
Minimum number of hours	21	1	48	7.05	11.25	4
Maximum number of hours	21	2	60	10.81	14.75	6
Minimum amount	4	50	300	125	119.02	75
Maximum amount	4	100	1000	425	427.2	300

Note: Amounts are in Philippine Peso (PhP). PhP 1 = ~ USD 0.021.

An exact McNemar's test (McNemar, 1974) determined that the difference in the proportion of participants willing to contribute something to keep the park before and after the focus group was not significant, $p = 1.00$. The minimum and the maximum number of hours and amount that the participants were willing to give per month do not follow a normal distribution according to a Shapiro-Wilk test ($p < 0$). Wilcoxon signed-rank tests found no significant differences in the minimum and the maximum number of hours and amount of money that the participants were willing to give per month before and after the focus groups (Table 6.27).

Table 6.27. Results of the Wilcoxon signed-rank tests comparing the minimum and maximum time and money the participants were willing to contribute per month to keep the park, before and after the focus groups. The significance level is .05. Significant results are in bold.

Contribution	N	Median			Test statistic	SE	Std. test statistic	Asymptotic sig.	Differences		
		Before	After	Difference					Positive	Negative	Ties
Min. number of hours	23	2	4	0	22.5	5.86	1.45	.147	6	1	16
Max. number of hours	24	4	5	0	46	9.772	1.893	.058	9	1	14
Minimum amount	24	0	0	0	2.5	2.716	-.921	.357	1	3	20
Maximum amount	24	0	0	0	2.5	1.837	-.272	.785	1	2	21

Social value orientation

After the focus groups, most participants (54.17%) were individualists, while 29.17% and 16.67% were prosocials and competitives, respectively (Figure 6.31). The SVO scores computed before the focus groups do not follow a normal distribution (Shapiro-Wilk test, $p = .034$), while the scores after the discussions do ($p = .117$). Of the 24 participants, 20 increased their SVO scores while four decreased their SVO scores. There was a statistically significant decrease (*Mdn* = -17.110) in the SVO scores of the participants before (*Mdn* = 30.47) and after (*Mdn* = -.955) the focus groups according to a Wilcoxon signed-rank test, $z = -3.514$, $p < .001$.

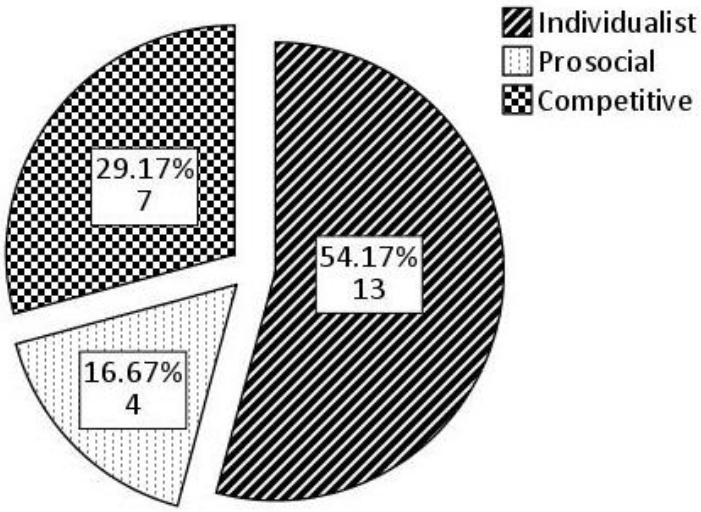


Figure 6.31. Participants' social value orientation after the focus groups

Results show that the participants' willingness to contribute did not change after the focus groups. Interestingly, while participants remained willing to contribute to keep the park, and the amount of time and money they were willing to give stayed the same, there was a shift in the participants' social value orientation. More participants became individualistic and competitive after the focus groups. Given the limited number of participants, this might have been because almost everyone was already willing to contribute even before the focus groups. This might also be because social value orientation measures personal held values, but the willingness to contribute is driven by shared assigned values to the ES and EDS of the resource in question.

6.2.5 Value of findings and study limitations

This research extends several contributions to the emerging field of socio-cultural valuation of ES and EDS. First, it was able to demonstrate a procedure for conducting a deliberative valuation of ES and EDS. The application of participatory approaches to ES and EDS valuation has long been considered a gap in the ES research (Small *et al.*, 2017; Kobryn *et al.*, 2018; Johnson *et al.*, 2019). Second, the results provided evidence of the influence of value source and constituency when eliciting ES and EDS values. There is, therefore, a need for future studies to exercise caution in eliciting, reporting, and comparing values. Third, the research demonstrated an effective means of revealing shared values among stakeholders. Fourth, it showed how future concerns could be incorporated into socio-cultural valuation to address intergenerational equity. These unique approaches will prove useful in making more inclusive and well-informed decisions about managing natural and human-made ecosystems.

While it generated many useful findings, it is essential to note that the study had a limited number of focus groups and participants. It is possible that not all stakeholder groups were represented well because the focus groups were promoted and administered online. There can also be a limitation on the level of participant interaction online. Moreover, since the focus groups were only conducted once, the study does not answer whether deliberation-influenced group values persist and eventually become shared values.

Despite these limitations, the insights gathered from this part of the study present a valuable foundation for future research and policy development within the city's management of urban parks. Identifying shared and conflicting ES and EDS values opens avenues for more targeted engagement with different stakeholder groups, which could facilitate more dialogues and cooperative problem-solving. Future studies may benefit from incorporating a mixed-method approach, combining online and face-to-face focus groups to ensure broader representation and enhanced participant interaction. Implementing longitudinal studies could also help to explore the dynamics of deliberation-influenced values over time, shedding light on the long-term stability or evolution of shared values. By building on the current findings, city planners, and

policymakers can develop more effective, context-specific strategies to foster community involvement, enhance park amenities, and promote sustainable urban living. This collaborative approach aligns with the global push towards more inclusive and participatory urban governance, considering the interplay between human values, urban landscapes, and environmental sustainability (Healey, 2003; Zientara et al., 2020).

CHAPTER 7: CONCLUSIONS

The research aimed to apply socio-cultural valuation to assess how stakeholders assign values to the ES and EDS of the Jose Rizal Plaza in Calamba City, the Philippines. The first part of the research used key informant interviews (KIIs) to identify the stakeholders of the park and the ES and EDS that they associate with it. This step guaranteed the involvement of stakeholders throughout the research process. The stakeholders of the park were identified as the city office and its employees, the businesses around the park, the students, and the residents from all the villages (near and far from the park). It was found that stakeholders regard the park as beneficial whether they have a direct role in its maintenance or live near to or far from it. In addition, respondents were most familiar with the park's cultural ES. When it comes to the EDS, those who live near the park experience them more. These KIIs enabled the preparation of a comprehensive list of the park's ES and EDS for the valuation survey. This broad and inclusive understanding of how stakeholders perceive the park provides Calamba City with insights into the shared and varying needs of the community. By recognising the wide-reaching value of the park to these diverse groups, the city can develop tailored programs and strategies that address specific stakeholder interests and needs.

The second part of the research investigated the assigned values to the ES and EDS and the factors that influence the valuation. It was found that the respondents value cultural ES the highest while the regulating ES the lowest. For the EDS, the respondents were most concerned with psychological EDS and least worried about economic EDS. Most of the respondents were willing to give time instead of money to keep the park. Moreover, they were willing to give more money when they worry more about the park's psychological EDS. Results of the fuzzy set Qualitative Comparative Analysis (fsQCA) suggest that visiting the park is necessary to cause a respondent to value the ES of Jose Rizal Plaza highly. For a high valuation to EDS, two conditions are necessary – not knowing the previous land use in the area where the park is built and visiting the park. These findings could help the city in deciding which amenities to keep and which amenities to improve or add in the future. It also emphasises the importance of improving access to the park, as direct experience seems to enhance the residents'

appreciation of its ES and EDS. Calamba City can use these findings to direct its resources and focus on the most valued aspects of Jose Rizal Plaza. By prioritising cultural and psychological elements, and understanding the significance of direct experience, the city can enhance visitor engagement and satisfaction. Potential actions may include promoting cultural events, improving accessibility to encourage visits, and emphasising the psychological benefits through community outreach programs.

The last part of the research studied how assigned values to ES and EDS could change in different situations. Analyses suggest that assigned values change when the source and constituency of the valuation are shifted. In addition, this method of deliberative socio-cultural valuation with varying sources and constituencies effectively reveals shared assigned values to ES and EDS. In the case of Jose Rizal Plaza, stakeholders share a high appreciation of the following ES: enjoyment, sports and physical fitness, relaxation and mental recreation, social relationships, and local identity and cultural heritage. For EDS, they share a serious concern with anti-social behaviour. The city office could use these insights in designing initiatives and programs towards improving the park and eliciting support from stakeholders. The shared values highlighted in this part of the research underscore the common interests and concerns of the community in relation to the park. Calamba City can leverage these insights to create unified campaigns and initiatives that resonate with a broad spectrum of stakeholders. Addressing concerns such as anti-social behaviour and promoting aspects like sports, relaxation, and cultural heritage can foster a more inclusive and engaging urban environment.

The study showcased a comprehensive approach to the socio-cultural valuation of urban parks. It presented an ideal chronology of methods for assessing the socio-cultural values of ES and EDS. The first step is creating a list of ES and EDS with the stakeholders; this is followed by the individual valuation of the ES and EDS; and finally, assessing how values change in different situations. It can also be noted that two ways of determining the non-monetary value of ES and EDS were applied in the study. Rating was used in the individual valuation, while weighing was applied in the deliberative valuation. While the two are equally effective, rating is more sensible to use when there is a greater number of ES and EDS, while weighing is more appropriate

when there are fewer ES and EDS and when trade-offs are being considered in the assessment.

This research significantly contributes to the existing literature on understanding stakeholder perceptions and values associated with the ES and EDS of urban green spaces. The study's three-part methodology offers a holistic framework, building upon existing research that emphasises the socio-cultural benefits of urban parks for relaxation, mental health, and socialisation (Wan et al., 2021). The research also aligns with Chen et al.'s (2020) focus on the disparate perceptions among different stakeholder groups by identifying and involving multiple stakeholders, including city office employees, local businesses, students, and residents. While previous studies have called for integrated assessments of different value dimensions in urban green spaces (Langemeyer et al., 2015; Kati and Jari, 2016), this research responds to that call by incorporating both regulating and cultural ES and psychological and economic EDS. Furthermore, the use of fuzzy set Qualitative Comparative Analysis (fsQCA) adds nuance to the valuation process, addressing methodological uncertainties highlighted by Schmidt et al. (2016). The findings resonate with the literature's push for more diverse demographic sampling in social valuation studies (Sun et al., 2019) and provide practical applications for enhancing visitor engagement and satisfaction - themes prominent in existing literature.

In addressing gaps within the literature, this research contributes to a more comprehensive understanding of the socio-cultural valuation of urban parks. Unlike previous studies that relied solely on a single data collection and analysis method, this research employed KIIs, focus groups, and fsQCA, offering a more nuanced approach. It answers the call of Langemeyer et al. (2015) for a universally accepted methodological approach by presenting an adaptable and simple chronology of methods for socio-cultural valuation. The research also extends the understanding of stakeholder views on EDS, a dimension poorly covered in earlier research. The study's deliberative socio-cultural valuation goes beyond the mere identification of ES and EDS, aligning with the recommendations of Small et al. (2017) for incorporating participatory methods. Moreover, the research explicitly involves stakeholders in identifying and valuing ES and EDS, addressing the inadequacies in stakeholder

representation highlighted by Bogdan et al. (2019) and Sun et al. (2019). Lastly, by considering both ES and EDS in the context of an actual urban park and drawing from a diverse stakeholder group, the study addresses the generalisability concerns raised by earlier studies, such as Egerer et al. (2019) and Tyrväinen et al. (2007). Therefore, the research does not only provide actionable insights for urban park management but also fills several key gaps in the existing literature, paving the way for more robust, generalisable, and inclusive future research on the socio-cultural valuation of urban parks.

Overall, the research produced valuable findings despite being challenged by the ongoing pandemic - the case study was limited to one, and the valuation survey and focus groups were only conducted online. It addressed gaps in previous socio-cultural valuation studies and provided a novel way of analysing conditions that cause a high valuation of ES and EDS. It also demonstrated an effective procedure for conducting a deliberative valuation of ES and EDS and showed how future concerns could be incorporated into it. These unique approaches will prove useful in making more inclusive and well-informed decisions about managing natural and human-made ecosystems. As the study encountered challenges in the participation of businesses in the interviews and surveys, future research should look into other approaches that would encourage businesses to participate. The valuation survey could also be administered face-to-face to ensure proper representation of stakeholders. Respondents will not be limited to those who can use computers or mobile phones. Face-to-face focus groups could also be undertaken to allow more participant interaction. Despite the limitations brought about by the pandemic, the research findings provide robust guidance for future planning and development. The city can implement these insights in ongoing and future projects, considering both the immediate findings and the potential for expanding the study when conditions allow. The challenges faced in this research can also guide future methodological adjustments. As the methods are simple and adaptable, they can be applied to other cities in different countries for comparative studies. The methods used in this research offer a versatile and adaptable approach for other cities to assess and value their urban parks. By following the outlined chronology and selecting appropriate valuation techniques, other cities can effectively gauge the socio-cultural significance of their

green spaces and make well-informed decisions. Having pioneered this approach, Calamba City may also seek collaboration with other cities for knowledge sharing and benchmarking.

The research encourages a second look at the current ways of eliciting and communicating the value of urban green spaces. It presents a new path to the valuation of ES and EDS that emphasises inclusivity, participation, and plurality of values. This is particularly important as policymakers, city planners, and residents work together to maximise the benefits of urban green spaces and increase the resilience of cities to the impacts of climate change and rapid urbanisation. In line with the broader trend towards inclusive and sustainable urban development, Calamba City can adopt the research's emphasis on participatory and pluralistic valuation as part of its urban planning and policy framework. This approach can foster a more resilient, adaptive, and socially responsive city landscape. Including various stakeholder groups in decision-making processes ensures that the city's planning is multifaceted and well-attuned to its residents' unique needs and values. The focus on plurality also makes it easier to harmonise the multiple, sometimes conflicting, interests and values related to urban green spaces. This new path to valuation emphasises the need for a shift in the planning paradigm. Rather than using purely economic metrics to gauge the value of urban spaces, there is a strong argument for incorporating socio-cultural factors, especially in a diverse and rapidly urbanising setting like Calamba City. Policymakers and planners can better attune their initiatives to the nuanced values of the community, thus enhancing public buy-in and long-term success of their programs.

By taking this research's conclusions and acting upon its practical recommendations, Calamba City has a unique opportunity to be a forerunner in implementing a holistic and participatory approach to urban park valuation and development. This could serve as a model not only for other cities in the Philippines but potentially for communities around the world grappling with the challenges of urbanisation and climate change. Calamba City should consider establishing a formalised channel for continuous stakeholder input, perhaps in the form of regular community consultations or a digital feedback platform. This will ensure that the city continues to meet its residents' changing needs and expectations. City planners might also consider partnerships with

academic institutions for ongoing research and evaluation, thereby keeping the data up-to-date and the approaches innovative.

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APPENDICES

Appendix 1 Articles reviewed for the valuation of parks

Number	Authors	Title	Year	DOI
1	Expósito A., Espinosa M., Villa-Damas A.	Valuing Visitor Willingness to Pay for Urban Green Space Conservation: Case of Maria Luisa Park in Seville, Spain	2021	10.1061/(ASCE)UP.1943-5444.0000700
2	Pelletier M.-C., Heagney E., Kovač M.	Valuing recreational services: A review of methods with application to New South Wales National Parks	2021	10.1016/j.ecoser.2021.101315
3	Wan C., Shen G.Q., Choi S.	Eliciting users' preferences and values in urban parks: Evidence from analyzing social media data from Hong Kong	2021	10.1016/j.ufug.2021.127172
4	Liu W.-Y., Lin Y.-Z., Hsieh C.-M.	Assessing the ecological value of an urban forest park: A case study of sinhua forest park in Taiwan	2021	10.3390/f12060806
5	Kim J.S., Lee T.J., Prof., Hyun S.S., Prof.	Estimating the economic value of urban forest parks: Focusing on restorative experiences and environmental concerns	2021	10.1016/j.jdmm.2021.100603
6	Hena S., Khan S.U., Rehman A., Sahar S., Khalil I.U., Luan J.	Valuing and significance of eco-tourism parks across eastern arid regions of Pakistan	2021	10.1007/s11356-020-10988-6
7	Lin S., Hu X., Chen H., Wu C., Hong W.	Spatio-temporal variation of ecosystem service values adjusted by vegetation cover: a case study of Wuyishan National Park Pilot, China	2021	10.1007/s11676-021-01364-2
8	Amirnejad H., Ataie Solout K.	Economic valuation of use values of environmental services in lar national park in Iran	2021	

9	Lopes F., Amaral B.	O valor do recreio florestal nos parques florestais Açorianos [The value of forest recreation in Azorean public parks]	2021	10.1590/1806-9479.2021.238884
10	Malik A., Zubair M., Manzoor S.A.	Valuing the invaluable: park visitors' perceived importance and willingness to pay for urban park trees in Pakistan	2021	10.1002/ecs2.3348
11	Pache R.-G., Abrudan I.V., Niță M.-D.	Economic valuation of carbon storage and sequestration in Retezat National Park, Romania	2021	10.3390/f12010043
12	Torres-Pruñonosa J., Raya J.M., Dopeso-Fernández R.	The Economic and Social Value of Science and Technology Parks. The Case of Tecnocampus	2020	10.3389/fpsyg.2020.632600
13	Yu H., Wang G., Yang Y., Bai Z., Liu B., Zhang T., Xu Y., Lu Y.	Enhancing ecological value through sustainable food supply of grasslands in the Three-River-Source National Park, Tibet Plateau, China	2020	10.1016/j.ecoser.2020.101218
14	Tibesigwa B., Ntuli H., Lokina R.	Valuing recreational ecosystem services in developing cities: The case of urban parks in Dar es Salaam, Tanzania	2020	10.1016/j.cities.2020.102853
15	Bhat M.Y., Bhatt M.S., Sofi A.A.	Valuing biodiversity of Dachigam National Park: a choice experiment application	2020	10.1108/MEQ-10-2019-0210
16	Neckel A., Da Silva J.L., Saraiva P.P., Kujawa H.A., Araldi J., Paladini E.P.	Estimation of the economic value of urban parks in Brazil, the case of the City of Passo Fundo	2020	10.1016/j.jclepro.2020.121369
17	Bataille C.Y., Luke K., Kruger T., Malinen S., Allen R.B., Whitehead A.L., Lyver P.O.B.	Stakeholder Values Inform Indigenous Peoples' Governance and Management of a Former National Park in New Zealand	2020	10.1007/s10745-020-00170-4
18	Alazaizeh M.M., Ababneh A., Jamaliah M.M.	Preservation vs. use: understanding tourism stakeholders' value perceptions toward Petra Archaeological Park	2020	10.1080/14766825.2019.1628243

19	Kubak M., Gavurova B., Legutka K.	Economic value estimation of the natural heritage of the tatra national park	2020	10.3390/ijerph17093032
20	Tameko A.M., Ndjanyou L.	The willingness to pay for urban parks' amenities: The economic value of 'Bois Sainte Anastasie' in Yaoundé, Cameroon	2020	10.1504/IJSD.2020.112116
21	Amaya P.M., Esenarro Vargas D., Rodriguez Rodriguez C., Vega V., López Bulnes J.	Economic valuation of environmental attributes of the Yanachaga–Chemillén National Park via contingent valuation and choice experiment	2020	10.1108/WJE-09-2020-0407
22	Saleh I., Khosravi M., Boshrabadi A.S., Rafiee H., Shahnabati N., Saleh H.R.	Economic valuation of ecosystem conservation using dichotomous choice approach (Case study: Khabar national park)	2020	
23	Jorge-García D., Estruch-Guitart V.	Economic valuation of ecosystem services by using the analytic hierarchy process and the analytic network process. Comparative analysis between both methods in the Albufera Natural Park of València (Spain)	2020	10.18280/ijdne.150101
24	Wu J., Wu G., Zheng T., Zhang X., Zhou K.	Value capture mechanisms, transaction costs, and heritage conservation: A case study of Sanjiangyuan National Park, China	2020	10.1016/j.landusepol.2019.104246
25	Zin W.S., Suzuki A., Peh K.S.-H., Gasparatos A.	Economic value of cultural ecosystem services from recreation in popa mountain national park, myanmar: A comparison of two rapid valuation techniques	2019	10.3390/LAND8120194
26	Zhao X., He Y., Yu C., Xu D., Zou W.	Assessment of ecosystem services value in a national park pilot	2019	10.3390/su11236609
27	Egerer M., Ordóñez C., Lin B.B., Kendal D.	Multicultural gardeners and park users benefit from and attach diverse values to urban nature spaces	2019	10.1016/j.ufug.2019.126445

28	Xie Q., Yue Y., Sun Q., Chen S., Lee S.-B., Kim S.W.	Assessment of ecosystem service values of urban parks in improving air quality: A case study of Wuhan, China	2019	10.3390/su11226519
29	Evangelio R., Hone S., Lee M., Prentice D.	What Makes a Locality Attractive? Estimates of the Amenity Value of Parks for Victoria	2019	10.1111/1759-3441.12259
30	Liu W.-Y., Chen P.-Z., Hsieh C.-M.	Assessing the recreational value of a National Forest Park from ecotourists' perspective in Taiwan	2019	10.3390/su11154084
31	Kang N., Wang E., Yu Y.	Valuing forest park attributes by giving consideration to the tourist satisfaction	2019	10.1177/1354816618803272
32	Roslinda E.	Economic valuation of the danau sentarum national park, West Kalimantan, Indonesia	2019	10.13057/biodiv/d200726
33	Othman J., Jafari Y.	Economic valuation of an urban lake recreational park: Case of Taman Tasik Cempaka in Bandar Baru Bangi, Malaysia	2019	10.3390/su11113023
34	Sever I., Verbič M.	Assessing recreational values of a peri-urban nature park by synthesizing perceptions and preferences of trail users	2019	10.1016/j.jenvp.2019.04.010
35	Rodríguez-Rodríguez D., Ibarra P., Echeverría M., Martínez-Vega J.	Perceptions, attitudes and values of two key stakeholders on the oldest and newest Spanish national parks	2019	10.1007/s10668-017-0051-5
36	Tobarra-González M.Á., Mendoza-Monpeán J.	Recreational value of El Valle and Carrascoy Natural Park	2019	10.1080/13032917.2018.1519196
37	Lagbas A.J.	Social valuation of regulating and cultural ecosystem services of Arroceros Forest Park: A man-made forest in the city of Manila, Philippines	2019	10.1016/j.jum.2018.09.002
38	Sutton P.C., Duncan S.L., Anderson S.J.	Valuing our national parks: An ecological economics perspective	2019	10.3390/land8040054

39	Dai P., Zhang S., Hou H., Yang Y., Liu R.	Valuing sports services in urban parks: A new model based on social network data	2019	10.1016/j.ecoser.2019.01.003
40	Sun X., Li S., Yu J., Fang Y., Zhang Y., Cao M.	Evaluation of ecosystem service value based on land use scenarios: A case study of qianjiangyuan national park pilot	2019	10.17520/biods.2018182
41	Wołejko L., Grootjans A.P., Pakalne M., Strazdiņa L., Aleksāns O., Elshehawi S., Grabowska E.	The biocenotic value of Slītere National Park, Latvia, with special reference to inter-dune mires	2019	10.19189/MaP.2018.AJB.361
42	Yuzbashkandi S.S., Mehrjo A.	Estimating the recreational values of forest park using the contingent valuation method (case study: Kabudval Forest Park, Golestan Province of Iran)	2019	10.17221/95/2019-JFS
43	Matthew N.K., Shuib A., Ramachandran S., Mohammad-Afandi S.H.	Economic valuation using travel cost method (TCM) in Kilim Karst Geoforest Park, Langkawi, Malaysia	2019	10.26525/jtfs2019.31.1.078089
44	Solikin A., Rahman R.A., Saefrudin E., Suboh N., Zahari N.H., Wahyudi E.	Forest valuation using travel cost method (TCM): Cases of Pahang National Park and Srengseng Jakarta urban forest	2019	10.21837/pmjournal.v17.i9.612
45	Bhat M.Y., Bhatt M.S.	Economic valuation of biodiversity in South Asia: The case of Dachigam National Park in Jammu and Kashmir (India)	2019	10.1002/app5.266
46	González R.M., Marrero Á.S., Navarro-Ibáñez M.	Tourists' travel time values using discrete choice models: the recreational value of the Teide National Park	2018	10.1080/09669582.2018.1527342
47	Wu J., Hu Y., Liu T., He Q.	Value capture in protected areas from the perspective of common-pool resource governance: A case study of Jiuzhai Valley National Park, China	2018	10.1016/j.landusepol.2018.08.047

48	Park C., Song H.	Visitors' perceived place value and the willingness to pay in an urban lake park	2018	10.3390/ijerph15112518
49	Amirnejad H., Jahanifar K.	Comparison of contingent valuation and travel cost method in estimating the recreational values of a forest park	2018	
50	Hutcheson W., Hoagland P., Jin D.	Valuing environmental education as a cultural ecosystem service at Hudson River Park	2018	10.1016/j.ecoser.2018.03.005
51	Mayer M., Woltering M.	Assessing and valuing the recreational ecosystem services of Germany's national parks using travel cost models	2018	10.1016/j.ecoser.2017.12.009
52	Huo S., Huang L., Yan L.	Valuation of cultural ecosystem services based on SOLVES: A case study of the south ecological park in Wuyi County, Zhejiang Province	2018	10.5846/stxb201704110624
53	Olbińska K.	The Value of Urban Parks in Lodz	2018	10.2478/remav-2018-0007
54	Marta-Pedroso C., Laporta L., Gama I., Domingos T.	Economic valuation and mapping of ecosystem services in the context of protected area management (Natural park of Serra de São Mamede, Portugal)	2018	10.3897/oneeco.3.e26722
55	Giannelli A., Giuffrida S., Trovato M.R.	Madrid Río Park. Symbolic values and contingent valuation	2018	
56	Estruch-Guitart V., Valls-Civera A.	An economic valuation of ecosystem services provided by the River Turia Natural Park (Valencia) [Valoración económica de los servicios ecosistémicos asociados al Parque Natural del Turia (Valencia)]	2018	10.7201/earn.2018.02.05
57	Chen B., Qi X.	Protest response and contingent valuation of an urban forest park in Fuzhou City, China	2018	10.1016/j.ufug.2017.11.005

58	Baral N., Kaul S., Heinen J.T., Ale S.B.	Estimating the value of the World Heritage Site designation: a case study from Sagarmatha (Mount Everest) National Park, Nepal	2017	10.1080/09669582.2017.1310866
59	Baral N., Hazen H., Thapa B.	Visitor perceptions of World Heritage value at Sagarmatha (Mt. Everest) National Park, Nepal	2017	10.1080/09669582.2017.1291647
60	Calleja A., Díaz-Balteiro L., Iglesias-Merchan C., Soliño M.	Acoustic and economic valuation of soundscape: An application to the 'Retiro' Urban Forest Park	2017	10.1016/j.ufug.2017.08.018
61	Wuepper D.	What is the value of world heritage status for a German national park? A choice experiment from Jasmund, 1 year after inscription	2017	10.1177/1354816616655958
62	Dong T., Zheng H., Xiao Y., Ouyang Z.-Y.	Comparison of ZTCM and TCIA methods for evaluating the use value of tourism resources: Taking Beijing Olympic Forest Park as an example	2017	10.13287/j.1001-9332.201708.034
63	Kibria A.S.M.G., Behie A., Costanza R., Groves C., Farrell T.	The value of ecosystem services obtained from the protected forest of Cambodia: The case of Veun Sai-Siem Pang National Park	2017	10.1016/j.ecoser.2017.05.008
64	Fracchiolla M., Terzi M., D'Amico F.S., Tedone L., Cazzato E.	Conservation and pastoral value of former arable lands in the agro-pastoral system of the Alta Murgia national park (Southern Italy)	2017	10.4081/ija.2017.847
65	Ashraf M., Lone F.A., Wani A.A.	Carbon credit valuation of soil carbon stock in different forest strata of dachigam national park	2017	
66	Engström G., Gren A.	Capturing the value of green space in urban parks in a sustainable urban planning and design context: Pros and cons of hedonic pricing	2017	10.5751/ES-09365-220221
67	McNeur C.	Parks, people, and property values: The changing role of green spaces in antebellum manhattan	2017	10.1177/1538513216657563

68	Sirina N., Hua A., Gobert J.	What factors influence the value of an urban park within a medium-sized French conurbation?	2017	10.1016/j.ufug.2017.03.021
69	Bertram C., Meyerhoff J., Rehdanz K., Wüstemann H.	Differences in the recreational value of urban parks between weekdays and weekends: A discrete choice analysis	2017	10.1016/j.landurbplan.2016.10.006
70	Prayaga P.	Estimating the value of beach recreation for locals in the Great Barrier Reef Marine Park, Australia	2017	10.1016/j.eap.2016.10.001
71	Gao Y., Liu K., Ma Q., Li Y., Fan Y.-N., Li X.-Q., Gu C.	Assessment of social value of ecosystem services based on solves model and visitor's preference: A case study of Taibai mountain national forest park	2017	10.13292/j.1000-4890.201712.014
72	Limaei S.M., Safari G., Merceh G.M.	Non-market valuation of forest park using travel cost method (case study: Saravan forest park, North of Iran)	2017	
73	Estruch-Guitart V., Vallés-Planells M.	The Economic value of landscape aesthetics in Albufera natural Park through the Analytic Multicriteria Valuation Method	2017	10.2495/DNE-V12-N3-281-302
74	Fulgencio H.	Social value of an innovation ecosystem: the case of Leiden Bioscience Park, The Netherlands	2017	10.1108/IJIS-09-2017-0098
75	Wu H.-J., Dan X.-Q., Liu S.-H., Huang Y., Shu Y., Cao H., Wu Z.-B.	Protection value evaluation of national wetland parks in Hunan Province, China	2017	10.13287/j.1001-9332.201701.023
76	Bhatt M.S., Bhat M.Y., Shah S.A.	Ecotourism value of national parks: A case of dachigam national park in Jammu And Kashmir (India)	2017	
77	Swapan M.S.H., Iftekhar M.S., Li X.	Contextual variations in perceived social values of ecosystem services of urban parks: A comparative study of China and Australia	2017	10.1016/j.cities.2016.11.003

78	Kim J., Park J., Yoon D.K., Cho G.-H.	Amenity or hazard? The effects of landslide hazard on property value in Woomyeon Nature Park area, Korea	2017	10.1016/j.landurbplan.2016.07.012
79	van Riper C.J., Kyle G.T., Sherrouse B.C., Bagstad K.J., Sutton S.G.	Toward an integrated understanding of perceived biodiversity values and environmental conditions in a national park	2017	10.1016/j.ecolind.2016.07.029
80	Homayoun T.Z., Blair R.B.	Value of park reserves to migrating and breeding landbirds in an urban important bird area	2016	10.1007/s11252-015-0437-9
81	Jung E., Choi Y., Yoon H.	The impact of the Gyeongui Line Park project on residential property values in Seoul, Korea	2016	10.1016/j.habitatint.2016.10.002
82	Brink A.B., Martínez-López J., Szantoi Z., Moreno-Atencia P., Lupi A., Bastin L., Dubois G.	Indicators for assessing habitat values and pressures for protected areas-An integrated habitat and land cover change approach for the Udzungwa Mountains National Park in Tanzania	2016	10.3390/rs8100862
83	Latinopoulos D., Mallios Z., Latinopoulos P.	Valuing the benefits of an urban park project: A contingent valuation study in Thessaloniki, Greece	2016	10.1016/j.landusepol.2016.03.020
84	Piriyapada S., Wang E.	Valuing Consumer Surplus for the Beach Resources at Ko Chang National Marine Park in Thailand	2016	10.1080/10941665.2015.1070888
85	Wang Y., Fu B.-T., Lyu Y.-P., Yang K., Che Y.	Assessment of the social values of ecosystem services based on SolVES model: A case study of Wusong Paotaiwan Wetland Forest Park, Shanghai, China	2016	10.13287/j.1001-9332.201606.011
86	Sutton P.C., Anderson S.J.	Holistic valuation of urban ecosystem services in New York City's Central Park	2016	10.1016/j.ecoser.2016.04.003
87	Rathnayake R.M.W.	Economic values for recreational planning at Horton Plains National Park, Sri Lanka	2016	10.1080/14616688.2015.1136350

88	Blayac T., Hamadé F., Salles J.-M.	Valuing the recreational services of a marine and terrestrial natural protected area: A travel cost analysis of Port-Cros National Park	2016	10.3917/redp.261.0127
89	Chiou C.-R., Lin J.-C., Liu W.-Y., Lin T.-W.	Assessing the recreational value of protective forests at Taitung Forest Park in Taiwan	2016	10.5367/te.2015.0468
90	Chengappa P.G., Devika C.M., Rich K.M.	Valuing recreational and educational benefits of Butterfly Parks in India	2016	
91	Li T., Gao X.	Ecosystem services valuation of Lakeside Wetland park beside Chaohu Lake in China	2016	10.3390/W8070301
92	Maldonado J.H., Sánchez R.C.	Economic valuation of the corales de profundidad National Natural Park [Valoración económica del parque nacional natural corales de profundidad]	2016	
93	Limaei S.M., Safari G., Merceh G.M.	Recreational values of forest park using the contingent valuation method (case study: Saravan Forest Park, north of Iran)	2016	10.17221/4/2016-JFS
94	Pirikiya M., Amirnejad H., Oladi J., Solout K.A.	Determining the recreational value of forest park by travel cost method and defining its effective factors	2016	10.17221/12/2016-JFS
95	Abu Bakar N.A., Radam A., Samdin Z., Yacob M.R.	Willingness to pay in kubah national park and matang wildlife centre: A contingent valuation method	2016	
96	Fardanesh A., Zeraatkish Y.	An investigation on the promenade value of Javanmardan Park in Tehran, using contingent valuation method (CVM)	2016	10.3923/ibm.2016.1639.1641
97	Langemeyer J., Baró F., Roebeling P., Gómez-Baggethun E.	Contrasting values of cultural ecosystem services in urban areas: The case of park Montjuïc in Barcelona	2015	10.1016/j.ecoser.2014.11.016
98	Jabben J., Weber M., Verheijen E.	A framework for rating environmental value of urban parks	2015	10.1016/j.scitotenv.2014.12.007

99	Nikodinoska N., Paletto A., Franzese P.P., Jonasson C.	Valuation of ecosystem services in protected areas: The case of the Abisko National Park (Sweden)	2015	10.5890/JEAM.2015.11.005
100	Kumar S., Yogesh, Chaudhry P.	Tourism recreational value of Biological Park, Itanagar, Arunachal Pradesh, India	2015	
101	Álvarez Campero R.I., Dios-Palomares R., Cañas Madueño J.A.	Estimating the economic value of an environmental asset. The case of Mochima National Park in Venezuela [Estimación del valor económico de un bien ambiental. El caso del Parque Nacional Mochima en Venezuela]	2015	
102	Brandli L.L., Marques Prietto P.D., Neckel A.	Estimating the willingness to pay for improvement of an urban park in southern Brazil using the contingent valuation method	2015	10.1061/(ASCE)UP.1943-5444.0000254
103	Ankomah E., Osei Adu K.	Recreational value of national parks in Ghana: A case of Kakum National Park	2015	
104	Považan R., Getzner M., Švajda J.	On the valuation of ecosystem services in Muránska Planina National Park (Slovakia)	2015	10.1553/eco.mont-7-2s61
105	Asciuto A., Borsellino V., D'Acquisto M., Di Franco C.P., Di Gesaro M., Schimmenti E.	Monumental trees and their existence value: Case study of an Italian natural park	2015	10.17221/86/2014-JFS
106	Turner R.W., Willmarth B.	Valuation of cultural and natural resources in north cascades national park: Results from a tournament-style contingent choice survey	2014	10.1177/2158244014528916
107	Iglesias Merchan C., Diaz-Balteiro L., Soliño M.	Noise pollution in national parks: Soundscape and economic valuation	2014	10.1016/j.landurbplan.2013.11.006
108	Wang E., Wei J., Lu H.	Valuing natural and non-natural attributes for a national forest park using a choice experiment method	2014	10.5367/te.2013.0329

109	Cheng C., Xiao Y., Rao E.M.	Analysis of natural landscape value change in recent 20 years of Xiangshan Park in Beijing	2014	10.5846/stxb201301220131
110	Langer E., Langer G., Striegel M., Riebesehl J., Ordynets A.	Fungal diversity of the Kellerwald-Edersee national park - Indicator species of nature value and conservation	2014	10.1127/0029-5035/2014/0201
111	Liu W.-Y., Chiou C.-R., Lin J.-C.	Application of the travel cost method to measure the urban forest park's recreational value with first-visit satisfaction taken into account	2014	
112	Kulhavy D.L., Wu D., Unger D.R., Hung I.-K., Sun J.	Comparison of tree condition and value for city parks and Stephen F. Austin state university in Nacogdoches, Texas, U.S.	2014	
113	Harnik P., Crompton J.L.	Measuring the total economic value of a park system to a community	2014	10.1080/13606719.2014.885713
114	Hidalgo-Fernández A., Hidalgo Fernández R.E., Cañas Madueño J.A., Bernabéu Cañete R.	Economic valuation of the recreational use of 'Sierra de Hornachuelos' Natural Park (Cordoba, Spain) [Valoración del uso recreativo del Parque Natural Sierra de Hornachuelos (Córdoba, España)]	2014	
115	Saayman M.	The non-consumptive value of selected marine species at table mountain national park: An exploratory study	2014	10.4102/sajems.v17i2.455
116	Samdin Z., Aziz Y.A., Radam A., Yacob M.R.	Sustainability of ecotourism resources at taman negara national park: Contingent valuation method	2013	
117	Rezaee A., Nakhaei N., Mohammadzadeh Sh.	The determination of recreation values of Jamshidieh Park in Tehran by using contingent valuation method	2013	
118	Neher C., Duffield J., Patterson D.	Valuation of national park system visitation: The efficient use of count data models, meta-analysis, and secondary visitor survey data	2013	10.1007/s00267-013-0080-2

119	Samos Juarez A., Bernabeu Cañete R.	Valuation of the recreational use of the Calares del Mundo and Sima Natural Park through the travel cost method	2013	10.5424/fs/2013222-02534
120	Mwebaze P., MacLeod A.	Valuing marine parks in a small island developing state: A travel cost analysis in Seychelles	2013	10.1017/S1355770X12000538
121	Gao W., Li J., Mao X., Li H.	Geological and Geomorphological Value of the Monogenetic Volcanoes in Wudalianchi National Park, NE China	2013	10.1007/s12371-013-0077-5
122	Mondéjar-Jiménez J.A., Gázquez-Abad J.C., Gómez-Borja M.A.	The recreational use value in spanish protected natural landscapes: Proposal for a nature park "serranía de cuenca"	2013	
123	Rafat B., Mosavi B.	Estimating recreational value of Hasht Behesht Park using contingent valuation method (CV)	2013	
124	Syamsul Herman M.A., Ahmad S., Ramachandran S., Rusli M.Y.	Recreational economic value of the Perlis state park, Malaysia: An application of zonal travel cost model	2013	
125	Hidalgo-Fernández A., Hidalgo Fernández R.E., Cañas Madueño J.A.	Estimating the economic value generated by suburban parks "La Sierrezuela" and "Los Villares" in the city of Cordoba, Spain [Estimación del valor económico que generan los parques periurbanos de La Sierrezuela y Los Villares en la ciudad de Córdoba, España]	2013	
126	Zhang X., Yu X., Zhang Z., Xu Z., Xu S., Xu B.	Ecosystem service values of wetlands of the national wetland park of Wu river, Northern China	2013	10.5558/tfc2013-031
127	Popa B., Coman C., Borz S.A., Nita D.M., Codreanu C., Ignea G., Marinescu V., Ioras F., Ionescu O.	Total economic value of natural capital - a case study of piatra craiului national park	2013	10.15835/nbha4129338

128	Lin I.-H., Wu C., De Sousa C.	Examining the economic impact of park facilities on neighboring residential property values	2013	10.1016/j.apgeog.2013.10.003
129	Andualem G.M., Oyekale A.S.	A truncated poisson modeling of visitors' use-values of Addis Ababa Lions Zoological Park, Ethiopia	2012	
130	Pavlova D.	Serpentine flora of Rila national park (Bulgaria) and its conservation value	2012	
131	Ahlfeldt G., Mastro A.	Valuing Iconic Design: Frank Lloyd Wright Architecture in Oak Park, Illinois	2012	10.1080/02673037.2012.728575
132	Kovacs K.F.	Integrating property value and local recreation models to value ecosystem services from regional parks	2012	10.1016/j.landurbplan.2012.08.002
133	Kümmerling M., Müller N.	The relationship between landscape design style and the conservation value of parks: A case study of a historical park in Weimar, Germany	2012	10.1016/j.landurbplan.2012.05.006
134	van Riper C.J., Kyle G.T., Sutton S.G., Barnes M., Sherrouse B.C.	Mapping outdoor recreationists' perceived social values for ecosystem services at Hinchinbrook Island National Park, Australia	2012	10.1016/j.apgeog.2012.06.008
135	Syamsul Herman M.A., Shuib A., Ramachandran S., Mohd Rusli Y., Richards A.	The need for recreational economic valuation at perlis state park	2012	
136	Chen W.Y., Jim C.Y.	Contingent valuation of ecotourism development in country parks in the urban shadow	2012	10.1080/13504509.2011.588727
137	Rideout D., Loomis J., Ziesler P., Wei Y.	Comparing fire protection and improvement values at four major us national parks and assessing the potential for generalized value categories	2012	10.2495/SAFE-V2-N1-1-12
138	Veisten K., Dybedal P., Grue B.	Measuring the economic value of nature and national parks: Indirect valuations from travel cost method and tourism satellite accounts	2012	10.1504/IJTP.2012.052559

139	Rahimi M.	Estimated value of forest recreation parks and identify factors influencing willingness to pay Bonab Arsanjan visitors (tourists)	2011	
140	Alfranca O., García J., Varela H.	Economic valuation of a created wetland fed with treated wastewater located in a peri-urban park in Catalonia, Spain	2011	10.2166/wst.2011.267
141	Hashem Nejad H., Feizi M., Seddigh M.	Determining the recreational value of Nour Forest Park (NFP) in Mazandaran, using contingent valuation	2011	
142	Millward A., Sabir S.	Benefits of a forested urban park: What is the value of Allan Gardens to the city of Toronto, Canada?	2011	10.1016/j.landurbplan.2010.11.013
143	Marzetti S., Disegna M., Villani G., Speranza M.	Conservation and recreational values from semi-natural grasslands for visitors to two italian parks	2011	10.1080/09640568.2010.505792
144	Okojie L.O., Orisajimi O.S.	Valuation of the recreational benefits of Old Oyo National Park, Nigeria: A travel cost method analysis	2011	
145	Han S.-Y., Lee C.-K., Mjelde J.W., Kim T.-K.	Choice-experiment valuation of management alternatives for reintroduction of the endangered mountain goral in woraksan national park, South Korea	2010	10.1080/02827581.2010.512874
146	Roosta T., Scandari S., Adeli K., Roosta H.	An estimating on of the economical value of arsanjan bonab forest park, Iran	2010	10.3923/pjbs.2010.628.634
147	Belkayali N., Atan M., Talay I., Akpinar N.	Determination of economic value of Göreme historical national park via contingent valuation method	2010	
148	Jim C.Y., Chen W.Y.	External effects of neighbourhood parks and landscape elements on high-rise residential value	2010	10.1016/j.landusepol.2009.08.027
149	Rideout D.B., Ziesler P.S., Wei Y.	Comparing environmental values across major U.S. national parks	2010	10.2495/FIVA100191

150	Ransom K.P., Mangi S.C.	Valuing recreational benefits of coral reefs: The case of Mombasa Marine National Park and Reserve, Kenya	2010	10.1007/s00267-009-9402-9
151	Sohrabi Saraj B., Yachkaschi A., Oladi J., Fard Teimouri S., Latifi H.	The recreational valuation of a natural forest park using travel cost method in Iran	2009	10.3832/ifor0497-002
152	Machín Hernández M.M., Hernández Santoyo A.	Toward an approach of economic valuation in protected areas. Case study: Vĩales National Park, Cuba [Hacia una aproximación de la valoración económica en áreas protegidas. estudio de caso: Parque nacional viñales, Cuba]	2009	
153	Füzyová L., Lániková D., Novorolský M.	Economic valuation of tatras national park and regional environmental policy	2009	
154	Ernstson H., Sörlin S.	Weaving protective stories: Connective practices to articulate holistic values in the Stockholm National Urban Park	2009	10.1068/a40349
155	Thomas E., Vandebroek I., van Damme P.	Valuation of forests and plant species in indigenous territory and National Park Isiboro-Sécure, Bolivia	2009	10.1007/s12231-009-9084-5
156	Bernard F., de Groot R.S., Campos J.J.	Valuation of tropical forest services and mechanisms to finance their conservation and sustainable use: A case study of Tapantí National Park, Costa Rica	2009	10.1016/j.forpol.2009.02.005
157	Heberling M.T., Templeton J.J.	Estimating the economic value of national parks with count data models using on-site, secondary data: The case of the great sand dunes national park and preserve	2009	10.1007/s00267-008-9149-8
158	Wang E., Li Z., Little B.B., Yang Y.	The economic impact of tourism in Xinghai park, china: A travel cost value analysis Using count data regression models	2009	10.5367/000000009788254287

159	Troy A., Grove J.M.	Property values, parks, and crime: A hedonic analysis in Baltimore, MD	2008	10.1016/j.landurbplan.2008.06.005
160	Aytekin A., Corbaci O.L.	Value benefit analysis software and its application in Bolu-Lake Abant Natural Park	2008	10.3390/s8095745
161	Adams C., Seroa da Motta R., Ortiz R.A., Reid J., Ebersbach Aznar C., de Almeida Sinisgalli P.A.	The use of contingent valuation for evaluating protected areas in the developing world: Economic valuation of Morro do Diabo State Park, Atlantic Rainforest, São Paulo State (Brazil)	2008	10.1016/j.ecolecon.2007.09.008
162	Creel M., Farell M.	Usage and valuation of natural parks in Catalonia, 2001-2002	2008	
163	Ahmad S.S., Javed S.	Exploring the economic value of underutilized plant species in Ayubia National Park	2007	
164	Iamtrakul P., Teknomo K., Hokao K.	A recreational valuation of public preference on park users' willingness to pay	2007	
165	Ranfa A., Bodesmo M., Leccese A., Cagnotti M.R.	Contribution to the floristic knowledge of an urban particular value area: The Santa Margherita's Public Park (Perugia) [Contributo alla conoscenza floristica di un'area urbana di particolare pregio: Il Parco di S. Margherita (Perugia)]	2007	
166	Kunimitsu Y.	Willingness-to-pay Value and Visitation Frequency in Rural Parks	2007	10.2457/srs.37.803
167	James I., Hoffman T., Munro A., O'Farrell P., Smart R.	The economic value of flower tourism at the Namaqua national park, South Africa	2007	10.4102/sajems.v10i4.1058
168	Kunimitsu Y.	Applicability of the contingent valuation method to cost-benefit analysis for rural parks	2007	10.2495/SDP070702
169	Jabarin A.S., Damhoureyeh S.A.	Estimating the recreational benefits of Dibeen National Park in Jordan using contingent valuation and travel cost methods	2006	10.3923/pjbs.2006.2198.2206

170	Hougner C., Colding J., Söderqvist T.	Economic valuation of a seed dispersal service in the Stockholm National Urban Park, Sweden	2006	10.1016/j.ecolecon.2005.11.007
171	Englin J.E., McDonald J.M., Moeltner K.	Valuing ancient forest ecosystems: An analysis of backcountry hiking in Jasper National Park	2006	10.1016/j.ecolecon.2005.05.022
172	Nillesen E., Wesseler J., Cook A.	Estimating the recreational-use value for hiking in Bellenden Ker National Park, Australia	2005	10.1007/s00267-003-0219-7
173	Crompton J.L.	The impact of parks on property values: Empirical evidence from the past two decades in the United States	2005	10.1080/13606710500348060
174	Pepper C., McCann L., Burton M.	Valuation study of urban bushland at Hartfield Park, Forrestfield, Western Australia	2005	10.1111/j.1442-8903.2005.00236.x
175	Schelhas J., Pfeffer M.J.	Forest values of national park neighbors in Costa Rica	2005	10.17730/humo.64.4.eum89efhdyvbkjlg
176	Pochron S.T.	Does relative economic value of food elicit purposeful encounter in the yellow baboons (Papio hamadryas cynocephalus) of Ruaha National Park, Tanzania?	2005	10.1007/s10329-004-0104-x
177	De Sousa G.B., Mota J.A.	Economic valuation of recreation areas: The case of pituaçu metropolitan park in Salvador, Bahia [Valoração Econômica de Áreas de Recreação O Caso do Parque Metropolitano de Pituaçu, Salvador, BA]	2004	
178	Herath G., Kennedy J.	Estimating the economic value of Mount Buffalo National Park with the travel cost and contingent valuation models	2004	10.5367/000000004773166529
179	Himayatullah A.	Economic valuation of the environment and the travel cost approach: The case of Ayubia Natioanl Park	2003	

180	Kulshreshtha S., Johnston M., Lac S.	Value of stored carbon in protected areas: A case study of Saskatchewan provincial parks	2003	
181	Mathieu L.F., Langford I.H., Kenyon W.	Valuing marine parks in a developing country: A case study of the Seychelles	2003	10.1017/S1355770X03000196
182	Van Beukering P.J.H., Cesar H.S.J., Janssen M.A.	Economic valuation of the Leuser National Park on Sumatra, Indonesia	2003	10.1016/S0921-8009(02)00224-0
183	Valladares-Padua C., Padua S.M., Cullen Jr. L.	Within and surrounding the Morro do Diabo State Park: Biological value, conflicts, mitigation and sustainable development alternatives	2002	10.1016/S1462-9011(02)00019-9
184	Pearson L.J., Tisdell C., Lisle A.T.	The impact of noosa national park on surrounding property values: An application of the hedonic price method	2002	10.1016/S0313-5926(02)50023-0
185	Duthy S.	Whian Whian - State Forest or National Park: Community Attitudes and Economic Values	2002	10.1016/S0313-5926(02)50020-5
186	Lee C.-K., Han S.-Y.	Estimating the use and preservation values of national parks' tourism resources using a contingent valuation method	2002	10.1016/S0261-5177(02)00010-9
187	Ortaçeşme V., Özkan B., Karagüzel O.	An estimation of the recreational use value of Kursunlu Waterfall Nature Park by the individual travel cost method [Kurşunlu Şelalesi Tabiat Parki'nin Rekreasyonel Kullanim Değerinin Bireysel Seyahat Maliyeti Yöntemi ile Hesaplanmasi]	2002	10.3906/tar-0106-4
188	Sorace A.	Value to wildlife of urban-agricultural parks: A case study from Rome urban area	2001	10.1007/s002670010243
189	Kluvankova T.	Valuation of national parks in transitional economies [Hodnotenie narodnych parkov v podmienkach prechodovych ekonomik]	1998	

190	Peachey A.	An economic valuation of water based recreation in the Great Barrier Reef marine park	1998	
191	Hadker N., Sharma S., David A., Muraleedharan T.R.	Willingness-to-pay for borivli national park: Evidence from a contingent valuation	1997	10.1016/S0921-8009(96)00094-8
192	Hart R.C., Appleton C.C.	A limnological synopsis of bhangazi south, a dystrophic coastal lake in the greater st lucia wetland park (kwazulu/natal), with comments on its conservation value.	1997	10.1080/10183469.1997.9631399
193	Bateman I.J., Langford I.H.	Non-users' willingness to pay for a National Park: An application and critique of the contingent valuation method	1997	10.1080/00343409750131703
194	Brown K.	Plain tales from the grasslands: Extraction, value and utilization of biomass in Royal Bardia National Park, Nepal	1997	10.1023/A:1018323631889
195	Bennett J., Gillespie R., Powell R., Chalmers L.	The economic value and regional economic impact of national parks	1996	10.1080/14486563.1996.10648360
196	Bennett J.	Estimating the recreation use values of national parks	1996	10.1177/135481669600200402
197	Boxall P.C., Watson D.O., Englin J.	Backcountry recreationists' valuation of forest and park management features in wilderness parks of the western Canadian shield	1996	10.1139/x26-108
198	Kosz M.	Valuing riverside wetlands: The case of the "Donau-Auen" national park	1996	10.1016/0921-8009(95)00058-5
199	Bateman I., Willis K., Garrod G.	Consistency Between Contingent Valuation Estimates: A Comparison of Two Studies of UK National Parks	1994	10.1080/00343409412331348396

200	AMUBODE F.O.	Spatial distribution and nutritive value of two species of Cochlospermum for warthog (Phacochoerus aethiopicus Pallas) in Kainji Lake Park, Nigeria	1991	10.1111/j.1365-2028.1991.tb00467.x
201	Hvenegaard G.T., Butler J.R., Krystofiak D.K.	Economic values of bird watching at Point Pelee National Park, Canada	1989	
202	More T.A., Stevens T., Allen P.G.	Valuation of urban parks	1988	10.1016/0169-2046(88)90022-9
203	Burgess J., Harrison C.M., Limb M.	People, Parks and the Urban Green: A Study of Popular Meanings and Values for Open Spaces in the City	1988	10.1080/00420988820080631
204	Armstrong P., Muir B.	Visual perception of conservation value. The distribution of flora in John Forrest National Park (Australia)	1988	
205	Braithwaite R.W., Werner P.A.	The biological value of Kakadu National Park	1987	
206	Allen P.G., Stevens T.H., More T.A.	Measuring the economic value of urban parks: A caution	1985	10.1080/01490408509512136
207	Chan Y., Carroll T.O.	Estimating recreational travel and economic values of state parks	1985	10.1061/(ASCE)0733-9488(1985)111:1(65)
208	Simon T.	(Analysis of the vascular flora of the Bugac Biosphere Reserve, Kiskunsag National Park, Hungary, with respect to nature conservation values). [A Bugaci Biosfera Rezervatum edenyes florajanak termemeszet- vedelmi ertekelese.]	1984	
209	Knetsch J.L.	Land values and parks in urban fringe areas	1962	10.2307/1236134

Appendix 2 Articles reviewed for socio-cultural valuation of ecosystems

Number	Authors	Title	Year	DOI
1	Leary J., Grimm K., Aslan C., Mark M., Frey S., Bath-Rosenfeld R.	Landowners' Socio-Cultural Valuation of Ecosystem Services Provided by Trees in Costa Rican Agricultural Landscapes	2021	10.1007/s00267-021-01442-5
2	Temesgen H., Wu W.	Farmers' value assessment of sociocultural and ecological ecosystem services in agricultural landscapes	2018	10.3390/su10030703
3	Ciftcioglu G.C.	The social valuation of agro-ecosystem services at different scales: A case study from Kyrenia (Girne) Region of Northern Cyprus	2021	10.1016/j.envdev.2021.100645
4	Faccioni G., Sturaro E., Ramanzin M., Bernués A.	Socio-economic valuation of abandonment and intensification of Alpine agroecosystems and associated ecosystem services	2019	10.1016/j.landusepol.2018.10.044
5	Mendoza-González G., Paredes-Chi A., Méndez-Funes D., Giraldo M., Torres-Irineo E., Arancibia E., Rioja-Nieto R.	Perceptions and social values regarding the ecosystem services of beaches and coastal dunes in yucatán, mexico	2021	10.3390/su13073592
6	Lopes R., Videira N.	How to articulate the multiple value dimensions of ecosystem services? Insights from implementing the PArticulatES framework in a coastal social-ecological system in Portugal	2019	10.1016/j.ecoser.2019.100955
7	Maniatakou S., Berg H., Maneas G., Daw T.M.	Unravelling diverse values of ecosystem services: A socio-cultural valuation using Q methodology in Messenia, Greece	2020	10.3390/su122410320
8	de la Rosa-Velazquez M.I., Ruiz-Luna A.	Social valuation of the ecosystem services from coastal wetlands: Current status and perspectives [Valoración	2020	10.15446/abc.v25n3.80387

		social de los servicios ecosistémicos de humedales costeros: Estado actual y perspectivas]		
9	Pérez-Sánchez D., Montes M., Cardona-Almeida C., Vargas-Marín L.A., Enríquez-Acevedo T., Suarez A.	Keeping people in the loop: Socioeconomic valuation of dry forest ecosystem services in the Colombian Caribbean region	2021	10.1016/j.jaridenv.2021.104446
10	Rodríguez-Caballero E., Castro A.J., Chamizo S., Quintas-Soriano C., Garcia-Llorente M., Cantón Y., Weber B.	Ecosystem services provided by biocrusts: From ecosystem functions to social values	2018	10.1016/j.jaridenv.2017.09.005
11	Gao Y., Liu K., Ma Q., Li Y., Fan Y.-N., Li X.-Q., Gu C.	Assessment of social value of ecosystem services based on solves model and visitor's preference: A case study of Taibai mountain national forest park	2017	10.13292/j.1000-4890.201712.014
12	Sherrouse B.C., Semmens D.J.	Validating a method for transferring social values of ecosystem services between public lands in the Rocky Mountain region	2014	10.1016/j.ecoser.2014.03.008
13	Sherrouse B.C., Semmens D.J., Clement J.M.	An application of Social Values for Ecosystem Services (SolVES) to three national forests in Colorado and Wyoming	2014	10.1016/j.ecolind.2013.07.008
14	Vihervaara P., Marjokorpi A., Kumpula T., Walls M., Kamppinen M.	Ecosystem services of fast-growing tree plantations: A case study on integrating social valuations with land-use changes in Uruguay	2012	10.1016/j.forpol.2011.08.008
15	Dorji T., Brookes J.D., Facelli J.M., Sears R.R., Norbu T., Dorji K., Chhetri Y.R., Baral H.	Socio-cultural values of ecosystem services from Oak Forests in the Eastern Himalaya	2019	10.3390/su11082250

16	Zhao Q., Li J., Liu J., Qin K., Tian T.	Assessment and analysis of social values of cultural ecosystem services based on the solves model in the Guanzhong-Tianshui Economic Region	2018	10.5846/stxb201704240738
17	Lagbas A.J.	Social valuation of regulating and cultural ecosystem services of Arroceros Forest Park: A man-made forest in the city of Manila, Philippines	2019	10.1016/j.jum.2018.09.002
18	Paudyal K., Baral H., Keenan R.J.	Assessing social values of ecosystem services in the Phewa Lake Watershed, Nepal	2018	10.1016/j.forpol.2018.01.011
19	Raviv O., Zemah Shamir S., Izhaki I., Sagie H., Negev M., Mazor-Tregerman M., Collins-Kreiner N., Mansfeld Y., Lotan A.	The socioeconomic value of multiple ecosystem types at a biosphere reserve as a baseline for one holistic conservation plan	2020	10.1016/j.ecoser.2019.101043
20	Johnson D.N., van Riper C.J., Chu M., Winkler-Schor S.	Comparing the social values of ecosystem services in US and Australian marine protected areas	2019	10.1016/j.ecoser.2019.100919
21	Ciftcioglu G.C.	Participatory and deliberative assessment of the landscape and natural resource social values of marine and coastal ecosystem services: the case of Kyrenia (Girne) Region from Northern Cyprus	2021	10.1007/s11356-021-12600-x
22	Alpuche-álvarez Y.A., Ochoa-Gaona S., Monzón-Alvarado C.M., Cortina-Villar S.	Agricultural modernization and socio-cultural valuation of ecosystem services in mayan landscapes of southeastern Mexico [Modernización agrícola y valoración sociocultural de los servicios ecosistémicos en paisajes mayas del sureste de méxico]	2019	10.25260/EA.19.29.2.0.774
23	Bidegain Í., López-Santiago C.A., González J.A., Martínez-Sastre R., Ravera F., Cerda C.	Social valuation of mediterranean cultural landscapes: Exploring landscape preferences and ecosystem services perceptions through a visual approach	2020	10.3390/land9100390

24	Zhang H., Gao Y., Hua Y., Zhang Y., Liu K.	Assessing and mapping recreationists' perceived social values for ecosystem services in the Qinling Mountains, China	2019	10.1016/j.ecoser.2019.101006
25	Bernués A., Rodríguez-Ortega T., Alfnes F., Clemetsen M., Eik L.O.	Quantifying the multifunctionality of fjord and mountain agriculture by means of sociocultural and economic valuation of ecosystem services	2015	10.1016/j.landusepol.2015.05.022
26	Bernués A., Rodríguez-Ortega T., Ripoll-Bosch R., Alfnes F.	Socio-cultural and economic valuation of ecosystem services provided by Mediterranean mountain agroecosystems	2014	10.1371/journal.pone.0102479
27	Bogdan S.M., Stupariu I., Andra-Topârceanu A., Năstase I.I.	Mapping social values for cultural ecosystem services in a mountain landscape in the Romanian Carpathians	2019	10.26471/cjees/2019/014/072
28	Zoderer B.M., Lupo Stanghellini P.S., Tasser E., Walde J., Wieser H., Tappeiner U.	Exploring socio-cultural values of ecosystem service categories in the Central Alps: the influence of socio-demographic factors and landscape type	2016	10.1007/s10113-015-0922-y
29	Sherrouse B.C., Clement J.M., Semmens D.J.	A GIS application for assessing, mapping, and quantifying the social values of ecosystem services	2011	10.1016/j.apgeog.2010.08.002
30	van Riper C.J., Kyle G.T., Sutton S.G., Barnes M., Sherrouse B.C.	Mapping outdoor recreationists' perceived social values for ecosystem services at Hinchinbrook Island National Park, Australia	2012	10.1016/j.apgeog.2012.06.008
31	Maestre-Andrés S., Calvet-Mir L., van den Bergh J.C.J.M.	Sociocultural valuation of ecosystem services to improve protected area management: a multi-method approach applied to Catalonia, Spain	2016	10.1007/s10113-015-0784-3
32	Lee J., Kweon B.-S., Ellis C.D., Lee S.-W.	Assessing the social value of ecosystem services for resilient riparian greenway planning and management in an urban community	2020	10.3390/ijerph17093261

33	Zhang W., Yu Y., Wu X., Pereira P., Lucas Borja M.E.	Integrating preferences and social values for ecosystem services in local ecological management: A framework applied in Xiaojiang Basin Yunnan province, China	2020	10.1016/j.landusepol.2019.104339
34	Bryan B.A., Raymond C.M., Crossman N.D., Macdonald D.H.	Targeting the management of ecosystem services based on social values: Where, what, and how?	2010	10.1016/j.landurbplan.2010.05.002
35	Iniesta-Arandia I., García-Llorente M., Aguilera P.A., Montes C., Martín-López B.	Socio-cultural valuation of ecosystem services: Uncovering the links between values, drivers of change, and human well-being	2014	10.1016/j.ecolecon.2014.09.028
36	Oteros-Rozas E., Martín-López B., González J.A., Plieninger T., López C.A., Montes C.	Socio-cultural valuation of ecosystem services in a transhumance social-ecological network	2014	10.1007/s10113-013-0571-y
37	Kati V., Jari N.	Bottom-up thinking-Identifying socio-cultural values of ecosystem services in local blue-green infrastructure planning in Helsinki, Finland	2016	10.1016/j.landusepol.2015.09.031
38	Chen Y., Ke X., Min M., Cheng P.	Disparity in Perceptions of Social Values for Ecosystem Services of Urban Green Space: A Case Study in the East Lake Scenic Area, Wuhan	2020	10.3389/fpubh.2020.00370
39	Sun F., Xiang J., Tao Y., Tong C., Che Y.	Mapping the social values for ecosystem services in urban green spaces: Integrating a visitor-employed photography method into SolVES	2019	10.1016/j.ufug.2018.11.012
40	Swapan M.S.H., Iftekhar M.S., Li X.	Contextual variations in perceived social values of ecosystem services of urban parks: A comparative study of China and Australia	2017	10.1016/j.cities.2016.11.003
41	Yang S., Zhao W., Pereira P., Liu Y.	Socio-cultural valuation of rural and urban perception on ecosystem services and human well-being in Yanhe watershed of China	2019	10.1016/j.jenvman.2019.109615

42	Lin Y.-P., Lin W.-C., Li H.-Y., Wang Y.-C., Hsu C.-C., Lien W.-Y., Anthony J., Petway J.R.	Integrating social values and ecosystem services in systematic conservation planning: A case study in Datuan Watershed	2017	10.3390/su9050718
43	Zagarola J.-P.A., Anderson C.B., Veteto J.R.	Perceiving patagonia: An assessment of social values and perspectives regarding watershed ecosystem services and management in Southern South America	2014	10.1007/s00267-014-0237-7
44	Loc H.H., Diep N.T.H., Tuan V.T., Shimizu Y.	An analytical approach in accounting for social values of ecosystem services in a Ramsar site: A case study in the Mekong Delta, Vietnam	2018	10.1016/j.ecolind.2017.12.066
45	Wang Y., Fu B.-T., Lyu Y.-P., Yang K., Che Y.	Assessment of the social values of ecosystem services based on SolVES model: A case study of Wusong Paotaiwan Wetland Forest Park, Shanghai, China	2016	10.13287/j.1001-9332.201606.011
46	Villegas-Palacio C., Berrouet L., López C., Ruiz A., Upegui A.	Lessons from the integrated valuation of ecosystem services in a developing country: Three case studies on ecological, socio-cultural and economic valuation	2016	10.1016/j.ecoser.2016.10.017
47	Greenland-Smith S., Brazner J., Sherren K.	Farmer perceptions of wetlands and waterbodies: Using social metrics as an alternative to ecosystem service valuation	2016	10.1016/j.ecolecon.2016.04.002
48	Malinauskaite L., Cook D., Davíðsdóttir B., Ögmundardóttir H.	Socio-cultural valuation of whale ecosystem services in Skjálfandi Bay, Iceland	2021	10.1016/j.ecolecon.2020.106867
49	Cáceres D.M., Tapella E., Quétier F., Díaz S.	The social value of biodiversity and ecosystem services from the perspectives of different social actors	2015	10.5751/ES-07297-200162

Appendix 3 Articles reviewed for the socio-cultural valuation of urban parks

Number	Authors	Title	Year	DOI
1	Burgess J., Harrison C.M., Limb M.	People, Parks and the Urban Green: A Study of Popular Meanings and Values for Open Spaces in the City	1988	10.1080/00420988820080631
2	Chen Y., Ke X., Min M., Cheng P.	Disparity in Perceptions of Social Values for Ecosystem Services of Urban Green Space: A Case Study in the East Lake Scenic Area, Wuhan	2020	10.3389/fpubh.2020.00370
3	Egerer M., Ordóñez C., Lin B.B., Kendal D.	Multicultural gardeners and park users benefit from and attach diverse values to urban nature spaces	2019	10.1016/j.ufug.2019.126445
4	Ernstson H., Sörlin S.	Weaving protective stories: Connective practices to articulate holistic values in the Stockholm National Urban Park	2009	10.1068/a40349
5	Kati V., Jari N.	Bottom-up thinking-Identifying socio-cultural values of ecosystem services in local blue-green infrastructure planning in Helsinki, Finland	2016	10.1016/j.landusepol.2015.09.031
6	Lagbas A.J.	Social valuation of regulating and cultural ecosystem services of Arroceros Forest Park: A man-made forest in the city of Manila, Philippines	2019	10.1016/j.jum.2018.09.002
7	Langemeyer J., Baró F., Roebeling P., Gómez-Baggethun E.	Contrasting values of cultural ecosystem services in urban areas: The case of park Montjuïc in Barcelona	2015	10.1016/j.ecoser.2014.11.016
8	Schmidt K., Walz A., Jones I., Metzger M.J.	The Sociocultural Value of Upland Regions in the Vicinity of Cities in Comparison with Urban Green Spaces	2016	10.1659/MRD-JOURNAL-D-16-00044.1
9	Sun F., Xiang J., Tao Y., Tong C., Che Y.	Mapping the social values for ecosystem services in urban green spaces: Integrating a visitor-employed photography method into SolVES	2019	10.1016/j.ufug.2018.11.012

10	Swapan M.S.H., Iftekhar M.S., Li X.	Contextual variations in perceived social values of ecosystem services of urban parks: A comparative study of China and Australia	2017	10.1016/j.cities.2016.11.003
11	Tyrväinen L., Mäkinen K., Schipperijn J.	Tools for mapping social values of urban woodlands and other green areas	2007	10.1016/j.landurbplan.2006.03.003
12	Wan C., Shen G.Q., Choi S.	Eliciting users' preferences and values in urban parks: Evidence from analyzing social media data from Hong Kong	2021	10.1016/j.ufug.2021.127172

Appendix 4 Key informant interview (KII) tools

KII-1 Consent Form

Project Title: Socio-cultural Valuation of Urban Parks: Lessons from the Philippines

Researcher: Dalton Erick Baltazar, Nottingham Trent University

Project Information

The general aim of the project is to assess how people value the benefits and disbenefits they associate with urban parks. This will be done through the conduct of key informant interviews, a survey, and focus group discussions. The following interview questions have been designed to collect general information about [Makati Park and Garden] [The Plaza] – its establishment, features, and possible stakeholders.

Interview Procedure and Data Management

This interview should take no longer than 40 minutes. It will be audio-recorded, transcribed, and translated. The recordings and transcripts will be kept in a secure encrypted storage service and will only be accessible to Mr. Baltazar, his supervisors, and trained assistants. All the interview data will be anonymised before storage and analysis, and care will be taken to remove other information in the interview that could identify you. None of the information that you will provide will be used for any commercial purposes and/or shared with any third party. The data from your interview might be used for academic papers, research presentations, news articles, and in other media that we may produce from the project. The recordings and transcripts might be kept indefinitely for future case study comparisons.

Right to Refuse or Withdraw

You have the right to refuse to answer any of the questions or to withdraw all the information that you already have given. You can also stop the interview any time by informing the interviewer.

If you wish to withdraw, you can do so by emailing Mr. Baltazar or his supervisors with your name and details. If you withdraw from the study within 15 days, your contributions to the project will be destroyed, and your data will be removed. After

this period, the data will have been anonymised and prepared for analysis. Therefore, they cannot be individually identified and cannot be withdrawn.

By signing this form, I agree that:

1. I understand the purpose of the study and the interview.
2. I am voluntarily taking part in this project.
3. My interview data can be used as described above.
4. I don't expect to receive any payment for my participation.
5. I understand that I can stop and withdraw from this study any time.

Interviewee's Name and Signature	Date
Interviewer's Name and Signature	Date

Contact Information

This study has been reviewed using approved protocols within the School of Animal, Rural and Environmental Sciences and has been approved under application number ARE917. If you have any further questions or concerns about this study, please contact:

Researcher
Dalton Erick Baltazar – dalton.baltazar@ntu.ac.uk | +639276345904

Supervisors

Dr Jillian Labadz (Director of studies) – jillian.labadz@ntu.ac.uk
Dr Roy Smith – roy.smith@ntu.ac.uk
Dr Andrew Telford – andrew.telford@ntu.ac.uk
Dr Marcello Di Bonito – marcello.dibonito@ntu.ac.uk

Any ethical concerns can be raised by contacting AREEthicalReview@ntu.ac.uk.

1.1 Reconnaissance and Stakeholder Identification

Date: _____
Location: _____
Time: _____

Name: _____
Barangay (village): _____
Stakeholder category: _____
Department/Office (for City Office employees): _____

Questions:

1. How was the park established (if possible, step by step process)?
    a. How was the park originally envisioned and designed?
    b. What was the previous land use in the area where it is now built?
    c. How and why was it chosen?
    d. Why was the park established?
    e. What were the intended functions and benefits? Can you tell us a little about the planning and whether some intended plans changed in the process of the park's construction?
    f. What are its features now? What other features are planned to be built?
    g. Have you noticed any differences between the park's original intended benefits and functions and how individuals utilise the park now?
    h. Do you know of any issues or conflicts that arose during the process of its establishment? If so, can you tell us what happened? If there were no conflicts, why do you think it all went as planned?
2. Who or which institutions would you say played an important role in its establishment? Can you provide more details about these individuals, groups, or institutions? How do they relate to one another?
3. What are the relevant laws or local ordinances related to the establishment of the park?
    a. Can we have a copy of these laws and local ordinances?
    b. Do you think these laws are enough to enable cities to establish parks? If yes, why? If no, what do you think is missing?
4. Who are the intended beneficiaries of the park?
    a. Do you know someone who we can interview to represent the intended beneficiaries that you have mentioned?
5. Aside from the intended beneficiaries, who or what else do you think benefits from the park?
    a. Do you know someone who we can interview to represent the "other" beneficiaries that you have mentioned?
6. We have a map here and a list of possible stakeholders of the park. Could you confirm which ones you think are reasonable and which ones are not? Could you suggest which villages to visit?

7. Are there reports (e.g., completion, monitoring) and other relevant documents related to the park?
    a. Can we have a copy of these documents?

KII-2 Consent Form

Project Title: Socio-cultural Valuation of Urban Parks: Lessons from the Philippines

Researcher: Dalton Erick Baltazar, Nottingham Trent University

Project Information

The general aim of the project is to assess how people value the benefits and disbenefits they associate with urban parks. This will be done through the conduct of key informant interviews, a survey, and focus group discussions. The following interview questions have been designed to collect information on the observed and possible benefits and disbenefits/disadvantages of [Makati Park and Garden] [The Plaza].

Interview Procedure and Data Management

This interview should take no longer than 40 minutes. It will be audio-recorded, transcribed, and translated. The recordings and transcripts will be kept in a secure encrypted storage service and will only be accessible to Mr. Baltazar, his supervisors, and trained assistants. All the interview data will be anonymised before storage and analysis, and care will be taken to remove other information in the interview that could identify you. None of the information that you will provide will be used for any commercial purposes and/or shared with any third party. The data from your interview might be used for academic papers, research presentations, news articles, and in other media that we may produce from the project. The recordings and transcripts might be kept indefinitely for future case study comparisons.

Right to Refuse or Withdraw

You have the right to refuse to answer any of the questions or to withdraw all the information that you already have given. You can also stop the interview any time by informing the interviewer.

If you wish to withdraw, you can do so by emailing Mr. Baltazar or his supervisors with your name and details. If you withdraw from the study within 15 days, your contributions to the project will be destroyed, and your data will be removed. After this period, the data will have been anonymised and prepared for analysis. Therefore, they cannot be individually identified and cannot be withdrawn.

By signing this form, I agree that:

1. I understand the purpose of the study and the interview.
2. I am voluntarily taking part in this project.
3. My interview data can be used as described above.
4. I don't expect to receive any payment for my participation.
5. I understand that I can stop and withdraw from this study any time.

Interviewee's Name and Signature	Date
Interviewer's Name and Signature	Date

Contact Information

This study has been reviewed using approved protocols within the School of Animal, Rural and Environmental Sciences and has been approved under application number ARE917. If you have any further questions or concerns about this study, please contact:

Researcher
Dalton Erick Baltazar – dalton.baltazar@ntu.ac.uk | +639276345904

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Dr Roy Smith – roy.smith@ntu.ac.uk
Dr Andrew Telford – andrew.telford@ntu.ac.uk
Dr Marcello Di Bonito – marcello.dibonito@ntu.ac.uk

Any ethical concerns can be raised by contacting AREEthicalReview@ntu.ac.uk.

1.2 Ecosystem Services and Disservices Identification

Date: _____
Location: _____
Time: _____

Name: _____
Barangay (village): _____
Stakeholder category: _____
Department/Office (for City Office employees): _____

Questions:

1. Have you ever visited the park?
    a. Yes
        i. How frequently do you visit the park?
        ____ per [encircle one: week, month, year]?
        ii. For what purpose(s)?
        iii. What features of the park can you remember?
    b. No
        i. Have you ever heard of the park? From whom? What things have you heard about it?
2. Do you know why it was built? If yes, can you give us some details of what you know?
3. Do you know how it was built? If yes, can you give us some details of what you know?

The Jose Rizal Plaza is a 6.9-hectare park, located at Barangay Real in Calamba City. As of January 2020, it has the following amenities: football/baseball field, gardens, activity area (used for Zumba classes, jogging, and different kinds of events), and for Christmas (until the end of January) – a Christmas village, a carnival, a bazaar, and a food park. A coliseum, shaped like a clay pot or "banga" (where Calamba got its name), is also currently being constructed in the area. The city also plans to add the following amenities in the coming years: public lounge, outdoor basketball/volleyball court, tennis court, children's park, senior citizen gym, and amphitheatre.

4. Do you think the park has benefits? If no, why? If yes, kindly elaborate.
5. Do you think the park has disbenefits? If no, why? If yes, kindly elaborate.
6. Who or what do you think benefits from the park?
7. Who or what do you think does not benefit from the park?
8. How do you think people in the city view the park?
9. How do you view the park's future?
10. Are there any ways in which the park could be improved?

Ecosystem services (ES) and disservices (EDS) are the tangible or intangible and the direct or indirect benefits/disbenefits that we get from nature. ES are generally categorised into provisioning, regulating, supporting, and cultural services. Provisioning ES are the products that we get directly from nature such as food, water, and other raw materials, while regulating ES are benefits that we obtain indirectly from natural ecosystem processes such as climate regulation, natural hazard regulation, water purification, and pollination. Supporting (or Habitat) ES refer to the ability of ecosystems to provide habitat to a lot of species and to maintain diversity. Cultural ES are the non-material benefits like spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences (MEA, 2005; Nesbitt et al., 2017).

11. The following statements are about ecosystem services and disservices that a park can have. Please indicate the degree to which you agree or disagree with the statements, keeping in mind [Makati Park and Garden] [The Plaza]. 1 corresponds with “strongly disagree”; 2 to “disagree”; 3 to “neither agree nor disagree”; 4 to “agree”; and 5 to “strongly agree”. Check 0 if you think you do not have enough basis to answer any of the five options.

No.	Statements	1	2	3	4	5	0
1	The park is a source of food for people (e.g., fruits, vegetables).						
2	The park is a source of water for people.						
3	The park is a source of raw materials for people (e.g., wood, fibre).						
4	The park helps in air purification (or controlling air pollution) through the trees and other vegetation present in it.						
5	The park helps to reduce heat island effect (the increased temperature in urban areas because of hardscapes – surfaces made out of concrete, bricks, and stones).						
6	The park helps in preventing flood (e.g., plant roots that absorb water, storage areas like ponds).						
7	The park serves as a water recharge area (place where water is able to seep into the ground and refill an aquifer).						
8	The park helps in purifying water (that enters the soil) because of the vegetation present in it.						
9	The park prevents soil erosion (wearing-away of a field’s topsoil by water and wind).						
10	The park enables pollination.						
11	The park enables seed dispersal.						
12	The park conserves biodiversity (of plants and animals).						
13	The diversity of plants and animals in the park prevents or moderates pests and diseases.						
14	The park enables (eco) tourism.						
15	The park provides a place for enjoyment and spending free time.						
16	The park offers opportunities for practicing different sports and keeping fit.						

17	The park provides a place to disconnect, relax, and diminish stress (mental recreation).						
18	The park provides unique and attractive landscapes (aesthetic information).						
19	The park provides inspiration for culture, art, and design.						
20	The park provides a place for direct connection with nature (spiritual experience).						
21	The park provides a place to pray and practice religious beliefs.						
22	The park provides a place for research on and education about nature (information for cognitive development).						
23	The park helps in the maintenance and exposure of traditional countryside activities and skills (traditional knowledge).						
24	The park provides a space where you can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation).						
25	The park enables the expression of local identity and cultural heritage.						
26	The park is a source of revenue for locals.						
27	The park provides jobs to locals.						
28	The park increases property values.						
29	The park lowers crime rates. It encourages more people to spend time outside their homes and in those spaces, leading to greater degree of informal surveillance of the area and deterring crime.						
30	The park provides a notion of government presence/good governance.						
31	The park lowers road rage incidents (by slowing vehicles).						
32	I am satisfied knowing that the park exists, with or without its benefits.						
33	I am satisfied knowing that I can use the park anytime in the future for whatever benefit it can provide me.						
34	The park will be beneficial to the future generations.						
35	The plants in the park and their pollens cause allergies or poisoning.						
36	Green areas (with grass and dense vegetation) in the park that are not intensively managed are unpleasant, ugly, and unsafe.						
37	The plants in the park emit polluting gases and dust (in the course of maintenance) that reduce air quality or contribute to air pollution.						
38	There is too much noise from the park when there are events.						
39	Some plants and animals in the park smell unpleasant.						
40	The park is expensive to create and maintain. Funds can be used for other projects.						
41	Some aspects of the park cause damage to structures/people (decomposition of construction wood by microbial activity, bird excrements accelerating corrosion, tree roots damaging pavements, or animals digging nesting holes).						
42	Animals in the park can become disease vectors.						
43	Trees and other plants in the park block the view from houses or when walking.						

44	The park obstructs fast and comfortable transportation (motorists slow down to take a peek of the park).						
45	The park gives access to invasive species.						
46	Animals searching for food in the trash bins in the park litter the environment.						
47	Wild or semi-wild animals like bats or rats in the park cause fear and inconvenience.						
48	The park provides space for crime/illegal activities and anti-social behaviour.						

12. If you were asked to contribute something to keep the park, would you be willing to make this contribution? [Yes] [No]

12a. If you answered yes to question 12, which of the following would you be willing to contribute?

a. Time
b. Money
c. Both time and money
d. Others (please specify)
e. All of the ones mentioned

Time
What is the minimum number of hours do you think you could contribute per month? _____
What is the maximum number of hours do you think you could contribute per month? _____

Money
What is the minimum amount do you think you could contribute per month?
_____
What is the maximum amount do you think you could contribute per month?
_____

Others (please specify): _____
What is the minimum do you think you could contribute per month? _____
What is the maximum do you think you could contribute per month? _____

12b. If you answered no to question 12, please indicate the reason.

a. I don't have extra time and money, but otherwise would contribute.
b. It is the responsibility of the city to keep and maintain the park.
c. Parks are not important.
d. I don't use the park. Those that use it should contribute.
e. Other reasons (please specify)

13. How much jeepney fare do you think is reasonable for you to reach the park (minimum fare (first 4km) is PhP 9.00; PhP 1.50 per additional 1 km)?

Appendix 5 ES and EDS statements from literature and the first set of key informant interviews. 1 - 39 are ES statements, and 40 - 53 are EDS statements.

No.	Type	Statements
1	provisioning	The park is a source of food for people (e.g., fruits, vegetables).
2	provisioning	The park is a source of water for people.
3	provisioning	The park is a source of raw materials for people (e.g., wood, fibre).
4	regulating	The park helps in air purification (or controlling air pollution) through the trees and other vegetation present in it.
5	regulating	The park helps to reduce heat island effect (the increased temperature in urban areas because of hardscapes – surfaces made out of concrete, bricks, and stones).
6	regulating	The park helps in preventing flood (e.g., plant roots that absorb water, storage areas like ponds).
7	regulating	The park serves as a water recharge area (place where water is able to seep into the ground and refill an aquifer).
8	regulating	The park helps in purifying water (that enters the soil) because of the vegetation present in it.
9	regulating	The park prevents soil erosion (wearing away of a field's topsoil by water and wind).
10	regulating	The park enables pollination.
11	regulating	The park enables seed dispersal.
12	regulating	The park conserves biodiversity (of plants and animals).
13	regulating	The diversity of plants and animals in the park prevents or moderates pests and diseases.
14	cultural	The park enables (eco) tourism.
15	cultural	The park provides a place for enjoyment and spending free time.
16	cultural	The park offers opportunities for practicing different sports and keeping fit.
17	cultural	The park provides a place to disconnect, relax, and diminish stress (mental recreation).
18	cultural	The park provides unique and attractive landscapes (aesthetic information).
19	cultural	The park provides inspiration for culture, art, and design.
20	cultural	The park provides a place for direct connection with nature (spiritual experience).
21	cultural	The park provides a place to pray and practice religious beliefs.
22	cultural	The park provides a place for research on and education about nature (information for cognitive development).
23	cultural	The park helps in the maintenance and exposure of traditional countryside activities and skills (traditional knowledge).
24	cultural	The park provides a space where you can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation).
25	cultural	The park enables and promotes the expression of local identity and cultural heritage.
26	cultural	The park stimulates the interest of the residents to the city's history and cultural heritage (including Jose Rizal).

27	cultural	The park provides a way to commemorate our national hero, Jose Rizal.
28	economic	The park is a source of revenue for the city (renting the activity area and other facilities).
29	economic	The park is a source of revenue for locals.
30	economic	The park provides jobs to locals.
31	economic	The park increases property values.
32	economic	The park serves a place for different kinds of events in the city (e.g., celebrations, concerts, competitions), enabling the city to save resources.
33	economic	The park serves as an extra parking space for city office employees and residents.
34	security	The park lowers crime rates. It encourages more people to spend time outside their homes and in those spaces, leading to greater degree of informal surveillance of the area and deterring crime.
35	security	The park provides a notion of government presence/good governance.
36	security	The park lowers road rage incidents (by slowing vehicles).
37	existence	I am satisfied knowing that the park exists, with or without its benefits.
38	option	I am satisfied knowing that I can use the park anytime in the future for whatever benefit it can provide me.
39	bequest	The park will be beneficial to the future generations.
40	health	The plants in the park and their pollens cause allergies or poisoning.
41	psychological	Green areas (with grass and dense vegetation) in the park that are not intensively managed are unpleasant, ugly, and unsafe.
42	ecological	The plants in the park emit polluting gases and dust (in the course of maintenance) that reduce air quality or contribute to air pollution.
43	psychological	There is too much noise from the park when there are events.
44	psychological	Some plants and animals in the park smell unpleasant.
45	economic	The park is expensive to create and maintain. Funds can be used for other projects.
46	ecological	Some aspects of the park cause damage to structures/people (decomposition of construction wood by microbial activity, bird excrements accelerating corrosion, tree roots damaging pavements, or animals digging nesting holes).
47	health	Animals in the park can become disease vectors.
48	psychological	Trees and other plants in the park block the view from houses or when walking.
49	psychological	The park obstructs fast and comfortable transportation (motorists slow down to take a peek of the park, humps, pedestrian lanes).
50	ecological	The park gives access to invasive species.
51	psychological	Animals searching for food in the trash bins in the park litter the environment.
52	psychological	Wild or semi-wild animals like bats or rats in the park cause fear and inconvenience.
53	psychological	The park provides space for crime/illegal activities and anti-social behaviour.

Appendix 6 Actual Filipino responses and their English translation

6.1 Do you think the park has benefits? If no, why? If yes, kindly elaborate.

	Filipino answer	English translation
1	**contribute to city's improvement**	
	economic development ng Calamba	[It leads to] the economic development of Calamba City.
	Isang magandang lugar para maipagmalaki sa buong mundo.	It is a place to be proud of.
	karagdagang kasikatan ng Calamba	It adds to the popularity of Calamba City.
	kumita yung Calamba dahil dyan.	Calamba City earns because of it.
	maaaring pagkakitaan	It can become a source of income.
	magiging landmark sya ng city.	It will become the city's landmark.
	magiging tourist spot na sya. Aangat ang Calamba dun sa ganoon.	It will become a tourist spot. It will lead to the development of Calamba City.
	Makikilala ang aming bayan	Calamba City will be popular.
	Malaking bagay nga ho yun eh. Meron pa nga po dun yung mga pinagkakakitaan. Kasi nilalagayan yun ng mga tindahan. Tulad nyan mga bazaar bazaar kapag pasko.	It can be a source of income. Bazaars are present during Christmas.
	since ang Calamba kasi is industrial na, unless pupunta ka sa part ng buffer zone, or sa Maquiling, wala ka na masyadong makikitang green areas.	Calamba City is already very industrialised. You will not be able to see green areas, unless you visit the park, the buffer zones, and Mt. Maquiling.
	Syempre kapag may turista, may income	Since there are going to be tourists, there will be income.
2	**dining out**	
	Kapag may mga nagtitinda ng food doon, nakain kami	We eat there whenever there are food stalls.
3	**environmental awareness for children**	
	ma-educate din yung mga bata	Environmental awareness of children
4	**exercise**	
	Ang nakukuha lang doon, halimbawa minsan nagzuzumba nga doon	People sometimes organise Zumba dance sessions there.
	jogging	People jog.
	kahit matanda, nakakapg ehersisyo	Even elderly can exercise [in the plaza].
	kalakasan ng katawan	[It promotes] physical health.
	kapag nagzu-zumba nalang. Exercise everyday	[People organise] Zumba dance sessions and exercise every day.
	Maayos, malawak at malinis na lugar para sa mga taong gustong mag: ehersisyo	It is a spacious and clean place for people who want to exercise.
	may mga napunta doon na mga tao para mag-jogging	People go there to jog.
	merong nagzu-zumba	People carry out Zumba dance sessions.
	mga exercise ng mga tao	People can exercise.
	mga tao, yung pagjo-jogging	People can jog.

	Filipino answer	English translation
	minsan dun nagzuzumba yung mga oldies, yung mga health conscious	Elderly and health-conscious people attend Zumba dance sessions.
	nagagamit din ito ng mga magulang sap ag-eehersisyo	Parents go the plaza to exercise.
	nagfun run kami dati dyan	We conduct fun run in the plaza.
	nagiging jogging place	[The plaza] becomes a jogging place.
	nagjo-jogging	People go jogging.
	nagjo-jogging sa umaga	People go jogging in the morning.
	Nagzu-zumba	People carry out Zumba dance sessions.
	nagzu-zumba, pampalakas ng katawan	People carry out Zumba dance sessions to strengthen their bodies.
	pagjo-jogging meron	People go jogging.
	pagzuzumba	People carry out Zumba dance sessions.
	physical health	[People go there for] physical health.
	Pwede magexercise don yung mga senior sa pagzu-zumba. Nakakapagbigay sila ng ano sa katawan ng isang tao. Sigla.	Senior citizens can go there to exercise. People carry out Zumba dance sessions that give them vigour.
	Senior Citizen gym	Senior citizens can go to the gym.
	Yung katulad ng mga exercise para sa mga senior, para sa katawan natin, pangkalusugan.	Senior citizens can exercise to improve physical health.
	Yung mga estudyante na kaylangan ng gym, na kung saan saan sila pumupunta	Students who need gym no longer need to go far.
	Yung sa jogging.	People go jogging.
	yung sa Zumba	People carry out Zumba dance sessions.
	Yung Zumba	People carry out Zumba dance sessions.
	Zumba	People carry out Zumba dance sessions.
	Zumba classes	People carry out Zumba dance classes.
	Zumba nga, nae-exercise yung mga tao	People carry out Zumba dance sessions to exercise.
5	**family bonding**	
	bonding ng mga pamilya	Families use the park for bonding.
	Kasi ako, yung family ko nadadala ko don. Nagbobonding kam	I bring my family to the plaza for us to bond together.
	nakakpagsama-sama yung mga pamilya.	Families can come together [in the park].
	puede ding bonding ng family.	Family can bond together [in the park].
6	**general health**	
	health benefits	[It has] health benefits.
	Sa health	[It has] health benefits.
7	**happiness and enjoyment**	
	kaligayahan ng isang taong pumupunta jan	It brings joy to a person.
	Kapag lalaro ng mga bata	Children can play in the plaza.
	magiging masaya sila	People become happier.
	Mahihirap talaga, yan yung nagiging lugar nila, kasi wala silang pera para makapunta ng department store. Mga	Less fortunate residents go there to enjoy because they do not have resources to go to department stores.

	Filipino answer	English translation
	ganyan. Yan ang nagiging lugar nila para mag enjoy sila.	
	matulungan din yung, ang alam ko wala namang ibang lugar dito na pwedeng magkaron ng playground yung mga senior citizen	It can serve as entertainment for senior citizens.
	mga kabataan.	[enjoyment] for the youth.
	nagiging theme place sya	It becomes a theme place.
	sa mga bata	[enjoyment] for the children
	Sa mga bata	[enjoyment] for the children
	sa mga senior citizen	[enjoyment] for senior citizens
	sariling laruan	[The plaza] serves as a playground.
	Yung mga bata naglalaro, maluwag na maluwag	It is a spacious venue for children to play.
	yung mga bata nakakapaglaro sila don	Children can play there.
	yung mga pamankin ko, sa park nakakapasyal din.	My niece and nephew go to the park to stroll around.
8	**improves mental health**	
	kung may lungkot na nadarama, pwedeng pumasyal sa the plaza para mahimasmasan yung kanilang pag-iisip	Strolling in the park can help ease loneliness and calm the mind.
	Magkaroon ng peace of mind.	It gives peace of mind.
	Makakatulong sa pagiisip	It can help improve thinking.
	Mental health	[It improves] mental health
	Nagpapa-relax ng isipan	It relaxes the mind.
	psychological benefits.	[It has] psychological benefits.
	yung marerelax yung isip mo	It helps relax the mind.
9	**increase (non-economic) quality of life city residents**	
	i-angat yung quality of life ng mga Calambeños	increase (non-economic) quality of life city residents
10	**increase awareness of people about the history of the city**	
	nakaka-contribute din sya sa historical awareness ng Pilipinas, ng Calamba.	increase awareness of people about the history of the city
11	**nice views**	
	naaano nila yung oras nila sa mga natatanaw nila doon.	People can spend their time looking at nice views.
	yung mga mata mo may nakikita ka, masaya.	When I see nice views there, I become happy.
12	**open space for events, meetings, and trainings**	
	aktibidad,	[a venue for] activities
	anohan ng mga minsan kapag merong mga okasyon	[a venue for] occasions
	carnival	[a venue for] carnival
	Carnivals	[a venue for] carnival
	Christmas park,	[a venue for] Christmas park
	Christmas village	[a venue for] Christmas village

Filipino answer	English translation
Dati kasi kung saan saan pa kami nagkikita kita. Ngayon, meron nang ganoong lugar.	It makes it easier for us to have a meeting place.
events	[becomes a venue for] events
hanapin mo lang yung pinakamalaking monumento ni Rizal. Dun na tayo magkita. Hindi ka na maliligaw. Kahit nasaang lugar ka sa Laguna	It makes it easier for us to have a meeting place because it is the only place where we have the tallest monument of Jose Rizal.
kabataan tayo dyan na mga elementary, highschool na yan ang ginagawa nilang pinaka- practice-an kaysa nga naman dadayo pa kung saan-saan	Elementary and high school students use it to practice for extra-curricular activities. They do not need to go far.
kanilang park. Yun po ginagamit minsan sa elementary school	[a venue for] elementary schools' activities
Kapag ganitong March, nagkakaroon ng fire Olympics	[a venue for] fire Olympics during March
Kapag may concert	[a venue for] concerts
kapag may event, doon ginaganap sa the Plaza	a venue for events
Katulad ng magpapasko	[a venue for] Christmas events
Kaysa pupunta sa malayo, jan nalang po sa park	[a venue for] events instead of going far
Kung taga-Calamba tayo, hindi na nga po tayo lalayo para lamang magpractice ng sports na ating kinakahiligan	[a venue for] sports events instead of going far
lahat ng activities na ano ng gobyerno doon sa city hall, doon ginaganap	a venue for government activities
libreng lugar na pagdarausan ng mga event	a free venue for events
Lugar para sa mga events	a venue for events
maaari itong pagdausan ng mga malalalking pagdiriwang	a venue for large-scale events
magkakaroon na din sila (senior citizens) ng sariling opisina. Hindi na sila mahihirapang magkita kita. Hindi na sila magkakawatak-watak. Alam na nila kung saan ang meeting place nila.	It provides office space for senior citizens' meetings. They will no longer find it difficult to find a place to gather.
mga concerts	[a venue for] concerts
Mga dance	[a venue for] dance activities
mga patimpalak.	[a venue for] contests
mga schools, may free silang practice	[a venue for] schools to practice
Minsan doon kami nag-aano, sa palaro. Sportsfest ng mga BHW.	a venue for our sportsfest for health workers
nagagamit kasi nga yon kapag may activity.	a venue for activities
naggamit ang park ng mga kabataan sa pagsasayaw	The youth use the park to practice dancing.

	Filipino answer	English translation
	nagp-practice yung mga bata. Yun din kapag sumasali din sa mga sayaw at drum and lyre	Children use it for practicing dances and playing drums and lyres.
	open space o isang lugar kung saan pwede silang maggrupo-grupo	[a venue for] meetings and gatherings
	pagkadaos ng pagdiriwang	[a venue for] celebrations
	pagpupulong	[a venue for] meetings
	sa Barangay Quick Response Team (BQRT), nagco-conduct kami every year ng fire Olympics	[a venue for] BQRT annual fire Olympics
	sa mga estudyante, ang laking tulong non, kasi nakikita namin, nakikita ko na maraming nagpa-practice don. Mga sayaw sayaw.	A great help to students who practice dancing.
	venue ng assembly point ng mga motorcade, ng organisations	It serves as assembly point of motorcades of organisations.
	Yung empleyado kasi, pagka may sportsfest di dito yearly kasi, hindi na kami lalabas pa or kung saan.	[a venue for] sportsfests; no need to go far
	yung event na katulad sa Buhayani	[a venue for] events such as the *Buhayani*
	yung mga activities nila. So malaking bagay na meron tayong venue	[a venue for] activities
	Yung mga event, manonood ka. Doon ginaganap. Masaya	[a venue for] events; brings joy
	Yung mga kabataan. Minsan kasi, yung anak ko dati, kapag may gagawin sila sa school na yung program	I used to watch my child joining school programs there.
	yung patingpalak. Nakakapanood ako. Kapag may pagdiriwang jan	[a venue for] contests; I sometimes watch during these events.
13	**parking space**	
	ginagawang parking	parking space
	kapag puno na yung parking sa city hall, nagagamit din nila kapag parking space yon.	parking when the city hall parking space is full
	Parking lot	provides parking
14	**place to have a stroll**	
	kasi ginagawang pasyalan	[It is a place] where we can stroll.
	lugar pasyalan	a place to have a stroll
	magandang pasyalan	a beautiful place to have a stroll
	Magandang pasyalan.	a beautiful place to have a stroll
	mga pasyalan nga	a place to have a stroll
	Oo dahil sa mga magagandang pasyalan	a beautiful place to have a stroll
	Pasyalan	a place to have a stroll
	Pasyalan	a place to have a stroll
15	**recreation**	

	Filipino answer	English translation
	At least mayroon ng ganitong klaseng lugar na mapupuntahan ang mga kabataan especially students	At least there is a place for students to go to for recreation
	for recreation	for recreation
	Galaan ng mga bata	for youth/children's recreation
	libangan ang mga tao	for people's recreation
	Libangan ng mga kabataan	for youth recreation
	Magkaroon ng maayos na paglilibangan ang kabataan.	It is a good place for youths' recreation.
	Nagkakaroon ng libangan	People now have a place for recreation.
	Nakakalibang	provides recreation
	nakakapaglibang yung mga tao.	recreation of residents
	nalilibang ang ano… kapag namamasyal	recreation while strolling
	Nalilibang kami at masaya.	for recreation and enjoyment
	pagkakataon na mag-punta doon. Kaysa kung saan sila magpunta. At least yun ang pinagkakaabalahan nila	Provides a recreational place for the youth.
	recreation	for recreation
16	**relaxation**	
	magandang lounge.	[Relaxing] lounge
	maglibang-libang	relaxing
	makapag relax-relax sila and at the same time hindi na sila lalayo sa city	Residents can relax without going too far.
	malaking bagay na may mapupuntahan ka afterwork	It is a big help to have a place to go to after work.
	Masaya naming napapanood at walang istorbo sa ingay ng mga sasakyan	It is relaxing to watch [events] without noise from vehicles.
	matatanggal yung stress.	It relieves stress.
	mga senior citizen natin, nagagala natin	Senior citizen can stroll and relax.
	Nababawasan yung kanilang mga stress sa buhay	Visitors' stress levels are lessened.
	nagiging lugar din kung saan pwedeng maka-unwind.	It is a place when [I] can unwind.
	nakakaalis ng stress	It relieves stress.
	Nakakwala ng problema. Kapag kunwari stress ka ng konti	It helps relieves stress-related problems.
	pasyalan ng ano iba	[It is] a place to stroll/relax.
	rest and recreation ng tao	[where] people can rest and recreate
	Sa senior	for senior citizen's relaxation
	Yung sa senior citizen	for senior citizen's relaxation
17	**shopping**	
	Katulad nung tyangge	[It is where I] can go shopping.
18	**Socialisation**	
	Magsocialize at siguro kapag may mga group works. Kapag may mga nagpapractice jan ng mga extracurricular activities nila.	[It can serve as] a place to socialise and to conduct practices for extra-curricular activities.

	Filipino answer	English translation
	nagiging place sya for socialisation sya ng taga Calamba kasi when it comes sa activities, yung contest, nanjan, jan sila nagmemeet.	It serves as a place for socialisation of Calamba City residents through activities, contests, and meetings.
	nakakasalamuha ng mga tao	You can mingle with people there.
19	**source of income for locals**	
	Nabibigyan ng oportunidad na magkaroon ng pagkakakitaan/ hanapbuhay ang ibang tao na nagtitinda dito.	Opportunity to sell goods and earn
	pong nabigyan ng hanap buhay noong "ber" months kasi yung mga nagtitinda doon mga taga-Villa de Calamba	Locals from Villa de Calamba were given source of income from selling during the Christmas season.
	source of income nila yon.	It provides a source of income.
20	**sports**	
	Meron doon football eh	[we can use] football field there
	meron po tayong mga naglalaro dyan ng mga football,	There are some who play football.
	meron tayong mga athlete na dumadayo pa sa ibang lugar para maglaro. At least kung magkakaron na tayo ng sarili, hindi na natin kaylangang dumayo pa.	There are athletes who go to other places to play sports. At least we have our own; we do not need to go somewhere else.
	mga foot ball	[for] football
	mga laro, ginagawang basketball	to play, basketball
	Mga tennis	[to play] tennis
	naging venue din yan, yan yung naging finish line ng marathon.	It becomes a venue/finish line for marathons
	nagp-practice doon sa foot ball	[Athletes] practice football
	paglalaro	[Athletes and visitors] play sports
	palakasan	[Athletes and visitors] play sports
	practice ng football	[Athletes] practice football
	sa mga athlete	[Athletes] practice sports
	sa mga sports	[Athletes and visitors] play sports
	sa sports	[Athletes and visitors] play sports
	Sa sports	[Athletes and visitors] play sports
	sports	[Athletes and visitors] play sports
	Tapos sports	[Athletes and visitors] play sports
	Yang katulad nyang sports sports	[Athletes and visitors] play sports
21	**tourism**	
	Isang atraksyon para sa lahat	[It is] a tourist spot for everyone.
	kapag yun ay naitayo na, pwedeng iencourage nun ang mga turista	When it is fully established, it will encourage tourists.
	Madami na ang darayo sa aming lugar.	number of tourists in Calamba City will increase
	makapaghikayat ng maraming local na dayuhan sa ibang lalawigan. At pati banyaga	It will attract tourists from other provinces and other countries.
	para sa ano, sa turista.	It is for the tourists.

	Filipino answer	English translation
	sa tourism	[for] tourism
	sa tourism din ng Calamba	[for] tourism of Calamba City
	to attract din yung other tourist	To attract other tourists
	tourism	[for] tourism
	tourist spot gawa ng rebulto ni Rizal. Sya yung pinakamataas	[it is a] tourist spot because of Jose Rizal's tallest monument

6.2 Do you think the park has disbenefits? If no, why? If yes, kindly elaborate.

	Filipino answer	English translation
1	**additional cost for the city**	
	Dagdag cost din.	[The park] is an additional cost for the Calamba City.
	Maintenance cost nya.	[The park has] a maintenance cost.
2	**anti-social activities**	
	bilang sakin yung bilang ako yung Violence Against Women and Their Children (VAWC) Team, kasi minsan nakakakuha kami ng mga batang yung iba't ibang lugar ba. Ginagawang tambayan nila yon	Since I am part of the VAWC, I have witnessed wrong doings by the youth who hang out/loiter in the park.
	dapat kasi magkaroon ng sa kabataan. Yung pag minor, kapag may limit yung oras kapag kabataan	There should be a regulation about the time minors are allowed inside the park.
	hindi maganda nilang nagagamit yung use ng facilities.	Some do not use the facilities well.
	maraming nasusumpungan sa plaza na gumagawa ng hindi kaaya-aya mula sa mga kabataan.	Some young residents are caught doing unpleasant activities in the park.
	Meron po kasi Malaya kang nakakakilos ng gusto naming gawin	Everyone is free to do anything they want so [they could engage in anti-social behaviour].
	mga di maiwasang mga undisciplined na mga tao na nagkakalat	Some undisciplined people litter.
	Mga tinatambayan ng mga adik	There are drug addicts who hang around/loiter.
	minsan kasi nagiging cause yun ng gulo. Trip trip sila. Kapag masyado syang open.	Sometimes, it becomes the cause of chaos. If [the park] is too open to the public.
	nagkakaron ng problema minsan sa mga bata, mga minors. May mga gang-gang sila	Problems arise when some youth who are members of gangs [go to the park].
	siguro yung mga kabataang nakatambay doon	Some youths who hang out/loiter there
3	**causes traffic**	
	nagt-traffic lang	[The park] causes traffic.
	Sa sobrang tao, hindi ka na pwedeng magsakay	It is very crowded to the point that it is difficult to find public transportation.

4	**conflict on users**	
	kasi nga nagawa sya. Tapos may hihiram, or dapat mapayagan mo lahat. Para diba pinayagan mo yung isa, or yung mga neutral or transparent yung treatment mo sa bawat, sa lahat. Kung may request, o sige. Parang ganyan.	The park can stir up conflict among users - who should be prioritised to use the open space?
5	**crime**	
	may mga areas sa park na nagiging centro siguro ng different kinds of crime	There are areas in the park that are becoming the centre of different kinds of crimes.
	Nakakatakot din kasi halimbawa may masamang loob	It can be scary because criminals can also be there.
6	**exposure to pollution**	
	siguro sa polusyon	The park exposes visitors to air pollution [since it is beside the road].
7	**incomplete facilities**	
	Minsan po kapag naulan. Kasi walang bubong	Facilities are incomplete – no shed [when it is raining].
8	**lack of parking**	
	parking na yon, kulang	Parking is not enough.
9	**security issues**	
	May mga nahuhuli sila dun sa mga madidilim na lugar na, meron nang nangyayari na hindi na maganda.	Some are caught doing unpleasant things in the dark areas of the park.
	Saka tabi ng riles. Yung security	[There are some] security issues because it is very near the railroad/illegal settlements.
10	**some spaces are wasted**	
	Hindi naman perwisyo. Kundi yung merong lugar na nasasayang imbis na napapakinabangan	There are some spaces that are wasted.

Appendix 7 Benefits and disbenefits shared by stakeholder groups

7.1 Comparison of the park benefits mentioned by stakeholder groups

	Barangays				
Benefits	**Closest**	**Far**	**Near**	**City Office**	**College students**
contribute to the city's improvement	•	•	•	•	•
dining out			•		
environmental awareness for children				•	
exercise	•	•	•	•	•
family bonding		•	•		
general health	•		•		
happiness and enjoyment	•	•	•	•	
improves mental health	•	•	•	•	
increase (non-economic) quality of life city residents				•	
increase awareness of people about the history of the city				•	
nice views		•	•		
open space for events, meetings, and training	•	•	•	•	•
parking space	•		•		
a place to have a stroll	•	•	•		•
recreation	•	•	•	•	•
relaxation	•	•	•	•	
shopping			•		
socialisation		•		•	
source of income for locals			•		•
sports	•	•	•	•	•
tourism	•	•	•	•	

Comparison of the park benefits mentioned by *barangays* with and without conservation zones within *barangays* far from and near the park

	Barangays far from the park		**Barangays near the park**	
	conservation zone		**conservation zone**	
Benefits	**w/o**	**with**	**w/o**	**with**
contribute to city's improvement	•	•	•	•
dining out			•	
environmental awareness for children				
exercise	•	•	•	•
family bonding	•	•	•	•
general health				•
happiness and enjoyment	•	•	•	•
improves mental health	•	•	•	
increase (non-economic) quality of life city residents				
increase awareness of people about the history of the city				
nice views		•	•	
open space for events, meetings, and trainings	•	•	•	•
parking space			•	•
place to have a stroll		•	•	•
recreation	•		•	•
relaxation	•		•	•
shopping			•	
socialisation	•			
source of income for locals				•
sports	•	•	•	•
tourism	•	•	•	•

7.2 Comparison of park disbenefits mentioned by stakeholder groups

	Barangays			City Office	College students
Disbenefits	**Closest**	**Far**	**Near**		
additional cost for the city				•	
anti-social activities	•	•	•	•	•
causes traffic		•	•		
conflict on users				•	
crime		•		•	
exposure to pollution			•		
incomplete facilities	•				
lack of parking			•		
security issues	•		•		
some spaces are wasted			•		

Comparison of the park disbenefits mentioned by the *barangays* with and without conservation zones, within *barangays* far and near the park

	Barangays far from the park		Barangays near the park	
	conservation zone		conservation zone	
Disbenefits	**w/o**	**with**	**w/o**	**with**
additional cost for the city				
anti-social activities	•			•
causes traffic	•		•	
conflict on users				
crime	•			
exposure to pollution				•
incomplete facilities				
lack of parking				•
security issues				•
some spaces are wasted			•	

Appendix 8 Computing for the radius values

The formula that was used is

$$P = \frac{R}{Q_i \times S_i}$$

where P = Proportion of agreed statements; R = number of 4 (agree)and 5 (strongly agree) answers (Table A and B); Qi = number of questions for each ES or EDS type (Table C); and Si = number of respondents in each stakeholder group (Table D).

Table A. Number of 4 (agree)and 5 (strongly agree) answers for each ES type and stakeholder group

Stakeholder	provisioning	regulating	cultural	economic	security	non-use
Barangays closest	1	53	136	51	26	30
Barangays far	6	70	231	75	43	48
with con. zone	0	22	105	34	19	19
w/o con. zone	6	48	126	41	24	29
Barangays near	6	101	257	92	53	58
with con. zone	3	55	131	45	26	29
w/o con. zone	3	46	126	47	27	29
City Office	1	30	63	29	10	13
College students	0	7	56	14	6	11

Table B. Number of 4 (agree)and 5 (strongly agree) answers for each EDS type and stakeholder group

Stakeholder	health	ecological	economic	psychological
Barangays closest	0	4	2	21
Barangays far from	5	6	2	32
with con. zone	0	2	0	13
w/o con. zone	5	4	2	19
Barangays near	7	11	7	54
with con. zone	2	4	1	29
w/o con. zone	5	7	6	25
City Office	0	0	0	5
College students	0	3	1	12

Table C. Number of questions in each ES and EDS type

ES types	Number	EDS types	Number
provisioning	3	health	2

regulating	10	ecological	3
cultural	14	economic	1
economic	6	psychological	8
security	3		
non-use	3		

Table D. Number of respondents in each stakeholder group

Stakeholder	provisioning
Barangays closest	10
Barangays far	20
with con. zone	10
w/o con. zone	10
Barangays near	20
with con. zone	10
w/o con. zone	10
City Office	5
College students	5

Table E. Computed proportion of agreed statements for each ES type and stakeholder group

Stakeholder	provisioning	regulating	cultural	economic	security	non-use
Barangays closest	0.03	0.53	0.97	0.85	0.87	1.00
Barangays far	0.10	0.35	0.83	0.63	0.72	0.80
with con. zone	0.00	0.22	0.75	0.57	0.63	0.63
w/o con. zone	0.20	0.48	0.90	0.68	0.80	0.97
Barangays near	0.10	0.51	0.92	0.77	0.88	0.97
with con. zone	0.10	0.55	0.94	0.75	0.87	0.97
w/o con. zone	0.10	0.46	0.90	0.78	0.90	0.97
City Office	0.07	0.60	0.90	0.97	0.67	0.87
College students	0.00	0.14	0.80	0.47	0.40	0.73

Table F. Computed proportion of agreed statements for each EDS type and stakeholder group

Stakeholder	health	ecological	economic	psychological
Barangays closest	0.00	0.13	0.20	0.26
Barangays far from	0.13	0.10	0.10	0.20
with con. zone	0.00	0.07	0.00	0.16
w/o con. zone	0.25	0.13	0.20	0.24
Barangays near	0.18	0.18	0.35	0.34
with con. zone	0.10	0.13	0.10	0.36
w/o con. zone	0.25	0.23	0.60	0.31
City Office	0.00	0.00	0.00	0.13
College students	0.00	0.20	0.20	0.30

Appendix 9 Valuation Questionnaire

Valuation Survey Consent Form

Thank you very much for agreeing to participate in this online survey.

My name is Dalton Erick Baltazar, a second-year PhD student at Nottingham Trent University in the United Kingdom. This survey is part of my PhD research entitled "Socio-cultural Valuation of Urban Parks: Lessons from the Philippines".

Project Information

The general aim of the project is to assess how people value the benefits and disbenefits they associate with urban parks. This will be done through the conduct of key informant interviews, a survey, and focus group discussions. The following questionnaire has been designed to collect socio-economic information, environmental knowledge, perception, and behaviour, and the importance you assign to the benefits and disbenefits of the Jose Rizal Plaza.

Eligibility to Participate

Please make sure that you meet the eligibility criteria below before proceeding to answer the survey.

- 18 years old or older
- Currently residing in Calamba City
- Have not responded to this survey yet

Survey Data Management

The survey should take no longer than 40 minutes to answer. Your answers are automatically encoded in a secure platform by Qualtrics. The encoded data will only be accessible to Mr Baltazar, his supervisors, and trained assistants. All the survey data will be anonymised before storage and analysis, and care will be taken to remove other information in the survey that could identify you. None of the information that you will provide will be used for any commercial purposes and/or shared with any third party. The survey data might be used for academic papers, research presentations, news articles, and in other media that we may produce from the project. The encoded data might be kept indefinitely for future case study comparisons.

Right to Refuse or Withdraw

You have the right to refuse to answer any of the questions in the survey or to withdraw all the information that you already have given. You can also stop the survey any time by closing your web browser.

If you wish to withdraw, you can do so by emailing Mr Baltazar or his supervisors with your name and details. If you withdraw from the study within 15 days, your contributions to the project will be destroyed, and your data will be removed. After this period, the data will have been anonymised and prepared for analysis. Therefore, they cannot be individually identified and cannot be withdrawn.

By proceeding with the survey, I agree that:

6. I understand the purpose of the study and the survey.
7. I meet the eligibility criteria to participate in the survey.
8. I am voluntarily taking part in this project.
9. The information I provide can be used as described above.
10. I don't expect to receive any payment for my participation.
11. I understand that I can stop and withdraw from this study at any time.

Contact Information

This study has been reviewed using approved protocols within the School of Animal, Rural and Environmental Sciences and has been approved under application number ARE917. If you have any further questions or concerns about this study, please contact:

Researcher

Dalton Erick Baltazar – dalton.baltazar@ntu.ac.uk | +639276345904

Supervisors

Dr Jillian Labadz (Director of studies) – jillian.labadz@ntu.ac.uk

Dr Roy Smith – roy.smith@ntu.ac.uk

Dr Andrew Telford – andrew.telford@ntu.ac.uk

Dr Marcello Di Bonito – marcello.dibonito@ntu.ac.uk

Any ethical concerns can be raised by contacting AREEthicalReview@ntu.ac.uk.

 Please click the image to proceed to the survey.

Valuation Questionnaire

A. Park Use

1. Do you know the previous land use in the area where the Jose Rizal Plaza is now built? Encircle the letter of your answer.

a. Yes → What was it? _____ **b.** No

2. Have you ever visited Jose Rizal Plaza?

a. Yes→ answer questions **i** and **ii** below **b.** No

i. How frequent? _____ (times) every [**encircle one**: week, month, year]

ii. For what purpose(s)? Encircle the letter of your answer. You can give multiple answers.

a. Health/exercise

b. Walking the dog

c. Relax/unwind

d. Fresh air/pleasant weather

e. Enjoy scenery

f. Photography

g. Watch or participate in events

h. Others (please specify): _____

3. Do you visit any other parks? Encircle the letter of your answer.

a. Oo → answer question **i** below **b.** No

i. Can you give the names of the other parks that you visit and the frequency of your visit?

Park Name	**How many times did you visit the park last year?**
1.	
2.	
3.	
4.	
5.	

4. Which of the following have you visited in the last 6 months, before the Corona virus disease (COVID-19) outbreak? Encircle the letter of your answer. You can give multiple answers.

a. Park in a town or city

b. Woodland or forest

c. River, lake, or canal

d. National park

e. Playing field or other recreational area

f. A rural village

g. A beach/coastline area

h. Children's playground

B. Environmental Knowledge, Perception, and Behaviour

Knowledge

1. Choose from the group of words in the box below what is being defined in each of the following statements. Write the number that corresponds to the term on the line provided before each statement.

(1) Biodiversity, (2) Pollution, (3) Urban sprawl, (4) Sustainability, (5) Watershed management, (6) Development, (7) Waste generation, (8) Population, (9) Resource distribution, (10) Zoning, (11) Climate change, (12) Green spaces

_____ **a.** The rapid, unrestricted, and unplanned expansion of cities.

_____ **b.** The presence of undesirable substances in water bodies and air.

_____ **c.** The variety of plants and animals in a certain place. A high level is considered desirable.

_____ **d.** Managing our resources well to make sure that they are still available for future generations.

_____ **e.** The process of implementing water and land use practices to maintain the natural resources of a certain area.

_____ **f.** Land area that is covered by grass, trees, or shrubs, usually for recreation, aesthetic, or environmental purposes.

_____ **g.** The long-term alteration of temperature and weather patterns because of the increased amount of greenhouse gases in the atmosphere.

2. How much do you know about these major environmental laws in the Philippines? Check one box in each line: **0 - Practically nothing; 1 - Only a little; 2 - A fair amount; 3 - A lot**

No.	Law	0	1	2	3
1	Clean Water Act (Republic Act No. 9275)				
2	Clean Air Act (Republic Act No. 8749)				
3	Ecological Solid Waste Management Act (Republic Act No. 9003)				

Perception

1. Please indicate how you feel local environmental issues have become since you have lived here. Check one box in each line: **1 - much worse; 2 - worse; 3 - stayed the same; 4 - better; 5 - much better.** Check **0** if you think you do not have enough basis to answer any of the five options.

No.	Environmental issues	1	2	3	4	5	0
1	The water quality in your local streams, rivers, and lakes.						
2	The general air quality.						
3	The level of pollution or waste produced by nearby businesses, farms, and industries.						
4	Water shortage.						
5	Weather-related disasters.						
6	Conversion of farms and other green areas to residential and commercial areas.						
7	The population of native animals, such as fish, birds, and mammals.						
8	The quality of public, green, and open spaces (e.g., parks, plazas).						
9	The overall environmental state of the city.						

1 - much worse; 2 - worse; 3 - stayed the same; 4 - better; 5 - much better

Behaviour

1. How frequently do you do the things below? Check one box in each line: **1 - never; 2 - rarely; 3 - sometimes; 4 - often; 5 – always.** Check **0** if you think you do not have enough basis to answer any of the five options.

No.	Statements	1	2	3	4	5	0
1	When I go out, I prefer walking and cycling, instead of using a car.						
2	I try to reduce my waste by repairing, reusing, and recycling.						
3	I usually buy eco-friendly products and brands.						
4	I encourage other people to protect the environment.						
5	I sign conservation petitions or participate in online/other conservation campaigns.						
6	I donate money or time to support environmental or conservation organisations.						
7	I join environmental or conservation organisations.						
8	I do voluntary work to help care for the environment.						
9	I take the initiative to know more information about environmental issues.						

C. Social Value Orientation

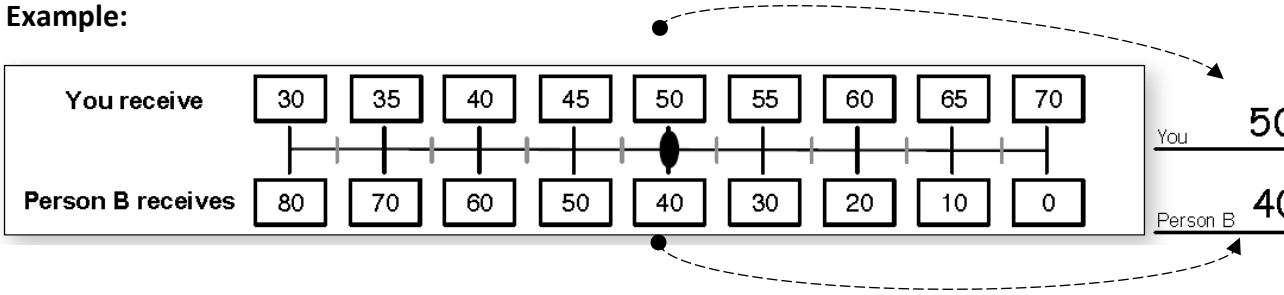
In this part of the survey, **imagine that you have been partnered with another person named "B".** Imagine that you and person B are unrelated and do not know each other. Person B will also not be informed of your decisions.

If you were given the power to divide a treasure (in the form of cash in Philippine Peso), how would you do it? **How much would you give yourself and how much would you give B?**

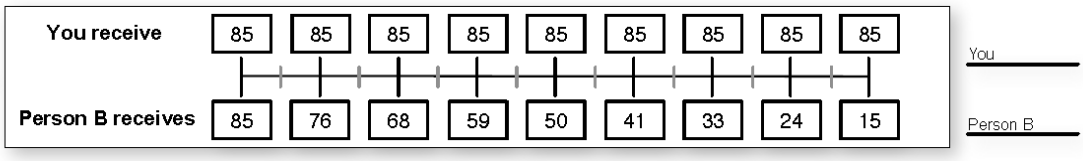
Each number below represents a set of allocation variations. **Choose one allocation** that you prefer in each number **by marking the respective position along the midline**, and then **write the values on the space provided**. Remember that this is about personal preferences, and therefore, there are no right or wrong answers.

In the **example** below, the respondent chose the **50 – 40 allocation**. This means that he/she prefers to receive PhP 50.00, and he/she prefers person B to receive PhP 40.00.

Example:



1



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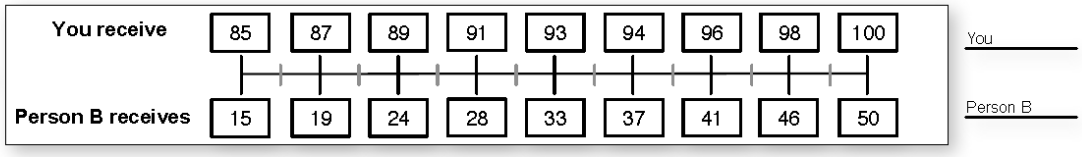

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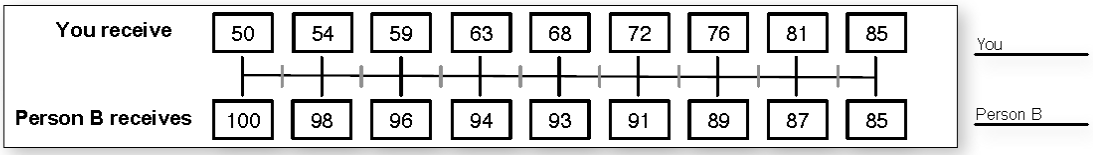

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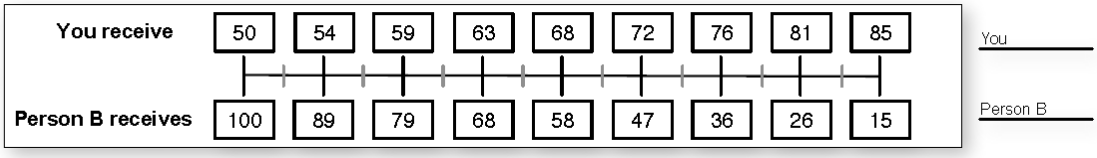

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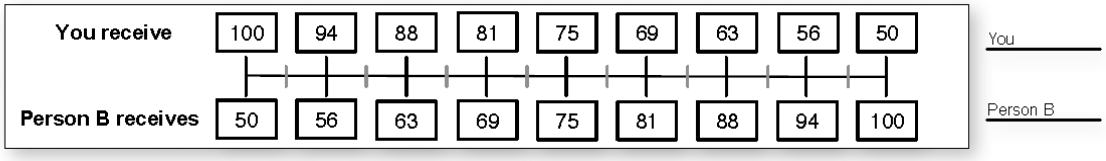
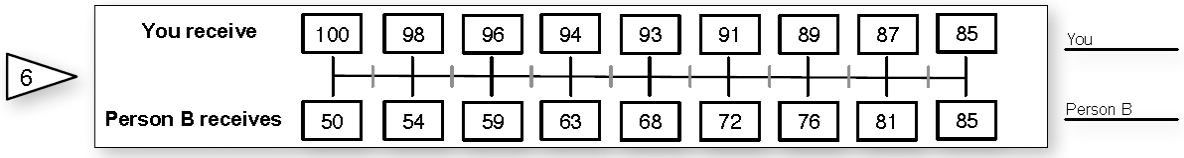




D. Valuation of Ecosystem Services and Willingness-to-contribute

Ecosystem services (ES) are the tangible or intangible and the direct or indirect benefits that we get from nature. ES are generally categorised into provisioning, regulating, supporting, and cultural services.

- **Provisioning ES** are the products that we get directly from nature, such as food, water, and other raw materials.
- **Regulating ES** are benefits that we obtain indirectly from natural ecosystem processes such as climate regulation, natural hazard regulation, water purification, and pollination.
- **Supporting (or Habitat) ES** refer to the ability of ecosystems to provide habitat to a lot of species and to maintain diversity.
- **Cultural ES** are the non-material benefits like spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences

Ecosystem Disservices (EDS) on the other hand, are the tangible or intangible and the direct or indirect disbenefits that we get from nature. Examples of these are pollens from plants that can cause allergies and the wild animals that can cause fear and discomfort to people.

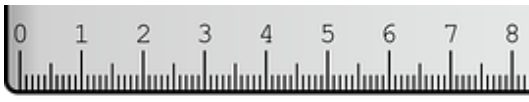
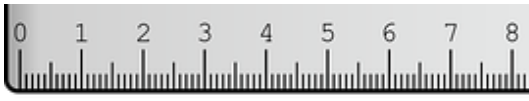
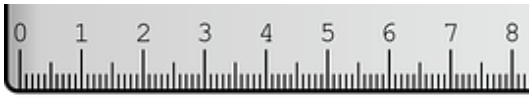
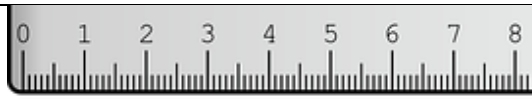
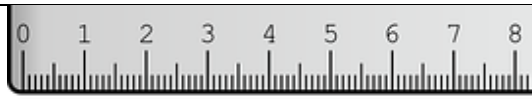
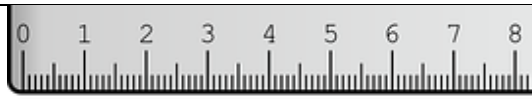
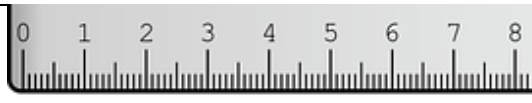
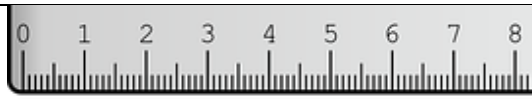
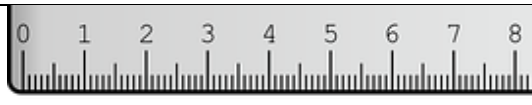
1. The following are the **ecosystem services** that the **Jose Rizal Plaza** has based on our interviews. Kindly **rate the importance** of each based on your opinion **using the ruler** on the ride side of the statements. An example is given below.

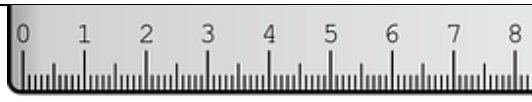
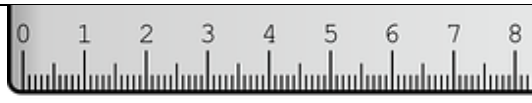
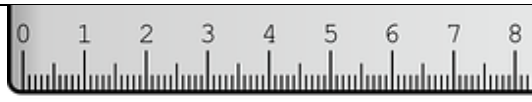
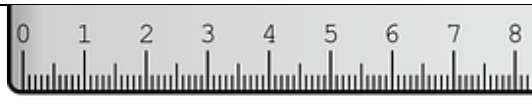
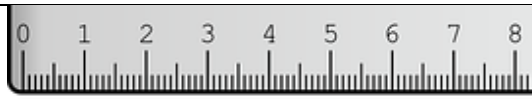
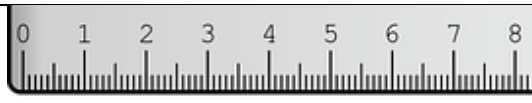
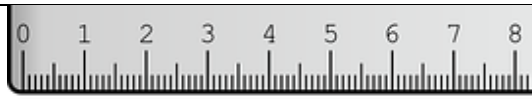
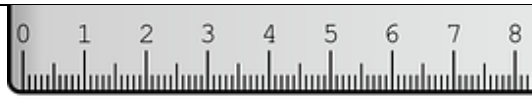
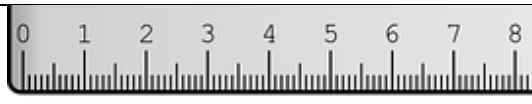
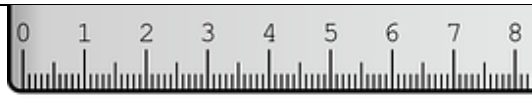
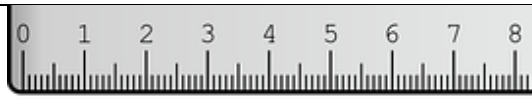
0 – not important at all; 10 – Absolutely essential

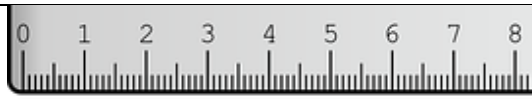
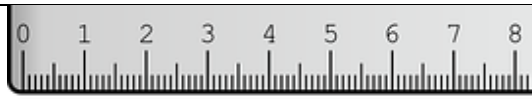
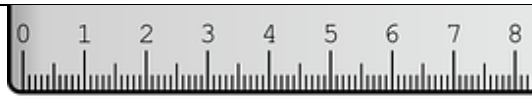
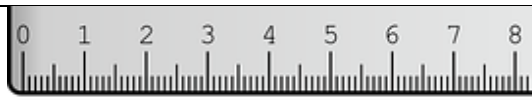
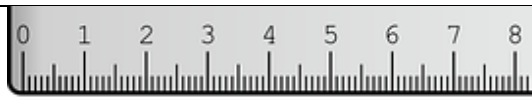
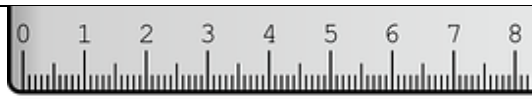
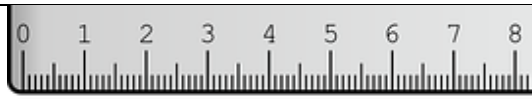
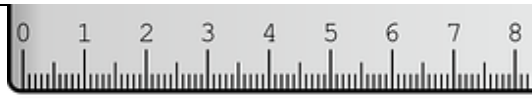
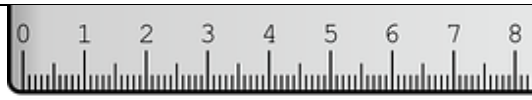
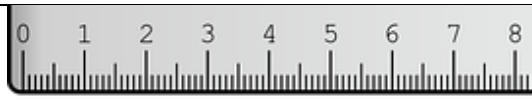
Example:

The ability of the park to provide food

Begin here:

1	The ability of the park to help in air purification (or controlling air pollution) through the trees and other vegetation present in it.	
2	The ability of the park to help reduce heat island effect (the increased temperature in urban areas because of hardscapes – surfaces made out of concrete, bricks, and stones).	
3	The ability of the park to help in preventing flood (e.g., plant roots that absorb water, storage areas like ponds).	
4	The ability of the park to serve as a water recharge area (place where water is able to seep into the ground and refill an aquifer).	
5	The ability of the park to help in purifying water (that enters the soil) because of the vegetation present in it.	
6	The ability of the park to prevent soil erosion (wearing away of a field's topsoil by water and wind).	
7	The ability of the park to enable pollination.	
8	The ability of the park to enable seed dispersal.	
9	The ability of the park to enable (eco) tourism.	
10	The ability of the park to provide a place for enjoyment and spending free time.	
11	The ability of the park to offer opportunities for practicing different sports and keeping fit.	
12	The ability of the park to provide a place to disconnect, relax, and diminish stress (mental recreation).	

13	The ability of the park to provide unique and attractive landscapes (aesthetic information).	
14	The ability of the park to provide inspiration for culture, art, and design.	
15	The park provides a place for direct connection with nature (spiritual experience).	
16	The ability of the park to provide a place to pray and practice religious beliefs.	
17	The ability of the park to provide a place for research on and education about nature (information for cognitive development).	
18	The ability of the park to help in the maintenance and exposure of traditional countryside activities and skills (traditional knowledge).	
19	The ability of the park to provide a space where you can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation).	
20	The ability of the park to enable the expression of local identity and cultural heritage.	
21	The ability of the park to stimulate the interest of the residents to the city's history and cultural heritage (including Jose Rizal).	
22	The ability of the park to provide a way to commemorate our national hero, Jose Rizal.	
23	The ability of the park to provide revenue for the city (renting the activity area and other facilities).	
24	The ability of the park to provide revenue for locals.	
25	The ability of the park to provide jobs to locals.	

26	The ability of the park to increase property values.	
27	The ability of the park to become a place where different kinds of events in the city (e.g., celebrations, concerts, competitions) can be held.	
28	The ability of the park to serve as an extra parking space for city office employees and residents.	
29	The ability of the park to lower crime rates. It encourages more people to spend time outside their homes and in those spaces, leading to greater degree of informal surveillance of the area and deterring crime.	
30	The ability of the park to provide a notion of government presence/good governance.	
31	The ability of the park to lower road range incidents (by slowing vehicles).	
32	The mere existence of the park, with or without its benefits.	
33	The idea that the park is there for me to use in the future for whatever benefit it can provide me.	
34	The benefits that the park will provide to the future generations.	
35	The ability of the park to enhance the non-economic quality of life of the city residents.	
36	The contribution of the park to increasing the green areas in the city.	

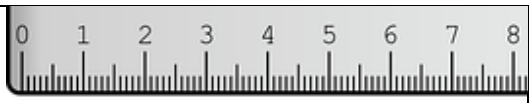
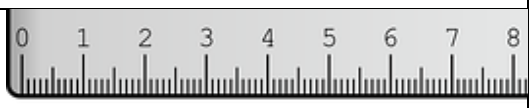
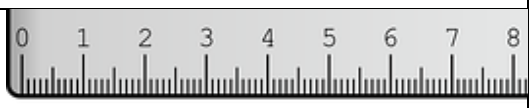
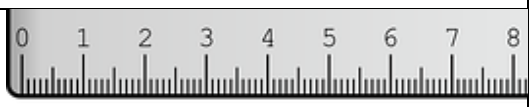
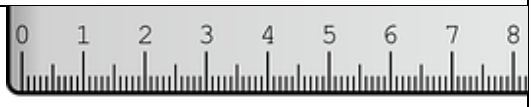
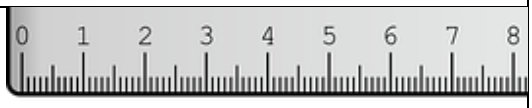
2. The following are the **ecosystem disservices** that the **Jose Rizal Plaza** has based on our interviews. Kindly **rate how concerning** you think each of them based on your opinion **using the ruler** on the ride side of the statements. An example is given below.

0 – not concerning at all; 10 – Absolutely concerning

Example:

The wild animals in the park that cause fear.

Begin here:

37	The unpleasant, ugly, and unsafe appearance of the green areas (with grass and dense vegetation) in the park that are not intensively managed.	
38	The obstruction of fast and comfortable transportation because of the park (motorists slow down to take a peek of the park).	
39	The too much noise from the park when there are events.	
40	The risk of the park providing space for anti-social behaviour, crime, and other illegal things.	
41	The park causing conflict among users - who should be prioritised to use the open space?	
42	The park wasting the land that could have been used for other purposes.	
43	The park exposing visitors to air pollution since it is beside the road.	
44	The frustration that the park brings to residents because of its incomplete features.	

3. If you were asked to contribute something to keep the park, would you be willing to make this contribution? Encircle the letter of your answer.

a. Yes → Answer question **i** below **b.** No → Answer question **ii** below

i. If you answered **yes**, which of the following would you be willing to contribute? Encircle the letter of your answer(s). You can have multiple answers.

a. Time → Answer the questions below

What is the minimum number of hours do you think you could contribute per month? _____

What is the maximum number of hours do you think you could contribute per month? _____

b. Money → Answer the questions below

What is the minimum amount do you think you could contribute per month? _____

What is the maximum amount do you think you could contribute per month? _____

c. Others (please specify): _____ → Answer the questions below

What is the minimum do you think you could contribute per month? _____

What is the maximum do you think you could contribute per month? _____

ii. If you answered **no**, please indicate the reason. Encircle the letter of your answer.

a. I don't have extra time and money but otherwise would contribute.

b. It is the responsibility of the city to keep and maintain the park.

c. Parks are not important.

d. I don't use the park. Those that use it should contribute.

e. Other reasons (please specify): _____

4. In your opinion, how will the Coronavirus Disease 2019 (COVID-19) affect how people use the Jose Rizal Plaza and other parks?

_____
_____

_____
_____

_____
_____

E. Socio-economic Characteristics

1. Which of the following describes you? You can choose multiple answers.

a. City office employee

b. Barangay office employee

c. Calamba City College student

d. Student from another college or university. Specify the college or university:
_____

e. Owner/employee of a business (e.g., restaurant, canteen, store, salon) in Barangay Halang or Real

f. Owner/employee of a business (e.g., restaurant, canteen, store, salon) in other barangays

g. Resident of Barangay San Juan or Barangay 4

h. Resident of Barangay Bucal or Barangay La Mesa

i. Resident of Barangay Real or Barangay Halang

j. Resident of ng Barangay Mayapa or Barangay Masili

k. Resident of Barangay Canlubang or Barangay Camaligan

l. Resident of other barangays

2. How did you find out about this survey? Encircle the letter of your answer.

a. From the posters at the City Office

b. From the posters at the Barangay Office

c. From social media (Facebook, Twitter)

d. From someone working at the City Office

e. From someone working at the Barangay Office

f. From the barangay health workers

g. From Dalton Baltazar

h. From a friend or a relative

i. Others (please specify): _____

3. Did Dalton Baltazar interview you as a key informant in the initial stages of his research project?

a. Yes **b.** No

4. Did you participate in any of the focus group discussions conducted by Dalton Baltazar related to his research project? Encircle the letter of your answer.

a. Yes **b.** No -> answer **4b** below

4b. Would you like to participate in an online focus group about the benefits and disbenefits of The Jose Rizal Plaza?

a. Yes-> answer **i** below **b.** No

i. Kindly provide your mobile number or email address so that we can contact you. _____

5. Barangay (village)_____

6. Age: _____

7. Gender. Encircle the letter of your answer.

a. Male

b. Female

c. I prefer to use my own term: _____

d. Prefer not to say

8. Marital status. Encircle the letter of your answer.

a. Single

b. Married

c. Widowed

d. Divorced

e. Separated

f. Prefer not to say

9. House ownership. Encircle the letter of your answer.

a. Owned

b. Rented

c. Mortgaged

d. Shared with relatives

e. Others (please specify): _____

10. Highest educational attainment. Encircle the letter of your answer.

a. no formal form of education

b. incomplete elementary education

c. complete elementary education

d. incomplete high school education

e. complete high school education

f. incomplete college education

g. complete college education

h. graduate school

11. Which of the following statements describe you? Encircle the letter of your answer.

a. I am a full-time student.

b. I am currently not in paid employment, but looking for a job.

c. I am currently not in paid employment, but not looking for a job.

d. I am part-time student, and I also work.

e. I have a part-time job.

f. I have a full-time job.

g. I have my own business.

h. I am retired.

i. I am a homemaker.

j. Others (please specify): _____

11b. If you answered **d, e, f, or g**, kindly choose one category related to your job or business. Encircle the letter of your answer.

a. Agriculture, Forestry, Fishing and Hunting

b. Mining and quarrying

c. Manufacturing

d. Electricity, gas, steam and air conditioning supply

e. Water supply; sewerage, waste management and remediation activities

f. Wholesale and retail trade; repair of motor vehicles and motorcycles

g. Transportation

h. Accommodation and food service activities

i. Information and communication

h. Financial and insurance activities

j. Real estate activities

k. Professional, scientific and technical activities

l. Administrative and support service activities

m. Government and public administration

n. Education

o. Human health and social work activities

p. Arts, entertainment and recreation

q. Other (please specify): _____

12. Daily minimum wage rate (PhP 303 in Calamba City). Encircle the letter of your answer.

a. Less than minimum wage rate

b. Minimum wage rate

c. Twice minimum wage rate

d. Three times the minimum wage rate

e. Four times the minimum wage rate

f. Five times minimum wage rate

g. > five times the minimum wage rate

13. Are you a migrant here? Encircle the letter of your answer.

a. Yes -> answer the question below **b.** No

Name of your home town (city o municipality): _____

How many years have you lived here in Calamba City? _____

14. Do you have internet access at home or your office?

a. Yes **b.** No

Appendix 10 Details of the respondents' knowledge of the major environmental laws in the Philippines by stakeholder group.

Clean Water Act (Republic Act No. 9275)

	Practically nothing		Only a little		A fair amount		A lot	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	5	12.50 %	16	40.00 %	18	45.00 %	1	2.50 %
Barangays far from the park	13	16.00 %	39	48.10 %	26	32.10 %	3	3.70 %
Barangays near the park	28	14.70 %	93	48.70 %	66	34.60 %	4	2.10 %
Businesses	4	8.70%	25	54.30 %	17	37.00 %	0	0.00 %
City office employees	2	6.90%	14	48.30 %	12	41.40 %	1	3.40 %
College students	56	19.40 %	135	46.90 %	92	31.90 %	5	1.70 %

Clean Air Act (Republic Act No. 8749)

	Practically nothing		Only a little		A fair amount		A lot	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	5	12.50 %	16	40.00 %	17	42.50 %	2	5.00 %
Barangays far from the park	12	14.80 %	39	48.10 %	27	33.30 %	3	3.70 %
Barangays near the park	29	15.20 %	99	51.80 %	58	30.40 %	5	2.60 %
Businesses	4	8.70%	23	50.00 %	17	37.00 %	2	4.30 %
City office employees	2	6.90%	14	48.30 %	12	41.40 %	1	3.40 %

College students	59	20.50 %	134	46.50 %	88	30.60 %	7	2.40 %

Ecological Solid Waste Management Act (Republic Act No. 9003)

	Practically nothing		Only a little		A fair amount		A lot	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	7	17.50 %	14	35.00 %	16	40.00 %	3	7.50 %
Barangays far from the park	14	17.30 %	32	39.50 %	28	34.60 %	7	8.60 %
Barangays near the park	25	13.10 %	86	45.00 %	71	37.20 %	9	4.70 %
Businesses	6	13.00 %	19	41.30 %	20	43.50 %	1	2.20 %
City office employees	2	6.90%	12	41.40 %	12	41.40 %	3	10.30 %
College students	50	17.40 %	122	42.40 %	89	30.90 %	27	9.40 %

Appendix 11 Details of the respondents' environmental perception by stakeholder group.

The water quality in your local streams, rivers, and lakes.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	2	5.00%	4	10.00%	13	32.50%	14	35.00%	7	17.50%	0	0.00%
Barangays far from the park	5	6.20%	6	7.40%	33	40.70%	24	29.60%	11	13.60%	2	2.50%
Barangays near the park	8	4.20%	40	20.90%	66	34.60%	45	23.60%	29	15.20%	3	1.60%
Businesses	4	8.70%	4	8.70%	18	39.10%	8	17.40%	11	23.90%	1	2.20%
City office employees	1	3.40%	3	10.30%	9	31.00%	8	27.60%	6	20.70%	2	6.90%
College students	14	4.90%	34	11.80%	104	36.10%	76	26.40%	56	19.40%	4	1.40%

The general air quality.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%

Barangays closest to the park	1	2.50%	1	2.50%	18	45.00%	10	25.00%	9	22.50%	1	2.50%
Barangays far from the park	4	4.90%	10	12.30%	33	40.70%	18	22.20%	14	17.30%	2	2.50%
Barangays near the park	3	1.60%	19	9.90%	73	38.20%	58	30.40%	32	16.80%	6	3.10%
Businesses	3	6.50%	2	4.30%	17	37.00%	13	28.30%	10	21.70%	1	2.20%
City office employees	2	6.90%	1	3.40%	5	17.20%	11	37.90%	8	27.60%	2	6.90%
College students	10	3.50%	21	7.30%	85	29.50%	88	30.60%	71	24.70%	13	4.50%

The level of pollution or waste produced by nearby businesses, farms, and industries.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	5	12.50%	17	42.50%	12	30.00%	5	12.50%	0	0.00%
Barangays far from the park	8	9.90%	17	21.00%	37	45.70%	15	18.50%	4	4.90%	0	0.00%
Barangays near the park	13	6.80%	46	24.10%	80	41.90%	35	18.30%	15	7.90%	2	1.00%

Businesses	6	13.00%	5	10.90%	16	34.80%	7	15.20%	11	23.90%	1	2.20%
City office employees	2	6.90%	3	10.30%	16	55.20%	3	10.30%	4	13.80%	1	3.40%
College students	14	4.90%	50	17.40%	120	41.70%	65	22.60%	36	12.50%	3	1.00%

Water shortage.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	2	5.00%	9	22.50%	20	50.00%	7	17.50%	1	2.50%
Barangays far from the park	3	3.70%	8	9.90%	18	22.20%	43	53.10%	9	11.10%	0	0.00%
Barangays near the park	7	3.70%	7	3.70%	37	19.40%	95	49.70%	40	20.90%	5	2.60%
Businesses	4	8.70%	1	2.20%	10	21.70%	20	43.50%	11	23.90%	0	0.00%
City office employees	1	3.40%	0	0.00%	5	17.20%	13	44.80%	7	24.10%	3	10.30%
College students	21	7.30%	23	8.00%	61	21.20%	127	44.10%	46	16.00%	10	3.50%

Weather-related disasters.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	2	5.00%	3	7.50%	13	32.50%	14	35.00%	8	20.00%	0	0.00%
Barangays far from the park	7	8.60%	6	7.40%	29	35.80%	28	34.60%	10	12.30%	1	1.20%
Barangays near the park	7	3.70%	26	13.60%	74	38.70%	55	28.80%	23	12.00%	6	3.10%
Businesses	3	6.50%	3	6.50%	17	37.00%	11	23.90%	12	26.10%	0	0.00%
City office employees	2	6.90%	0	0.00%	12	41.40%	8	27.60%	6	20.70%	1	3.40%
College students	14	4.90%	25	8.70%	79	27.40%	120	41.70%	40	13.90%	10	3.50%

Conversion of farms and other green areas to residential and commercial areas.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	3	7.50%	11	27.50%	13	32.50%	10	25.00%	3	7.50%	0	0.00%

Barangays far from the park	6	7.40%	25	30.90%	38	46.90%	8	9.90%	4	4.90%	0	0.00%
Barangays near the park	7	3.70%	75	39.30%	79	41.40%	21	11.00%	6	3.10%	3	1.60%
Businesses	6	13.00%	13	28.30%	16	34.80%	5	10.90%	6	13.00%	0	0.00%
City office employees	1	3.40%	12	41.40%	11	37.90%	3	10.30%	2	6.90%	0	0.00%
College students	23	8.00%	70	24.30%	121	42.00%	46	16.00%	26	9.00%	2	0.70%

The population of native animals, such as fish, birds, and mammals.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	5	12.50%	5	12.50%	13	32.50%	12	30.00%	5	12.50%	0	0.00%
Barangays far from the park	13	16.00%	9	11.10%	28	34.60%	21	25.90%	9	11.10%	1	1.20%
Barangays near the park	21	11.00%	30	15.70%	84	44.00%	43	22.50%	11	5.80%	2	1.00%
Businesses	11	23.90%	4	8.70%	15	32.60%	10	21.70%	6	13.00%	0	0.00%

City office employees	3	10.30%	3	10.30%	15	51.70%	6	20.70%	1	3.40%	1	3.40%
College students	42	14.60%	28	9.70%	76	26.40%	105	36.50%	32	11.10%	5	1.70%

The quality of public, green, and open spaces (e.g., parks, plazas).

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	4	10.00%	12	30.00%	11	27.50%	10	25.00%	2	5.00%
Barangays far from the park	5	6.20%	7	8.60%	23	28.40%	19	23.50%	23	28.40%	4	4.90%
Barangays near the park	3	1.60%	15	7.90%	56	29.30%	54	28.30%	56	29.30%	7	3.70%
Businesses	7	15.20%	2	4.30%	12	26.10%	6	13.00%	19	41.30%	0	0.00%
City office employees	1	3.40%	2	6.90%	7	24.10%	7	24.10%	11	37.90%	1	3.40%
College students	9	3.10%	26	9.00%	66	22.90%	78	27.10%	93	32.30%	16	5.60%

The overall environmental state of the city.

	Perception ratings											
	do not know		much worse		worse		stayed the same		better		much better	
Stakeholders	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	2	5.00%	4	10.00%	13	32.50%	12	30.00%	7	17.50%	2	5.00%
Barangays far from the park	9	11.10%	6	7.40%	27	33.30%	16	19.80%	22	27.20%	1	1.20%
Barangays near the park	1	0.50%	20	10.50%	82	42.90%	47	24.60%	36	18.80%	5	2.60%
Businesses	7	15.20%	4	8.70%	11	23.90%	11	23.90%	12	26.10%	1	2.20%
City office employees	1	3.40%	1	3.40%	12	41.40%	8	27.60%	7	24.10%	0	0.00%
College students	18	6.30%	19	6.60%	79	27.40%	88	30.60%	70	24.30%	14	4.90%

Appendix 12 Details of the respondents' environmental behaviour by stakeholder group.

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	3	7.50%	4	10.00%	16	40.00%	13	32.50%	3	7.50%
Barangays far from the park	2	2.50%	4	4.90%	12	14.80%	33	40.70%	22	27.20%	8	9.90%
Barangays near the park	0	0.00%	4	2.10%	24	12.60%	85	44.50%	54	28.30%	24	12.60%
Businesses	2	4.30%	0	0.00%	10	21.70%	18	39.10%	15	32.60%	1	2.20%
City office employees	0	0.00%	1	3.40%	3	10.30%	14	48.30%	9	31.00%	2	6.90%
College students	4	1.40%	13	4.50%	43	14.90%	134	46.50%	75	26.00%	19	6.60%

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	0	0.00%	4	10.00%	3	7.50%	10	25.00%	12	30.00%	11	27.50%

Barangays far from the park	3	3.70%	4	4.90%	4	4.90%	27	33.30%	15	18.50%	28	34.60%
Barangays near the park	1	0.50%	5	2.60%	16	8.40%	57	29.80%	64	33.50%	48	25.10%
Businesses	2	4.30%	2	4.30%	6	13.00%	14	30.40%	16	34.80%	6	13.00%
City office employees	0	0.00%	0	0.00%	5	17.20%	8	27.60%	10	34.50%	6	20.70%
College students	5	1.70%	11	3.80%	25	8.70%	85	29.50%	89	30.90%	73	25.30%

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	3	7.50%	8	20.00%	10	25.00%	8	20.00%	8	20.00%	3	7.50%
Barangays far from the park	6	7.40%	14	17.30%	12	14.80%	29	35.80%	11	13.60%	9	11.10%
Barangays near the park	10	5.20%	48	25.10%	36	18.80%	58	30.40%	19	9.90%	20	10.50%
Businesses	5	10.90%	11	23.90%	7	15.20%	17	37.00%	4	8.70%	2	4.30%
City office employees	0	0.00%	7	24.10%	6	20.70%	11	37.90%	5	17.20%	0	0.00%

College students	22	7.60%	85	29.50%	65	22.60%	72	25.00%	24	8.30%	20	6.90%

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	8	20.00%	12	30.00%	12	30.00%	5	12.50%	2	5.00%
Barangays far from the park	5	6.20%	27	33.30%	20	24.70%	22	27.20%	4	4.90%	3	3.70%
Barangays near the park	14	7.30%	60	31.40%	51	26.70%	55	28.80%	6	3.10%	5	2.60%
Businesses	4	8.70%	12	26.10%	13	28.30%	12	26.10%	5	10.90%	0	0.00%
City office employees	2	6.90%	6	20.70%	9	31.00%	11	37.90%	1	3.40%	0	0.00%
College students	24	8.30%	109	37.80%	74	25.70%	60	20.80%	16	5.60%	5	1.70%

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	16	40.00%	9	22.50%	6	15.00%	6	15.00%	2	5.00%

Barangays far from the park	8	9.90%	28	34.60%	20	24.70%	13	16.00%	6	7.40%	6	7.40%
Barangays near the park	11	5.80%	85	44.50%	35	18.30%	42	22.00%	12	6.30%	6	3.10%
Businesses	4	8.70%	20	43.50%	7	15.20%	10	21.70%	3	6.50%	2	4.30%
City office employees	1	3.40%	9	31.00%	12	41.40%	6	20.70%	1	3.40%	0	0.00%
College students	30	10.40%	112	38.90%	60	20.80%	58	20.10%	19	6.60%	9	3.10%

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	3	7.50%	10	25.00%	5	12.50%	14	35.00%	5	12.50%	3	7.50%
Barangays far from the park	6	7.40%	18	22.20%	19	23.50%	19	23.50%	11	13.60%	8	9.90%
Barangays near the park	6	3.10%	49	25.70%	40	20.90%	61	31.90%	24	12.60%	11	5.80%
Businesses	3	6.50%	14	30.40%	6	13.00%	14	30.40%	8	17.40%	1	2.20%
City office employees	1	3.40%	7	24.10%	9	31.00%	10	34.50%	1	3.40%	1	3.40%

College students	21	7.30%	66	22.90%	70	24.30%	83	28.80%	28	9.70%	20	6.90%

When I go out, I prefer walking and cycling, instead of using a car.

	did not answer		never		rarely		sometimes		often		always	
Stakeholder groups	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Barangays closest to the park	1	2.50%	5	12.50%	8	20.00%	14	35.00%	6	15.00%	6	15.00%
Barangays far from the park	4	4.90%	7	8.60%	14	17.30%	33	40.70%	11	13.60%	12	14.80%
Barangays near the park	4	2.10%	12	6.30%	45	23.60%	70	36.60%	36	18.80%	24	12.60%
Businesses	3	6.50%	3	6.50%	8	17.40%	16	34.80%	12	26.10%	4	8.70%
City office employees	0	0.00%	5	17.20%	6	20.70%	12	41.40%	3	10.30%	3	10.30%
College students	10	3.50%	25	8.70%	76	26.40%	92	31.90%	52	18.10%	33	11.50%

Appendix 13 Focus group guidelines and questionnaires

Online Focus Group Consent Form

Thank you very much for agreeing to participate in this online focus group.

My name is Dalton Erick Baltazar, a second-year PhD student at Nottingham Trent University in the United Kingdom. This focus group is part of my PhD research entitled "Socio-cultural Valuation of Urban Parks: Lessons from the Philippines".

Project Information

The general aim of the project is to assess how people value the benefits and disbenefits they associate with urban parks. This will be done through the conduct of key informant interviews, a survey, and focus group discussions. This focus group has been designed to collect socio-economic information and the importance you assign to the benefits and disbenefits of the Jose Rizal Plaza before and after discussing relevant concepts.

Eligibility to Participate

Please make sure that you meet the eligibility criteria below before participating in the focus group:

- 18 years old or older
- Currently residing in Calamba City
- Have not participated in this focus group yet

Data Management

This activity should take no longer than 2 hours. The discussions will be audio-recorded, transcribed, and translated. The recordings and transcripts will be kept in a secure encrypted storage service and will only be accessible to Mr Baltazar, his supervisors, and trained assistants. All the focus group data will be anonymised before storage and analysis, and care will be taken to remove other information in the discussions that could identify you. None of the information that you will provide will be used for any commercial purposes and shared with any third party. The data from this activity might be used for academic papers, research presentations, news articles,

and in other media that we may produce from the project. The recordings, transcripts, and photos might be kept indefinitely for future case study comparisons.

Right to Refuse or Withdraw

You have the right to refuse to answer any of the questions in the focus group or withdraw the information that you have given. You can also withdraw your participation by informing the facilitator.

If you wish to withdraw, you can do so by emailing Mr Baltazar or his supervisors with your name and details. If you withdraw from the study within 15 days, your contributions to the project will be destroyed, and your data will be removed. After this period, the data will have been anonymised and prepared for analysis. Therefore, they cannot be individually identified and cannot be withdrawn.

By signing this form, I agree that:

12. I understand the purpose of the study and the focus group.
13. I meet the eligibility criteria to participate in the focus group.
14. I am voluntarily taking part in this project.
15. My focus group data can be used as described above.
16. I don't expect to receive any payment for my participation.
17. I understand that I can stop and withdraw from this study any time.

Contact Information

This study has been reviewed using approved protocols within the School of Animal, Rural and Environmental Sciences and has been approved under application number ARE917. If you have any further questions or concerns about this study, please contact:

Researcher

Dalton Erick Baltazar – dalton.baltazar@ntu.ac.uk | +639276345904

Supervisors

Dr Jillian Labadz (Director of studies) – jillian.labadz@ntu.ac.uk
Dr Roy Smith – roy.smith@ntu.ac.uk
Dr Andrew Telford – andrew.telford@ntu.ac.uk
Dr Marcello Di Bonito – marcello.dibonito@ntu.ac.uk

Any ethical concerns can be raised by contacting AREEthicalReview@ntu.ac.uk.

Entry Questionnaire

Your code*:	

*Code will be the date (DDMMYY) and participant number (example: 030420-1 for participant number 1 in a focus group conducted on the 3rd of April 2020)

Instruction: Please answer each question as honestly as possible.

1 What comes to your mind when you hear the term “urban parks”?

2. Have you ever visited Jose Rizal Plaza?

a. Yes -> answer questions i and ii below b. No

i. How frequent? _____ (times) every [encircle one: week, month, year]

ii. For what purpose(s)? Encircle the letter of your answer. You can give multiple answers.

a. Health/exercise

b. Walking the dog

c. Relax/unwind

d. Fresh air/pleasant weather

e. Enjoy scenery

f. Photography

g. Watch or participate in events

h. Others (please specify): _____

3. If you were asked to contribute something to keep the park, would you be willing to make this contribution? Encircle the letter of your answer.

a. Yes -> Answer question i below b. No -> Answer question ii below

i. If you answered yes, which of the following would you be willing to contribute? Encircle the letter of your answer(s). You can have multiple answers.

a. Time -> Answer the questions below

What is the minimum number of hours do you think you could contribute per month? _____

What is the maximum number of hours do you think you could contribute per month? _____

b. Money -> Answer the questions below

What is the minimum amount do you think you could contribute per month? _____

What is the maximum amount do you think you could contribute per month? _____

c. Others (please specify): _____ -> Answer the questions below

What is the minimum do you think you could contribute per month? _____

What is the maximum do you think you could contribute per month? _____

ii. If you answered no, please indicate the reason. Encircle the letter of your answer.

a. I don't have extra time and money but otherwise would contribute.

b. It is the responsibility of the city to keep and maintain the park.

c. Parks are not important.

d. I don't use the park. Those that use it should contribute.

e. Other reasons (please specify): _____

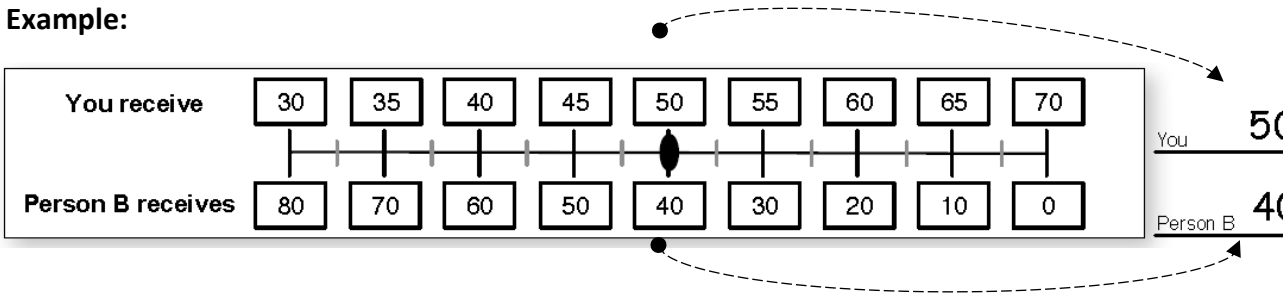
4. In this part of the survey, **imagine that you have been partnered with another person named "B".** Imagine that you and person B are unrelated and do not know each other. Person B will also not be informed of your decisions.

If you were given the power to divide a treasure (in the form of cash in Philippine Peso), how would you do it? **How much would you give yourself and how much would you give B?**

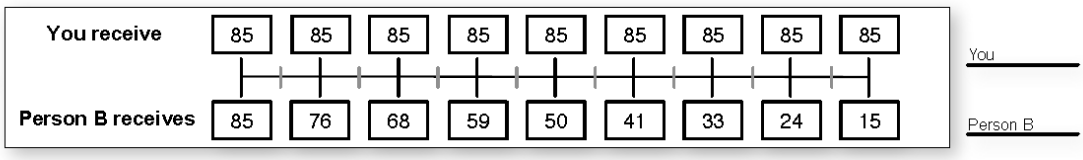
Each number below represents a set of allocation variations. **Choose one allocation** that you prefer in each number **by marking the respective position along the midline**, and then **write the values on the space provided**. Remember that this is about personal preferences, and therefore, there are no right or wrong answers.

In the **example** below, the respondent chose the **50 – 40 allocation**. This means that he/she prefers to receive PhP 50.00, and he/she prefers person B to receive PhP 40.00.

Example:



1



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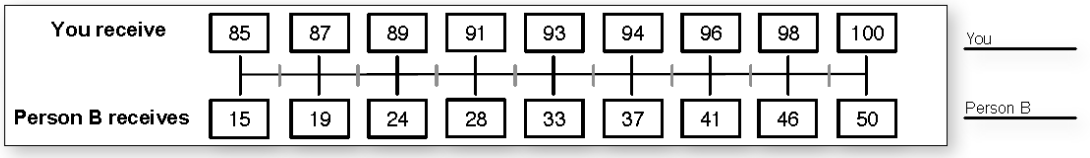

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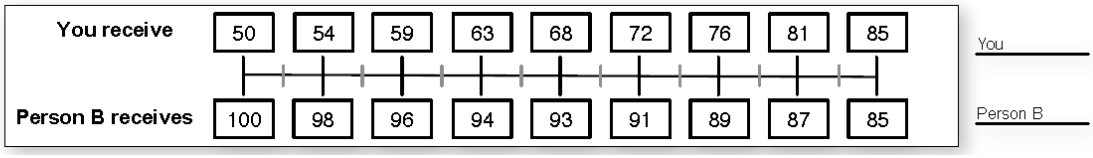

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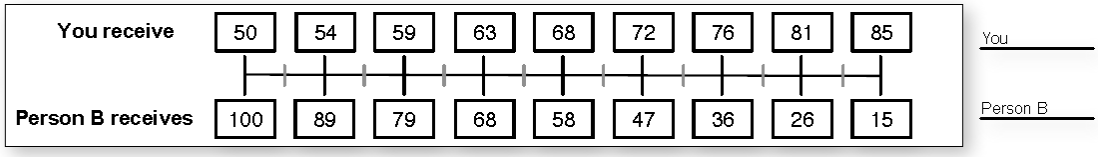
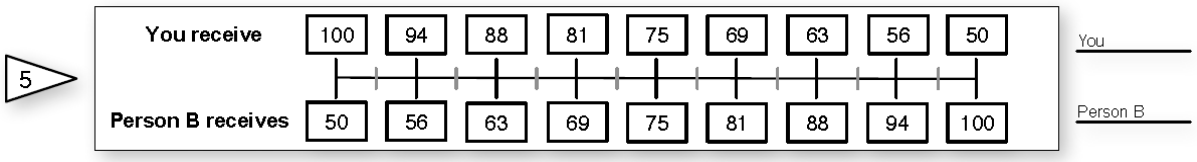
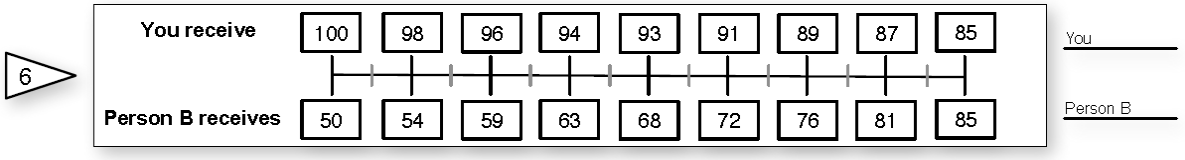






Socio-economic Characteristics

1. Did Dalton Baltazar interview you as a key informant in the initial stages of his research project?

a. Yes b. No

2. Did you participate in our survey related to the benefits and disbenefits of The Jose Rizal Plaza?

a. Yes b. No

3. How did you find out about this focus group? Encircle the letter of your answer.

a. From the posters at the City Office

b. From the posters at the Barangay Office

c. From social media (Facebook, Twitter)

d. From someone working at the City Office

e. From someone working at the Barangay Office

f. From the barangay health workers

g. From Dalton Baltazar

h. From a friend or a relative

i. Others (please specify): _____

4. Which of the following describes you? You can choose multiple answers.

a. City office employee

b. Barangay office employee

c. Calamba City College student

d. Student from another college or university. Specify the college or university: _____

e. Owner/employee of a business (e.g., restaurant, canteen, store, salon) in Barangay Halang or Real

f. Owner/employee of a business (e.g., restaurant, canteen, store, salon) in other barangays

g. Resident of Barangay San Juan or Barangay 4

h. Resident of Barangay Bucal or Barangay La Mesa

i. Resident of Barangay Real or Barangay Halang

j. Resident of ng Barangay Mayapa or Barangay Masili

k. Resident of Barangay Canlubang or Barangay Camaligan

l. Resident of other barangays

5. Barangay (village)_____

6. Age: _____

7. Gender. Encircle the letter of your answer.

a. Male

b. Female

c. I prefer to use my own term: _____

d. Prefer not to say

8. Marital status. Encircle the letter of your answer.

a. Single

b. Married

c. Widowed

d. Divorced

e. Separated

f. Prefer not to say

9. House ownership. Encircle the letter of your answer.

a. Owned

b. Rented

c. Mortgaged

d. Shared with relatives

e. Others (please specify): _____

10. Highest educational attainment. Encircle the letter of your answer.

a. no formal form of education

b. incomplete elementary education

c. complete elementary education

d. incomplete high school education

e. complete high school education

f. incomplete college education

g. complete college education

h. graduate school

11. Which of the following statements describe you? Encircle the letter of your answer.

a. I am a full-time student.

b. I am currently not in paid employment, but looking for a job.

c. I am currently not in paid employment, but not looking for a job.

d. I am part-time student, and I also work.

e. I have a part-time job.

f. I have a full-time job.

g. I have my own business.

h. I am retired.

i. I am a homemaker.

j. Others (please specify): _____

11b. If you answered d, e, f, or g, kindly choose one category related to your job or business. Encircle the letter of your answer.

a. Agriculture, Forestry, Fishing and Hunting

b. Mining and quarrying

c. Manufacturing

d. Electricity, gas, steam and air conditioning supply

e. Water supply; sewerage, waste management and remediation activities

f. Wholesale and retail trade; repair of motor vehicles and motorcycles

g. Transportation

h. Accommodation and food service activities

i. Information and communication

h. Financial and insurance activities

j. Real estate activities

k. Professional, scientific and technical activities

l. Administrative and support service activities

m. Government and public administration

n. Education

o. Human health and social work activities

p. Arts, entertainment and recreation

q. Other (please specify): _____

12. Daily minimum wage rate (PhP 303 in Calamba City). Encircle the letter of your answer.

a. Less than minimum wage rate

b. Minimum wage rate

c. Twice minimum wage rate

d. Three times the minimum wage rate

e. Four times the minimum wage rate

f. Five times minimum wage rate

g. > five times the minimum wage rate

13. Are you a migrant here? Encircle the letter of your answer.

a. Yes -> answer the question below b. No

Name of your home town (city o municipality): _____

How many years have you lived here in Calamba City? _____

14. Do you have internet access at home or your office?

a. Yes b. No

Exit Questionnaire

Your code:	

Instruction: Please answer each question as honestly as possible.

1. What do you think are the important concepts/keywords that were discussed in the focus group?

2. If you were asked to contribute something to keep the park, would you be willing to make this contribution? Encircle the letter of your answer.

a. Yes -> Answer question i below b. No -> Answer question ii below

i. If you answered yes, which of the following would you be willing to contribute? Encircle the letter of your answer(s). You can have multiple answers.

a. Time -> Answer the questions below

What is the minimum number of hours do you think you could contribute per month? _____

What is the maximum number of hours do you think you could contribute per month? _____

b. Money -> Answer the questions below

What is the minimum amount do you think you could contribute per month? _____

What is the maximum amount do you think you could contribute per month? _____

c. Others (please specify): _____ -> Answer the questions below

What is the minimum do you think you could contribute per month? _____

What is the maximum do you think you could contribute per month? _____

ii. If you answered no, please indicate the reason. Encircle the letter of your answer.

a. I don't have extra time and money but otherwise would contribute.

b. It is the responsibility of the city to keep and maintain the park.

c. Parks are not important.

d. I don't use the park. Those that use it should contribute.

e. Other reasons (please specify): _____

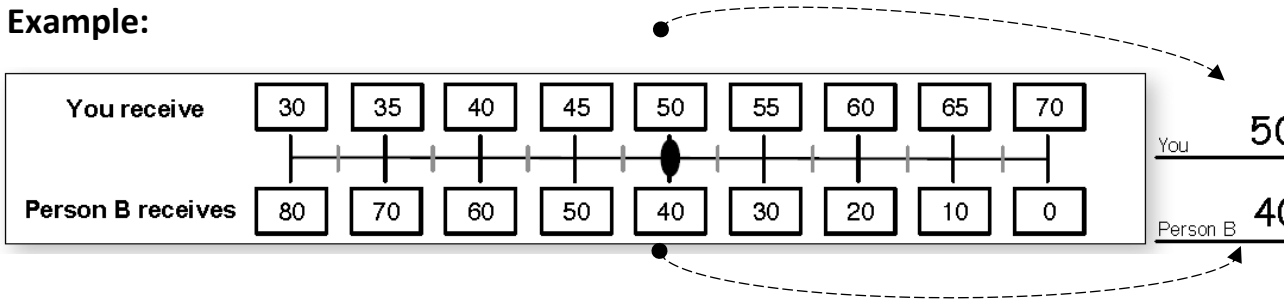
3. In this part of the survey, **imagine that you have been partnered with another person named "B".** Imagine that you and person B are unrelated and do not know each other. Person B will also not be informed of your decisions.

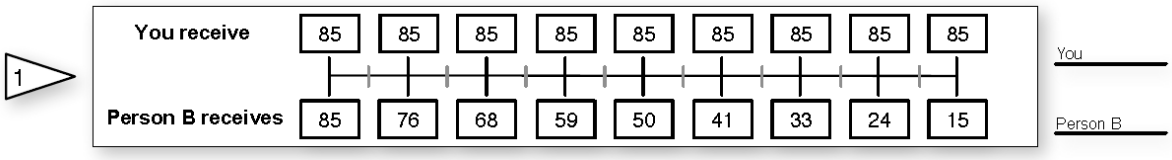
If you were given the power to divide a treasure (in the form of cash in Philippine Peso), how would you do it? **How much would you give yourself and how much would you give B?**

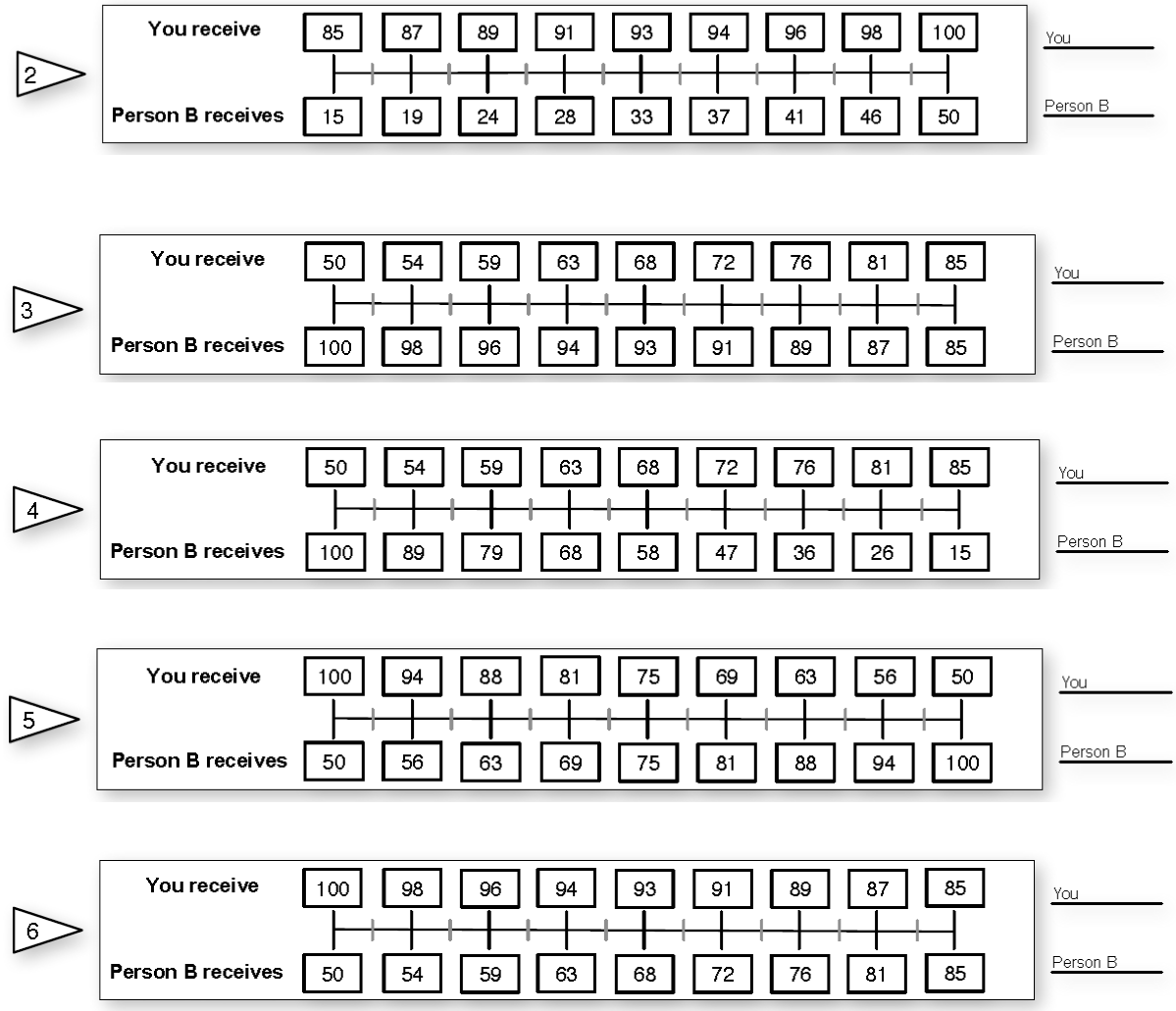
Each number below represents a set of allocation variations. **Choose one allocation** that you prefer in each number **by marking the respective position along the midline**, and then **write the values on the space provided**. Remember that this is about personal preferences, and therefore, there are no right or wrong answers.

In the **example** below, the respondent chose the **50 – 40 allocation**. This means that he/she prefers to receive PhP 50.00, and he/she prefers person B to receive PhP 40.00.

Example:







Instructions (to focus group facilitators/assistants)

1. Fill-out the focus group diary
2. Send the link to the online consent form and entry questionnaire
3. Inform the participants about the study, the concept of ecosystem services/disservices, and the characteristics and ecosystem services/disservices of the park (based on the earlier stages of the research).
4. (1st: Individual to self) Ask the participants to distribute 100 hypothetical "preference points" to the different park ES/EDS on their own and without talking to any other participant.
5. Discuss the concept of trade-offs.

6. (2nd: Group to individual) Form groups, and let the participants communicate and discuss trade-offs for 5 minutes. Ask them then to distribute the preference points together and submit only one valuation form.
7. (3rd: Individual to group) Break groups and ask the participants to distribute the points individually again without talking to other participants.
8. (4th: Future generations – individual; before communication) Ask the participants again to perform the distribution once more, this time considering what they think will be important for future generations.
9. (5th: Future generations - group) Reform the groups and let them discuss which ecosystem services and disservices they think will be important for future generations for 5 minutes. Afterwards, ask them to distribute the preference points together and submit only one valuation form.
10. (6th: Future generations – individual; after communication) Break groups and ask the participants to distribute the points individually again (considering future generations) without talking to other participants.
11. Open forum and debriefing
12. Send the link to the exit questionnaire

Time Allocation

No.	Activity	Time (min.)
1	Entry questionnaire	10
2	House rules	5
3	The concept of ecosystem services/disservices	5
4	Park information	5
5	The park ecosystem services/disservices and photos	10
6	1st distribution (Individual to self)	5
7	The concept of trade-offs	5
8	Group discussion	5
9	2nd distribution (Group to individual)	5
10	3rd distribution (Individual to group)	5
11	Future generations	5
12	4th distribution (Future generations – individual; before communication)	5

13	Group discussion		5
14	5th distribution (Future generations – group)		5
15	6th distribution (Future generations – individual; after communication)		5
16	Debriefing and discussion		10
17	Exit questionnaire		10
		TOTAL	**105**

Focus Group Lecture Contents

1. House rules – expressing opinions
2. Introduction about the research
3. The concept of ecosystem services/disservices
4. Park information
5. The park ecosystem services/disservices and photos
6. Trade-offs (will be discussed after the first valuation)
7. Future generations
8. Debriefing questions (separate discussions for ecosystem services and disservices)
    a. What factors did you consider in allocating the points when you were on your own, within a group, or interacting with other groups?
    b. How did you think the discussions affect how you distributed the points?
    c. How did you think the thinking about welfare of the future generations affect how you distributed the points?
    d. What do you think are the take-aways of this activity?

Ecosystem Services/Disservices Valuation Form

Your code(s)*:			

* For groups, write all the codes of the members.

Valuation No.	1	2	3	4	5	6

Ecosystem Services. *Distribute a total of 100 points to the different ecosystem services that the park has based on their importance to you (or to your group). You can distribute the points to all of the ecosystem services or to just some of them. There are no right or wrong answers.*

Ecosystem Services	**Points allocat**
The ability of the park to enable (eco) tourism.	
The ability of the park to provide a place for enjoyment and spending free time.	
The ability of the park to offer opportunities for practicing different sports and keeping fit.	
The ability of the park to provide a place to disconnect, relax, and diminish stress (mental recreation).	
The ability of the park to provide unique and attractive landscapes (aesthetic information).	
The ability of the park to provide a place for research on and education about nature (information for cognitive development).	
The ability of the park to provide a space where you can maintain or create relations among people and family (social relationships, cohesive communities, diversity appreciation).	
The ability of the park to enable the expression of local identity and cultural heritage.	
The ability of the park to stimulate the interest of the residents to the city's history and cultural heritage (including Jose Rizal).	
The ability of the park to provide revenue for the city (renting the activity area and other facilities).	
The ability of the park to provide revenue for locals.	

The ability of the park to become a place where different kinds of events in the city (e.g., celebrations, concerts, competitions) can be held.	
The ability of the park to serve as an extra parking space for city office employees and residents.	
The ability of the park to enhance the non-economic quality of life of the city residents.	
The contribution of the park to increasing the green areas in the city.	

Ecosystem Disservices. *Distribute a total of 100 points to the different ecosystem disservices that the park has based on the level of concern you (or your group) has for them. You can distribute the points to all of the ecosystem disservices or to just some of them. There are no right or wrong answers.*

Ecosystem Disservices	**Points allocat**
The expensive maintenance of park. Funds can be used for other projects.	
The obstruction of fast and comfortable transportation because of the park (motorists slow down to take a peek of the park).	
The risk of the park providing space for anti-social behaviour, crime, and other illegal things.	
The park causing conflict among users - who should be prioritised to use the open space?	
The park wasting the land that could have been used for other purposes.	
The park exposing visitors to air pollution since it is beside the road.	
The frustration that the park brings to residents because of its incomplete features.	

Appendix 14 Reasons for valuing ES and EDS - individual

No	Filipino quote	Translated quote	Broad theme	Specific theme	ES or EDS	Specific ES and EDS
1	Para sa akin, ang naging importante, para sa akin, ay 'yung gagamitin siya sa sports kasi ako po ay naging patunay nun kasi kami po ay 'yung Calamba Puppies. 'Yung Calamba Puppies po ay 'yung club na gumagamit ng park para sa football players ng elementary at high school so hawak po namin 'yung mga batang naglalaro ng football sa buong Calamba na gustong sumali sa club namin.	For me, the important thing, for me, is that it will be used in sports because I was the proof of that because we're the Calamba Puppies. Calamba Puppies is the club that uses the park for elementary and high school football players, so we handle the kids who play football all over Calamba who want to join our club.	personal experience	member of sports organisation	ES	sports and physical fitness
2	'yung family kasi dito rin po ako nakatira sa may Halang. Opo. Kasi sa family nakikita ko po halos araw-araw kahit may pasok o wala, may mga pamilyang nagpupunta para iba't-ibang reason.	Family because I also live here near Halang. Yes. Because I see families almost every day, whether there is work or none, there are families who go for different reasons.	personal experience	see a lot of families in the park	ES	family and social relationships
3	'Dun sa areang 'yun, halos 'yung buong pamilya nagkakasama-sama tuwing especially weekend pero nandun din naman sila sa weekdays kaya lang mabilis lang siguro 'pag weekdays pero sa weekends halos mula five o'clock andun na	In that area, almost whole families are together, especially every weekend. They also go there during weekdays but only for a short time, unlike during weekends when they go from five o'clock for Zumba until the evening. This is especially	personal experience	see a lot of families in the park	ES	family and social relationships

	nagZuzumba hanggang gabi. 'Yung lalo na 'pag December, 'yung mga pagkain at 'yung Christmas tree atsaka 'yung may mga rides.	during December when there are food, Christmas tree and rides.				
4	ecotourism. Dahil parang domino effect kasi 'yung ecotourism. 'Pag may ecotourism ka, pwede mo mapromote 'yung relaxation, pwede mong… 'Yung pagbibisita ng mga tao, Dadami 'yung tax tapos kita rin 'yan sa munisipyo.	Ecotourism. Because it is like domino effect because of ecotourism. If you have ecotourism, you can promote relaxation, you can… the visitation of people, tax will increase, and the municipality will also have income.	opinion	ecotourism results to other benefits	ES	ecotourism (domino effect)
5	Pagka napromote 'yung ecotourism 'pag marami pumuntang bisita, magpproduce siya ng trabaho sa iba o pagkakitaan ng ibang tao, like, pwede silang magbenta doon whatsoever. Ayun 'yung pinakamain focus ko talaga.	If the ecotourism is promoted, if more visitors will come, it will produce jobs for others, or other people will have a source of income like they can sell there whatsoever. That is really my main focus.	opinion	ecotourism results to other benefits	ES	ecotourism
6	'yung dagdag kita sa mga residente ng Calamba kasi nagpunta ako sa part na 'yun para 'dun sa mga… Christmas at sa perya atsaka kasama 'yung family	The extra source of income for the residents of Calamba because I went there for… Christmas and carnivals together with family.	personal experience	saw vendors in the park during Christmas	ES	revenue for locals
7	Syempre 'yung epekto niya is para sa relaxation nung family 'tas 'yung gathering at the same time, 'yung enjoyment, tapos 'yung syempre	Of course, its effect is for the relaxation of the family and their gatherings at the same time, the enjoyment, then, of course, the	personal experience	went with family	ES	family and social relationships

	kumikita ‘yung mga may-ari nung stores tapos ‘yung mga games. ‘Yun lang ‘yung para sa part ko at sa family namin, naging benefits namin doon.	store owners gain income, and there are games. That is all for my part and my family's benefits there.		there and felt relaxed		
8	Syempre ‘yung epekto niya is para sa relaxation nung family ‘tas ‘yung gathering at the same time, ‘yung enjoyment, tapos ‘yung syempre kumikita ‘yung mga may-ari nung stores tapos ‘yung mga games. ‘Yun lang ‘yung para sa part ko at sa family namin, naging benefits namin doon.	Of course, its effect is for the relaxation of the family and their gatherings at the same time, the enjoyment, then, of course, the store owners gain income, and there are games. That is all for my part and my family's benefits there.	personal experience	went with family there and felt relaxed	ES	relaxation
9	Syempre ‘yung epekto niya is para sa relaxation nung family ‘tas ‘yung gathering at the same time, ‘yung enjoyment, tapos ‘yung syempre kumikita ‘yung mga may-ari nung stores tapos ‘yung mga games. ‘Yun lang ‘yung para sa part ko at sa family namin, naging benefits namin doon.	Of course, its effect is for the relaxation of the family and their gatherings at the same time, the enjoyment, then, of course, the store owners gain income, and there are games. That is all for my part and my family's benefits there.	opinion	benefits for family	ES	enjoyment and spending free time
10	Syempre ‘yung epekto niya is para sa relaxation nung family ‘tas ‘yung gathering at the same time, ‘yung enjoyment, tapos ‘yung syempre kumikita ‘yung mga may-ari nung	Of course, its effect is for the relaxation of the family and their gatherings at the same time, the enjoyment, then, of course, the store owners gain income, and	personal experience	while providing enjoyment, residents	ES	revenue for locals

	stores tapos ‘yung mga games. ‘Yun lang ‘yung para sa part ko at sa family namin, naging benefits namin doon.	there are games. That is all for my part and my family's benefits there.		with stores can earn		
11	Syempre nandun ‘yung statue ni Rizal, so ‘yung history natin	Of course, the statue of Rizal is located there and so is our history.	opinion	because of Rizal's statue	ES	interest history
12	yung antisocial. Kasi ‘pag na-tag yung place na ganoon, bababa ‘yung tao na pupunta ‘dun. But ‘yung the rest is feeling ko kayang solusyonan pero once na safety na ‘yung pinag-uusapan, like ganun na tao na pwedeng may makagawa sa’yo ng ‘di maganda eh ibang usapan na. Siya talaga ‘yung hundred percent kong nilagyan.	Antisocial because if the place is tagged as such, there will be lesser people who will go there. But for the rest, I feel that it has a solution, but once that safety becomes the concern, like a person who can do something that is not good, it is a different story. That is what I answered with one hundred per cent.	opinion	antisocial tag could lead to other disservices	EDS	antisocial behaviour
13	Nung itinayo yung coliseum, nabahala ang mga, marami akong kakilala kasama na rin ako doon na ang laki ng ginastos doon tapos lumiit na para ‘dun sa dating nakagawian. Parang naging ganoon. So naisip ko rin na tama nga naman sana inayos nalang din tapos hindi naman ganun kagarbo siguro or ganun kalaki ‘yung ginastos para doon kasi hindi naman naitanong sa	When the Coliseum was built, they were bothered. I know plenty of people, including me, that a lot of money was spent there at the expense of other things that the municipality used to fund. It became something like that. So I realized that it was correct that it should've been made better but not that grand, or they should not have spent that much because the	opinion	did not consult the public	EDS	expensive maintenance

	mga tao eh. Wala namang naging, kunwari, naging, nagtatanong siguro sa mga nakatira sa Calamba kung ito ba ay talagang gusto nila. So 'yung decision makers lang, 'yung nasa government natin, sila lang 'yung nagdecide para doon.	citizens were not even consulted about it. There were no consultations for the residents of Calamba, whether they like it or not. It was only up with the decision-makers, those people in our government, they were the only ones who decided about it.				
14	Tapos, ang pangalawa doon, kasi 'nung, syempre ilang taon na rin kaming gumagamit ng sa football diyan ang nakakahiya lang kung bibisita tayo, 'yung C.R., madumi, tubig, sira. Tapos 'yung aming mga sports equipment, nasisira, nawawala, ninanakaw. Ayun, so kulang din sa security siguro kasi may lapses na sa security kasi may naririnig rin kami na mga kwento na may mga batang nirape ng kasing bata rin nila o may gigagawang lovers lane 'yung doon so nagiging, parang shady 'yung area kasi madilim nga. Wala namang security. Ganoon, iyon para siguro sa akin importante doon.	The second one is that when, of course, we had been using the football field for several years now, but the embarrassing part is the toilet, it is dirty, theres no water, it is out of order. Then, our sports equipment are also broken, missing, or looted. It lacks security because there are lapses in security. We sometimes hear that there are children raped by their fellow children and that the place is being used as lovers' lane, so it becomes a shady area because it is dark. There is no security, and I think that is what's important.	heard from others	crimes in the park	EDS	antisocial behaviour

15	Tapos, ang pangalawa doon, kasi ‘nung, syempre ilang taon na rin kaming gumagamit ng sa football diyan ang nakakahiya lang kung bibisita tayo, ‘yung C.R., madumi, tubig, sira. Tapos ‘yung aming mga sports equipment, nasisira, nawawala, ninanakaw. Ayun, so kulang din sa security siguro kasi may lapses na sa security kasi may naririnig rin kami na mga kwento na may mga batang nirape ng kasing bata rin nila o may gigagawang lovers lane ‘yung doon so nagiging, parang shady ‘yung area kasi madilim nga. Wala namang security. Ganoon, iyon para siguro sa akin importante doon.	The second one is that when, of course, we had been using the football field for several years now, but the embarrassing part is the toilet, it is dirty, theres no water, it is out of order. Then, our sports equipment are also broken, missing, or looted. It lacks security because there are lapses in security. We sometimes hear that there are children raped by their fellow children and that the place is being used as lovers' lane, so it becomes a shady area because it is dark. There is no security, and I think that is what's important.	personal experience	dirty toilet	EDS	incomplete facilities
16	‘Yun nga, ‘yung naidudulot na pagkainis ng mga tao sa park dahil sa incomplete ‘yung facility. Una, bukod doon sa, ‘yun nga, nabanggit ni ma’am na sa C.R. tapos din ‘yung kulang din sa mga lightings, pagka gabi tapos medyo nakukulangan kasi ako doon sa pagiging greenery nung area kasi parang… nung lalo na nung natayo ‘yung structure ni Rizal tapos ‘yung nandun lahat lalo ‘yung, ‘di ba	The park causes people to be displeased because the facility is incomplete. Firstly, aside from what was mentioned about the toilets, then lack of lightings during the evening, I also think it lacks greenery, especially when the structure of Rizal was built, where everything was there. The Coliseum is there, right? The structure of San Roque, this one, Rizal's. It's not so	opinion	lacks proper lighting	EDS	incomplete facilities

nandun ‘yung mga… ‘yung coliseum, ‘yung structure ni (San Roque?) ‘yung kay Rizal. Tapos nung natayo ‘yung ano… so parang hindi na siya masyadong about ‘dun sa mga like napuntahan ko na, na historical sa Cebu ‘yung port San Pedro na cultural siya pero ang ganda ng pagkagreenery niya. ‘Yung mga upuan- landscape, yung mga upuan na… siguro dahil naman sa bago pa din naman ‘tong kay, ‘dun sa Calamba plaza, sa “The Plaza”, tapos ‘yun nga, ‘yung sa dulo, medyo, hindi ko alam kung kasama ‘yun parang putol na sa dulo eh ‘di ba parang nung nagsama-sama ‘dun ‘yung mga… ‘yung ano nung Christmas, ‘yung para sa mga stores ‘tsaka ‘dun sa ano… So parang hindi na siya masyadong ano, para ‘dun sa ecosystem. Kasi ‘di ba kung papansinin mo ‘yung sa, ‘yung kay Rizal ‘pag sa Luneta, emphasis pa talaga ‘dun ‘yung nature eh. Dito parang medyo nakukulangan ako.

much anything like the parks I visited, which are historical like in Cebu, the port San Pedro which is cultural, but the greenery is beautiful, the benches, the landscape. Maybe this is because "The Plaza" in Calamba is still new. There is an unused land which cannot be identified whether it is still part of the park. If you will notice the Luneta park, the emphasis is nature. I think Calamba's "The Plaza" lacks that.

17	nakukulangan kasi ako doon sa pagiging greenery nung area kasi parang… nung lalo na nung natayo ‘yung structure ni Rizal tapos ‘yung nandun lahat lalo ‘yung, ‘di ba nandun ‘yung mga… ‘yung coliseum, ‘yung structure ni (San Roque? 1:11:40) ‘yung kay Rizal. Tapos nung natayo ‘yung ano… so parang hindi na siya masyadong about ‘dun sa mga like napuntahan ko na, na historical sa Cebu ‘yung port San Pedro na cultural siya pero ang ganda ng pagkagreenery niya. ‘Yung mga upuan- landscape, yung mga upuan na… siguro dahil naman sa bago pa din naman ‘tong kay, ‘dun sa Calamba plaza, sa “The Plaza”, tapos ‘yun nga, ‘yung sa dulo, medyo, hindi ko alam kung kasama ‘yun parang putol na sa dulo eh ‘di ba parang nung nagsama-sama ‘dun ‘yung mga… ‘yung ano nung Christmas, ‘yung para sa mga stores ‘tsaka ‘dun sa ano… So parang hindi na siya masyadong ano, para ‘dun sa ecosystem. Kasi ‘di ba kung papansinin mo ‘yung sa, ‘yung kay Rizal ‘pag sa Luneta, emphasis pa	I also think it lacks greenery, especially when the structure of Rizal was built, where everything was there. The Coliseum is there, right? The structure of San Roque, this one, Rizal's. It's not so much anything like the parks I visited, which are historical like in Cebu, the port San Pedro which is cultural, but the greenery is beautiful, the benches, the landscape. Maybe this is because "The Plaza" in Calamba is still new. There is an unused land which cannot be identified whether it is still part of the park. If you will notice the Luneta park, the emphasis is nature. I think Calamba's "The Plaza" lacks that.	opinion	improve greenery	EDS	incomplete facilities

	talaga ‘dun ‘yung nature eh. Dito parang medyo nakukulangan ako.					
18	halimbawa eto sa magagandang mga tanawin. ‘Pag pumunta ka kasi sa park doon sa the Plaza, halimbawa syempre stress, halimbawa po as teacher stressed ako, ‘pag may makita akong magagandang tanawin, syempre marerelax ako, ‘di po ba?	For example, the beautiful scenery. If you go to the park at the plaza, for instance, of course, stress, for example as a teacher I am stressed, if I look at beautiful scenery I will naturally feel relaxed, will I not?	personal experience	relaxation because of nice view or scenery	ES	relaxation
19	Tapos, ‘yung kultural na pagkakakilanlan ng Calamba, kasi ‘di po ba, meron sa atin sa the Plaza, nandoon ‘yung statue ni Jose Rizal so ‘yun ang kultural na pagkakakilanlan ng Calamba.	With the cultural identity of Calamba, we have there at the plaza the statue of Jose Rizal, so that is the cultural identity of Calamba.	personal experience	because of Rizal's statue	ES	local identity and cultural heritage

20	And then, ano pa nga? Ecotourism, opo. So, maganda rin po siya, isang aspect din siya na makakatulong sa city government para sa pag-ano din ng Calamba, parang pagpataas ng turismo.	And then, what else? Ecotourism, yes. So it is also good, it is also an aspect that would help the city government for the improvement of tourism in Calamba.	opinion	promote tourism	ES	ecotourism
21	sports po ‘yung matataas ko kasi as a sports coordinator po, talagang gamit na… yes po, kami po ni Ma’am Jo, nila Sir Sam, coaches po kasi kami. So, bale gamit na gamit po talaga namin ang plaza. Unang-una po dun sa sports at sa maayos na pangangatawan talagang ginagamit po namin ‘yan para makapag-jogging po ang mga ano po namin, students namin, Zumba, kasi po nagZuzumba rin po ako sa division office, ginagamit po naming yan.	Sports is high for me because as a sports coordinator, it is really used... yes, together with Ma'am Jo and Sir Sam, we are coaches. So we often use the plaza plaza. Firstly, in sports and physical wellness, we use it, such as for jogging, our students, Zumba, because we do Zumba at the division office, we use that.	personal experience	sports coordinator	ES	sports and physical fitness
22	Next po ‘yung ganapan ng mga kaganapan sa Calamba. Ito po, kasi po, isa po ang Bareto sa talagang sumasali sa iba’t-ibang events kapag may mga Calamba events po. So, ‘yun po, talagang, for me po ah, mataas po talaga siya for me.	Next is the event place for events in Calamba. Because Barreto is one of those who frequently take part in different kinds of events whenever Calamba has them. So, there, for me, it is really high.	personal experience	school events	ES	sports and physical fitness

23	Yung enjoyment po, para sa akin kasi po ‘pag po kami nagala ng mga kaibigan ko, mga kaklase ko po, nag-eenjoy po kami sa lugar na ‘yon.	Enjoyment, for me, whenever my friends and I would hang out, my classmates, we enjoy ourselves at that place.	personal experience	going to the park with friends	ES	enjoyment and spending free time
24	yung mahal na pagpapagawa’t pagmemaintain sa park. Iyon ang una kasi syempre anlaking budget ng city government. Ang corrupt, nandoon, hindi naman po ‘yun matatanggal as far as I’m concerned. Lumaki po ako sa pulitiko kaya alam ko po ‘yun.	The expensive construction and maintenance of the park. That comes first because, of course, the city government has a huge budget. The corrupt is there, that will not go away as far as I am concerned. I grew up in politics, so I know those things.	opinion	corruption	EDS	expensive maintenance
25	Yung hindi pagkakasundo-sundo ng mga gagamit kasi po ‘pag kami, sasabihin, “Ma’am, nauna na po magpareserve dito sina ano po”, ah s’ya mag-aantay po kami, may practice. Inaabot kami ng eleven ng gabi kasi hindi po nakapag-ano nga po	The disagreements regarding use because if it were us, they would say, "Ma'am, these people were first to reserve," so we will wait, there is practice. It takes us until eleven in the evening because we were not able to...	personal experience	conflict on reservations	EDS	conflict among users
26	one- mahal na pagpapagawa. Imbis na mapunta po sa iba ‘yung, parang, pera, parang naibuhos po lahat sa pagpapagawa po ng park na ‘yon, ng city plaza, ay ng plaza, ng the Plaza.	One- expensive construction. Instead of the money going elsewhere, it all went to the construction of that park, the city plaza, of the Plaza.	opinion	money could have been spent on other things	EDS	expensive maintenance

27	Next po ‘yung pagpapabagal ng trapiko ng park kasi sobrang dami nga po talagang pumupunta sa the Plaza, ‘yun po ‘yung nagiging cause kaya nalelate po kami…	Next is the slowing down of traffic due to the park because there are a lot of people going to the Plaza. That becomes the cause of our tardiness.	opinion	a lot of people visit the park	EDS	traffic
28	‘Pag may event, yes po. Next po ay ‘yung, ayan, ‘yung last po, hindi pagkakasundo-sundo ng mga gagamit nito.	When there are events, yes, next is the last one, disagreements regarding use.	personal experience	disagreements regarding use	EDS	conflict among users
29	Kasi po naexperience ko na rin pong mabully dun sa the Plaza…	Because I have also experienced being bullied there at the Plaza...	personal experience	bullying	EDS	antisocial behaviour
30	Sa ecotourism po kasi syempre ‘yun po ‘yung pagkukuhanan din ng ano eh, ah tawag dito? Benefit nung city. ‘Yun po. Nagbebenefit ang city po.	With ecotourism, of course, that is also a source of what do you call it? Benefit for the city. The city benefits.	opinion	city will benefit	ES	ecotourism
31	Tapos ‘dun naman po sa stress, syempre po, ‘pag pupunta ka doon para mag-unwind kasama na din po ‘yung maglaro, ‘yung sports, maentertain. ‘Yun po.	With stress, of course, when you go there to unwind, you also play, do sports, you get entertained. That is it.	opinion	relaxation includes de-stressing and playing sports	ES	relaxation
32	Kasi, minsan ‘pag umaano rin naman ako dati noon. Nung normal pa, hindi pa ganoon ‘yung may Covid, ah	Because sometimes when I also (go) there. When it was still normal, when there was no Covid, I	personal experience	see people relaxing	ES	relaxation

	kita ko nag-eenjoy ‘yung mga tao nakakapagrelax sila	see that people enjoy and can relax.				
33	Kasi, minsan ‘pag umaano rin naman ako dati noon. Nung normal pa, hindi pa ganoon ‘yung may Covid, ah kita ko nag-eenjoy ‘yung mga tao nakakapagrelax sila tapos	Because sometimes when I also (go) there. When it was still normal, when there was no Covid, I see that people enjoy and can relax.	personal experience	people enjoy in the park	ES	enjoyment and spending free time
34	tapos ‘yung mga taong nabigyan ng permiso ng government ng or ng city hall, nakakapagtayo sila ng business doon and sometimes nakikita ko rin naman na nakakatulong din sila, nakakatulong din ‘yun sa kanila. Kasi nga, imbis na nasa bahay lang sila, kumikita sila ‘pag dun sila, nagtitinda sila, ganun.	The people who are permitted by the government or the city hall can put up their businesses there, and sometimes I also see that they also help, it also helps them. Instead of just being at home, they can earn if they are there and sell.	personal experience	saw businesses in the park	ES	revenue for locals
35	kagaya ng ecotourism, ayan along with, ‘yung part na nakikita naman naming nagagamit siya, ‘yung the Plaza for events, noh, to promote the city.	Like ecotourism and the part where we see that it is being used, the Plaza for events, right? to promote the city.	personal experience	promote the city	ES	ecotourism
36	‘yung enjoyment kasi nga kasama na rin siya doon(ecotourism).	enjoyment, because it is also included there (ecotourism)	opinion	enjoyment as part of ecotourism	ES	enjoyment and spending free time

37	‘yung sa exercises ang sports, nagagamit siyang venues para makapagZumba, noh. Limited nalang din naman kasi ‘yung spaces sa Calamba para gawin siya eh	Exercises and sports it is being used as venues for Zumba, right? The available spaces in Calamba which can be used for that purpose are also limited.	personal experience	Zumba	ES	sports and physical fitness
38	para makapag-unwind, makapag-alis ng stress. Ayan, kasi ayun nga, parang ibang tanawin naman. Actually more commercialized na halos ‘yung ano eh, ‘yung city ng Calamba eh.	To unwind and relieve stress. So that there could be a change of scenery, the city of Calamba is already mostly commercialized.	opinion	Calamba I very commercialised	ES	relaxation
39	Yung sa antisocial kasi ano, parang dahil na sa openness nung park, wala naman din masyadong nag… walang security, noh, so kahit ano pwedeng gawin eh. Natetake advantage nung mga ano, ‘yung youth ‘tsaka ‘yung mga iba pang ano pa.	Antisocial, because due to the park's openness, there is not enough security, anything can be done. It is being taken advantage of by the youth and others.	opinion	poor security	EDS	antisocial behaviour
40	Then, ‘yung sa pagbagal ng traffic, pagkakaroon ng heavy traffic, naramdaman namin ‘yan nung last Christmas, nung nagkaroon ng parang special na..	The slowing down of traffic, having heavy traffic, we felt that last Christmas, there was a special...	personal experience	Christmas events	EDS	traffic
41	about dun sa kada ‘pag may event, traffic talaga as in.	About whenever there is an event, the traffic is really heavy.	personal experience	when there are events	EDS	traffic

42	Yung para sa security baga minsan, meron din kasi ‘pag nagkaroon ng event doon sa Rizal park ay katulad nalang ng mga necessities like ‘yung comfort rooms and ‘yung mga maintenance doon, ‘yun ‘yung wala. ‘Yung mga nagmemaintenance parang, or ‘yung gumagamit din na masyadong naaabuso, hindi ganun nagiging maayos ‘yung lugar lalo na ‘pag may mga big events.	Sometimes, for security, when events are held at Rizal park, just like necessities such as comfort rooms and maintenance, those are lacking. Those doing maintenance or those who use these abuse them. Also, the place does not stay orderly, especially when there are events.	personal experience	toilets	EDS	incomplete facilities
43	ecotourism po. Yes po, kasi, kapag ang… ano ko po kasi, parang ang pagkaka-ano ko sa mga ganyan po is parang kapag talaga mga park, mahalaga talaga ‘yung ecotourism po, ayan.	Ecotourism. Yes, because if... what I (think) about those things is when it comes to parks, ecotourism is very important.	opinion	important	ES	ecotourism
44	yung enjoyment kasi part naman po talaga siya and ‘yung the Plaza naman po is nagagamit siya na place para makapag-enjoy ‘yung mga tao.	Enjoyment, because it is really a part of it and the Plaza is being used as a place where people can enjoy.	opinion	function of a park	ES	enjoyment and spending free time
45	sports at maayos na pangangatawan parang nalagyan ko din po ‘yung kasi parang ano na siya, parang kilala na rin siya na ano, na pinupuntahan siya nung mga tao para ma… doon,	Sports and physical wellness, I also added there because it is like, known as a place where people go to do such activities as jogging and Zumba.	personal experience	jogging, zumba	ES	sports and physical fitness

	for example po is doon magjogging, mga ganun, magZumba, ayan					
46	sports at maayos na pangangatawan parang nalagyan ko din po ‘yung kasi parang ano na siya, parang kilala na rin siya na ano, na pinupuntahan siya nung mga tao para ma… doon, for example po is doon magjogging, mga ganun, magZumba, ayan kasama na rin po ‘yun ‘dun sa mag-alis ng stress at mag-relax, ayun po, nabigyan ko rin po siya.	Sports and physical wellness, I also added there because it is like, known as a place where people go to do such activities as jogging, Zumba, and relieve stress and relax.	opinion	relaxation is part of exercising	ES	relaxation
47	‘yung bonding ng pamilya po o makabuo ng pagkakaibigan kasi po parang… Kasi since park nga po siya parang ‘di naman… ‘yung the Plaza po kasi parang di naman talaga siya ‘yung literal na ano pero kalimitan po kasi ‘yun ‘yung pinupuntahan ng family and friends kung… lalo na po kapag may mga ano doon, may mga event doon, ganun.	Bonding of families or forming of new friendships because... since it is a park, it is not literal... however, it is often where families and friends go to when... especially when there are events there.	personal experience	families go to events	ES	family and social relationships
48	Then, last po is ‘yung kultural na pagkakakilanlan ng Calamba kasi po parang kahit ‘yung mga friends ko po sa… sa school po ‘yung friends ko	Then, last is the cultural identity of Calamba because even my friends from school, my friends	personal experience	friends from other cities know the park	ES	local identity and cultural heritage

	po na mga taga-malayo, alam din po nila ‘yung the Plaza, ayun, kaya parang nakakadag-dag din po siya. ‘Yun lang po.	from far away, also know the Plaza, that is why it also adds. That is it.				
49	Una po ‘yung ecotourism, same lang di po nung ano ni, dahilan ni, kay . Parang mas… maganda din siya for other living beings. Kadalasan nga din po kasi dun po ‘yung mga, ano din ‘yung mga ‘di lang po tao, minsan may mga makikita din po mga nagpapagala ng mga aso nila, ‘yun din po.	First is ecotourism, it is the same with, the reason of... It is also good for other living beings. Often it is not just humans, but people who walk their dogs can also be seen there.	personal experience	pets are brought to the park	ES	ecotourism
50	‘yung sports at sa para sa maayos na pangangatawan kasi po ang, ‘yun din po, para din po sa akin kasi ‘yun din po ‘yung kalimitang ang final pinupuntahan namin kapag nagjojogging kami kasi parang mula Looc po hanggang doon sa the Plaza, malayo po, parang perfect din po para magjogging ‘tsaka magbike or magbike po.	Sports and physical wellness are often the last place we go to when we go jogging from Looc to the Plaza. It is far and perfect for jogging and biking.	personal experience	jogging	ES	sports and physical fitness
51	Ang then naman po is ‘yung kita para sa mga lokal na tao sa Calamba kasi po ano po eh, doon po ‘yung… makakahanap din po ng hanap-buhay ‘yung ibang mga residente ng	And then, source of income for Calamba locals because that is where some residents of Calamba	personal experience	people sell street foods	ES	revenue for locals

	Calamba gawa po ng mga paextrang tinda-tinda ng mga street foods, ‘yun po.	can earn a living through selling street food, for instance.				
52	‘yung pagdadagdag ng mga luntiang mga lugar sa Calamba kasi po parang dalawa, ‘di ba po, dalawa ‘yung plaza ng Calamba, parang ‘yung the Plaza po, ‘yun ‘yung mas green kaysa doon sa luma kaya mas maganda sa mata.	The addition of green places in Calamba because is it not that we have two plazas in Calamba? The Plaza is greener than the older one, so it is more pleasing to the eye.	opinion	better than the old one	ES	increasing green areas
53	Sir. Kagaya po ng nasabi nila, opo. ‘Yung ecotourism po kasi parang it’s not para lang sa ano eh, sa mga tao. Pwede din sa mga pets and aside from that po,	Sir. Like what they said, yes. Ecotourism is not only for people but also for pets, and aside from that,	opinion	pets are brought to the park	ES	ecotourism
54	it can help us magkaroon ng kultural na pagkakakilanlan- cultural identity ‘yung Calamba po. Kasi po we all know naman po na kapag sinabing “the Plaza”, kung pupunta tayo sa ibang lugar, kapag sinabing “the Plaza”, ang una pong pumapasok sa isip natin, ‘yung malaking statue po ni Dr. Jose Rizal which is kilala na po at nafeature na po sa iba’t ibangwebsites sa iba’t ibangshow and at the same time sa news po	it can help us have a cultural identity- the cultural identity of Calamba. We all know that when we say "the Plaza," if we would go to other places when we say "the Plaza," the first thing that comes to our minds is the huge statue of Dr. Jose Rizal, which is already known, featured in various websites and shows and at the same time, in the news. So, that helps to make known our cultural identity as	personal experience	Calamba was featured in some shows because of the park	ES	local identity and cultural heritage

	kaya parang it help us na makilala ‘yung ating ano cultural identity as Calambeño by having Dr. Jose Rizal po as our national hero na taga-Calamba po	Calambeños having Dr. Jose Rizal as our national hero from Calamba.				
55	mga lokal na tao sa Calamba kasi po kung mapapansin naman po natin we all know naman po na talagang kikita po ‘yung Calamba city office dito but aside from that, matutulungan din po ng park na ‘to ‘yung mga taong nasa tinatawag nating nasa laylayan, nasa normal class or middle class na mga tao. Pwede silang magtayo ng business beside the park and at the same time I’ve been in the Plaza for many times and I know na nakiki… And I saw na meron din namang mga ano doon mga establishment or mga small businesses na talagang makakatul… talagang natulungan ng the Plaza. Kasi we all know na maraming taong pumupunta sa the Plaza and aside from that may mga kailangan ‘yung mga tao like tubig,	Local people from Calamba because if you noticed, Calamba city office would profit here, but aside from that, it would also help people at, what we call, the margins; normal or middle-class people. They could put up a business beside the park, and at the same time, I have been to the Plaza many times, and I saw that there are establishments or small businesses there who are aided by the Plaza. We know that many people go to the Plaza, and aside from that, people need things like water, food, and other stuff that locals could provide.	personal experience	people sell things in the park	ES	revenue for locals

	pagkain, and other stuff na talagang mapoprovide nung mga lokal na tao doon.					
56	‘yung ganapan po ng iba’t ibangkaganap… iba’t ibangevents dito sa Calamba po. Kasi po… ‘Yung events naman po, gawa po ‘di ba, we all know naman po na shinoshowcase talaga natin dito ‘yung Buhayani festival and at the same time is Calambana festival. Tapos ano din, nagagamit po natin siya sa mga events like for example, nung ginamit po namin siya sa school namin ng alay-lakad… I’m from city college of Calamba po kasi, ginamit po naming ‘yung lugar and talagang masasabi ko pong nakatulong po ‘yung lugar kasi maliit lang po ‘yung school namin.	Event place of various events here in Calamba. We all know that Buhayani and Calambana festivals are being showcased here. We are also able to use it for events like, for example, when we used it for our school for alay-lakad... I am from the city college of Calamba, we used the place, and I can testify that the place helped because our school is small.	personal experience	festivals in Calamba	ES	events
57	yung antisocial na aktibidad po. Kasi kalimitan naman nga po ‘yun din po ‘yung parang mass, parang social gathering ng iba’t ibang mga kabataan, mga grupo po. Pero kadalasan po kasi may ibang kabataan po talaga na… katulad nga po nung gangs, minsan po	Antisocial activities. Often, that is also the mass or social gathering of youths, the groups. However, often there are young people who, like the gangs, vandalize the school park. Sometimes the base of the statue of Rizal itself has scribbles. And then, their litter as well.	personal experience	youth litter, vandalise	EDS	antisocial behaviour

	binavandalize nila ‘yung school park, may nakasulat pa nga po minsan sa mismong statue ni Rizal ‘dun sa baba po. And then po ‘yung sa kalat din po nila. And kung minsan man po, siguro meron doon, may mga nangyayaring away din po.	Sometimes, perhaps, there are also fights happening there.				
58	‘yung pagka exposed po nung mga tao sa polusyon kasi nga po, ‘yun nga po dahil sa katabing kalsada, ‘yun nga po and then madami nga din pong dumadaang sasakyan gawa na din po sa tapat ‘yun ng city hall and parang main road din po ‘yung park kaya minsan po ang… naeexpose din po ‘yung mga tao sa air pollution gawa po nung smoke ng mga sasakyan.	The exposure of people to pollution because it is next to the road, many vehicles are passing by, is also in front of the city hall. The park is also on the main road, so, sometimes people get exposed to air pollution due to smoke coming from vehicles.	opinion	lots of vehicles passing by	EDS	exposure to air pollution
59	pagpapabagal ng trapiko ng park na minsan lang naman pong mangyari lalo na po kung may parang paskuhan ‘yung every December na sobrang traffic po talaga doon sa the Plaza, sa part ng the Plaza gawa nga po ng sobrang daming bumibisita.	The slowing down of traffic due to the park only happens sometimes, especially during Christmas in December when traffic is really heavy at a part of the Plaza because of the number of visitors.	personal experience	Christmas events	EDS	traffic

60	hindi pagkakasundo-sundo ng mga gagamit nito kasi personally speaking po, nangyarin po ‘yun noong ano, noong nagvovolleyball po kami sa the Plaza po. Parang kami ‘yung nauna so, tendency, kami ‘yung unang, kami ‘yung parang may karapatan na maglaro tapos ‘yung iba po, hindi po nabibigyan ng chance. Alam naman po naming ‘yon pero hindi lang po masabi kasi nga po, ibang tao. Tapos, ayun po, ‘di po equally nakakaranas gumamit ng mga facilities	Disagreements between people who need to use it because personally speaking, it happened when we were having a volleyball game at the Plaza. We were first, so we should have had the right to play, and then, others were not being given a chance. We knew that but could not say it because we were strangers. People cannot equally experience using the facilities.	personal experience	unequal opportunity to use facilities	EDS	conflict among users
61	yung pagkainis po dahil sa hindi kumpletong pasilidad po. Kasi po, Sir, nung before po, ano po, siguro sa una, Sir, ganun naman po talaga ‘yung mga park, kumpleto, maayos. Pero habang tumatagal, hindi… parang nawawala, like, for example sa football field po, ‘yung net po doon na sa goal, kanya-kanya pong kabit. Kanya-kanya pong kabit ng net para po sa goal so parang ayun po ‘yung nangyayari. Parang nung una, nagkaroon nung mga elementary po	Frustration due to incomplete facilities. It is typical that at the beginning, the parks are complete and orderly. However, as time goes by, things get lost. For example, at the football field, people need to install the goalpost net for themselves. People install the goalpost net for themselves; that is what happens. When I was an elementary student, there was a net, but now there is no more.	personal experience	sports facilities	EDS	incomplete facilities

	ako, meron pong net pero ngayon wala na po. ‘					
62	mahal na pagpapagawa o pagmemaintain po. Hindi ko po sure, Sir, kung mahal po talaga ‘yung pagmemaintain ‘cause we all know naman po na mayaman naman po ‘yung Calamba, ‘yung economy ng Calamba. Hindi ko po alam kung mahal ‘yung pagpapagawa or sadyang hindi lang namemaintain ng ayos kasi po ‘yung C.R. po doon… kagaya na po ng nasabi niyo, malaking hektarya ng lupa po ‘yung the Plaza and maraming kailangang facilities so iba’t… mga football, football field, volleyball court, tapos ‘yung mga pasyalan po and ‘yung mga tatambay po. So technically, ineexpect po natin na iba’t ibang klase ng tao ‘yung pupunta doon but unfortunately po ‘yung makikita po nating C.R. doon or comfort room is ano lang po, bale, apat tapos dalawa	Costly construction or maintenance. I am unsure, Sir, if maintenance is truly expensive because we all know that Calamba is rich, the economy of Calamba. I am not sure if construction is expensive or if it is just not being maintained well because the C.R., like what you said, the Plaza takes up many hectares of land and plenty of facilities are needed. Football balls, football field, volleyball court, places for sight-seeing and hanging out. Technically, we expect that all sorts of folks would go there, but unfortunately, there are only about four C.R. or comfort rooms, and only two are functional. There is no water, and the (toilet) is clogged. So maintenance of the place is the disservice that I see.	opinion	too big and require many facilities	EDS	expensive maintenance

	lang po ‘yung gumagana, wala pa pong tubig at barado pa po ‘yung ano. So, ‘yung maintaining po nung lugar is ‘yung disservices po na nakikita ko.					
63	pagbabagal ng trapiko dahil po sa park. Kasi po ‘yung simula po nung tinayo ‘yung the Plaza, lagi na pong traffic doon sa Halang po tapos lalo na po ‘pag Christmas season po, talagang traffic po.	The slowing down of traffic due to the park. Since the Plaza was built, traffic has been heavy at Halang. Especially during the Christmas season, traffic is very heavy.	personal experience	Christmas events	EDS	traffic
64	mahal na pagpapagawa at pagmemaintain sa park kasi ano po kung titingnan natin ‘yung reality talaga, kumbaga, ang daming ano kasi po parang, iyon, kagaya po nung nabanggit ni na parang ‘yung sa pagmemaintain din po. Like, ako po kasi hindi ano, hindi ako lagi talaga diyan sa the Plaza pero ‘pag napunta po ako napapansin ko na parang minsan parang ‘yun nga, ‘yung hindi po namemaintain ng maayos.	Costly construction or maintenance of the park because when we look at reality, the thing is, there are a lot of, like what they mentioned about maintenance. I do not often go to the Plaza, but when I do, I indeed notice the poor maintenance.	personal experience	poor maintenance	EDS	expensive maintenance
65	Then, ‘yung sa mahal na pagpapagawa naman po is makikita rin naman natin na doon sa ibang mga tao na parang inaano nila na kagaya nung… wait, naano ako,	With the costly construction, we can also see with some people who... For instance, when something was supposed to be done with the park's main (blank),	opinion	expensive but people can't see it	EDS	expensive maintenance

	Kagaya nung ano po, ‘yung dapat na gagawin po doon sa mismong ano ng park, parang andaming nag-aano na, “ay ang mahal ng pagpapagawa tapos hindi manlang… parang ayun po. Ganun ‘yung mga sinasabi kasi.	many people said, "oh it is too expensive and it is not even..."		(quality of facilities)		
66	. And then, ‘yung ano po, ‘yung pagpapabagal ng trapiko ng park. Kasi nga po laging nagtatraffic nga po doon dahil na rin din po sa katapat nga siya ng city hall.	And then, the slowing down of traffic due to the park. Because traffic is always heavy there also because it is in front of the city hall.	personal experience	because of the location	EDS	traffic
67	Then, ‘yun pong antisocial na aktibidad kagaya ng pagbubuo ng gangs. ‘Yon po kasi parang mgay mga nababalita po doon na ano, na may nagkakagulo daw po sa the Plaza, mga ganun po. And then,	Then, the antisocial activities such as the formation of gangs. There are news of quarreling at the Plaza, things like that. And then.	heard from others	gangs	EDS	antisocial behaviour
68	yung pagkaexposed ng mga tao na napunta rito sa polusyon dahil and park ay katabi ng kalsada. Kasi nga po, dahil na rin po sa traffic, ang dami pong sasakyan doon tapos ‘yung puwesto po nung park is nandun nga lang po sa may daan. So, ayun po.	The exposure of people who go here to pollution because the park is beside the road. Because of traffic, there are many vehicles there and the position of the park just by the passageway.	personal experience	lots of vehicles passing by	EDS	exposure to air pollution

69	... tuwing nagpupunta talaga 'ko ng the Plaza, 'yun talaga 'yung napapansin ko 'tsaka naexperience din kasi namin before, 'yan si , nakasama ko talaga siyang magjogging sa the Plaza. So feeling ko 'yun talaga kasi karamihan talaga ng mga tao lalo na 'yung mga health buff talagang sa the Plaza sila pumupunta para magjogging, or kung ano man ang sports na ginagawa nila, mga Zumba, ganyan.	Whenever I go to the Plaza, that is what I notice. Also, we experienced before, this person, we jogged together at the Plaza. So, I feel like that is really it because most people, especially health buffs, go to the Plaza to jog or whatever sport they do, like Zumba.	personal experience	jogging, zumba	ES	sports and physical fitness
70	yung pinaka... kasi po ano, 'yung sa sports po, ayun, tulad ko po, bilang part sa mga kabataan po, 'yun, tulad po sabi po ni po, 'dun po talaga kami naggagawa po ng mga sports, like, practice po ng volleyball, ng sayaw, 'tas nagjojogging po and Zumba, ganun.	The most... with sports, like me, who is among the youth, like what they said, that is the place where we do sports, like practice volleyball, dance, jogging, and Zumba.	personal experience	jogging, zumba	ES	sports and physical fitness
71	sa bonding naman po ng pamilya, lalo na po 'nung pasko, doon po kami madalas nung pamilya po namin, 'dun po kami nagpupunta para po magspend ng time with my family po.	With family bonding, especially during Christmas, we are often there as a family, we go there to spend time with family.	personal experience	Christmas events	ES	family and social relationships

72	Ganun din kasi 'dun talaga kami minsan pumupunta ng mga friend ko atsaka nakakatanggal din kasi talaga ng stress kapag nasa park ka.	It is just like that, it is really where my friends and I go, and also, being at the park relieves stress.	personal experience	being in the park relaxes us	ES	relaxation
73	Nakakapag-enjoy ka din 'tsaka 'yung maganda rin kasi 'yung mga nakikita mo so pantanggal stress and relax.	You are also able to enjoy, and the view you see is also good, so it relieves stress and is relaxing.	personal experience	scenery brings enjoyment	ES	enjoyment and spending free time
74	oo, naexperience ko na 'yon. 'Pag may mga event lalo na doon.	Yes, I have experienced that, especially when there is an event there.	personal experience	saw pollution	EDS	exposure to air pollution
75	oo, naexperience ko na 'yon. 'Pag may mga event lalo na doon.	Yes, I have experienced that, especially when there is an event there.	personal experience	saw traffic	EDS	traffic
76	Kasi po ano, una po 'yung sa pagbagal ng traffic, 'yun nga po kasi kadalasan nga po doon po ginaganap 'yung mga events or pinapayagan pong magkaroon ng events po doon, ayun, nagdudulot po siya ng pagsikip ng daloy nung mga sasakyan.	Because the first is the slowing down of traffic, just like I said, it is often where events are held, or events are allowed to be carried out there, it causes heavy traffic.	personal experience	events cause traffic	EDS	traffic
77	Tapos sunod po is 'yung antisocial na activities. Naranasan ko na po 'yun na may nakakita po talaga ako ng parang rambol doon sa plaza.	And then, next is antisocial activities. I really experienced seeing a fight there at the Plaza.	personal experience	gang fights	EDS	antisocial behaviour

78	Opo, tapos 'yung sunod po 'yung pagkainis sa hindi kumpletong facility. 'Yun, tulad nung sinabi niyo kanina, 'yung 'pag uulan po, 'tas 'yung C.R. po ganun.	Yes, and then the next one is frustration due to incomplete facilities. Like I said earlier, when it rains, and also the C.R.	personal experience	toilets	EDS	incomplete facilities
79	traffic kasi talagang naexperience namin, naglalakad na talaga kasi sobrang ayaw gumalaw nung mga sasakyan.	We really experienced traffic, we end up walking because the vehicles are not moving.	personal experience	lots of vehicles passing by	EDS	traffic
80	yung pagkainis dahil sa 'di kumpletong pasilidad, kasi wala talaga siyang C.R. 'yung sobrang naiihi ka na, hindi mo alam kung saan ka si-C.R., ano, uuwi ka pa ng bahay? Parang, 'yon.	The frustration due to incomplete facilities because it really does not have a C.R. when you really need to pee, you do not know where to relieve yourself, what, will you have to go back to your house?	personal experience	toilets	EDS	incomplete facilities
81	maraming bullying na nagaganap doon kasi kanya-kanyang barkada nagtatagpo doon so time na nila para mag-away-away.	There is a lot of bullying happening there because each barkadas meet there, so it is their time to fight.	personal experience	bullying	EDS	antisocial behaviour
82	yung mahal na pagpapagawa ng pagmemaintain sa park kasi 'yun nga nakakaano talaga siya, nakakadagdag siya ng gastos. Imbis na pwede na natin gamitin siya sa ibang bagay, kailangan siyang imaintain kasi nga marami ang pumupunta so napapagastos tayo.	Costly maintenance of the park because it really adds to the expense. Instead of using it for other purposes, it needs to be maintained because a lot of people go there, so we end up spending money.	opinion	money could have been spent on other things	EDS	expensive maintenance

83	ano talaga, personal experience talaga	It is a personal experience, really.	personal experience	relaxed in the park	ES	relaxation
84	personal reasons din, mas bet ko rin po kasi na magkaroon po talaga nung mga green spaces lalo na po sa mga urban areas for ano na rin po, for ecological purposes and aestheti... at para po lumakas din 'yung aesthetic value nung isang lugar.	Personal reasons as well, I would also like to have more green spaces, especially in urban areas, for ecological purposes and aesthetic, for the aesthetic value of a place to increase.	opinion	ecological and aesthetics	ES	increasing green areas
85	yun dapat ang iaano ko eh. Dapat bibigyan ko ng puntos, sabi ko bakit kailangan mahal 'yung pagpapagawa? Pero teka lang po ah. 'Yun nga po, parang lahat po kasi nung mga necessities na 'yan parang ayun nga po	I was supposed to give points. I said, how come construction needs to be expensive? But wait. As I said, all of those necessities are like I said.	opinion	why is it expensive?	EDS	expensive maintenance
86	Actually naexperience ko 'to nung naglalakad-lakad po ako 'dun dati. As in sobrang dami pong mga bata na... mga, as in 'yung mga teenagers na nagaano...	I actually experienced this when I was walking there. As in, there are a lot of kids... as in, teenagers who...	personal experience	youth loiter in the park	EDS	antisocial behaviour
87	Oo, na minsan nagrarambolan sila doon or kung ano namang mga kaangasang ginagawa	Yes, sometimes they fight there, or whatever acts of arrogance they do there.	personal experience	gang fights	EDS	antisocial behaviour

88	Ah yes, naexperience ko 'to lalo na nung December kasi po 'di ba every... one year palang po ako sa ano eh, one year palang po ako dito sa Calamba so first time ko lang pong makaexperience nung Christmas something sa the Plaza. So nagkakaroon po ng mga commo... mga commotion lalo na po 'dun sa paggamit lalo na 'dun sa parang right side po nung the Plaza kung gagamitin po ba siya for Zumba ng mga tita or pagpapraktisan po ng street dancing nung mga bata base po sa pa... nakita ko last year.	Yes, I experienced this especially last December because it is not that every... I have only been living in Calamba for one year, so it was my first time to experience Christmas something at the Plaza. There were commotions especially regarding use, particularly at the right side of the Plaza, whether it was going to be used for Zumba by aunties or for street dance practice by the children based on what I saw last year.	personal experience	use of space	EDS	conflict among users
89	Kasi, 'yung sa ecotourism, Sir, kasi meron din akong mga kamag-anak from other cities sa Laguna, napunta talaga kami diyan, napunta sila diyan kasi nga, 'yung una 'yung ambience daw so dahil gusto nilang mapuntahan. Una, curious din sila. Pangalawa, kasi nga, nakikita nila sa mga pictures na maganda nga lalo 'pag may mga events at December. Something like that. So nagiging talagang ano siya, nagiging tourism talaga siya.	With ecotourism, Sir, my relatives from other cities and I really go there for its ambiance and because they would like to go there. First, they say they are also curious. Second, they see in pictures that it is beautiful, especially when there are events during December. Something like that. So it really becomes a form of tourism.	personal experience	relatives from other cities that visit the park	ES	ecotourism

90	yung sa ecotourism, may malaking part po kasi siyang gagampanan kapag naging maayos po 'yung napatayo 'yon 'yung sa harap po ng city hall natin.	It will have a big role to play with ecotourism when the building in front of our city hall gets in order.	unspecific	unspecific	ES	ecotourism
91	So, maganda siyang source of income din lalo na sa mga tao na naninirahan po dito sa Calamba.	So, it is a good source of income, especially for people living here in Calamba.	opinion	people nearby can earn	ES	revenue for locals
92	It can also give 'yung enjoyment kasi ginagawa talaga siyang pasyalan para din po makaprelax 'yung mga tao when it... lalo na 'pag mga holidays, ganyan, napunta sila doon.	It can also give enjoyment because it is being used as a place where people can go sightseeing and relax, especially during holidays, like that, they go there.	personal experience	people enjoy in the park during holidays	ES	enjoyment and spending free time
93	It can also give 'yung enjoyment kasi ginagawa talaga siyang pasyalan para din po makaprelax 'yung mga tao when it... lalo na 'pag mga holidays, ganyan, napunta sila doon.	It can also give enjoyment because it is being used as a place where people can go sightseeing, to also relax especially during holidays, like that, they go there.	personal experience	people enjoy in the park during holidays	ES	relaxation
94	sports, ayan so meron din po 'yun kasi I, personally nagZuzumba ako doon kapag walang ginagawa para sa health.	Sports that also have some because I, personally, do Zumba there for health when I am not doing anything.	personal experience	Zumba	ES	sports and physical fitness
95	Ang first po 'yung ecotourism, syempre kailangan po ng lugar po natin 'yan dito sa Calamba para mapromote po 'yung ating lugar.	The first is ecotourism, of course, our city here in Calamba needs that to get promotion.	opinion	promote Calamba City	ES	ecotourism

96	enjoyment, syempre, isa rin po 'yung way para kahit papaano marelieve 'yung stress kapag napunta doon	Enjoyment, of course, it is also a way, somehow, for stress to be relieved when going there.	opinion	de-stress	ES	enjoyment and spending free time
97	sports, I'm into sports din po so sports at maayos na pangangatawan so minsan meron pong mga time na doon kami nagtetraining for our players.	Sports, I am also into sports and physical wellness, so there are times when we train there for our players.	personal experience	playing sports	ES	sports and physical fitness
98	Next, magagandang tanawin. Napili ko rin po siya kasi tulad nung sabi po ni, last December parang nagkaroon po siya ng mga decorations so may ano po doon na time na talagang pinupuntahan siya ng...	Next, beautiful scenery. I also chose this because of what they said, last December there were decorations, so there is also a time when people really go there.	personal experience	Christmas events	ES	aesthetic information
99	Ano pa ba? Kultura ng pagkakakilanlan ng Calamba kasi nandoon po Dr. Jose Rizal eh. Which is dito po talaga sila nung kanilang family and wala na po ata	What else? Cultural identity because Dr. Jose Rizal is there. They are really here with their family, and there is nothing else, I think.	personal experience	because of Rizal's statue	ES	local identity and cultural heritage
100	antisosyal na aktibidad kagaya ng mga pagbubuo ng mga gangs, pangbubully at sa iba pang mga ilegal na gawain. So meron po kasing instances na meron pong students kami na nagkaroon po ng eksena po diyan sa lugar na 'yan so isa po siyang factor kasi nga po ay	Antisocial activities such as the formation of gangs, bullying, and other illegal acts. There are instances when we have students causing a scene there, so that is another factor since there are plenty of people hanging around there.	personal experience	gangs	EDS	antisocial behaviour

	maraming nakatambay so 'yun po 'yung nangyari.					
101	Parang pagkainis dahil hindi kumpleto 'yung mga pasilidad kasi wala po siyang ano, Sir, walang C.R. talaga na convenient na ano kasi 'pag po magsi-C.R. ka meron po 'dung parang, ano bang tawag 'dun, basta, pero hindi po siya parang portalet, parang hindi po siya convenient sa mga magsi-C.R. so pupunta pa po ng munisipyo para po mag-C.R. So 'yun lang po, Sir.	Frustration due to incomplete facilities because it does not have a C.R., Sir, that is convenient when you need to use the toilet, there is something there, what do you call it? It is not a portalet, it is not convenient for those who need to use the toilet so people need to go to the city hall so that they can use the toilet. That is it, Sir.	personal experience	toilets	EDS	incomplete facilities
102	Tapos, ayun, nilagyan ko 'dun sa ano, 'yung mahal na pagpapagawa kasi parang may mga ano 'ko, eavesdrop ba 'yung tawag 'dun na naririnig na masyado na daw malaki 'yung nagagastos. Actually six years na 'yan eh, in the making.	Then, I added there, costly construction because I have this, is it called eavesdrop? I heard that expenditure was too high. It is actually six years in the making.	heard from others	why is it expensive?	EDS	expensive maintenance
103	Ayun, six years in the making na daw 'yan and nakikita naman namin. Though ano naman siya, umuusad, kaya lang hindi pa rin siya tapos. Parang sa loob ng anim na taon, gaano na kalaki 'yung budget and	They say it is six years in the making, and we see it. Although it has progressed, it is not yet finished. In six years, how much budget was allocated for that, and what was the amount spent for	opinion	why is it expensive?	EDS	expensive maintenance

	amount spent for that pero kailangan din naman syempre siyang pagkagastusan kais kailangan isecure na safe siya na maayos 'yung pagkakagawa. Ayun po	that already? However, it does need to be financed in such a way to ensure that it is safe, secure, and built well.				
104	So 'yung sa pagpapagawa meron din akong natsismis diyan eh, kaya may point din ako diyan pero mababa lang 'yung percent ko diyan kasi nga naririnig-rinig ko din.	So with the construction, I also have gossip about that, so I also have a point there, but the percentage is low because I only heard it.	heard from others	why is it expensive?	EDS	expensive maintenance
105	Yung traffic meron akong nilagay especially 'pag December kasi naexperience namin 'yan since kapag kasi December 'yung mismong buong field meron na siyang mga kiosk and everything so wala ka nang pagpaparkingan. So simula sa stop light, actually sobrang traffic na.	I added some to traffic, especially during December because we experienced that since during December, the whole field has kiosks and everything, so you do not have parking space. Starting from the stoplight, traffic is heavy already.	personal experience	Christmas events	EDS	traffic
106	Antisocial, that's the highest, Sir, sixty percent ako diyan. Kagaya ng sabi ni, meron kaming student diyan, minsan meron ako nung... meron pa akong... naexperience, chineck ko 'yung attendance sa klase, ang mababasa sa count diyan... kasi sabi ko rin po… ang mababasa sa counter niyan, sa klase ko wala siya. so	Antisocial that is the highest, Sir. I put sixty percent there. Like what they said, we have a student there, and I also have experience. I checked class attendance, what will be reflected in the count... I also said, what will be reflected in the count is that they are not in my class. The classmates would say	personal experience	school cases	EDS	antisocial behaviour

	kinukwento ng mga classmate, nakikipag-date daw diyan, 'di napasok. So siguro kasi 'yung security niya, Sir, hindi din siya ganun kahigpit lalo 'pag gabi. So may mga sulok-sulok diyan na may mga siguro harassment na nangyayari so napakaalarming nun. Kailangan ipriority nila 'yun kasi maraming mga minors doon talaga, mga estudyante. Kaya nga sabi ni Ma'am Lei sa estudyante namin mismo, 'yung mga taga Barretto, ano po?	that they went on a date there instead of going to school. Perhaps security is not strict enough, especially at night. Perhaps, there are corners there in which harassment happens, this is very alarming. They should prioritize that because there are plenty of minors there, students. This is why Ma'am Lei told our students, those who are from Barretto...				
107	Yung sa pagkakasundo-sundo sa paggamit, naexperience ko kasi 'yan, Sir, nung may event kami sa sports. So nandun na kami, then 'yung coordinator namin, si Sir Jocson... Dr. Jocson, may nag... tinatanungan pa siya, asaan daw 'yung permit namin kaya nagagalit-galit siya, "bakit permit eh city ano 'to, division sports 'to?" So 'yun, 'yung mga ganung issue kasi daw may	(dis)agreement regarding use because I experienced that, Sir, when we had an event in sports. We were already there, then, our coordinator, Sir Jocson... Dr. Jocson, he was being asked where our permit was, so he got angry, "why would a permit be needed, this is a city, a division sports?" Those are the issues because they say there are...	personal experience	permits	EDS	conflict among users
108	Yung sa pollution hindi ko siya nilagyan eh kasi kapag nandun ka naman sa loob hindi mo naman mauusukan talaga masyado eh.	I did not add any to pollution because you would not inhale much smoke anyway when you are	opinion	pollution does not reach the park	EDS	pollution not

	Ayun namang kinatatayuan ng lugar, para sa akin, perfect naman siya. Okay naman	inside. Where the place stands, for me, it is perfect. It is okay.				
109	Yung sa facilities din, ayun, 'pag magsi-C.R. kasi walang ano, walang lock, wala pang ilaw.	The facilities as well, when going to the C.R., there are no locks nor light.	personal experience	toilets	EDS	incomplete facilities

Appendix 15 Reasons for valuing ES and EDS – future generations

No	Filipino quote	Translated quote	Broad theme	Specific theme	ES or EDS	Specific ES and EDS
1	ang concern naman lagi ng future generation na nakikita natin ngayon is 'yung sa pollution, tapos 'yung sa nature din kasi 'di ba marami nang ginagawa rito sa Calamba na mga subdivision. 'Dito lang sa paligid namin sa Pansol marami ditong, 'di ba paanan kami ng bundok, so maraming mga binibiling dating forest, ginagawa nang subdivision. So ayun, 'yun din 'yung possible na concern is dapat talaga mapanatili 'yung greenery 'dun sa paligid.	The concern for the future generation that we can see today is pollution as well as nature. There are plenty of ongoing constructions of subdivisions here in Calamba. Especially in our location. There are big parts of the forest that are sold to be made into a subdivision. It can also be a possible concern in keeping the greenery around us.	opinion	pollution and degradation, commercialisation	EDS	exposure to air pollution
2	kasi sa future kung pag-uusapan natin ang future, magkakaroon talaga ng changes so ang consideration nalang doon is would it still be possible to have the same values that we have today at doon sa future generation given the baka different scenario na mag-uurbanize na siya.	Because if we talk about the future, there will surely be changes. So the consideration for that is that it will still be possible to have the same values that we have today to that of the future generation. There will be a different scenario where it will become urbanized.	comment	same values for future generations?	ES	

3	So, ang sa akin lang, if magkakaroon ng future doon sa mga decision makers na magkaroon ng, as I've said, 'yung sa negative na dapat naging, nagtanong muna sa mga tao or nagtanong sa iba-ibang sector ng tao kung what is beautiful, what is positive, sana 'di… siguro para din sa future generation natin, makakatulong siya.	For me, if the decision-makers will take action in like what I've said regarding the lack of consultation with the public to decide whether what is beautiful, or what is positive to put in the park, it will be helpful for our future generation.	comment	consult the public	ES
4	Yes, highly urbanized na siya so makakaapekto na siya but still, maganda rin 'yung sinabi nung isa na may greenery kasi nga nawawala na 'yung pagka, 'yung nature, 'yung highly urbanized na siya so magiging ganun na siya. So siguro pwede na 'yung maglalagay ng patches ng ganoon but still, siguro kailangan pa rin natin mamaintain 'yung same kind ng historical pride natin na dito galing si Rizal 'tas meron rin tayong consideration for the families na hanggang ngayon pwede pa rin silang magtipon-tipon 'dun sa park na 'yun and then aside from that, these children who are growing up	Yes, it will have an effect because it is highly urbanized. The other person's idea about the greenery is also good because the ambiance of nature is gone; it is highly urbanized so that it will become like that. So maybe, the patches can be added, but I think we still need to maintain the same kind of historical pride that Rizal came from Calamba and consider the families that, until now, can still gather in the park. And then, aside from that, these children who are growing up still value the	suggestion	improve greenery, historical value, facilities for families	ES

	still value ‘yung sports the same way rather than digital- ‘yung mga cellphones na mga nangyayari dito, in the future baka… sa akin lang ‘yun, sa tingin ko lang.	sports the same way rather than digital cellphones that are currently going on here, in the future, maybe it's just me or I just think of it like that.				
5	Sa tingin ko, in continuation doon sa kung magboboom nga talaga sa ecotourism na ‘yun nung park, ang magiging problema next, napapansin ko kagaya kasi sa amin sa Cavinti, kasi ecotourism din kami, ang nagiging problema is ‘yung traffic, sobrang problema ‘yung traffic.	In my opinion, in continuation of the popularity of the park's ecotourism, the next problem will be, I noticed, like in our place at Cavinti, because we are also focused on ecotourism, the traffic is a major problem.	personal experience	more people will visit the park	EDS	ecotourism
6	Kasi, Sir, ‘yung sa akin, halimbawa, ‘yung isa kasi na medyo mahal talaga ‘yung gastos ‘dun. Kasi yearly din kasi po, nag-iimprove po ‘yung ating “the Plaza”. Tulad po ‘nun, dati po monument lang po ni Dr. Jose Rizal biglang nagkaroon na po ng Rizal coliseum dahil syempre po may mga future preparations and projects pa rin po sila Mayor lalo’t	Because, for me, for example, they put up an expensive part. Because, every year, "the Plaza" is improved. Like in the past, the only part built was Dr. Jose Rizal's monument, and the Rizal Coliseum was suddenly built. Of course, the Mayor still has future projects and preparations, especially if	general reason	additional facilities in the park	ES	

	po ‘pag si Mayor pa rin… Tim Chipeco pa din ‘yung naupo doon, ‘di ba. Madadagdagan pa rin po ‘yun ng mga facilities po doon.	the same Mayor, Tim Chipeco, is re-elected, right? There will still be additions to the facilities.			
7	For me, ate, nung factor na ‘yung future generation kasi ‘di ba dapat every project naman may sustainability dapat. So dapat in the long run, bukod ‘dun sa direct na effect niya sa local citizens, meron na din dapat ‘dun sa, kunwari, ‘dun sa green areas talaga kasi, ‘di ba, ang problem naman sa environment nagkakaroon ng land conversion so sana ‘yung naging plaza ay maging green area din siya for Calamba para naman maenjoy nung mga taga-Calamba ‘yung, although, urbanized siya, pero parang ‘di ba, maraming mga puno, ganyan.	For me, the factor that the future generation, because every project should be sustainable, right? So, in the long run, aside from its direct effect on the local citizens, it should have, for example, in the green areas, because the problem is with the environment, land conversion, so the plaza should also become a green area for Calamba so that the locals can enjoy it, even if Calamba is urbanized, there are still plenty of trees.	general reason	improve greenery	ES
8	For example, sa ecotourism po, magkakaroon ng kasiyahan ‘yung bonding sa pamilya. Ang sa akin po ay hindi po muna ako magfofocus about dun sa makukuhang magandang, halimbawa po ay,	For example, in ecotourism, bonding with family would have brought enjoyment. For me, I would not yet focus on reaping good, for instance, a source of income for locals or	general reason	immediate needs - family bonding	ES

	pagkakakitaan nga mga locals o ng pera because, the Calamba itself po, yung mga infrastructure sa Calamba po, kaya na pong nung masagot ‘yung pangangailangan po nung iba. ‘Yun nga lang po, siguro mahirap din magsalita, hindi nabibigyan ng tama or hindi nadidivide ng tama ng ano po natin… ayun.	money, because Calamba itself, the infrastructures of Calamba, can already meet others' needs. However, it is hard to say, people are not being given rightly or it is not being divided correctly by our...				
9	‘yung mahal na pagpapagawa po at pagmemaintain sa park. Kasi instead po na, sa akin po ha, sana po kung, halimbawa, naging facility, Covid facility ngayon ‘yung park, instead po na ganun, ang nangyari po, naging arena. Sa sobrang laki po, ang alam ko po ang laki ng pondo, ang laki-laki po ng pondo ‘nun eh. Pero kung halimbawa po, ginawa nalang ospital ‘yung place, ‘di ba po. So marami pa po sanang natulungan lalo na po ngayon na panahon ng ganito.	The expensive construction and maintenance of the park. Because instead of, for me, I wish the park had been, for example, Covid facility instead of an arena. What I know is that it has a huge fund. The fund is whopping. However, for instance, they turned the place into a hospital instead, right? So more people could have been helped, especially at this time.	opinion	could have been something else - COVID19 facility	EDS	expensive
10	Atsaka po, traffic na rin po siguro kasi po dahil nga po mas naiimprove po ‘yung atin pong “the Plaza”, mas madami pong tao ‘yung	Also, traffic is heavy already because our "the Plaza" is improving, more people are going there. Like, for example,	opinion	more people will visit the park	EDS	traffic

	pumupunta po doon. Like, for example, ‘yung nangyari po nung nagkaroon po nung kakaibang… parang Christmas	when something special took place... like Christmas.				
11	Sobrang pati po ‘yung parking lot po sa mismong tabi ng city hall nagamit po nila. ‘Tas para po ma… para lang po maoccupy po ng ibang nagpapark po ‘tsaka po dinadayo po talaga ng ibang mga karatig-lugar po natin.	It is too much, and they also used the parking lot beside the city hall. And so that... just so that it could be occupied by others who park and also neighboring areas are also visiting it.	personal experience	people from nearby cities visit the park	EDS	traffic
12	Siguro sa ano, as time goes by, so mas lalong makikilala ang kultura natin dito sa Calamba. So ‘yang kultural na pagkakakilanlan ang medyo talagang tinaasan ko.	Perhaps as time goes by, our culture here in Calamba will be more well known. So cultural identity is what I really raised.	opinion	culture of Calamba will be known	ES	local identity and cultural heritage
13	Kasi ‘di ko natinaasan ‘yung mga luntiang lugar o green areas kasi, ‘yun na nga, siguro navivisualize ko lang hindi na siguro ganun… ano nga ‘yung tinaasan ko pa?	I did not raise green areas anymore because, you know, maybe I visualize it as not like that anymore... what did I raise?	opinion	greenery will eventually improve	ES	increasing green areas
14	For me po, ano, ‘yung cultural na pagkakakilanlan ng Calamba. ‘Yan, mas lalo po kasi makikilala ang Calamba habang ano po, habang tatagal	For me, the cultural identity of Calamba. Because Calamba would be more well known as time goes by.	opinion	culture of Calamba will be known	ES	local identity and cultural heritage

15	yung may kasaysayan, nasaan ‘yung kasay…? Interes ng mga residente sa kasaysayan at kultura ng Calamba.	History, where is hist...? The interest of the resident in the history and culture of Calamba.	unspecific	unspecific	ES	stimulate interest to history and culture
16	Ano po, ‘yung kita po sa tao. Kasi po marami pong mga nagtitinda doon, mga nagbebenta po ganun.	Source of income for people. Since there are a lot of vendors there.	personal experience	saw vendors in the park	ES	revenue for locals
17	Tapos naman po sa event, ‘pag na… mas rarami po ‘yung tao ‘pag nagawa na po ‘yung Rizal coliseum, ‘yun po.	And then, for events, if... there will be more people when the Rizal coliseum gets built.	opinion	because of Rizal coliseum	ES	events
18	Ah, ‘yun po ulit, ‘yung, syempre, magmemaintain po ng park. So ‘yun po ang mataas ko doon.	The same thing again, the, of course, the maintenance of the park. So that the high one.	opinion	park needs maintenance	EDS	expensive
19	hindi na masyado ‘yung hindi pagkakasundo kasi syempre as time goes by, lalagyan na nila ‘yan ng schedule para hindi na ganun.	Not so much with the disagreements because as time goes by, they will put a schedule there so it would not be that way anymore.	opinion	will have schedule	EDS	conflict not
20	‘yung lalo pong babagal ang trapiko kasi magiging ano po talaga siya eh, parang magiging tourist spot ng Calamba na laging pinupuntahan ng tao so ibig sabihin po, makakaapekto po siya sa trapiko. ‘Yun po sa akin.	Traffic would slow down more because it will be a tourist spot of Calamba frequented by people, which will affect the traffic. That is it for me.	opinion	more people will visit the park	EDS	traffic

21	nabawasan ‘yung sa ecotourism, noh. Kasi kung ‘yung future generations ‘yung iis… ‘yun nga ‘yung sa kanila ‘yung iisipin natin, more on mas gusto nila mag-ano eh, ‘yun nga mag-enjoy and dahil nga less sensitive sila ngayon or parang more sensitive sila mas gusto nilang magtanggal ng stress at magrelax.	The one for ecotourism was reduced. Because if we think more about future generations, it is more like they would like to enjoy more since they are less sensitive now or more sensitive, they would like more to remove stress and relax.	opinion	future generation like to relax more	ES	ecotourism
22	yun nga ‘yung sa kanila ‘yung iisipin natin, more on mas gusto nila mag-ano eh, ‘yun nga mag-enjoy and dahil nga less sensitive sila ngayon or parang more sensitive sila mas gusto nilang magtanggal ng stress at magrelax.	If we think more about future generations, it is more like they would like to enjoy more since they are less sensitive now or more sensitive, they would like more to remove stress and relax.	opinion	more prone to stress	ES	relaxation
23	Tapos ngayon kasi parang halos lahat gustong maging ano eh, ‘yung fit… physically fit talaga so para sa kanila importante talaga ‘yun.	Nowadays, almost everyone would like to be fit... really physically fit so to them that is really important.	opinion	they like to get fit	ES	sports and physical fitness
24	inano ko rin is ‘yung kultura nung parke mismo and ‘yung sa kultura ng Calamba kasi ang naaano ko rin diyan is meron tayong mga kabataan din na maganda maishare sa kanila ‘yung, eto ‘yung kultura noon, eto ‘yung history ng Calamba	I also (included or raised) the culture of the park itself and the culture of Calamba because I feel like it is also good to share to the youth the culture and history of Calamba so that it would not be left	opinion	share culture of Calamba to the youth	ES	stimulate interest to history and culture

	para hindi naman mapag-iwanan ang… ah hindi naman masabi ng mga future generations na, “ah, okay parke lang ‘to, dito lang tayo mag-eenjoy”.	out... so that the future generations will not say, "oh okay, it is just a place we can enjoy."				
25	Pero tinaasan ko rin ‘yung enjoyment kasi nga hindi tulad nung mga kabataan noon na parang, okay ah, relax, unwind, meet-ups ng friends, meetings and so on and so forth, ngayon kasi para rin sa mga businesses, sa pakikipagmeet-up sa mga friends from other places.	However, I also raised enjoyment because unlike youth in the past who are like, okay, relax, unwind, meetups with friends, meetings, and so on, now it is also for business, to meet up with friends from other places.	personal experience	youth meet-ups and businesses	ES	enjoyment and spending free time
26	nabago po, like ‘yung sa antisocial, ‘yung katulad ng sa sinabi ni kasi nga, iba na rin po ‘yung kabataan today and in the near future kas inga po minsan masyado na silang maagang naeexpose sa mga, mga hindi dapat malaman nila, ‘yang mga ganyan.	It changed, like with antisocial, like what they said, the youth today would be different from that of the near future because sometimes they are exposed too early to things they are not supposed to know yet, like those things.	opinion	youth will be more exposed to antisocial activities	EDS	antisocial behaviour
27	Lalo na rin ‘yung mga gathering at nights kasi napapansin ko rin ‘yun eh, once na dumadaan ako ng mga nine doon, nine o’clock p.m., ten, meron pa ring mga nakatambay na	Especially gatherings at night because I also notice that, when I pass by there at nine, nine o'clock p.m., ten, there are still people hanging out	personal experience	late-night gatherings	EDS	antisocial behaviour

	as in bata pa talaga, ayun ‘yung nakakabahala.	there who are still very young, that is what is worrying.				
28	Tapos ‘yung mga facilities, ‘yung mga kulang na pasilidad n asana madagdagan and ‘yun lang.	And then the facilities, the incomplete facilities that hopefully would increase in number, that is all.	opinion	improve facilities	EDS	incomplete
29	bumaba na ‘yung sa traffic siguro by that time natanggap nalang nila na heavy traffic talaga eh.	With the traffic, it went down because maybe by that time they would have already accepted that traffic is really heavy.	opinion	accept traffic	EDS	traffic not
30	Pero ‘yung sa antisocial, ‘yun nga, dahil nga… based on experience din kagaya din ‘yun kay Sir na ano, anliliit pa nung mga ‘yun, mga grade seven, mga even ano pa nga, younger eh na nasal abas pa rin ng late night, nagtitipon with frien… ewan ko, barkada. Then, minsan nagcacause pa sila ng gulo kahit ganun kaliliit palang sila’t kababata. So, sila ‘yung magiging future generation eh. So, what more? Parang pababa… lahat ng negative ngayon pabata ng pabata ‘yung ano, gumagawa.	However, with antisocial, like I said, because... it is also based on an experience similar to Sir, they were still very young, about seventh grade, maybe even younger, they were still outside late at night gathering with frien... I do not know, barkada (a group of intimate friends or company). And then, sometimes they cause trouble even though they are still so young. So, they will be the future generations. So, what more? It seems to be going down...	personal experience	youth stay late in the park	EDS	antisocial behaviour

		those doing negative things are now getting younger and younger.				
31	Yung next ko na po ay ‘yung pagmemaintain gawa po ng syempre sa future, hindi po natin masasabi kung ganun pa din ba siya kaganda. May parenovate ba?	The next one for me is maintenance because, of course, in the future, we cannot say if it will still be that good. Will it still get renovated?	opinion	renovate	EDS	incomplete
32	Para po kasi sa akin, ngayon po kasi mas narealize ko ‘yung kahalagahan ng pagkakaroon nung, ‘yung mga green, ‘yung mas more po sa green, mas ano sa environment, ganun po. Mas naano ko siya dahil mas kailangan siya nung future generation parang dahil ngayon po parang namumulat na tayo na, ‘yun ‘yung nagiging epekto po sa atin so mas nagiging aware po tayo. So, ang mas naisip ko po ngayon is ‘yung, isipin ‘yung para naman talaga sa, ‘yung literal na future	For me, I now realize the importance of green places and the environment. Future generations need these more. We are enlightened by things that affect us, so we are becoming more aware. So, I think more about the literal future as well as future generations.	opinion	future needs more greens	ES	increasing green areas

	naman po nung sa future generation.					
33	dun sa pagdaragdag ng mga luntiang mga lugar kasi ayun na din po na, siguro na for the near future na kailangan mas pahalagahan pa natin ‘yung mga greens like trees and ‘yung iba pa po gawa po ng sa ipasok na din po natin ‘yung climate change na sinasabi.	Adding green places. Perhaps in the near future, we need to give more value to greens like trees and other things because of, let us include it, what they call climate change.	opinion	future needs more greens because of climate change	ES	increasing green areas
34	syempre, isa na rin po, ‘di ko naman din po binawas ‘yung sa sports and maayos na pangangatawan dahil mas kailangan naman din po ‘yun ng future generation din.	Of course, that is also another thing, I did not reduce sports and physical wellness because future generations also need that.	opinion	future needs to be fit	ES	sports and physical fitness
35	And pati po ‘yung pag-aaral at pananaliksik patungkol sa kapaligiran po, Sir. Kasi nga po, ‘di ba po, as the world ano po, become modernized po, habang tumatagal parang nababawasan na ‘yung mga puno, ganun po.	And also, studies and research about the environment, Sir. Is it not that as the world becomes more modernized, as time goes by, the number of trees goes down.	opinion	research for nature	ES	information for cognitive development
36	Mas mahalaga po ‘yung ano… but, ano naman po, we all know naman po na ‘yung ano po, ‘yung mission po ng Calamba city hall po or city	That (blank) is more expensive, but we all know that Calamba city hall or city office's mission is a green,	opinion	environmentally competitive	ES	increasing green areas

	office po is green, competitive city po. Parang not just competitive in economic thing but also in, ano po, parang environmental thing din po.	competitive city. Not only competitive in economic thing but also environmental thing also.				
37	antisocial, mas madaming tao naman din po, siguro, in the near future, and then siguro po mas magkakaroon ng mga social interactions na siguro kasama na din po 'dun 'yung ano, 'yung sa pagform ng gangs and then sa bullying and dun sa mga ilegal na gawain gaya po ng, sabihin na po nating gang war or kaya 'yung pagbavandalize.	Antisocial, there will be more people, perhaps, in the near future. And then, perhaps, there will be more social interactions which, perhaps, would also include the formation of gangs, bullying, and illegal acts such as, let us say, gang war or vandalism.	opinion	more social interactions in the future	EDS	antisocial behaviour
38	yung sa pagkaexpose ng tao sa polusyon gawa ng kung 'di man po mapipigilan pagdaan ng mga sasakyan sa main road na sa may city hall between city hall and the Plaza po. Syempre po mas magwoworry, nagwoworry din po ako 'dun sa air pollution na maaarin nilang malanghap or matanggap, 'yun po.	The exposure of people to pollution if vehicles are passing through the main road, which is in between city hall and the Plaza, could not be avoided. Of course, I also worry more about air pollution they might inhale or receive.	opinion	lots of vehicles passing by	EDS	exposure to air pollution

39	Yung ‘dun po sa ano, ‘yung mahal na pagpapagwa at pagmemaintain sa park kasi po kung, ang iniisip ko po, kung ngayon pa lang hindi siya masyadong mamaintain ng maayos, parang, ano pa po, parang, baka mas lalo pa siyang maging hindi mamaintain po, ganun, sa lalo na po ng mga future generation.	The costly construction and maintenance of the park because what I am thinking of is that if it is not being maintained properly now, it might only worsen, especially for the future generations.	opinion	fear that the park will not be maintained well	EDS	expensive
40	sa traffic, ‘yun po kasi, ‘yung pagpapabagal ng trapiko ng park kasi nga po ano na ‘yun, given na rin po ‘yun, baka rin po mas lalo siyang maka-ano, makasagabal po sa future generation.	The slowing down of traffic due to the park because that is also a given could worsen and become a hindrance to future generations.	opinion	traffic will bother the future generations	EDS	traffic
41	yung antisocial na aktibidad kagaya na po ng mga gangs, ayun po, kasi alam naman po natin ngayon na mas, parang, mas lumalala ‘yung ano, ‘yung bullying, ganun. Kaya po parang mas nakaka… baka mas maging malala po, lalo na ‘dun sa future generation.	Antisocial activities such as gangs because it is well known that bullying is getting worse these days. It might get worse, especially for future generations.	opinion	gangs	EDS	antisocial behaviour
42	‘yung ano po, pagkaexpose ng mga tao sa polusyon dahil nga po nasa tabi ng kalsada.	The exposure of people to pollution because it is next to the road.	opinion	location of the park	EDS	exposure to air pollution

43	yung antisocial na aktibidad, 'yung mga, kagaya po ng pagbubuo ng mga gang tapos turns into bullying	Antisocial activities, like the formation of gangs which turns into bullying.	opinion	gangs	EDS	antisocial behaviour
44	hindi pagkakasundo-sundo pa rin ng mga gagamit kasi sa park po, it's a public place tapos iba't ibang mga tao 'yung mga pupunta. So parang 'yun, 'yun po 'yung hindi napagtuonan ko ng pansin.	Disagreements regarding use because a park is a public place and people who go there are varied. So, that is something I was not able to pay attention to.	opinion	public space	EDS	conflict
45	pinakamataas ko atang nabigyan dito 'yung pagkaexpose ng mga tao sa polusyon kasi nga habang tumatagal mas dumadami 'yung tao so mas maeexpose tayo sa iba't ibang klase ng polusyon.	I think the highest I gave here was to the exposure of people to pollution because as time goes by, the number of people increases so we will get more exposed to different kinds of pollution.	opinion	different sources of pollution	EDS	exposure to air pollution
46	parang 'dun sa near future nga po, mas nakikita ko po na ano, 'yung mga kabataan kasi ngayon talagang mabarkada na tapos madaming mga friends... Mas nadami pa rin po 'yung case ng bullying kahit po may ginagawa, may batas na dito.	In the near future, I see more that today's youth are really into barkadas, and they have plenty of friends... Cases of bullying are also increasing even though something is being done, and there is already a law here.	opinion	bullying	EDS	antisocial behaviour
47	traffic, 'yun po, sabi nga ni, ano nga po, parang malabo nga pong mapalakihan 'yung kalsada nun	Traffic, like what they said, it is unlikely that the road there will get widened, and even if it	opinion	difficult to widen the road	EDS	traffic

	kaya kahit po mapalakihan man siya ganun pa din po 'yung magiging ano ng traffic doon sa areang 'yun. '	does get widened, traffic will stay the same in that area.				
48	Tas 'yung kakulangan po sa facilities, although malalagyan na po siya ng, 'yung, coliseum, ano po, tingin ko po, sa dami na, pagdami't, patuloy na pagdami po ng tao, hindi pa rin po sapat 'yung facilities po na kaya po nilang itayo para po 'dun, para po ma, anong tawag, maoccupy po 'yung pagdami ng tao.	And then, incomplete facilities, although there will be a coliseum, as the number of people rises, the facilities they can build will not be sufficient to occupy (meet the demands of) the rising number of people.	opinion	increase in population	EDS	incomplete
49	. Kasi sa tingin ko in the future talaga mas grabe pa siguro ang traffic dahil nga sa mga pagtatayo na gaya ng mga park na 'yan	In my opinion, in the future, traffic will probably get worse because of construction there such as those parks.	opinion	more facilities more traffic	EDS	traffic
50	yung pagkainis, feeling ko 'yung mga future generation kasi mas maghahanap sila eh, ng mas kumpletong pasilidad. Kumbaga mas ano sila eh, mas upgraded sila, mas maarte sila kumbaga.	The frustration, I feel like the future generations will look for more complete facilities. That is, they are more upgraded, they are more sensitive.	opinion	future will require more facilities	EDS	incomplete

51	To appreciate the park, kasi it should be serving to the public, hindi siya serving lang, kasi to cite an example is before, nung hindi pa nagboom 'yung employee number ng city hall, nagagamit talaga siya. Unfortunately, now, if you can see daily, ang nagiging purpose talaga nung park is parking space, which is, it defeats the purpose.	To appreciate the park, it should be serving the public, not only serving, because to cite an example: before, when the employee number of city hall has not boomed yet, it was being used. Unfortunately, now, if you can see daily, the park's purpose has shifted into a parking space that defeats the purpose.	concern	used as parking space	ES
52	di naman sa pinopoliticize ko but the thing is, ang akin kasi is parang, nawala talaga 'yung purpose especially when it comes to heritage. 'Di ba nga, alam natin na nasa record, andiyan 'yung pinakamataas na monument ni Rizal but on what account, 'di ba? Hanggang 'dun lang. So, nasa Calamba nga, ikaw, ako, resident dito pero hindi siya nakakatulong sa akin para makilala ko lalo ang bayani, si Rizal. Tapos, ayun lang siguro, nasasayangan lang ako kasi 'yun 'yung maiiwan natin, 'yun 'yung maiiwan natin kasi... ng park, 'di ba? It should be full of	Not that I am politicizing this, but the thing is, for me, the real purpose has disappeared, especially when it comes to heritage. Is it not that, as we know, it holds the record of having the highest monument of Rizal but on what account, right? That is it. So it is in Calamba, I, you, we are residents here, but it does not help me in getting to know the hero, Rizal, more. Perhaps, that is it, I feel like it is such a waste that that is what we are going to leave behind, that is what we are going to leave	concern	pupose of the park	ES

	memories, full of good things, 'yun 'yung sa akin.	behind because... of the park, right? It should be full of memories, full of good things, that is it for me.				
53	mga green areas kasi sabi ko, mahalaga sa isang lugar 'yung malinis 'yung, ayun nga, 'yung sa green ano. Mahalaga 'yun na sa darating na panahon kasi nga ngayon, masasabi... medyo 'yung green nga natin ngayon eh parang, unti-unti nang nawawala kasi nga, ewan ko sa mga tao ngayon.	The green areas because, I said, it is important in a place that the green areas are clean. That is important for the future because now, green areas are slowly getting depleted because I do not know what it is with people nowadays.	opinion	green and clean	ES	increasing green areas
54	yung kita ng mga local na tao sa Calamba, napag-isip-isipan ko po iyon na pwede silang maging isa sa mga ano, maging advantage po 'dun sa plaza na ishowcase po 'yung products ng Calamba.	Source of income for local people in Calamba, I also thought that that could be advantageous for the Plaza. The products of Calamba can be showcased.	opinion	showcase products of Calamba	ES	revenue for locals
55	dun sa pagkaexpose ng mga tao sa polusyon kasi nga dahil nga 'yung park ay along the highway kahit sabihin mong medyo ano malayo pero ano eh, kasi ako isang beses palang nga din ako na ano... nung nagpunta nga ako diyan, 'yun nga 'yung merong Christmas village na	Exposure of people to pollution because the park is along the highway even if you say it is a bit far. I have only been there once when they had the Christmas village she was talking about earlier. When I went there, I said, the	personal experience	location of the park	EDS	exposure to air pollution

	sinasabi ni ate kanina. Kasi nung nagpunta ako doon, sabi ko, maganda sana 'yung lugar kaya lang 'pag maraming sasakyan, ayun, sa'yo napunta ang mga usok.	place could have been beautiful if not for the smoke that gets to you when there are plenty of vehicles.				
56	kasi nga 'di ba katapat na siya ng mismo pong bagong munisipyo, parang napag-isip-isipan ko na bakit pa, ano, bakit pa magiging mahal 'yung pagmemaintain eh meron naman po tayong city ENRO sa ating munisipyo na pwedeng sila na po 'yung gumawa po ng paraan para po sa pagmemaintain po nung lugar so part na po 'yun ng ano, parang part na rin... pwede po siyang maging part ng project po ng city enro and at the same time magagamit din po 'yung tax ng, nung lungsod sa tama lalo na po dito sa park.	Since it is in front of the new city hall, I thought, how come maintenance is expensive when we have city ENRO in our city hall and can find a way to maintain the place. It could also be a part of the project of city ENRO, and at the same time, city taxes can be used rightly, especially in the park.	opinion	why is it expensive?	EDS	expensive
57	Yung pagpapabagal ng trapiko ng park, ito naman ay seasonal kasi hindi naman talaga siya... well, daily andoon talaga 'yung influx ng mga employees	The slowing down of traffic due to the park, this, however, is seasonal because it is not really... well, daily there is an influx of employees.	personal experience	lots of vehicles passing by	EDS	traffic

58	antisocial activities na kung saan, if you can notice, wala naman talagang guard sa area at the same time 'yung guard, ang binabantayan hindi naman 'yung kung sino 'yung gumagamit nung park but the use of the park as a vehicle park.	Antisocial activities where, if you can notice, there are really no guards in the area, and at the same time, it is not the people who use the park that the guard monitors but the vehicles parked there.	personal experience	poor security	EDS	antisocial behaviour
59	yung pagkainis kasi hindi kumpleto 'yung facilities kasi to give explanation to this, 'yung C.R. is hindi naman talaga siya namemaintain to the point na dahil hindi siya namemaintain, ang ginawa nila is 'wag nalang gamitin 'yung comfort rooms at ilock siya, hindi proactive 'yung naging solutions nila. So, which is nakakainis talaga.	The frustration because facilities are incomplete, and to explain this, the C.R. is not being maintained to the point that what they did was not to put the comfort rooms to use and keep it locked. Their solution was not proactive. So it is really frustrating.	personal experience	toilets	EDS	incomplete
60	Naano ko rin po kasi na parang park din po ay isa sa lugar, hindi lang mall, para makapagbonding po 'yung family kasi 'yung mga bata po ngayon hindi na sila talaga actually into park eh. Madalas po mas gusto po talaga ay mall. So, 'yun.	I (thought) that a park is also a place, not just the mall, for families to bond because kids these days are not really into parks. Often they like the mall more. So, there.	opinion	another option than malls	ES	family and social relationships

61	nadagdag ko doon ay 'yung pag-aaral o pananaliksik siguro, ayun nadagdag ko siya kasi in the near future, malamang marami 'yung magkakainteres na pag-aralan din 'yung mga ganitong bagay. So 'di natin alam kung anong mangyayari kaya mas maganda mapag-aralan siya. So 'yun po 'yung nadagdag ko.	I added there to studies and research, I added there because, in the near future, it is likely that more will get interested in studying topics such as this. So, we do not know what will happen, so it is good for it to be studied. So, that is what I added.	opinion	research for nature	ES	information for cognitive development
62	ganap ng iba't ibang sa Calamba kasi in the near future magkakaroon kasi ng coliseum diyan eh. So, for sure maraming ganap na mangyayari diyan. Pwedeng mga international events, national events, ayan.	An event place of different (blank) in Calamba because there will be a coliseum there in the near future. So, for sure there will be a lot of events there. It can be international events, national events, there.	opinion	more events in the future because of coliseum	ES	events
63	pamilya, number, 'yun ang pinakamataas ko sa percentage. Kasi libre diyan eh. Libre 'yang bonding eh, walang bayad. Ayun	Family, number, that is my highest percentage. Because it is free there. Bonding is free, with no payment.	opinion	free	ES	family and social relationships
64	So tinaasan ko 'yung percentage ko nung antisocial, yes, kasi siguradong-sigurado 'yan kung hindi pa rin maaayos 'yung security nila, mas madami pang mababuong kung-ano-ano po diyan.	So I increased the percentage of antisocial, yes because we can be sure that if security does not get fixed, there will be more questionable things that would form there.	opinion	poor security	EDS	antisocial behaviour

65	yung percent nung trapiko kasi nga habang tumatagal mas naaano siya, nadedevelop siya. For sure kung hindi sila gagawa ng way para sa traffic baka lalong magbigat po 'yung traffic diyan.	The percentage of traffic because as time passes by, the more it gets developed. For sure, if they do not make a way, traffic will only get heavier.	opinion	lots of vehicles passing by	EDS	traffic
66	traffic po, 'yung traffic kasi madami pong for sure bibisita sa mga, kagaya nga po nung sa... dito sa Calamba.	Traffic, the traffic because for sure there would be many would visit, just like... here in Calamba.	opinion	more people will visit the park	EDS	traffic

Appendix 16 Comments on the impact of discussions

No	Filipino quote	Translated quote	Broad theme	Specific theme
1	Ako, same lang, nature and safety, nature at safety.	For me, it is the same, nature and safety, nature and safety.	bases of decisions	considerations were nature and safety
2	Sa akin, nadagdagan ng konti ‘yung sports dahil sa sinabi ni Ma’am. Kasi ‘nung una, hindi ko nakikita si park as para sa sports kasi feeling ko merong nakalaan na place para sa sports and hindi ‘yun ‘yung park, parang ganun, pero dahil kinonsider ‘yun ni Ma’am, parang nabigyan ko siya ng konting space para iconsider, like ‘yung football nga kailangan na ng green area at hindi na mag-indoor talaga ‘yun. So kailangan din talaga. Mga ganoon.	For me, sports increased a little because of what Ma'am said. Because at first, I did not see the park as for sports because I felt like there was a dedicated place for sports, and that was not the park. However, since Ma'am considered that, I was able to give it a little space for consideration, like with football which requires a green area instead of having it indoors. So it is still needed.	influenced by opinions of others	considered other benefits that were mentioned by other participants
3	Sir, for me, nakaaffect naman siya kasi iba-iba rin naman tayo kasi ng experiences. Nagbigay po sila ng example, maaalala natin, ay oo nga noh, may ganun pa pala.	Sir, for me, it also affected me because each of us has had different experiences. They gave an example, and we would remember, oh right, there is such a thing as that.	influenced by experiences of others	hearing experiences of others influenced decisions
4	Same lang nung kay, noong, kunwari, noong nagdidiscuss tayo after naming masagutan, ate, nung narinig ko ‘yung factors na binigyan nila ng ibang points na hindi ko naman nabigyan. So,	Same with, when, for instance, when we were discussing after we answered, ate, when I heard the factors to which they gave different points, and I did not give any. So, I thought that "oh that is right, that is also important." There.	influenced by opinions of others	realised other benefits after discussions

	napaisip ako na, “ah oo nga ano, parang important din pala siya”. Ayun			
5	actually, nabago po talaga ‘yung aking pananaw based po sa una kong sinagot. Kasi po parang ‘yung una kong sagot, tiningnan ko po muna ‘yung perspective ko lang, then based po sa mga napakinggan ko po sa kanila, ah may point. So bale po, ganun.	Actually, my perspective really changed based on my initial answer. Because with my first answer, I only looked at my perspective, and then, based on what I heard from them, oh, they have a point. So that was how it was.	influenced by opinions of others	hearing the opinions of others changed perspective
6	nakaapekto ‘yung sagot din nung iba kasi nga ‘yun naman ‘yung totoo, like lalo na po ‘dun sa antisocial. ‘Yung mga pambubully lalo na’t ‘yung mga gatherings ng mga iba’t-ibang groups. ‘Yun ‘yung isa doon sa nakaapekto sa akin sa pagchange ng answer ko.	The answers of others also affected because that is really the truth, like especially about the antisocial. The bullying, especially the gatherings of various groups. That is one that affected me to change my answer.	influenced by opinions of others - specific	hearing the opinions of others changed perspective
7	nung sabi rin ni, ‘yung sa pagmaintain nung park so meron siyan ano eh, relation, may relationship siya na, okay, so tataas or magkakaroon pa ng expenses sa pagmaintain nun dahil nga din merong mga, mga groups and magkakaroon ng mas mataas na, or paglalaanan siya ng budget. Halimbawa	When they said the park's maintenance, so it also has relation, it has a relationship that, okay, so it will increase or there will be more expenses for its maintenance because there are groups. There will be a higher budget allocated to it. For instance, for security so that those kinds of groups could be avoided.	influenced by opinions of others - specific	hearing the opinions of others changed perspective

	for security para maiwasan naman ‘yung mga ganung groups.			
8	nakaapekto po 'yung ano, 'yung opinion po ng bawat isa po sa amin in a good way po kasi po, 'di ba po, we have to listen din po for others' opinion po and mas magiging broader 'yung ano natin, 'yung pag-iisip natin kapag napakinggan natin 'yung kung ano 'yung perspective ng ibang tao kaya okay din po ako sa mga suggestions nila kanina and no violent reactions ako.	Each other's opinion had an effect on each of us in a good way because is it not that we need to also listen to others' opinions and our way of thinking will become broader when we hear what another person's perspective is, which is why I am okay with their suggestions earlier and have no violent reactions.	influenced by opinions of others	hearing the opinions of others changed perspective
9	kapag mag-isa lang ako kasi syempre tinitingnan ko lang din 'yung opinion ko. So nung narinig ko 'yung opinion nung iba parang, "oo nga naman, tama naman sila", so medyo naano ako, na okay, so ganun din 'yung parang umayon ako sa opinion din nila.	When I am alone, of course, I would only look at my own opinion. So when I heard others' opinions, like, "that is right, they are correct," so I was like, okay, so it was also like that, I also agreed with their opinion.	influenced by opinions of others	hearing the opinions of others changed perspective
10	Tsaka meron naman halos kasi pare-pareho din 'yung naging opinyon namin so parang wala namang masyadong ipinagbago.	Also, there was almost because our opinions were similar, so there was not much change.	not a lot of changes since opinions were similar	similar opinions

11	For me po, lalo pong naging... kasi kanina parang sarili ko lang 'yung naisip ko 'yung parang point of view ko pero noong naging apat na beses po 'yung pagsasagot natin, nung valuation form, naging ano na po, parang, bigla po akong napatingin sa buong ano, sa buong reflection ng lungsod ng Calamba, kung sino po lahat ang makikinabang at kung mapepreserve man natin 'yung culture kaya medyo nakaano rin po, medyo nakaaffect din po 'yung parang emphatic side ko para 'dun sa lungsod sa pagsasagot ko po nung form.	For me, it became more... because earlier I only thought of myself as my point of view, however, when it came to be that we answered the valuation form four times, it became like I suddenly was able to look at the whole, the whole reflection of Calamba city, who will benefit and if we are going to be able to preserve the culture. That is why my emphatic [sic] side for the city affected how I answered the form.	influenced by opinions of others	hearing the opinions of others changed perspective
12	Well, hindi siya totally nagchange, since ang ginawa ko kasi nung nakaraan, the third survey, 'yung third time is... same concerns pero iniba ko lang 'yung gravity kasi nga naka... in a way na 'yung point of view ko din is nachange, hindi naman siya ganun kadrastic but 'yung sentiments and the needs of the others ay nilagyan ko rin ng emphasis kasi nga it turned out na maybe I'm just looking for my own self-serving concerns. 'Yun lang naman.	Well, it did not change, since what I did previously, the third survey, the third time is... same concerns, but I only changed the gravity because, as I said, it was... in a way that my point of view also changed. It was not as drastic, but I emphasize others' sentiments and needs because it turned out that maybe I am just looking for my self-serving concerns. That is all.	influenced by opinions of others	hearing the opinions of others changed perspective

13	Para sa akin po, kasi may time na nakalimutan ko 'yung sa ano eh, 'yung sa facility kasi nasa dilo na siya 'di ba. So nung nabanggit siya ni sabi ko, "ay oo nga pala, noh?" So 'yun, medyo nagbago 'yung ano ko nung second, nung second round. Ayan, 'tas 'yung sinabi rin niya na tungkol sa, tungkol sa culture ng Calamba, kasi nga 'dun si Rizal, di ko na rin kasi masyado siyang naalala before kasi nga nagfocus ako sa iba, ayan. So 'yun, nung second round, nadagdag ko rin siya. Ayun po.	For me, because there was a time when I forgot the facility because it was at the end, right? So when they mentioned it, I said, "oh that is right." So I changed my mind a bit during the second round. Also, what they said about the culture of Calamba because Rizal is there, I forgot about it before because I focused on another thing. So there, during the second round, I added that as well.	influenced by opinions of others	realised other benefits after discussions

Appendix 17 Comments on the impact of thinking about future generations

No	Filipino quote	Translated quote	Theme	Specific ES and EDS
1	Ako, hindi tao ‘yung naisip ko eh, ‘yung maintenance. Parang paano nila isusustain ‘yung maintenance hanggang future na ganun dapat ‘yung napoproject, like, kailangan ‘yung green na nakikita ko ngayon ay kailangan mas maraming green in the future, na paano nila imemaintain ‘yun. Maintenance-mas focused ako sa maintenance.	For me, it was not the people I thought of but maintenance. Like, how they would sustain the maintenance of it until the future in a way that what should be projected is, like, it needs to be that the green I see now there should be more green in the future, how would they maintain that. Maintenance- I am more focused on maintenance.	focus on maintenance and greens	increasing green areas
2	sa akin kasi syempre… Kasi syempre ay ako’y may mga apo na, oh ‘di ba, hindi halata. So syempre iniisip ko ‘yung future nila, oh, halimbawa, naubos na po ‘yung ano, ‘yung sa EDS po tayo, naubos na ‘yung pera ng local government, ng kakamaintain ‘nun. So kaya po mas mataas talagang score ko doon sa EDS kasi papaano na ‘yung ibang fund kung nakabuhos lang ‘dun sa pagmemaintain ng Rizal park. Pero sa ES naman po ang mataas nga doon, mas lalong makikilala ang Calamba, hindi lang dito sa atin, locally, sa ibang bansa din po. Syempre, nandito tayo,	For me, of course... of course, because I already have grandchildren, it is not obvious, is it? So, of course, I think of their future, for instance, the thing gets depleted, the EDS, when the local government's money gets depleted in its maintenance. So that is why my EDS score is really higher because what will happen to other funds if it is all poured out to Rizal park's maintenance? However, for E.S., what is high there is that Calamba would be more well known locally and in other countries as well. Of course, we are here, my grandchildren would say, "oh, I am from Calamba," see?	thought about grandchildren; maintenance	expensive maintenance

	mga apo ko sasabihin, “ay taga-Calamba ako”, oh ‘di ba?			
3	yung next generation na, ‘yung pinagbasihan ko doon, ‘yung nakikita ng… ako nakikita ko ‘yung mga students na nagpoprogress, noh. Sila ‘yung nagiging mga adults. Ano eh, doon ko nakuha ‘yung basis ng sagot ko na medyo kakaiba nga as bawat batch ng student or bawat batch ng mga nahawakan namin na students sa school.	The next generation, which I made into a basis there, what is seen... Me, I see the students who make progress, right? They are the ones who become adults. That is where I got my basis for my answer, which was that it really is unique in every batch of students or every batch of students we handle at school.	thought about current students	not specific
4	Ang inisip ko po 'nun is kung ano po 'yung makukuha nilang mga benefits sa plaza po and syempre din po, kung ano na ba 'yung epekto kapag sinama na po 'yung other factors like 'yung sa environment, 'yung ganun, sa economy and population na ng Calamba in the near future.	What I thought about at that time was what benefits they would reap from the plaza and also, of course, what the effect would be if other factors were included like the environment, such as that, the economy and population of Calamba in the near future.	thought about environment, economy, and the residents of Calamba	not specific

5	in general 'yung tiningnan ko so sa lahat ng tao talaga siya. Nagbase lang ko nung mangyayari sa present na nangyayari ngayon so 'yung prediction ko parang ganun, nakabase lang kung ano 'yung availability ng meron tayo sa ngayon tapos 'yung pinagdadaanan natin ngayon kaya medyo ano, medyo kulang 'yung mga anong tawag doon? 'Yung sagot ko.	In general, the way I looked at it was that it really is for everyone. My basis is what is presently happening, so my prediction is like that, it is only based on what is available to us now and what we are currently going through, which is why it is a bit, it is not enough, what do you call that? My answer.	thought about residents of Calamba	not specific
6	na din po 'tsaka 'yung mga, kung ano 'yung napapansin sa mga kabataan sa ngayon. So kung ganun na sila ngayon, how much in the future pa?	As well as what can be observed with youth these days. So if they are like that now, how much more in the future?	thought about the youth now	not specific
7	yung mga magiging future residents po ng Calamba kasi syempre 'di ba knowing na we are the, isa tayo sa mga city ng Laguna so expect po natin na every month or every, marami pong na lumilipat po dito na mga tao for work or any personal matters so naging isa po sila sa mga basehan ko 'dun sa pagsagot po ng form and 'dun naman po sa mga ano po	the future residents of Calamba, of course, knowing that we are the, we are one of the cities of Laguna, so we expect that every month or every, there are plenty of people who move here for work or any personal matters, so the became one of my bases in answering the form and also with the...	thought about the future residents of Calamba from other cities or provinces	not specific
8	sa sports at sa mga gaganapin na mga factors po, ang naisip ko naman po doon ay 'yung sa mga kabataan po lalo na po 'dun sa mga kasama po sa mga	With factors like sports and events that would be carried out, I thought that was about the youth, especially those involved	thought about youth involved in sports	sports and physical fitness

	varsity, 'yung mga nagpapractice po for special events sa school, mga ganun po, 'yung related po sa P.E.. '	in varsities, those who practice for special events at school, which are related to P.E.		
9	Yun po 'yung mga naisip ko and inisip ko na rin po na paano po siya magiging ano, magiging welcoming sa tao na mapopromote din po natin 'yung culture ng Calamba city, Laguna. 'Yun po.	Those are what I thought about, and I also thought about how it would become, become welcoming to people so that we would also be able to promote the culture of Calamba city, Laguna. That is it.	thought of park characteristics that the future generations might like	local identity and cultural heritage
10	Siguro, as a person that really values the fut... the legacy na maiiwan is nakita ko na, as I observe, it's a sad thing na 'pag sinabing Calamba is syempre connoted agad diyan si Dr. Jose Rizal but the question is, relevant pa ba? Natatanong pa ba nila na, kasi 'di ba parang sa ganitong bagay, 'pag sinabing Calamba, parang expected na the locals, alam talaga sila, 'di ba, alam talaga siya. Kaya lang, since kung titingnan natin 'yung park, andiyan nga si, yung bantayog na malaki ni Rizal pero ano ba siya, aesthetic purpose lang ba siya, 'di ba pero, 'di ba? Parang nakakalungkot kasi, 'yun 'yung sa akin.	Perhaps, as a person who really values the fut... the legacy that will be passed on, I saw that it is sad that when Calamba is mentioned, of course, Dr. Jose Rizal is already connoted there. However, the question is, is it still relevant? Are they still asking, because with this sort of thing, right? If you say Calamba, it is like it is expected that the locals really know them, is it not? He is really known. However, if we look at the park, there is the big monument of Rizal, but what is it, is it only for aesthetic purposes, am I right? It is saddening, that is it for me.	thought of the park's legacy	history

11	really important na when a certain person stroll this park, pag-alis niya doon, maaappreciate niya lalo 'yung importance na naiwan nung ating pambansang bayani and then, how can it encourage, 'di ba? Kahit hindi 'yung local na Calamba na, "ay ang sarap pumunta rito".	It is really important that when certain people stroll this park when they leave, they would appreciate the importance of the national hero's legacy more and then, how can it encourage, right? Even those who are not locals of Calamba, "oh it is great to go here."	historical importance of the park	history
12	Bale meron na rin po kasi akong daughter, meron na rin po akong anak so inisip ko po, "ano kaya 'yung mga dapat kong iconsider para pagdating ng panahon, ano ba talaga 'yung dapat nilang maisip about kung... about sa park, ano ba 'yung kahalagahan nun sa kanila?".	I also have a daughter already, I also have a child, so I thought, "what are the things I should consider so that when the time comes, what really are things they should think about if... about the park, what is its importance to them?".	thought of children	not specific

Appendix 18 Comments on COVID-19 and the park

No	Filipino quote	Translated quote	Open or close	Theme
1	Dapat sarado kasi as situation ngayon, talang nandoon pa tayo sa stage na nag… still study, like ‘nung first na labas nila droplets, ngayon airborne na so hindi mo alam kung gaano ba kacontagious ‘tong sakit na ‘to so para mas malessen ‘yung movement ng mga tao, it’s better na ‘wag nalang muna buksan para maiwasan din ‘yung pagpunta or pag-ano… ‘yun lang.	It should be closed because of the present situation, we are still at the stage where... still study, like at first it was droplets, now it is airborne, so you do not know how contagious this illness is so for people's movement to lessen, it is better not to open yet so that we can avoid coming or... that is it.	closed	to lessen people's movement
2	Meron din akong ishshare. For me, mas kailangan ng tao kasi for the mental health. Napakaliit ng apat na sides nung bahay para matagalan natin ‘tong Covid so kailangan natin ‘yung space, ‘yung greens na ‘yon siguro kahit malayo, magkalayo lang, para lang makalabas lang ‘dun sa bahay at ma… total ‘yung iba naman eh parang hindi sila tinitreat, hindi na tinitreat ‘yung Covid na napakadelikadong sakit pero for us na ‘yung sa mental health ng mga tao ‘saka sa kalakihan, mas, siguro mas kailangan nila ‘yung park ngayon for air,	I also have something to share. For me, people need it more for mental health. The four sides of the house are very small for us to last this Covid, so we need the space, the greens perhaps even though it is far away, just to get away, just so people can go out of the house and... besides, it seems like others are not being treated, not treating Covid as a very dangerous illness but for us who are for the mental health of people and generally, it is more, perhaps they now need the park	open	for mental health

	for magandang perspective.	more for air, for a beautiful perspective.		
3	Oo. Sa iba naman, feel ko ‘dun sa apat na walls na parang nakakasakal kung minsan siguro para sa iba nakaka, parang, bilanggo, parang ganun. Ayun, para tayong boxed.	Yes, with others, I feel like, within four walls, it is sometimes suffocating for some, it is like being a prisoner. It is like we are boxed.	open	for mental health
4	Para sa akin po, dapat binuksan. Instead po ‘yung mga classrooms, noh, dapat po, kasi syempre hindi naman po natin, kung halimbawa po malalagyan ng mga Covid patients ‘yung ibang rooms po ‘dun sa bawat schools, what if po, halimbawa hindi po madisinfect ng maayos, so halimbawa po isipin po natin hopefully na sana by December na ‘to, tapos na po ‘yung Covid, paano po kung hindi nadisinfect ng maayos. So ‘yung mga bata po, pwede pong ma-anuhan. Unlike po sa park pwede po doon magtayo tapos since mahangin po doon so open area, medyo ‘di naman po open area, ganun. Para sa akin po madali pong madisinfect doon ‘tsaka	For me, it should be open. Instead of the classrooms, right? It should be, because of course, we do not, for example, should Covid patients be placed in some of the rooms in each school, what if, for instance, they do not get disinfected properly, so, for example, let us consider that hopefully by this December, Covid would end, what if they do not get properly disinfected? So the kids, they may get... Unlike at the park, they could build there and since it is breezy there in an open area, not so much an open area. For me, it would be easier to disinfect there and also, there would be	open	COVID19 facility

	maluwag po kasi ‘yung gagalawan.	more space to move around.		
5	So sa ganoon kalaking area, sana naging ano siya, nautilize ‘yung area na ‘yon for greater purposes hindi lang ‘dun sa, you know, rebulto ni Rizal, ganun.	So with an area that large, I wish it became, that area was utilized for greater purposes not only with, you know, Rizal's monument, like that.	open	COVID19 facility
6	siguro, tama po na isara muna kasi lalo po sa panahon ngayon, ‘di po ba, oh hindi naman pwedeng lumabas ang… ‘di ba may mga age limit kung sino lang ang pwedeng lumabas. Ang mga senior citizen hindi naman, ‘yung mga bata, hindi pwede. So ‘pag nandoon na, halimbawa po may pa-event tapos doon ginanap, eh hindi po ‘yun, siguro hindi pwede kasi ang spreading ng virus n’yan, spreading ng virus, ang bilis lang. Hindi po natin macocontrol.	Perhaps it is right that it is closed, especially at this time, is it not? It is not allowed to go out... Is there not an age limit for whoever is allowed to go out? The senior citizens are not, the kids are not allowed. So if they are there already, for example, there is an event being held there, it should not be, perhaps it should not be allowed because the spread of the virus, spreading of the virus, is very quick. We cannot control it.	closed	to prevent the spread of the virus
7	, dapat po ano, buksan pero masunod pa rin ‘yung social distancing. Pero in general talaga para mawala, maiwasan ‘yung ganung… lalo na ‘yung hawaan, mas	It should be open, but social distancing should still be observed. However, in general, for it to disappear, avoid the... especially the spread, it is	in the middle	with protocols; exercise at home

	magan… much better na sarado. Kumbaga sa bahay nalang mag-exercise, ganun.	better... much better that it is closed. That is, exercise should be done at home.		
8	, hindi pa naman po totally open po kasi ‘yung park namin kaya po ‘di din kami makasagot kaagad. Wala pa po siya totally na park, ano lang po siya eh, damuhan palang kaya po hindi pa rin po namin masagot kanina ‘yung tanong niyo, kaya po natigil po siguro kami. Pero in general po dapat po talaga isara.	Our park is not yet completely open, so we are also not able to answer immediately. We do not really have a park, it is only it is still a grassy field which is why we were not yet able to answer your question earlier, perhaps that is why we were interrupted. But in general, it should really be closed.	closed	no reason
9	Sa tingin ko po, sana pinasara muna po kasi po 'yung city government po mismo 'yung nagpapatupad ng social distancing and sana winiwish nila or ine-aim nila na magstay at home. Sana po, Sir, dinagdagan... hindi pa ako nakakapunta, Sir, pero sana dinagdagan nila 'yung security para, or, hinigpitan nila 'yung security para walang masyadong makapasok doon. Kasi kung ang dahilan lang naman ay pag-eexercise, pag-uunwind, we can do that at home naman po.	In my opinion, I wish it had been closed because it is the city government itself who enforces social distancing, and I prefer if they also wish or aim to stay at home. I wish, Sir, that it was increased... I have not been, Sir, however, I wish they increased security so not a lot of people would be able to enter there. Because if the only reason is to exercise, to unwind, we can also do that at home.	closed	exercise at home
10	nagbabrowse din po kasi ako sa facebook page po ng ano, ng... ni Mayor po, Mayor Timmy po. Nakikita ko po doon 'yung... nakikita ko po doon na	I also browse the Facebook page of... the Mayor, Mayor Timmy. I see there... I see there that, the comments that... I agree with their	no answer	should have been a hospital

	ano, 'yung mga comments po na... which is nag-agree naman po ako sa comment nila na sana pala five years bago mangyari itong Covid or year bago mangyari 'tong Covid, sana pala hospital nalang 'yung ano, pinagtuonan ng pansin kaysa 'yung pagpapatayo ng stadium po doon kasi, oo nga naman po, mas priority po dapat natin 'yung health and tama naman rin po na dapat, pina- or parang, minaintain nalang ng ayos or nagkaroon ng improvement and development 'yung ano po, 'yung JB Hospital po or (maging? 10:16) extension nalang po kasi nga po, 'di ba, Covid-19 tapos kulang tayo sa facilities. 'Yun lang po, Sir.	comments that it should have been that five years before Covid happened or a year before Covid happened, the hospital should have been the, the one given more attention instead of constructing the stadium there because, I agree, our priority should be health, and it is also correct that it should, like, JB Hospital should have instead been maintained or improved and developed, or it should have become an extension instead because of Covid-19, and also we lack in facilities. That is it, Sir.		
11	yung parang mas napagtuonan nalang ng pansin na gawing hospital nalang imbis na, 'yun po, 'yung sa part na nag-aagree po 'ko	It is like attention should have been given more to turning it into a hospital instead, that, in the part where I agree with.	no answer	should have been a hospital
12	ibang perspective naman, ang naisip ko naman po is 'yung parang after ano na, 'yung hindi po ngayon na merong, na bawal pang lumabas, ang naisip ko naman po 'dun sa question is ano, for example po, meron nang vaccine na available, so kung pwede na po tayong,	A different perspective, what I thought of is what to do after, not like now where we have, that going outside is prohibited, what I thought about in the question was, for example, a vaccine is available already, so if	open	with protocols

	kunwari, pwede nang lumabas, kung pwede nang pumunta doon sa the Plaza or sa park po, parang mas matututunan na po nung mga tao na maging, 'yung mas maging malinis po, 'yung mas magiging aware po sila sa nasa kapaligiran nila and mas mapapractice po din siguro 'yung social distancing, 'yung ganun po, since hindi pa nga rin naman po nag-eend 'yung Covid. Like, kunwari po may vaccine palang naman, ganun po.	we are already able to, for instance, going out is allowed, if it is allowed to go to the Plaza or the park, people can learn more to be cleaner, they would be more aware of their surroundings, and they would also be able to practice social distancing since Covid will not truly end. Like, for example, we only have a vaccine.		
13	kasi ngayon 'di ba meron nga tayong sinusunod na social distancing and honestly hindi pa ako nakakalabas para pumunta doon so hindi ko alam ang situation ng tha Plaza pero for sure makakaapekto siya ng malaki kasi nga mas cautious na ang mga tao na dapat tayo ay magkaroon ng social distancing kasi nga 'yung virus hindi naman natin nakikita. So feeling ko, mas magiging ano sila, maingat na ngayon.	Because now we are following social distancing and honestly I have not gone out to go there, so I do not really know the situation at the Plaza, but for sure it would have a huge effect because people will be more cautious that there should be social distancing because we cannot see the virus. So I feel like they would be more careful now.	no answer	with protocols
14	halos nasa city hall po kami minsan 'pag may mga meeting po ng S.K. tapos po, ano, napapansin ko po na mas onti na po talaga ngayon 'yung taong napunta po 'dun sa park, maliban nalang po 'dun sa	We are almost always at the city hall when there are SK meetings, and I also notice that there are really fewer people now who go to the park aside from those who bike and...	no answer	used as a parking lot

	mga taong nagbabike po and nagpa... 'dun po 'yung ginagawang parking lot ng city hall po ngayon.	that is what city hall uses as a parking lot now.		
15	Kasi po maski po 'yung mga kotse meron din pong social distancing 'dun sa city hall tapos po ano, mas magiging maingat na po 'yung mga tao na mas susunod po sila 'dun sa sinasabi na bawal po talagang lumabas kasi nung wala pong Covid, mas, may nakikita rin po kami doon mga seniors 'tas 'yung mga kabataan po nandun. Eh mas mahigpit po ngayon na may edad po na bawal lumabas 'dun sa pinaka bahay and area po ninyo kaya 'yun po.	Even the cars observe social distancing at city hall, and people would be more careful to follow orders not to go out because when we did not have Covid, we also see seniors and youth there. It is stricter now that old people cannot go out of the house and living area.	no answer	still see youth and elderly in the park
16	Kasi sa ano ngayon, hindi masyadong pinapayagan ang mga mass gathering so pwede naman siguro magpunta pero ano lang, pwede siguro 'yung 'pag punta ka lang 'dun siguraduhin mo lang na ano, na maka... ano 'yung may mga oras naman siguro na wala naman sigurong mga tao doon na pwede kang makaano.	Because now, mass gathering is not permitted so perhaps you can go, however, perhaps you could go there if you make sure that... there are times when maybe there are no people that you may...	open	with rules
17	Pero for me siguro ngayon kasi may Covid-19 pa nga, baka hindi ko lang alam ngayon kung sarado siya or ano pero maganda doon eh. Makaka... for me siguro 'pag ano, 'yung inip,	For me, however, because there is still Covid-19, maybe I just do not know now if it is closed or what, but it is beautiful there. For me, perhaps, if, boredom, if	open	control duration

	'pag may pinuntahan kang saglit, kahit umano ka lang, tumigil ka lang mga ilang saglit lang doon basta may pinuntahan kang iba na priority kasi nga dahil nga lalo na dito sa Calamba napakahigpit dito. Pinag-aano nga 'yung mga gala-gala. 'Yun, kung mapapadaan lang pero kung hindi naman, eh 'di, 'wag na mag-ano... hintayin na lang na matapos 'yung pandemya kasi matatapos din naman 'yan eh.	you go someplace for a little while, even if you stop there for a bit just so you could go somewhere with a different priority because especially here in Calamba it is very strict. Wandering around is... If it is just passing by but not really, so do not, do not... just wait for the pandemic to end because it will end eventually.		
18	, I put on my lifestyle na 'yung healthy activity, that's very important. Pangalawa 'dun, the psychological or the mental capacity ng isang tao, 'di ba? 'Di ba nga ngayon ang taas din ng incidents ng rage ng depression or 'yung 'pag may anxiety, pagkalungkot. 'Yung, since kasi ngayon tayo ay nasa GCQ, we are allowed na magkaroon ng person... ah anong tawag dito? I forgot the term eh, pero 'yung, 'yung, anong tawag dito? 'Yung nagjojogging ka is allowed using the proper protocol na paggamit ng mga mask. 'Yun, so, malaking bagay din na hin... mga nawalan ng work because kailangan talaga magshut down or nalay-off or nagwowork from home na	I put on my lifestyle that includes healthy activity, that's very important. Second, the psychological or mental capacity of one person, right? At present, there are many incidents of rage and depression, anxiety, and sadness. Since now we are under GCQ, we are not allowed to have person... what do you call this? I forgot the term, but the, the, what do you call this? Jogging is allowed when observing the proper protocol of wearing masks. There, so, it is a big deal that... people who lost their jobs because they needed to shut down or were laid off or are working from home so that they are not	open	physical and mental health

	hindi sila nakakulong kasi 'yung hindi ka makasinghot ng hangin na sariwa. Meron din siyang epekto.	confined because when you cannot breathe fresh air. That also has an effect.		
19	malaki talaga ang factor katulad ko. Since dahil walang... ang... nag-ano eh nagmark-up kasi ngayon ang transportation fare 'di ba so minsan 'pag nagtitipid ako at ayaw kong gumastos since malapit lang ang bahay sa city hall and doon ako nag... katulad nung nakaraan kasi nag-ayos ako ng mga requirements so nilakad ko siya. So 'yung 'pag dumadaan ako ng park, nakikita ko siya anong changes, nakakalessen siya ng anxiety talaga. 'Yun lang, siguro 'yung mga nakaraan na survey kanina, 'yun talaga laman ng heart ko na nallulungkot ako na ang park nagiging talagang parking area lang talaga. Sabi ko, sayang kahit papaano 'di ba, napapakinabangan 'to ng ano, ng iba't ibang tao.	It is really a huge factor because, like me. Since because there is not... the... Because transportation fare marked-up now, right? Sometimes, I am being frugal and do not want to spend since my house is near the city hall anyway and that is where I... Like before, when I was taking care of my requirements, so I walked there. So when I pass by the park, I see what the changes are, it really lessens anxiety. That is it, perhaps the surveys earlier, that is really the content of my heart, that I am sad that the park has been turned into a parking area. I said, is it not such a waste because somehow it could have been used by different people?	open	for mental health

20	syempre 'di ba every two weeks pabago-bago po tayo ng community quarantine so parang we can ano naman po, we can, meron pa eh, magagamit pa rin natin 'yung ano, 'yung parks pero need pa rin po natin sumunod sa mga protocols like social distancing, 'yung mga ganun.	Of course, is it not that every two-week community quarantine changes so anyway we can, we can, there is still, we can still use the, the parks but we still need to follow protocols like social distancing, things like that.	open	with protocols
21	Ako po kasi naniniwala ako sa konsepto ng forest bathing lalo na po kapag stressed tayong lahat so sobrang makakatulong po 'yung park po ngayon lalo na po sa 'pag, ano, sa destressing, or anything na basta po for self-care, ganun po.	For me, I believe in the concept of forest bathing, especially if we are all stressed, so the park will be of immense help now, especially with destressing, or anything as long as it is for self-care.	open	for de-stressing
22	May effect po kasi syempre for safety reasons, noh. So dapat po talaga isara muna siya para din masecure natin na safe 'yung mga tao dito sa Calamba lalo ngayon dumadami po 'yung cases, noh. So 'yun po.	There is an effect because, of course, for safety reasons. So it should really be closed for now so that we can be secured that people here in Calamba are safe, especially now that the number of cases is rising.	closed	for safety

Appendix 19 Lessons from the focus groups

No	Filipino quote	Translated quote	Broad theme	Specific theme
1	Value more ‘yung park. Parang, kasi na-aano ‘yan eh, natetake advantage kasi nandiyan na ‘yan, like, parang kung maimagine mo ‘yung presyo ng kung magkano ‘yung ipinundar ng munisipyo diyan, kung magkano ‘yung nilaan na pondo para diyan, eh baka maappreciate mo, parang, baka mas dalasan mo dahil sayang naman ‘yung pinondo diyan kung hindi naman pala mamamaximize or hindi mo mayuutilize masyado ‘yung paggamit kasi hindi naman income-generating ‘yung park na pinundar nila sa ngayon. Parang, sayang kung, ‘di ba. Ayun lang ‘yung mas naappreciate ko ngayon.	Value the park more. Like, because it is being taken advantage of that it is there, like, if you can imagine the price of the municipality's investment there, the amount of funds allocated for that, you might appreciate it, like, maybe you would frequent it more because the funds allocated there would go to waste if it would not be maximized or utilized enough because the park they established is not income-generating. Like, it's a waste if, right? That is all I appreciate more now.	what to do	to value the park more
2	‘yung FGD na ‘to, just gives… stresses the point na importante ang research. Sa isang decision-making kailangan may planning, so kung hasty decision, walang planning, kung minsan	This FGD just gives... it stresses the point that research is important. When it comes to decision-making, planning is needed, so if hasty decision, no planning, sometimes there are negative	decision-making	importance of research in decision-making

	kasi may mga negative na mangyayari or mga negative na hindi makikitang mga points. And next, 'yung ating, kasi siguro kampante tayo na Calamba is the cleanest air in the South.	outcomes or negative points that are not seen. Next, maybe because we are confident that Calamba is the cleanest air in the South.		
3	May last point lang ako. Last point. 'Yung social relevance, social relevance, community relevance, sana may participation talaga lagi. So 'yun lang po, sana meron tayo 'nun.	I only have one last point. Last point. The social relevance, social relevance, community relevance, I wish there really is participation always. So that is it, I wish we had that.	decision-making	public participation in decision-making
4	Natutunan 'yung kahalagahan ng urban park. 'Yung mga benefits, 'yung mga ecological services and disservices.	I learned the importance of an urban park. The benefits, the ecological services, and disservices.	ecosystem services and disservices	value of urban parks
5	Yung uses po, efficient po.	The uses, it is efficient.	benefits and disbenefits of the park	uses of the park
6	Ako po, 'yung ano, 'yung parang, namulat din kasi 'di lang pala 'yung tao mismo 'yung natutulungan niya for enjoyment pati din pala 'yung mga taong mismong nagwowork doon. 'Yung mga nagtataho, 'yung nagbebenta ng kwek-kwek, natutulungan rin sila kasi po way din po 'yun na kumita sila.	For me, the, the like, I was enlightened because it was not just that the people were serviced, but it was also for the enjoyment of people who work there. The taho vendor, the kwek-kwek vendor, they are also aided because it is also a way for them to earn money.	benefits and disbenefits of the park	realisation of who benefits from the park

7	Hindi lang po, dahil tinayo po ‘yung park na ‘yan, marami pong purpose para gamitin po ‘yon.	Not only that, because the park was built, it has many purposes for it to be used.	benefits and disbenefits of the park	uses of the park
8	Siguro po ako, sa katagalan ko, parang ngayon ko lang naisip, “ah pwede pala ‘tong iresearch na ganito, Sir”. ‘Yun po ang aking… alam niyo, nung nagsabi si Sir, sino po ito, si Sir Sam, nacurious po ako. ‘Di po ba, nung katext ko kayo, gusto ko nang magtanong kagabi. Sabi ko, pwede palang iresearch ‘to na ganito. So ayun, talagang nagfocus ako sa inyo ngayon, oh ‘di ba, Sir? Inalis ko muna ang aking tutor kasi nacurious talaga ako. So pwede pala ‘yon na iresearch kahit… ako kasi sa tingin ko simple lang, ‘di ba, tapos pwede pala siyang iresearch.	Maybe for me, for a long time, it is like I just thought, "ah it is possible to research this like this, Sir." That is my... you know, when Sir said, who is this, Sir Sam, I got curious. Was it not that, when we were texting each other, I wanted to ask last night. I said I did not realize that it was possible to research this like this. So there, I really focused on you now, am I right, Sir? I cleared my tutoring because I really got curious. So it was possible to research that event though... in my opinion, it is simple, right? and you can research it.	research	research
9	marami po akong natutunan, naspecify niyo po sa amin ‘yung mga advantages and disadvantages po ng park. ‘Yun po.	I learned a lot, you specified to us the advantages and disadvantages of the park. There.	benefits and disbenefits of the park	benefits and disbenefits of the park
10	Sa akin naman, dito ko rin nakita ‘yung kung paano natin titingnan ‘yung progress in the near future or sa future nung bawat generation	For me, I observed with this how we could look at the process in the near future or the future of each generation because	future generations	thinking about future generations

	kasi nga nung nakita ko ‘yung pamimilian, paano ba makikilala ulit ng mga future generations ang Calamba, ‘yung historical landmarks baga. Tapos namulat din sa mga bagay na pwedeng mangyari, an eye-opener siya din para sa akin.	when I saw the choices, how will future generations get to know Calamba, like with the historical landmarks. I was also enlightened with things that could happen, it was also an eye-opener for me.		
11	yung ecosystem services and disservices, syempre, lalo na po 'dun sa the Plaza natin na, 'yung park natin sa Calamba.	The ecosystem services and disservices, of course, especially with our the Plaza, our park at Calamba.	ecosystem services and disservices	ecosystem services and disservices
12	papaano din mas papahalagahan 'yung park na in a way na hindi siya... na in a way na hindi siya makakasama sa tao. Kumbaga parang mas iprioritize 'yung services na ibinibigay ng park sa atin. A	How we can also value the park more in a way that it would not be... in a way that would not be detrimental to people. That is, like, to prioritize more the services given to us by the park.	ecosystem services and disservices	value of urban parks
13	yung mas pagtuon siguro ng government natin, 'yung much ecotourism na ibinibigay nung park kasi 'yun din 'yung pwedeng pakinabangan ng future generation.	More attention is given by our government, the ecotourism that is given by the park because that is also what future generations could benefit from.	future generations	ecotourism for future generations
14	thankful din po ako na napag-uusapan 'yung ganitong klase ng topic po, ganitong klaseng issue po na kailangan iaddress din.	I am also thankful that we are able to talk about this sort of topic, this kind of issue that also needs to be addressed.	research	relevant issue

15	natutunan ko po is 'yung ecosystem services and disservices nga po. And malaki po 'yung tulong nito, noh, nitong meeting na po na 'to for our future endeavors po. And at the same time po, masaya po ako na finally nga po napag... kahit papaano napag-uusapan 'tong ganitong klase ng topic and nung sinabi talaga ni Sir sa una parang, 'yun nga po 'yung magiging topic, ganun po, natuwa po ako kaya nag-go din po ako and thankful po ako for that po	I learned about ecosystem services and disservices. And this is a big help, right? This meeting for our future endeavors. And at the same time, I am glad that... Somehow we can talk about these kinds of topics, and when Sir said at the beginning that that would be the topic, that was it, I was glad, which is why I went for it and am thankful for that.	ecosystem services and disservices	ecosystem services and disservices
16	yung about sa 'yung services and disservices po, iyon, unang mga nabanggit.	The one about services and disservices, that, the ones mentioned first.	ecosystem services and disservices	ecosystem services and disservices
17	mas ano po, parang kasi nung una, 'yung akala ko parang about sa mga nangyayari lang siya 'dun sa the Plaza, parang 'yung normal lang. Ngayon po na nagkaroon ng discussion and ano po, nagkaroon ng mga pagbibigay ng opinion, mas na ano po 'ko, parang mas lumawak po 'yung pananaw ko 'dun sa ano, parang, hindi lang pala siya basta park, parang may mga ganung bagay din	It is more like because at first, I thought it was only about what was going on at the Plaza, like, just what is normal. Now that we had a discussion and opinions were given, I was able to, like my perspective was broadened about the, like, it is not just a park-like there are also things like that, that is possible, that we can benefit from. Others have it too, and there are also things that we do not know, and we	value of discussion	wider perspective about benefits and disbenefits

	po na ano, na pwede, na may nabebenefit po tayo tapos meron din 'yung iba and then meron nga din po na mga bagay na hindi natin alam na hindi lang pala natin napapansin pero ganun na pala 'yung nangyayari, 'yon po.	just do not notice, but that is what is already happening, that is it.		
18	, happy din po 'ko na naririnig... ah parang mas lumawak po 'yung pananaw ko dahil napakinggan ko rin po 'yung mga pananaw nung iba. Yes, po, yung mga opinion po nung iba	I am also happy that it is being heard... ah like my perspective broadened more because I also heard others' perspectives. Yes, the opinion of others.	value of discussion	wider perspective about benefits and disbenefits
19	naging klaro kung ano 'yung mga nakukuhang benefits sa mga park kasi usually ang alam ko lang talaga, pasyalan lang siya, gawaan lang ng event. So mas naging klaro na may mga ganyan pa palang aspeto sa mga park.	The benefits reaped from the park became clear because I am only aware that it is only for strolling and for carrying out events. So it became more clear that the park has those aspects.	benefits and disbenefits of the park	benefits and disbenefits of the park
20	mas naging ano, mas naging aware ako sa benefits na naibibigay ng park as well as 'yung nakukuha din natin na hindi okay doon so mas ano siya ngayon, mas aware ka na na, "ah okay, effect din pala siya". Hindi ko naman napapansin 'yun dati kasi nga in general mo	I became more, I became more aware of the benefits given by parks as well as what we get from it that is not okay, so it is now more, you are more awake that, "ah okay, that is also an effect." I did not notice that before because we only see it generally, so now it is more specific.	benefits and disbenefits of the park	benefits and disbenefits of the park

	siyang nakikita so mas specific na siya ngayon.			
21	yung willingness po ng mga tao to participate po with this kind of ano po, with this kind of study.	The willingness of people to participate with this kind of, with this kind of study.	research	willingness of people to participate in this kind of research
22	So, naenjoy ko po 'yung mga ganito lalo't, syempre, nashare ko po sa inyo kanina na isa rin po akong urban forestry major so parang may mga nashare din po ako kahit papaano na related po 'dun sa napag-aralan ko.	So, I enjoyed these kinds of things, especially, of course, I shared with you earlier that I am also an urban forestry major, so I could also somehow share about things I studied.		enjoyed the discussion
23	And at the same time, nakita ko rin po 'yung opinion po ng mga kasama ko po dito in their different perspective po.	And at the same time, I also saw the opinions of my companions and their different perspectives.	value of discussion	heard opinions of others
24	nung nagstart talaga tayo magkaroon ng collaboration with my students kasi 'di ba, chineck ko din, may nagfeed-back sa akin na student, sabi niya, "Sir, ang ganda po nung ano, nung tawag dito? Nung research," kasi ako din naman narealize ko din talaga na oo nga, parang... ako may sentiments ako, kaya lang hindi ko navovoice out, 'di ba. Tapos, nung isang araw nga	When we started having collaboration with my students, I also checked, a student gave me feedback, she/he said, "Sir, that is good, what do you call it? the research," for me also, I also realized that yes, like... Me, I have sentiments, but I am not able to voice them out, right? Then, the other day someone gave me a message, I was afraid to... I do not know what happened	research	difficulty of research and fear of expressing opinions

	someone messaged me, natatakot siyang mag-ano, mag... ewan ko kung what happened yesterday kasi 'di pa siya nagrereply sa akin kung natuloy kayo yesterday.	yesterday because they have not replied yet if you pushed through yesterday.		
25	is natatakot siya sumagot kasi akala niya it's regarding governance. Sabi ko, hindi, it's for a research sa mga urban parks na ang narealize ko today is 'pag sinabi mong park it will always leave a legacy 'di ba 'pag sinabi mo kunwari 'yung Rizal park, alam na. So, the purpose of the park is not just for aesthetical purpose pero ano 'yung value niya sa isang tao talaga na kais part 'yun ng culture niya eh, part 'yun ng soul niya eh na 'pag umedad siya	She/he was afraid to answer because she/he thought that it was regarding governance. I said, no, it is for research about urban parks, in which I realized today that if you say park, it will always leave a legacy, is it not that if you say, for example, Rizal park, you already know. So, the purpose of the parks is not just for aesthetic purpose but its value to a person because that is part of her/his culture, it is part of his/her soul that when she/he grows old session, like, that is right, it is like I realized that it is really, why not go to the park, with the Plaza one of the reasons why I do not frequently go there is that there are a lot of people just like I said about last December. So actually, personally, I have not gone there. I only heard about it on TV, by word of mouth. So, I got interested, why not after this pandemic, I will try to go there. So	research	difficulty of research and fear of expressing opinions

		there, on training, we only go there, only for a while. So there.		
26	session po parang, oo nga noh, parang narealize ko na talagang, why not nga na pumunta diyan sa park, na sa the Plaza kasi isa sa dahilan ko ba't hindi ako madalas nakakapunta nga is marami kasi talagang tao just like nung sinasabi ko nga po nung December. So actually personally, hindi po ako nakapunta doon. Nabalitaan lang po siya sa TV, sa mga sabi-sabi. So, nagkaroon po ako ng interes na, why not after this pandemic, I'll try to go po doon. Ayun, mga trainings lang po, doon lang kami, saglitan lang. So ayun po.	that is right, it is like I realized that it is really, why not go to the park, with the Plaza one of the reasons why I do not frequently go there is that there are a lot of people just like I said about last December. So actually, personally, I have not gone there. I only heard about it on TV, by word of mouth. So, I got interested, why not after this pandemic, I will try to go there. So there, on training, we only go there, only for a while. So there.	what to do	motivation to visit the park
27	anong natutunan ko, I've learned na akala ko kasi wala lang 'yung, hindi na rin napapansin 'yung mga disbenefit, ano, 'yun pala alam din	What I learned, I have learned that I thought it was nothing, the disbenefits are not noticed anymore, the thing is they already	benefits and disbenefits of the park	disbenefits of the park

	pala nilang nakakabuo na ng mga antisocial diyan, 'yung sa fraternities and harassment. At least aware pala sila na may mga ganun nang nangyayari diyan. So akala ko kasi nababalewala ng government. So at least, alam pala nila. Ayun, natutunan ko 'yun.	knew that antisocial things are being formed there, with the fraternities and harassment. At least they were aware that things like that were happening there. I thought that the government was overlooking it. So at least they know. There, I learned that.		
28	yung awareness na pinag-aaralan pala 'yung mga ganyan. Akala ko basta lang siya nandiyan, 'di ba. Pasyalan lang. So, magandang isipin na pwede din siyang pagkunan ng source ng studies, kagaya niyan, sa mga thesis.	The awareness that things like that were being studied. I thought it was just there, right? For strolling only. So, it is good that it can also be a place to get sources for studies, like that, with theses.	research	awareness of this kind of research