

PUBLIC PRIVATE PARTNERSHIP IN BUILDING RESEARCH FUNDING

**(Collaborative Study between the Indonesian Institute of Sciences
and PT Dyandra Promosindo in Management
Bogor Botanical Garden)**

Yavis Amanda¹, Ima Mayasari²

Universitas Indonesia, Depok, Indonesia^{1,2}

E-mail: yavisamanda@gmail.com

ABSTRACT

The problems in this study are focused on the collaboration between Indonesia Institute of Science (LIPI) and PT. Dyandra Promosindo as an alternative in research funding. The aim of this study was to analyze the partnership model carried out by LIPI with the private sector in the management of the Bogor Botanical Gardens using the Public Private Partnership (PPP) concept. The research approach used is a qualitative approach with reference to the theory of E. Savas (2000). The data were collected through a literature review (literature review) on the concept of public private partnership, reports on research budgeting, profiles of the Indonesian Institute of Sciences and Bogor Botanical Gardens as well as partnership agreements and were analyzed qualitatively. Then conducted interviews with Bogor Botanical Gardens managers, namely LIPI and Partners. The results of the study concluded that (1) In general, the collaboration is a PPP collaboration based on the dimensions of the roles and responsibilities of the government and the private sector, cooperation contracts entered into, transfer of duties and functions of services and risks, service managerial systems and service innovation by the private sector; (2) There are obstacles that affect the implementation of partnership cooperation.

Keywords: *Bogor Botanical Garden; Public Private Partnership, Public Private Partnership.*

ABSTRAK

Permasalahan dalam penelitian ini difokuskan pada kerjasama antara LIPI dan PT. Dyandra Promosindo sebagai alternatif dalam pendanaan riset. Penelitian bertujuan untuk menganalisis model kerjasama kemitraan yang dilakukan oleh LIPI dengan pihak swasta dalam pengelolaan Kebun Raya Bogor menggunakan konsep Public Private Partnership (PPP). Pendekatan penelitian yang dipergunakan adalah pendekatan kualitatif dengan mengacu teori dari E. Savas (2000). Data-data dikumpulkan melalui studi literatur (literatur review) terhadap konsep public private partnership, laporan mengenai penganggaran penelitian, profil Lembaga Ilmu Pengetahuan Indonesia dan Kebun Raya Bogor serta perjanjian kerjasama kemitraan dan dianalisis secara kualitatif. Kemudian

dilakukan wawancara pada pengelola Kebun Raya Bogor yaitu LIPI dan Mitra. Hasil Penelitian menyimpulkan bahwa (1) Secara umum kerjasama tersebut merupakan kerjasama PPP dengan mendasarkan pada dimensi peran dan tanggung jawab pemerintah dan swasta, kontrak kerjasama yang dilakukan, pengalihan tugas dan fungsi layanan serta risiko, sistem manajerial pelayanan dan inovasi pelayanan oleh swasta; (2) Terdapat kendala yang mempengaruhi implementasi kerjasama kemitraan.

Kata Kunci: *Kebun Raya Bogor; Kemitraan Pemerintah Swasta, Public Private Partnership.*

INTRODUCTION

One of the development agendas in the 2020-2024 National Medium-Term Development Plan (RPJMN) is to increase quality and competitive human resources. This development is urgently needed considering that Indonesia's human productivity and competitiveness are still low. This is reinforced by the 2020 Human Capital Index report released by the World Bank, which places Indonesia at 98 out of 176 countries, lagging behind Singapore (1st place), Vietnam (38th place), Brunei Darussalam (56th place), Malaysia (62nd place), and Thailand (63rd). In addition, in strengthening science and technology and innovation, Indonesia is still lagging behind other Southeast Asian countries. Indonesia is ranked 75th out of 132 countries based on the 2022 Global Innovation Index (GII).

The low Global Innovation Index (GII) is influenced by several indicators, one of which is the low R&D budget relative to GDP. Indonesia is still "stingy" in allocating budget for R&D. The World Bank noted that for 5 consecutive years,

Indonesia allocated less than 0.25% of R&D funds. Far from the standard set by the OECD of 1%. Within the ASEAN region, Indonesia's R&D spending is smaller than that of Singapore, Malaysia, Thailand and Vietnam. Even though the results of research conducted by Svetlana Sokolov-Mladenovic, et al (2016) on 28 European Union countries between 2002-2012 showed that an increase in the share of research and development spending in GDP by 1% could lead to GDP growth of 2.2%.

In addition, the research budget in Indonesia is more dominated by the government. As stated by Vice President Ma'ruf Amin when opening the Work Meeting of the Agency for the Assessment and Application of Technology on February 24 2020 "*In Indonesia, the government dominates the largest allocation of funding, while in Asean countries it is dominated by industry.*" and former Minister of Research and Technology Bambang Brodjonegoro "*0.25 percent is not the peak of the problem. The peak of the problem is with the meager budget or funding, 80 percent of which comes*

from the APBN or from the government. Only 20 percent comes from the private sector.” This condition indicates that most of the development of science and technology (science and technology) in Indonesia is carried out by the government.

The initial step in building R&D in Indonesia was the passage of the Law on the National Science and Technology System on July 16 2019 by the House of Representatives (DPR). This law places science and technology, one of which is to play a role as a foundation in national development planning in all areas of life so that science and technology can make an optimal contribution to economic growth and increase the competitiveness of Indonesian people. Meanwhile, one of the goals of the National Science and Technology System is to increase the intensity and quality of interactions, partnerships, synergies between elements of Science and Technology Stakeholders.

The pressure point to strengthen partnerships in order to increase research funding is carried out by involving all parties from science and technology providers or developers and users of science and technology, both government and private, in order to achieve research and development goals together. Partnerships in science and technology development can occur through legally binding agreements such as cooperation (cooperation) and collaboration (collaboration) or non-

binding ones such as coordination (coordination). Cooperation in partnership refers to jointly organizing between the parties to achieve common goals (Taufik, 2010).

This organization is through efficient and effective division of tasks to obtain and save costs and time. The difference between cooperation and collaboration lies in the methods and work processes of each party. Collaboration aims to obtain innovative results, new breakthroughs, and collective achievements together, while coordination places more emphasis on harmonious work arrangements to avoid work gaps and overlapping tasks for each party.

The concept of the Public Private Partnership (PPP) began in England since the reign of Prime Minister Margaret Thatcher in 1979. At that time the British Government found it difficult to provide subsidies to their BUMNs, which then invited the private sector to participate in owning shares in government companies/BUMNs. From that moment on, England was considered a pioneer in implementing PPP. Various strategic SOEs in the UK have been transferred to the private sector, such as British Airways (BA), British Railways (BR) to British Telecom. Currently the PPP concept has been widely applied in various countries although with different names such as P3 in North America, Privately Finance Project used in Australia, and Private Finance Initiative used in Japan

and Malaysia. Meanwhile, the World Bank uses the term Private Participation in Infrastructure.

On November 25, 2019 LIPI entered into a cooperation contract with PT. Dyandra Promosindo is related to the management of the botanical garden as an education-based conservation and ecotourism area. The partnership includes the management of four Botanical Gardens previously owned by LIPI. This study aims to analyze the implementation of public and private partnerships through the PPP concept and the constraints that occur.

LITERATURE REVIEW

Savas (2000) defines the concept of Public Private Partnership as part of privatization, which is a form of delegation. Delegation is considered as a partial privatization that requires a sustainable active role from the government, which still has responsibility for the functions it has delegated to the private sector. Public Private Partnership according to Savas refers to a government arrangement that states the need for capital-intensive infrastructure, a long period of time and then transfers its financing and operation to the private sector.

Felsing (2008) argues that public private partnership is a framework that involves the private sector and the government which have their respective roles. The private sector has a role in carrying out

technical, operational and innovation expertise in running its business efficiently, while the government has a role as a policy maker. This framework is carried out as an effort to improve the quality and efficiency of government services because the sources of funds owned by the government are very limited to cover investment needs (European Commission, 2003).

Parente (2006) from the USAID Environmental Service Program defines PPP as a transfer of government functions within a certain period of time in accordance with an agreement or work contract entered into between the government and the private sector, in which the private party then receives compensation for the functions it carries out directly or indirectly, and are willing to accept the risk of performance in carrying out the transfer of functions.

The three concepts of Public Private Partnership put forward by Savas, Parente and Felsing have interrelated definitions. Starting from Savas (2000) then specifically developed the notion of Public Private Partnership by Parente (2006) and Klaus Felsing (2008). This definition has different variables or indicators in interpreting the concept of Public Private Partnership. Savas interprets PPP with the dimensions of the government still having responsibility and the transfer of operational costs to the private sector. Meanwhile, Parente

has a cooperation dimension, which is seen from the period/period of cooperation carried out by the government and the private sector and the management of tasks and functions carried out by both parties. The transfer of functions, services and risks to private parties previously owned by the government is important in the PPP concept provided by Parente. As for Klaus Felsing has dimensions of operational technical expertise, service

innovation and responsibility of the parties. Management of public services with PPP has a more efficient and effective public service managerial system, has different service innovations compared to those carried out by the government and there is a clear division of responsibilities between the government and the private sector. These three PPP concepts can be translated in table 1.

Table. 1 Operationalization of the PPP Concept according to Savas (2000), Parente (2006) and Felsing (2008)

Draft	Variable	Dimensions	Subdimensions	Indicator
Public Private Partnership	Government and Private Responsibilities	Responsibilities of the Parties	Government and Private Responsibilities	There is a division of roles and responsibilities between the government and the private sector
	Transfer of Responsibilities from Government to Private	Cooperative Contract	Dasar Hukum Kemitraan	Legal Basis of Partnership
			Partnership Term	How long did the partnership last
			Transfer of Duties and Functions	There is a transfer of duties and functions of services and risks to the private sector which was previously owned by the government
	Operational Technical Expertise	Management in the management of cooperation	Have a more efficient and effective service managerial system	
Service Innovation	Innovations made	What are the service innovations and changes made by the private sector		

METHOD

This study uses a post positivism approach with data collection methods of literature review (literature review) and interviews. Literature study on the concept of

public private partnership, reports, news and publications regarding research budgeting, profiles of the Indonesian Institute of Sciences and the Bogor Botanical Gardens and

partnership agreements made. By using a literature study, the authors hope to get relevant ideas and theories that can be used to find out the partnership model carried out by LIPI in overcoming research budget limitations besides that of the authors. Interviews were conducted with the managers of the Bogor Botanical Gardens, namely LIPI (now BRIN) and partners.

RESULTS AND DISCUSSION

The Indonesian Institute of Sciences (LIPI) is one of the government's R&D institutions which also experiences this condition. LIPI's budget acquisition is mostly dominated by APBN. LIPI's budget from 2016 - 2020 has continued to increase but is still dominated by the budget provided by the government through the state budget. In addition, more budget is allocated for personnel expenditure. Realizing the importance of this

partnership, in 2020 LIPI has established a science and technology development policy through 3 (three) main programs to improve the quality of research institutions, namely improving research management in accordance with global norms and standards, increasing research capacity and competence and research collaboration for all groups. One of these programs is realized through a partnership policy in obtaining research budgets outside the APBN. One form is by cooperating in the management of Botanical Gardens with the private sector.

Table. 2 LIPI Budget for 2016-2020

Years	Budget (Rp)
2016	1.271.241.554.000
2017	1.144.698.961.000
2018	1.387.313.742.000
2019	1.522.752.417.000
2020	1.503.374.248.000

Source: LIPI Performance Report (LKj) 2016-2020

Table. 3 LIPI Fund Sources for 2016-2020

Fund Sources	2016 (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)
Pure Rupiah	85,55	85,33	78,85	71,53	56,20
Foreign Loans	8,41	7,42	6,84	7,31	7,98
Non-tax revenue	5,81	6,57	5,55	5,26	1,49
Overseas Grants	0,16	0,43	-	-	0,48
Overseas Direct Grants	0,07	0,20	0,11	0,14	-
Domestic Direct Grants	-	0,05	-	-	-
State Sharia Securities	-	-	8,65	15,76	33,85

Sources: processed by the author based on the LIPI Performance Report, 2022

Table. 4 LIPI Expenditure Portion for 2016-2020

Spending	2016 (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)
Employee spending	48,90	50,96	43,10	44,61	41,81
Goods spending	33,71	34,93	30,57	25,17	14,12
Capital expenditure	17,39	14,11	26,33	30,22	44,07

Sources: processed by the author based on the LIPI Performance Report, 2022

A Botanical Garden is an ex situ plant conservation area that has a documented collection of plants and is organized according to taxonomic, bioregional, thematic classification patterns, or a combination of these patterns for the purposes of conservation, research, education, tourism and environmental services. Currently LIPI has 4 botanical gardens namely the Bogor and Cibodas Botanical Gardens in West Java, Purwodadi in East Java and the Eka Karya Botanical Gardens in Bali. The management of the 4 botanical gardens is carried out by the Center for Plant Conservation Research and the Botanical Gardens. LIPI is also given authority in developing Botanical Gardens throughout Indonesia in accordance with Presidential Regulation Number 93 of 2011 concerning Botanical Gardens.

Nonetheless, the duties of the Center for Plant Conservation Research and Botanical Gardens in accordance with the Regulation of the Indonesian Institute of Sciences Number 1 of 2019 concerning the Organization and Work Procedure of the Indonesian Institute of

Sciences are to carry out the preparation of the formulation and implementation of policies, provide technical guidance and supervision, monitoring, evaluation, and reporting in the field of plant conservation research and development of the botanical garden area. The educational and ecotourism functions are not regulated in the LIPI regulations, so that in implementing the management of the Botanical Gardens LIPI often encounters various problems, including the high operational costs for maintaining the botanical garden as well as the costs for non-PNS support employees who are very large and the payment of salaries which affects the research budget LIPI. Therefore, to assist the management of the botanical garden in optimizing the function of the botanical garden as education and national ecotourism, namely by cooperating with the private sector.

On August 24 2021, the government issued Presidential Regulation Number 78 of 2021 concerning the National Research and Innovation Agency where LIPI has been integrated into the National

Research and Innovation Agency. Changes have also occurred in the management of the Botanical Gardens in accordance with National Research and Innovation Agency Regulation No. 1 of 2021 concerning Organization and Governance of the National Research and Innovation Agency which is currently managed by the Directorate of Research and Innovation Infrastructure Partnerships.

Cooperation between the government and business entities in Indonesia is better known as PPP and is regulated in Presidential Regulation Number 38 of 2015 concerning Government Cooperation with Business Entities in Infrastructure Provision. The regulation outlines the cooperation that can be carried out between the government and business entities related to the provision of economic and social infrastructure which includes, road infrastructure, transportation, water resources and irrigation, drinking water, centralized wastewater management systems, local wastewater management systems, solid waste management systems, telecommunications and informatics, electricity, oil and gas and renewable energy, energy conversion, urban facilities, educational facilities, sports and arts infrastructure facilities, regional infrastructure, tourism, health, prisons and public housing infrastructure.

The PPP referred to in the regulation is cooperation between the

government and business entities in the provision of infrastructure for the public interest with specifications predetermined by the government, which partly or wholly use the resources of business/private entities by taking into account the risk sharing between the government and business entities. However, this regulation does not cover in detail what fields can be cooperated through PPP.

Fields that can be collaborated through PPP are further regulated through the Minister of National Development Planning/Head of Bappenas Regulation Number 2 of 2020 concerning Amendments to the Regulation of the Minister of National Development Planning/Head of the National Development Planning Agency Number 4 of 2015 concerning Procedures for Implementing Government Cooperation with Business Entities in Infrastructure Provision which is a derivative regulation of Presidential Regulation Number 38 of 2015. Infrastructure in the regulation is defined as technical, physical, system, hardware and software facilities needed to provide services to the community and support structural networks so that the community's economic and social growth runs well. One of the fields that can be collaborated is the infrastructure of educational facilities, research and development including learning facilities, laboratories, training centers, research centers/study centers, research

and development facilities and infrastructure, business incubators learning galleries, student practice rooms, libraries and/or or learning and training support facilities.

However, Muhamad Nahdi (2014) from the Directorate General of State Assets, Ministry of Finance of the Republic of Indonesia, also argues that perspectives and theories regarding Public Private Partnerships in other countries are also interpreted in Indonesia by Utilization Cooperation (KSP). Nahdi's opinion is based on the inherent characteristics of PPP put forward by Tom Hocking (2006), including: (1) it is a method and way for the government to achieve greater public services with a minimum budget (2) a creative way of funding public service projects (3) create a pattern of cooperation between the government and the private sector (4) the collaboration between the government and the private sector provides mutual capital and (5) each PPP project has unique differences. According to Nahdi, these characteristics are also included in the KSP concept, so Nahdi concluded that KSP is part of PPP. Provisions regarding asset utilization cooperation in Indonesia are regulated differently from PPP provisions. Asset utilization cooperation refers to Minister of Finance Regulation Number 115/PMK.06/2020 concerning Utilization of State Property.

The results of the research on the collaborative partnership conducted by

LIPI and PT Dyandra Promosindo in the management of the Bogor Botanical Gardens by comparing the PPP concept according to the expert, are as follows

There is a division of roles and responsibilities between the government and the private sector as well as a certain period of cooperation

According to Felsing (2008) a good public-private partnership is one that allocates tasks, obligations and risks between the government and private partners optimally. Then Parente in Mukti (2014) reiterated that the transfer of government functions within a certain period is in accordance with the work contract or agreement made by the government and the private sector. Thus, the allocation of the roles and responsibilities of the government and the private sector must be contained in a document agreed upon by the parties.

LIPI's agreement with PT Dyandra Promosindo contains the rights and obligations of each party. One of them is agreeing to form and establish a new legal entity in the form of a limited liability company specifically designated only to manage the operations of the Botanical Gardens, namely PT Mitra Natura Raya (PT MNR). Henceforth, PT Dyandra Promosindo transferred all of its rights and obligations and gave authority to PT MNR to cooperate and become

LIPi's partner to optimally manage the Botanical Gardens.

Prior to the cooperation with PT Dyandra Promosindo, the Bogor Botanical Gardens had 5 functions, namely plant conservation, research, environmental education, tourism and environmental services. The existence of this collaboration has divided roles, namely LIPi's role is for the research function, while the other 4 functions are transferred to the responsibility of PT. MNR

Cooperative Contract

1. Legal Basis of Partnership

Public Private Partnerships are better known as Public Private Partnerships (PPP). In Indonesia Public Private Partnerships are often referred to as Public Private Partnerships (PPP). On August 31, 2020 the government issued Minister of Finance Regulation Number 115/PMK.06/2020 which regulates the Utilization of State Property as Technical Instructions from Government Regulation Number 28 of 2020 concerning BMN Management. One of these regulations regulates the use of State Property by Other Parties within a certain period of time in order to increase non-tax state revenues and other sources of financing. However, the partnership carried out by LIPi was carried out before the existence of the Minister of Finance regulation. This partnership is based on Government Regulation number 32 of 2016 which regulates the Types and Tariffs of Non-

Tax State Revenues Applicable in the Indonesian Institute of Sciences.

2. Partnership Period

This partnership was initially implemented for a period of 3 years, namely from 25 November 2019 to 31 December 2022. The agreement was then amended on 8 October 2020 which changed the term of the agreement to 5 years ending on 31 December 2025. Changes The agreement was due to PT Dyandra Promosindo's declining performance in implementing the management of the botanical garden as an education-based plant and ecotourism area and its ability to adapt during the Covid-19 Pandemic.

The scope of the partnership cooperation in the management of the Bogor Botanical Gardens is the transfer of all services previously managed by LIPi which include management of e-ticketing and parking, management of education-based ecotourism packages, management of tourist vehicles, management of places selling souvenirs, management of all-purpose hawkers centers (food court) and/or restaurant, management of cleanliness, security and supporting resources, management of guest houses, guest houses, villas, management and procurement of other tourism supporting equipment, management of the Zoological Museum and Indonesian National Museum of Natural History, revitalization of public facilities and building maintenance in public and

conservation areas, organizing Eid prayers and state activities, organizing exhibitions or activities and organizing other activities agreed by both parties.

PPP according to Savas (2000) is a public and private partnership in which the government expresses its need for capital-intensive, long-lived infrastructure and the desired facilities are built using a complex combination between the government and the private sector. The financing and operations are carried out by the private sector in long-term contracts or leases. Financing usually ranges from 20 years to 99 years covering construction, operation, maintenance and capital costs.

A different opinion was expressed by Felsing (2008) where PPP can be categorized into several forms, one of which is contract service. Service contracts, namely cooperation carried out by the government by hiring private parties or entities to carry out one or more tasks or certain services for a certain period, usually 1-3 years. The government remains the main provider of public services and infrastructure contracts while outsourcing to the private sector is only part of its operations. Private partners use service fees mutually agreed upon by the government and meet performance standards set by the government. The government is responsible for financing any capital investment required to fund or expand the service system.

3. Transfer of Functions and Risks

One of the reasons for the government to enter into partnerships is to transfer risks previously owned by the government to the private sector. The transfer of risks in the partnership between LIPI and PT Dyandra Promosindo in question is related to the functions of environmental education, environmental services, plant conservation and tourism which were previously owned by LIPI to PT Dyandra Promosindo. However, in its development, not all risks were fully transferred from LIPI to PT MNR. So it is not a transfer of risk but risk sharing. This can be seen from the conditions, namely on July 1 2020 there was a change in the agreement due to the spread of Covid-19 which resulted in the closure of the Bogor Botanical Gardens and could reduce revenue. Risk sharing also occurs in the construction and renovation of infrastructure.

The transfer of risk to the private sector is important for the government in conducting partnerships between the government and the private sector. Transferring risks to the private sector can produce better and more efficient designs and work practices (Grimsey & Lewis, 2005), so that partners are needed who can manage risks in order to achieve the government's goal of transferring its public services to the private sector. Therefore, careful planning is needed in selecting cooperation partners. However, if each

party in partnership is able to transfer some of the inherent risks to other partners, so that risk sharing occurs, partnerships can be built. The purpose of sharing the risk is to encourage the parties to work together more closely (Wang et al, 2018)

The implementation of LIPI's partnership with PT Dyandra Promosindo does not use risk transfer in carrying out service duties and functions but uses risk sharing during the Covid-19 pandemic. The Covid 19 pandemic is considered a force majeure that allows for changes to the partnership agreement. The force majeure conditions are listed in the cooperation agreement signed by LIPI and PT. Dyandra Promosindo.

Service Managerial System

One of the reasons for the government to enter into partnerships with the private sector is to obtain a more efficient and effective service managerial system. Private partners are considered to have operational technical expertise that was not previously possessed by the government so that they can then be applied in more effective and efficient public services. The first thing that was done in the partnership between LIPI and PT Dyandra was to form PT MNR to carry out operational, administrative and financial management activities for the Botanical Gardens. Public-private partnerships allow the government to hand over operational

roles to efficient private operators while the government focuses on the core responsibilities of the public sector namely regulation and supervision (Felsing, 2008). The existence of PT MNR provides an opportunity for LIPI and PT Dyandra Promosindo to improve Bogor Botanical Garden services more effectively and efficiently. PT MNR as executor while LIPI as regulation and supervisor to suit the function of the Bogor Botanical Gardens. Meanwhile, changes in online services and employee performance measurement aim to increase the effectiveness and efficiency of service resources.

Service Innovation and Changes Made by the Private Sector

Public services according to Ratminto and Winarsih in Hardyansyah (2018) are all forms of services both in the form of public goods and public services which in principle are the responsibility and are carried out by government agencies in an effort to fulfill community needs and in the framework of implementing statutory provisions.

The Bogor Botanical Gardens is a work unit at LIPI that has a public service function. Bogor Botanical Gardens Public Services can be categorized as services, namely services that produce various forms of services needed by the public (Hardyansyah, 2018). These services include research results, environmental

awareness education, mentoring of students and students as well as tourism services.

Innovation in public services is very important to increase public confidence in visiting the Bogor Botanical Gardens. For that PT. MNR has carried out various service innovations, including (1) in the technical operational sector for infrastructure & garden maintenance by creating a Standard Operating Procedure (SOP) that is integrated systematically and transparently to make it easier for managers to check work results. (2) create a Standard Operating Procedure (SOP) regarding professional Hospitality, in which all Front Liner personnel who deal directly with consumers have uniform

capabilities in accordance with the SOP. (3) Creating interesting and interactive programs both offline and online for the community on the topic of Plant Conservation. As for what has been developed, namely the Botanical Garden Tour, Plant Education Class, Training Modules, Plant Information Boards. (4) Utilizing developments in Technology and Information to attract the attention of the wider community by disseminating information about the Bogor Botanical Gardens on the topic of plant conservation, tourism and culinary. To find out the comparison of service innovations carried out by partners also by comparing the results of previous research conducted by Kusumawardani (2019) as in Table 5 below:

Table. 5 Comparison with the results of previous studies

No.	Constraint	Kusumawardani Research Results (2019)	Yavis Research Result (2022)
1.	Parking Lot	Parking space is still limited and shortages often occur on weekends or weekdays.	Parking space is still limited on weekends, but partners have communicated with public places around the Bogor Botanical Gardens so that on weekends they can accommodate vehicles for visitors to the Bogor Botanical Gardens such as malls, hospitals, etc.
2.	Rubbish Bin	The number of trash cans that are still lacking to accommodate waste from visitors to the Bogor Botanical Gardens	Partners add bags / trash cans from fallen trees, patrols in waste transportation, selection of organic and plastic waste, and partners work with experts (greenpeace) in optimizing compost.
3.	Lactation	The lactation room is still feasible	Lactation rooms have not been

No.	Constraint	Kusumawardani Research Results (2019)	Yavis Research Result (2022)
	Room	and safe to use when breastfeeding while at the Bogor Botanical Gardens and provides moments of privacy. However, the number of these lactation rooms in the KBR area which is quite large is still very minimal, they are not scattered at every point of the location so that visitors experience quite a lot of difficulties in reaching these lactation rooms.	provided at every point in the Bogor Botanical Gardens but there are rooms that have been prepared/tidied up for lactation rooms.
4.	Rental Bikes	In terms of eligibility and safety, rented bicycles are still feasible and safe to use, but in terms of the actual number it is quite a lot, but on weekends, many visitors/tourists still often lack or have to queue for quite a long time if they want to use these rental bicycles, because there is no monitoring of how long (maximum time) visitors/tourists can use this rental bicycle.	The number of rental bicycles has been increased by partners by adding electric bicycles, electric scooters, golf cars, shuttle buses and electric antelope.
5.	Prayer Room	The cleanliness of the prayer room is still lacking, such as the amount of dust on the carpet and in the corners of the room	Partners optimize the place to be used as a prayer room and do tidying up.
6.	Toilet	The lack of toilets spread across the scope of the Bogor Botanical Gardens makes it difficult for visitors to find a toilet.	Partners only do tidying up including free toilets and optimizing existing toilets.
7.	Number of Visitors	The level of visits is still lacking, especially during weekdays or weekdays.	The level of visits is still less than before the Covid 19 pandemic.
8.	Medical Tools	The equipment in the clinic is still incomplete, and the staff of the Bogor Botanical Gardens still use the clinic.	Equipment is still limited, but partners are working with PMI Hospital to provide doctors on weekends. In addition, in case of an emergency, partner visitors have collaborated with Siloam Hospital and PMI Hospital as a reference.
9.	Website	The management of the KRB website is still not updated with the current condition of the KRB.	The website has been updated and is separate from the previous website managed by LIPI. In addition, KRB

No.	Constraint	Kusumawardani Research Results (2019)	Yavis Research Result (2022)
			information is also added through social media.
10.	Membership	There is no special treatment for those who become KRB members so the number of members is too small.	Treatment membership for individuals is still limited, namely being able to visit KRB earlier. However, in the future, partners will expand further, such as doing membership levels with facilities. Currently partners are optimizing membership for groups.
11.	Online Services	KRB is still less interactive in conducting online services, because the number of human resources is still minimal.	Services use online and barcode when visiting.

However, the management of the Bogor Botanical Gardens from the government to the private sector did not go completely smoothly. There are still obstacles to be faced, including:

a. In carrying out the rights and obligations of the role, there were still obstacles, namely at the beginning of the management transition from LIPI to PT Mitra Natura Raya, including communication, which involved the division of tasks and functions between civil servants and private partners regarding technical management of the Bogor Botanical Gardens. Conflicts/frictions often occur at the beginning of the transfer of management of the Bogor Botanical Gardens between civil servants and partners. However, according to Asiah (2017) conflict can have a positive and functional impact if managed

properly, one of which can increase mutual understanding and increase more productive cooperation in achieving goals. This mutual understanding is manifested in understanding the roles and responsibilities of each, namely between civil servants and partners. So that communication and technical coordination is needed between civil servants and partners in managing the Bogor Botanical Gardens.

b. Human Resources/personnel that were previously managed by LIPI were transferred to private partners, causing an increase in personnel income accompanied by changes in work patterns, performance measurement and performance evaluation. This adjustment also causes personnel to be reduced based on evaluations conducted by partners on a regular basis;

c. There are many stakeholders in the Bogor Botanical Gardens such as researchers, humanists, local government (Bogor City Government), Central Government (Presidential Palace and BRIN), tourists and environmental observers.

Currently, partners are trying to overcome these obstacles through synergy between BRIN and partners and improving programs/developments that can increase visitors.

CONCLUSION

The implementation of the partnership collaboration carried out by LIPI and PT Dyandra Promosindo in the management of the Bogor Botanical Gardens is carried out in the form of PPP. This is based on the fulfillment of dimensions (a) the parties have their respective roles and responsibilities; (b) has a legal basis for partnership cooperation based on a cooperation agreement (c) the cooperation period is relatively short; (d) there is a transfer of service functions and risk sharing; (e) an effective managerial system; and (f) there are service innovations carried out by partners. However, there are still obstacles that occur in the partnership.

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