Interactive governance framework and its potential for governing protected area landscape

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Abstract: One of the recurring problems in the protected area management in Indonesia is the lack of collaboration between various actors who influence and were affected by the existence of these areas. One causes of existing conflicts are the diverse actor’s perceptions regarding the needs, interests, and priorities that will be considered in the region’s policymaking, relating to the management and use of natural resources. Biodiversity conservation versus physical-economic development is one among them. Instruments to tackle this problem are urgently needed, and interactive governance is one prospective alternative. Its various components, including the division of sub-system elements, properties, orders, and styles of interactive governance, can be used to strengthen the governability of a protected area. Enhancing governability can solve societal problems or develop opportunities in protected areas as the ultimate goal. This article is a literature review that explores the potential of an interactive governance framework as a solution to the lack of dialogue between actors in the protected area’s landscape. The study was conducted by exploring the understanding and history of theoretical development, followed by previous studies using this framework, and discussing the application possibilities in the protected area landscape’s management, especially in Indonesia. The study results show that this framework is remarkably feasible to be applied in Indonesia, primarily supported by the perspective of land ownership aspect, traditional community participation, the collaboration between actors and sectors, and the democratic maturation in Indonesia.

Keywords: interactive governance framework, protected area landscape, actors collaboration.

1. Protected Areas (PAs) governing problems in recent and pandemic era

The global COVID-19 pandemic heavily affects many aspects, including the current status and how their manager or administrator runs the governance of protected areas (PAs). Some identified impacts included income deprivation due to lack of eco-motivated tourists and low level of funds support and staff for PAs’ operationalization [1]. Initial research by Coad et al. [2] was illustrating the same result applies to more than 500 PAs around the globe. Budget cut and refocusing were other issues that have been identified, particularly as part of efforts to minimize the effects of pandemics [1,3]. This situation influences further impact, including increasing deforestation due to non-conservation activities such as gold mining in South America. Pandemic was also affecting different aspects, such as level of engagement and participation by the people in PAs’ decision-making processes [1,3], that diminishing the efforts to implement environmental conservation rules [3], including here was biomonitoring activities [1].
Indonesia currently (2020) has 554 protected areas (PAs) encompassing more than 27.14 million hectares [4]. Despite the pandemic problem, the current PAs governance in Indonesia has also encountered many problems. In their report, ICEL (1998) argued that the biggest issue in Indonesia’s past policies related to the governance of the PAs was the lack of a clear vision of biodiversity conservation. Consequently, many PAs in Indonesia has become a “paper park” only [6-8]. Therefore, strengthening environmental arrangements and fitting goal-oriented strategies are needed [7]. Assessments processes on various PAs also showed the problems related to resources management to conserve biodiversity assets and ineffective environmental policies and regulations [7]. One of the most significant issues was the policy dualism, particularly when non-conservation activities were too compromised or accommodated in protected areas [5,7]. These activities include mining, logging, and hunting that influence the increasing deforestation rate [7].

Other issues related to governing protected areas are the unclear categorization of the protected areas themself [5,7]. There was also a conflict of interest and priority regarding the conservation and development, including the surrounding people’s livelihood [7,9,10]. These conflicts are caused mainly by low-level local community support; among others, the reasons are related to the tenurial conflict involving indigenous communities. Since 2015-2019 there were 484 cases of tenurial conflicts have been identified by the Indonesian Ministry of Environmental and Forestry [4]. The conflicts were often exacerbated by unsuitably implementing regulations and unfair benefit-sharing regarding natural resource utilization [11]. Other issues that have been identified include uncoordinated policies implementation among the government agencies [5], corruption, and low of law enforcement, particularly facing the groups who break the law by doing activities that undermine conservation areas [4,7].

The impacts from unsuccessful governing protected areas are considered significant, notably leading to the biodiversity crisis [1]. For example, in Indonesia’s lowland case, deforestation due to illegal logging and forestry land conversion affects the significant population decrease of the primates, ungulates, and carnivores [6]. This issue creates less functional protected areas and the extinction of 30 of 51 primates in Indonesia in 2050 [12]. Although reports by Nurbaya [4] and Rahmadanty et al. [13] indicate the lower rate of net deforestation between 2013-2019, up to half a million hectares of deforestation in one year alone is considered an awful fantastic number. Further, it is undoubtedly substantial in decreasing the quality of ecosystem and environment in the whole conservation areas.

Ineffective PAs’ governance impacted the biodiversity and social and economic aspects, including conflicts between PAs administrator and the local communities [11]. Publication by Dermawan et al. (2014) on MPAs case resulted in less than 10 % assessed MPAs (6 of 74 MPAs) reaching the target of an MPA, which is a positive impact for community welfare and sustainable financing [14]. The main reason is the lack and unfair benefit received by the local community from the PAs, although they had significant roles and attached values to these areas [15]. Even in a few cases, the existence of PA and the administrator often creates “livelihood insecurity” for the local communities.

2. Partnership, Collaboration, and Co-management in Managing Protected Areas

Addressing such problems could be done mainly through compatible strategies, either conceptual or technical approaches [1,7,12,16,17]. Some strategies are helpful to reach a successful protected area include by (1) strengthening the connectivity in the habitat patches to support conservation efforts [12]; (2) decentralization; (2) reinforcing the governance system, more effectively in managing biodiversity area, and asserting knowledge and research management [16]; (3) more encouraging public constituents and giving more room for the private sectors to participate as efforts to expand the partnership among the actors and could employ some innovative collaborations [1,7,16]; (4) public education; (5) Employing more hi-tech approaches, enhancing skills and capacity of the staff and fund resources diversification that can also be used to minimize the local poverty around the PAs [1]; (6) More technical strategies by applying mix-policy and forest code, such as in Brazil [17].

Decentralization is required to tackle the deforestation problems in Indonesia, mainly through sharing roles, rights, and responsibilities among stakeholders in different levels of governance [5,18]; however,
another research was informing the opposite results [6]. Public education approaches are needed to enhance public awareness and their active participation in governing protected areas. Applying these approaches will be more effective by involving key actors, such as teachers, religious leaders, and policy-makers [7]. Hi-tech approaches are advantageous to support the monitoring process, law enforcement, and research, such as drones for conducting surveillance and introducing live programs or virtual tours [1].

Refers to the long list of efforts to enhance governing of the PAs above, particularly for Indonesia’s situation, I argue on emphasizing the three most essential strategies. These strategies mainly tackle the lack of stakeholder’s support’s problem and low of the local community’s support in governing the protected areas: partnership, collaboration, and co-management. There are many involved actors with their respective interests and priorities to the PAs; thus, a win-win solution’ scheme is needed towards sustainability of the PAs [19,20]. The scheme has to follow a participative model of “financial sustainability” to reduce conflicts among actors and the PAs’ pressure on conservation by local people’s activities [21]. In formulating this model, indeed multi-actors involvement and participation are indispensable, including in the context of landscape governance [22]. This model also needs innovative partnership and collaboration between the PAs’ actors [7].

Partnership scheme with local communities illustrated by initial research in PA governance is significantly crucial to assist a successful landscape policy [23][24], including in Community-Based Natural Resources Management (CNRBM)[23,25-27]. A community-based conservation strategy was considered the best alternative to bring together biodiversity conservation interest and social-economy-livelihood interest of the local communities living in or surrounding PAs [7]. Although a few cases show unsuccessful stories, such as some PAs on Sulawesi island, however; most of the cases applying partnership with local people schemes are showing a big success. Some success stories are included plant setting arrangements in Sumba island’s case and fish harvest management through indigenous rules in Padaido island, West Papua [7].

Collaboration processes among the actors in managing protected areas could be applied by involving local actors only [24], between protected areas administrator and the customary governance [28], and by using a public-private-producer scheme [29]. Some successful stories on the collaboration of the protected area management in Indonesia have been acknowledged [7,11]. For example, the Bunaken National Park case involves government-provincial and district, NP administration, local community, and industrial tourism. This collaboration has sustainably managed the conservation programs and economically supported up to 30,000 local people in and around the NP [7]. Another success case showed in Berau, East Kalimantan, as the first district-level marine PA in Indonesia. Fascinatingly, in this site, the PA administrators vigorously involve local and international NGOs consortiums and other actors from various backgrounds through keeping to employ the existing legal system [7].

Collaboration efforts in governing the PAs, however, are not always running effortlessly. Unclear collaboration modalities, particularly authority-sharing issues, become the primary problem. This issue includes local and indigenous people’s authority in managing “a common-pool resource” [11]. For this reason, the collaboration also needs to arrange roles and responsibility-sharing among the actors, which helps resolve asymmetric power in pursuing an effective PAs governance.

Co-management allows all of the actors to be fairly involved in decision-making processes related to natural resources [30], including in PAs. This mechanism overcomes the failure of the top-down approaches and bottom-up strategies, particularly on coordination among the actors [18]. Co-management also indicates sharing of tasks, interests, and responsibilities among the actors. It implies the understanding among the actors that helps communicate, interact, and discuss the priorities and strategies to govern the PAs.

3. What and how is Interactive governance can be the best answer?
A suitable framework that effectively can be used for accommodating partnership, collaboration, and co-management strategies among the stakeholders is interactive governance (IG). This framework emphasizes interactions among the actors or stakeholders in tackling complex societal problems and
creating further opportunities as the primary goals [31-34]. The framework has a remarkable similarity to communicative planning and network governance [33]. The IG framework highlights some specific characteristics, including a democratic actor’s participation, promoting a self-organization initiative, and applying more less-hierarchical rules and regulations [35]. This framework also underscores bottom-up participation, typically called civic initiatives, that can potentially produce a new democratic “created spaces.”

Interactive governance encompasses three aspects, the governing system as the subject, the system to-be-governed as the object, and the last aspect is interaction [31,32]. For the implementing process, this governance type is referred to as governability aspects, which in short could be defined as “governance capacity.” It can be indicated by the system’s “overall quality” [32]. Interactive governance has three guidance orders for implementation: day-to-day management as the first order, and then design and maintenance of institutions as the second order. The last one is meta-governance as the third order that inspired the first two orders [31,32]. This framework needs to consider four properties in the implementation processes: diversity, complexity, dynamics, and scale [30].

The interactive governance framework was initiated by Jan Kooiman, with public administration as the first main discussion subject [35]. Later, the framework has expanded to other subjects, such as fisheries and marine sciences [30,36]. The framework is illustrated as a modern government model that emphasizes interactions between the official holder (governor) and other actors, including private and civil society [30-32].

Despite its high relevance, the implementation of the framework considerably remains low. Based on the Scopus database on 14 Juli 2021, by employing interactive governance keyword, there were 71 documents identified, with most works on social science research and environmental science. Most of the documents are in scientific journals and book-chapters form (85, 5 %), with self-organization and the roles of the participation in the public governance as the mainstream of the discussions, and water governance, ocean or coastal management as the other research field. Some keywords often employ the same Scopus database’s findings, including governance approach, corporate governance, and democracy. The initial researchers in this framework include Jan Kooiman, Jacob Torfing, Eva Sorensen, Maarten Bavinck, Peter Driessen, and Jurian Edelenbos. Furthermore, based on annual data, there are four publications on average, with the peak number was reached in 2016 with 18 documents.

4. Potential for applying interactive governance framework in managing protected areas in Indonesia

Before illustrating the potential of this framework to be implemented in governing Indonesia’s PAs, I intend to first describe to what extent the framework has been employed by either Indonesia researcher or using Indonesia as the case study. Remain using the same database findings above, interactive governance framework’ implementation in Indonesia’ case studies relatively remains lacking. Triyanti et al.’s (2017) discuss the relationship between the framework and social capital in a coastal protection issue using the case coastal area in Demak Regency, Central Java. Another relevant publication but was not included in the Scopus database, for example, presented by Maula & Prasojo [37]. This publication mainly discusses how the framework can support regulation reformation processes related to the permit of development construction in Jakarta Province. The key findings of the research reveal the weakness of local institutions and inconsistency of national policies, where the problem needs coordination enhancement to go along with more positive interactions among the current government actors.

Another document related to the discussion on interactive governance framework is presented by Adrianto & Kusumo [38]. They mainly discussed how governability in Indonesia’s fisheries and marine sector. The document uses some cases to illustrate how to combine this framework with a resources governance model encompassing three components: governance quality, governance diversity, and governance vitality. This publication also recommended establishing a local co-management board as a form of collaboration among the involved stakeholders. This institution expected could assist in reaching the overarching goals in natural conservation, livelihood sustainability, natural resources monitoring, and community development.
Another relevant research in Indonesia was based on the national park’s case presented by Wahyuni [39]. The research investigated Gunung Halimun-Salak National Park and problematized the overlap function of the area, either as the conservation and rich of natural resources area. This complexity could be addressed by applying an interactive governance framework, mainly via the “governance of governance” concept toward a sustainable governance area. The framework assisted in digging up a more democratic interaction among the actors and supported by partnership scheme, the learning process in managing area, and developing specific institution with authority to more integrated governing the area.

The illustrations bring up a big question: To what extent is the application of this framework in Indonesia, specifically in governing the protected areas? Refers to my point of view, I can conclude to urge this framework to be implemented broadly in the governance of Indonesia’s PAs. I have four deliberations for this recommendation include:

Firstly, as mentioned above, one of the biggest problems encountered by the current governance system of the PAs in Indonesia is the interaction barrier among the actors, and the pandemic crisis worsens [1]. The diversity and complexity of PAs’ situation in Indonesia also become additional reasons that match characteristics that need to be solved by the interactive governance framework. This framework gives vast opportunities to assist in resolving issues related to authority sharing in collaboration among the actors [11]. It also allows local communities’ rights, participation, and access to natural resources as the primary consideration in governing the PAs [5] through improvement partnership for reaching mutual prosperity [4].

Secondly, Indonesia has so many indigenous people groups who live in or around the PA and traditionally had robust cultural relations with every aspect in protected areas. The neglect of this fact often generate conflicts among stakeholders, mainly due to different point of view, priorities, and claims on land tenurial or other natural resources. The indigenous people’s embedded cultural values and points of view could be seen as meta-governance from the interactive governance framework perspective. This meta-governance is obviously crucial to inspire the two other orders as a whole system. Consequently, well-addressing the meta-governance should be an immense assistance to manage the aspect of regulation-institution as the 2nd order and daily management as the 1st order of protected areas in Indonesia. Further, more enriching knowledge and understanding of the main issue would enormously help resolve the simultaneous problem in governing Indonesia’s protected areas.

Thirdly, there have been many cases implementing the basic concept of the framework without any clear guidance. Thus, based on this fact, it should be much easier to expand apply this framework. Some practices in natural resources management involved actively local participation, such as “Sasi Laut” in Papua and Maluku [8], also in Nusa Penida, Bali [40]. Another program, such as agroforestry, has been long-implemented in Indonesia. It also gave spacious room for the local people to govern PA via agricultural activities and conserving the PA simultaneously [41]. In addition, Kossmann [40] also demonstrated the successfullness of the collaborative approach among the marine landscape actors to conserve the coral reef and provide a sustainable livelihood for the local community. These researches reveal how the participative approach in managing PA was rarely encountering social problems. In this point, the main goal in governing protected areas is not a conservation aim only, but to present more opportunities and benefits for all stakeholders [11] that fit with the interactive governance framework [31,32].

Finally, the evolving governance system in Indonesia in general from centralized into more decentralized [8,18], including in protected area governance. Although some aspects remain need to be increased; however, the progressing system gave enormous opportunities for many people’s groups, for instance, the dana desa (village funds) program. This program allows the villagers who live in or around the PA to freely plan and execute their programs based on their specific needs and interests. The program could answer issues related to the lack of operational institution finance and the local community’s livelihood issues [1,2,5], such as the case on Lubuk Kertang, Sumatera Utara [4]. Dana desa also becomes a solid modality to support bottom-up participation or civil initiatives [33,35]. Another support from policy showed by regulation of Indonesia’s Ministry of Environmental and Forestry on sustainable
Ecosystem and Forestry. One essential point of this regulation emphasized engaging social participation in accessing and managing the forest or protected areas. It also allows responsibility-sharing among the involving stakeholders towards a sustainable ecosystem and environment [4]. Another policy that well supported this framework’s application is social forestry. Through presidential decree No. 88/ 2017 on settlement of land tenure in forest area, and Regulation of Ministry Environment and Forestry No. 63/2016 specifically to arrange social-forestry program are giving tremendous opportunities for collaboration among actors, including local communities and indigenous people that has been a long time become problematically in governing PAs in Indonesia. As the follow-up form this program, until May 2020, the government of Indonesia, via the Ministry of Environment and Forestry, has been appointed 66 areas of indigenous forest located in 22 provinces. This step was expected to bridge and resolve tenurial conflicts between the government and indigenous people [4]. This program is in line with Chia & Sufo’s (2016) research on community forest (CF) and communal forest that are helpful for improving community and local level participation and increasing access to forest benefit for the local community [42]. However, it is important for establishing a solid management body or institutions, transparent regulations, and natural resources management [8]. These steps suit the second governance order in the interactive governance framework [31-35]. Further, all lucrative policies above must accommodate transparent, collaborative actions based on dialog and adequate consultancy processes [11]. Despite could be the supportive factor, government policies could also have the potential to hamper the implementation of this framework. For example, although Forestry Law No. 41/ 1999 has been arranged on decentralization, empowerment, and social participation in governing PA, but still practicing dominant roles of the national government. These roles are include managing forestry areas and product systems [18]. Another recent policy, the omnibus law or Cipta Kerja (Law No. 11/2020), was implemented by Minister of Environment and Forestry Decree No 24/2020 on Forest areas support for the Food Estate Program. This policy could become a new stumbling block, where conservation interests in protected areas could easily be defeated by investment and food security reasons. At this point, the policy-makers need some proper and prudent steps to accommodate and reconcile many actors and interests. Again, these steps for implementing processes should consider the specific current governance situations as the meta-governance, supported by solid institutions and transparent regulations, and well-executed in the field by an effective daily management system.

5. Conclusion
This article illustrates the problems in governing protected areas, the interactive governance’s understanding and application, and the potential to implement this framework, particularly in Indonesia. Some key findings that could be inferred are: The current status of protected areas remains to experience problems in their governing processes, either in regular or in pandemic crisis era. One of the most crucial problems that need to manage is low support and participation from local communities in applying their policies. It happens due to a lack of positive and fair interaction among the stakeholders, particularly to create partnership and collaboration in the governance of protected areas. The interactive governance framework could be the best answer to address this problem and at the same time enhance the PA’s governability. Some reasons are behind the argument on why this framework is best suitable for broader implementation in Indonesia. These reasons include (1) the main problem encountered by Indonesia’s protected areas governance; (2) the common has been practiced in some places in Indonesia; (3) the evolving political and governing system in Indonesia that more democratic and gave more room to participate from below (bottom-up processes); and the last is (4) supported by the legal aspect—particularly via the social-forestry program. Applying this framework could significantly improve the governability of PAs in Indonesia toward fair and common welfare for all involved actors and a sustainable ecosystem.
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