



## TOOLBOX

# MAINSTREAMING WELFARE IMPROVEMENT OF THE POOR AND INEQUALITY REDUCTION IN MARINE PROTECTED AREA MANAGEMENT

Muhammad Syukri, Sulton Mawardi, Annabel Noor Asyah, Made Anthony Iswara

TOOLBOX

## MAINSTREAMING WELFARE IMPROVEMENT OF THE POOR AND INEQUALITY REDUCTION IN MARINE PROTECTED AREA MANAGEMENT

Muhammad Syukri  
Sulton Mawardi  
Annabel Noor Asyah  
Made Anthony Iswara

### **Reviewer**

Prof. Dr. Ir. Luky Adrianto M.Sc

### **Editor**

Mohammad Gabriell Firdausy Erfan

The SMERU Research Institute

January 2026

# Toolbox: Mainstreaming Welfare Improvement of the Poor and Inequality Reduction in Marine Protected Area Management

Authors: Muhammad Syukri, Sulton Mawardi, Annabel Noor Asyah, Made Anthony Iswara

Editor: Mohammad Gabriell Firdausy Erfan

Cover photo: Ibnu Ciptas (Unsplash)

Published by:

The SMERU Research Institute

Jl. Cikini Raya No. 10A

Jakarta 10330

Indonesia

Suggested citation:

Syukri, Muhammad, Sulton Mawardi, Annabel Noor Asyah, and Made Anthony Iswara (2026)

*Mainstreaming Welfare Improvement of the Poor and Inequality Reduction in Marine Protected Area Management*. Toolbox. Jakarta: The SMERU Research Institute.

For the digital version, add:

<URL> [access date]



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

SMERU's content may be copied or distributed for noncommercial use provided that it is appropriately attributed to The SMERU Research Institute. In the absence of institutional arrangements, PDF formats of SMERU's publications may not be uploaded online and online content may only be published via a link to SMERU's website.

The findings, views, and interpretations published in this report are those of the authors and should not be attributed to any of the agencies providing financial support to The SMERU Research Institute.

For further information on SMERU's publications, please contact us on 62-21-31936336 (phone), 62-21-31930850 (fax), or smeru@smeru.or.id (e-mail); or visit [www.smeru.or.id](http://www.smeru.or.id).

# Table of Contents

Table of Contents | i

List of Tables | ii

List of Figures | ii

List of Boxes | ii

List of Abbreviations | iii

I.	Mainstreaming Welfare Improvement of the Poor and Inequality Reduction (PKM2PK): What and How?   1
1.1	Introduction   1
1.2	PKM2PK Mainstreaming Approach   2
1.3	The Importance of PKM2PK Mainstreaming Approach   4
II.	PKM2PK Mainstreaming in MPA Management   7
2.1	Policy and Legal Basis   7
2.2	Designating a Conservation Area   11
2.3	Planning and Budgeting   16
2.4	Implementation   25
2.5	Partnership with Nongovernmental Actors   28
2.6	Monitoring and Evaluation   33
III.	Closing   39
	List of References   40



# List of Tables

Table 1. Checklist of the Steps in Formulating a Policy	8
Table 2. Data of People's Diversity in the Area Surrounding MPAs	13
Table 3. Matrix of the Stakeholder Analysis	14
Table 4. List of Required Individual and Regional Data (Village-Scale)	19
Table 5. Evaluation of Past Programs and Social Impact Analysis of Potential Programs in a MPA	19
Table 6. Plan for Meetings	20
Table 7. Plan for Synergizing MPA Programs in the PKM2PK Efforts	20
Table 8. Analysis of Beneficiaries of MPA Programs	21
Table 9. Example of MPA Management Strategic Plan Formulation by the Government and/or MPA Management Unit	21
Table 10. Example of PKM2PK Implementation in the Government and/or MPA Management Unit's RKA Document	24
Table 11. Mapping the Aspects of MPA Management to Build a Partnership	30
Table 12. EVIKA Criteria and Indicators Related to Welfare Improvement of the People in MPA	34
Table 13. Strengths and Weaknesses of Each Type of Monitoring and Evaluation	36
Table 14. Dummy Indicators of People's Welfare in MPA	37

# List of Figures

Figure 1. Stakeholders' Influence vs. Interests	14
Figure 2. Risk Analysis	16
Figure 3. Checklist of Public Services Criteria Based on Law No. 25 of 2009 on Public Services	28
Figure 4. Alliance Facility for Poverty Reduction	31
Figure 5. TNP2K's Partnership Schemes	32

# List of Boxes

Box 1. Poverty and Inequality in MPAs	2
Box 2. An Illustrative Example of PKM2PK Mainstreaming in MPA Management	4
Box 3. Not All Policy and Legal Basis on MPA Include PKM2PK Efforts	10
Box 4. Definition of Social Inclusion, Empowerment, and Protection	12
Box 5. Success Story: A Proactive "Jemput Bola" System as a Way to Bring Closer Services to the Poor and the Vulnerable	27
Box 6. An Example of Best Practice to Reduce Poverty in Public and Private Partnership in Indonesia	30
Box 7. Independent Partnership Success Story: Solar-Powered Electricity Program in Kabupaten Timor Tengah Selatan	33

# List of Abbreviations

<b><i>adminduk</i></b>	<i>administrasi dan kependudukan</i>	population administration
<b>BPS</b>	Badan Pusat Statistik	Statistics Indonesia
<b>DTKS</b>	Data Terpadu Kesejahteraan Sosial	Integrated Social Welfare Data
<b>EVIKA</b>	Evaluasi Efektivitas Pengelolaan Kawasan Konservasi	Evaluation of the Effectiveness of Conservation Area Management
<b>Gol</b>		Government of Indonesia
<b>KKB</b>	<i>kerangka kerja bersama</i>	alliance framework
<b>MPAs</b>		marine protected areas
<b>NGOs</b>		nongovernmental organizations
<b>PKM2PK</b>	<i>peningkatan kesejahteraan masyarakat miskin dan pengurangan ketimpangan</i>	welfare improvement of the poor and inequality reduction
<b>Podes</b>	Pendataan Potensi Desa	Village Potential Data Collection
<b><i>pokmaswas</i></b>	<i>kelompok masyarakat pengawas</i>	civilian monitoring group
<b>RKA</b>	<i>rencana kerja dan anggaran</i>	work and budget plan
<b>Sakernas</b>	Survei Angkatan Kerja Nasional	National Labor Force Survey
<b>SUOP</b>	<i>satuan organisasi pengelola</i>	management organization unit
<b>Susenas</b>	Survei Sosial-Ekonomi Nasional	National Socioeconomic Survey
<b>TNP2K</b>	Tim Nasional Percepatan Penanggulangan Kemiskinan	National Team for the Acceleration of Poverty Reduction

# I. Mainstreaming Welfare Improvement of the Poor and Inequality Reduction (PKM2PK): What and How?

## 1.1 Introduction

The Government of Indonesia (GoI) has expressed its commitment to both protecting and sustainably utilizing areas within Indonesian waters that possess particular characteristics by designating them as marine protected areas (MPAs). MPAs, referred to in regulations as “conservation areas in the coastal areas and isles”, are established to safeguard the existence, availability, and sustainability of the existing resources and ecosystem, with the aim of, among others, improving community welfare. The management of MPAs must be guided by the principle of equality, as stipulated in Article 3 letter f and Article 4 letter d of Law No. 27 of 2007 on the Management of Coastal Areas and Isles. Although certain provisions in this law were amended by Law No. 1 of 2014, which no longer explicitly mentions the principle of equality, MPAs continues to carry the mission of improving the welfare and reducing inequality among communities living in and around these areas, alongside efforts to conserve biodiversity.

Efforts related to the welfare improvement of the poor and inequality reduction (PKM2PK) in MPAs are of paramount importance—not only because they are mandated by the law, but also because these areas are generally inhabited by a poor population and characterized by high levels of inequality. Therefore, managing MPAs is particularly challenging, as it requires conserving and restoring biodiversity while simultaneously addressing poverty and inequality among local communities.

The high rate of poverty and inequality must be addressed simultaneously, so that the efforts to tackle conservation issues will not instead exacerbate the poverty and inequality in the MPAs. The government has come up with a number of affirmative development programs—programs that specifically target poverty issues—such as Direct Cash Transfer-Village Fund (BLT-DD), the Family of Hope Program (PKH), home renovation program, Rice for Prosperous Families (Beras Sejahtera) program, Indonesia Health Card (KIS), Smart Indonesia Card (KIP), fishermen’s card, and fishing equipment assistance for the fishermen. These affirmative programs are very crucial and have shown to be effective in alleviating the expense burdens of the poor. Such programs can be integrated and mainstreamed into the management of MPAs.

## 1.2 Approach to PKM2PK Mainstreaming

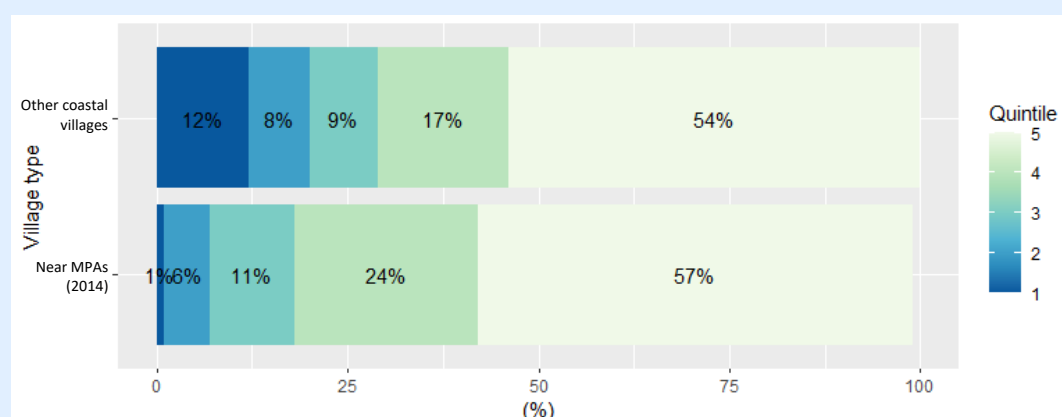
Affirmative efforts alone are not sufficient to improve welfare and reduce inequality; they should be complemented by a mainstreaming approach. Affirmative programs are specifically designed for the beneficiary families to help improve their welfare and reduce equality. Meanwhile, mainstreaming should be implemented in various programs and policies although not directly aimed at improving welfare and reducing inequality.

### Box 1

#### Poverty and Inequality in MPAs

Data from 2015 shows that almost 60% of the villages in the MPAs (designated in 2014) fall within the poorest 20% quintile in Indonesia; slightly higher than that of other coastal villages (see figure below). This indicates that various means of livelihood in the coastal areas have yet to optimally improve the people's living standards.

#### Poverty Rate Quintiles in 2015: Comparison of Villages Near MPAs vs. Other Coastal Villages



Source: Poverty and Livelihood Map of Indonesia 2015 (The SMERU Research Institute, 2014); 2014 MPA data (Ministry of Marine Affairs and Fisheries [KKP])

#### Note:

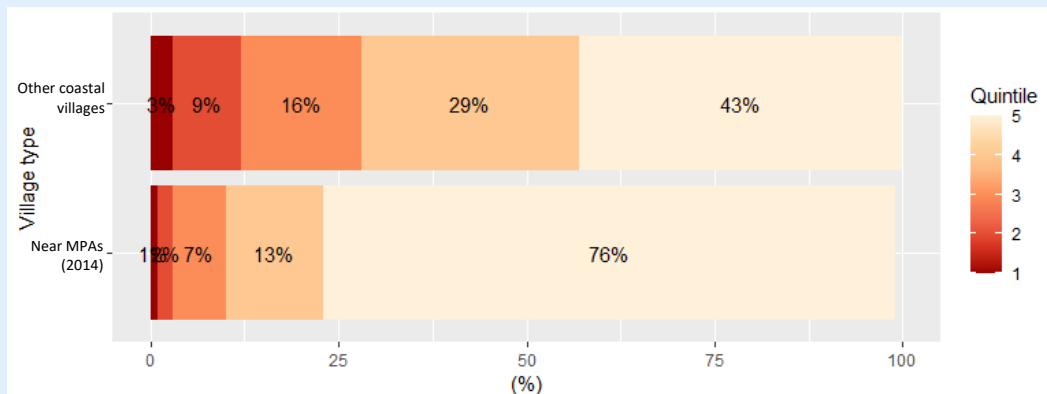
Villages near MPAs are villages located around MPAs designated in 2014 and coastal villages located two kilometers away from MPAs or in proximity with other villages that rely on capture fisheries as the main economic sector.

Other coastal villages refer to the villages located in the same *kabupaten* (district) region as the villages near MPAs, but not in proximity with any MPAs.

Not only predominantly poor, the people living around MPAs are also afflicted with a high level of inequality. More than 70% of the villages around MPAs fall within the 20% quintile of the villages with the highest Gini ratios (highest inequality) in Indonesia (see figure below). The number of villages with very high Gini ratios is almost twice the number of coastal villages in non-MPAs. This suggests that (i) the livelihood in the MPAs have not succeeded in improving the people's welfare and (ii) the economic benefits are not being evenly distributed. A small portion of the population in the villages enjoys the majority of the economic benefits, while the rest struggle merely to survive.



### Gini Index Quintiles in 2015: Comparison of Villages Near MPAs vs. Other Coastal Villages



Source: Poverty and Livelihood Map of Indonesia 2015 (The SMERU Research Institute, 2014); 2014 MPA data (KKP)

### What Is PKM2PK Mainstreaming in MPA Management?

PKM2PK mainstreaming is a strategy that aims to integrate welfare improvement of the poor and inequality reduction as a cross-cutting dimension across all stages of MPA management, which are (i) legal and regulatory framework development, (ii) area designation, (iii) planning and budgeting, (iv) implementation, (v) partnership development, and (vi) monitoring and evaluation. This means that, in designing and carrying out each of these stages, the PKM2PK dimension is inherently considered from the outset.

PKM2PK mainstreaming is not a standalone program within MPA management. Regardless of the type of activity, mainstreaming PKM2PK is an approach to designing and managing MPA that emphasizes ensuring the management delivers tangible benefits in terms of poverty reduction and reduced inequality.

PKM2PK mainstreaming also does not require a special budget, as it is not a separate program. It is implemented by adjusting the design or implementation of a policy to make it relevant to the welfare improvement of the poor and inequality reduction, instead of adding new activities.

## Box 2

### Illustrative Example of Mainstreaming PKM2PK in MPA Management

In the process of designating a potential MPA, the proposer conducts an in-depth study on the potentials of livelihood improvement for the poor as well as the negative impacts. The proposer also collects data of the people living around the proposed MPA, especially the underprivileged. The proposer examines the various ways in which these communities are connected to the proposed MPA—not only through livelihoods, but also through social, cultural, and potentially religious ties. Specifically, the proposer learns about the sources of vulnerability among marginalized people and how the proposed MPA might either mitigate or exacerbate those vulnerabilities. The insights and data gathered on the conditions and connections of marginalized communities are then integrated into the draft management plan for the MPA. This plan should carefully consider both the positive and negative impacts of all aspects of MPA management on welfare improvement and inequality reduction within the surrounding communities.

## 1.3 Why Mainstreaming PKM2PK Is Important

The PKM2PK mainstreaming approach is not intended to replace the affirmative approaches through welfare improvement programs that specifically target the poor. Rather, it is an approach to ensure that PKM2PK is implemented in a comprehensive and integrated manner. The following are three reasons why mainstreaming PKM2PK is important.

- a) Affirmative programs usually focus on giving direct benefits to the people in the form of money, goods, or services (such as training). Meanwhile, poor communities also need broader forms of support to improve their welfare. This includes, for example, pro-poor institutional support, such as in the form of accessible, fast, and affordable services. This kind of support can be easily available when the government's activities and policies already mainstream PKM2PK.
- b) Mainstreaming PKM2PK does conflict with the core duties and functions of ministries/institutions that may not have the mandate to address poverty and inequality issues. Therefore, any ministries/institutions can contribute to the PKM2PK efforts.
- c) Moreover, since poverty and inequality are multidimensional issues, they should be handled by engaging all sectors. This can be achieved by implementing a mainstreaming approach in all policies and programs across ministries/institutions.

### 1.3.1 About This *PKM2PK Mainstreaming Toolbox*

#### **What Is This *PKM2PK Mainstreaming Toolbox* and What Is Its Purpose?**

The *PKM2PK Mainstreaming Toolbox* is a guideline module designed to help the stakeholders in MPAs mainstream PKM2PK in MPA management. As a guideline, this toolbox complements the main policy as stipulated under the laws and other regulations. Hence, this toolbox is aimed at actualizing the mandate set by the laws and their implementing regulations, as discussed above. As such, this toolbox should be used by the

MPA stakeholders only within the context of implementing the mandate of the laws to improve the welfare of the poor and reduce inequality.

This toolbox serves as a guideline for mainstreaming PKM2PK in all stages of MPA management:

**a) Legal and Regulatory Framework Development**

This toolbox provides a guideline on how a legal basis for MPA establishment and operation should be developed, including the key elements needed to ensure PKM2PK mainstreaming in the process. For the already established MPAs, this part can still be useful, especially in the process of revising the regulations and developing the technical/operational policies.

**b) Area Designation**

This toolbox provides a guideline to orient the processes of proposing, reserving, and designating an MPA toward PKM2PK, especially by conducting adequate social analyses on the potential benefits and risks of establishing an MPA for the surrounding communities.

**c) Planning and Budgeting**

This toolbox assists relevant stakeholders in designing a pro-PKM2PK planning and budgeting without having to create specific activities or set budgets for PKM2PK objectives.

**d) Implementation**

This toolbox showcases the good governance model that can support PKM2PK. In addition, this section also shows simple adjustments that can be made in MPA operations, which can have huge impacts on the achievement of PKM2PK objectives.

**e) Partnership Development**

This toolbox guides on how to build a partnership that can contribute to the achievement of PKM2PK, without encumbering the people living near the MPA.

**f) Monitoring and Evaluation**

This toolbox provides direction for developing additional methods or sources of information that can be used in the Evaluation of the Effectiveness of Conservation Area Management (EVIKA) in order to capture various PKM2PK-related variables and indicators during the evaluation stage and ensure that the people's welfare condition is accurately reflected in the EVIKA result.

**Who Can Use This Toolbox?**

This toolbox can be used by all MPA stakeholders, but the main users are the policymakers and managers of each MPA unit. Since this toolbox adopts a mainstreaming approach, all components within the MPA management unit are encouraged to understand its content. This toolbox should be well understood by units responsible for the institutional preparation, designation, planning and implementation, and monitoring and evaluation of the MPA.

## **How to Use This Toolbox?**

This toolbox can be used as a guideline by every MPA management unit in performing their tasks and functions. This means that this toolbox should be used as training materials for all staff members recruited to manage MPA at the beginning of their assignment (onboard training). This toolbox can also be used at any time and applied to MPAs at any stage (whether already designated or still in the process of designation). This toolbox takes a forward-looking orientation, meaning that it helps to ensure that future activities can accommodate PKM2PK aspects. For earlier stage components, such as the legal basis development and area designation, even MPAs that have long been designated can still benefit from this toolbox, particularly when revising their legal foundations or zoning plans.

## II. Mainstreaming PKM2PK in MPA Management

### 2.1 Policy and Legal Framework

Policies and legal frameworks that support PKM2PK in MPAs are crucial, and their existence must be ensured. These policies and legal basis in the form of formal regulations should include mandates for implementing PKM2PK. They should be present in the regulation at every level of the government. Moreover, these policies and legal frameworks should align the interests of multiple stakeholders across sectors, ensure that the poor communities participate in the decision-making processes, and—most importantly—guarantee the implementation of PKM2PK efforts.

#### 2.1.1 Reflection Questions

- a) Has PKM2PK become one of the main goals in MPA establishment and management, and has this been stipulated in laws and regulations or other policies related to MPA?
- b) Has PKM2PK been formalized in every stage of MPA management through policies or legal frameworks?
- c) Are the legal foundations related to PKM2PK aligned across sectors (between ministries/institutions) and levels of the government (from the central to village governments)?
- d) Are targets related to PKM2PK in MPAs already included in the long- and medium-term plans as well as annual development plans of the relevant stakeholders at the central and regional levels?
- e) Are PKM2PK targets and implementation integrated into the annual work plan of the MPA management units?
- f) Do the policies developed take into account their potential impacts on increasing inequality in the future?
- g) Are the policies developed based on evidence of the socioeconomic conditions of communities living near the MPAs?

#### 2.1.2 Why Are These Questions Important?

Policies and legal frameworks are fundamental in MPA management. Without a legal umbrella that regulates PKM2PK in MPAs, the management and other relevant stakeholders cannot perform their functions, as doing so may be seen as overstepping their authority. Clear policy and legal frameworks will also ensure the sustainability of innovations in PKM2PK efforts in MPAs. However, the evidence-based policy and legal frameworks must be effective in achieving the objectives.

Furthermore, the inclusion of statements about PKM2PK in the MPA management's vision and missions acts as a mandate that should be translated into short-, medium-, and long-



term MPA management strategies. These strategies will then be implemented through specific actions that can be used to evaluate progress and success in the future. This also helps ensure that efforts to achieve PKM2PK are more focused and measurable.

### 2.1.3 Required Actions

- a) Collecting evidence as the basis for formulating policies/regulations/plans related to PKM2PK in MPAs. The evidence may include primary data collection, literature reviews, and case study analyses, both from Indonesia and other countries.
- b) Ensuring that the spirit of PKM2PK is embedded in every national policy and/or other regulations related to MPAs.
- c) Ensuring that PKM2PK efforts are included in the short-, medium-, and long-term MPA management plans, and that they have clear goals and can provide directions to relevant stakeholders to perform their functions.
- d) Ensuring that PKM2PK efforts are included in the short-, medium-, long-term, and annual development plans of the regional governments that have MPAs in their regions.
- e) Ensuring that PKM2PK efforts are included in the annual work plan of the MPA management units.
- f) Considering the potential long-term impacts on increased inequality during the policy formulation process.
- g) Ensuring that PKM2PK efforts in MPAs are explicitly mentioned in relevant parts—for example, in the considerations, principles, and objectives—and regulations.
- h) Ensuring vertical alignment (between lower regulations and higher regulations) and horizontal alignment (among regulations across different ministries/institutions), so that PKM2PK efforts can be implemented in a coherent and coordinated manner.

**Table 1. Checklist of Policy Formulation Steps**

Subject	Task/Authority*			
	Central Government	Provincial Government	<i>Kabupaten</i> (District)/ <i>Kota</i> (City) Government	Management Unit
<b>Preparation Process</b>				
<input type="checkbox"/> Understanding, disseminating, and advocating the urgency of PKM2PK efforts in MPAs and the importance of mainstreaming PKM2PK into relevant policies				
<input type="checkbox"/> Preparing supporting evidence, such as primary data (involving the surrounding communities,				

Subject	Task/Authority*			
	Central Government	Provincial Government	<i>Kabupaten</i> (District)/ <i>Kota</i> (City) Government	Management Unit
if necessary), literature reviews, and case study analyses as the basis for formulating policies related to PKM2PK in MPAs				
<input type="checkbox"/> Conducting participatory socioeconomic mapping to identify opportunities and challenges that might emerge when a strategic policy is implemented near the MPA				
<b>Formulation Process</b>				
<input type="checkbox"/> Organizing public consultations regularly prior to approving a policy related to PKM2PK in an MPA, especially for policies that concern the interests of the people				
<input type="checkbox"/> Ensuring the vertical and horizontal policy alignment, so that PKM2PK efforts can be carried out in a coherent and coordinated manner				
<input type="checkbox"/> Ensuring that PKM2PK efforts are included in the considerations section, which is one of the important elements in the introductory section of any relevant MPA-related policies				
<input type="checkbox"/> Ensuring that PKM2PK efforts are included in the medium-, long-term, and annual plans of the regional governments that have MPAs in their regions				
<input type="checkbox"/> Ensuring that PKM2PK efforts are included in the				

Subject	Task/Authority*			
	Central Government	Provincial Government	<i>Kabupaten</i> (District)/ <i>Kota</i> (City) Government	Management Unit
annual work plan of the MPA management units				
<input type="checkbox"/> Ensuring that every proposed policy is supported by an analysis of potential impacts on inequality				

### Box 3

#### Not All Policies and Legal Frameworks on MPAs Include PKM2PK Efforts

According to Regulation of the Minister for Marine Affairs and Fisheries No. PER.02/MEN/2009 on the Procedures for Designating MPAs, one of the four objectives of designating an MPA is to improve the welfare of the surrounding communities. This explicitly shows the government's commitment to achieving the balance between marine environment conservation and people's welfare improvement through MPA.

However, since the enactment of Regulation of the Minister for Marine Affairs and Fisheries No. 31/PERMEN-KP/2020 on the Management of Conservation Areas, the previous regulation is no longer in effect and the clause on improving the people's welfare was revoked. The new ministerial regulation states that conservation area management is carried out for (i) the protection, conservation, and utilization of biodiversity and/or fishery resources; and (i) the protection, conservation, and utilization of traditional cultural sites (Regulation of the Minister for Marine Affairs and Fisheries No. 31/PERMEN-KP/2020, Article 2)

It is regrettable that the mandate on improving the people's welfare is no longer one of the objectives of MPA management to go hand in hand with conserving the environment. The ministerial regulation should serve as a reference for its technical implementing regulations/policies. If the ministerial regulation does not mention the mandate to improve the welfare of the surrounding communities, there is a concern that such efforts will not be implemented in practice. This needs to be anticipated by regularly reviewing the regulations/policies to ensure the implementation of PKM2PK efforts in the MPAs. Nevertheless, the context of improving community welfare in conservation areas can still be pursued, as the scope of the conservation area management includes the utilization of conservation areas (Regulation of the Minister for Marine Affairs and Fisheries No. 31/PERMEN-KP/2020, Article 3 letter c). Within this utilization framework, a proposed approach would be sustainable use that contributes to the welfare of those who manage or benefit from these areas.

## 2.2 Designating an MPA

Designating an MPA involves a series of activities consisting of proposing, reserving, and designating. All these stages play a determining role in the MPA governance and target achievement; that is, to actualize a sustainable marine development based on the principles of equality to improve community welfare. When the designation of MPA is not based on proper information and mechanism—for example, without identifying potential conflicts and negative impacts on the local communities' livelihood—its objectives are unlikely to be achieved. Therefore, mainstreaming PKM2PK becomes vital at the designation stage.

### 2.2.1 Reflection Questions

- a) Has there been a thorough socioeconomic study conducted prior to the MPA designation proposal on the area's potentials to improve people's welfare and reduce inequality?
- b) Has there been an analysis of the potential negative impacts of the MPA on marginalized groups?
- c) Was the analysis based on primary data (collected directly from primary sources/persons)?
- d) Was the study conducted in a participatory process?
- e) Has the reservation stage been validated (administrative and field data validation), and were the results used to inform the designation stage?

### 2.2.2 Why Are These Questions Important?

Designating a marine area as an MPA is an action that results in major changes not only on the biological environment, but also on the human ecology. Thus, the presence and interests of people who live in and depend on these waters must be carefully considered. Moreover, various regulations, including Law No. 27 of 2007 and Law No. 1 of 2014, have mandated that one of the objectives of an MPA establishment is to improve the people's welfare.

However, the term *people* is often ambiguous. Who are these people? Are they all the same or different? Are they rich or poor? Are they men or women? Are they natives or nonnatives? Do they have similar access to resources and decision-making processes? Are they equally affected by the existence of an MPA? In many communities, these differences relate to the different positions in the society and access to various resources.

Communities experience development impacts in different ways and, therefore, require tailored approaches. Some may be able to capitalize on the opportunities the MPA designation presents and improve their welfare; on the other hand, the MPA designation may lead to some others getting the short end of the stick.

To understand who they are, as well as their interests and needs, it is necessary to conduct a direct assessment based on the data collected from the field. In fact, to obtain valid information that truly captures the people's condition, the data collection must involve the people through participatory methods.

### 2.2.3 Required Actions<sup>1</sup>

To achieve PKM2PK objectives, there are three aspects that need to be fulfilled in the overall MPA management, including its designation. Those are social inclusion, empowerment, and protection.

#### **Box 4**

##### **Definition of Social Inclusion, Empowerment, and Protection**

*Social inclusion* refers to efforts to remove institutional barriers (rules, mechanisms, working procedures, behaviors, and so on) while also strengthening incentives to improve access for individuals and diverse community groups to participate in development.

*Empowerment* refers to efforts to strengthen assets and capabilities of individuals or community groups in order for them to be able to perform their functions and be actively involved, as well as to influence or demand accountability from institutions that affect their lives.

*Protection/guarantee* refers to efforts to control various social risks that arise due to policy interventions or development.

To effectively implement these three principles when preparing an area for designation as an MPA, it is imperative to understand the opportunities and barriers to improving welfare and reducing inequality, as well as the potential social impacts. For that reason, an appropriate social analysis must be conducted before proposing an area for MPA designation.

There are at least five social dimensions that need to be analyzed and taken into consideration at the proposal stage. These dimensions are briefly described below:

#### **a) Community Diversity**

The people living around the proposed MPA consist of individuals with diverse identity backgrounds. These identities can be (i) ascribed identities, such as sex, ethnic group, race, and age; (ii) achieved identities, such as education, ideology, occupation, and citizenship; or (iii) mixed identities, such as language, religion, location, and native/nonnative status. For some, these diverse backgrounds do not affect their position in the community, nor do they affect their access to available resources. For some others, however, these different identities play a pivotal role in determining their social position and access to available resources. Therefore, in a major development policy that can transform an area (such as the establishment of an MPA), it is fundamental to understand this diversity to anticipate how the people will accept or reject the plan, as well as to predict patterns of resource use.

---

<sup>1</sup>Most of the discussion in this section refers to World Bank (2003).



**Table 2. Community Diversity Data around MPAs**

Ascribed Identity	Achieved Identity	Mixed Identity
Age	Education	Language
Sex	Occupation	Gender
Ethnic group/race	Ideology	Native/nonnative status
Others	Others	Others

**b) Institutional, Regulatory, and Behavioral Aspects**

The second aspect especially focuses on the link between organizations and institutions, both formal and informal ones, that affects various patterns of social relations. Institutions at different levels should be examined, including those at the government level (e.g., regulations from the village or regional governments), market institutions (e.g., product supply chain), and at the community level (e.g., customary rules on sailing activities). The most important aspect to examine is how far these institutions facilitate or limit people to access or utilize the available opportunities. Understanding the institutions, regulations, and behaviors will help identify the opportunities and challenges that an MPA presents, as well as the achievement of its objectives. This analysis can be supported using tools such as an institutional mapping tools (or the Venn diagram).

**c) Stakeholders**

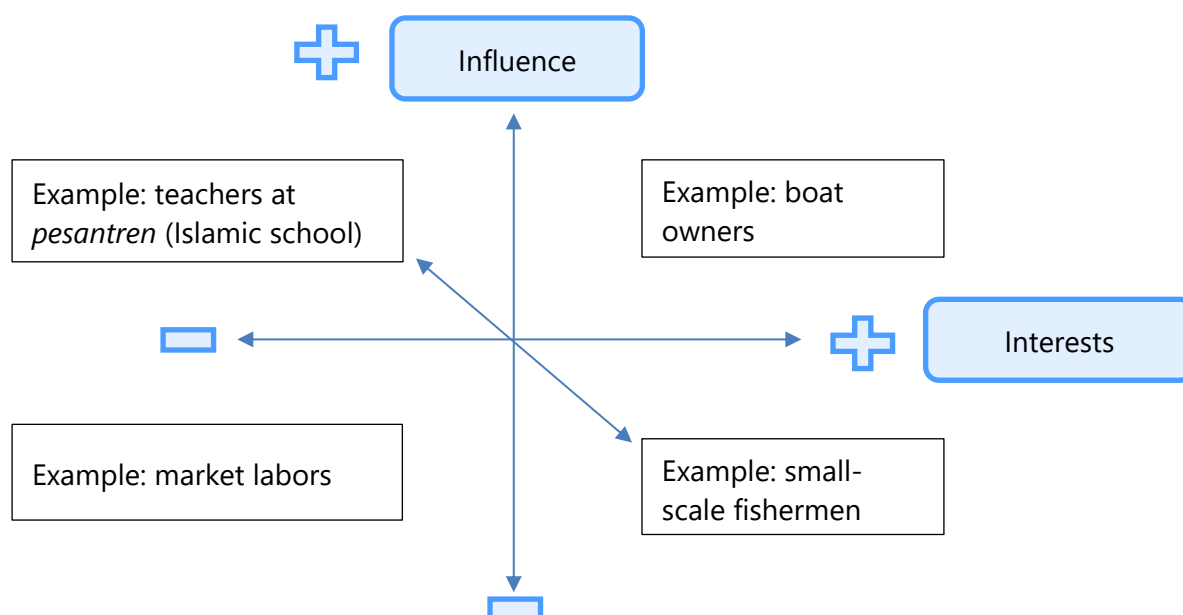
Stakeholder mapping aims to understand the actors (whether individuals, groups, or organizations) that have roles and interests in the MPA, either because they can potentially affect its existence or because they may be affected by it. These stakeholders have various degrees of influence and interests (having huge influence but low interest, or vice versa), so that they might support or oppose the changes that the MPA may bring about. Firstly, the stakeholder analysis should map the relevant stakeholders based on their influence and interests. Secondly, the analysis should go deeper into identifying the specific interests and influence of each stakeholder, as well as their assets and capacity to support their positions regarding the MPA. Lastly, the analysis should identify which stakeholders are likely to support and which are likely to oppose the MPA. This stakeholder analysis helps determine who needs to be engaged due to their influence on the success of the MPA, and who needs to be protected and empowered due to the potential negative impact the MPA may have on their livelihoods.

**Table 3. Stakeholder Analysis Matrix**

Stakeholder Category <sup>a</sup>	Relevant Stakeholders	Characteristics (Social Condition, Location, Number, Capacity of Organization, etc.)	Interests (Supports MPA, Neutral, and Opposes MPA)	Influence (H=High, M=Medium, L=Low)
Government officials				
Staff of the managing authority				
Direct beneficiaries (including economic actors)				
Individuals who suffer a loss				
Organized interest groups				
Civil society				
Donor institutions				
International stakeholders				

<sup>a</sup>The stakeholder names listed in this matrix are illustrative examples only.

**Figure 1. Stakeholders' Influence vs. Interests**



#### **d) Participation**

The focus on participation mapping relates to two main aspects: people's participation as collaborators in MPA management and people's participation in the context of capitalizing on the opportunities that may be present from the establishment of the MPA. Analysis of this participation pattern should be conducted to understand *who* (male or female, old or young, native or nonnative, and so on) can and cannot get involved in *what types of community activities* (decision-making activity or others), at *which level* (RT<sup>2</sup>, RW<sup>3</sup>, *dusun*<sup>4</sup>, village, and so forth), and *to what extent* (merely being present, voicing opinion, or making a decision). The participation analysis should also be conducted to learn about local institutions, both formal and nonformal, that facilitate/support or limit people's participation, as well as the potentials of people's empowerment. Moreover, as participation is affected by the presence of assets and capabilities, the analysis should identify what assets and capabilities the marginalized groups have in order to participate. The output of the analysis will be a mapping of opportunities for inclusive participation and the efforts to strengthen them.

#### **e) Social Risks**

The final and arguably the most important aspect focuses on various negative possibilities (risks) that might emerge due to the presence of the MPA. In general, these risks are divided into five, namely:

- (1) vulnerability risks: the increased exposure to multiple forms of stress and shocks;
- (2) state-related risks: conflict and violence, political turmoil, religious and ethnic unrest;
- (3) economic and political risks: the benefits of MPA being monopolized by the elites (elite capture), or the area's operations being controlled by an influential local figure;
- (4) institutional risks: poor governance, lack of management's capacity, complex operational design (rendering it hard to implement); and
- (5) exogenous risks: climate change impacts.

The risk analysis should identify the risks that are very likely to occur. It is also essential to learn to what extent the risks undermine the objectives' achievement. Some risks may require more attention, whereas some others may be less significant. A matrix assessing the likelihood of occurrence and the severity of impacts should serve the basis for following up the MPA designation plan.

---

<sup>2</sup>RT, or neighborhood unit, is the smallest unit of local administration consisting of a number of households.

<sup>3</sup>RW is a unit of local administration consisting of several RT within a *kelurahan* (village-level administrative area).

<sup>4</sup>A *dusun* is an administrative area within a village, consisting of a number of RT.

**Figure 2. Risk Analysis**

Likelihood of occurrence	Very high	T	T	UR	S
	High	T	T	UR	UR
	Medium	A	T	P	P
	Low	A	T	P	P
		Low	Medium	High	Very high

Magnitude of risks

Note:

S = Stop; if the risk is too high and not worth the benefits.

UR = Change the plan; take actions to anticipate the possibilities of risks by changing the design or adding a mitigation strategy.

P = Trigger; make a measurable indicator that, if achieved, will trigger the design change or mitigation strategy to solve issues of distribution, compensation, negative impacts, and others.

T = Review and reconsider.

A = Ignore.

In the context of social risk analysis, the biggest portion of the focus should be directed to the marginalized groups, such as the poor households, women, and people with disability. Should a risk occur, these marginalized groups are most likely to be hit the hardest, as they lack resources needed to manage the risks and mitigate the impacts. Thus, this risk analysis—in addition to mapping the risks that might emerge due to the MPA's existence—must also identify the consequences if those risks do materialize (losses incurred) and possible options to address them.

## 2.2.4 Things to Avoid

The following should be avoided during the designation process:

- Ignoring the results of the comprehensive socioeconomic analysis because the government already sets certain targets for the proposed MPA
- Using the socioeconomic analysis as a mere formality to enforce the establishment of the proposed MPA by not conducting a thorough socioeconomic analysis

## 2.3 Planning and Budgeting

Planning and budgeting that support PKM2PK efforts will become the foundation of the whole process of MPA management and reflect the policymakers' commitment. Efforts from the central, provincial, *kabupaten/kota* governments and the management units in tackling poverty and inequality issues can be detected early through the annual planning and budgeting documents. Planning and budgeting are critical stages that must be thoughtfully prepared to ensure that MPA management contributes to improving community welfare, reducing inequality, and preserving marine ecosystems.

### 2.3.1 Reflection Questions

- a) Are the planning and budgeting of the MPA programs formulated based on evidence to support PKM2PK efforts?
- b) Has there been a socioeconomic impact evaluation of the running programs that can inform future planning?
- c) Has a social impact analysis been conducted to examine whether a program plan supports the PKM2PK efforts and does not cause inequality in the future?
- d) Have the annual management plans prepared so far included the poor and favored them? For example, do they include the poor as both contributors of input and beneficiaries?
- e) Are the cross-sectoral PKM2PK programs well integrated into the MPA?
- f) Has there been an analysis of the proportions of the beneficiaries for each MPA management program?
- g) Has the formulation of budget allocation for MPA management adopted the pro-poor budgeting concept and targeted the PKM2PK efforts?
- h) In formulating MPA management budget allocation, have the public been involved through a participatory budgeting mechanism? For example, are they engaged in dialogues with the government/management unit to solve the poverty issue in the MPA?
- i) Are the budget plans for programs that are irrelevant to—or even in conflict with—the interests of the poor drawn up effectively and efficiently for the benefit of PKM2PK?
- j) Are there PKM2PK programs that combine broad and narrow targeting approaches? Broad targeting is an approach that does not directly target the poor individuals/families/groups, such as through the provision of education, health, and clean water. Meanwhile, a narrow targeting approach targets poor individuals/families/groups directly, such as through the provision of business capital assistance for poor families.

### 2.3.2 Why Are These Questions Important?

- a) Evidence-based program planning and budgeting is important, as it eases the government and MPA management units in formulating programs that are effective, targeted, and supportive of PKM2PK efforts. Latest data on poverty and inequality around the MPA is also important to provide information about the regions, groups, and sectors that require special attention and should become a priority.
- b) Social impact analysis and the identification of the potential inequalities at the planning and budgeting stage can determine a program's effectiveness and feasibility. It can minimize the losses suffered by poor communities if a program turns out to be misaligned with their interests. Early detection of the impacts allows for more well-thought solutions/strategies.
- c) Involving poor communities in the planning and budgeting process is very important to ensure that a program achieves its intended beneficiaries according to their needs and creates positive impacts on their livelihoods. Essentially, communities have the right to



know about public budgeting, and the government has the obligation to inform them of the upcoming programs. The government should see the people as their dialogue partner when formulating a budget plan. This will become an added value for the government and MPA management, as it reflects the practice of participatory, transparent, and accountable governance.

- d) Achieving PKM2PK goals is a cross-sectoral effort that cannot be carried out by the Ministry of Marine Affairs and Fisheries alone. Each institution has different mandates and areas of focus. Therefore, synergy among institutions is important to ensure that PKM2PK goals that are aimed at the poor in MPAs can be effectively met.
- e) Analyzing who benefits from the program is important to examine whether a program is pro-poor, neutral, or potentially burdensome to poor communities.
- f) Understanding pro-poor budgeting is important for every MPA management institution so they can design programs that support PKM2PK. Pro-poor budgeting refers to the intentional formulation and implementation of policies related to budgeting to create policies, programs, and projects that favor poor communities' interests.
- g) Improving the effectiveness and efficiency of budget spending that indirectly targets the interests of the poor is necessary to manage budget constraints often faced by government institutions and MPA managers. This can be achieved through cross-sectoral synergy.
- h) The combination of broad and narrow targeting approaches in MPA program budgeting is vital to cover more poor populations and allow them to directly enjoy the benefits.

### 2.3.3 Required Actions

- a) Collecting evidence and compiling data about the condition of the people living around the MPA. The evidence and data should capture the (i) regional conditions, including natural resources potentials, (ii) infrastructure conditions, (iii) available facilities and infrastructures, and (iv) strengths and challenges within an administrative area of the MPA. This effort can be done in collaboration with Statistics Indonesia (BPS), research institutes, higher education institutions, survey agencies, nongovernmental organizations (NGOs), and other relevant entities. The data must be objective, up-to-date, and relevant to credibly inform the formulation of MPA management plans. An example of required datasets is presented in Table 4.

**Table 4. List of Required Individual and Regional Data (Village-Scale)**

General Data of the Population	Regional Data
Age	Types and conditions of available potential coastal and marine resources
Sex	Types and conditions of available infrastructures that support coastal and marine activities
Education	Types and conditions of available infrastructures that support tourism activities
Occupation	Types and conditions of transport, education, and health facilities and infrastructures
Average income/day	Types of occupation and the number of human resources that support marine activities
Alternative occupation	Types of occupation and the number of human resources that support tourism
Marital status	Involvement of other parties in managing the potentials
Number of family members	Strengths/added value of the region
Types of social protection program coverage	Existing challenges

- b) Inventorizing previous MPA programs and evaluating their successes to see whether they already reflect PKM2PK efforts or amplify the potential of inequality. In addition to that, conduct social impact analysis of the planned programs. An example matrix of program evaluation and analysis is presented in Table 5.

**Table 5. Matrix of Past Program Evaluation and Social Impact Analysis of Future Programs in an MPA**

Past Program Evaluation						
Program	Running Period	Urgency	Results	Challenges	Impacts	Solutions
Future Program Social Impact Analysis						
Policy/Program Proposal	Planned Time for Program Implementation	Urgency	Targets	Challenges	Potential Impacts	Next Strategies

- c) Involving poor communities in planning MPA management programs that support PKM2PK efforts. It is also necessary to create an inventory of constraints that may arise in involving poor communities and strategies to address them. A framework for enhancing the participation of poor communities can be found in Table 6.

**Table 6. Deliberation Implementation Plan**

Objective	Focus	Target	Time of the Meeting	Location
To improve the welfare of the poor and reducing inequality in the MPA	To obtain input from communities about the welfare improvement and inequality reduction programs within the local context of each village/region	Representatives of the village apparatus, public figures, representatives of the poor, supporting NGOs, etc.	Fourth week of January to fourth week of April	Kecamatan (Subdistrict) X (Village A, B, C) Kecamatan Y (Village D, E, F)
	To obtain information about the types of assistance, training, and infrastructure that the poor communities need in the villages/regions in the MPA			

- d) Synergizing cross-sectoral programs with relevant stakeholders through comprehensive partnership program planning and feasible execution plan. A proposed synergy plan for MPA programs is presented in Table 7.

**Table 7. Plan for Synergizing MPA Programs in PKM2PK Efforts**

Program	Objective	Planned Time for Implementation	Partner			Collaboration Implementation Plan
			Involved Partner	Partner's Function	Support Needed from the Partner	

- e) Conducting beneficiary analysis to learn which stakeholders—or in this case, which poor groups—benefit the most, are least affected/neutral, and most burdened by the MPA program. An example of beneficiary analysis from various community groups is presented in Table 8.

**Table 8. Analysis of Beneficiaries of MPA Programs**

Poor and Vulnerable Group	Program's Impacts <sup>a</sup>		
	Beneficial	Neutral	Burdensome
<b>1. Name of the Program</b>			
Very poor households (RTSM)	<i>Reasons why implementing the new policy/program will be beneficial</i>	<i>Reasons why implementing the new policy/program will be neutral</i>	<i>Reasons why implementing the new policy/program will be burdensome</i>
Poor households (RTM)			
Female			
People with disability			
Homeless people			
Older people			
Children			
Poor people working in the coastal area (specific details, if necessary)			

<sup>a</sup>Choose one.

- f) Mainstreaming PKM2PK in government and MPA management planning documents as a strong basis for policy to run programs that improve the welfare of the poor and reduce inequality. An example of its implementation is shown in Table 9.

**Table 9. Example of MPA Management Strategic Plan Formulation by the Government and/or MPA Management Unit**

No.	Policy Direction	Strategy	Action
1	Participatory, harmonious, and feasible planning of the marine space, coastal areas, and isles	<ul style="list-style-type: none"> <li>Monitoring and evaluating the utilization of marine space based on the zoning plan in the management unit's work area</li> </ul>	
		<ul style="list-style-type: none"> <li>Supporting the operation of MPA and/or incentives for the utilization of marine space in the management unit's work area</li> </ul>	

No.	Policy Direction	Strategy	Action
		<ul style="list-style-type: none"> <li>Engaging the people, especially poor communities, in the MPA planning</li> </ul>	<ul style="list-style-type: none"> <li>Conducting deliberation on the MPA management planning</li> <li>Conducting public consultation regarding MPA management</li> </ul>
2	Sustainable management of the conservation areas and marine biodiversity	<ul style="list-style-type: none"> <li>Providing facilities and infrastructures in the MPA in the management unit's work area</li> </ul>	
		<ul style="list-style-type: none"> <li>Improving the human resource competence within the MPA management</li> </ul>	
		<ul style="list-style-type: none"> <li>Engaging the local communities, especially poor communities, in the MPA management</li> </ul>	<ul style="list-style-type: none"> <li>Delegating the MPA monitoring function to the community-based watchdog groups (<i>pokmaswas</i>)</li> <li>Implementing collaborative actions between the government and the people through coral reef care programs</li> </ul>
3	Good governance within the management unit	<ul style="list-style-type: none"> <li>Human resource management and governance in the management unit</li> </ul>	
		<ul style="list-style-type: none"> <li>Strengthening performance accountability in the management unit</li> </ul>	
		<ul style="list-style-type: none"> <li>Strengthening the human resources and governance to improve the welfare of the</li> </ul>	<ul style="list-style-type: none"> <li>Adding a new division to handle PKM2PK efforts</li> </ul>



No.	Policy Direction	Strategy	Action
		people and reduce inequality	
4	Welfare improvement and inequality reduction in the MPA	<ul style="list-style-type: none"> <li>Formulating policies on people's welfare in each management unit's area</li> </ul>	<ul style="list-style-type: none"> <li>Formulating short-, medium-, and long-term MPA management plans with a focus on PKM2PK efforts</li> <li>Formulating strategic plans and annual actions to promote PKM2PK efforts in MPA management</li> </ul>
		<ul style="list-style-type: none"> <li>Providing financing and capital assistance for poor communities in the MPA</li> </ul>	<ul style="list-style-type: none"> <li>Allocating budget to help small industries in the MPA by providing capital assistance for marine product processing equipment</li> <li>Allocating budget for tour guide training programs as an alternative livelihood for the MPA communities</li> </ul>

g) Improving the effectiveness and efficiency of spending budget that does not directly target the interests of poor communities to address budget constraints often faced by government and MPA management institutions. An example of the implementation of PMK2PK in the work and budget plan (RKA) document is shown in Table 10.

**Table 10. Example of PKM2PK Implementation in the Government and/or MPA Management Unit's RKA Document**

Activity Component	Subcomponent	Location of the Activity	Performance Target (Quantitative)	Budget Ceiling
Improving the welfare of the poor and reducing inequality in the MPA				
Policy on community welfare				
Recommendation of priority villages for poverty alleviation				
Inventory of data and studies	Socioeconomic survey	Kecamatan X (Desa A, B, C)	1 package	
		Kecamatan Y (Desa D, E, F)	1 package	
	Study of the alternative livelihoods for the coastal communities	Kecamatan X (Desa A, B, C)	1 package	
		Kecamatan Y (Desa D, E, F)	1 package	
Financing and capital assistance for poor communities				
Assistance for conservation activist fishermen				
Provision of fishing materials	Provision of fishing boats, nets, and seaweed seeds	Kecamatan X (Desa A, B, C)	30 fisher groups	
Provision of capital for marine product processing equipments	Provision of business capital for seaweed processing venture	Kecamatan Y (Desa D, E, F)	5 business groups	

h) Disseminating information about PKM2PK, both internally within the government and outside the government, including political leaders and the public.

### 2.3.4 Things to Avoid

- Conducting planning and budgeting without involving poor communities around the MPA, without using the latest poverty data, and without being based on the empirical conditions in the field
- Not evaluating past policies/programs and not planning for future urgent policies/programs
- Not conducting social impact analysis in formulating a policy/program
- Not integrating PKM2PK into strategic plans as well as annual work and budget plans

## 2.4 Implementation

The success of MPAs depends on good governance and coordination with various stakeholders, including the local communities and different levels of the government. Good governance is reflected in the transparent, participatory, and accountable practices in accordance with the applicable regulations. Meanwhile, coordination comprises vertical coordination (between different levels of the government) and horizontal coordination (between the government and other actors).

Through administrative functions—service (e.g., community empowerment) and nonservice matters (e.g., zoning control and reef rehabilitation)—MPAs can play a crucial role in improving the welfare of the surrounding communities and reducing inequality. Moreover, by fulfilling the operational needs using local resources, the existence of MPAs further supports the local community's livelihood. In addition to ensuring the sustainability of MPA programs and policies, effective coordination and governance between government institutions and the regional governments will ultimately contribute to the achievement of the expected outputs, outcomes, and impacts.

Conversely, poor governance can pose massive challenges on the implementation of MPAs. For instance, lack of accountability in service delivery may lead to corruption, collusion, and nepotism in MPA operations. Furthermore, the lack of vertical and horizontal coordination can result in overlapping programs or the absence of services. Thus, good governance principles should be adopted and practiced consistently in all aspects of MPA operations.

### 2.4.1 Reflection Questions

- a) Is there a mechanism that allows all segments of society, including poor and vulnerable groups, to participate in the MPA governance?
- b) Does the MPA's data collection mechanism target the poor and vulnerable groups? If there are individuals or families who believe they are eligible to benefit from the MPA but are not included in the data, is there a mechanism to address this?
- c) Is there a clear and accessible system to accommodate input and complaints from the people, especially the poor and vulnerable groups?
- d) Has the MPA designed a model for providing friendly services that respect the poor and vulnerable groups?
- e) Has the MPA considered and utilized local resources in its programs and activities to ensure long-term sustainability?
- f) Has the MPA disseminated information about its activities and programs transparently using a method that everyone, including the poor and vulnerable groups, can understand easily?
- g) Is there a clear mechanism for coordination between relevant agencies on designating and executing the tasks and responsibilities of each agency, especially in an effort to improve the welfare and reduce inequality around the MPA?

## 2.4.2 Why Are These Questions Important?

Improving community welfare and reducing inequality are critical objectives in MPA operations. Without well-designed programs, good governance principles, and coordination between governmental and nongovernmental institutions, MPA's objectives will be difficult to achieve. Moreover, the sustainability of activities is essential to ensure that the welfare improvement efforts can be maintained over the long term.

Furthermore, poor and vulnerable groups are usually sensitive to how services are delivered. If services are provided in a way that is unfriendly or disrespectful of their dignity, these communities may be reluctant to engage or make use of the services. This is often due to a sense of inferiority—a feeling of weakness or helplessness—that many poor and vulnerable individuals experience. For instance, they might be reluctant to access a certain service if the process is complicated, the requirements are difficult to meet, the staff are unfriendly, or the facilities are hard to reach.

## 2.4.3 Required Actions

- a) Designing a service mechanism that is friendly to poor and vulnerable communities. It should be simple, free of charge, require simple documentation, be easily accessible, and use a proactive approach. The proactive approach involves providing services directly to the people who need them and ensuring well preparation to meet the needs of the poor and vulnerable.
- b) Improving the targeting mechanism for MPA empowerment program's beneficiaries by focusing on poor and vulnerable groups. This can be achieved by targeting potential beneficiaries who are listed in the Integrated Social Welfare Data (DTKS). Individuals and families who believe that they are eligible but not listed in DTKS can report it to the head of village.
- c) Implementing a clear and easily accessible system to address input and complaints, especially from poor and vulnerable groups. For example, the government can set up a hotline. People may also submit their concerns through the head of village, who will then coordinate with the MPA management.
- d) Improving transparency and fostering public understanding about MPA activities and programs by providing easy-to-understand information through various media, such as posters and brochures, as well as direct dissemination.
- e) Utilizing and involving local resources for labors, materials, and traditional knowhow in the MPA programs' planning and implementation. Mapping local resources and providing capacity building training can become a step in the right direction in this process.
- f) Clarifying and strengthening coordination related to PKM2PK between government agencies by formulating joint work guidelines, which cover explanations of the roles, duties, and responsibilities of each agency.

#### 2.4.4 Things to Avoid

- a) Failing to involve communities, especially poor and vulnerable groups, in the program implementation. This can result in programs that do not align with their actual needs and conditions.
- b) Ignoring or underestimating local resources in the program implementation. This sort of practice can lead to poor community acceptance, which ultimately undermines the program's sustainability.
- c) Ignoring good governance principles in the MPA operations. For instance, the lack of transparency and accountability in MPA policies, programs, and activities can lead to corruption, collusion, and nepotism practices and eroding trust.
- d) Disregarding regulations and guidelines, which can lead to misaligned implementation and failure in achieving the program's objectives.
- e) Poor communication and coordination between government agencies that can cause overlapping, inefficiency, and conflicts. Hence, it is important to maintain a good and open communication channel between agencies.

##### **Box 5**

##### **Success Story: The “Proactive Outreach” System as an Effort to Bring Services Closer to Poor and Vulnerable Communities**

A *kelurahan* in Magetan, East Java, along with Adminduk's<sup>a</sup> Jemput Bola (Proactive Outreach) Team, has made the proactive outreach service a flagship initiative and a regular program conducted periodically in the area. One example is the delivery of services such as data recording for the issuance of electronic identity card (e-KTP) and family identity card (KK) by visiting poor families and people with disability directly. The team goes door-to-door in every neighborhood, meets every resident, and delivers the services that would otherwise be available only at the *kelurahan* office.

The idea behind the approach is to bring population administration and civil registration services closer to the people by reaching out directly. The main objective is to expedite the process and help those living far from the office or unable to come to the population and civil registration agency's office.

This strategy can be applied to multiple forms of services. To address the challenges of providing health services in a wide region with diverse topography and demography, Kabupaten Bayuwangi Health Agency has come up with an innovation dubbed Jemput Bola Rawat Warga (Proactive Outreach for Community Care) or Jebol Raga. The initiative aims to reduce disparity and achieve targets, especially in reaching the most vulnerable population, such as poor communities and those who are geographically isolated.

Through this program, health workers actively look for, visit, and take care of people who are sick and left unattended, including older people and the poor. Moreover, the activities are shared to social media to raise public awareness. This sort of innovation can be applied to the context of MPA by providing accessible services and information related to MPA to the local communities.

<sup>a</sup>population administration

### Figure 3. Public Service Criteria Checklist Based on Law No. 25 of 2009 on Public Services

- ☐ Are the service requirements clear, publicized, and easy for users to understand?
- ☐ Are the service system and procedure clear and easy to understand and follow?
- ☐ Is the service delivery time clearly stated and accountable?
- ☐ Is the charge or fee for the service clear, publicized, and free from illegal fees?
- ☐ Is the information about the service products easily accessible and understandable to service users?
- ☐ Are the service facilities and other facilities proper and comfortable for the users?
- ☐ Is there a mechanism to receive feedback from the service users and evaluate the service provider's performance?
- ☐ Are there clear and measurable service promises/commitment?
- ☐ Is there a clear and effective mechanism to handle complaints from the service users?
- ☐ Is there a clear and accessible channel to obtain information about the services?
- ☐ Are there special services for the vulnerable groups, such as people with disability, older people, pregnant women, and children?
- ☐ Are the service providers easily recognizable from their uniform or identity card?

## 2.5 Partnership with Nongovernmental Actors

Regulation of the Minister for Marine Affairs and Fisheries No. 21/PERMEN-KP/2015 on Partnership in the Management of MPAs defines partnership as a cooperation between two or more parties based on the principles of equality, transparency, and mutual benefits. A partnership may be initiated either by the managing organizational unit or by the community, and both parties must submit proposed partnership programs. The term *community* in this context consists of community groups, indigenous communities, NGOs, corporations, research institutions, and universities. According to the regulation, one form of partnership program includes efforts to strengthen the socioeconomic conditions of communities living around MPAs. Therefore, partnership in MPA management should become part of the efforts to improve the welfare of surrounding communities and reduce inequality.

However, the efforts to improve people's welfare and reduce inequality through partnership in the context of MPA still needs to be optimized. Despite some initiatives, a major challenge remains in ensuring that the partnership is sustainable and not transactional. Another challenge is ensuring the participation of the indigenous communities and poor communities, who generally have insufficient access or understanding of the MPA management process. Moreover, challenges related to MPA's sustainability remains. Some regions depend on partnership with NGOs in the MPA management. This means that any changes in the availability of resources or organization's priorities can undermine the MPA's sustainability.

### 2.5.1 Reflection Questions

- a) Has the established partnership taken into consideration the objectives of PKM2PK?
- b) Is there a mechanism to ensure that the benefits from the partnership are equally and fairly distributed among all stakeholders, so that no party is disadvantaged or receives an unfair share of the outcomes?
- c) Is the partnership built on the principles of equality, transparency, and mutual benefits?
- d) Does the partnership have the potential to burden poor and marginalized communities?

### 2.5.2 Why Are These Questions Important?

Good and effective partnerships will help improve people's welfare and reduce inequality. The government has limitations in terms of resources. Therefore, through partnerships, resources and skills can be combined to achieve common goals. Moreover, improving welfare is not solely the responsibility of the government, but also other stakeholders. For that reason, the government should actively engage nongovernmental actors.

### 2.5.3 Required Actions

- a) Identifying and involving more relevant stakeholders in the partnership. This process starts with mapping the stakeholders to learn about the entities and individuals that have interests and capacity to support PKM2PK efforts around the MPA.
- b) Establishing and maintaining good relationships with the partners based on the principles of equality, transparency, and mutual benefits. This includes maintaining regular, transparent, and honest communication about the program's goals, hopes, and challenges.
- c) Ensuring that the partnership is built to improve the people's welfare. One way to do this is by continuously evaluating how the partnership contributes to the people's welfare improvement and inequality reduction. This includes measuring and reporting the improvement of access to basic services, income, or quality of life.
- d) Ensuring that the partnership is sustainable and not transactional. From the people's point of view, this can be achieved by building awareness and commitment that, ultimately, it is the people who benefit from the MPA partnership. From the MPA managers' perspective, the partnership should focus not only on fulfilling the targeted quantity, but also quality.



**Box 6****Example of a Good Practice in Public-Private Partnership for Poverty Reduction in Indonesia**

To address the complex issue of poverty, the National Team for the Acceleration of Poverty Reduction (TNP2K) recommends that every poverty reduction program focus on a specific topic to be more targeted and effective. The topic can be chosen based on a comprehensive research and coordination with relevant agencies. It should be consistent over several years.

Determining the location of a poverty reduction program is also important and should be done carefully and realistically. This process requires coordination, research, and field visit by the implementing team. Key data needed to inform this process includes the number of poor residents, occupations, health conditions, and access to major cities.

To ensure the program's success, partnerships should consider several factors: budget, location, human resources, and experiences in implementing similar programs. Well-thought and detailed budgeting are crucial for smooth implementation. The budget should cover all components, including contingency costs that may arise during the program.

## 2.5.4 Things to Avoid

- a) Establishing partnerships that exacerbate inequality by granting excessive authority to the partner to manage resources in the MPA
- b) Partnerships that are not transparent or do not yield fair benefits
- c) Overdependence on one or several stakeholders. Therefore, it is crucial to explore the potentials and capacity of all parties involved.

## 2.5.5 Supporting Tools

### a) Mapping MPA Management Aspects to Build a Partnership

**Table 11. Mapping the Aspects of MPA Management to Build a Partnership**

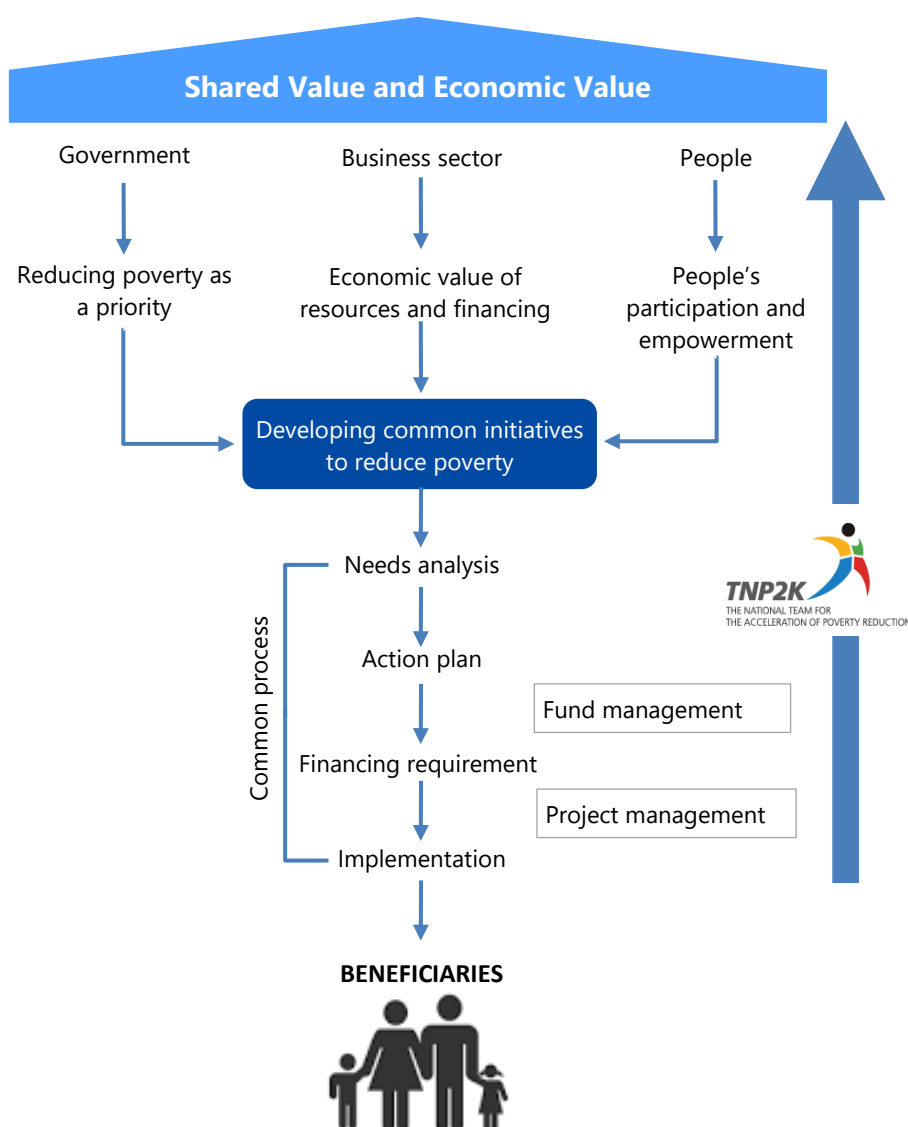
MPA Management Aspects	Approaches	Potential Partners	Expected Benefits
Monitoring and evaluation	Joint research, training	Universities, research institutes	Generating new data and knowledge about MPA that can inform policymaking
Habitat rehabilitation	Joint project, technical support	World Wildlife Fund (WWF), Wildlife Conservation Society (WCS), private sector	Restoring degraded ecosystems and protecting endangered species
Community awareness raising	Campaign, training	Yayasan Karang Lestari Indonesia (YKLI), Yayasan Konservasi Alam Nusantara (YKAN)	Increasing public knowledge and awareness about the importance of marine conservation

MPA Management Aspects	Approaches	Potential Partners	Expected Benefits
Local economic development	Joint financing project	<i>Pokmaswas</i> , tourism awareness groups ( <i>pokdarwis</i> ), private sector	Improving the welfare of surrounding communities through the developed programs

## b) Partnership Framework Model

The alliance framework (KKB) model is an approach developed by TNP2K to reduce poverty. This model promotes multistakeholder partnership between the government, private sector, and communities to align their missions. The objective of the KKB model is to create a common value through collaboration, mutual benefits, reciprocal contributions, while also recognizing the risks involved.

**Figure 4. Alliance Facility for Poverty Reduction**



Source: TNP2K (2019)

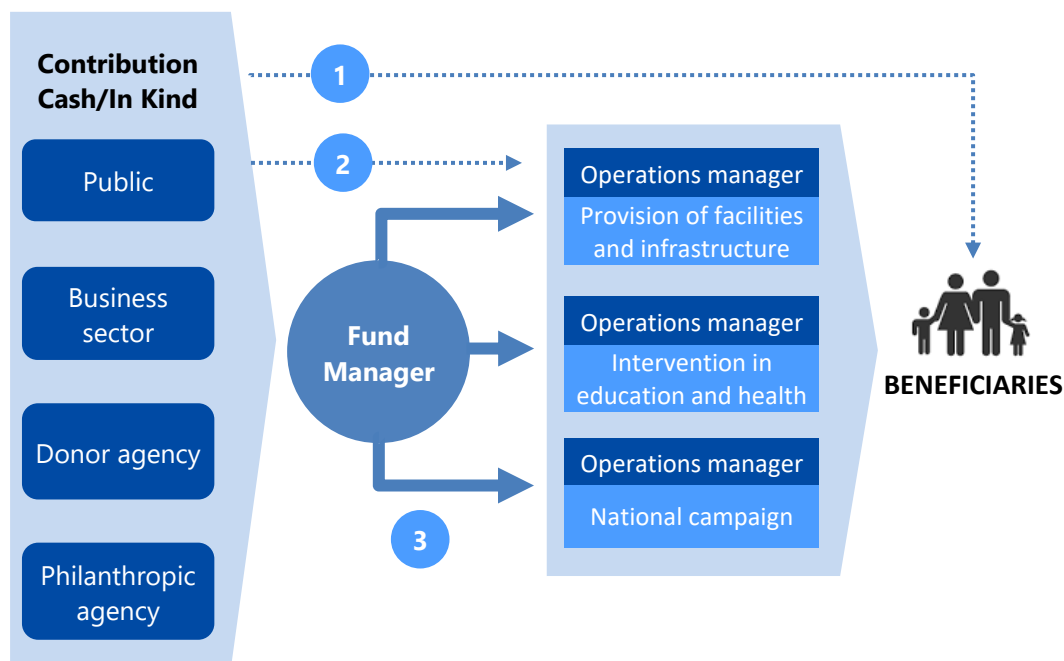
### c) TNP2K Partnership Schemes

The suggested partnership schemes include three options for the participating parties, whether it is the public sector, business sector, donor agencies, or philanthropic agencies:

- (1) sponsorship scheme, by giving assistance directly to the beneficiaries;
- (2) independent scheme, by directly supporting various activities that foster independence, including providing facilities and infrastructure, interventions in education and health, or program campaigns; and
- (3) alliance scheme, by providing funds or support to an intermediary agency (fund manager) that will manage the programs aligned with poverty reduction targets.

(4)

**Figure 5. TNP2K's Partnership Schemes**



Source: TNP2K (2019)

**Box 7****Success Story of a Self-Reliance Partnership: Solar Power Program in Kabupaten Timor Tengah Selatan**

In Kabupaten Timor Tengah Selatan, East Nusa Tenggara (NTT), more than seven million households, including two million poor households, lack access to electricity. The poverty rate in this *kabupaten* reached 29.4%, while the electrification rate was about 43%. To address this issue, the government, through TNP2K, initiated a solar power program using a partnership approach.

The Government of Kabupaten Timor Tengah Selatan; an NGO, namely Besipa'e Foundation; and private companies, such as Artha Graha and Bank NTT, collaborated in the program. Besipa'e Foundation was responsible for ensuring the availability of solar electric devices and educating the beneficiaries.

This partnership successfully provided electricity access to around 767 target households in 6 villages. People who benefited from this program could boost their productivity and build the economic capacity to pay the monthly bills. The program also opened the opportunities for economic empowerment through micro and small enterprises. This success story shows how partnership between the government and private sector can help reduce poverty and improve community welfare.

## 2.6 Monitoring and Evaluation

Regulations that govern the MPA program emphasize the importance of MPA objectives to promote a sustainable marine area for the welfare of the people. As a development program, the MPA implementation should be regularly monitored and evaluated to assess how effective it is in achieving this goal. Functionally, the purpose of monitoring and evaluation is to provide objective and systematic information about the program's performance and identify reasons for its success or shortcomings. In this context, the Directorate General of Marine Space Management, the Ministry of Marine Affairs and Fisheries, has designated EVIKA as a standard for MPA monitoring and evaluation.

EVIKA is a very strategic program instrument, especially in determining whether the overall aspects of MPA implementation are moving toward the targeted objectives, both the protection and conservation aspects and its utilization for people's welfare. The latter is especially emphasized, since EVIKA incorporates indicators related to people's participation, empowerment, and socioeconomic condition into its 24 MPA monitoring and evaluation indicators. Some variables that make up the people's welfare indicator include all EVIKA's monitoring and evaluation criteria, namely input, process, output, and outcome (Table 12). This shows that an MPA designation clearly includes a mandate to improve the welfare of the locals, and that EVIKA is consistent with MPA objectives.

**Table 12. EVIKA Criteria and Indicators Related to Community Welfare Improvement in MPAs**

Criteria	Indicators	Variables
Input	Human resources	Human resource structure, number, and competence for socioeconomic monitoring, people's awareness, and assistance functions
Process	Community empowerment	Achievement of community outreach targets around the MPA
Output	Community empowerment	Assistance from the management organization unit (SUOP) for community groups and their level of independence
	Partnership	Partnership between SUOP and communities to support management objectives
	Data and information	Up-to-date and accessible data and information of social, cultural, and economic aspects
Outcome	Socioeconomic condition	<ul style="list-style-type: none"> <li>• Impacts of the MPA on the creation of new jobs and absorption of new workforce in the tourism and fisheries sectors</li> <li>• Change in people's income over time</li> <li>• Change in quantity and size of the fish caught by traditional fishers</li> </ul>
	Community participation	Active involvement of communities in/around the MPA in its management

Although EVIKA indicators are aligned with MPA objectives, the welfare outcome it measures remains general or aggregate in nature. These indicators are not disaggregated by community groups. Consequently, EVIKA cannot show which segments of community in the MPA benefit more or less than the others. This information is important, as aggregate figures can mislead MPA managers' interpretation. For instance, if an MPA has only benefited a certain group in the society, its designation has instead created a new problem of increasing inequality between community groups. This certainly goes against the principles underlying an MPA designation, including the distribution of benefits.

In practice, the level of community welfare can be assessed from, among others, the dynamics of poverty and income inequality in an MPA. Thus, it is imperative that EVIKA sort the community groups affected by the MPA. In relation to this, PKM2PK is a highly relevant indicator in the whole implementation of MPA and EVIKA. Mainstreaming PKM2PK, both in MPA implementation and EVIKA indicators, will clarify the articulation of MPA benefits. EVIKA could draw on the poverty and inequality variables regularly published by BPS. EVIKA could also utilize the Village Potential Data Collection (Podes) variables from BPS to observe transformations in village conditions within the MPAs.

Accordingly, it would be advisable for EVIKA to incorporate an impact criterion into its monitoring and evaluation, using the poverty and inequality reduction in the MPAs as key indicators. It is important to keep in mind that poverty and inequality are multidimensional

issues. Its reduction efforts will require the involvement of ministries and institutions, as well as regional governments. As a development program, MPAs can contribute to poverty and inequality reduction efforts in all of its activities.

The implication of adding an impact criterion is that EVIKA needs to be equipped with basic data/information before an MPA is designated (baseline condition). However, since many MPAs are already operational, this does not mean that collecting baseline data is no longer necessary. The basic data/information can be collected on the current condition. Then, this information data can act as reference or starting point to assess the MPA management's performance in the following years.

Moreover, the current EVIKA system functions as an internal or technocratic monitoring and evaluation mechanism. While it cannot be generalized, internal monitoring and evaluation is often constrained by the tendency of unwillingness to admit one's own shortcomings. If this tendency is also present in EVIKA, it can undermine its accuracy. To reduce this risk, EVIKA should be complemented by external monitoring and evaluation—meaning the process is carried out by academics, researchers, or professionals. As community participation is an important element in an MPA designation, its monitoring and evaluation can be conducted in a participatory manner by considering surrounding communities as the main stakeholders.

### 2.6.1 Reflection Questions

- a) Would it be better to incorporate an impact criterion—using poverty and inequality reduction indicators—so into the current EVIKA mechanism, so that PKM2PK can serve as the foundation for all MPA activities?
- b) Considering that many community members around MPA still have a low level of welfare, would it be better if the target groups for empowerment—such as the poor and vulnerable—were defined more specifically within EVIKA?
- c) To improve EVIKA's credibility, would it be better if the MPA monitoring and evaluation is complemented with external and/or participatory monitoring and evaluation? If this cannot be implemented across all MPAs, would it be possible to conduct such evaluations in selected sample areas, and use them to help verify the findings of routine internal monitoring and evaluation?

### 2.6.2 Why Are These Questions Important?

The ultimate objective of MPA is the preservation and protection of the environment in a way that provides sustainable benefits to communities. EVIKA, as the standard instrument for MPA monitoring and evaluation, has incorporated indicators of community empowerment, participation, and socioeconomic conditions. Therefore, MPA monitoring and evaluation must be able to capture the dynamics of community welfare.

To date, the EVIKA mechanism primarily assesses administrative reports from SUOP. Although this process includes a verification step through public consultations with stakeholders (including the central government, local governments, village governments, universities, the private sector, and community representatives), this approach has limitations, especially when it comes to community welfare indicators. One of the issues is

that the individuals participating in public consultations may not be those who truly understand and are well-informed about the welfare dynamics in the MPA. Public consultation can and should continue, but they ought to be supported by data and information from other sources, including (i) the National Socioeconomic Survey (Susenas) and National Labor Force Survey (Sakernas) results from BPS; (ii) Podes data from BPS; and (iii) data from primary sources, i.e., information obtained directly from the locals or first-hand sources. These are the best sources for verification, as they are less prone to information distortion. This can be achieved through external or participatory monitoring and evaluation several sample MPAs (Table 13).

**Table 13. Strengths and Weaknesses of Different Types of Monitoring and Evaluation**

Type of Monitoring and Evaluation	Strength	Weakness
Internal monitoring and evaluation	<ul style="list-style-type: none"> <li>• The environment/subject being monitored and evaluated is well known to the evaluators.</li> <li>• Some respondents find it easier to give information to “insiders” rather than outsiders.</li> <li>• Lower costs.</li> <li>• Program mechanisms are well understood.</li> </ul>	<ul style="list-style-type: none"> <li>• External parties often view internal monitoring and evaluation as less objective due to potential conflicts of interest.</li> <li>• Evaluators may lack training in areas outside their expertise.</li> </ul>
External monitoring and evaluation	<ul style="list-style-type: none"> <li>• External evaluators typically have greater expertise in specific areas.</li> <li>• Results tend to be more objective due to lack of personal involvement or vested interests in the program.</li> <li>• Findings are often considered more credible by external stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• May incur higher costs.</li> <li>• There is a risk of misunderstanding specific details of the program.</li> </ul>
Participatory monitoring and evaluation	<ul style="list-style-type: none"> <li>▪ Program implementers and community representatives collaborate in designing and conducting the monitoring and evaluation.</li> <li>▪ Participatory monitoring and evaluation can be applied within both internal and external frameworks.</li> <li>• It serves as a strategy for community empowerment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The process takes more time.</li> <li>▪ Higher costs.</li> <li>• The process is more flexible and more varied than the traditional nonparticipatory monitoring and evaluation, which can make the results harder to generalize.</li> </ul>



To strengthen the data and information sources within the EVIKA mechanism, variable selection should take into account different social group categories—for instance, distinguishing between poor and nonpoor community groups. As such, EVIKA will evolve into a more holistic monitoring and evaluation mechanism. To actualize this, a planned scenario should be prepared based on analysis of the people's condition, both in terms of the potentials and weaknesses. Moreover, this approach must be adapted to the context of each region.

### 2.6.3 Required Actions

- a) Given that EVIKA is the current standard for MPA monitoring and evaluation, this toolbox does not recommend replacing it. What should be done is to enhance the methods and sources of data/information to enrich the indicator variables. For the secondary data sources, variables used to measure community welfare and conditions of the villages around the MPAs can refer to those used by BPS.
- b) Community welfare is dynamic, meaning that the variables making up the welfare level indicator can be used as proxy indicators for the MPA impact criteria. This is important to ensure that the measures of welfare levels between the MPAs are comparable to one another and can be compared to that of the national level. Table 14 shows the example variables from various data sources that can be included as EVIKA indicators. With the addition of these variables, EVIKA may also need to adjust its indicator categories.

**Table 14. Dummy Indicators of Community Welfare in MPAs**

Data Source	Variables
Susenas	<ul style="list-style-type: none"> <li>• Occupation</li> <li>• Income per capita</li> <li>etc.</li> </ul>
Sakernas	<ul style="list-style-type: none"> <li>• Occupation</li> <li>etc.</li> </ul>
Podes	<ul style="list-style-type: none"> <li>• Occupation</li> <li>• Access and infrastructure</li> <li>etc.</li> </ul>
Indonesia Family Life Survey (Sakerti)	<ul style="list-style-type: none"> <li>• Occupation</li> <li>• Income per capita</li> <li>etc.</li> </ul>

- c) If participatory monitoring and evaluation is to be conducted, SUOP can facilitate it by involving local stakeholders who are directly involved in and/or are impacted by the existence of the MPA.
- d) External monitoring and evaluation can be carried out by paid institutions or in collaboration with universities, research institutes, NGOs, and so on. In conducting this type of monitoring and evaluation, the chosen institution must be reputable, and the selection process should comply with applicable regulations.

- e) For external and/or participatory monitoring and evaluation, MPA managers can begin on a smaller scale as a learning step and as a reference for EVIKA when doing verification through public consultation.
- f) Whichever monitoring and evaluation method is used, the variables that make up the indicators should reflect the real conditions and must be as closely related as possible to the MPA implementation, either directly or indirectly.
- g) A monitoring and evaluation can be considered successful when the results can serve as input to guide the program implementation in the right direction. This requires some prerequisites: (i) improvement of human resources' capacity in all work units, (ii) institutional aspect of monitoring and evaluation as an effective work unit, and (iii) sufficient budget allocation for EVIKA adjusted with the additional methods and coverage of activities.
- h) These steps will improve EVIKA's credibility as an MPA monitoring and evaluation system. These steps are aligned with EVIKA's technical guidelines, which require real conditions of the conservation areas. This means that there should be no conservation areas that exist only on paper ("paper parks") or conservation areas that act only as a cost center that do not yield economic value for the locals nor do they contribute to the national economy.

#### 2.6.4 Things to Avoid

Since monitoring and evaluation are integral components of the logical framework in development policies/programs—which follow a cycle of planning, budgeting, implementation, and monitoring and evaluation—the following should be avoided:

- a) Not treating social welfare dynamics as an key part in designating an MPA
- b) Treating monitoring and evaluation as less important than planning, budgeting, and implementation
- c) Performing monitoring and evaluation merely to "tick the technical obligation box" in the program's logical framework and/or treating it as a superficial add-on to the program's implementation
- d) Not using the results of the monitoring and evaluation as important input for the program's improvement and/or in the next planning process
- e) Including variables/indicators that do not represent the MPA operations
- f) Manipulating the monitoring and evaluation process and/or results to justify the program's achievement

### III. Conclusion

The Indonesian government is on the right track with its commitment to conserving marine and coastal areas in a bid to ensure environmental sustainability for the future generations. However, environmental concerns should also be reinforced by efforts to improve the socioeconomic condition of the people. The development of conservation areas must also contribute to the welfare improvement of the poor and inequality reduction of the surrounding communities.

This toolbox can help MPA managers in strengthening the role of conservation areas within the broader effort of the government to reduce poverty and inequality. The toolbox, however, will not serve any function without implementation. Putting the guide into action requires political will from decision-makers in the conservation sector, as well as the perseverance of MPA managers. If PKM2K efforts are successfully implemented, conservation area management in Indonesia can strike a balance—ensuring the preservation of the environment and biodiversity, while also promoting the welfare and equity of the surrounding communities.

# List of References

- The SMERU Research Institute (2016) *Poverty and Livelihood Map of Indonesia 2015* <<http://www.indonesiapovertymap.org/>> [21 November 2022].
- The World Bank (2003) *Social Analysis Sourcebook: Incorporating Social Dimensions into Bank-Supported Projects*. Washington DC: The World Bank.
- Tim Nasional Percepatan Penanggulangan Kemiskinan (2019) *Kemitraan Pemerintah dan Swasta dalam Upaya Penanggulangan Kemiskinan*. Jakarta: Tim Nasional Percepatan Penanggulangan Kemiskinan <<https://www.tnp2k.go.id/download/5991001Buku%20KemitraanFINAL.pdf>> [22 June 2023]

## Government Laws and Regulations

- Regulation of the Minister for Marine Affairs and Fisheries No. 31/PERMEN-KP/2020 on The Management of Conservation Areas [Peraturan Menteri Kelautan dan Perikanan KP No. 31/PERMEN-KP/2020 tentang Pengelolaan Kawasan Konservasi].
- Regulation of the Minister for Marine Affairs and Fisheries No. 21/PERMEN-KP/2015 on Partnership in the Management of Marine Protected Areas [Peraturan Menteri Kelautan dan Perikanan KP No. 21/PERMEN-KP/2015 tentang Kemitraan Pengelolaan Kawasan Konservasi Perairan].
- Regulation of the Minister for Marine Affairs and Fisheries No. PER.02/MEN/2009 on The Procedures for Designating Marine Protected Areas [Peraturan Menteri Kelautan dan Perikanan No. PER.02/MEN/2009 tentang Tata Cara Penetapan Kawasan Konservasi Perairan].
- Law No. 1 of 2014 on the Amendment to Law No. 27 of 2007 on the Management of Coastal Areas and Isles [Undang-Undang No. 1 Tahun 2014 tentang Perubahan atas Undang-Undang Nomor 27 Tahun 2007 tentang Pengelolaan Wilayah Pesisir dan Pulau-Pulau Kecil].
- Law No. 25 of 2009 on Public Services [Undang-Undang No. 25 Tahun 2009 tentang Pelayanan Publik].
- Law No. 27 of 2007 on the Management of Coastal Areas and Isles, Article 3 letter f; Article 4 letter d [Undang-Undang No. 27 Tahun 2007 tentang Pengelolaan Wilayah Pesisir dan Pulau-Pulau Kecil Pasal 3 Huruf f; Pasal 4 Huruf d].



Jl. Cikini Raya No. 10A  
Jakarta 10330 Indonesia



+62 21 3193 6336



+62 21 3193 0850



smeru@smeru.or.id



smeru.or.id



The SMERU Research Institute



@SMERUInstitute



@smeru.institute