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# OUR FUTURE PILOT<sup>1</sup>

## GUIDE NO. 3

**Building Coastal Spatial Scenarios in Vietnam:  
Supporting Planning in Coastal Landscapes at the Local Level**

Toolkit for Participatory Coastal Spatial Planning at the  
District Level



<sup>1</sup> This pilot was developed and implemented through the Tenure and Global Climate Change (TGCC) Program.

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Prepared by:

Tetra Tech

Tetra Tech  
159 Bank Street, Suite 300  
Burlington, VT 05401

Principal Contacts:

Matt Sommerville, Chief of Party  
[matt.sommerville@tetrattech.com](mailto:matt.sommerville@tetrattech.com)

Cristina Alvarez, Project Manager  
[cristina.alvarez@tetrattech.com](mailto:cristina.alvarez@tetrattech.com)

Megan Huth, Deputy Project Manager  
[megan.huth@tetrattech.com](mailto:megan.huth@tetrattech.com)

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## Acronyms and Abbreviations

PCRA	Participatory Coastal Resource Assessment
TGCC	Tenure and Global Climate Change
USAID	United States Agency for International Development

## Toolkit for Participatory Coastal Spatial Planning at the District Level

The Government of Vietnam is highly interested in improving coastal forest management, especially for mangrove forests. Decree 119/2016/ND-CP, approved by the Government of Vietnam in August 2016, focuses on policies for the sustainable management, protection, and development of coastal forests to support adaptation to climate change.

The *Our Coast – Our Future* pilot project<sup>2</sup> promotes the design of coastal spatial scenarios and a spatial implementation plan as part of a participatory coastal spatial planning process that enables the adoption of a holistic approach to coastal forest management. By working with coastal communes, the creation of a district-level spatial implementation plan enables coordination and consensus over how to manage the coastal landscape to achieve the sustainable management of coastal forests.

The development of coastal spatial scenarios explicitly considers the relationship between forest rehabilitation and management, and multiple other uses of the coastal landscape for infrastructure, livelihood support, and income generation. By identifying the complementarities and conflicts between these different current and future interests in the coastal landscape, an integrated coastal resource management approach can be set into motion.

This **Toolkit for Participatory Coastal Spatial Planning at the District Level** promotes a tenure-responsive form of coastal spatial planning by identifying ways to improve the sustainability of coastal natural resources focusing on issues of access, use, management, and exclusion rights to specific resource areas. Once a spatial implementation is developed, the stage is set for creating a collaborative approach to mangrove management with key local stakeholders. Altogether, this provides an effective way of improving the sustainable management of vital coastal resources such as mangrove forests.

The **Toolkit for Participatory Coastal Spatial Planning at the District Level** is composed of three parts:

- a. *Guide No. 1: Participatory Coastal Resource Assessment: Developing Commune Coastal Profiles in Vietnam.*
- b. *Guide No. 2: Participatory Mapping: Creating Knowledge for Coastal Spatial Planning in Vietnam.*
- c. *Guide No. 3: Building Coastal Spatial Scenarios in Vietnam: Supporting Planning in Coastal Landscapes at the Local Level.*

These guides are available in both Vietnamese and English languages.

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<sup>2</sup> This pilot was developed and implemented through the Tenure and Global Climate Change (TGCC) Program. See: <https://www.land-links.org/project/tenure-global-climate-change-vietnam/>.

## I. Purpose of Participatory Coastal Spatial Planning

Coastal spatial planning promotes an integrated approach to economic, environmental, and resource management. This guide focuses on engaging in a participatory coastal spatial planning process through which various interests within the coastal landscape can collaborate to improve and sustain coastal forests such as mangroves by developing a range of possible spatial visions and related scenarios. A vision provides a broad image of what the coastal area will look like over the longer period up to 2030, and a scenario is a more specific and detailed plan that covers the more immediate period up to 2025. These offer varying levels of balance between coastal forest conservation and various economically productive activities in the coastal landscape that support household food security and income generation.

From the developed scenarios and visions, stakeholders choose one scenario and vision to move forward. This scenario, along with the management objectives and targets associated with it, becomes the basis for preparing a spatial implementation plan on how to put activities into motion to realize the collective vision for the coastline. Developing a scenario and designing these activities relies on a comprehensive understanding of how various dimensions of the coastal landscape, including economic, social, cultural, institutional (such as tenure), and ecological factors, intersect with each other. At times, these interconnections can be complementary, and at other times, they can be conflicting.

This guide offers a tenure-responsive planning approach in which the design of interventions for achieving management objectives takes into consideration how governance arrangements concerning aquatic resources affect sustainable coastal forest management. The facilitation team creates this plan after completing two steps, laid out in *Guides No. 1 and 2* of this Toolkit. First, the facilitation team develops Commune Coastal Profiles according to the Toolkit's *Guide No. 1: Participatory Coastal Resource Assessment: Developing Commune Coastal Profiles in Vietnam*. These Commune Coastal Profiles include accurate and detailed digital maps in a digitized format, providing a geospatial knowledge base upon which the spatial vision and scenario development can proceed. The rapid collection and updating of near real-time, spatially enabled data forms the bedrock of developing effective forms of participatory coastal spatial planning. Then, the facilitation team completes the process laid out in the Toolkit's *Guide No. 2*, which focuses on *Participatory Mapping: Creating Knowledge for Coastal Spatial Planning in Vietnam*. *Guide No. 2* provides guidance on how to undertake a participatory approach to create a set of digital maps based on multiple knowledge inputs from the community. Once these two steps are completed, the process of building spatial visions and scenarios as well as a spatial implementation plan can begin.

This process of building spatial visions and scenarios is the focus of *Guide No. 3: Building Coastal Spatial Scenarios in Vietnam: Supporting Planning in Coastal Landscapes at the Local Level*. By drawing on both local and external knowledge, this participatory process brings coherence and integration across diverse sectors to improve coastal landscapes management, particularly to conserve coastal forests while supporting local livelihoods and businesses.

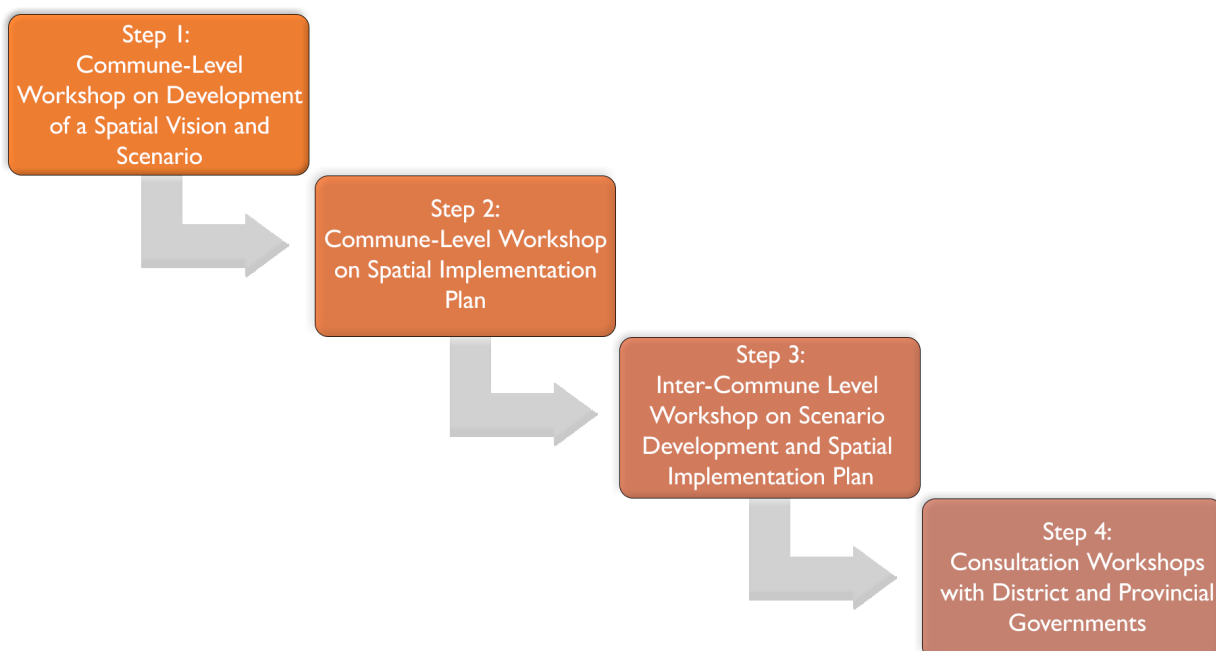
Participatory coastal spatial planning facilitates the following:

- Understanding of the current and future linkages, complementary and conflictual, between the various resource uses within the district's coastal landscape in the context of climate change;
- Cross-sectoral management that brings together sectors such as aquaculture, fisheries, agriculture, forestry, infrastructure, and land administration;
- Collaboration between the government, public and private sectors, local communities, and educational and scientific institutions;
- Strengthening institutional and governance frameworks such as tenure and contract regimes that promote sustainable management with attention to gender and social inclusion;
- Clarification of zones for specific types and levels of resource uses;
- Resolution of disputes over resource uses, current and expected into the future;
- Catalyzing new project initiatives through informed decision-making for the coastal landscape in the context of economic transformation and climate change; and
- Monitoring and evaluation of impacts of existing policy and legal interventions for achieving the planning objectives.

## 2. Process of Building Coastal Spatial Scenarios

This guide provides step-by-step information on how to build a coastal spatial scenario at the commune level, together with a spatial implementation plan for the district level. Within any coastal district, different communes might have distinct approaches to managing their mangroves, aquaculture ponds, mudflats, and fisheries in front of the sea dike. Coordination between communes is necessary to protect the district's coastal forests as one belt that acts as a buffer against climate change-induced transformations in sea-level rise, storms, and sea surges and provides a productive ecosystem that nurtures the aquatic biodiversity supporting both ecological and human wellbeing.

Once a coastal district expresses interest in developing a coastal spatial scenario and implementation plan, the district begins by identifying key stakeholders within each coastal commune who can support the process. This can include commune government officials, mass organizations, representatives of key types of resource users (e.g., gleaners, aquaculture farmers, boat fisheries, and clam farming), and main private sector interests. A facilitation team, composed of either project staff or consultants, supports the process of building spatial scenarios and designing a spatial implementation plan. Ideally, this team can work with a local organization that has been significantly involved in mangrove planting and protection to carry out an initial round of meetings to raise awareness of the need for coastal spatial planning and the importance of active engagement together with the local government and key stakeholders.



*Figure 1: Four steps for building coastal spatial scenarios and implementation plan*



Once the stakeholder engagement process is established, the facilitation team organizes the following workshops:

### **Step 1: Commune-level Workshop on Development of a Spatial Vision and Scenario**

The aim of this one-day, commune-level participatory workshop is to develop alternative spatial planning visions and scenarios for the commune and collectively select one vision and scenario for implementation within the coastal landscape. Facilitators use an analysis of resource use and governance, as well as maps created through the Participatory Coastal Resource Assessment (Guide No. 1) and Participatory Mapping process (Guide No. 2), to guide discussions about spatial scenario development in a geospatial sense. Step 1 involves four main exercises, as follows:

- Exercise 1: Determine existing spatial use complementarities and conflicts as well as different sectoral use overlaps within current resource use patterns in the commune coastal areas.
- Exercise 2: Analyze relevant sectoral government plans and policies affecting coastal areas to determine possible conflicts and overlapping projections.
- Exercise 3: Project likely impacts of climate change scenarios on coastal development.
- Exercise 4: Develop alternative coastal visions and scenarios together with management objectives and targets.

### **Step 2: Commune-level Workshop on Spatial Implementation Plan**

The main aim of the second one-day commune participatory workshop is to develop a spatial implementation plan for the selected commune spatial scenario. It involves two participatory exercises:

- Exercise 5: Select a spatial scenario for implementation.
- Exercise 6: Create a spatial implementation plan to reach defined management objectives and targets.

### **Step 3: Inter-commune-level Workshop on Scenario Development and Spatial Implementation Plan**

The primary goal of this inter-commune level workshop is to merge all the coastal commune scenarios and spatial implementation plans into one district-level integrated coastal spatial planning scenario and spatial implementation plan.

This one-day workshop involves the following exercises:

- Exercise 7: Provide an overview of previous commune-level participatory workshops to facilitate a comparative discussion among the spatial scenarios and implementation plans.
- Exercise 8: Merge commune-level scenarios and spatial implementation plans into one district-level integrated spatial scenario and implementation plan.

#### ***Step 4: Consultation Workshops with District and Provincial Level Governments***

The facilitation team finalizes the district-level integrated coastal spatial planning scenario and spatial implementation plan developed in Step 3 through a set of consultation workshops with the district and provincial or municipal governments. This involves a one-day consultation workshop at each level:

- Consultation Workshop No. 1: Facilitators obtain feedback from district-level officers for the district-level integrated coastal spatial planning scenario and spatial implementation plan.
- Consultation Workshop No. 2: Facilitators obtain feedback from provincial or municipal-level officers and decision-makers for the district-level integrated coastal spatial planning scenario and spatial implementation plan.

### 3. Step I - Commune-level Workshop on Development of a Spatial Vision and Scenario

Step I focuses on the development and selection of a commune-level coastal spatial scenario for implementation. This involves organizing a one-day workshop in each coastal commune to develop alternative coastal spatial visions and scenarios for their commune.

Organizing this workshop involves coordinating with the commune administration and the local community members to identify about 40 to 50 representatives (gender-balanced) to participate in the workshop and to determine a suitable location and day for the event. Inviting 40 to 50 representatives to this commune-level workshop permits adequate coverage of different types of interests in the coastal landscape. To address these diverse interests, the representatives can include: local commune and village officers (land use officer, economic-in-charge officer), Women's Union representatives, Youth Union representatives, Farmer's Union/Fisheries Association representatives, border guard officers, village heads, and representatives from key local resource users (gleaners, aquaculture farmers, fisherfolk, clam farmers, and others).

This one-day workshop includes four practical exercises. The facilitation team appoints three to four facilitators (including a balance of men and women) to implement each of these four exercises.

#### **Opening Session: Introduction (30 mins)**

The opening session introduces the key objectives and content of the workshop and explains how participants benefit from active engagement. In particular, the opening session should highlight the following:

- The benefits of a participatory process in comparison with an expert-driven approach in a context where there are multiple benefits derived from the diverse uses of coastal resources;
- The importance of combining local knowledge with expert knowledge for the planning process so that a better understanding of complementarities and conflicts between resource uses can be developed;
- The need to identify how future scenarios will be influenced by climate change and economic development;
- The logic behind both the sequencing exercises in terms of how they contribute to the development of alternative visions and spatial scenarios, and the selection of one scenario for implementation; and
- The need to work at the commune level first to develop an integrated district-level spatial plan.

***Exercise 1: Determine existing spatial use complementarities and conflicts as well as different sectoral use overlaps within current resource uses in the commune's coastal area (1 hour 30 mins)***

**Objective:** The aim of this exercise is to examine the current mix of resource uses within the coastal landscape in terms of their complementarities and conflicts, as well as areas of overlap. This helps participants identify which rules and regulations are already working well, and which require improvements. It also permits participants to identify conflicts that need to be resolved for an integrated approach to coastal management to be developed. The facilitators divide participants into small groups that reflect specific resource use types such as mangrove planters and protectors, gleaners, aquaculture farmers, boat fisheries, and clam farmers.

The process of building spatial visions and scenarios begins with an examination of which resource use types have complementarities and which have conflicts. Since the Participatory Coastal Resource Assessment already included a preliminary look at conflict, participants first review the existing information to further flesh out its details. This process develops a clear picture of the existing zonation (formal or informal), as well as what types of new zonation are needed together with new regulatory arrangements to minimize conflict. Facilitators use Table 1 to guide the examination of complementarities and conflicts within each sector (among gleaners for example) as well as cross-sectoral complementarities and conflicts (such as between mangrove planters and aquaculture farmers). Based on this analysis, participants identify specific interventions for achieving management objectives in Step 2 during the development of a spatial implementation plan.

**Table 1: Examples of Existing Resource Use Complementarities, Conflicts, and Overlapping Uses**

Complementarities, conflict, and overlapping uses	Describe causes of complementarities	Describe causes of conflict and overlapping uses	Conflict reduction measures	Spatial dimensions of suggested conflict reduction measures
<b>SECTOR-BASED COMPLEMENTARITY AND CONFLICT</b>				
Fishing by hand vs. boat fisheries		Fixed bamboo and fishing net gear blocks navigation channels for movement of capture fishery boats.	Clear regulations on proper densities of fixed bamboo and fishing net gear. Ban fixed bamboo and fishing net gear in navigation channels. Ban use of fixed bamboo and fishing net gear during the fish-breeding season in April and May.	Establish boundaries for each use.
<b>CROSS-SECTORAL COMPLEMENTARITY AND CONFLICT</b>				
Mangrove rehabilitation vs. fishing by hand	Mangrove rehabilitation has improved fish productivity	Fishing by hand in newly planted forested areas damages mangrove trees;  there are no effective rules for regulating fishing by hand operations.	Develop a rule to ban fishing by hand in newly planted forest areas.	Establish boundaries for each use.

Complementarities, conflict, and overlapping uses	Describe causes of complementarities	Describe causes of conflict and overlapping uses	Conflict reduction measures	Spatial dimensions of suggested conflict reduction measures
Mangrove rehabilitation vs. boat fisheries	Mangrove rehabilitation has increased fish availability and species during key fishing seasons	Boat fishing in close proximity of newly planted mangrove areas can create damage.	Ban use of illegal electric shock gear for fishing in mangrove forests. Limit boat fishing during the breeding season in April and May.	Establish boundaries where mangrove rehabilitation has taken place.
Clam farming vs. boat fisheries		Boats are damaged by the infrastructure set up for clam farming such as pillars.	Clear zoning for clam farming areas and fishing by boat areas.	Establish boundaries to prevent overlap between clam farming areas and fish boat navigation channels.

#### Preparation:

- Materials: a) hard copy color Google Earth commune coastal maps, b) A0 paper, c) A0 paper hangers, d) colored dots/sticky notes, e) whiteboard pens, f) laptop, and g) projector.
- The facilitators develop a PowerPoint presentation to a) set out the goal and process for this exercise, b) summarize the existing resource uses in the commune together with their resource governance and tenure rules, and c) identify possible conflict and overlapping resource uses based on findings from previous work in the Participatory Coastal Resource Assessment (*Guide No. 1*) and Participatory Mapping (*Guide No. 2*).

**Process:** First, the facilitators present a PowerPoint presentation explaining the main objectives and process for Exercise 1. Then, the facilitation team presents key findings from the earlier steps, including Participatory Coastal Resource Assessment (*Guide No. 1*) and Participatory Mapping (*Guide No. 2*).

Facilitators divide participants into small groups by main resource user types, such as mangrove planters and protectors, gleaners, people who fish by hand, aquaculture producers, boat fishers, and clam farmers. Some user types can be joined into one group if needed. Local commune officers and mass organization representatives may choose to join any group that relates to their

work. Each group nominates a leader to guide the discussion and present the group's findings to all workshop participants.

Facilitators instruct small groups to consider the following questions:

- What are the existing complementarities between resource uses in the commune's coastal areas?
- What are the existing resource conflicts and spatial overlaps between resource uses in the commune's coastal areas?
- In what way are these conflicts gendered? Are there differences between women's and men's interests in coastal resources?
- What are the causes of the specific conflicts and overlaps? Are these causes sectoral? Cross-sectoral?
- What measures can help to solve the conflicts and overlaps?
- Can the group map out the conflicts and overlapping uses on the map provided to the group (using colored dots and sticky notes)? Is it possible to delineate areas primarily used by either women or men?

Facilitators work with each group to support the discussion and take their own notes. Once the discussion is complete, each group's leader presents their findings and map, and then responds to questions and feedback from other workshop participants. Following the workshop, the facilitation team analyzes the information shared by participants and creates a finalized table of conflicts and conflict resolution measures.

**Exercise 2: Analyze relevant sectoral government policies and plans as they relate to coastal development to determine possible conflicts and overlaps from future resource uses (1 hour 30 mins)**

**Objective:** The purpose of Exercise 2 is to examine how the policies and plans within different sectors of the government have developed plans for use of coastal areas. The facilitators present on the current governmental system of sectoral planning as well as their multi-sectoral analysis of the different government ministries and agency projections for the coastal landscape in areas such as sea dike construction, road construction, fisheries, aquaculture, mangrove management, biodiversity conservation, clam farming, and tourism. It is necessary to identify overlapping projections where different sectoral plans have proposals for developing the same geographical area for different purposes. Identifying these overlapping projections permits the formation of a clear picture of how to integrate these policies and plans.

Once the participants have had a chance to discuss the key findings in the presentation on possible future conflicts and overlapping plan projections within their commune's coastal landscape, the next step is to discuss the actual area in hectares of these overlapping projections.

### Preparation:

- Materials: a) printouts of commune coastal maps, relevant sector planning maps, and charts, b) A0 paper, c) A0 paper hangers, d) whiteboard pens, e) sticky colored notes, f) laptop, and g) projector.
- The facilitation team should develop a pyramid diagram (see Figure 2 below) to illustrate the different levels of sector plans to help officials and community members consider which are relevant for their district coastal area.
- The coastal spatial planning facilitation team should collect and analyze all relevant government sector development policies and plans (up to 2020, 2025, and 2030) and associated maps related to the district's coastal landscape. The team should overlay this information on the commune landscape to understand likely future conflicts and overlapping projections. A table (see Table 2) should be prepared to identify the area (in hectares) that has overlapping projections in place.

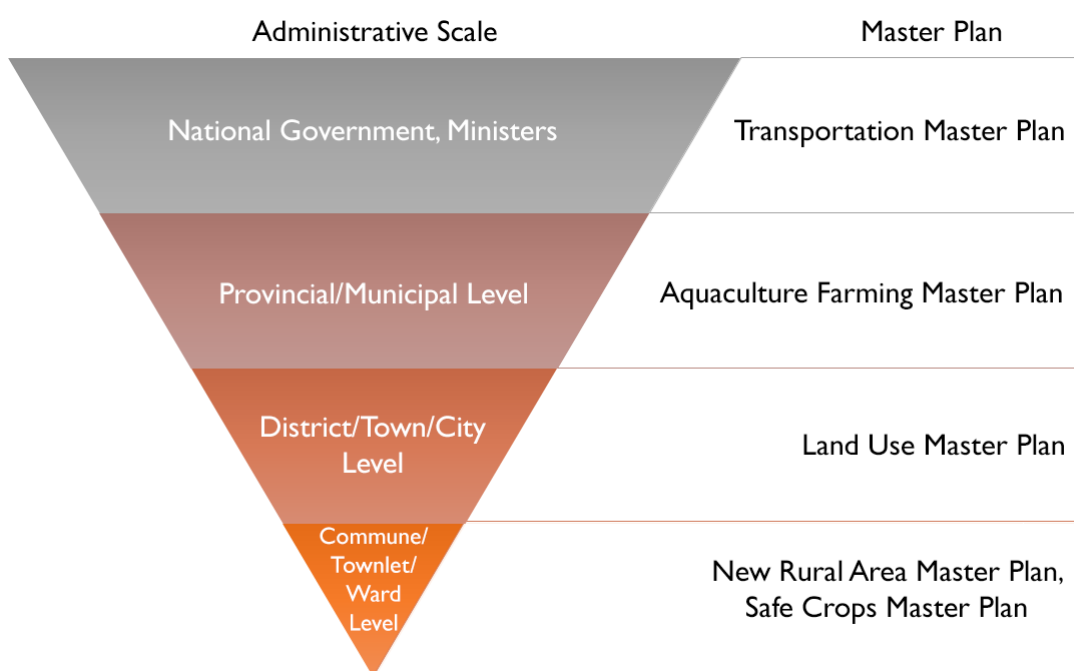


Figure 2: Relevant sector-level plans for coastal areas.

This exercise covers the following sectoral plans and policies up to 2020, 2025, and 2030:

- a) Land Use Planning for the province or municipality towards 2020 and 2025;
- b) The Fisheries and Aquaculture Development Planning towards 2020 and Vision to 2030 for the province or municipality, which identifies the strategic goals and targets for aquaculture pond production and clam farming;
- c) Decree No. 33/2010/ND-CP of the Prime Minister's Office dated March 31, 2010, on managing marine capture fisheries within Vietnamese seas, which specifies marine capture zoning within the three capture zones of nearshore, coastal waters, and offshore waters;



- d) Forest Protection and Development Plan for the province or municipality for the period 2017-2020;
- e) The National Biodiversity Conservation Planning towards 2020 and Vision to 2030 approved under the Decision No 45/QĐ-TTg by the Prime Minister on January 8, 2014. Mangrove conservation areas are identified in this planning document; and
- f) Tourism Development Planning towards 2020 and Vision to 2030 for the province or municipality. Eco-tourism plans may also be covered by this document.

The facilitation team lays these planning reports and associated maps over each other to understand and predict future conflicts and overlapping projections. At times, these maps are available in a digitized format. Where only paper maps are available, they are accessible at the provincial authority offices (such as the Provincial Department of Agriculture and Rural Development, Department of Natural Resources and Environment, Department of Tourism, Department of Planning and Investment). Where only paper maps exist, they should be collected from provincial departments and then digitized into geographic information system (GIS) format for conflict identification and zoning purposes.

**Table 2: Sample Targets for Relevant Sector Plans, and Possible Spatial Conflicts and Overlaps**

Sector	Current Status (Hectares)	Targets for 2020/2025 (Hectares)	Targets for 2030 (Hectares)	Identify where possible spatial conflicts/ overlapping projections may occur
<b>I. Resource conservation planning</b>				
Biodiversity areas				
Mangrove forest				
<b>II. Resource use planning</b>				
Land use				
Aquaculture				
Boat fisheries				
Clam farming				
Agriculture				
Transportation				
Urban areas				
Wind parks or alternative energy				
Industry zones				

**Process:** Facilitators conduct this exercise in a plenary format. The facilitators first present an analysis of government sectoral maps and their possible future conflicts and areas of overlapping projections, then lead a plenary discussion to i) add any further sectoral plans that participants may know of for their coastal areas and ii) add additional comments regarding any impacts that relevant sectoral plans may have on their coastal areas in the future.

### **Exercise 3: Identify likely impacts of climate change and coastal development (45 mins)**

**Objective:** This exercise identifies projected future impacts of climate change (scale, extent, and level) on the commune's coastal areas based on national climate change scenarios developed and issued by the Ministry of Natural Resources and Environment in 2016. The exercise focuses on the projected inundation areas in coastal landscapes caused by sea-level rise in the periods up to 2025 and 2030.

Facilitators use data and maps related to the national climate change scenarios to develop a presentation on the likely impact of climate change factors on the commune and district. In this case, the time frames are up to 2025 and 2030 which is similar to many sectoral maps that are up to 2020/2025 and 2030. After this presentation, facilitators organize a plenary discussion of the likely impacts on the local coastal area, and then the workshop scores the intensity of these impacts.

#### **Preparation:**

- Materials: a) printouts of coastal commune maps and any climate change scenario maps; b) A0 paper, c) A0 paper hangers, d) whiteboard pens, e) laptop, and f) projector.
- The facilitation team develops a PowerPoint presentation to summarize the key climate change factors and impacts for the commune's coastal area in light of the climate change scenarios.
- The facilitation team finalizes Table 3 with range of climate change factors and likely types of impacts in the commune's coastline and prints copies for all participants to develop scores on intensity of impact.

**Process:** First, the facilitators provide a brief introduction to the purpose of this exercise and provide all participants with copies of Table 3. They explain the scoring system in Table 3 so participants understand how to confirm the types of impacts and assess their relative intensity (using a scoring system that ranges from 1 to 5). Then, the facilitators present on likely climate change factors and impacts based on the climate change scenarios for the commune's coastal areas. During this presentation, participants begin to fill out their tables with scores. Following this, during a plenary discussion, facilitators confirm the various types of impacts related to each climate change factor, and then total the score for each of the likely impacts within the commune's coastline based on the participant scoring.

**Table 3: Likely Intensity of Future Climate Change Impacts in Local Coastal Areas Based on a Scoring System**

Order	Climate Change Factor	Type of Impact	Score 1: Very Low Impact 2: Low Impact 3: Medium Impact 4: High Impact 5: Extremely High Impact
Example	<i>Areas of coastline that will be inundated</i>	<i>Note types of impact within coastal area</i>	4
1			
2			
3			
4			
5			

**Exercise 4: Develop alternative commune coastal visions and scenarios together with associated management objectives and targets (2 hours)**

**Objective:** In this exercise, participants explore what type of future coastal landscape the local government and communities want in their district. Participants develop different visions with a variety of approaches to balance conservation and economic development targets. These may range from taking no action, to implementing a range of interventions to achieve a more positive or ambitious balance between conservation and development involving significant mangrove expansion and protection. Creating spatial visions involves considering the aspirations of different types of resource users within the commune and realistically assessing which interventions are feasible up to 2025.

The purpose of Exercise 4 is to develop three or four alternative coastal spatial visions and associated scenarios with management objectives and targets for the commune's coastal areas. An alternative coastal spatial vision provides a broad picture of what the coastal area should look

by 2030. A scenario is a more detailed picture of the coastal area focusing on setting up goals and targets for each sector for the more immediate period up to 2025. Targets include criteria such as ecological health of the commune coastal resources, level of mangrove forest cover, reduction in conflicts, and improvements in income generation.

To develop a vision and associated scenario with management objectives and targets for a commune's coastal areas, it is important to review all the dimensions discussed in Exercise 1 to 3: a) existing status of complementarities, conflicts, and overlaps in current resource use, b) likely future conflicts and overlapping projections from different sectoral plans, and c) likely intensity of impacts of key climate change factors based on varied climate change scenarios. This defines the parameters within which participants can envision possibilities for the future.

**Preparation:**

- Materials: a) printouts of color Google Earth commune coastal maps as well as any relevant sectoral plan maps, b) A0 paper, c) A0 paperhangers, d) colored sticky notes, e) whiteboard pens, f) laptop, and g) projector.
- The facilitation team develops a PowerPoint presentation to a) summarize key findings from Exercise 1 to 3, b) guide group members on the meaning of vision and associated scenario, management objectives and targets, and c) explain how to develop a vision and scenario together with management objectives and targets.

**Process:** The facilitators divide workshop participants into 4 to 5 groups of specific user types. Each group nominates a leader to present the discussion results to the plenary group. In addition, a facilitator joins each group to help catalyze discussion and ensure the group follows the process. The facilitator also writes up notes on key points of discussion upon completion of the exercise. At the end of the exercise, each group shares their spatial vision and scenario with related management objectives and targets to the entire workshop.

To create a vision, each group needs to develop a vision statement that sets out the overall image or inspirational ideal for the future by 2030. This vision statement can be up to one paragraph long and should refer to what the various geographical zones within the district coastal landscape will look like by 2030. Following this, a detailed prospective scenario sets out the geographical components of how various sectors and uses of the coastal landscape will be developed by 2025. This can include such themes as sea dike construction, road and path construction, fishing facilities, aquaculture production, mangrove forest protection, and future planting, clam farming, ecotourism, and other non-timber forest product enterprises. Participants identify these themes on the map together with notes about management objectives to achieve by 2025 for each theme.

Subsequently, participants develop targets to flesh out the specific goals for various criteria and/or zones within the coastline. Targets could be qualitative or quantitative, depending on the criteria. For example, quantitative targets could set a goal for the number of hectares of mangroves in good condition. Qualitative targets assess the achievement of more intangible goals such as reduction in conflict, increased efficiency for gleaners, and improvements in household food security.

Targets are set up for the three key milestones: current year, five years out, and 2025. Some sample questions to guide the development of targets include:

1. How many hectares of mangrove forests will be in good health and well protected? Where will they be located?
2. How many hectares of mangrove forests will be reforested? Where will these be located? When will this planting take place?
3. Will aquaculture pond farming expand, stay the same, or scale down? How many hectares of aquaculture pond farming will there be in total? Where?
4. How many hectares of clam farming will be in production? Where?
5. How many hectares will be used for gleaning? Where?
6. How many hectares will be used for boat fishing? Where?
7. Which type and level of conflicts can be reduced?
8. By how much will household and community income increase?

Once each group has prepared its vision and associated scenario, management objectives, and targets, the group leader presents these to the plenary. Subsequently, facilitators lead a discussion about the relative balance between conservation and economic growth in each spatial vision and scenario. They should emphasize how different user groups perceive the relative importance of different future resource uses and economic growth opportunities, as well as benefits of coastal forest expansion. The discussion can then focus on the specifics of management objectives for each sector and targets associated with each different scenario.

## 4. Step 2 - Commune-level Workshop on Spatial Implementation Plan

Developing a spatial implementation plan for the selected spatial scenario involves conducting two participatory exercises in a commune-level workshop that focus on selecting a spatial scenario and then developing a related plan. The same participants who were involved in Step 1 on alternative vision and scenario development should participate in Step 2

Prior to beginning the exercises, it is important for the facilitators to:

- a) Briefly recap the activities and key results from the previous four exercises carried out in Step 1; and,
- b) Introduce the purpose and process of developing a spatial implementation plan based on Exercise 5 and 6.

### **Exercise 5: Select a spatial scenario for implementation (2 hours)**

**Objective:** To select a scenario which most resource users can agree on, facilitators guide participants through three activities to: a) develop a set of agreed indicators for evaluating management objectives and targets, b) use the indicators to develop a set of scores for different scenarios, and c) decide how to design a single spatial scenario for implementation based on a discussion of scoring results.

The first step involves developing a set of indicators. The indicators must fit with the priorities of government officials and key resource users up to the scenario period 2025. Subsequently, in a plenary discussion, the facilitators lead a discussion about all indicators to develop a score for each indicator ranging from 1 to 5, with 1 indicating low priority and 5 indicating high priority. This process of scoring helps facilitate a discussion about the overall prioritization of indicators in terms of spatial scenario development for implementation. Through this process, participants agree upon a spatial scenario for which they can finalize a set of management objectives and targets. These management objectives and targets involve geospatial information on which participants allocate areas according to uses (zonation), together with tabular data that set out quantitative and qualitative goals.

### **Preparation:**

- Materials: a) posters with all group outputs from Exercise 4 on vision and scenario development with targets, b) color printed Google Earth map of commune coastal area, c) A0 paper, d) A0 paperhangers, e) colored sticky notes, f) whiteboard pens, g) laptop, and h) projector.
- The facilitation team prepares a PowerPoint presentation to explain how to develop indicators, perform the scoring work, and subsequently, develop a final scenario with associated management objectives and targets.

**Process:** The facilitation team works in a plenary session with the participants to first introduce the process involved in selecting a spatial scenario and implementation plan. Then, the team a

plenary discussion to identify a set of indicators. Table 4 below shows a sample set of indicators. After participants discuss these, they assign score for each indicator. Lastly, based on this evaluation process, the facilitators support an open discussion about how to merge the scenarios into one scenario that reflects the majority perspective on the balance between different sectoral interests.

**Table 4: Scoring System for Different Scenarios**

Indicator	Scenario 1 Score	Scenario 2 Score	Scenario 3 Score
Support to maintain current mangrove forests in good health			
Support to expand mangrove areas through further planting			
Support to protect and further develop boat fisheries			
Support expansion of intensive aquaculture production			
Support expansion of extensive or semi-extensive aquaculture production			
Solve the existing conflicts between boat fisheries and clam farmers			
Improve facilities for boat fisheries landing and processing			

Indicator	Scenario 1 Score	Scenario 2 Score	Scenario 3 Score
Support equitable access to net fishing			
Support gleaners in accessing good quality aquatic resources in mangroves and mudflats			
Support women to develop mangrove-related economic enterprises			
Add further indicators			

At the end of the exercise, the selected scenario, management objectives, and targets will be presented in two ways: represented on a map and in the following table:

**Table 5: Example Management Objectives and Targets for the Selected Scenario**

Sectoral Theme	Management Objectives	Current Status	Targets for 2025
<b>I. Coastal Resource Conservation</b>			
Mangrove forest in good health		419 ha	
Mangrove reforestation		40 ha	
<b>II. Resource uses</b>			
Aquaculture ponds		365 ha	
Clam farming		210 ha	
Annual fishing by net harvest		2000 kg	
Annual boat fishing harvest		10,000 kg	



Sectoral Theme	Management Objectives	Current Status	Targets for 2025
III. Conflict resolution			
Contribute to reducing levels of conflict		100%	
IV. Contributions to local economy			
Percentage increase in household income from baseline year		100%	
Percentage increase in district gross domestic product from baseline year		100%	

**Exercise 6: Create a spatial implementation plan to reach defined management objectives and targets (2 hours)**

**Objective:** This exercise aims to provide a detailed spatial implementation plan for the selected scenario. A coastal spatial implementation plan is commonly understood as a set of intended actions through which the goals of the selected spatial scenario can be achieved over the established time frame (i.e., to 2025). A typical coastal spatial implementation plan includes a set of activities with associated timeframes, required budgetary resources, and identification of agencies or individuals responsible to implement these activities.

**Preparation:**

- Materials: a) printed maps and information from previous exercises on A0 paper, b) A0 paper, c) A0 paperhangers, d) colored sticky notes, e) whiteboard pens, f) laptop, and g) projector.
- The facilitation team develops a PowerPoint presentation to explain what a spatial implementation plan is (objectives, relevant stakeholders, timeframe, activities, budgets, sample plans) as well as summarize the previous exercises on scenario development to guide the preparation of a spatial implementation in Exercise 6.

**Process:** This exercise begins with the facilitation team explaining, with the help of the PowerPoint presentation, what the content of a spatial implementation is, and what is involved in this specific exercise for identifying its content. The facilitation team introduces Table 6, which presents the contents of the spatial implementation plan, during this presentation. Then the facilitation team divides participants into 4 or 5 groups covering different resource uses. Each group nominates a group leader to both facilitate discussion and present the main findings to the plenary.

The group discusses the range of specific activities, key stakeholders, expected results, timeframes, budgetary resources, and priority levels to prepare a spatial implementation plan for the selected spatial scenario. After presentation to the plenary by each small group, the facilitation team distills key areas of consensus among the different resource user groups to develop a final spatial implementation plan that most participants agree to.

**Table 6: Contents of the Coastal Spatial Implementation Plan**

No.	Activity	Role of key stakeholders	Expected results	Timeframe (year)	Required funds and budget (million VND)	Priority level				
						Low => High				
						1	2	3	4	5
Management objective for mangrove planting and protection										
1										
2										
Management objective for sea-dike infrastructure										
1										
2										
Management objective for sustainable aquaculture production										
1										
2										
Management objective for gleaning										
1										
2										
Management objective for boat fisheries										
1										
2										
Management objective for clam farming										
1										
2										
Management objective for community-based eco-tourism development activities										
1										
2										

## 5. Step 3 - Inter-commune-level Workshop on Scenario Development and Spatial Implementation Plan

The primary goal of the inter-commune level workshop is to merge all coastal commune spatial scenarios and implementation plans into one district-level integrated coastal spatial planning scenario and implementation plan.

This one-day workshop involves two exercises. Exercise 7 reviews the commune-level spatial scenario and implementation plan identifying their similarities and differences. Exercise 8 merges the commune-level scenarios and spatial implementation plans into one district-level integrated spatial scenario and implementation plan.

About one-third of the participants who were involved in Step 1 and Step 2 participate in Step 3, for a total of 60 to 70 participants. There should be adequate representation of key commune leaders and all key resource users.

**Exercise 7: Provide an overview of previous commune-level participatory workshops to facilitate a comparative discussion among the spatial scenarios and implementation plans (2 hours)**

**Objective:** As a first step, it is necessary to review all the commune-level spatial scenarios and implementation plans for participants to begin to identify their commonalities, differences, and merits. This is the focus of Exercise 7, which is structured as a plenary discussion among all workshop participants.

**Preparation:**

- Materials: a) printed commune spatial scenario and spatial implementation plans for all communes, b) A0 paper, c) A0 paper hangers, d) colored sticky notes, e) whiteboard pens, f) laptop, and g) projector.
- The facilitation team develops a PowerPoint presentation that identifies the key results in terms of each commune's coastal spatial scenario and implementation plan.

**Process:** After presenting the key features of each commune's spatial scenario and implementation plan, the facilitation team organizes a discussion about the ways in which each plan presents commonalities and differences as well as overlaps. In addition, the group should explore the strengths and weaknesses of each plan; for example, some plans may have underestimated the time or budget required to carry out certain activities.

**Exercise 8: Merge commune-level scenarios and spatial implementation plans into one district-level integrated spatial scenario and implementation plan (3 hours)**

**Objective:** The main goal of this exercise is to find ways to integrate the spatial scenarios and implementation plans into one plan. Participants achieve this through careful discussion about the strengths of each plan and how integration facilitates better economic development opportunities as well as coastal forest conservation futures.

**Preparation:**

- Materials: a) printed commune spatial scenario and spatial implementation plans for all communes, b) A0 paper, c) A0 paperhangers, d) colored sticky notes, e) whiteboard pens, f) laptop, and g) projector.

**Process:**

After recapping the key points of discussion from Exercise 7, the facilitators begin a plenary discussion to carefully build up an integrated spatial scenario and implementation plan. This requires an iterative approach whereby the facilitation team highlights key points from each commune's plans, through which they form the building blocks for fleshing out the various sectoral components, zonation requirements, related management objectives and targets, and subsequently the details of activities needed to achieve the goals.

## **6. Step 4 - Consultation Workshops with District and Provincial or Municipal Level Governments**

Once the draft district-level integrated spatial scenario and implementation plan is available, it is important to share the findings and gather feedback from the district and provincial governments. This involves organizing a one-day workshop at the district level, and another at the provincial or municipal level. This enables finalization of the district spatial scenario and spatial implementation plan.

# Appendix One: A Suggested Outline for the Participatory Coastal Spatial Planning Report

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