



# BLUE SOLUTIONS

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## TRAINING

### BLUE PLANNING IN PRACTICE

Ecosystem-based Marine and Coastal Planning and Management

#### PUBLISHED BY

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# Blue Planning in Practice Participant Handbook

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## 1. Acknowledgment

During the **development process** of the Blue Planning in Practice training course, a **broad range of experts and practitioners** from development agencies, NGOs and research institutions from around the world contributed to the conceptualization of the training course, the design of the course structure, as well as the training materials based on their own experiences and publications. Some provided “blue solutions” and examples from their own countries.

We gratefully acknowledge the valuable inputs of:

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The training course **Blue Planning in Practice** is based on a large and diverse range of existing frameworks, tools, guidelines, articles and online resources aiming to enable national and local planners and practitioners develop and implement integrated coastal and marine policies and plans. In particular, the Blue Planning in Practice training was enriched by the following publications and trainings:

- **Evidence-based analysis and practical guidance on the challenges and enabling factors for successful Marine Spatial Planning**, UNEP (2016). This study provided the synthesis of enabling factors and key challenges to Marine Spatial Planning to this training course. Special thanks to the authors who were intensely involved in integrating the findings of this study into the training materials.
- We **especially acknowledge the Battelle Institute** who made available the material of the existing “Marine Planning Advancement Training (MPAT) Course”, Barrett, M., McGee, L.-A.. Parts of the Blue Planning in Practice course are inspired by the Battelle training, and selected exercises (namely: Develop goals and SMART objectives; Identify spatial incompatibilities, Identify Blue Planning measures and Adapt the Blue Plan) have been used and/or adapted for this training.
- Five exercises of this training course have been adapted from GIZ’s management model **Capacity WORKS**, GIZ 2015, (namely: Map stakeholders; Identify stakeholders’ interests; and Draft a road map).
- The fictitious case Bakul has been adapted from the Blue Solutions training courses “**Climate change adaptation in coastal and marine areas (Blue CCA)**”, GIZ 2015, and “**Integrating Ecosystem Services into Coastal and Marine Planning (Blue IES)**”, GIZ 2014. Furthermore, three exercises of these two courses have been used and adapted for this training (namely: Exploring positions and shape negotiations, Communicate Blue Planning and Plan personal action).

The training was developed by the Blue Solutions Initiative, funded by the **International Climate Protection Initiative (ICI)** of the **Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)**.

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## 2. Introduction to the course

### 2.1. Course Overview

#### Rationale

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Healthy and productive oceans and coasts provide vital services essential to human society. Their rich ecosystems, habitats and biodiversity are critical for the health and food security of large and growing coastal populations. Healthy coasts also help mitigate the impacts of climate change. They reduce the risk of vulnerable communities to disaster and rising seas, storms and floods. And they offer valuable ecosystem-based carbon mitigation and adaptation options.

However, many of these services are declining due to increasing and often competing coastal activities and resource uses. The trend is amplified by uncoordinated sector policies and management. Trade-offs exist between the benefits of activities for human well-being and their impacts on marine and coastal ecosystems. Climate change and ocean acidification exacerbate this situation. An integrated approach to policy formulation and implementation as well as ecosystem management across sectors is, therefore, essential to foster effective synergies across the three pillars of sustainable development.

Planners are, however, often faced with challenges in applying integrated management principles. For example, allocation of space and ecosystem services among different sectors and stakeholders at appropriate spatial scales. Blue Planning, i.e. ecosystem-based marine and coastal planning and management is regarded a particularly useful approach to support integration of environment and resource management, economic development and governance priorities at local and national scales. In addition, Blue Planning can be used to support adaptation to certain climate hazards – such as increasing sea temperatures, sea level rise and increasing storm frequency/intensity – by including spatial and temporal climate change adaptation measures into Blue Planning.

#### Aim

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This training course, informed by decades of practical experiences and learning in the field, aims to strengthen practical planning and implementation. The course, therefore, provides an introduction to the theory and practical starting points of Blue Planning.

With this course participants will:

- **Understand the relevance** of spatial planning as a topic for coastal and marine development and management;
- Learn to **think in systems** and understand the role of coastal and marine ecosystems for human well-being;
- Become **aware of the unique characteristics** of planning in coastal and marine areas;
- Be able to **balance interests** of different stakeholder on the basis of clear and transparent criteria;
- Become able to **start applying Blue Planning** in their own specific legal, governance and administrative contexts;
- Become **aware of barriers, challenges and enabling factors** for the effective use and implementation of Blue Planning approaches; and
- Be **enabled to develop their own strategies** to overcome those barriers and challenges.

On a more personal level, participants shall:

- Enhance **analytical skills**;
- Learn to **think strategically**;
- Strengthen **cooperation and dialogue skills**;
- Learn to **communicate in an audience-oriented and culture-sensitive way**; and
- Enhance reflective skills such as **creativity, innovation and adaptive management skills**.

## Target audience

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The training package is primarily intended for **professionals responsible for the planning and management of coastal and marine areas** and their natural resources, not only from the environment sector, but also from other sectors (e.g. fisheries, tourism, transportation, energy, and sea mining), or from cross-sectorial planning and management bodies. It thus aims at decisions makers, planners, practitioners and technical staff from governments as well as civil society, academia and the private sector from developing and emerging countries. The Blue Planning training course also targets national and international staff in international or regional cooperation working in coastal and marine development projects.

## Training methodology

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The course is based on a case method, which conveys teaching messages mainly through interactive practical exercises (case work). The training deals with the fictitious country of Bakul, a case closely based on real-life conditions and challenges. The fictitious case allows participants to dive into a matter, free from their own work context and its biases. The methodology can also be applied to a real case, yet this involves further preparation in advance of the training course in order to gather and process necessary information.

All exercises follow the same sequence:

1. The **introduction**, given by the trainer, provides the necessary theoretical background and introduces participants to the casework.
2. The **casework** gives participants the opportunity to work through the different aspects linked to Blue Planning in a systematic manner. Participants assume the roles of ‘case work experts’ in charge of the specific module’s task.
3. The ‘case work experts’ **present** their results to the plenary. This is an opportunity to share experiences and to foster mutual learning. Trainers offer alternatives and remarks when necessary.
4. In a final **reflection**, the participants reassume their own real-life position. They reflect on their experiences and link them to their own work in order to make the newly gained knowledge more applicable. Trainers support through guiding questions. **Challenges and enabling factors** for successful Blue Planning shape these reflections: They have been synthesised from a study conducted by UNEP, the Swedish International Development Cooperation Agency (SIDA) and the Scientific and Technical Advisory Panel of the Global Environment Facility (GEF)/STAP, which reviewed 73 Blue Planning processes (see UNEP 2016).
5. In addition, “**Blue Solutions**” – successful cases – complement the training by illustrating theoretical inputs and case work learning. They serve as real case examples for “what works” (key success factors) in different situations.<sup>1</sup>

Ideally, the course will be embedded in a longer-term advisory process aiming at supporting concrete Blue Planning efforts. Based on a stocktaking capacity needs assessment, training modules will be chosen and adapted to the particular case. In this regard, the training will most likely not be a single event, but consist of several training and advisory workshops. The training course might as well serve as a single-event introductory course on Blue Planning aiming at informing and raising awareness among practitioners.

## Training material

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The following training material is available:

- Participant Handbook (including task descriptions and further resources)
- Presentations (providing technical background knowledge & real-life examples)
- Trainer Handbook (including guidance on how to best run the exercises)

This present Participant Handbook is meant to be a source for participant during and after a Blue Planning training workshop. It is not a stand-alone publication and will always need further instructions and explanations by the trainers.

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<sup>1</sup> Blue Solutions are innovative concepts and practical approaches that inspire and facilitate action towards healthy and productive marine and coastal ecosystems. They (a) address challenges to sustainable development and human wellbeing in the marine and coastal realm and contribute to maintaining or improving the status/health of biodiversity and ecosystems, (b) are effective and have been applied with a demonstrated impact, and (c) are scalable with elements that have the potential for upscaling or adaptation in other contexts.

## 2.2. What is Blue Planning in Practice?

We understand Blue Planning as an **overarching term** for approaches such as integrated coastal zone management, coastal and marine spatial planning, maritime planning, coastal development planning and the many other similar terms.

We promote an ecosystem approach, i.e. the integrated management of land, water and living resources, which promotes a balance between conservation and human uses in an equitable way. Thus, Blue Planning affords a way to shape Blue Economy policies more sustainably.

We understand Blue Planning approaches to be time-bound (looking at seasonality, the temporal dimension of human uses, and having a temporal horizon) and site-specific, aiming to achieve multiple objectives for the use of coasts and ocean by minimizing conflicts among users and reducing impacts on ecosystems and ecosystem services and fostering sustainable development. Blue Planning might as well be a useful tool to tackle issues such as climate change and poverty reduction and can serve to contribute towards achieving global targets such as the Sustainable Development Goals or the Aichi targets of the Convention on Biological Diversity.

As human activities on land and in the water impact coasts and the ocean, the training promotes a holistic approach, stretching from coastal lands to ocean, including the Exclusive Economic Zone (EEZ). We are, however, not addressing high seas (Areas Beyond National Jurisdiction, ABNJ) as these often require different management and governance approaches.

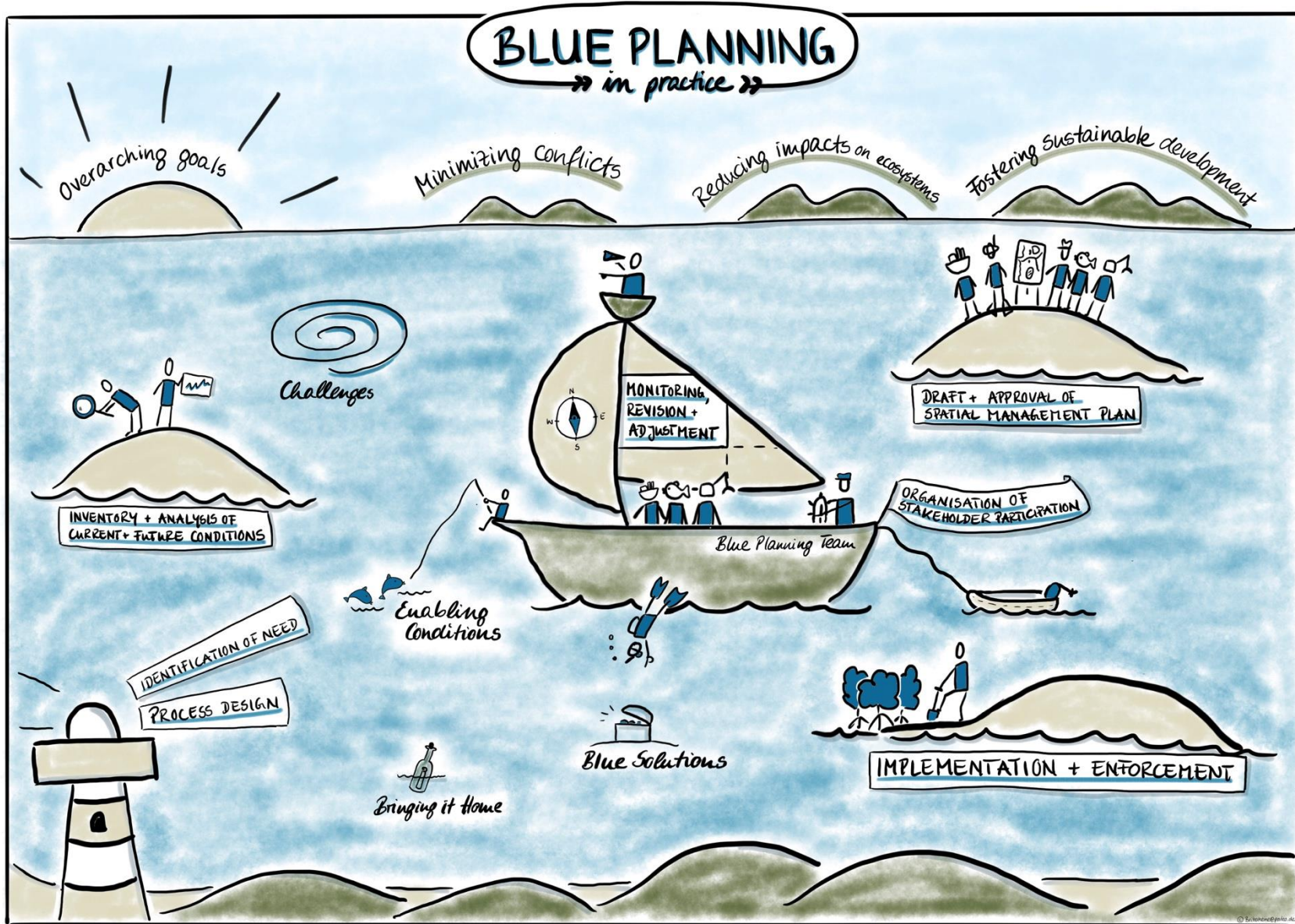
Blue Planning does not lead to a final and definitive plan. It is a continuing, iterative process that includes learning and adaptive management over time. The development and implementation of Blue Planning includes a number of elements, comprising the following:

- Identification of need and process design
- Organisation of stakeholder participation
- Inventory and analysis of current and future conditions
- Drafting and approving the spatial management plan
- Implementation and enforcement
- Monitoring, revision and adjustment

These elements are not part of a simple process that moves consecutively from one to the next. Rather, planning is a dynamic process that includes many feedback loops within the process. Some elements such as “stakeholder participation” and “monitoring, revision and adjustment” are integral elements that need to be considered throughout the process and within other elements. For instance, analysis of existing and future conditions will change as new information is identified and incorporated in the planning process. Stakeholder participation will shape the process as it develops over time. Thus, also the training exercises will most likely not be dealt with in the consecutive order displayed in this participant handbook, but in an order relevant to participants’ contexts. The following visual illustrates the iterative and dynamic nature of Blue Planning:

- The overall objectives of Blue Planning are visualized above the horizon.
- A Blue Planning Team travels on a sailboat through the sea stretching from coastal lands to ocean back and forth between the main elements of Blue Planning.
- The lighthouse “Identification of Need and Process Design” guides the crew and stakeholders on their way, while the other islands can be headed for as appropriate throughout the process.
- Monitoring, Revision and Reflection is displayed as an integral part of the sailboat that via the compass supports keeping on track throughout the process.
- Stakeholders are as well an integral part and present on the sailboat. The dingy helps to get more stakeholders on board if necessary.
- The sea also contains enabling conditions that need to be caught (fishes), challenges the crew need to be aware of (eddy) Blue Solutions that need to be recovered (treasure chest), as well as lessons learnt to take home (message in a bottle).





### 2.3. Glossary of terms

**Adaptive management:** A systematic process for continually improving management policies and practices toward achieving articulated goals and objectives by learning from the outcomes of previously employed policies and practices. Active adaptive management is where management options are used as a deliberate experiment for the purpose of learning.

**Areas Beyond National Jurisdiction (ABNJ):** Those areas of ocean for which no one nation has sole responsibility for management – commonly called the high seas. In all, these make up 40% of the surface of our planet, comprising 64% of the surface of the oceans and nearly 95% of its volume. Often considered the world's last global commons, the complex ecosystems in the ABNJ include the water column and seabed of the high seas and are mostly far from coasts, making the sustainable management of the fisheries resources and biodiversity conservation in those areas extremely difficult and challenging.

**Assessment area:** The adjacent area outside your management authority that has uses or resources that will need to be considered when developing your plan and managing your area.

**Biodiversity** (a contraction of biological diversity): The variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part. Biodiversity includes diversity within species, between species, and between ecosystems.

**Blue Planning:** Overarching term for approaches such as integrated coastal zone management, coastal and marine spatial planning, maritime planning, coastal development planning and the many other similar terms.

**Decision Support Tools (DST) or Decision Support Systems (DSS):** a wide range of computer-based tools (simulation models, and/or techniques and methods) that support decision analysis and participatory processes.

**Drivers of biodiversity loss:** Natural or human-induced factors that directly or indirectly cause a change in biodiversity are referred to as drivers. The Millennium Ecosystem Assessment (MEA) distinguishes between indirect and direct drivers:

- **Direct drivers** explicitly influence ecosystem processes, e.g. habitat loss, alteration and fragmentation, over-exploitation and unsustainable use of natural resources, excessive nutrient load and other forms of pollution, invasive species and climate change.
- **Indirect drivers** are factors that contribute to changes in the direct drivers, e.g. change in population, economic activities, technology and lifestyle.

**Ecosystem:** Dynamic complex of plant, animal, and microorganism communities and their non-living environment interacting as a functional unit. If one part is damaged it can have an impact on the whole system. Humans are an integral part of ecosystems. Ecosystems can be terrestrial or marine, inland or coastal, rural or urban. They can also vary in scale from global to local. Examples of ecosystems include forests, wetlands, open ocean, coastal, coral reefs, inland water, drylands, desert, cultivated (e.g. cropland or pasture) and urban ecosystems.

**Ecosystem approach:** A strategy for the integrated management of land, water, and living resources that promotes conservation and sustainable use. An ecosystem approach is based on the application of appropriate scientific methods focused on levels of biological organization, which encompass the essential structure, processes, functions, and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems.

**Ecosystem management:** An approach to maintaining or restoring the composition, structure, function, and delivery of services of natural and modified ecosystems for the goal of achieving sustainability. It is based on an adaptive, collaboratively developed vision of desired future conditions that integrates ecological, socioeconomic, and institutional perspectives, applied within a geographic framework, and defined primarily by natural ecological boundaries.

**Ecosystem services:** The benefits people obtain from ecosystems. These services are derived from natural (e.g. tropical forests) and modified ecosystems (e.g. agricultural landscapes). While there is no single, agreed method of categorising ecosystem services, the Millennium Ecosystem Assessment (MEA) framework of provisioning, regulating, supporting and cultural services is widely accepted and being used.

**Exclusive Economic Zone:** The zone where coastal nations have jurisdiction over natural resources. It is an area beyond and adjacent to the territorial sea: it can extend to a maximum 200 nautical miles from the baselines (usually the mean low-water mark).

**Governance:** The process of regulating human behaviour in accordance with shared objectives. The term includes both governmental and nongovernmental mechanisms (MEA 2005).

**Integrated coastal zone management (ICZM) or Integrated coastal management (ICM):** A dynamic, multidisciplinary and iterative process to promote sustainable management of coastal zones. It covers the full cycle of information collection, planning (in its broadest sense), decision making, management and monitoring of implementation. ICZM uses the informed participation and cooperation of all stakeholders to assess the societal goals in a given coastal area, and to take actions towards meeting these objectives. ICZM seeks, over the long-term, to balance environmental, economic, social, cultural and recreational objectives, all within the limits set by natural dynamics. 'Integrated' in ICZM refers to the integration of objectives and also to the integration of the many instruments needed to meet these objectives. It means integration of all relevant policy areas, sectors, and levels of administration. It means integration of the terrestrial and marine components of the target territory, in both time and space.

**Marine Spatial Planning:** is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process. MSP does not lead to a one-time plan. It is a continuing, iterative process that learns and adapts over time.

**Millennium Ecosystem Assessment (MEA):** Launched in June 2001 and involving more than 1,300 leading scientists from 95 nations, the MEA is a ground-breaking study on how humans have altered ecosystems, and how changes in ecosystem services affect human well-being, both now and in the future. Integrating findings at the local, regional, global scales and from alternative intellectual traditions, the MEA offers the first truly comprehensive picture of the health of the planet.

**Ocean zoning:** A regulatory measure to implement marine spatial management plans that regulate access and use of specific marine geographic areas. Zones are usually defined or described using a combination of maps and regulations for some or all areas of a marine region.

**Planning area:** The area within your management authority for which planning has commenced, e.g. the marine waters of a specific state. Usually it is designated through a political process. The boundaries for analysis for Blue Planning often will not and should not coincide with the boundaries for planning and management.

**Power:** describes a stakeholder's level of influence in the system – how much s/he can direct or coerce the Blue Planning process and other stakeholders.

**Precautionary principle:** The management concept stating that in cases “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation,” as defined in the Rio Declaration (1992).

**Stakeholder:** Any individual, group or organization who has an interest in (or a 'stake'), or who can affect or is affected, positively or negatively, by a process or management decision.

**Territorial sea:** A belt of coastal waters extending at most 12 nautical miles (22.2km / 13.8 mi) from the baseline (usually the mean low-water mark) of a coastal State which represents the sovereign territory of that State, through which foreign ships (both military and civilian) are allowed innocent passage through it. This sovereignty also extends to the airspace over and seabed below.

### 3. Bakul Information: Introduction to the case



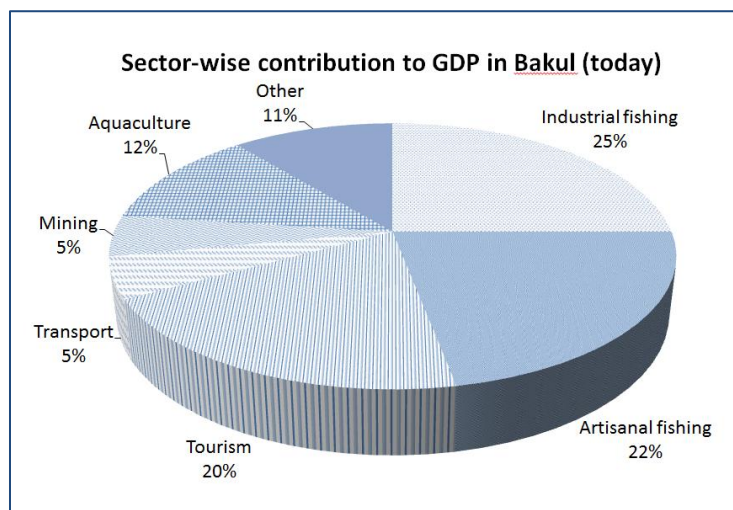
Bakul is a tropical developing country, covering an area of 130,000 km<sup>2</sup> (a size similar to Nepal, Nicaragua or Benin). It is famous for its beautiful beaches and islands, the world-famous **Bakul Reef** and the **Coroné Delta** in northeastern Bakul, which draw tens of thousands of tourists to the country annually. The Mighty Mountains, a high-altitude belt (up to 2000 meters) running north to south along the west of the country, split Bakul into two main geographical regions: the western highlands and the eastern lowlands, including the coast.

**Fisher folks** were the first settlers along the coast of Bakul. They typically built their homes near the shoreline, where smooth landing of artisanal fishing boats was most convenient. Nowadays, fishing villages have extended further inland, but remain close to the shore. Coastal settlements include not only small fishing villages, but also a **growing number of hotels and other touristic infrastructure**.

Bakul is divided into **three provinces** (comparable to ‘regions’ or ‘states’ in other countries): the coastal provinces **Indare** and **Exportul** and the highland province **Belandu** with no coastal access. Its major cities are located near the coast: Hanku (the capital) and Moneila city (the economic centre of the country). Bakul has one major harbour, the Historic Harbour, and the Marvellous Marina.

Bakul is a developing country with a **market-oriented economy**. Historically, the country’s economic performance has been tied to **exports**, which provide hard currency to finance imports and external debt payments. Although these exports have provided substantial revenue, self-sustained growth and a more egalitarian distribution of income have proven elusive. Presently, the main exports are fish and shrimp, palm oil and, to a lesser degree, timber.

The Bakul Reef is internationally known for having diverse and rich fishing grounds. People’s livelihoods along the coast mainly rely on artisanal **fisheries**, which employ no less than 15,000 people. The fisheries sector largely depends on goatfishes, which stay in shallow coastal waters with sandy sediments during summer and leave for deeper waters in autumn. Industrial fishing (mainly in the form of offshore trawling and pelagic seine fisheries) is rapidly taking over traditional artisanal fishing grounds, as well as increasing its activities in offshore water: The status of fish stocks in the region has not been assessed, but there is some indication that certain



bank areas are rich in demersal finfish, and currently a few of Bakul’s larger fishing boats do venture offshore to catch Ballistes. Several fishing nations have expressed interest in accessing Bakul’s offshore waters for large-scale industrial trawling, and at least one multinational tuna company has requested permission to conduct research into whether tuna fisheries would be viable in Bakul’s EEZ.

In recent years, the **tourism** sector has been growing rapidly. The total number of international and domestic visitors in the country yearly is today five times larger than ten years ago, and the Ministry of Tourism aims to triple the

current numbers within the next ten years.

Figure 1: Sector-wise contribution to GDP in Bakul (as of 2015)

The Department of Mineral Resources supported research on strategic **minerals** and recently announced the discovery of phosphate deposits in areas near the shore and other strategic minerals on Bakul’s continental slope. They now aim to develop the sea mining sector at full scale to create revenue and jobs.

Table 1: Key features of Bakul

Key features of Bakul	
<b>Area and location</b>	<ul style="list-style-type: none"> <li>• 130,000 km<sup>2</sup> (similar in size to Nepal, Nicaragua or Benin)</li> <li>• 390 km of coastline</li> <li>• 35,350 km<sup>2</sup> of Exclusive Economic Zone (EEZ)</li> <li>• Bordering Bekule Country in the north and Mariba Country in the south.</li> </ul>
<b>Provinces and major coastal cities</b>	<p>Three provinces: Indare, Exportul and Belandu</p> <p>Two main cities (both coastal):</p> <ul style="list-style-type: none"> <li>• Hanku City (1 Mio.), the capital, home to the Marvellous Marina used by big yachts</li> <li>• Moneila City (0,5 Mio.), home to the Historic Harbour used for economic activities</li> </ul>
<b>Population</b>	<ul style="list-style-type: none"> <li>• 12 Million; with 55 % living in coastal rural areas.</li> <li>• Population growth: 1.9% per year, mainly in urban areas.</li> </ul>
<b>Governance</b>	<ul style="list-style-type: none"> <li>• Representative democratic republic.</li> <li>• Weak enforcement of laws and strong presence of NGOs and other advocacy organisations.</li> <li>• Provinces with considerable autonomy.</li> <li>• EEZ under jurisdiction of the federal government, coastal waters managed by province governments.</li> </ul>
<b>Economic indicators</b>	<ul style="list-style-type: none"> <li>• <b>Human Development Index (HDI)</b> 0.723, increased by 0.11% over the past 10 years</li> <li>• <b>GDP per capita:</b> US\$5,195, increasing by 6,7% per year</li> </ul>
<b>Ecosystems</b>	<ul style="list-style-type: none"> <li>• The <b>Bakul Reef</b> stretches along almost the whole coast of Bakul.</li> <li>• The shallow waters of Bakul's coast host <b>vast sea grass beds</b>, home to one of the world's largest population of manatees, three species of sea turtles and other remarkable marine life.</li> <li>• A dozen of small scattered <b>sandy beaches</b> and <b>islands</b>, including Turtle Island and Manatee Island: Both islands offer an ideal base for diving tourists who wish to explore the reef. Turtle Island is a nesting area for endangered leatherback marine turtles.</li> <li>• <b>Coroné Delta:</b> low-level plain not higher than 3m above sea level, home to the <b>Nelam Wetlands</b> (Endemic Bird Area). Mangrove forests used to cover the whole intertidal area; yet, they have been declining significantly in recent years due to the expansion of shrimp farming and habitation construction.</li> <li>• 3% of Bakul's coastal/marine area is declared protected, including parts of the Bakul Reef and Nelam Wetlands. Ecosystems in these protected areas are in a good condition and have shown signs of recovery.</li> </ul>
<b>Climate and oceanography</b>	<ul style="list-style-type: none"> <li>• <b>Tropical climate</b> in the coastal area and more temperate climate in the mountains.</li> <li>• In the coastal area, the year can be split into two periods: the <b>dry season</b> (December to April) and the <b>rainy season</b> (May to November).</li> <li>• <b>Tropical cyclones</b> regularly affect Bakul's coast from July through to October.</li> <li>• Recently, increased incidents of <b>flooding</b> during the rainy season, affecting the Coroné delta in particular, and <b>prolonged dry periods</b>.</li> <li>• A <b>north-south current</b> dominate the coast's oceanography.</li> <li>• <b>Tidal range is small</b> with changes of only about 35 cm. Yet, tidal currents are important for dispersion of sediments and larvae in reef passages and near river mouths</li> <li>• The marine resources of Bakul are inextricably <b>linked to a much larger area via water exchange:</b> For instance, the watershed of Bakul's neighbouring Bekule and Mariba are influencing Bakul's coast.</li> </ul>

## News Report

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### *Bakul Today: Our seas at risk?*

As the government decided to embark on a Blue Planning process, the environmental NGO Green Bakul organized a press conference today. The NGO commissioned a study to examine the status of our coastal and marine ecosystems that comes to the conclusion that these natural treasures are under serious stress from several human activities:

**A growing and largely unregulated fisheries industry**, especially in the EEZ (overfishing, dynamite fishing), challenges marine biodiversity and the sustainability of fish stocks.

**An increasing number of tourists** along Bakul's coast and islands, as well as new **tourism infrastructure construction** (hotels, roads, ports), mainly along the coast of Indare province, aggravate coastal erosion and increase waste discharge in the sea.

**Aquaculture waste** from shrimp farms (charged with antibiotics), carried from the north of Bakul and from Bekule by the north-south current, causes eutrophication of marine waters, which negatively impacts marine life.

**Milaku River** in the south, continuously **discharges nutrients and fertilizers** from agricultural activities into the sea.

**International shipping routes** in the high seas are accessed via a passage south of Bakul Reef. This is causing marine pollution and other negative impacts for marine life. To safeguard shipping, access to the Historic Harbour has been designed as a Traffic Separation Scheme under IMO regulations.

Tropical cyclones, along with increased sea surface temperatures, have caused **major coral bleaching and destruction events** in the past. Over 50% of Bakul's coral reef has been damaged since 1998.

The recent discovery of deposits of strategic minerals alerts Green Bakul. They are worried, that full scale development of mining activities, including industrial port development, offloading facilities, and minerals processing plants, could further threaten the integrity of Bakul's seascape.



## 4. Identification of need and process design

Once you decide to embark on Blue Planning, the following tasks need consideration. Remember, the tasks do not necessarily need to be tackled consecutively as displayed below. In fact, planning is a dynamic process, that needs to be adapted to each specific context and should include many feedback loops within the process. The symbols below indicate where a consideration of Stakeholder involvement and Monitoring and Evaluation will be especially helpful.

### 1. Identify Need:

Usually Blue Planning takes place out of a need to tackle certain problems or resource competitions, either existing or anticipated. These issues may be related to economic development (e.g., where to allow new mineral extraction or aquaculture facilities) or to environmental conservation (e.g., which biologically and ecologically important areas need to be protected). Specifying problems or resources competitions you want to tackle through Blue Planning will help to **keep your efforts focused** throughout the process.

### 2. Establish authority:

In order to undertake Blue Planning it is important to figure out the kind of authority needed for such a process – the authority to plan for Blue Planning (1) and the authority to implement Blue Planning (2). Both types of authority are equally important. They could be combined in one organization, but in most Blue Planning initiatives around the world, **new authority is often established, while implementation is carried out through existing authorities and institutions**. In any case, establishing authority shall be aligned to the political context.

### 3. Organize the process:

This includes identifying and mobilising adequate financial resources for **managerial tasks** such as creating a Blue Planning team, developing a work plan and defining spatial boundaries and timeframe.

### 4. Define principles and vision

Blue Planning should be guided by a set of principles and a vision that determine its nature and characteristics and **reflect the result you want to achieve through Blue Planning**. It is important that the vision and principles do not stand by themselves, but should be reflected throughout the Blue Planning process, in particular in the goals and objectives you identify later.



### 5. Develop goals and SMART objectives

Once the vision and principles are in place, they should be specified in terms of broad goals and concrete objectives. What does the vision set out to achieve? Specifying Blue Planning objectives is essential to help you **focus and tailor your Blue Planning efforts towards achieving results**. This will serve to guide the entire planning process, limiting the amount of work, money and data that needs to be collected to this predefined scope. Developing so-called SMART objectives will also support your monitoring and evaluation efforts.



#### 4.1. Case work: Identify need

Identify need	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Know how to identify and agree on the planning issue;</li> <li>• Describe your Planning Area;</li> <li>• Describe uses by sectors and drivers influencing conditions of ecosystems; and</li> <li>• Explain the reasons for Blue Planning (issues, needs and challenges).</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Overview on current overlapping uses, compatibilities and drivers of biodiversity loss you want to address through Blue Planning</li> <li>• Decision on need for Blue Planning</li> </ul>
<b>Importance</b>	Once you decide to embark on Blue Planning, defining clearly the need will help you to stay on track throughout the process.

#### Context

In Bakul no integrated planning manages existing uses of coastal and marine resources. As the economy is growing and more and more sectors are using Bakul's seascape, the government realized a plan is needed to guide the use, conservation and protection of their coastal and marine resources. To develop such a plan the Government seeks the help of several consultant groups.

#### Instructions for case work

You are members of a consulting firm that has been contacted by the Federal Government of Bakul to support the development of a Blue Plan for Bakul. You must now travel to Bakul to consult with its leaders and community members balancing different priorities and perspectives. Along your voyage, you will receive guidance from trainers and collaborate with other consultancy groups, formed by other participants, in developing a Blue Plan for Bakul. At times, you will stop to reflect on what you learnt by using a logbook. This will help you apply insights and ideas you have gathered to your own work context.

The following tools assist your work:

- Table 2 and Figure 2 assist in identifying the need for Blue Planning in Bakul.
- Text box 2 provides a list of indicators to assess the need for Blue Planning.
- Text box 1 provides guidance on effective group work.
- Overview on examples of coastal and marine ecosystem services (see page 21).

The following information on Bakul supports your work:

- Introduction to Bakul (see page 12-13)
- News report from Bakul Today: Our seas at risk? (see page 14)
- Map 1 illustrates Bakul's land cover and bathymetry.
- Map 2 illustrates current land and ocean use in Bakul.



## Your task

Your task is to familiarise yourself with Bakul and its current challenges and help the government to define the need for Blue Planning: Do any incompatible uses or uses that adversely affect important ecosystems exist in Bakul? Can you anticipate future incompatibilities? If not, you may not need to embark on Blue Planning. Remember, however, that places without any visible problems or resource competitions today can look very different in another ten or twenty years:

### Step 1

1. Read the Introduction to Bakul and the maps carefully and identify current uses as well important ecosystems in your Planning Area.
2. Use Table 2 to brainstorm existing coastal and marine ecosystems, ecosystem services and their human users. Work in grid lines and relate your findings to one another:
  - In column A brainstorm the coastal and marine ecosystems.
  - In column B brainstorm the related ecosystem services that these ecosystems provide.
  - In column C brainstorm related human users depending on these ecosystem services
  - In column D brainstorm possible drivers influencing the current condition of the ecosystem, e.g. destructive fishing or overfishing.
3. After completion of the table, assess the current condition of ecosystems and possible future trends. The current condition describes the status of the ecosystem. The trend describes whether the condition is declining, improving or staying the same. This includes past trends and likely future developments. Examples are changes in fish population or steady decline of fresh water availability due to increased use from the tourism sector. Highlight current conditions of ecosystems and their trends using the colours and symbols from Figure 2 in Table 1.

### Step 2

In a second step, localize and highlight existing overlapping spatial uses on Map 2 (circle them). Review your brainstorming and maps and assess the need for Blue Planning using the indicators described in the Text box 2 below.

**Table 2: Coastal and marine ecosystems, ecosystem services and human users**

Coastal and marine ecosystems, ecosystem services and human users			
A	B	C	D
<b>Coastal &amp; marine ecosystem</b>	<b>Ecosystem services</b>	<b>Human users / sectors</b>	<b>Underlying causes influencing condition of ecosystems</b>
Mangrove forest	Wood for stoves	Coastal community	Lack of alternatives (fuelwood)
Bakul Reef	Habitat for species	Tourism sector	Lack of regulations

**Figure 2: Condition and trend rating**

<b>Conditions:</b>					
Good	Good/Fair	Fair	Fair/Poor	Poor	Undetermined
<b>Trends:</b>					
<ul style="list-style-type: none"> <li>↑ Condition appears to be improving</li> <li>– Condition does not appear to be changing</li> <li>↓ Condition appears to be declining</li> <li>? Undetermined trend</li> </ul>					

**Text box 1: Guidance for effective and efficient group work**

### Guidance for effective and efficient group work

- A group should nominate (for each exercise):
  - A **Group Facilitator**: moderating and making sure everyone participates;
  - A **Time Manager**: ensuring that activities are achieved and stopped on time; and
  - A **Presenter**: recording and presenting the groups' findings.
- Before starting the exercises, take your time to read through the task description and see if everybody is on board.
- The groups work independently.
- For missing information, make assumptions and work with them.
- Trainers can be asked for advice.
- The main learning objective is to learn about the strategic approach, rather than to be comprehensive in the task.

**Text box 2: Defining need for Blue Planning**

**Defining need for Blue Planning\***

**Early indications for Blue Planning:**

Sensitive and/or fragile ecosystems, large-scale users, rapid changes to the socio-economic or political system (strong drivers)

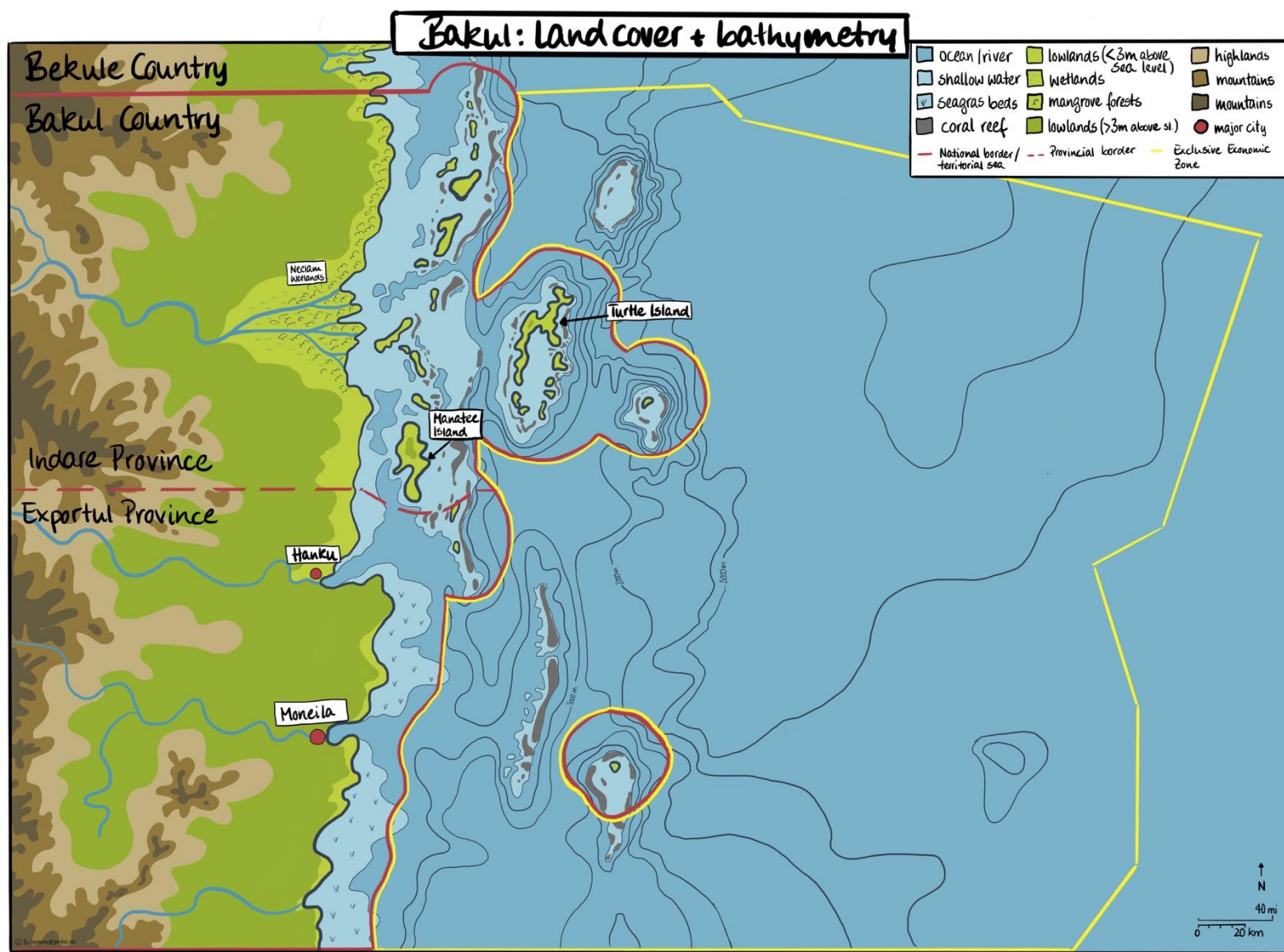
**Assess the trends of use:**

- Intensity and diversity of uses increases: **Indication for Blue Planning**
- Intensity and diversity of uses stable: Blue Planning may not be needed
- Intensity and diversity of uses decreases: Blue Planning may not be needed

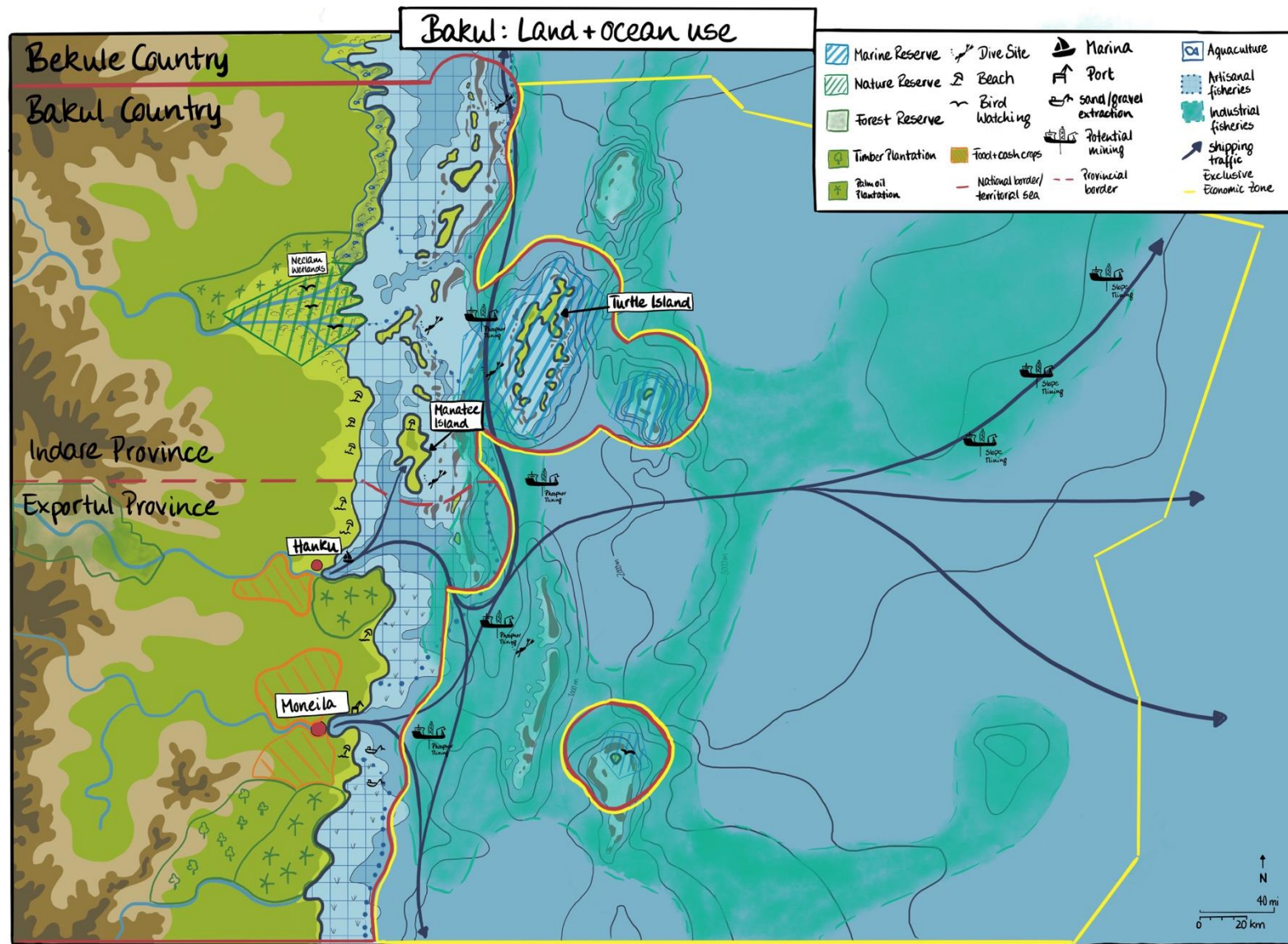
**Assess the spatial impacts and resource competitions:**

- Spatial impacts likely to increase: **Indication for Blue Planning**
- Spatial impacts stay the same: Blue Planning may not be needed
- Spatial impacts decrease: Blue Planning may not be needed
- Spatial resource competitions set to intensify: **Indication for Blue Planning**
- Spatial resource competitions set to remain the same: **Indication for Blue Planning** (if resource competitions are already problematic)
- Spatial resource competitions set to decrease: Blue Planning may not be needed (be aware however, that resource competitions may change or new competitions may arise)

\*Adapted from PlanCoast (2008)



Map 1: Bakul land cover & bathymetry



Map 2: Bakul land & ocean use (current)

*Overview on examples of marine and coastal ecosystem services*

Service	Description	Examples of marine and coastal ecosystem services
<i>Provisioning services</i> are the products people obtain from ecosystems.		
Food	Ecosystems provide food in wild habitats and in managed agro-ecosystems.	Fisheries and aquaculture supplied the world with about 128 million tonnes of fish for consumption in 2010. Marine capture fisheries alone (theoretically) put one fillet per week on every person's plate.  Healthy coral reefs can yield an average of 15 tonnes of fish and other seafood per square kilometre each year. 1.2 per cent of the world's tropical coral reefs nourish up to 1 billion people.
Raw material	Ecosystems provide a great diversity of materials for construction and fuel.	Many marine and coastal ecosystems provide coastal communities with construction material, such as mangrove wood as building materials for boat construction.
Fresh water	Ecosystems provide surface and groundwater.	Healthy coastal ecosystems protect rivers and other inland freshwater systems from storm surges.
Medicinal resources	Many plants are used as traditional medicines and as input for the pharmaceutical industry.	Many new pharmacological compounds have been discovered in marine ecosystems.
<i>Regulating services</i> are the benefits people obtain from the regulation of ecosystem processes.		
Climate regulation	Ecosystems influence climate by emitting or absorbing greenhouse gases or aerosols to/from the atmosphere	Marine ecosystems play an important role in climate regulation due to their ability to sequester and store carbon dioxide from the atmosphere.
Natural hazard regulation	Capacity of ecosystems to reduce damage caused by natural hazards such as floods, storms, and landslides.	Coral reefs, mangroves and sea grass beds provide protection from floods, and buffer land from storms.
Water purification and waste treatment	Microorganisms in soil and in wetlands decompose human and animal waste, as well as many pollutants.	Mangroves have a great capacity to absorb heavy metals and other toxic substances in effluents.  Estuaries, marshes and lagoons play a key role in maintaining hydrological balance and filtering water of pollutants
Erosion prevention and maintenance of soil fertility	Role vegetative cover plays in in soil retention	Mangroves and sea grass beds reduce coastal erosion and stabilise land by trapping sediments.

Service	Description	Examples of marine and coastal ecosystem services
<i>Cultural services</i> represent the spiritual, educational, recreational enjoyment derived from healthy ecosystems.		
Recreation	Recreational pleasure people derive from natural or cultivated ecosystems.	Scenic coastlines, islands and coral reefs offer recreational opportunities such as SCUBA diving, snorkelling and sea kayaking.  Coastal tourism provides a livelihood for many coastal communities. It relies on pristine beaches, clean water, healthy ecosystems and abundant wildlife.
Aesthetic values	The beauty and aesthetic values of nature in all its appearance	The beauty of coastlines, reefs and islands is an inspiration for art
Spiritual, religious and ethical values	Spiritual, religious and ethical values people attach to ecosystems, land- and seascapes, or species.	The salmon is of significant cultural significance in the aboriginal culture of the Northeast Pacific.  The Bajau peoples of Indonesia and the aboriginal people of the Torres Strait (Australia) have a culture intimately connected to oceans.
Supporting services are necessary for the delivery of all other ecosystem services.		
Providing habitats	Habitats provide everything that an individual plant or animal needs to survive. Migratory species need habitats along their migrating routes.	Coastal and marine ecosystems provide nurseries to a large number of marine species.
Primary productivity	The formation of biological material by plants, some protists and some bacteria through photosynthesis and nutrient assimilation.	Coastal and marine ecosystems contribute about half of the Earth's primary production through plants and algae.
Nutrient cycling	Role ecosystems play in the flow and recycling of nutrients (e.g., nitrogen, sulphur, phosphorus, carbon) through processes such as decomposition and/or absorption.	Mangroves and saltmarshes play a key role together in cycling nutrients. For example, saltmarshes in the Red Sea region contribute nitrogen to adjacent mangroves.  Beaches and sandy shores are important in the delivery of land-based nutrients to the near shore coastal ecosystem.

## Sources:

- Kosmus, M.; Renner, I. and S. Ullrich (2012): Integrating Ecosystem Services onto Development Planning. A stepwise approach for practitioners based on the TEEB approach. GIZ.
- UNEP (2011): Taking steps towards marine and coastal ecosystem-based management
- UNEP (2006) Marine and Coastal Ecosystems and Human Well-being. A synthesis report based on the findings of the Millennium Ecosystem Assessment
- UNEP /WCMC (2011): Marine and coastal ecosystem services. Valuations methods and their practical application.

## 4.2. Case work: Establish authority

Establish authority	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand administrative and legal regulatory basis of a Blue Planning process.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Decision on what kind of authority you need for Blue Planning</li> </ul>
<b>Importance</b>	Once you decide to embark on Blue Planning, define whether you have appropriate authority to develop and implement Blue Planning is crucial to ensure that your efforts might not be wasted if planning or implementation are not possible later on.

### Context

The Federal Government of Bakul has identified a great need for Blue Planning: While the economy of Bakul benefits from recent coastal development, such as the growing tourism and transport, the health and integrity of its coastal and marine areas are threatened by human activities such as clearing mangroves, overfishing and pollution, which are further exacerbated by climate change impacts. In addition, upcoming gravel and sand extraction is expected to potentially have additional impacts on the ecosystems and affects other human uses of the coast and sea. Thus, the Government has reinforced its decision to embark on Blue Planning. It will now need your help establishing appropriate authority for Blue Planning, both for the planning and the implementation phase.

### Instructions for case work

You continue to play the role of consultants advising the Government of Bakul.

The following tools assist your work:

- Text box 3 provides hints on establishing authority

The following information on Bakul supports your work:

- Figure 3: Federal and Provincial Government structure in Bakul
- Information on the United Nations' Convention on the Law of the Sea

### Your task

Your task is to discuss the existing government structure in your Planning Area and decide what the most efficient option to establish authority for developing and implementing Blue Planning would be.

1. Start by reviewing the existing government structures in your Planning Area, and decide what would be the most efficient option to establish authority for initiating a Blue Planning process in your Planning Area. Document your results on a flipchart.
2. In a second step, discuss the most effective options for the implementation of Blue Planning activities. Remember, very often, existing single-sector institutions will carry out implementation actions. Compile a list of the sectors that need to be involved in the implementation of Blue Planning in your Planning Area. Document your results on a flipchart.



**Text box 3: Hints on establishing authority for Blue Planning**

**Hints on establishing authority for Blue Planning**

On the one hand, you'll need to define the **authority to plan** for Blue Planning. The single most important aspect when creating authority to plan for Blue Planning is to make sure that your Blue Plan will be enforceable. There are three different ways to establish authority for planning Blue Planning:

- Create new legislation;
- Depart from existing legislation, either by re-interpreting it or by slightly modifying it to provide a basis for Blue Planning; or
- Add it to provisions to legislation already underway or that is being considered for development in the near future.

On the other hand, you'll need to define the **authority to implement** Blue Planning. Remember! Blue Planning usually does not replace single-sector management. Instead, it aims to provide guidance to single-sector decision-makers so that the sum of all decisions is oriented toward integrated, ecosystem-based management of the ocean and coasts fostering sustainable development. Therefore, in theory, the authority for implementing Blue Planning could be centralized in one comprehensive organization specially designed for Blue Planning. However, experience in various countries shows that it is effective to leave implementation to the existing management authorities responsible for a single sector, concern, or activity.

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**Bakul Information**

*United Nations' Convention on the Law of the Sea<sup>2</sup>*

In the Territorial Sea, up to a limit not exceeding 12 nautical miles from the baseline, coastal States have full jurisdiction for zoning and Blue Planning, based upon sovereignty. Coastal States have legislative power regarding innocent passage that is useful for Blue Planning. They can adopt laws and regulations in respect of all or any of the following topics: safety of navigation and regulation of maritime traffic; protection of navigational aids and facilities, as well as other facilities and installations (e.g., wind farms); the protection of cables and pipelines; the conservation of living resources; and the preservation of the environment of the coastal State.

In the EEZ a coastal State has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil. These sovereign rights apply to other activities for economic exploitation and exploration, such as the production of energy from water, currents and winds.

Following directives of the UNCLOS, Bakul has already established its limits for the Territorial Sea, EEZ and Continental Shelf.

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<sup>2</sup>See: Maes, F. (2008). The international legal framework for marine spatial planning. *Marine Policy*, 32(5), 797-810.

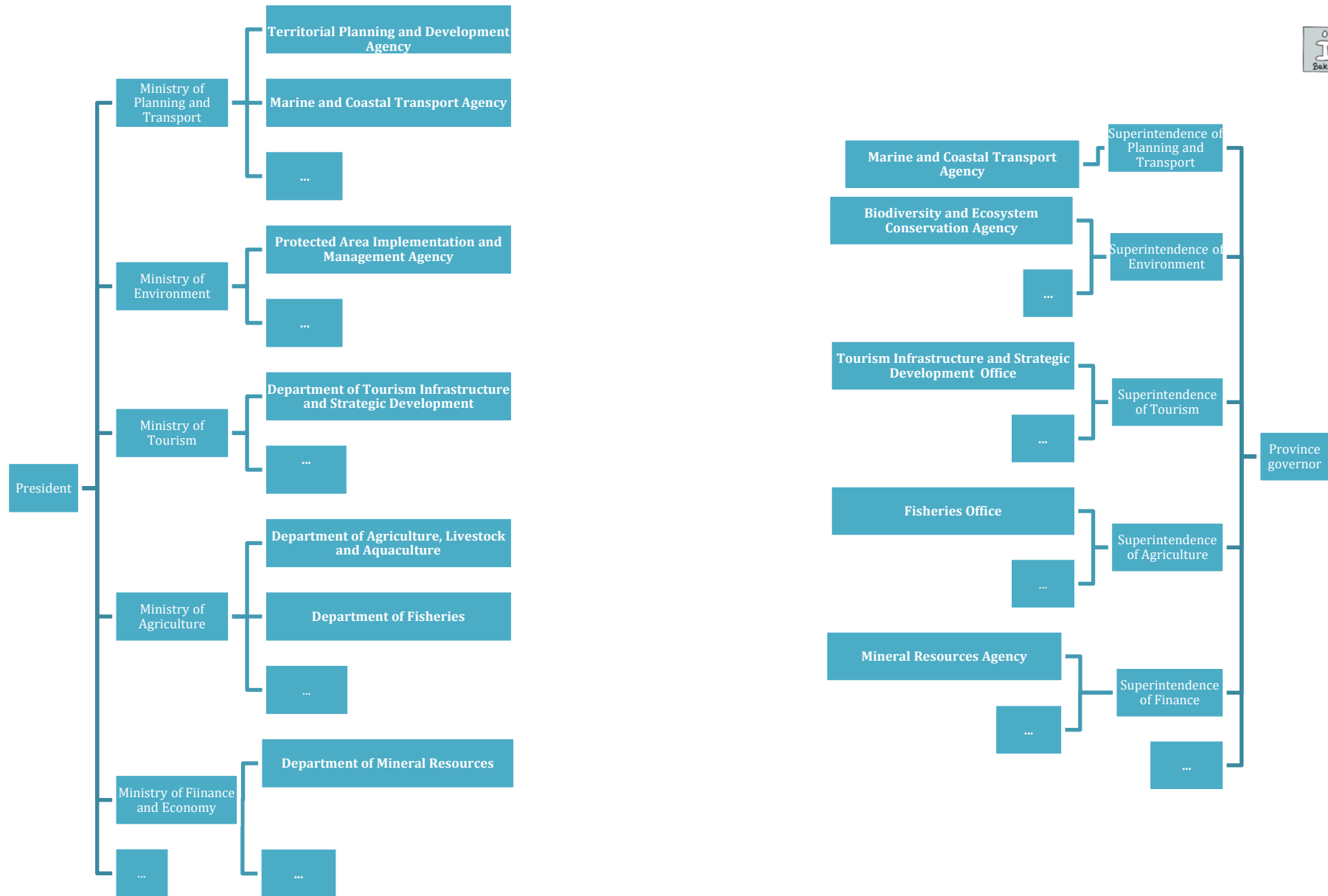


Figure 3: National and provincial government structure in Bakul

### 4.3. Introduction: Organize the process

Organize the process	
<b>Purpose / Learning objectives</b>	After this input, you will: <ul style="list-style-type: none"> <li>• Understand the role and the tasks of the Blue Planning team and other involved actors; and</li> <li>• Understand how to structure the planning process.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Input only (no case work)</li> <li>• If applied in a real case:</li> <li>• Organisation of a Blue Planning team with desired skills</li> <li>• Work plan with defined milestones and responsibilities (see Exercise: Draft a Blue Planning road map)</li> <li>• Defined boundaries for Planning and Assessment Area</li> <li>• Defined time frame</li> <li>• Financial plan with estimates costs and identified means to obtain financing</li> </ul>
<b>Importance</b>	Once you decide to embark on Blue Planning, the following tasks are crucial to organize your process: create a Blue Planning team; develop a work plan; and define time frame as well as boundaries.

#### Creating a Blue Planning team

A key task is to organize the Blue Planning team. While it is important to have a multi-disciplinary team, it is as important to have team members with desirable skills such as strategic and analytical thinking, negotiation and conflict resolution, strategic planning, coordination and organizational management, communication, data management, project implementation and evaluation.

#### Develop a work plan

Actions to develop a work plan include:<sup>3</sup>

- List the main activities needed to develop the plan;
- Break each activity down into manageable tasks, i.e. a task that can be managed by an individual or group and is easy to visualize in terms of resources required and the time it will take to complete. However, be careful, a common mistake is to break the activities into too many small components;
- Choose appropriate time periods for specifying when activities will take place (by week, month, quarter);
- Clarify the sequence and relationships between tasks (Does another task have to be completed before another task can be started? Can two tasks be carried out at the same time?);
- Estimate the start time and duration of each task. This may be represented as a line or bar on a chart.
- Be careful to:
- Include all essential activities and tasks;
- Keep in mind the workload on individuals, and identify where additional assistance may be needed; and
- Be realistic about how long a task will take;
- Identify key events (milestones) to help monitor progress. These are often dates by which a task will be completed; and
- Assign responsibilities for tasks with the various members of the Blue Planning team.

<sup>3</sup> See Ehler & Douvère (2009): p. 38

## Defining boundaries

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The area for which you develop Blue Planning is usually designated and managed as a single unit, e.g., the marine waters of Bakul. Typically, these boundaries will not coincide with the boundaries of a single ecosystem: Often a number of ecosystems of varying sizes exist within, and may extend beyond, the designated Planning Area. At the same time, demands for the resources of the Planning Area might be imposed from areas not necessarily coinciding with your Planning Area. Finally, natural processes such as larval dispersion, sediment transport, and atmospheric deposition of nutrients do not stop at the borders of your Planning Area. Therefore, it is important to recognize two different types of boundaries: (1) boundaries for planning and management; and (2) boundaries for analysis (that take into account external influences and demands on the Planning Area).

## Defining a time frame

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It is essential to define a timeframe for your Blue Planning process. The timeframe consists of two parts:

- A baseline year or period to be used to provide a basis for identifying current conditions; and
- Target year or target period that defines the period you are planning for and allows you to identify a preferred future scenario. This should reflect the ambition of the plan and be realistic. Revision periods (adaptation cycles) should also be defined.

## Obtaining financial support

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Blue Planning is not possible without adequate financial resources. Although Blue Planning is usually inherently a governmental responsibility, a common problem occurs when funding, which may be available for the planning phase, is not available for the implementation, adaptation and revision of Blue Planning measures.

Thus, often other funding mechanisms have to be found. Potential alternative funding mechanisms include:

- Grants and donations;
- Tourism revenues such as diving or yachting fees;
- Payment for Ecosystem Services (PES) schemes;
- Revenues from energy or mining such as fees from offshore oil, gas or wind farms; and
- Fishing revenues such as fishing access payments, eco-labelling and product certification or aquaculture permit fees.
- Partnership approaches in which all beneficiaries of the Blue Planning process contribute to its costs.

#### 4.4. Role play: Define a vision

Define a vision	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand the value of a vision in guiding a BPiP process;</li> <li>• Understand the benefits of participatory vision formulation; and</li> <li>• Develop a vision for the long-term use of your Planning Area that will inform the development of Blue Planning goals and objectives.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Formulation of a vision statement</li> </ul>
<b>Importance</b>	A Blue Planning vision helps guiding the whole process. They should be developed and agreed upon early on in the process.

#### Context

The Federal Government of Bakul decided to establish the Coastal and Marine Management Authority (CMMA), under the Ministry of Planning. The CMMA is an autonomous public statutory body charged with the responsibility of implementing and monitoring policies that govern the use and development of the coastal and marine environments in Bakul.

The major functions of the CMMA are to:

- advise the Minister on all matters related to the coastal and marine zone, and on the formation of policies
- assist in the development of programs and projects
- foster regional and international collaboration
- commission research and monitoring
- assist in the preparation of development guidelines and review the Blue Plan in consultation with stakeholders

The CMMA shall develop Blue Plans for the Exclusive Economic Zone (EEZ) and supervise the development of Blue Plans for terrestrial waters of each province in coordination with the province planning agencies (see Figure 4).

The CMMA has set up a Blue Planning team and a work plan. The CMMA aims to establish a cohesive Blue Plan for a period of the next ten years. The Blue Plan shall be developed for different planning zones within Bakul, covering the two provinces Indare and Exportul with their territorial waters (within 12 nautical miles) as well as the Exclusive Economic Zone (within 200 nautical miles).

The CMMA has already agreed upon a set of guiding principles for the whole process, namely:

1. Sustainable blue development
2. Long term perspective and objectives
3. Ecosystem approach
4. Coherent terrestrial and maritime spatial planning

The CMMA now aims to consolidate an inter-sectoral vision for the future of Bakul's seascape. Therefore, they have asked different stakeholder groups to present their vision of Bakul's future at a first public stakeholder meeting in a press conference.

## Instructions for case work

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You play the role of one of the following stakeholder groups and create your vision for the future of Bakul's seascape:

- Artisanal Fishing Cooperative
- Department of Mineral Resources
- Ministry of Planning and Transport: Marine and Coastal Transport Agency
- Cooperative of Tourism Operators
- Bakul Nature Conservation
- CMMA

The following tool assists your work:

- Text box 4 provides hints on defining a vision

The following information on Bakul supports your work:

- CMMA Guiding Principles for Blue Planning in Bakul (see above)
- Bakul 2004 Biodiversity Protection Act (see page 28)
- Stakeholders in Bakul (see pages 35-40).

### Text box 4: Hints on defining a vision

#### Hints on defining a vision

A vision can either be derived from existing policy documents, for instance national or regional development plans, or it can be created solely for the Planning Area.

Put simply, a vision is a description of what is desired for the area in question. Ideally, it is a lofty, vivid, and idealized description of a desired outcome that inspires, energizes, and helps you create a positive mental picture of your future. A vision for your Blue Plan should include aspects that relate to economics, environment, and the social, and cultural context. It can be stated in one sentence, in a brochure or as a sketch, and can be general or specific.

A vision statement should...

- Describe what all stakeholders want to see happening at your site in the future;
- Not assume that the future world will be the same as the world today;
- Be written in the present tense as if you were living in that future right now;
- Be specific to your Planning Area; and
- Be positive and inspiring.

## Your task

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Step in the role of your stakeholder and reflect upon a vision for Bakul's seascape. Draft a Vision Statement from your stakeholders' perspective. The statement should not be longer than three or four sentences. Be ready to present the vision statement to the CMMA.

The following questions might help you to come up with your vision statement:

- What do you fish for? What can you see, hear and feel in your ideal future? Do not restrict your thinking by any constraints; instead be visionary and creative!
- What challenges would you have to overcome for this future? Think about challenges within your own sector and challenges regarding cooperation with other sectors. Describe possible solutions to solve these challenges rather than the problem.

Also think about how to present your vision statement: Present your results using visual aids.

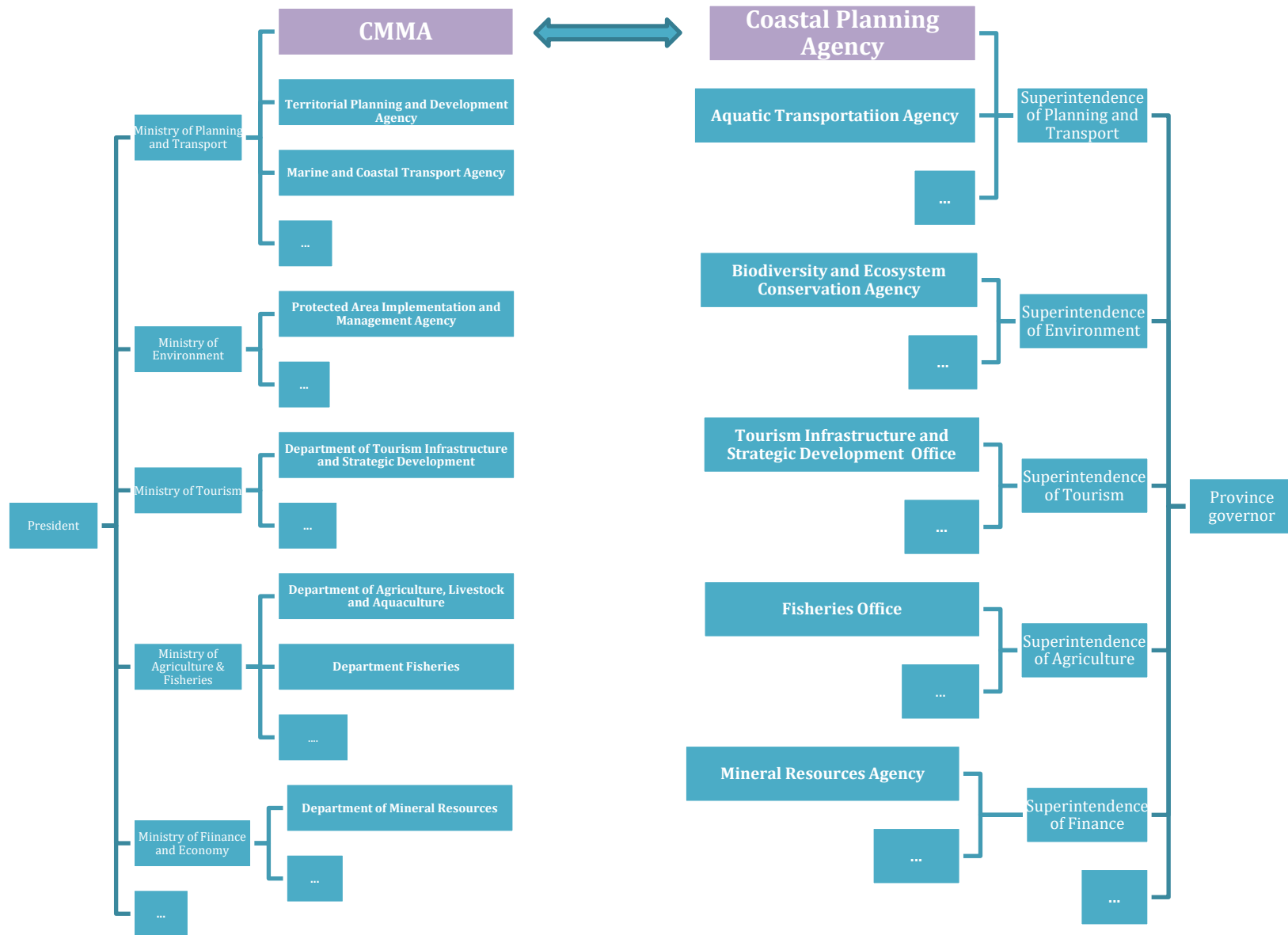


Figure 4: CMMA and government structure in Bakul

#### 4.5. Case work: Develop goals and SMART objectives<sup>4</sup>

Develop goals and SMART objectives*	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand the relationship between a vision, goals and objectives;</li> <li>• Develop goals and objectives that reflect the vision for your Planning Area; and</li> <li>• Understand the value of SMART objectives for monitoring and evaluation.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Formulation of goals that reflect the vision of your Planning Area</li> <li>• Formulation of SMART objectives for Blue Planning</li> </ul>
<b>Importance</b>	Ideally goals and objectives will be derived from particular problems or resources competitions you encounter in your marine area, and will reflect a set of principles and a Blue Planning vision that guide the process.
<b>* SMART stands for: Specific, Measurable, Achievable, Relevant, Time-bound</b>	

#### Context

The CMMA has already agreed upon a set of guiding principles for the whole process, namely:

- Sustainable blue development
- Long term perspective and objectives
- Ecosystem approach
- Coherent terrestrial and maritime spatial planning

Based on these principles and consultations with several stakeholders, the CMMA has consolidated the following vision for the Blue Planning process:

*“A shared ocean provides the cultural identity, heritage, health and wealth to the coastal people of Bakul. A highly productive, diverse and balanced economy guarantees an economically viable, environmentally sound and socially responsible future, based on healthy ocean biodiversity and marine natural resources.”*

The CMMA now needs help to develop goals and objectives based on the information gathered so far during the Blue Planning process, keeping in mind that some objectives might depend on others.

#### Instructions for case work

You play the role of consultant advising the CMMA on developing goals and SMART objectives.

The following tools assist your work:

- Text box 5 provides hints on developing goals and SMART objectives
- Table 3 provides a list of helpful questions supporting the creation of SMART objectives

#### Your task

Your task is to identify Blue Planning goals and objectives for your Planning Area:

1. Review the principles and vision and the information on Bakul’s seascape you have gathered so far during the process.
2. Based on this information and the Blue Planning vision, create four goals for your Planning Area, which you consider most important: Look at your concerns; the goals for your Planning Area should reflect a positive approach to these challenges. If you meet these goals, would you be closer to your vision? Document your results on flipchart.

<sup>4</sup> This exercise has been adapted from McGee, L.A., & Barrett, M.J.: 2013a



- Then, create one SMART objective for each of your goals for your Planning Area. Use the questions in the table 3 below to check whether the objectives are SMART. Again, document your results on a flipchart.

#### Text box 5: Hints on developing goals and SMART objectives

##### Hints on developing goals and SMART objectives

A **goal** describes the end result of your effort, what you expect to achieve through this work. If different stakeholders are working together, then the objectives should be very explicit. Because they are guiding different stakeholders, it is crucial to avoid different interpretations.

It can be helpful to review goals from other Blue Plans when formulating your own. In your own Planning Area, it may be helpful to look at your own agency's past goals, or goals from other collaborative planning exercises you know about to help get you started. Examples of Blue Planning goals might include:

- Ensure sustainability of economic uses of marine space by economically valuating ecosystem services;
- Promote appropriate uses of marine space;
- Reduce and resolve conflicts among current and future human activities;
- Protect marine resources;
- Conserve ecological structure – at all levels of biological organization – to maintain biodiversity and natural resilience of the marine area;
- Protect ecologically valuable areas;
- Restore degraded areas;

When developing goals, be sure that they tie directly to your Planning Area and your vision. Remember to think about solutions to your concerns for the area. If you are worried about overfishing, your goal could be “fishing is conducted sustainably”. If your concern is habitat loss; your goal could become “habitats are preserved (or expanded)”.

An **objective** is a sub-goal. It identifies a short-term, measurable step within a designated period of time that is moving toward achieving a long-term goal. Making your objectives SMART (Specific, Measurable, Achievable, Realistic, and Time Sensitive) is a proven method for success. SMART objectives also serve the purpose of monitoring and evaluation.

##### Differences between goals and objectives include:

- Goals are broad; objectives are narrow
- Goals are general intentions; objectives are precise
- Goals are intangible; objectives are tangible
- Goals are abstract; objectives are concrete;
- Goals can't be measured; objectives can be measured

**Table 3: Characteristics of a good objective**

Characteristics of a good objective*	
<b>Specific</b>	Is the objective concrete, detailed, focused, and well-defined?
<b>Measurable</b>	Can we measure what we want to do? Can the objective be expressed as a quantity?
<b>Achievable</b>	Can the objective be attained with the resources available?
<b>Relevant</b>	Will this objective lead to a desired goal?
<b>Time-Bound</b>	When will we accomplish the objective? Is a finish and a start date clearly defined?

## 4.6. Bringing it home: Identification of need and process design



### Enabling & challenging factors for the process design<sup>5</sup>

The process design is crucial for the whole Blue Planning process. UNEP, the Swedish International Development Cooperation Agency (SIDA) and the Scientific and Technical Advisory Panel of the Global Environment Facility (GEF)/STAP reviewed 73 Blue Planning processes around the world and identified factors that may support and/or challenge the Blue Planning process. At this stage of the Blue Planning process the following factors, which have been taken from UNEP (2016), should be considered as being important for developing a stable Blue Planning process:

An **official mandate** and **government support** of the Blue Planning process has often shown to be a core enabling factor. Not having sufficient support from decision makers is arguably one of the most serious barriers to Blue Planning progress, as often this can hinder the approval of the process, undermine the necessary regulatory authorities and restrict the availability of funding. However, this does not mean that voluntary, bottom-up, or soft-law approaches would not work in Blue Planning. Actually, these may play a strong role in preparing and/or accompanying Blue Planning.

A key is also to understand who, within the Blue Planning process, has the **mandate to make** ultimate resource use decisions, what policies and legislation are in place to define a Blue Planning mandate, how decision making within a Blue Planning process is devolved and coordinated, and what mechanisms are in place to ensure those involved in decision making have appropriate remits, are accountable, and are effectively delivering upon objectives.

A significant challenge to good process design was identified as establishing **unambiguous goals** for the Blue Planning process. Poorly developed goals mean that processes may be destined to fail from an early stage as ambiguous goals inhibit effective communication, progress measurement and outcome delivery. Key issues to be addressed by Blue Planning should be defined already at an early stage of the process to ensure a focused process that tackles relevant issues.

Another challenging element of successful process design was identified as **developing a shared vision**. Many processes have goals set and driven forward by a single or select stakeholder group, usually including those who have the power to impose such goals over others, such as the government in national processes. Although it may be possible for stakeholders to reach consensus around an overarching vision or broad goal, it can be more challenging to do so for more refined objectives.

It is important to understand that Blue Planning **should enable ‘brokerage’ between conflicting or competing interests** to find workable solutions. Explicitly recognising trade-offs between conflicting interests can help to make prioritization decisions transparent and therefore more justifiable to stakeholders.

If the Blue Planning process design itself is poor, or established without sufficient **transparency**, stakeholders may withdraw support from the process or lose trust that their inputs are being fully or appropriately taken into account. Also a lack of consistency in the decision-making process between stages can lose the trust of stakeholders.

Furthermore, establishing strong **coordination across different institutional entities** or sectors, such as federal/state or district/region, was identified as very problematic for several Blue Planning processes. Political support was viewed as a deciding factor in obtaining public and stakeholder approval.

**Leadership**, characterised by providing vision and championing progress, is another essential figure for Blue Planning. Leadership should explicitly communicate Blue Planning goals and objectives and be realistic about what a Blue Planning process can and cannot deliver. The lack of a champion responsible for driving the Blue Planning process forward – either in the form of an individual, organisation or institution – risks the Blue Planning process succumbing to inertia or redundancy in difficult times or losing vital support from stakeholders.

<sup>5</sup> Source: UNEP (2016)

Naturally, **funding** is necessary to support time, effort and continued Blue Planning implementation. **Human capacity and technical expertise** was identified as a particular challenge. Limited human capacity can restrict important activities (e.g. mapping, stakeholder engagement) within a comprehensive Blue Planning process, particularly in remote or transboundary areas. Providing **consistent human resources throughout the Blue Planning process** was noted as an important element supporting a successful outcome.

**Key guidance messages:**

Have a clear Blue Planning process design and communicate it well. Strong Blue Planning governance arrangements reduce barriers to effective Blue Planning. Ensure the necessary resources are in place to support the Blue Planning process. Develop technical capacity and expertise at all levels.

**Blue Solutions and other successful real-life examples**

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- Sound legislative governance framework for spatial planning and management processes (Australia – Jon Day) – Blue Solution
- Lack of effective process design and ambiguous goals– Portugal – Case Study MSP in Practice



**Logbook:**

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*What is one main take away or action item you need to apply or accomplish in this stage of Blue Planning when you return home?*

## 5. Bakul Information: Stakeholders



### Department of Fisheries

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#### *Position*

- Fisheries, as the most significant sector in Bakul, have to be protected.
- The government should economically support efficient fishing techniques.

#### *Interests*

- Increase fisheries revenues, independently of what type or techniques are used.

#### *Needs*

- There is a strong lobby from the Industrial Fisheries sector to push through governmental policies that benefit this activity, especially in terms of facilitating approval of fishing licenses. The Department needs to prove it's been acting towards achieving desired advancements in this area.
- Due to the significant electorate of fishermen, the interests of this group have to be represented at least superficially.

#### *Beliefs*

- Industrial fisheries have been shown to be more efficient than artisanal fisheries.
- Industrial fisheries take place far away from touristy areas. This reduces conflicts between these two sectors.
- Artisanal fisheries are less productive and compete with both industrial fisheries and tourism.
- Traditional fishermen have not been able to adapt to more efficient fishing techniques, and should, therefore, be exposed to regular, market-based price fluctuations.

### Cooperative of Tourism Operators

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#### *Position*

- Tourism should be strongly incentivized by the Bakulian federal government.
- There is no real need to have 'no-go' protected areas in Bakul.
- The revenues of tourism activities are largely converted back to environmental benefits.

#### *Interests*

- The CTO is interested in accelerating and guiding the creation and implementation of laws and regulations which benefit tourism.
- The CTO is interested in subsidies from the federal government as well as in foreign private sector investments.

#### *Needs*

- Tourism operators need lucrative tourist facilities to secure their income.
- Most operators build their business models on mass tourism (large hotels and large group tours).

#### *Beliefs*

- Tourism is the only real win-win activity for economic development and environmental conservation.
- Tourism-related activities only have impacts on the ecosystems when they are excessively performed. However, operators are aware of the need to preserve Bakulian ecosystems, and the market for tourism is, therefore, able to self-regulate.
- The government is only needed to carry-on infrastructural projects and to settle regulatory disputes with local fishermen and with conservationists.

## Department of Mineral Resources

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### *Position*

- There is more than enough space in the sea to accommodate mineral extraction, and Bakulians will be the most direct beneficiaries of the branch's development.
- Encourage extraction firms to apply the ISO 14 000 standards to manage their environmental responsibilities. By this means, extraction activities will do no harm.

### *Interests*

- Has a strong interest to support, legally and economically, extraction activities.
- Plans to push prioritization of extraction activities over other (non-)uses.

### *Needs*

- There is a strong lobby from the Sand and Gravel sector to push through governmental policies that benefit this activity, especially in terms of facilitating approval of extraction permissions. The Department needs to prove it's been acting towards achieving desired advancements in this area.

### *Beliefs*

- The sea is enormous and mostly unused. Mineral extraction has little effect on the health of the ocean in Bakul.
- Sand and gravel extraction, along with the exploitation of the manganese deposits, represents the most profitable activity in Bakul, hardly interfering with other sectors.

## Marine and Coastal Transport Agency

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### *Position*

- Ports and shipping routes must be treated as priority over other uses in Bakul's ocean because of the importance of the transportation sector for the country's economy.
- Maritime safety is guaranteed and continuously improved by a multitude of international conventions.
- Without the additional infrastructure proposed (expansion of the ports, etc.) it will not be possible to receive the number of tourists aimed by the Tourism Sector, nor to further develop freight transport. Therefore, improving maritime infrastructure is a must in Bakulian waters.

### *Interests*

- Increase the capacity of Bakul's ports for transportation of people and goods.
- Some preferred routes could be optimized by dredging channels in some areas of the Bakul Reef and also around ports.

### *Needs*

- There is strong competition to attract exports transportation in Bekule, which has a modern shipping and port infrastructure. Bakul marine transport sector cannot afford to lose the flow of goods and passengers to its neighbour countries.
- There is a need to reassure investors that environmental regulations will not interfere with the shipping and port activities. Some already complain about certain no-go regulations in the Bakul Reef Protected Area, which have been causing costs to go up and also delayed transportation.
- Ports in Bakul are financially independent from the government. They actually provide a source of revenues through profit and taxation, which reinforces the added value of port activities in Bakul.

### *Beliefs*

- Bakul will lose in terms of exports and tourism revenues if shipping routes are inadequate (e.g., if shipping lanes are not as straight as possible, if certain sizes of ships are prohibited in some areas).
- Bekule has privileged its shipping routes, and there is no current evidence that this has harmed the environment or other economy sectors.

## Bakul Sand Work Ltd. (BSW)

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### *Position*

- Goes ahead of environmental directives and shows willingness to pay large compensation sums, in exchange of swift and uncomplicated regulations for sand and gravel extraction in Bakul.
- BSW supports the reforestation program in the Nelam Wetlands by directly investing in the acquisition of thousands of seedlings of mangrove species.
- BSW will also help finance the port expansion, creating hundreds of new jobs.

### *Interests*

- Raise profits in sand and gravel extraction, especially in areas near the reef, which are of easy access. This should reduce extraction costs and raise profits.

### *Needs*

- BSW needs rapid approval and regulation of sand and gravel extraction activities.
- BSW needs to apply for a financing scheme with the Development Bank of Bakul, which gives millions of dollars to finance development activities at very small interest rates.

### *Beliefs*

- Biodiversity protection initiatives delay and/or disturb extraction activities and reduce profits.
- It is enough to invest in protection for areas outside the extraction zones, as a form of compensation.
- These compensation sums represent only a minimal fraction of the extra profit that would arise from extraction activities near the reef.
- Environmental compensation would, therefore, represent a net gain for the environment and for Bakulians that depend on it.
- These activities would also generate hundreds of new jobs, including for former fishermen, which have been pushed away from their fishing grounds by tourism and more competitive, industrial fisheries.



## Artisanal fishing cooperative

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### *Position*

- Traditional fishing grounds should be made exclusive to traditional, small-scale fishermen.
- The cooperative should always be consulted when economic activities with considerable impact are to be started in or around their fishing areas.
- Traditional fishermen should also be included in tourism planning and should be allowed to perform themselves tourism-related activities, such as transporting tourists and acting as guides (e.g. for whale watching).

### *Interests*

- Artisanal fishermen must have guaranteed the right to maintain their traditional activities and fishing grounds.
- For more representation in decision making, artisanal fishermen want to be consulted by the government

### *Needs*

- Artisanal fishermen need to secure their main food and income source, i.e. fisheries resources, on which their livelihoods directly depend.
- The cooperative needs to be financially supported by the government, so that it can help fishermen maintain their activities, especially in times of environmental disasters (like the tropical cyclones) and during temporal closures.

### *Beliefs*

- All activities performed near the coast affect fishermen's livelihoods.
- They are the weakest economy branch in Bakul, but at the same time the most relevant in terms of tradition and cultural, as well as food provision.
- Small-scale fisheries do not harm the environment, no matter what techniques they apply, as long as it's done the traditional way. They have been doing it in Bakul for centuries, and the environmental degradation started after other activities were introduced, especially industrial fisheries. 'There is, and there will always be, enough fish in the sea – for Bakulians, at least!'
- The government has the duty to provide financial support to fishermen, e.g. in times of low prices, by buying overproduction and forcing prices to go back up.

## Bakul Nature Conservation (BNC)

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### *Positions*

- There is an urgent need to stop the growth of and also reduce shrimp farming, especially in Nelam Wetlands
- Gravel, sand and manganese extraction should be entirely forbidden in the reef area (including a buffer zone) and near the islands. Activities should only be allowed in areas that have been extensively researched.
- Compensation measures to harmful activities must contemplate the same ecosystem affected, i.e., occur as near as possible to the affected areas.
- The Precautionary Principle should be applied in all circumstances, and no authorizations should be given under accelerated environmental assessment processes.

### *Interests*

- BNC is interested in expanding its influence in the Bakulian government and getting more and more regulations approved that strictly controls all activities in coastal and marine areas.
- BNC has a strong interest in increasing Bakul's protected areas' extension.

### *Needs*

- More investments on biodiversity conservation and research
- More participation in decision making in environmental matters

### *Beliefs*

- Only a strong government intervention in economic activities can prevent further biodiversity loss
- Bakul's federal government is not genuinely interested in prioritizing environmental protection over economic development. The initiative to start a Blue Planning process in Bakul is mainly due to increasing international pressure for a stronger legislative framework to regulate activities in the ocean and on the coast.
- Industry players and especially large-scale extractive sectors seek mainly profit and are not willing to compromise in order to move towards sustainable practices. Besides, almost all of them are involved in corruption schemes to enhance profit are dishonourable.

## University of Bakul

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### *Position*

- Conservation must be prioritized, but only parallel to sustainable use of Bakul's resources, especially by traditional local users.
- A consistent and comprehensive databank should be created, and impact assessments should be conducted, before any decision on permissions to potentially harmful activities on the coast and at sea.
- Therefore, more social and ecological research is needed, and results will take many years to be compiled and properly examined, to assess viability of different economic development scenarios.
- The University of Bakul should be always consulted by governmental agencies while granting permissions for large-scale activities in the coastal-marine regions.
- Research should be granted access to 'research-only' protected areas, especially in the Reef area and in the Nelam Wetlands.

### *Interests*

- Academia is interested in increasing its participation in decision-making at all governmental levels in Bakul.
- The University is interested in raising Bakul's prestige as an excellent research hub in the Tropics.

### *Needs*

- The University of Bakul has been suffering from a systematic reduction in investments by the government. Recent raises in tuition fees have caused revolt among students, so the University is now looking for sponsoring opportunities through Public-Private Partnerships (PPPs).

### *Beliefs:*

- Research in Bakul is not being given due attention, especially by the government.
- Bakul has the potential to host major research projects in coastal and marine tropical ecology. The country has been losing eminent researchers and prospect scientists ('brain drain') due to lack of proper investment in science.
- Gravel, sand and manganese extraction is potentially very harmful to Bakul's coastal and marine environments. However, with adequate assessments and careful monitoring, these activities might be performed in a way not to harm the ocean and, at the same time, bring important revenues to Bakul.
- Industrial fisheries are an even greater threat to Bakul's ocean and are now happening without due control by governmental agencies.

## 6. Organisation of stakeholder participation



Identifying and involving relevant stakeholders is vital for successful Blue Planning and implementation for a number of reasons, for example, to encourage ‘ownership’ of the Blue Plan, build trust among stakeholders, encourage voluntary compliance with rules and regulation. Above all, stakeholder participation delivers integration. It is a special task in itself and also needs to be considered in other Blue Planning elements. However, involving too many stakeholders at the wrong time or in the wrong form can result in time loss and distraction from the expected or anticipated results. To involve stakeholders effectively and efficiently, you need to consider the following tasks:

### 1. Map stakeholders:

Drawing up a map of stakeholders potentially involved in the Blue Planning process means **visualising all stakeholders according to their roles and relevance**. The map provides an overview of the entire range of stakeholders involved in the system, allowing you to draw conclusions and formulate hypotheses on the stakeholders’ influence on issues addressed by Blue Planning, and concerning the stakeholders’ mutual relationships, power constellations and dependencies. The map offers insight into actual and potential alliances and conflicts. Discussing the map of stakeholders can assist you in formulating strategic options and hypotheses concerning specific stakeholders.

### 2. Identify stakeholders’ interests

Stakeholders’ interests in the Planning Area are usually not fully congruent with Blue Planning objectives. This is only natural, given that Blue Planning by its very nature is a balancing instrument with a holistic long-term perspective. Any change will also usually generate responses of reserve and resistance. To prevent Blue Planning from being vetoed, **it is vital that interests of stakeholders are understood and considered**. Once, stakeholders have articulated their perspectives, it is possible to alleviate feelings of uncertainty and address resistance early on, so that a **negotiation-oriented open climate** for achieving the desired Blue Planning objectives can be created.

### 3. Involve stakeholders

In addition to defining who should be involved, you will also need to decide **when and how to engage stakeholders**. Not all stakeholders need to be involved at all times. Different stakeholder groups, with varying levels of interest and entitlement, can take part in different Blue Planning elements. There are many different techniques to involve stakeholders, ranging from “communication” with no real participation, to “negotiation” where decision-making power is shared among stakeholders.

### 4. Build trust

Building trust is a fundamental prerequisite for effective Blue Planning. As stakeholders are dependent on each other regarding the Blue Planning objectives, hesitant scepticism, mistrust, and tensions are major obstacles to effective and efficient cooperation towards achieving Blue Planning goals and objectives.

## 6.1. Case work: Map stakeholders<sup>6</sup>

Map stakeholders	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand the role of stakeholders in a Blue Planning process; and</li> <li>• Identify and visualise relevant stakeholders and their relationships.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Visualized stakeholder map</li> </ul>
<b>Importance</b>	In situations in which it is important to obtain a picture of the stakeholders involved, ideally early in the Blue Planning process; and monitoring relationships of key stakeholders over time. It might be useful to do a second analysis for the implementation phase, as other stakeholders will be involved or stakeholder will have different roles and responsibilities.

### Context

After consulting several stakeholders, the CMMA has consolidated the following vision for the Blue Planning process:

*“A shared ocean provides the cultural identity, heritage, health and wealth to the coastal people of Bakul. A highly productive, diverse and balanced economy guarantees an economically viable, environmentally sound and socially responsible future based on healthy ocean biodiversity and marine natural resources.”*

The CMMA has started to design the Blue Planning process and now needs help to decide what key stakeholders they should involve in the process.

### Instructions for case work

You play the role of consultant advising the CMMA on key stakeholders to be involved in the process. Build on information from your previous case work.

The following tools assist your work:

- Text box 6 provides hints on identifying relevant stakeholders.
- Figure 5 illustrates an outline for the visualisation of the stakeholder map
- Text box 7 illustrates how to visualize stakeholder relationships

The following information on Bakul supports your work:

- Overview on relevant stakeholders in Bakul (page 45)
- Stakeholders in Bakul (see pages 35-40).

<sup>6</sup> This exercise has been adapted from the Capacity WORKS Tool 09: Map of Actors (see GIZ: 2015).

## Your task

Your task is to identify stakeholders to be involved in the Blue Planning process and assess their relationships. Depending on the issue at stake, stakeholders will be either more or less relevant and influential. Drawing up a map of stakeholders for a specific issue means visualising all stakeholders according to their roles and relevance:

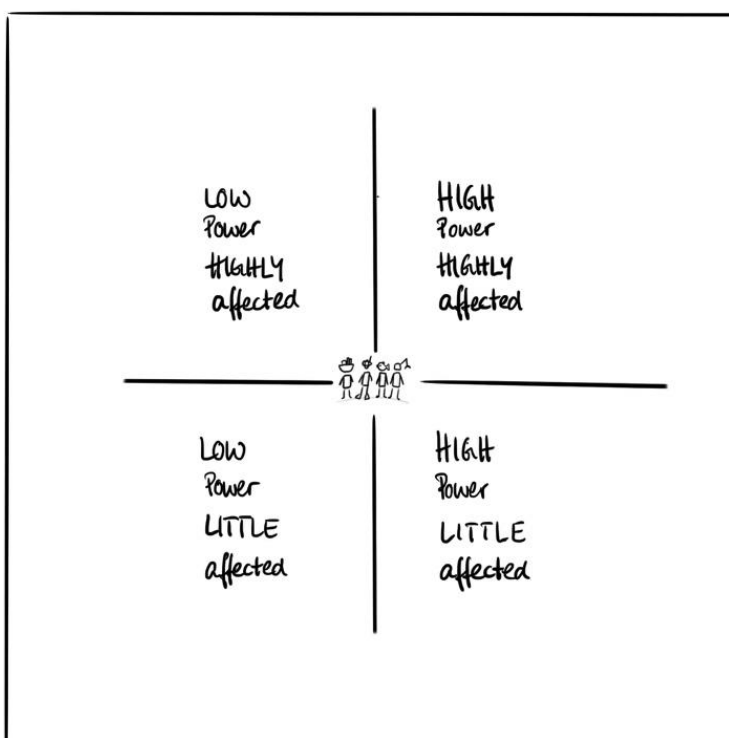
1. **Formulate the key issue:** Start by recalling the CMMA's vision statement (see above) and the identification of need for Blue Planning. What issues does the CMMA wish to address with Blue Planning? The answer will assist you in steering the process of stakeholder identification.
2. Read the overview on relevant stakeholders in Bakul and create a list of **all stakeholders relevant** to Blue Planning in your Planning Area. Also think of others stakeholders not mentioned in the overview provided. Write your stakeholders on cards or Post-Up. Remember: Blue Planning should be a transparent process to which everyone should have access. Document your results on cards. See Text box 6 for hints on identifying relevant stakeholders.
3. **After generating the list of stakeholders, map them into the matrix format below** on a flipchart or pin board. Map the stakeholders based on their relative power and interest:
  - **Power:** describes a stakeholder's level of influence in the system – how much he can direct or coerce the Blue Planning process and other stakeholders.
  - **Affected by BPIP:** describes the degree to which a stakeholder will be affected by Blue Planning in practice.

Position each stakeholder into the relevant grid. It is helpful to **position stakeholders between whom a close relationship exists close to each other**. The distance between stakeholders will then indicate how close their relationship is.

4. In a next step, **visualize the relationships between stakeholders:** To that end, we recommend that you use the symbols below to represent the different type and quality of relationships.
5. In a next step, indicate if a stakeholder is a **veto player**.

**Veto players** are stakeholders without whose support and participation the objectives of the Blue Planning process cannot be achieved, or who may even be able to veto the process. For example, they can be stakeholders possessing existing rights to resources in the Planning Area.

Figure 5: Stakeholder Map



6. **Evaluate the outcome:** In this last step, you jointly discuss the outcome. Is your map of stakeholders an accurate reflection of the current reality? Have you taken into account all relevant stakeholders? What is the first thing that strikes you? What do you think of the picture the map gives you? Are any important elements missing?

**Text box 6: Hints on identification of relevant stakeholders**

**Identification of relevant stakeholders**

The following questions help to create a list of relevant stakeholders:

- Who will be affected by Blue Planning?
- Who will be responsible or accountable for Blue Planning?
- Who will have decision authority on Blue Planning?
- Who can support Blue Planning?
- Who can obstruct Blue Planning?
- Who has been involved in this type of process in the past?

Applying the following formula to identify relevant stakeholder helps to get the “whole system” involved, stakeholders that together can make a difference towards successful Blue Planning in practice. These should be interdependent stakeholders who among them have:

- Authority to act on their own
- Resources of time, money, access, and influence
- Expertise – social, economic, technical – in the topic
- Information that others need
- Need – people who will be affected by the outcome

\*Source: Weisbord, M. & S. Janoff (2010) and Gray, D. et al (2010)

**Text box 7: Stakeholder relationships**

Stakeholder relationships	
_____	Solid lines symbolise close relationships in terms of information exchange, frequency of contact, overlap of interests, coordination, mutual trust etc.
- - - ? - - -	Dotted lines symbolise weak or informal relationships. The question mark is added where the nature of the relationship is not clear.
=====	Double dotted lines symbolise alliance and cooperation partnerships that are formalised contractually or institutionally.
→	Arrows symbolise the dominance of one stakeholder over another.
____/____	Lines crossed by a slash symbolise relationships marked by tension, conflicting interests or other forms of conflict.
____  ____	Cross lines symbolise close relationships that have been interrupted or damaged.



**Bakul Information**

The following stakeholder groups might have an interest in Bakul’s coastal and marine area or could be

affected by a Blue Planning process:

Representatives of civil society:

- Bakul Nature Conservation (BNC)
- Federation of Indigenous People of Bakul (FIPB)
- Artisanal Fishing Cooperative
- Recreational fishers
- Scuba divers
- Coastal residents
- Foreign tourists and international community

Public authorities:

- Secretary of Coastal and Marine Management Authority (CMMA)
- Ministry of Agriculture (MoA; including Department of Fisheries Resources)
- Ministry of Planning and Transport (MPT)
- Ministry of Finance and Economy (MFE; including Department of Mineral Resources)
- Ministry of Tourism (MT)
- Ministry of Environment (MoE)
- Military: Coast Guard and Navy
- University of Bakul

Representatives of the private sector:

- Cooperative of Tourism Operators:
- Palm Oil Cooperative:
- Bakul Sand Work Ltd.:
- Fish & Fins Ltd.:
- Shrimp Farming Company 'Crevette Ltd.'
- Pipeline and cable developers



## 6.2. Case work: Identify stakeholders' interests<sup>7</sup>

Identify stakeholders' interests	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>Identify stakeholders' interest in Blue Planning.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>Visualised overview on stakeholders' alignment with Blue Planning and conflicting objectives (tables)</li> </ul>
<b>Importance</b>	<p>Before identifying stakeholders' interests, you must have a good knowledge of the key stakeholders and be able to understand them. Ideally, identify stakeholders' interests after you have completed the map of stakeholders.</p> <p>If you plan to identify stakeholders' interests jointly with key stakeholders, a high degree of openness and trust will be required.</p>

### Context

The CMMA has reviewed your work on Blue Planning goals and objectives and accepted your suggested set of goals and objectives. It now uses it to steer the Blue Planning process and is keen to learn more about stakeholders' interests in Blue Planning.

### Instructions for case work

You continue to play the role of consultant advising the CMMA on key stakeholders and their interest. Build on information from your previous case work.

The following tools assist your work:

- Text box 8 provides hints on identifying stakeholders' interests
- Table 4 and Table 5 assist in identifying stakeholders' interests

The following information on Bakul supports your work:

- Stakeholders in Bakul (see pages 35-40).

### Your task

Your task is to identify and specify stakeholders' interest in Blue Planning. The task is divided into two steps: First you establish the degree of alignment between stakeholder interests and Blue Planning goals, to then assess conflicting interests.

#### *Step 1: Establish degree of alignment with Blue Planning goals*

Discuss the four dimensions mentioned in the text box 8 for each relevant key stakeholder. Use the Table 4 to guide your work. Work in grid lines and relate your finding to one another. First review and list your Blue Planning objectives.

- In column A list the key stakeholders you have identified in the "Map stakeholders" exercise.
- In column B brainstorm their interests in Blue Planning: How do they use the Planning Area? What could be their interest in Blue Planning? Refer to the result of the inventory process.
- In column C assess the alignment with Blue Planning goals from -- to ++ (--, -, 0, +, ++).
- In column D assess possible effects of harmony, dissonance and or indifference. How could this stakeholder support Blue Planning?
- In Colum E brainstorm possible options for broadening the scope of action: What to do? How can you make use of the stakeholder's interests in Blue Planning?

<sup>7</sup> Steps 1 and 2 of this exercise have been adapted from the Capacity WORKS Tool 11: Interest of Key Actors (see GIZ: 2015).

Table 4: Alignment with Blue Planning

Alignment with Blue Planning				
Blue Planning goals:				
A	B	C	D	E
Key stakeholders	Interests	Alignment	Possible positive effects	What to do?
Stakeholder 1				
Stakeholder 2				
Stakeholder 3				

Text box 8: Hints on identifying stakeholders' interests

### Hints on identifying stakeholders' interests

When analysing the attitudes of key stakeholders towards your Blue Planning efforts, in a *first step* you need to ask the following questions:

- What interests do key stakeholders have in Blue Planning?
- To what extent do these interest align with your Blue Planning goals?
- What effects might this alignment or lack of alignment have on the Blue Planning process?
- What strategic options do you need to develop to broaden your scope of action, win the support of stakeholders and eliminate obstacles (for example, in relation to information and communication, structuring participation, strengthening relationships between stakeholders and supporting negotiation processes)? How should you manage the Blue Planning process so that key stakeholders can be involved effectively?

In a second step you should shed light on stakeholder's interests that may conflict with the project. Jointly discussing the situation can:

- Help identify beliefs that stakeholders share. For instance, stakeholders in the government administration may fear that they could lose legitimacy and influence in a transnational Blue Planning process.
- Enable planners to address and work through conflicting objectives with key stakeholders early on. In the case of transnational Blue Planning this could mean, for instance, broadening the mandate of national government administration to include new tasks of regulation and supervision.

*Step 2: Assess conflicting interests*

Use the following table to shed more light on any stakeholders’ interest that may *conflict* with the Blue Planning goals. Work in grid lines and relate your finding to one another:

- In column A, B & C transfer your results from table 4 above for those stakeholders for whom you have assessed a negative alignment with Blue Planning goals.
- In column D brainstorm fears and/ or anticipated losses that might motivate action of the key stakeholder.
- In column E brainstorm what conflicts need to be addressed: The first question you need to ask is whether conflict should be made explicit and addressed at all. This question is crucial, because heedful addressing tension and conflict always has positive spin-offs/results. For example, it could help clear up other unresolved issues, such as the division of roles between stakeholders.

**Table 5: Conflicting interests**

Conflicting interests				
Blue Planning goals:				
A	B	C	D	E
Key stakeholders	Interests	Alignment	Fears and anticipated losses	What conflicts need to be addressed?
Stakeholder 1				
Stakeholder 2				
Stakeholder 3				

### 6.3. Case work: Involve stakeholders

Involve stakeholders	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Know how to develop a participation strategy; and</li> <li>• Understand how to work and communicate with stakeholders, especially in multi-sectorial settings.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Visualised outline on how and when to engage stakeholders (table)</li> </ul>
<b>Importance</b>	Involving stakeholders is vital for the success of Blue Planning. Thus, it should be planned early and throughout the Blue Planning process.

#### Context

Your consultancy has identified key stakeholders to be involved in the Bakul Blue Planning Process (see Stakeholder Map Exercise). The CMMA now needs your help in deciding when and how to involve these stakeholders in the Blue Planning process.

#### Instructions for case work

You continue to play the role of consultant advising the CMMA on key stakeholders and how and when to involve them in the Blue Planning process. Build on information from previous case works.

The following tools assist your work:

- Text box 9 provides hints on involving stakeholders
- Figure 6 displays different types of stakeholder participation
- Table 6 elaborates on advantages and disadvantages of different stakeholder participation techniques
- Table 7 assist in planning when and how to involve stakeholders
- Stakeholders in Bakul (see pages 35-40).

#### Your task

Your task is to identify when and how stakeholders should be involved in the Blue Planning process. Use table 7 to decide which stakeholder to involve in which elements of Blue Planning and how. Work in grid lines and relate your findings to one another:

- Column A displays the Blue Planning elements. You may want to add the specific tasks (exercises) within each element.
- In column B list the key stakeholders to be involved in this element.
- In column C define the type of involvement for each stakeholder to be involved in this Blue Planning element.
- In column D brainstorm the main objective of these meetings and/ or activities.
- In column E identify suitable stakeholder participations techniques: How will you involve this stakeholder? Think about appropriate means of engagement. You may consult the “Stakeholder Participation Techniques” below (see Table 6).

**Text box 9: Hints on involving stakeholders**

**Hints on involving stakeholders\***

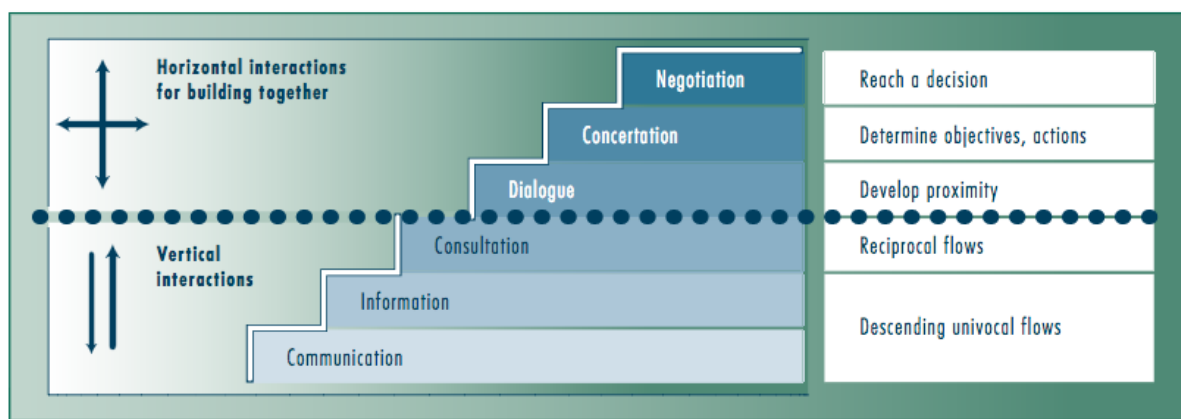
In a first step you will need to decide when to involve stakeholders. Reflect about the different Blue Planning elements and the key stakeholders you have identified and decide who needs to be involved in which element.

In a second step you will need to decide how to involve these stakeholders. The following differentiation can assist you:<sup>1</sup>

- **Messaging:** Authorities responsible for Blue Planning want to convey a message to a target audience and obtain approval for what their message asserts, suggests, and decides. Communication does not involve stakeholders in any active way.
- **Information:** Authorities responsible for Blue Planning want to keep a target audience informed about their intentions, decisions and attempts to provide a basis of understanding, but don't expect any particular reaction. Unlike communication, the information is intended to be objective and represents a way to empower stakeholders to react to decisions or take a position with full knowledge of the facts.
- **Consultation:** Authorities responsible for Blue Planning collect the opinions of stakeholders they have consulted. The opinions expressed need to be considered in the further decision making, but with no guarantee that they will be taken into account. The reasons why statements were not taken up should be made transparent.
- **Dialogue:** A form of 'horizontal' interaction among stakeholders who are positioned as equals. There is no precise purpose other than to know and understand one another better. Dialogue is intended to create a sense of proximity and mutual understanding about the problems and solutions for a particular Planning Area.
- **Concertation:** A form of 'horizontal' interaction among stakeholders who are positioned as equals. Unlike dialogue, the purpose is to develop a common position among a group of stakeholders that can be presented or defended before the authorities responsible for Blue Planning. (Concertation is a French term referring to musicians playing an instrument with the purpose of creating a common outcome, e.g. a concert).
- **Negotiation:** A form of 'horizontal' interaction in which both stakeholders and the authorities responsible for Blue Planning have equal powers for decision-making.
- 

\*Adapted from: Bouamrame 2006

**Figure 6: Different types of stakeholder participation** (Adapted from Bouamrame 2006)



**Table 6: Stakeholder Participation Techniques**

Stakeholder Participation Techniques <sup>8</sup>		
Method	Advantages	Disadvantages
<b>Advisory group/ Task force</b>	<ul style="list-style-type: none"> <li>• Provides for interaction between agency and full spectrum of community opinion</li> <li>• Creates forum for interaction between groups themselves</li> <li>• Good forum for creating consensus</li> <li>• Group members become knowledgeable and make informed recommendations</li> </ul>	<ul style="list-style-type: none"> <li>• Selections for group members must be credible to public</li> <li>• Group activity must be linked to real decisions</li> <li>• Requires much staff time and support</li> <li>• Public doesn't automatically accept group recommendations as representative of larger public</li> <li>• Disputes over group's mandate can develop</li> </ul>
<b>Exhibitions</b>	<ul style="list-style-type: none"> <li>• Can be seen by whole community,</li> <li>• Opportunity to imaginatively present context and issues,</li> <li>• Useful for distributing newsletters, leaflets, and questionnaires or as back cloth to meeting,</li> <li>• Staff can directly answer questions and attract interest.</li> </ul>	<ul style="list-style-type: none"> <li>• May be poorly attended</li> <li>• Not all venues equally attractive</li> <li>• Runs risk of dullness</li> </ul>
<b>Flyers</b>	<ul style="list-style-type: none"> <li>• Useful to identify key issues</li> <li>• Easy to produce</li> <li>• Useful public relations</li> <li>• Wide coverage.</li> </ul>	<ul style="list-style-type: none"> <li>• Takes time and money to produce</li> <li>• May over-simplify</li> <li>• May encourage unjustified claims.</li> </ul>
<b>Focus Group</b>	<ul style="list-style-type: none"> <li>• Helpful in assessing emotional and other qualitative factors</li> <li>• Cheaper and yields greater depth data than surveys</li> </ul>	<ul style="list-style-type: none"> <li>• No claims can be made about statistical accuracy</li> <li>• Public may have false perceptions about how focus group data are used</li> <li>• Cannot substitute for more visible forms of participation</li> </ul>
<b>GIS based website</b>	<ul style="list-style-type: none"> <li>• Large potential audience</li> <li>• Raises awareness and provides open access to data.</li> </ul>	<ul style="list-style-type: none"> <li>• Intimidating medium for many sectors of population</li> <li>• Needs constant updating to remain relevant</li> <li>• Can be expensive and impersonal.</li> </ul>
<b>Internet</b>	<ul style="list-style-type: none"> <li>• Allows widespread access to resources on issues</li> <li>• Allows for participation from geographically broad audience</li> </ul>	<ul style="list-style-type: none"> <li>• Not everyone has access to the Internet</li> <li>• Training may be required to use some technologies</li> <li>• Technology may be unreliable</li> <li>• Technology is still developing</li> </ul>

<sup>8</sup> Table adapted from: McGee, L.A., & Barrett, M.J. (2013a)

<b>Stakeholder Participation Techniques (ctn.)</b>		
<b>Method</b>	<b>Advantages</b>	<b>Disadvantages</b>
<b>Interview</b>	<ul style="list-style-type: none"> <li>• Can provide more in-depth information than any other method</li> <li>• People provide more information in private than they will in public</li> </ul>	<ul style="list-style-type: none"> <li>• Time-consuming</li> <li>• The number of interviews possible is usually limited by time</li> <li>• Skilled interviewers are required</li> <li>• Interview responses are not visible to the rest of the public</li> </ul>
<b>Large group/small group meeting</b>	<ul style="list-style-type: none"> <li>• Provides great interaction despite large group size</li> <li>• Participants can solve problems or complete tasks</li> <li>• Produces greater enthusiasm than other large meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Group may resist breaking into smaller groups</li> <li>• Logistics of smaller break-out groups can be cumbersome</li> <li>• Organized groups may dominate some small groups</li> </ul>
<b>Local Media</b>	<ul style="list-style-type: none"> <li>• Large potential audience</li> <li>• Relatively cheap</li> <li>• Good for public relations</li> <li>• Raises awareness.</li> </ul>	<ul style="list-style-type: none"> <li>• Uncertainty over how media will use material; may not use it at all, get story wrong, or stress conflicts.</li> </ul>
<b>Newsletter</b>	<ul style="list-style-type: none"> <li>• Sets scene for dialogue, opportunity for all to contribute, strong image of the project, can be co-ordinated with a website</li> </ul>	<ul style="list-style-type: none"> <li>• Open-ended commitment, can suffer from ‘fatigue’ if process extended</li> <li>• May use too much professional terminology.</li> </ul>
<b>Open house</b>	<ul style="list-style-type: none"> <li>• Allows one-on-one interaction between stakeholders and agency</li> <li>• Can be designed so that participants can provide written comments</li> <li>• Event design is highly flexible and can be made formal or informal</li> </ul>	<ul style="list-style-type: none"> <li>• Participants may not hear the views and opinions of others</li> <li>• May be difficult to systematically collect participant input</li> <li>• Does not give stakeholder groups an audience to address</li> </ul>
<b>Poll or survey</b>	<ul style="list-style-type: none"> <li>• Helps to assess opinions of broader public</li> <li>• Results can be described and presented quantitatively</li> </ul>	<ul style="list-style-type: none"> <li>• Requires trained staff to conduct process</li> <li>• Faulty methods can yield misleading results</li> <li>• Only provides results for a particular moment in time—results may change in near future</li> <li>• Potentially high costs</li> </ul>
<b>Public hearing</b>	<ul style="list-style-type: none"> <li>• All participants can have their comments recorded verbatim</li> <li>• Highly transparent; all participants can hear what others say</li> </ul>	<ul style="list-style-type: none"> <li>• May result in speeches rather than discussion of issues</li> <li>• Does not provide for interaction</li> <li>• Can be manipulated or controlled by organized groups</li> </ul>

Stakeholder Participation Techniques (ctn.)		
Method	Advantages	Disadvantages
<b>Public meeting</b>	<ul style="list-style-type: none"> <li>• Can be less formal than a public hearing</li> <li>• Participants can have their comments recorded (usually not verbatim)</li> <li>• Typically more interactive than public hearing</li> <li>• Highly transparent; all participants can hear what others say</li> </ul>	<ul style="list-style-type: none"> <li>• May result in speeches rather than discussion of issues</li> <li>• May contribute to polarization of parties</li> <li>• Can be manipulated or controlled by organized groups</li> </ul>
<b>Town meeting</b>	<ul style="list-style-type: none"> <li>• Greater interaction and less formality than public hearing</li> <li>• Provides for much interaction</li> </ul>	<ul style="list-style-type: none"> <li>• May contribute to exaggerated or fixed positions</li> <li>• May not provide venue for problem solving</li> </ul>
<b>Workshop</b>	<ul style="list-style-type: none"> <li>• Effective for problem solving or completing a task</li> <li>• Highly interactive: people feel views are valued;</li> <li>• Useful for producing agreement</li> <li>• Encourages ‘grass roots’ to express views;</li> <li>• Can be very creative; flexible, targeted debate, possibly less confrontational,</li> <li>• Involves interested and well informed;</li> <li>• Helps start a common outlook.</li> </ul>	<ul style="list-style-type: none"> <li>• Limits number of participants that can be involved</li> <li>• Those with fixed positions may resent workshop process</li> <li>• May arouse expectations that can’t be met</li> <li>• Needs careful management, continuity and follow-up</li> <li>• Depends on quality of facilitation</li> <li>• Doesn’t necessarily represent a balanced point of view.</li> </ul>



**Table 7: How and When to Engage Stakeholders**

<b>How and When to Engage Stakeholders</b>				
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>Blue Planning element</b>	<b>Key stakeholders involved</b>	<b>Type of Involvement (Negotiation, concertation, dialogue, consultation, information, or messaging)</b>	<b>Objective of these meetings and/or activities</b>	<b>Stakeholder Participation Technique</b>
<b>Identification of need and process design</b>				
<b>Inventory and analysis of current &amp; future conditions</b>				
<b>Draft &amp; Approval of the Spatial Management Plan (SMP)</b>				
<b>Implementation and enforcement of SMP</b>				
<b>Monitoring, revision &amp; adjustment</b>				

## 6.4. Introduction: Build trust<sup>9</sup>

Build trust	
<b>Purpose / Learning objectives</b>	After this input, you will: <ul style="list-style-type: none"> <li>• Understand the importance of trust in a multi-stakeholder process like Blue Planning; and</li> <li>• Have an overview on how to assess the basis of trust and how to identify trust-building activities.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Input only (no case work)</li> <li>• If applied in a real case:               <ul style="list-style-type: none"> <li>• Assessment of cooperation climate;</li> <li>• Compilations of hypothesis on cooperation climate;</li> <li>• Plan of trust-building activities</li> </ul> </li> </ul>
<b>Importance</b>	Building trust is a fundamental prerequisite in a multi-stakeholder process like Blue Planning. Yet, trust is an elusive quality, because it cannot be produced on demand. It grows slowly, is invested and allowed to mature, but sometime can be lost and tacitly withdrawn.

Building trust is a complex communication process that requires considerable investment of time and money. It is not so much the explicit interests of stakeholders involved that play a crucial role in building trust, but rather their mutual perceptions and assumptions.

Trust is built in four ways:

- **Personal experience:** Previous positive or negative interaction experiences are used to make assumptions concerning the future behaviour of the other stakeholder.
- **Reputation:** The observation and experience of other parties are used to make assumptions concerning the future behaviour of the other stakeholder.
- **Sense of identification:** Familiarity with rules and core values make it easier for a stakeholder to make swift assumptions concerning the future behaviour of the other stakeholder.
- **Recognised rules/ institutions:** Non-partisan third parties can play a key role in building trust by laying down a cooperation framework or acting as arbitrators.

The management model Capacity WORKS from GIZ offers a useful tool that supports assessing the cooperation climate, assessing features of successful partnerships and planning trust-building activities (see GIZ: 2015).

<sup>9</sup> Input based on Capacity WORKS Tool 15: Building Trust (see GIZ: 2015).

## 6.5 .Bringing it home: Organisation of stakeholder participation



### Enabling & challenging factors<sup>10</sup>

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Blue Planning is a participatory process. Engaging relevant and representative stakeholder sectors and designing appropriate participation methods and opportunities is a challenge but a necessary one for any Blue Planning process. UNEP (2016) highlight the following aspects as being of central relevance for the success of the process:

Blue Planning should be designed as an open and collaborative process through both top-down and bottom-up engagement, including **the involvement of representative stakeholder sectors**. There is a need to fully engage all stakeholders, including governmental, cross-sectoral, and the public. The **involvement** of all relevant stakeholders **early in the process** and throughout each stage is seen to be important for achieving more detailed engagement and communication with the sectors involved in the process. Stakeholder engagement may also be critical for ensuring an ecologically responsible and **democratic process** and to make sure that stakeholders **feel an ownership** of the process.

There is a significant **relationship between user group support and** the medium-term and longer-term **progress** in meeting the Blue Planning objectives and in gaining positive ecological benefits

► **Key guidance messages:**

Ensure that stakeholder engagement is ample and inclusive.

### Blue Solutions and other successful real-life examples

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- Public participation to strengthen and legitimize planning processes (Australia – Jon Day) – Blue Solution
- Insertion into the community (Columbia – Joge Jimenez) – Blue Solution Buidling Block
- Late involvement of stakeholder and unclear communication – Dogger Bank – Case Study MSP in Practice

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<sup>10</sup> Source: UNEP (2016)

**Logbook:**

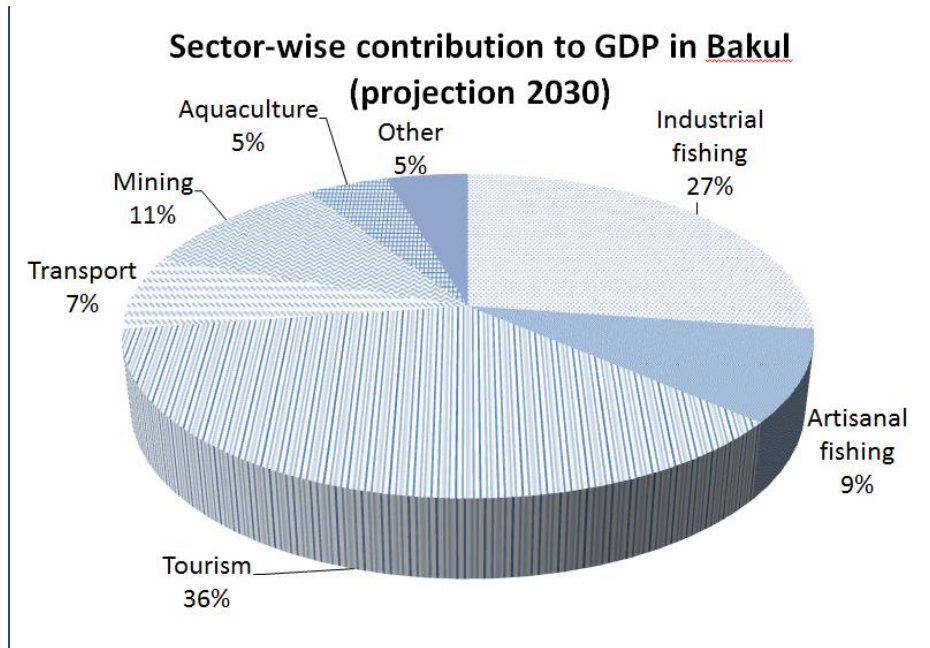
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*What is one main take away or action item you need to apply or accomplish in this stage of Blue Planning when you return home?*

## 7. Bakul Information: Future development



Figure 7: Sector-wise contribution to GDP in Bakul (projection for the next 15 years)



### Bakul's 10-Year Development Plan

#### Vision:

A hub of international tourism driven by a highly productive, diversified, knowledge-based, private sector-led economy, steered by morally upright, visionary and competent leaders alongside law-abiding and self-reliant citizens living in an ecologically sound community.

#### Goals:

- Improve the standard of, and access to training in the sector of tourism to encourage vocations of young locals and support the reconversion of fishermen
- Enhance tourism in coastal areas through marine and terrestrial infrastructure development
- Significantly enhance exports of fish, palm oil, timber and minerals
- Agriculture and fishery support services for increased productivity and income
- Encourage private sector participation in the fisheries, aquaculture and agriculture sector as well as in the tourism sector
- Enhance coastal protection, reduce existing ecosystem threats and create internationally recognized national parks

## Bakul Strategic Plan for the Agriculture, Fisheries and Aquaculture sector

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### **Vision:**

Bakul's industrial fisheries sector has become internationally competitive. Palm oil and timber net exports are drastically increased, while the aquaculture sector remains an important component of the national economy.

### **Objectives:**

Enhance the sector's production and exports

- Within the next ten years, reinforce Bakul's fishing fleet with more industrial bottom trawlers and expand fisheries targets to additional fish species that find good uses on international markets.
- Within the next ten years, increase the overall supply of fish products to meet the processing industry and human consumption demand.
- Within the next ten years, increase total net exports of products from Bakul's agriculture, especially palm oil and timber wood.
- Within the next ten years, increase revenue generation from Bakul's Exclusive Economic Zone (EEZ), implement a licensing scheme for foreign fishing fleets for access to fisheries, including both demersal and pelagic fisheries.
- Within the next 10 years, enhance monitoring at sea to improve compliance of Bakul's artisanal fishing fleet with the fishing permit system and effectively implement a national Observers Program aboard every industrial fishing vessel so as to document catch and landing.
- By fighting against Illegal, Unreported and Unregulated (IUU) Fishing in Bakul's waters, especially regarding foreign fleets.

## The Minerals Industry Proclamation

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### **Vision:**

The Minerals industry (MI), especially marine sand and gravel extraction, is a significant provider of wealth and jobs. Today it is the source of around a third of Bakul's total exports, and underpins some of the country's most important global trading relationships. Furthermore, valuable deposits of phosphor and other strategic minerals have been recently discovered in the EEZ, and, through phosphor extraction, the Department of Mineral Resources aims to more than double the mineral sector's contribution to Bakul's GDP.

According to Bakul's 10-Year-Development-Plan, the MI is the key industry for the country's economic development.

### **Main goals:**

- The MI provides long-term jobs
- The MI provides commodities to answer increasing demand for the purpose of coastal defense, land reclamation, and construction (road building, ports, housing, etc.)
- The MI is the future basis of the state's most important global trading relationships
- The MI has the Federal Government's commitment to provide certainty for investment, fiscal certainty, and infrastructure to foster a vibrant mining sector

### **Indicator:**

To achieve the stated goals, the sand and gravel extraction should be increased by 300% and phosphor extraction should be introduced within the next ten years.

## Bakul's Transport Sector Plan

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### **Vision:**

Efficient transport infrastructure is the lifeblood of a strong and dynamic Bakul as a competitive site for economic activity, and it is a crucial prerequisite for growth and employment. It lays the foundations for sustainable mobility for people and goods, with improved accessibility and a higher quality of life.

### **Goals:**

Our marine infrastructure is strengthened and provides an adequate grid for Bakul in terms of goods traffic, passengers transport and leisure activities.

- Within the next ten years, the Historic Harbour has the capacity to handle around twice the number of ships as of today.
- Within the next ten years, a new Cruise ship dock, built as part of the Historic Harbour, has the capacity to attend cruise liners with twice the current number of visitors/day.
- Within the next ten years, the Marvelous Marina is expanded and provides space for three times more vessels than today.
- Within the next ten years the Blue Coast Highway is installed with four lanes, providing access to the Hotel Boulevard and connecting all ports as well as the main roads connecting Hanku with the rural areas.
- Within the next ten years the highland and central regions for agricultural activities are connected with the Historic Harbour via at least two modern two-lane highways

### **Observations:**

- Maritime safety is guaranteed and continuously improved by a multitude of international conventions.
- The maritime industry in Bakul is a sector of the economy with excellent prospects for the future and is of great importance to the economy as a whole.

## Bakul Tourism Sector Plan

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### **Vision:**

Ecotourism represents the biggest sector of our national economy and generates significant revenue, contributing to economic growth and poverty eradication in Bakul.

Levels of community participation in the sector are enhanced, social tourism programs are run effectively and external private sector investment in the sector of tourism and recreation is increased.

### **Objectives:**

- By 2025, achieve a highly competitive tourism sector that attracts international and domestic tourist arrivals to Bakul with a number of visitors per year three times as large as today's number.
- By 2020, enhance national revenue from the ecotourism sector by 50% and incomes of population employed in this sector by 10%.
- Inspire, engage and convert stakeholders to alternative, sustainable livelihoods of the tourism sector (arts and handicrafts, tourist guide, catering, etc.), with an aim to increase the number of jobs in the branch by 30% until 2020. This will in turn improve the visitors' experience by offering them improved exposure to Bakul's people, heritage and culture.
- By 2025, double the annual investment in community-based tourism ventures, with a share of at least 20% of the total investment carried by the private sector.
- By 2020, construct new hotels to double the current capacity to accommodate tourists.

## Bakul Environment Strategy Plan

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### **Vision:**

Bakul's healthy ecosystems are the basis for human well-being and socio-economic prosperity. The direct pressures on biodiversity are reduced, its sustainable use is promoted, and the benefits to all from ecosystem services are enhanced through participatory management.

### **Objectives:**

- Within the next ten years, an effectively and equitably managed, ecologically representative and well connected system of national reserves covers at least 10% of Bakul's coastal and marine areas. All stretches of beach serving as nesting habitats for marine turtles are nominated as protected area (CBD Strategic Plan for Biodiversity, Aichi Target 11.)
- Within the next ten years, reduce by 20% the existing non-climate-related stresses such as marine pollution, habitat loss and unsustainable fishing practices (Aichi Targets 5, 6, 7, 8).
- Within the next ten years, safeguard coastal features that provide essential services, including mangroves and coral reefs (Aichi Target 14).
- Within the next ten years, improve participation of local communities for the conservation and sustainable use of biodiversity (Aichi Target 18).
- Within the next ten years, enhance Bakul's ecosystem resilience by conserving and restoring natural barriers to coastal erosion (e.g., mangroves, sand banks).
- Within the next fifteen years, enhance international recognition of Bakul Reef Protected Area by proposing it as a UNESCO Man and the Biosphere Reserve.

## Bakul information

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### *2004 Biodiversity Protection Act*

The main objectives are to:

- provide for the protection of the environment, especially in areas of national environmental significance
- conserve elements and functions of ecosystems and the goods and services they provide
- promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources

Bakul is also committed to protecting habitats considered of extreme relevance for native species, especially with regards to feeding, reproduction and/or migration. According to this act, these habitats must be safeguarded from threatening anthropogenic activities, in spatial and temporal dimensions that are considered suitable with respect to their use by species.



## 8. Inventory and analysis of current and future conditions



A core element of the Blue Planning process is inventorying and analysing current and future human uses and the status of the ecosystems in both the Planning Area and the whole Assessment Area.

An inventory is a means of gathering information on the current conditions of the coastal and marine environment. Its purpose is to bring together a wide range of baseline information. An inventory should also take into account any obvious trends and developments in order to be able to assess future conditions at a later stage of the planning process.

Within this element, the following tasks need consideration. Remember, these tasks do not necessarily need to be tackled consecutively as displayed below. In fact, planning is a dynamic process, that needs to be adapted to each specific context and should include many feedback loops within the process. The symbols below indicate where a consideration of Stakeholder involvement and Monitoring and Evaluation will be especially helpful.

### 1. Map your seascape

In a first step, you **collect and analyse spatial information** on oceanographic and other physical environmental features, such as distribution of natural resources (ecosystems and ecosystem services) and spatial information about current and future human activities. This information will construct your baseline. Not all data are useful at this stage of the Blue Planning process and the choice of data, among those available, must thus be made carefully.



### 2. Identify spatial incompatibilities:

For planning purposes, it is important to **visualise what the spatial incompatibilities in a given area may be**. Whether or not a human use is compatible within your Planning Area, is assessed by comparing any single use with other uses in the area.



### 3. Determine when Decision Support Tools are useful

A large number of tools currently exist, or are being developed, which facilitate and support planning processes. These tools can be a helpful resource but are not necessarily needed for effective Blue Planning. It is important to **be aware of what these tools can and cannot offer to Blue Planning and decide whether or not they would be useful in your specific context**.



## 8.1. Case work: Map your seascape

Map your future seascape	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Describe future uses by sectors, specific users and seasonal parameters;</li> <li>• Describe future drivers of biodiversity loss; and</li> <li>• Understand issues of time and scale in data mapping and analysis.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Map of projected future demands of ocean space.</li> <li>• List of future drivers of biodiversity loss.</li> </ul>
<b>Importance</b>	Initially an inventory is used simply to gather information, providing the necessary background information for Blue Planning. However, collating necessary information is likely to be an incremental process. The inventory should be refined during the process to reflect modified objectives and new sources of data.

### Context

The CMMA aims to establish a cohesive Blue Plan for a period of the next ten years. The plan shall be developed for different planning zones within Bakul covering the two provinces Indare and Exportul with the territorial waters (within 12 nautical miles) as well as the Exclusive Economic Zone (within 200 nautical miles).

The CMMA was quite happy with your analysis of the need for Blue Planning. Based on that analysis, it already designed the whole process and organized the participation of stakeholders. Yet, it now needs to take into consideration the country's future development plan as well as different sector plans.

The CMMA needs help with analysing current and future conditions of Bakul's seascape and wants to know:

- What are current pressures on Bakul's seascape? Are there particular threats?
- What are possible future pressures and threats?

The CMMA was quite happy with your analysis of the need for Blue Planning. Yet, they now also want to take into consideration the country's future development plan as well as different sector plans.

### Instructions for case work

You play the role of consultants advising the CMMA on preparing an inventory. Build on information from your casework "Identify Need".

The following tools assist your work:

- Text box 10 provides hints on mapping your seascape

The following information on Bakul supports your work:

- Map 1 and Map 2 provide an overview on Bakul's land cover and bathymetry as well as current land and ocean use
- Bakul's future development (see pages 58-61)

## Your task

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You continue to be members of a consultancy group. Your task is to analyse current and future conditions of Bakul's seascape:

1. Review the Bakul information: Future development" (see p. 61) and the map you have produced during the "Identify Need" casework.
2. Review Bakul's proposed new development plan as well as the sector plans of Transport, Fisheries, Tourism, Mineral Extraction and Environment and identify future developments (see below). Visualise each sector plan on a different sheet of transparent paper (provided by trainers):
  - Project current trends in the spatial and temporal needs of human uses (including "non uses" such as protection) within the timeframe of the next 10 year.
  - Based on these trends, draw on each sheet of transparent paper the estimated spatial and temporal requirements for the specific future sector demands of ocean space within the timeframe of the next 10 years.
3. Put the transparent paper sheets on top of each other and highlight potential areas of overlapping uses. In addition, brainstorm possible effects of the unfolding situation on ecosystems and ecosystem services: Figure out trends in direct drivers of biodiversity loss (e.g. habitat loss, alteration and fragmentation, over-exploitation, pollution and climate change, also see Glossary). Document your results on a flipchart.

### Text box 10: Hints on mapping your seascape

#### Hints on mapping your seascape

Estimating future trends of existing uses will indicate where, when and how the projected human uses will occur. Estimating new demand for ocean space will provide insight into what is likely to happen without any management interventions.

Remember, Blue Planning should recognize that the Planning Area is typically affected by human activities that are: (1) upstream from the Planning Area, but within the drainage area of the adjacent coastal area, e.g. agriculture; and (2) downstream from the Planning Area, e.g. in the open ocean. Pressures on the resources of the marine Planning Area may be greater from activities outside the marine area than from activities inside it. This fact illustrates the importance of drawing the boundaries of analysis broader than the boundaries of management.

## 8.2. Case work: Identify spatial (in)compatibilities<sup>11</sup>

Identify spatial (in)compatibilities	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Get familiar with methods for conflict analysis and the identification of uncertainties; and</li> <li>• Develop a matrix of spatial uses and assign degrees of compatibility.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Estimates of spatial compatibility of different types of sea use (matrix)</li> </ul>
<b>Importance</b>	Builds on “Identify Need” and “Map your seascape” and provides inputs for “Drafting & Approving a Plan”  Initially an inventory is used simply to gather information, providing the necessary background information for Blue Planning. However, collating necessary information is likely to be an incremental process. The inventory should be refined during the process to reflect modified objectives and new sources of data.

### Context

After the analysis of current and future conditions, the CMMA needs more specific information on spatial incompatibilities to identify targeted management activities for their Blue Plan. They have asked you as consultant to conduct such an analysis.

### Instructions for case work

You continue to play the role of consultant advising the CMMA on preparing an inventory and analysis of current and future conditions. Build on information from previous case work.

The following tools assist your work:

- Text box 11 provides hints on identifying spatial incompatibilities
- Table 8 assist in identifying spatial incompatibilities
- Figure 8 assists in rating the (in)compatibility of uses

### Your task

Your task is to identify compatibilities and incompatibilities between uses in your planning area, both existing and future:

1. Refer to the uses you have identified during the inventory process. Choose up to six uses you believe are incompatible or pose problems to other uses. Write them in the first row of Table 8 below and copy them in the first column using the same order.
2. Start by discussing how one use will impact another use. This will help you to assess the compatibility between those uses. Define the compatibility starting with assessing the impact of the first use in the first column on the second use in the first row, then on the third use in the first row etc. For instance, what impacts does Use 1 have in Use 2 and how compatible are they? Rank the compatibility among uses on a scale of -2 (Incompatible) to +2 (Compatible) using the colour code in Figure 8. Also consider the “direction” of a conflict; does use 1 only impact use 2, or do they both impact each other? Understanding the direction of the conflict can help identify solutions.

<sup>11</sup> This exercise has been adapted from McGee, L.A., & Barrett, M.J. (2013a) and Angela Schultz-Zehden et.al. (2008).

**Text box 11: Hints on identifying spatial incompatibilities**

**Hints on identifying spatial incompatibilities**

Spatial incompatibility describes a situation where different types of use cannot coexist in the same area. Although some mitigation may be possible through appropriate management, some general idea of spatial compatibility can probably be established for most types of uses. A designated nursery ground for fisheries for instance is unlikely to be compatible with sand and gravel extraction.

Remember that there are several dimensions to marine uses: the Sea Floor, the Water Column, the Surface, Air Space, and Time. Impacts to each of these dimensions could be short or long term, have a small or large spatial effect, and produce direct or indirect consequences.

**Table 8: Estimates of spatial compatibility of different types of sea use**

Estimates of spatial compatibility of different types of sea use						
	Use 1	Use 2	Use 3	Use 4	Use 5	Use 6
Use 1	?					
	(direction of possible impact)					
Use 2						
Use 3						
Use 4						
Use 5						
Use 6						

**Figure 8: Rating compatibility**

<b>Incompatible</b> (-2)	<b>Rarely compatible</b> (-1)	<b>Need more information</b> (0)	<b>Likely compatible</b> (+1)	<b>Compatible</b> (+2)
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### 8.3. Case work: Determine when Decision Support Tools are useful

Determining when Decision Support Tools are useful	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>Describe different methods to collect and map information about human uses, ecological and environmental conditions and stakeholder interests (including their advantages and pitfalls)</li> <li>Determine when DST are appropriate methods for specific purposes and contexts</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>Structured comparison of decision support tools for your purpose</li> </ul>
<b>Importance</b>	Whenever you need to decide whether and what DST to use in a Blue Planning process.

#### Context

The CMMA is in the process of gathering and processing data on Bakul’s seascape. It has heard of computer-based Decision Support Tools (DSTs) and is keen to learn more about them and how the CMMA could make use of DSTs for Bakul’s Blue Planning process. It now needs help with exploring whether the use of DSTs is useful for the Bakul Blue Planning process and with identifying the most suitable approach.

#### Instructions for case work

You continue to play the role of consultants advising the CMMA. Build on your work from “Identify goals and SMART objectives”.

The following tools assist your work:

- Text box 12 provides hints on determining when DSTs are useful.
- Table 9 assists in identifying useful DSTs.
- Table 10 provides an overview on features of DSTs.

#### Your task

Carefully review table 10 providing an overview on the most commonly used decision support tools. Then use the following table to prioritize a tool you want to use for your Blue Planning process:

- In column A review your Blue Planning objectives.
- In column C identify the potential recipient(s) of information
- In column C identify decision support tools that could be used for these objectives.
- In column D identify the typically required information and data you would need to apply that tool. Also discuss what data are already available in Bakul and what you would need to collect. This will lead you to column D.
- In column E identify the costs involved in applying this tool in your planning area (high, medium or low).
- In column F prioritize the tool that you would favour to use by using a number scale and explain why.

**Text box 12: Hints on selecting Decision Support Tools**

**Hints on selecting Decision Support Tools**

Decision Support Tools (DST) consist of interactive software designed to support and inform decision makers. In this case work, we will explore DSTs to help you to decide upon the use of these tools for your purpose and your particular Blue Planning context.

In general, Decision Support Tools can add value to Blue Planning for:\*

- Data management
- Mapping and visualization
- Alternative scenario development and analysis
- Proposal for management measure option
- Stakeholder participation and collaboration, and community outreach and engagement
- Adaptive management and assessment of achieving objectives

In order to identify the most suitable DSTs for your Planning Area and Blue Planning objectives consider the following questions:

- Who will be looking at the results?
- Who should participate in the data collection and how?
- What data does the tool require and what data are available?
- What are the costs of applying the tool?
- Are there potential risks in applying a certain tool?
- 

\* For more details see: Center for Ocean Solutions (2011).

**Table 9: Selecting Decision Support Tools**

Selecting Decision Support Tools						
A	B	C	D	E	F	G
<b>Blue Planning Objectives</b>	Potential recipient(s) of information	Decision Support Tool that could be used	Data requirements (vs. data availability)	Technical expertise required (vs. existing capacities)	Involved cost (including time): high, medium or low	Prioritisation

Table 10: Decision Support Tools Overview

Decision Support Tools Overview: Fisheries management*							
Tool	Functions	Data Requirements	Technical Expertise required	Cost (money and time)	Benefits	Limitations	Example
<b>Atlantis</b> <a href="http://atlantis.cmar.csiro.au/www/en/atlan-tis.html">http://atlantis.cmar.csiro.au/www/en/atlan-tis.html</a>	<ul style="list-style-type: none"> <li>• Fisheries management</li> <li>• Biodiversity conservation, ocean zoning</li> <li>• Management evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Physical</li> <li>• Chemical</li> <li>• Ecological</li> <li>• Fisheries</li> <li>• Oceanographic</li> <li>• Economic</li> <li>• Social</li> </ul>	<b>Expert</b> user. User manual under development ( <a href="http://www.ebmtools.org">www.ebmtools.org</a> , 11/5-12).	Expert/consultant fees	<ul style="list-style-type: none"> <li>• Flexible ecological &amp; fleet dynamics models, with many user choices for functional relationships.</li> <li>• Possible to test depictions of complex ecosystems against management policies &amp; assessment methods.</li> </ul>	<ul style="list-style-type: none"> <li>• Working assumptions not stated clearly &amp; cannot be supplied by user (but assumptions are expressed in the modelling equations or the software code).</li> <li>• Complexity: effort needed to simplify the outputs &amp; communicate results.</li> </ul>	Mainly temperate regions in Australia and in the USA
<b>Ecopath with Ecosim (EwE)</b> <a href="http://ecopath.org/">http://ecopath.org/</a>	A free ecological/ecosystem modeling software suite that can be used, e.g., to evaluate ecosystem effects of fishing, explore management policy options and analyze impact and placement of marine protected areas.	Ecopath data requirements are relatively simple: data are often already available from stock assessment, ecological studies, or literature.	Entry point requires no programming or mathematical skills.  User manual: <a href="http://sources.ecopath.org/trac/Ecopath/wiki/UsersGuide">http://sources.ecopath.org/trac/Ecopath/wiki/UsersGuide</a>	EwE is free. It is possible to purchase 'user support contracts' for scientific or technical assistance.	<ul style="list-style-type: none"> <li>• EcoBase: an information repository of EwE models freely accessible online:</li> <li>• <a href="http://sirs.agrocamp-us-ouest.fr/EcoBase/">http://sirs.agrocamp-us-ouest.fr/EcoBase/</a></li> <li>• User-friendly interface</li> <li>• On-going improvements</li> </ul>	Because EwE is packaged in a form that is readily digested by as many people as possible, undiscerning users can more readily use it as a "black-box", neglecting to test the appropriateness of default parameter settings and conferring inadequate consideration to alternative functional relationships.	Used all over the world.  US West Coast: <a href="http://www.marineplanning.org/Case_Studies/USA_WestCoastFisheries.html">http://www.marineplanning.org/Case_Studies/USA_WestCoastFisheries.html</a>  Model examples available in the EcoBase repository.

\*For an analysis of fisheries models with an ecosystem approach, see Plagányi (2007).



Decision Support Tools Overview: Ecosystem services modeling, valuation, and tradeoffs*							
Tool	Functions	Data Requirements	Technical Expertise required	Cost	Benefits	Limitations	Example
<b>InVEST</b> <a href="http://www.naturalcapitalproject.org/InVEST.html">www.naturalcapitalproject.org/InVEST.html</a>	<p>Ecosystem services: Estimate how production and value of ESs are affected by human activities and climate change.</p> <p>Applications: Marine spatial planning &amp; prioritization; permit allocation &amp; mitigation; climate adaptation; food security planning; EBM processes; design of payments for ESs.</p>	<ul style="list-style-type: none"> <li>Physical</li> <li>Biological</li> <li>Economic</li> <li>Scenarios: maps of potential future land use or land cover and/or marine habitats and ocean uses.</li> </ul>	<p><b>Expert</b> user</p> <p>Running InVEST does not require knowledge of Python programming, but it does require basic to intermediate skills in GIS software.</p>	<p>Open-source</p> <p>InVEST models can be run independently, or as script tools in the ArcGIS ArcToolBox environment. Need for a mapping software such as QGIS or ArcGIS to view results.</p>	<ul style="list-style-type: none"> <li>Models not only account for service supply, but also include location and activities of people who benefit from services.</li> <li>User can define alternative scenarios (flexible).</li> <li>Working assumptions stated clearly and can be supplied by user.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Need for scenarios. For further help on scenario building:                             <ul style="list-style-type: none"> <li><a href="http://scenariohub.net/">http://scenariohub.net/</a></li> </ul> </li> <li>Depending on model, there may be a need for information from multiple expertise/disciplines.</li> </ul>	<p>West Coast of Vancouver Island, (British Columbia), Chesapeake Bay (Maryland, USA), Monterey Bay (California).</p> <p>Tropical environments: Hawaii, Belize, Ecuador, Colombia, Gulf of Mexico.</p>
<p>* For a comprehensive comparative assessment of decision-support tools for ecosystem services, see Bagstad et al. 2013.</p>							

Decision Support Tools Overview: Participatory management area design							
Tool	Functions	Data Requirements	Technical Expertise required	Cost	Benefits	Limitations	Example
<b>SeaSketch.</b> <a href="http://www.seasketch.org/home.html">http://www.seasketch.org/home.html</a>	<p>Delineate boundaries of MPAs that meet the objectives of the law.</p> <p>Share maps with others and collaboratively edit spatial plans.</p>	<ul style="list-style-type: none"> <li>• Management area boundaries</li> <li>• Biological</li> <li>• Cultural</li> <li>• Physical</li> <li>• Habitat</li> <li>• Consumptive uses</li> <li>• Non-consumptive uses.</li> </ul>	<p>Little to no experience with GIS software.</p> <p>Substantial knowledge in Python programming.</p>	<p>License (\$3,000 to 80,000)</p>	<p>Allows non-technical stakeholders to collaboratively design MPAs and other types of management areas and networks.</p>	<ul style="list-style-type: none"> <li>• Requires customisation to meet the needs for specific areas: codes have to be changed.</li> <li>• Does not have analysing advantages of GIS software</li> </ul>	<p>California (MLPA Initiative) and Oregon (Territorial Sea Planning Process).</p>

Decision Support Tools Overview: Optimization tools							
Tool	Functions	Data Requirements	Technical Expertise required	Cost	Benefits	Limitations	Example
<p><b>Marxan and relatives</b></p> <p><a href="http://www.uq.edu.au/marxan">www.uq.edu.au/marxan</a></p>	<p>Provides multiple options for networks of reserves, multiple-use parks, resource use areas, and other types of spatial management. Meets conservation or other targets with contributions from multiple sites. Minimizes the cost to users in terms of spatial footprint and/or considering any user-defined metric (e.g., fishing revenue).</p> <p>Marxan with Zones provides options for management of multiple types of activities (e.g., complementary zones for conservation, mixed use, and resource extraction), and considers multiple types of costs to users.</p>	<ul style="list-style-type: none"> <li>• Biophysical</li> <li>• Human uses (optional but recommended)</li> <li>• Marxan can accept data obtained in many formats, but the preparation stage is often lengthy</li> </ul>	<p>Expert user</p> <p>Planning process objectives and feature targets must be set in advance.</p> <p>Output can be imported to GIS software to visualize or further analyze results.</p> <p><a href="#">User list</a> available for software help. See also <a href="#">guides</a> and <a href="#">trainings</a>.</p>	<p>Freely available, but often the time investment in data preparation is substantial (it can take about a year to develop an analysis)</p>	<ul style="list-style-type: none"> <li>• Enables consideration not only of the cost of activities, but also to their possible biodiversity benefits.</li> <li>• Can incorporate several layers of ecological elements (e.g. species, habitats, biological values) and pressures.</li> <li>• Clear algorithm used to prioritize areas. No assumptions are made by the tool (although they may be present in user data) because Marxan is not a model.</li> </ul> <p>Marxan associated software includes Marxan with Zones, Marxan with Connectivity, among others.</p>	<ul style="list-style-type: none"> <li>• Limited possibilities to incorporate interactions between areas spatially separated by each other, therefore inhibiting consideration to corridors for dispersal of species.</li> <li>• Marxan only allows consideration of one cost layer.</li> <li>• Marxan with Zones (which allows multiple costs) gets very complex with each addition zone and their interactions.</li> <li>• Not yet open source.</li> </ul>	<p>Australia ( Great Barrier Reef and terrestrial), California Channel Islands, British Columbia, South Africa, Congo, Indonesia, St. Kitts and Nevis</p>
<p><b>Zonation</b></p> <p><a href="http://cbig.it.helsinki.fi/software/zonation/">http://cbig.it.helsinki.fi/software/zonation/</a></p>	<p>Defines marine reserves and conservation networks; identifies areas important for retaining habitat quality and connectivity for multiple species.</p> <p>Produces a hierarchical prioritization of the conservation value of a</p>	<p>Can accept large datasets</p>	<p>Expert user</p> <p>Output can be imported to GIS software to visualize or further analyze results.</p>	<p>Open source but technician time can be substantial.</p>	<p>Ability to work with both GIS &amp; statistical species distribution modelling &amp; connectivity responses for biodiversity features.</p> <p>Allows species weighting &amp; species-</p>		<p>New Zealand, Finland</p>

	landscape.				specific connectivity considerations to be applied.		
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**Decision Support Tools Overview: Integration tool\***

Tool	Functions	Data Requirements	Technical Expertise required	Cost	Benefits	Limitations	Example
<b>NatureServe Vista</b> <a href="http://www.natureserve.org/conservation-tools/natureserve-vista">http://www.natureserve.org/conservation-tools/natureserve-vista</a>	<p>Produces indices for regions’ conservation values, in a view to set conservation targets.</p> <p>Evaluates scenarios of current and future stressors and conservation practices against conservation goals.</p>	<p>Land / sea uses and other stressors, conservation and management practices</p> <p>Ecological and other values to be represented</p>	<p>Moderate expertise to set up, low technical ability to apply the tool.</p>	<p>Freely available, requires ArcGIS with Spatial Analyst</p>	<p>Multi-objective assessment and planning tool; works across realms, scales, and sectors.</p> <p>Compatible with Marxan through a wizard that prepares input for Marxan and, after running Marxan, imports the resulting scenarios back into NatureServe Vista.</p>	<p>Planning level tool, precision and complex modelling for species viability or inclusion of economics, hydrology, or ecosystem processes requires incorporation of additional specialized tools.</p>	<p>Various U.S. case studies, e.g. Georgia, Virginia and Latin America.</p>

**\*For more information on GIS-based conservation planning tools, see Fyhr et al. (2013), Baldwin et al. (2014) and PacMARA & Center for Ocean Solutions (2011).**

## 8.4. Bringing it home: Inventory and analysis of current and future conditions



### Enabling & challenging factors<sup>12</sup>

Gathering sufficient high-quality data and data collection capacity were always inevitable challenges. However, UNEP (2016) emphasise that these **should not be insurmountable barriers** to effective Blue Planning. However, the authors identified a lack of explicit communication or understanding around **acceptable data quality standards** and the use of data or within the Blue Planning process was found to cause significant mistrust in the process. Data and knowledge issues **preventing a comprehensive ecosystem approach** to Blue Planning were noted to result in significant environmental issues during implementation. A pilot study may be needed to **determine the minimum amount of data required** to build, adopt and implement a plan. Blue Planning may seek for **partnerships and knowledge alliances**, e.g. for improved valuation of ecosystem services and thorough attention to climate change impacts, fisheries management, and land-sea integration, as ways in which Blue Plans could be strengthened. **Access to regional data**, particularly baseline data, was also expressed as a key requirement linked both to increased cooperation across stakeholders and to increased institutional capacity. Especially local scale Blue Planning initiatives may struggle with data availability and quality as data and information may be required at finer resolutions and at greater levels of accuracy and detail. Participatory mapping, knowledge partnerships and modelling may help to **overcome the lack** of robust scientific data.

#### ► Key guidance messages:

A lack of spatial data and analytical tools are not insurmountable constraints to effective Blue Planning.

### Blue Solutions

- Interactive and transparent approach in marine spatial planning (Israel – Michelle Portman)
- Mapping and Valuing Ecosystem Services for Integrated Management (Belize - Gregg Verutes)
- Building block: Use and limitations of decision support systems/tools (solution: Effective zoning as a key spatial planning/ Australia John Day)



### Blue planning data and networks

#### Databases

- Global Biodiversity Information Facility: <http://www.gbif.org/>  
Provides a single point of access (through this portal and its web services) to hundreds of millions of records, shared freely by hundreds of institutions worldwide, making it the biggest biodiversity database on the Internet.
- Google Earth Engine: <https://earthengine.google.com/>  
Combines a multi-petabyte catalog of satellite imagery and geospatial datasets with planetary-scale analysis capabilities and makes it available for scientists, researchers, and developers to detect changes, map trends, and quantify differences on the Earth's surface
- Ocean Data Viewer: <http://data.unep-wcmc.org/>  
Ecosystem Service Valuation Database
- GeoNetwork: <http://geonetwork-opensource.org/>  
A catalog application to manage spatially referenced resources. It provides powerful metadata editing and search functions as well as an interactive web map viewer.

#### Networks

- EBM Tools Network: <https://www.ebmtoolsdatabase.org/>  
An online hub for tools and projects for innovative interdisciplinary coastal-marine spatial planning and ecosystem-based management
- The Ecosystem Services Partnership: <http://www.fsd.nl/esp>

<sup>12</sup> Source: UNEP (2016)

**Logbook:**

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*What is one main take away or action item you need to apply or accomplish in this stage of Blue Planning when you return home?*

## 9. Drafting and Approving the Spatial Management Plan



A spatial management plan is a comprehensive, strategic document that provides the framework and direction for Blue Planning decisions. It should identify when, where, and how goals and objectives will be met. A spatial management plan should be drafted and discussed to identify specific management measures that will produce a desired future through explicit decisions about the location and timing of human sea uses. Yet, the plan is not an end in itself but a beginning toward the implementation of desired goals and objectives.

Within this element, the following tasks need consideration. Remember, these tasks do not necessarily need to be tackled consecutively as displayed below. In fact, planning is a dynamic process, that needs to be adapted to each specific context and should include many feedback loops within the process. The symbols below indicate where a consideration of *Stakeholder Involvement* and *Monitoring and Evaluation* will be especially helpful:

### 1. Identify alternative Blue Planning measures

Once a preferred future is decided, then you need to answer the questions: **How do we get there?** Specific management measures need to be identified that will produce the desired goals and objectives through explicit decisions about the location and timing of human sea uses.



### 2. Allocate sea use

Drafting the spatial Blue Plan is all about decision-making: What uses to prioritise where; what uses to restrict where; and what other management measures to apply?

**Zoning** (in space as well as in time) is only one but often the principal management measure used to implement comprehensive spatial Blue Management Plans. **Criteria (decision rules)** support the allocation of sea use.



### 3. Explore positions and shape negotiations

Blue Planning is based on decisions taken in processes of negotiation between stakeholders from different sectors with different perspectives. Successful negotiation is a key prerequisite of Blue Planning. Yet, you cannot measure the success of an individual negotiation situation solely on the extent to which a negotiation partner was able to assert him or herself. In the context of Blue Planning, successful negotiation must always fulfil additional functions, namely strengthening joint objectives orientation, achieving a better **understanding of the individual interests, needs and beliefs involved and consolidating the overall partnership.**



### 9.1. Case work: Identify Blue Planning measures<sup>13</sup>

Identify Blue Planning measures	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>Plan for emerging and potential future overlapping uses within the Planning Area;</li> <li>Understand the value of alternative planning options; and</li> <li>Identify Blue Planning measures based on evaluation criteria.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>List with identified and evaluated management strategies</li> </ul>
<b>Importance</b>	Once a desired future (vision, goals and objectives) has been selected, then Blue Planning measures that can lead to that future vision need to be identified.

#### Context

The CMMA has a good overview on Bakul’s seascape: It is aware of key stakeholders and their interest. The CMMA knows where and when sea uses are currently overlapping and will likely overlap in the future. It has identified important ecosystems and their current status as well as factors that are threatening the integrity of these ecosystems today and in future. The CMMA’s Blue Planning vision, goals and objectives reflect all these issues.

The CMMA now wants to know: How do we get there? How do we reach our vision, goals and objectives? Again, they have contracted you as consultants to help answer that question and identify a set of appropriate Blue Planning measures for your Planning Area.

#### Instructions for case work

You play the role of consultants advising the CMMA on drafting and approving a spatial management plan. Build on information from your previous case work.

The following tools assist your work:

- Text box 13 provides hints on identifying Blue Planning measures
- Table 11 assist in identifying the type of Blue Planning measures
- Table 12 assist in evaluating Blue Planning measures
- Text box 14 provides an overview on Blue Planning measures

#### Your task

Your task is to brainstorm and evaluate alternative Blue Planning measures. The task is divided into two steps. First you identify the type of Blue Planning measures needed, to then evaluate alternative Blue Planning measures:

##### *Step 1: Identify the type of Blue Planning measure*

Use table 11 to guide your work:

- Review the results of your inventory and write overlapping uses in the table below.
- Then decide whether the use needs to be prohibited, regulated or if uses need to be segregated.

<sup>13</sup> This exercise has been adapted from McGee, L.A., & Barrett, M.J. (2013a).



**Text box 13: Hints on identifying Blue Planning measures**

**Hints on identifying Blue Planning measures**

Remember, Blue Planning measures can influence overlapping human uses by:

- **Prohibiting** one use, e.g. by designation of no-take zones or marine protected areas that prohibit sand and gravel extraction;
- **Segregating** different uses, e.g. zoning of areas for specific uses, e.g., wind farms, sand and gravel mining, or marine transportation; or
- **Regulating** uses (time and intensity), e.g. regulating fishing activity and capacity by limiting the number of vessels allowed to fish.
- **Encouraging** specific uses, e.g. by setting positive incentives.

**Table 11: Type of Blue Planning measures**

Type of Blue Planning measures	
Overlapping uses / drivers of biodiversity loss	Measure needs to:
	a) <b>Prohibit use</b> b) <b>Segregate use</b> c) <b>Regulate use</b>

*Step 2: Evaluate alternative Blue Planning measures*

1. Choose one overlapping use you want to work on and transfer it to table 12 below.
2. Choose a Blue Planning measure from the list in text box 14 below or another one that you think might work and use table 12 to evaluate the proposed strategy.
3. In a second step, choose another alternative strategy and evaluate it in order to compare both strategies.

**Table 12: Evaluate Blue Planning measures**

Evaluate Blue Planning measures		
Identified overlapping uses:		
Criteria	Blue Planning measures	Alternative Blue Planning measure
Measure selected to manage this use.		
How will this help you meet your objectives?		
Will this strategy address the impact this use has on your Planning Area? How?		
Will this strategy help reduce conflict between this use and other uses and / or other resources?		
What will short-term/long-term change as a result of this strategy taking effect?		
Would this strategy impact a large or small number of stakeholders?		
What level of resistance do you realistically expect from stakeholders if this strategy is implemented?		

**Text box 14: Blue Planning measures**

**Blue Planning measures**

There is a variety of ways to approach management strategies, and each Planning Area will need its own mix based on the history of the area, the uses, and its stakeholders.

**Regulations** are used to control the type and extent of activities in a Planning Area. A fishing regulation could restrict the type of gear used in certain areas or at certain times of year.

**Permits** grant users access to conduct activities in a Planning Area based on a set of conditions. Permits may be used to limit the amount of extraction of a given resource, or limit the total number of users for a given area or season.

**Best Management Practices** may be enforced or voluntary, but set a standard for how a use must, or should be, conducted. One example may be a fishing charter captain explaining the size and catch numbers for target species, and catch and release methods for non targeted species.

**Voluntary Compliance** is based on educating people about the impacts and consequences of their uses to change their behaviour and apply a more beneficial practice. Requesting hotels to limit or augment their beachfront lighting so as not to interfere with turtle nesting behaviour is an example.

**User, Access, or License Fees** grant access to certain activities based on the user's willingness or ability to pay. Fees require users to determine whether the activity is worth the cost to participate. Commercial fishing boats may be required to pay to fish in a Planning Area. Fees are often used in conjunction with permits to cover the administration costs of managing a resource.

**Development Fees** are paid by a user wishing to develop the space or resources within a specific area, typically leading to large or long-term changes to the area. Development fees are often charged to waterfront developers or offshore energy projects.

**Education and Outreach** are best suited for lower impact activities where small changes in people's behaviour could have a large impact on the use or condition of resources. Education programs may include training tourists to swim carefully around coral, or boating carefully in a manatee habitat.

**Law Enforcement** is used to ensure that regulations, permits and other strategies are followed by users in a Planning Area. Often times, increasing the visibility of law enforcement officials can change behaviour. Law enforcement may be shown through fish and wildlife inspections or patrols along no discharge areas.

**Temporal Closures** of extractive uses are often scheduled during vital life cycle stages for key species or habitat. An example of a temporal closure would be closing a fishery during spawning season, or banning certain types of fishing gear during turtle migrations.

Source: McGee & Barrett (2013a)

## 9.2. Case work: Allocate sea use

Allocate sea use	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand how to align Blue Planning with other planning processes;</li> <li>• Know how to specify criteria for the allocation of sea use; and</li> <li>• Illustrate how your Planning Area might look if human uses are redistributed based on your Blue Planning goals and objectives</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Draft Blue Plan (document)</li> <li>• Structured list of criteria for allocation of seascape</li> <li>• Designation of zones (map)</li> </ul>
<b>Importance</b>	A desired vision, goals and objectives need to be in place before zoning can take place. A thorough assessment of current and future conditions as well as stakeholder interests needs to inform the allocation of sea space.

### Context

The CMMA has started to put the pieces of the Blue Planning process together to compile a draft Blue Plan for Bakul. It already compiled the following information from the different consultancy groups:

- A description of the boundaries of the Planning Area, as well as a specified baseline year and timeframe of the plan;
- The vision as well as the goals and objectives;

The CMMA also wants to include a zoning plan into the spatial management plan and again needs support to develop such a plan for the different Planning Areas. The CMMA just received the results of a study on the seasonality of natural and anthropogenic events in Bakul and thus wants to incorporate the issues of time into the zoning plan.

### Instructions for case work

You continue to play the role of consultants advising the CMMA on drafting and approving a spatial management plan. Build on information from your previous work.

The following tools assist your work:

- Text box 15 provides general hints on zoning.
- Table 13 assists in identifying zoning criteria for allocating sea space
- Text box 17 provides overviews on different types of zones.

The following information on Bakul supports your work:

- Figure 8 displays the seasonality of natural and anthropogenic events in Bakul.

### Your task

Your task is to develop a zoning plan for your Planning Area. The task is divided into two steps: In a first step, you identify zoning criteria for the allocation of seascape to certain uses, to then in a second step actually allocate the seas space of your Planning Area to certain uses or non-uses.

**Hints on zoning: Allocating sea use**

A zoning plan is the means through which the purpose of particular parts of the management area can be assigned. The main purposes of a zoning plan depend mainly on the BPiP vision, goals and objectives and may include:

- Protecting ecosystem services while allowing reasonable human uses
- Separating conflicting human uses or combining compatible human uses
- Minimizing the effects of human uses on ecosystems and ecosystem services
- Promoting the growth of a single sector, i.e. offshore wind farms, by maximizing access of a particular use to resources and space.

However, no one type of zoning will fit all situations: Locating and designing zones needs to be based on the underlying topography, oceanography and particular ecosystem services and human uses. Zones should reflect the compatibilities and incompatibilities of uses in the area.

Also, zoning does not segregate uses into a large number of single use areas, i.e. fishing here, shipping there, tourism in another place, etc.). Instead, zones can allow whatever multiple uses are compatible with the particular objectives of that zone type. Some zones can be for maintaining existing uses, others for expanding existing uses, others for accommodating new uses, some may be for nature conservation or scientific research, some may protect cultural values, and some may be for industrial use or large scale development. Always remember: zone by objective, not by activity.

*Step 1: Identify zoning criteria*

Use Table 13 below to guide your work:

1. Review your inventory and transfer the uses you want to spatially manage and ecosystem services and functions you want to protect to Column A. You may also take into account specific uses that you want to promote.
2. Review the examples of zoning criteria in the Text box 15. For each use, identify between three and five decision criteria that need to be taken into account when locating these uses. List these criteria in the table below. Examples include: Physical, chemical and biological effects over time, economic effects and their distribution, administrative considerations, timing considerations, political considerations, resource use effects and setting incentives for preferred uses.

**Table 13: Identify zoning criteria**

A	B	C	D	E
<b>Uses/Ecosystem services &amp; functions</b>	Criteria 1	Criteria 2	Criteria 3	Criteria 4
Sand mining	Not inside shipping lanes	>1km from coral reefs	Proximity to shore/lee	
Aquaculture	Not covering an area greater than 10% of pristine coastal habitat	Not in high bird concentration areas	Stable coastal area	

**Text box 15: Examples of zoning criteria for the allocation of seascape to certain uses and non-uses****Examples of zoning criteria for the allocation of seascape to certain uses and non-uses**

**International and national regulations:** Zoning criteria can be derived from reviewing international and national regulations and policies that influence space allocation in the area and are not readily changeable. Changes in shipping routes and traffic separation schemes, for example, need to be approved by the International Maritime Organization. Your national shipping administration, for instance, might have regulations on safety distances for ships, which could influence the designation of shipping lanes. Safety distances of 0.5 nautical miles (nm) for areas with about 1000 to 5000 ships/year would lead to a width of shipping lanes of at least 1 nm (1.852 km). More heavily trafficked areas may require shipping lanes with a width of 5 or 10 nm. Additional criteria for the designation of shipping lanes can, for instance, be water depth, the need for roadstead (safe anchor place) for certain types of traffic, navigation areas for certain types of ships, minimum distances to shorelines, shallow areas and fixed installations as well as to sensitive areas, e.g. selected Marine Protected Areas. Safety distances may differ from region to region because of weather conditions, water depth, etc.

**Economic and technical considerations:** Zoning criteria can also be derived from economic or technical requirements to make a particular activity operational. Offshore wind energy, for example, is likely to be more economically viable when placed closer to shore. Technical solutions to minimise conflicts should be considered where possible. Cables and pipelines, for instance, should cross shipping lanes at right angles (shortest distance) to reduce the risk of damages by anchors and other types of conflicts.

**Physical and environmental conditions:** Zoning criteria can also be derived from physical and environmental conditions. Most extracting activities, for example, are dependent on the availability, accessibility and quality of the resources. The functioning of infrastructure, for example, could be impaired by certain conditions, such as bathymetry, sediment type, and currents. The functioning of Marine Protected Areas, for example, will be dependent of the occurrence of species, biotopes or of ecological functions. These may change during seasons, wherefore also licenses to human activities may be granted on a spatiotemporal basis. In those cases, where the knowledge base on physical, geochemical, or biological conditions is weak, designation may be given for test fields or monitoring areas only, e.g. with a time limit of 5 years.

**Preferential conditions:** Zoning criteria can also be derived from reviewing preferential conditions (environmental, economic, social) for the allocation of space to certain human uses. For example, the “Integrated Management Plan for the North Sea 2015” of the Netherlands stipulated that no wind farms are allowed within 20 km of the shoreline (visibility). Another example include:

- No economic activities are allowed during marine mammal or bird feeding areas at certain times of the year.
- In case of limited resources (e.g. sand, gravel, hydrocarbons), licences may be granted only for a limited share of those resources to allow a sustainable and a controlled development.
- Cable crossings should be avoided where possible to allow easier maintenance and repair; instead cables should be laid in parallel where possible.

**Setting incentives:** Zoning can also be used to set incentives for preferred uses, for example, to create jobs in a poor area or promoting access to resources for under-represented or less powerful users.

Source: Adapted from Ehler & Douvere (2009)

*Step 2: Allocate the sea space of your Planning Area*

1. Use the types of zones in Text box 17 and designate specific types of zones on Map 1 of your Planning Area (use colour coding). Start in areas where uses overlap and define what uses are allowed in that specific zone. Then note the types of management measures (segregate, prohibit, regulate) you plan to implement in that specific zone. Keep in mind that designation can include temporal specifications (e.g. considering the seasonality of human uses or of ecological sensitivities, see Figure 8: Seasonality of natural and anthropogenic events in Bakul.).
2. Remember, Blue Plans consist not only of cartographic elements! You may add other regulations and measures: For any multiple use zone find specific management measures that make the uses compatible and sustainable (see Text box 14: Blue Planning measures)
3. Double-check if sector plans are accommodated and identify what has not been considered.

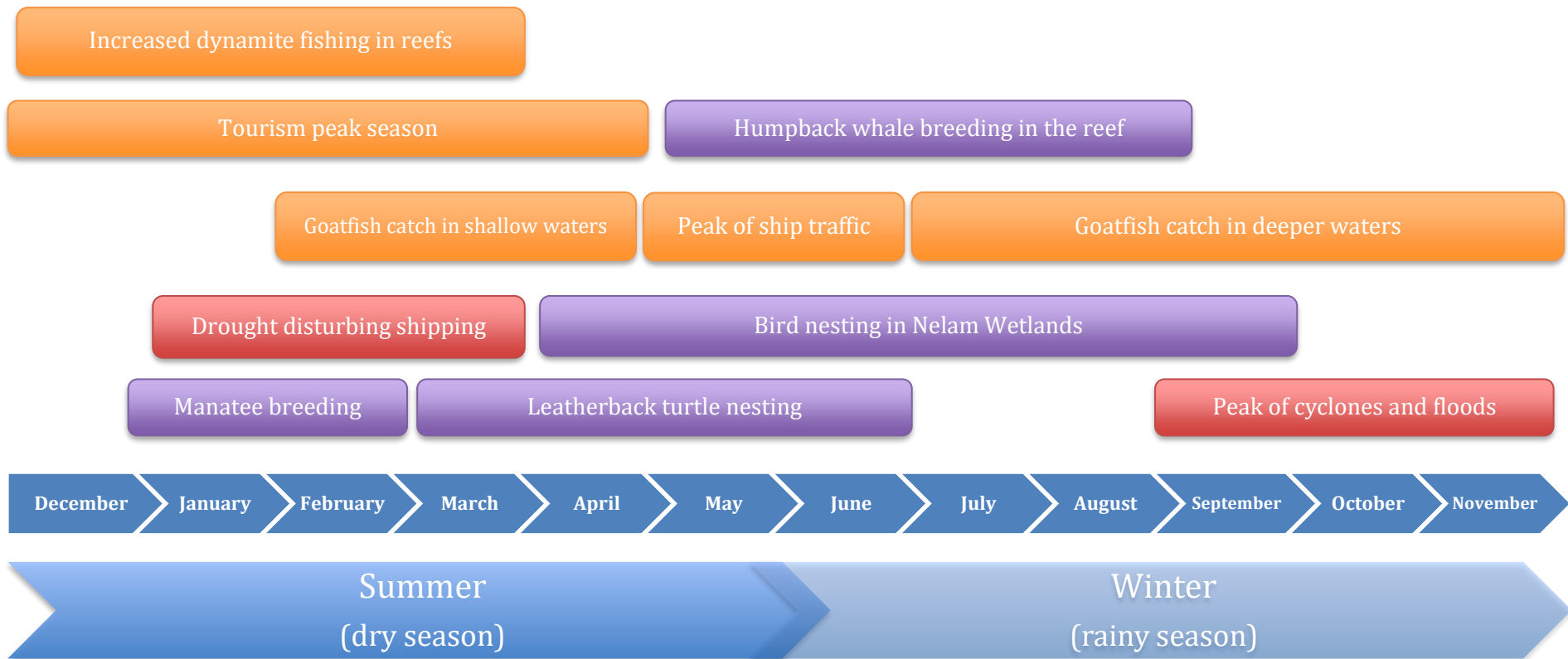
**Text box 17: Types of Zones**

**Types of Zones**

- General use zone: All uses allowed, possibly with some restrictions regulated by management measures
- Multiple use zone: Only certain uses allowed, possibly with some restrictions regulated by management measures
- Exclusive zone: Only one use allowed, e.g. conservation, possibly with some restrictions regulated by management measures



Figure 8: Seasonality of natural and anthropogenic events in Bakul.





### 9.3. Role play: Explore positions and negotiate the draft plan<sup>14</sup>

Explore positions and negotiate the draft plan	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand the relevance of appraising stakeholders’ positions, interest, needs and beliefs;</li> <li>• Know how to prepare and conduct Blue Planning consultations;</li> <li>• Know how to integrate stakeholder perspectives in a final Blue Planning document; and</li> <li>• Know how to get a final Blue Planning document approved.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Exploration of stakeholders positions, interests, belief and needs (role-play)</li> </ul>
<b>Importance</b>	Whenever bilateral or multilateral agreements need to be reached or decisions need to be taken.

#### Context

The CMMA has consolidated a draft spatial management plan for Bakul’s seascape and organized a meeting to present this draft plan and to discuss it with key stakeholders. The objective of this workshop is to negotiate a final Blue Plan for Bakul being accepted by all stakeholders to the greatest extend possible.

#### Instructions for case work

During this role play you will represent one of several stakeholder groups during the CMMA workshop:

- Bakul Nature Conservation (BNC)
- Artisanal fishing cooperative
- Department of Fisheries
- Department of Mineral Resources
- Cooperative of Tourism Operators
- Bakul Sand Work Ltd.
- Coastal and Marine Management Authority
- Academia (Federal University of Bakul)

The following tools assist your work:

- Text box 18 provides hints on successful negotiation.
- Figure 9 displays the iceberg model illustrating the importance of positions, interests, beliefs and needs.

The following information on Bakul supports your work:

- Stakeholders in Bakul (see pages 35-40).
- Map 3 displays the draft spatial management plan of the CMMA

#### Your task

Your task is to slip into the **role of one stakeholder group**:

Review the Blue Plan prepared by the CMMA. Then prepare a 2-minute statement where you will present the main position of your stakeholder group and suggest changes to the Blue Plan of the CMMA. Remember to think, act and empathize with your stakeholder and make the underlying interests, needs and beliefs part of your role. Also be prepared to elaborate on them when asked for them by the CMMA. Choose one person to present the statement during the stakeholder workshop in plenary. Base your statement on the information gathered during the previous steps and the additional information you will receive. You can be creative too.

<sup>14</sup> This exercise has been adapted from the Blue IES training.

If you play the **role of the CMMA**, you have a special task: Ask all stakeholder to present their statement to the prepared draft Blue Plan.

The CMMA's mid term goal is to consolidate a (possibly new) version of the plan accepted by all stakeholders to the greatest extent possible. To reach that goal:

- Chair and facilitate the discussion;
- Review the negotiation steps below and pre-structure the discussion accordingly;
- Consider trust-building setting of the meeting (pleasant atmosphere); and
- Be prepared to suggest changes to the CMMA's draft Blue Plan on the spot.

Observers also have a special task:

Science tells us that 70% of communication is non-verbal. Therefore, carefully observe how the scene evolves and take notes with regards to:

- What can you hear?
- What can you see (e.g. body language such as physical movements and gestures)?
- What can you sense?

Please note if you can differentiate between positions, interest, beliefs and needs!

If you are three observers please divide the task by focusing on one aspect per person.

### Text box 18: Hints on successful negotiation

#### Hints on successful negotiation

Negotiation positions are usually founded on interest and, ultimately perceptions. Successful negotiation includes separating positions from interests and perceptions. Once you understand the needs and know of the stakeholders' interests and perceptions, you will be able to revise your Blue Planning objectives and proposed outcomes, increasing the possibility of success:

**Positions:** The (visible) tip of the iceberg represents what the other side tells you it wants. It is usually couched in terms of a closed demand to be accepted or rejected. It is often quantified and is always quite specific. Yet, positions are always negotiable. Example: fishermen objecting to an offshore wind farm.

**Interests** are hidden motivations underlying the stated positions. These interests are more personal, less clear and often illogical. There is some room for negotiation about how the interest is met. Example: To continue fishing in fishing grounds.

*A position is something you have decided upon (what you say you want). Your interests are what caused you to so decide (why you want it).*

**Perceptions** are grounded in values, needs, beliefs, emotions and fears of the individual. They are subjective and not easily accessible to others. And it is here that we must start, not by making concessions, but by understanding how our partner sees the world. Perceptions are usually not negotiable. Example: Fishermen trusting in the traditional fishing rights.

In a nutshell, successful negotiation involves:

- Acknowledging the different interest of the stakeholders involved;
- Broadening the system boundaries during the negotiation process to include new elements;
- Precisely defining various interests and the advantage and drawback of different solutions; and
- Developing Blue Plans that are better for the stakeholders involved than no Blue Plan at all.

Although this logic may be compelling, real negotiations never follow this pattern exactly. Negotiations are influenced by the time and place, but, above all, by the stakeholders themselves, who influence the process with their various cultural orientations, capacities and more or less transparent strategies. How the negotiation proceeds depends on how successfully you can structure the process together with the participants. Within any negotiation process, the structure of the process itself is also always an object of negotiation.

\* Source: Young, Mark, Jay Rhoderick & Jay Rhoderick (2014): "Playing with icebergs: negotiating improvisationally. Ivey Business Journal: ivelybusinessjournal.com

## Negotiation steps

According to GIZ, the following **six negotiation steps** have proved useful in practice:<sup>15</sup>

### *Step 1: Deal with different positions and interests*

To generate an ethos of cooperation based on fair play, it helps if you start by separating positions from facts. In this first step, all parties declare their respective interest in the issues being negotiated. For a negotiation process to be successful, all of the parties involved must make their own positions, as well as their reasons for holding them (i.e. their interests), clear and transparent.

### *Step 2: Deal with the issue*

In this second step, you can analyse in detail the issues to be negotiated together with the other parties involved. During this step, it may well be appropriate to obtain further information, or listen to the opinions of experts. The feeling of having new information together with your partners paves way for the next step.

### *Step 3: Explore mutual interest*

Looking at mutual interest will help you secure sound negotiation outcomes. What do the parties involved wish to achieve together? What visions of the future do they share? In this step, you pave way for creating mutual trust.

### *Step 4: Develop alternative options*

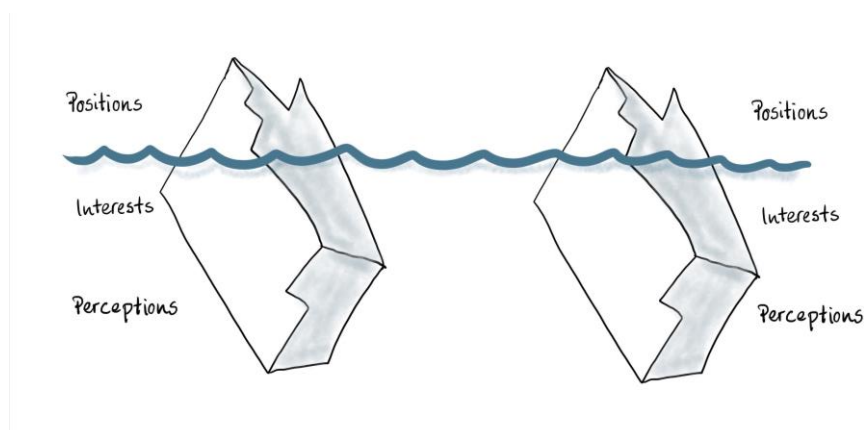
In the next step, you should avoid reaching a premature plan. Instead, utilise all the information available and develop alternative options. Fostering this process of creative thinking is worthwhile. As new options emerge, all sides will become more confident that everything they need now are appropriate criteria (e.g. planning principles) for selecting one of several alternatives.

### *Step 5: Agree on assessment criteria*

In this step, you agree on criteria for assessing possible solutions. You can round off the joint evaluation and selection of possible options by skilfully introducing compensatory elements wherever there is any remaining sense of unease.

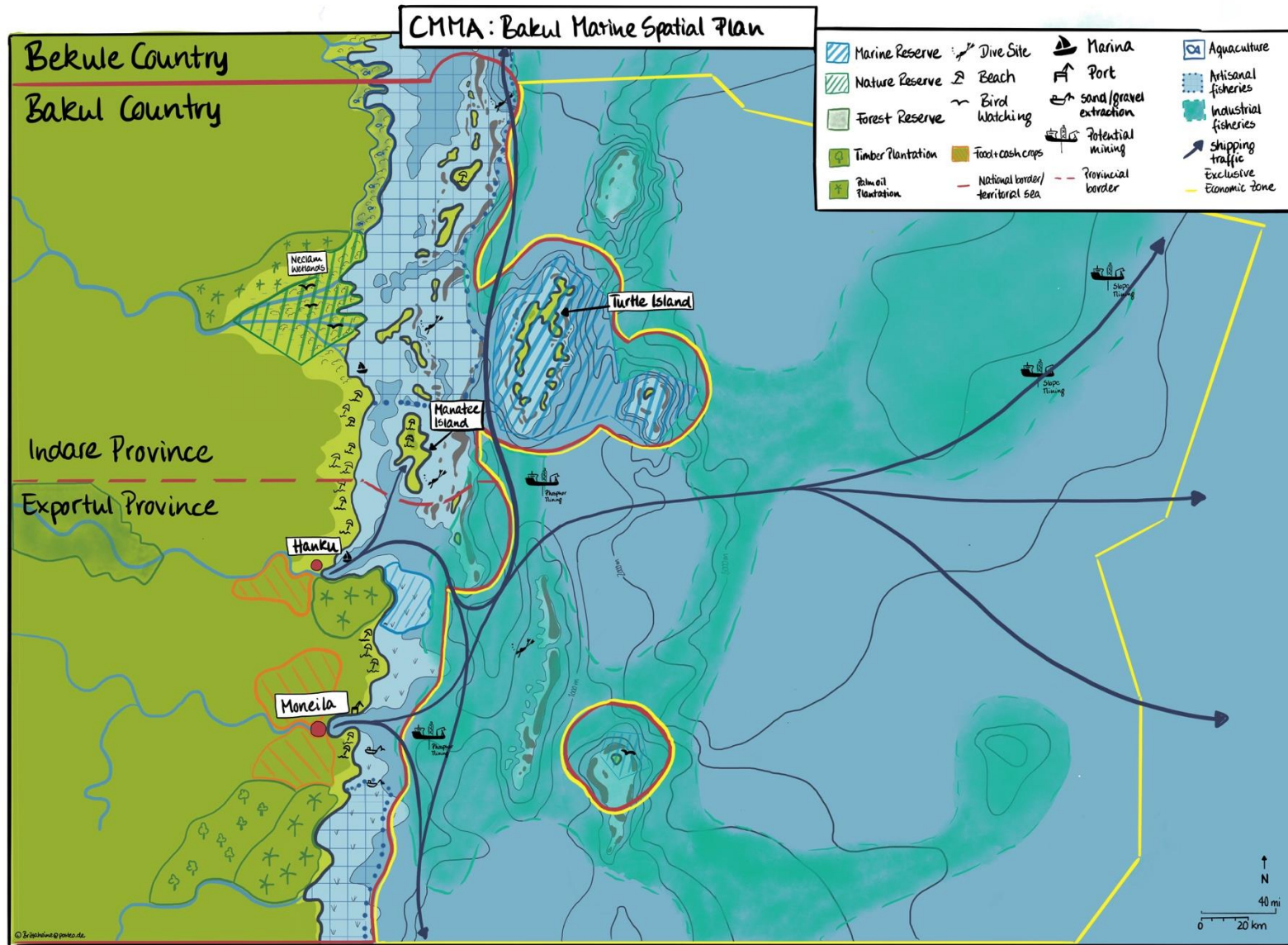
### *Step 6: Select an option*

Once you have assessed the possible options, the one that is most suitable for the stakeholder involved is chosen. You then agree on the implementation activities.



**Figure 9: Iceberg model**

<sup>15</sup> Capacity WORKS Tool 19: Shaping Negotiation Processes (see GIZ: 2015).



Map 3: CMMA's Marine Spatial Plan for Bakul

## 9.4. Bringing it home: Draft and Approval of the Spatial Management Plan



### Enabling & challenging factors<sup>16</sup>

Drafting a Blue Plan requires a sound knowledge on environmental and human values, on the impacts of human activities, as well as on conflicts and compatibilities between human uses, functions and your Blue Planning objectives. The necessary levels of expertise and experience might not always be available and **measures to improve the human or institutional capacity** may be necessary.

Having a **mechanism for resolving conflicts** during the development of a Blue Plan contributes to successful Blue Planning. This is valid for various stages during the Blue Planning process, including the way how conflicts and incompatibilities are addressed during the drafting phase.

Stakeholder participation is one of the central pillars of Blue Planning, and each process phase must find a suitable way to **take account of stakeholder interests** while simultaneously maintaining unambiguous goals and objectives that allow the measurement of progress. The analysis of Blue Planning in practice by UNEP (2016) showed that Blue Planning processes should enable **'brokerage'** between conflicting or competing interests to find workable solutions. Explicitly **recognising trade-offs** between conflicting interests can help to make prioritization decisions transparent and therefore more justifiable to stakeholders. In the absence of consensus, the best collective outcome may be a "least worst" scenario for stakeholders, but the extent to which this has been developed through **concerted negotiation and compromise** will affect the **acceptance and voluntary cooperation** by stakeholders, as well as the levels of compliance with the final Blue Planning scenario in the implementation stage. The ways of decision making need to **be clear and transparent**.

Suggested areas of improvement in Blue Planning processes include more collaborative and transparent processes, as well as the allocation of more time (consultation processes may last for many months) and resources to support consultation throughout the lifespan of a Blue Planning process. The planning adoption and designation stage of a Blue Planning process, when the need for the involvement of stakeholders, sectors and/or decision-making authorities increases, has often shown to be a **bottleneck** with the risk of stalled negotiations and delayed approval.

### Blue Solutions and other real-life cases

- Management Plan Development -various examples (Norway, Massachusetts, Netherlands, Abu Dhabi; all well documented)
- Effective zoning as a key spatial planning/management tool (Australia – Jon Day) - Blue Solution

<sup>16</sup> Source: UNEP (2016)

## *Sample Outline of a Management Plan<sup>17</sup>*

### **Title Page**

### **Executive Summary**

Key issues to include need for the Plan, summary, approach, and actions taken.

### **Table of Contents**

### **Introduction**

Define the purpose and scope of the plan; explain the legislative or other basis and authority for the plan's development; summary timeline of the Plan's development and agencies involved.

### **Site Description**

#### **Location and governance:**

- Location and size of the area
- The purpose of the area (why was it created)
- The legal status of the area
- Who has the legal authority to manage the area
- The current management system

#### **Biophysical setting:**

- The key physical features of the area (climate, geology, hydrology, soils)
- The key biological features of the area (communities, any target resources)

#### **Socioeconomic and cultural setting:**

- The cultural features (traditional communities, cultural practices)
- The social features (data and trends of communities and their uses of the area)
- The stakeholder groups with an interest in the area

#### **Current Status of the Area:**

- The current uses of the area
- The threats to the area and its resources
- The obstacles to effective management
- The management successes in the area
- The current management challenges
- The history of management planning in the area

#### **Management Approach**

- Description of the management planning process used
- Vision Statement
- Goals and objectives
- Management activities
- Indicators
- Evaluation Plan
- Plan Review Process
- Roles and responsibilities of partners and lead staff

#### **Optional**

- Enforcement plan
- Budget
- Sustainable finance plan

#### **Appendices (As Required)**

- Boundary description and map
- Maps
- Habitat classifications
- Species classifications
- Special features or resources in the area
- Legal language/regulations

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<sup>17</sup> Source: McGee & Barrett (2013a)

**Logbook:**

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*What is one main take away or action item you need to apply or accomplish in this stage of Blue Planning when you return home?*

## 10. Bakul Information: Blue Planning measures



### Measure 1

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Newly established rules for industrial fisheries (zoning, temporal and spatial closures, gears, depth, distance from the shore)

#### *Goal*

Reducing conflicts, protect coral reefs, recovery of fish stocks

#### *Stakeholder group*

Industrial Fisheries

### Measure 2

---

Participatory Monitoring Program (compliance with newly established rules for diving/snorkeling, e.g. limited number of operators and tourists, restricted areas, clear division between recreational fisheries and diving at the same place and time)

#### *Goal*

Reduce impacts on ecosystems, increase awareness of operators and tourists for nature conservation

#### *Stakeholder group*

Local tourist operators

### Measure 3

---

New no-go areas and entry fees for recreational areas

#### *Goal*

Reduce impacts on ecosystems, protect breeding areas, raise funds for conservation

#### *Stakeholder group*

General public, especially habitants of Hanku

### Measure 4

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Newly established cross-sectoral data sharing mechanism among government agencies

#### *Goal*

facilitate and enhance exchange of information, facilitate monitoring and revision of the Blue Plan, facilitate evaluation of measures and impacts

#### *Stakeholder group*

Government agencies



## 11. Implementation and enforcement



Implementation is the process of converting a written document into an operating program for the Planning Area. Implementation differs for each Planning Area and will be determined by the structure, agencies, and people involved. Implementation is a key element of Blue Planning and is carried out throughout the existence of a Blue Planning program.

Within this element, the following tasks need consideration. Remember, these tasks do not necessarily need to be tackled consecutively as displayed below. In fact, planning is a dynamic process, that needs to be adapted to each specific context and should include many feedback loops within the process. The symbols below indicate where a consideration of Stakeholder involvement and Monitoring and Evaluation will be especially helpful.

### 1. Communicate Blue Planning

Communication is key to the success of Blue Planning and its implementation. Yet, the topics involved are usually very complex and often rather difficult to perceive and understand for lay audiences. Therefore communication needs to be **tailored to specific target audiences** to be effective.



### 2. Implement effectively

Implementation is the process of converting Blue Plans into actual operating program. Compliance and enforcement are critical issues for implementation. **Compliance** occurs when requirements are met and desired changes in behaviour are changed so that, for example, catch limits are not exceeded, or human uses are located appropriately in designated zones, or certain uses do not occur in protected areas. **Enforcement** refers to a set of actions that governments take to achieve compliance with regulations involving human activities in order to correct or halt situations that endanger the environment or the public.



**11.1. Case work: Communicate Blue Planning<sup>18</sup>**

Communicate Blue Planning	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Get familiar with communication strategies;</li> <li>• Communicate and raise awareness on Blue Planning; and</li> <li>• Tailor your messages to specific target groups.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Key communication messages</li> </ul>
<b>Importance</b>	Ideally, communication is accomplished early, often and in a sustained manner throughout the Blue Planning process. Maintaining a high level of awareness throughout the implementation phase of Blue Planning is essential.

**Context**

The Federal Government of Bakul has formally established the Bakul Blue Planning program and the CMMA is charged with the coordination of the process. The CMMA already has gained an overview on key stakeholders involved in the implementation of Blue Planning. The CMMA is now keen to start implementation of Blue Planning measures as soon as possible. In order to implement them successfully, the CMMA needs to involve several stakeholders including Government agencies, the private sector and the general public. Thus, the CMMA needs support in preparing several targeted communication campaigns.

**Instructions for case work**

You play the role of consultant advising the CMMA on the implementation of Blue Planning and communication.

The following tools assist your work:

- Text box 19 provides hints on Communicating Blue Planning
- Text box 20 provides an overview on non-technical communication products and communication channels

The following information on Bakul supports your work:

- Overview on Blue Planning measures (see page 93)

<sup>18</sup> This exercise has been adapted from the Blue CCA training.

## Your task

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Your task is to think about an appropriate communication strategy, prepare a five-minute statement tailored to a specific target audience and present it to the plenary. Be creative in the mode of delivery, you may use any visual aid you find helpful. Just remember to stick to the five minutes! The plenary will play the role of your target audience and provide feedback on how convincing your statement was.

The following guiding questions and considerations help you tailor your message to your stakeholder group:

1. What do you (i.e. the CMMA) want to achieve with communicating the results?
2. Review your identified stakeholders' interests. You may also take into account ideas on positions, interests, needs and beliefs that you gained through the negotiation role-play.
3. Identify key messages you want to convey in relation to these Blue Planning measures: What needs to be done differently? What is the underlying objective of the measure? Review the hints on communication above.

If you have time left, also think about what communication products and channels would be most effective to reach your target audience(s) in a real context. You also may consult the Text box 19 below.

### Text box 19: Hints on communicating Blue Planning

#### Hints on communicating Blue Planning

Successful Blue Planning communication relies as much on providing more information as on *how* the information is presented. Everything you communicate must be of an *appropriate tone, length, and format tailored to your audience*.

Effective communication should be:

- **Powerful:** A powerful message is one that raises strong emotions, or fosters deep reflection.
- **Lasting:** A lasting message sticks with the audience long after the message is gone, such as a catchy song or easily remembered phrase.
- **Actionable:** An actionable message is one that clearly describes what actions are required, such as 8-inch limits on crawfish, or 50-meter riparian buffer zone.
- **Surprising:** A surprising message is one that creates pleasant tension in the recipient's mind, such as a surprising comparison, an interesting fact or a new perspective.
- **Targeted:** A targeted message is aimed directly at a particular audience.
- **Interesting:** An interesting message is one that has strong visual or auditory appeal.
- **Clear:** A clear message states exactly what the key issues are, focusing precisely on the specific points, including for example: the problems cause by undervaluation, the urgency of taking adaptation measures, the importance of changing the situation, and potential means of changing the situation.

**Text box 20: Non-technical communication products and communication channels**

**Non-technical communication products and communication channels\***

**Possible communication products include:**

- Policy briefs
- Brochures
- Posters
- Presentations or slideshows
- Videos
- Newsletters
- Press releases for the media
- Sample interview responses for media coverage
- Maps, charts and info graphics
- Website contents
- Visual aids that display trade-offs (e.g., spider diagrams, bar charts, summary tables)

**Avenues for communicating and disseminating results and recommendations include:**

- Traditional media
- Social media (e.g., Facebook, Twitter)
- Launch events
- Stakeholder workshops or other public meetings
- Partners' networks
- Targeted private meetings
- Relevant conferences and events
- Information campaigns—advertisements / social marketing
- Tourist education (e.g., on importance of coral reefs and responsible diving)
- Websites
- Smartphone apps

\*Source: Waite et al. (2014)

## 11.2. Case work: Implement effectively

Implement effectively	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Get familiar with different instruments and entities for the effective implementation and enforcement of blue plans;</li> <li>• Understand the limits of Blue Planning with respect to implementation and enforcement; and</li> <li>• Know ways to ensure political commitment.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Identification of actions required to ensure compliance and enforcement of Blue Planning</li> </ul>
<b>Importance</b>	Implementation usually takes place after the planning phase; yet, it can also be started earlier on in the process. Whenever you start implementing Blue Planning measures, ensuring their compliance is vital for the success of Blue Planning and its specific vision, goals and objectives.

### Context

The Federal Government of Bakul has formally established the Bakul Blue Planning program, and the CMMA is charged with the coordination of the process. Existing single-sector institutions will carry out most actions towards implementation. These institutions use the comprehensive plan and the zoning plan as guides for permitting and other actions for which they are responsible. The CMMA as the coordinating entity aims to ensure compliance with the Blue Plan, i.e. it wants to ensure that desired changes in behaviour are achieved and Blue Planning objectives are met. It has asked for your support as a consultant in this endeavour.

### Instructions for case work

You continue to play the role of consultant advising the CMMA on the implementation of Blue Planning.

The following tools assist your work:

- Text box 21 provides hints on effective implementation of Blue Planning

### Your task

You play the role of consultants advising the CMMA. Your task is to support the effective implementation of Blue Planning: Brainstorm concrete actions that either enforce compliance or encourage voluntary compliance with the Bakul Blue Plan. Remember to keep in mind the role of time and resources! List the actions you have identified on a flipchart.

#### Text box 21: Hints on effective implementation

##### Hints on effective implementation

The way how Blue Planning is implemented is highly dependent on the type of Blue Planning. Formal Blue Planning processes, i.e. those where the necessary legislation and administrative structure for Blue Planning are fully available, often concentrate on the implementation of Blue Planning goals and regulations by achieving compliance of sectoral activities and regulations with the Blue Plan, e.g. within the shipping, marine conservation, or fisheries sectors. In this case Blue Planning takes effect mainly within the administration.

In comparison to formal processes informal Blue Planning processes often have a much stronger need for voluntary and community-based actions and require therefore more communication and awareness rising activities. The Blue Solutions listed on the following page give an impression of the variety of successful implementation strategies.

### 11.3. Bringing it home: Implementation and enforcement



#### Enabling & challenging factors<sup>19</sup>

Compliance and enforcement rely upon the development of management measures or regulation systems within a Blue Planning process. Preventing **fair access to resources** as a result of poorly designed management measures or regulation systems, such as inequitable **permit systems**, causes stakeholder support to break down and compliance to diminish. Weak national/local government or **institutional capacity to regulate or enforce** management within the implementation phase is a key challenge for changing behaviour and achieving goals. This may require **continuous funding** during the implementation and monitoring stages as well as training and education. **Clear governance arrangements and policy integration** will support the implementation of Blue Planning outcomes.

**Corruption**, while a symptom of poor governance, may negatively affect compliance and enforcement elements of Blue Planning processes.

#### Blue Solutions and other real-life examples

- Community Communication Programme (Colombia – Jorge Jiménez) - Blue Solution
- Regional participatory fisheries monitoring (Colombia, Costa Rica, Panama) – Blue Solution
- Shared governance and partnerships with key sectors – Building block of Blue Solution: Sound legislative governance framework for spatial planning and management processes (Australia – Jon Day)
- Inter-jurisdictional System of Coastal Marine Protected Areas in Argentina (Argentina) – Case Study MSP in Practice
- Clear governance arrangements and policy integration avoid implementation gaps (Belize) - Case Study MSP in Practice
- Coordinated multi-layered management for implementation of MSP across the GBR (Australia – Jon Day)



<sup>19</sup> Source: UNEP (2016)

**Logbook:**

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*What is one main take away or action item you need to apply or accomplish in this stage of Blue Planning when you return home?*

## 12. Monitoring, revision and adjustment



Monitoring, revision and adjustment are key steering tasks of Blue Planning and its effective implementation. Adaptive management is a systematic approach for improving management through learning by monitoring and evaluating management outcomes. Simply put, it is 'learning by doing' and adapting what one does based on what is learned. Also, adaptive management needs to be applied when new situations occur.

Within this element, the following tasks need consideration. Remember, these tasks do not necessarily need to be tackled consecutively as displayed below. In fact, planning is a dynamic process, that needs to be adapted to each specific context and should include many feedback loops within the process. The symbol below indicates where a consideration of stakeholder involvement will be especially helpful.

### 1. Measure Progress

Monitoring results (or performance) and evaluation are integral and continuous tasks that use the **systematic collection on data on selected indicators** to provide Blue Planners and stakeholders with indications of the extent of progress towards the achievement of goals and objectives. Monitoring also supports a **continuous learning process**.



### 2. Reflect upon the process

Throughout the Blue Planning process it is important to reflect at the reason for starting the process and **determine if your work is still on track**. It is also important to plan time for this in your process. Possible areas of change include: New directions in the national development planning; increasing knowledge on environmental parameters or new threats resulting from climate change.

### 3. Adapt the Blue Plan

Adaptive management is a **dynamic process** that provides the opportunity to adjust strategies, as the Planning Area requires. However, **stakeholder also need to understand that a plan can and will change**. If findings on what works and where a different approach might be needed are put forward in a transparent manner, stakeholders can engage in sharing ideas for improvement.





## 12.1. Case work: Measure Progress

Measure Progress	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Have an overview on monitoring and evaluation approaches and techniques;</li> <li>• Prepare a monitoring and evaluation plan; and</li> <li>• Understand monitoring needs and limits.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Overview on important task for monitoring and evaluation (including indications on time and stakeholders to be involved)</li> </ul>
<b>Importance</b>	<p>Monitoring and evaluation are integral activities of Blue Planning and should be considered from the very beginning of the planning process onwards.</p> <p>While the monitoring itself has to be conducted during the implementation phase of a Blue Plan, the results might be used to inform the inventory stage of a possible plan revision.</p>

### Context

The Federal Government of Bakul has formally established the Bakul Blue Planning program, and the CMMA is charged with the coordination of the process. The CMMA also is responsible for monitoring and evaluation. The CMMA needs support in designing and implementing a performance monitoring and evaluation process for Blue Planning and its implementation in Bakul. The CMMA needs advice on the main tasks on monitoring and evaluation as well as when to approach these tasks and on what stakeholders to be involved in the tasks.

### Instructions for case work

You play the role of consultant advising the CMMA on monitoring, revision and adjustment of the Bakul Blue Plan. Build onto your existing work.

The following tools assist your work:

- Text box 22 provides hints on measuring progress of Blue Planning.
- Table 14 assists in measuring progress.

### Your task

Your task is to prepare a Monitoring and Evaluation Plan for the implementation of Bakul Blue Plan. Use Table 14 to guide your work. Work in grid lines and relate your finding to one another:

- In column A brainstorm concrete tasks related to monitoring and evaluation.
- In column B decide when to conduct the task.
- In column C brainstorm involved stakeholders.

**Text box 22: Hints on measuring progress\***

**Hints on measuring progress\***

Mainstreaming a monitoring system into the Blue Planning steering structure provides relevant stakeholders with the information required for making decisions that will drive the project's progress. The following questions will help clarify the requirements for a results-based monitoring system:

- Which actors are to be involved in the key strategy and steering decisions to be made by the project?
- How are key steering decisions made and what information is required to this end?
- What interests, expectations and information requirements do the different actors have with respect to joint monitoring systems?
- What information must the monitoring system be able to provide, and when?
- Which actors are to be involved in monitoring? Who is responsible for which aspects of monitoring?
- Do the cooperation system partners possibly already have monitoring systems in place that can be used as a basis for (improving) the joint project?
- What human and financial resources are required for setting up and operating the monitoring system? What resources are available?

\* Source: Capacity WORKS Tool 22: Results-Based Monitoring System (see GIZ: 2015).

**Table 14: Measure Progress**

Measure Progress		
A	B	C
Task	When to conduct?	Stakeholders involved

## 12.2. Case work: Reflect on the process

Reflect on the process	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand the value of regular reflection; and</li> <li>• Schedule time in your planning process to reflect, learn and improve.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Overview on successes and failures</li> <li>• Compilation of lessons learned</li> </ul>
<b>Importance</b>	Reflection and adaptive management should be informed by monitoring and evaluation and carried out throughout the Blue Planning process.

### Context

The CMMA has established a monitoring team to measure the performance of Bakul Blue Plan. The monitoring team has already started its work and produced initial results. At this point of the Blue Planning process, the CMMA decided to look back at where the process started and assess if the process is still heading in the right direction. Again, the CMMA needs support.

### Instructions for case work

You continue to play the role of consultant advising the CMMA on monitoring, revision and adjustment of the Bakul Blue Plan. Build onto your existing work.

### Your task

Your task is to reflect upon the present Blue Planning process:

1. Reflect upon your goals, objectives and Blue Planning measures.
2. Then answer the following questions and document your results on flipchart:
  - What has been accomplished through the Blue Planning process so far?
  - What has been failed to work so far?
  - What can be learned from successes and failures?
  - How has the context (e.g., environment, governance, technology, economy) changed since the program was initiated?
  - Do we still meet the needs?

### 12.3. Case work: Adapt the Blue Plan<sup>20</sup>

Adapt the Blue Plan	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Understand the inherent iterative nature of Blue Planning processes;</li> <li>• Understand possibilities how to adapt existing Blue Plans; and</li> <li>• Organize support for the further development of Blue Planning.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Proposal for adapting goals, objectives and Blue Planning measures</li> <li>• Hints on communicating changes to affected stakeholders</li> </ul>
<b>Importance</b>	Adaptive management should be informed by monitoring and evaluation and carried out throughout the Blue Planning process.

#### Context

Several Government institutions have started to implement Blue Planning measures and the Monitoring and Evaluation team is already tracking performance. Yet, the Climate Change Adaptation Committee recently published the results of an in-depth climate risk assessment. Among the identified hazards posing severe risk to Bakul coastal and marine development is a very likely increase in the intensity of cyclone events over the next few decades. The Federal Government of Bakul thus prioritised the following measures for implementation:

- Identify coastal areas subject to flooding and erosion and establish climate change adaptation measures in these areas; and
- Use ecological buffer zones to minimize erosion and provide flood storage and reducing flood velocities.

A climate change research team has already produced a map indicating areas at risk and suggesting several concrete adaptation measures. The CMMA now needs your help as consultants to provide advise on how to incorporate necessary changes to the Blue Plan.

#### Instructions for case work

You play the role of consultant advising the CMMA on monitoring, revision and adjustment of the Bakul Blue Plan. Build onto your existing work.

The following tools assist your work:

- Text box 23 provides hints on adapting Blue Planning

The following information on Bakul supports your work:

- The CMMA's Coastal and Marine Climate Change Adaptation Action Plan elaborates on flooding and erosion risks and contains a list of priorities adaptation measures
- Map 4 and Map 5 display flooding and erosion risks in Bakul.

#### Your task

Your task is to review and adapt the Bakul Blue Planning process:

1. Review Blue Planning goals and objectives, the Zoning Plan and Blue Planning measures based on the new information; and
2. Then decide whether and how they need to be revised.
3. In a last step identify the stakeholders affected by this change, and explain provide hints for the CMMA on how to communicate changes to the Blue Plan to affected stakeholders.

<sup>20</sup> This exercise has been adapted from McGee, L.A., & Barrett, M.J. (2013a).

**Text box 23: Hints on adapting Blue Planning****Hints on adapting Blue Planning**

Modifications to a Blue Plan should not be made in an improvised way. They should instead be made part of the next round of planning in a continuous process. Management can be changed by: (1) modifying Blue Planning goals and objectives; (2) modifying desired Blue Planning outcomes; or (3) modifying Blue Planning management measures.

**Bakul Information***CMMA's Coastal and Marine Climate Change Adaptation Action Plan for Bakul:***Flooding and erosion risk in Bakul:**

Three types of flooding can occur:

1. Coastal flooding as a result of storm surges or large waves;
2. Flash flooding from rapidly rising rivers, especially where hillslopes have been cleared of vegetation; and
3. Surface flooding where high rainfall pools in low lying areas.

The coastal, riverbank, and low lying areas vulnerable to flooding are where many of the residential, industrial, and urban areas are located.

Erosion can occur in three main ways:

1. Shoreline erosion is possible during storms from surge, waves, or long shore drift of sediment;
2. Riverbank erosion risk is present where rivers flow rapidly through the hills and where the shape of the river has been constrained by engineering; and
3. Inland erosion occurs on hill-slopes and on flat lands after forest and natural vegetation clearing.

Due to the widespread susceptibility to erosion throughout the county, potential impacts on people and development are high.

**Prioritized adaptation measures:****Coastal Fisheries:**

- Establish and strengthen early warning systems for coastal mariners.
- Improve hazard detection and warning communications.
- Prepare mariners with capacity to respond.

**Marine and coastal habitats:**

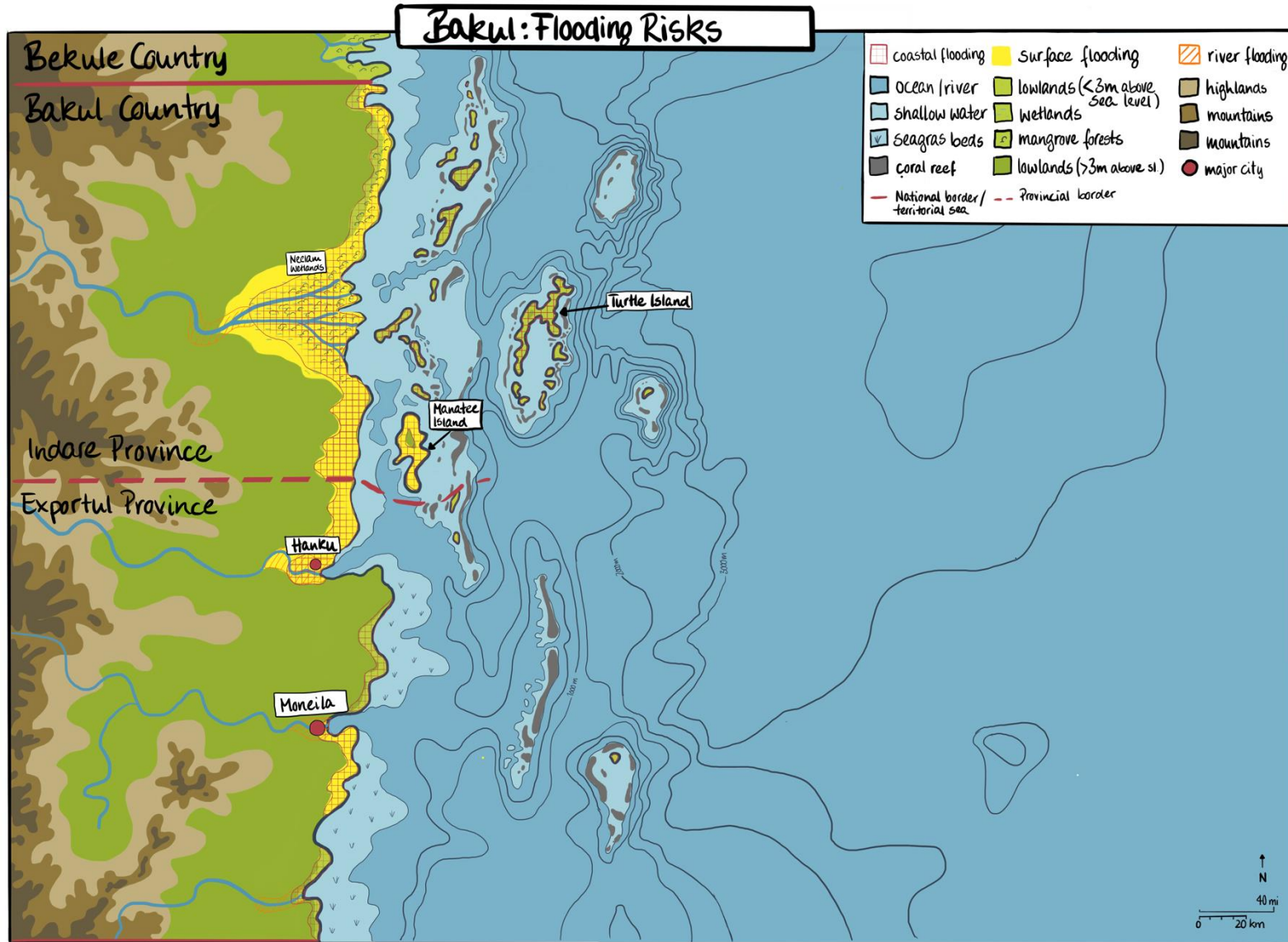
- Improve management of existing mangroves.
- Reduce human impacts on mangroves.
- Establish strategic mangrove protected areas.
- Protect mangrove mother trees.
- Protect pristine mangrove forests and mangrove areas near or adjacent to known areas of abundant fish, mollusc, and crustacean fisheries.
- Reduce coral reef destructions.
- Preserve intact vegetation along riverbanks by limiting disturbance, and replant where necessary
- Preserve remaining upland forests by reducing clearing and upland logging.

**Livelihood and Economic Development:**

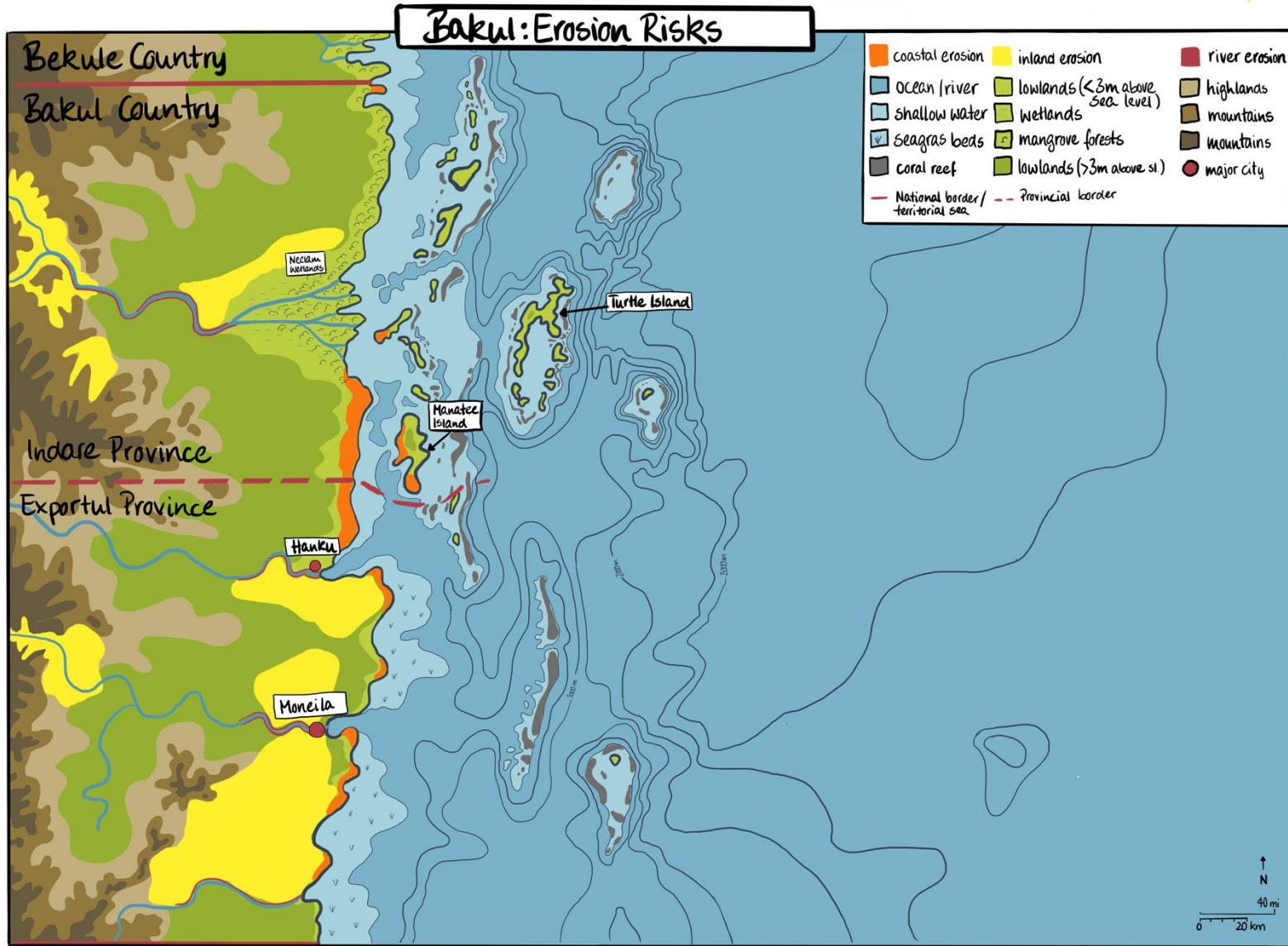
- Develop emergency response and recovery plans for businesses.
- Establish greenbelts to protect businesses and tourism industry along rivers and the coastal zone.

**Infrastructure:**

- Establish coastal set-backs and other land-use zones to locate coastal development outside of hazard-prone areas
- Prohibit sand mining of small, low-lying islands.
- Retrofit existing critical infrastructure to withstand climate change and other natural hazard impacts



Map 4: Flooding risks in Bakul



Map 5: Erosions Risks in Bakul

## 12.4. Bringing it Home: Monitoring, revision and adjustment



### Enabling & challenging factors

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There is currently little knowledge about enabling and challenging factors for this element of Blue Planning. While there are dozens of Blue Planning initiatives around the world, only a small number of cases reached the stage of evaluation and amendment, so far. Blue Planning is still a young management concept and it usually takes several years before the first round of a Blue Planning process is accomplished.

It seems that in many practice examples the Blue Planning authority starts a self-evaluation either within two years, in most cases five years, or latest ten years, after a Blue Plan came into force. Such an evaluation usually checks the needs for amendments as a consequence of changes in societal, political, economic, or technological developments. In practice, there is often a constant communication of the Blue Planning authority with other agencies, commercial and non-commercial NGOs and other stakeholders, which allows the Blue Planning authority to get first impressions on potential needs for amendment. Spatial observation systems are used to map and compare the actual development with the Blue Plan. Such a system usually consists of maps and statistics, e.g. on maritime transport, fish landings, demographic or economic development. Existing statistics and monitoring programs, available for example from the Statistical Office or from environmental authorities, are used to minimize the effort for own data collections. A self-evaluation therefore often consists of a comparison of planned and actual developments, at least partially based on statistical data, plus a performance analysis on the implementation, effectiveness, and reasonability of Blue Planning regulations based on stakeholder feedback. In most cases the results of such a self-evaluation are documented in internal reports.

### Blue Solutions and other real-life examples

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- Regional participatory fisheries monitoring (Colombia, Costa Rica, Panama) – Blue Solution
- [Management effectiveness in GBR – The GBR outlook report \(Australia – Jon Day\) – document](#)



**Logbook:**

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*What is one main take away or action item you need to apply or accomplish in this stage of Blue Planning when you return home?*

## 13. Bringing it Home



### 13.1. Plan personal action

Plan personal action	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Practically approach Blue Planning through giving and receiving feedback on concrete and real challenges; and</li> <li>• Identify entry points and define concrete next steps with regards to approaching Blue Planning in your actual work back on the job.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Personal Action Plan</li> </ul>
<b>Importance</b>	At the end of the training course and whenever

#### Context

Congratulations! You have supported the planning and implementation of Bakul's Blue Plan. Before you travel home, you will have time to reflect on what you've learned and how to bring this information back to your work.

At the end of the training workshop, it is time to reflect about how to apply your newly acquired knowledge and skills. How can you integrate the issue of Blue Planning into your work? How can you transfer elements or the entire approach to your work context? The exercise involves peer consultation, but for the most part you will be working individually.

#### Instructions

Do not play any role; be yourself!

The following tools assist your work:

- Table 15 assist in planning personal action on Blue Planning

#### Your task


Team up in pairs and reflect on what you have learned during the seminar.

1. Start by reflecting individually: Create your own little "transfer project": This project should be rather straightforward (nothing too complex) and include concrete steps for implementing Blue Planning in your working context. Use the table 15 (see next page) to briefly describe your project.
2. Then present your transfer project to your partner and vice versa. Mutually check the following in order to assure that the projects is realistic and can be implemented:
  - Is the objective realistic?
  - Can your partner achieve his/her goal more or less independently?
  - The timeline should not be too long in order to keep up motivation → better limit oneself to small achievements.
  - Is the environment clearly defined (where, what, with whom)?
  - How do we know that the objective is achieved (indicator)?
  - Adapt the project accordingly

Table 15: Plan personal action

Plan personal action				
Objective	Activities	Deadlines	Stakeholders	Challenges
<b>Sensitize local authorities about Blue Planning benefits</b>	<ul style="list-style-type: none"> <li>• Prepare information brief (fact sheet)</li> <li>• Organize workshop at local level...</li> </ul>	<ul style="list-style-type: none"> <li>• End of June 2016</li> <li>• End of July 2016</li> </ul>	Local authorities	<ul style="list-style-type: none"> <li>• Limited availability of funding</li> <li>• Low motivation of stakeholders</li> </ul>

## 13.2. Draft a Blue Planning road map<sup>21</sup>

Draft a Blue Planning road map	
<b>Purpose / Learning objectives</b>	By the completion of this exercise, you will be able to: <ul style="list-style-type: none"> <li>• Apply key elements of roadmaps;</li> <li>• Condense key findings of previous steps into a consistent roadmap as guidance for the concrete Blue Planning process; and</li> <li>• Draft ideas for the ‘real’ Roadmap development after the training.</li> </ul>
<b>Output</b>	<ul style="list-style-type: none"> <li>• Roadmap</li> </ul>
<b>Importance</b> 	Developing a roadmap (or work plan) should be one of the first tasks of a Blue Planning process, as it specifies what elements of the process should be done by whom, by what time, at what cost and how the various elements relate each other.

### Context

Congratulations! You have supported the planning and implementation of Bakul’s Blue Plan. Now it is upon time to work on your own Blue Plan for your own context starting with drafting a road map.

### Instructions

Do not play any role; be yourself!

The following tools assist your work:

- Text box 24 provides hints on drafting a road map
- Table 16 assist in drafting a Blue Planning road map

### Your task

Use the following matrix to guide your work:

1. In column A list the main work packages needed to develop the Blue Plan (you may consults the Blue Planning elements in this handbook).
2. In column B break each activity down into manageable tasks, i.e. a task that can be managed by an individual or group and is easy to visualize in terms of resources required and the time it will take to complete. However, be careful, a common mistake is to break the activities into too many small components.
3. In Column C choose appropriate milestone (points in time) for specifying when activities will take place (by week, month, quarter). Remember to clarify the sequence and relationships between tasks: Does another task have to be completed before another task can be started? Can two tasks be carried out at the same time?
4. In column D appoint responsibilities for tasks with the various members of the Blue Planning team.
5. In column F roughly assign resources and budget needed.

<sup>21</sup> This exercise has been adapted from the Capacity WORKS Tool 24: Plan of Operations (see GIZ: 2015) and Ehler & Douvère (2009).

**Text box 24: Hints on planning a road map**

**Hints on planning a road map**

A road map is a document that identifies key packages of tasks, decisions, responsibilities and milestones for implementing Blue Planning over a specific time. A time frame of one year is generally advisable. It sets out who will do what and when.

Operational planning is a management task and includes fundamental decisions on the outputs within the Blue Planning process. Planning operations means designing and planning these output processes, i.e. channelling resources into effective procedures, outputs and work packages.

Operational planning is an iterative and recursive procedure. A workshop format including all relevant stakeholders has been proven effective. You should most certainly involve individuals who are involved in Blue Planning at the strategic level. It is also helpful to involve people from the operational level who will be responsible for implementing the agreed work packages. Select the participants very carefully as the more people are involved, the more complex the process becomes.

**Table 16: Blue Planning Road Map**

Blue Planning Road Map					
A	B	C	D	E	F
Work Packages	Tasks	Milestones (Point in time)	Responsibility	Resources and Budget	Notes

### 13.3. Check list for Blue Planning in your own context

We have compiled this checklist for you as a reference when returning home. It contains important issues that need to be tackled in one way or another in each Blue Planning process. For a better overview we have compiled the issues by Blue Planning elements. You may use this list as a gentle reminder not to miss important issues within each element for Blue Planning or as a To-do-list to guide your first steps in your own Blue Planning process.

#### Identification of need and process design

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- ✓ Identify your need for Blue Planning.
- ✓ Delimit and understand your planning area thoroughly, i.e. based on administrative, ecological, and socio-economic conditions and to an extent that reflects your initial need for Blue Planning.
- ✓ Understand the legal and administrative framework for your Blue Planning process (e.g. which regulations exist, who is responsible for what?).
- ✓ Get yourself organized: Understand your mandate and analyse competencies needed. Build up a team that possesses the necessary skills; prepare a first work plan that reflects your temporal, human, and financial resources.
- ✓ Define ways of collaboration with a) other national agencies and, if necessary, b) agencies in neighbouring countries affected by your Blue Planning. Have in mind the mandates of those agencies and the difference between formal and informal communication.
- ✓ Design your Blue Planning process carefully; see enabling and challenging factors below.
- ✓ Agree on goals and visions that relate with the key issues to be solved in the Blue Planning process, while having in mind the concept of SMART objectives.

#### Organisation of stakeholder participation

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- ✓ Ensure that you identify all your stakeholders.
- ✓ Understand what types of stakeholders are part of the Blue Planning process and what relationships existing between them.
- ✓ Understand positions, interests, needs and beliefs of stakeholders already before you start to draft your first Blue Plan.
- ✓ Define which stakeholder you will involve when and how in the Blue Planning process. This shall not exclude any stakeholder, but stakeholders may have different responsibilities that may require different forms of interaction. Make a comprehensive plan for your stakeholder work that provides guidance to you and your team on how, when, and with whom to interact.
- ✓ To prepare an accurate stakeholder map you need to:
- ✓ Define and demarcate the scope: Start by clearly formulating the key issue in order to circumscribe the area to be mapped and clearly determine the number of stakeholders to be included.
- ✓ Define the point in time and intervals: The stakeholders form a dynamic system of mutual interdependencies. This web of relationships can change very quickly. It is therefore important that you note the point in time at which the analysis of these relationship was carried out.
- ✓ Separate perspectives: Each stakeholder has his or her own perspective. A map of stakeholders therefore only ever represents the perspective of the individuals or groups involved in preparing it.
- ✓ Explain and discuss with stakeholders their role in the process.
- ✓ Be prepared that not all stakeholders may want to take part in the Blue Planning process. Ensure that this does not hamper the overall progress of your Blue Planning process.

### Inventory and analysis of current and future conditions

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- ✓ Define an assessment area that may be larger than your planning area, acknowledging that your plan might be impacted from processes outside of your planning area.
- ✓ Decide on the timeframe of your plan and therewith on the forecasting for future uses.
- ✓ Define and communicate minimum data standards.
- ✓ Have a system in place to store, handle, and analyse data.
- ✓ Collect available data that might help you to understand your socio-ecological and socio-economic systems, i.e. historical data, data that allows you to estimate trends or patterns, data on the future plans of your stakeholders, etc. Restrict the data collection to necessary data.
- ✓ Identify resource competition and compatibilities between uses, functions, and Blue Planning objectives. Be aware that resource competitions and compatibilities may be dynamic. Incompatibilities may depend on intensities, species life cycles (e.g. increased sensitivity during the spawning season), or seasonal changes of human activities (e.g. increased conflicts during the tourism season). Knowledge of these dynamics may help you to develop an efficient Blue Plan.
- ✓ Decide on the appropriate use of Decision Support Tools while having in mind the availability of human, financial and data resources.

### Draft and Approval of the Spatial Management Plan

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- ✓ Develop and structure criteria for how to allocate sea space to single uses and functions.
- ✓ Understand the different legislative situation of uses. International shipping lanes, for instance, may not be changed via national Blue Planning.
- ✓ Consider competition and compatibilities of uses and functions when developing a draft plan including their spatiotemporal dynamics by seasons and think about the necessity for buffer zones, e.g. if single uses are expected to intensify in future.
- ✓ Reflect given objectives in your Blue Plan, e.g. binding international conventions, objectives formulated in your national constitution or other legally binding requirements that your Blue Plan needs to be compliant with.
- ✓ Think about ways how to implement and enforce your Blue Plan already now. Any formulated measure should be reachable.
- ✓ Know the positions of your stakeholders and, if possible, the underlying reasons.
- ✓ Understand and use methods for conflict management.
- ✓ Allow the development of alternative Blue Plan suggestions by stakeholders.
- ✓ Make use of the tools and approaches for interaction with stakeholders as developed in module II.
- ✓ Be transparent and explain clearly how decisions are made.
- ✓ Take sufficient time for (multiple) rounds of stakeholder negotiation. This may take months but it will bring you a major step forward.
- ✓ Develop management measures that fit to your purpose, neither being too overambitious nor too narrow. Use measures that have a tradition in your region if appropriate.

### Implementation and enforcement

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- ✓ Understand the various forms of Blue Planning implementation: Your Blue Plan is a framework that needs to be implemented partly by other sectoral agencies, by stakeholders and private actors.
- ✓ Make use of your results elaborated in exercise I.2.
- ✓ Develop an implementation plan clarifying agency mandates and outlining the necessary responsibilities and management actions under specific policies, specifically for enforcement activities.
- ✓ Include responsible agencies in your Blue Planning process and communicate their roles.
- ✓ Ensure the necessary institutional capacity to enforce the Blue Plan.
- ✓ Communicate the outcomes of the Blue Planning process on various levels, from politicians to stakeholders and a broader public. Seek to ensure robust support by stakeholders.
- ✓ The degree of enforcement may depend on the knowledge about progress in achieving the Blue Planning objectives. Monitoring, see module VII, is therefore crucial also for the implementation and enforcement.

### Monitoring, revision and adjustment

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- ✓ Monitor both the Blue Planning process and its outcome (social, economic & ecological) and define suitable indicators.
- ✓ It may be difficult to distinct between those changes caused by the Blue Plan and other (external) factors that facilitate change. But any information on relevant changes may be important to assess whether your Blue Plan is still appropriate.
- ✓ Have consistent indicators, use existing monitoring data from other departments, if available.
- ✓ Allow independent review of your performance.
- ✓ Celebrate success.
- ✓ Agree on to whom and how the progress in reported and how the outcomes are used to inform a revision/adaptation of the Blue Plan.
- ✓ Have a structure to incorporate changes into an adaptive Blue Planning.



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