

# Sustainable Blue Economy: Identifying Pathways for Progress



**BLUE SOLUTIONS**



# BLUE SOLUTIONS



of the Federal Republic of Germany

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**Layout:**

Strategic Agenda

**Published by:**

Blue Solutions

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GRID-Arendal

International Union for Conservation of Nature (IUCN)

United Nations Environment Programme

(UN Environment)

**On behalf of**

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety of the Federal Republic of Germany (BMU)

**Citation:**

Lobmüller, Janina & Lieberknecht, Louise (2021): *Sustainable Blue Economy: Identifying Pathways for Progress* (GIZ 2021)

**Contact information:**

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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**Date of publication:**

December 2021

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## Introduction

Looking at our planet from space, there is no doubt: we live on a blue planet. The ocean covers more than 70 percent of the Earth's surface and it supports all life by generating oxygen and regulating the global climate. Billions of people have a direct or indirect connection to the ocean; 40 percent of the world's population live within 150 kilometres of the coast, while megacities along our coastlines are growing in number and population. Oceans and coasts provide food and livelihoods for a large portion of the global population and the ocean is home to an estimated 80 percent of the planet's biodiversity. For many coastal communities, the ocean is not only a source of food but also an intrinsic part of their culture and heritage.

The potential of the ocean to play a role in achieving sustainable development and providing a source of well-being is enormous, but only if ocean ecosystems can be maintained in and/or restored to a healthy and productive state, and if the benefits they provide are distributed equitably and fairly to meet fundamental needs. A Sustainable Blue Economy would provide a triple win in terms of ecological, economic and social sustainability, and thus play an important role in achieving the United Nations Sustainable Development Goals (SDGs).

To make this vision a reality, we need a clear definition of what, exactly, we mean by "blue economy". We also need to define, in detail, the characteristics that would make the blue economy sustainable. These definitions would create a guiding vision of the blue economy: the state we would like it to be in, the characteristics we would like it to have, and the benefits we would like it to provide. Most importantly, we need to identify pathways for transforming the status quo of the blue economy into that vision.

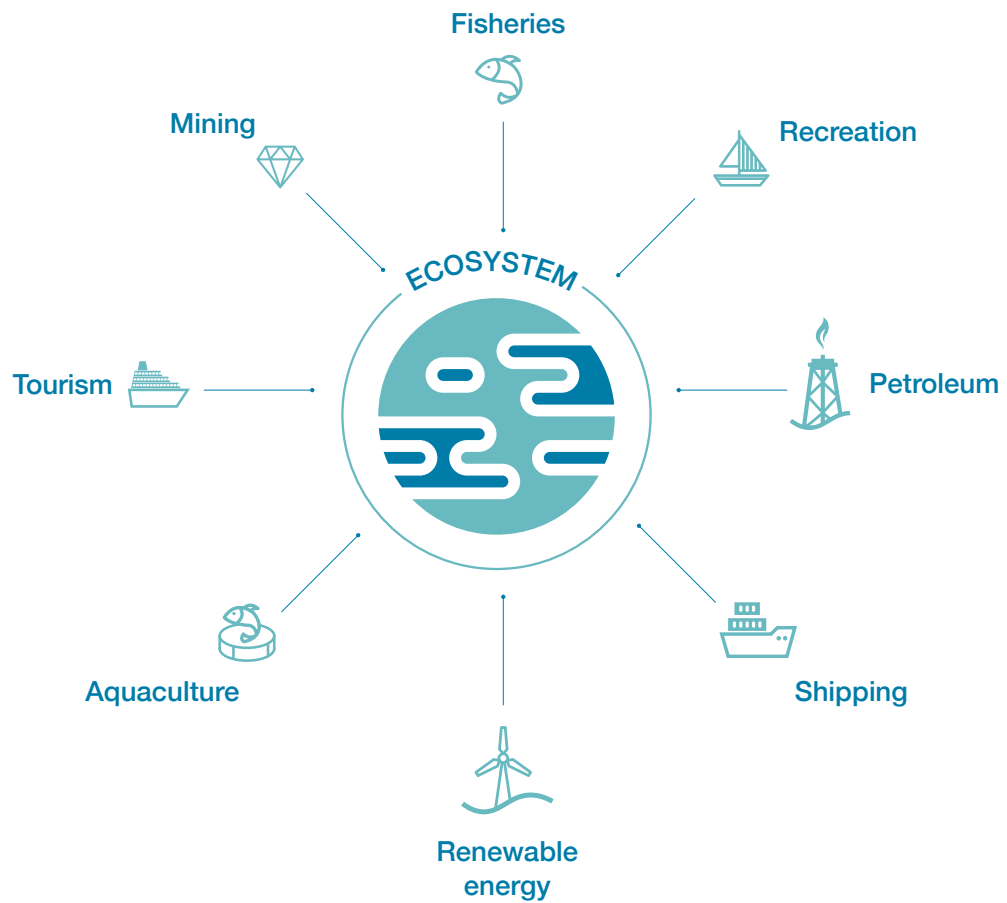
The first part of this document provides a brief definition and guiding vision, but the main purpose of this publication is to illustrate potential pathways towards that vision by presenting a series of real-life examples of initiatives that are addressing different aspects of sustainable blue economic development and putting transformative action into practice on the ground. These case studies can serve as examples and sources of inspiration for practitioners around the globe, making a topic that can seem somewhat abstract and overwhelming more tangible, and illustrating how theory can be put into practice.

### Background

The term "blue economy" emerged around 10 years ago, in part as a response to the concept of the "green economy", which was a key focus of Rio+20 (the United Nations Conference on Sustainable Development), held in Rio de Janeiro in 2012. In its outcome document, *The Future We Want* (A/RES/66/288), the concept of green economy is highlighted as a key tool to achieve sustainable development and poverty eradication: "We consider green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development" (para 56).

# The Blue Economy

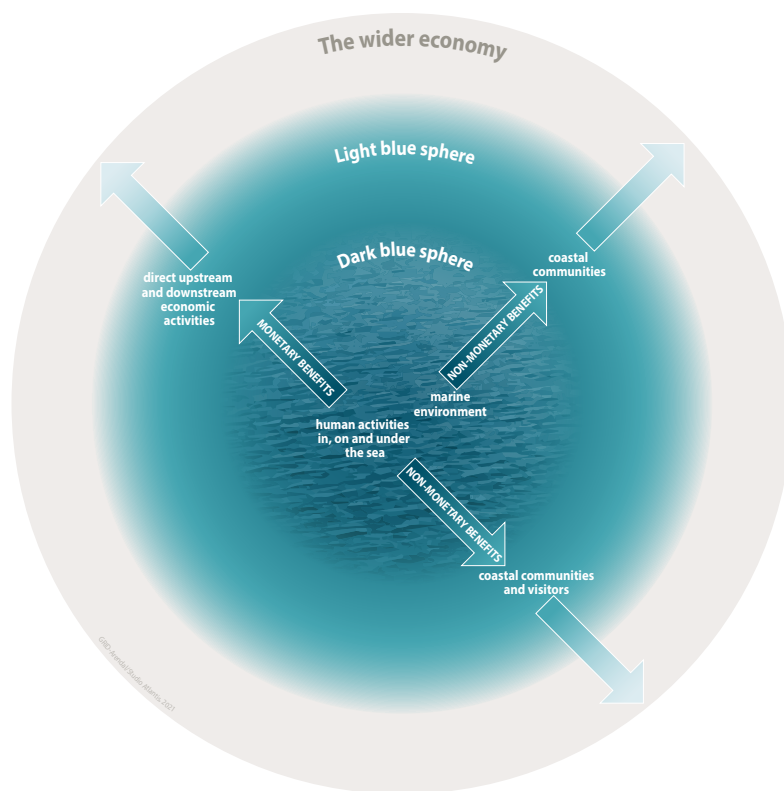
The global economy could not exist in its current form without the ocean: around 90 percent of all internationally traded goods travel by ship, and the ocean economy directly contributes an estimated US\$ 1.5 trillion to the global economy. Over 3 billion people rely on seafood as a source of protein and nutrients, and the ocean food sector alone provides up to 237 million jobs. Millions more work in other ocean sectors (illustrated in Figure 1), and more still are indirectly connected to the ocean economy.



**Figure 1:** Industries and sectors active in marine and coastal ecosystems.  
*Source: Winther et al. (2020)*

The blue economy referred to throughout this report can be visualized as occupying two blue spheres, dark blue and light blue, that sit within the wider economy (Figure 2). The core of the blue economy (the dark blue sphere) consists of the ocean environment itself, and of the activities people carry out in, on or under the sea. Most of the industries illustrated in Figure 1 relate to the dark blue sphere, at least for part of their operational activities. The dark blue sphere includes traditional maritime industries (fisheries, coastal tourism, energy and mineral production, ship building, transport and ports) as well as new and developing industries (blue carbon, new aquaculture products, desalination and renewable ocean energy including wind, wave and tides).

The dark blue sphere generates a wide range of benefits that support human well-being, some of which are listed in Table 1. Figure 2 provides a simplified illustration that divides these benefits along three axes, each represented by a set of arrows flowing towards the wider economy. These arrows represent monetary and non-monetary benefits generated by human activities at sea, and the non-monetary benefits that a healthy ocean ecosystem provides on its own, without humans having to visit the ocean at all (e.g. oxygen produced by marine phytoplankton).



**Figure 2:** The blue spheres. *Source:* GRID-Arendal/Studio Atlantis, (2021)

Because humans do not live at sea, the actual value of the benefits that flow from the dark blue sphere normally only materialize on dry land, for example, a commercially caught fish generates monetary income and provides a source of nutrition only once it has been brought to shore to be sold and eaten. The blue economy therefore also encompasses a light blue sphere that relates to human communities and networks on land. This sphere can be visualized as a light blue halo around the dark blue sphere, representing:

- upstream and downstream economic activities directly linked to maritime activities (e.g. suppliers of products, materials and services required by maritime operators, buyers of resources extracted from the sea or of services provided by maritime operations, etc.)
- planners and providers of supporting infrastructure (e.g. ports and related transport and logistical infrastructure)
- the indirect beneficiaries of monetary incomes generated (e.g. families/households whose well-being is improved by income derived from marine activities)
- the beneficiaries of non-monetary benefits derived from the ocean ecosystem and/or from activities carried out at sea (e.g. mental health benefits of spending time by the sea, the enjoyment and spiritual nourishment provided by maritime leisure activities, protection from flooding by intact mangrove ecosystems, etc.).

The blue spheres form an intrinsic part of the wider economy. Human interactions, interdependencies, and economic supply and value chains form an interconnected web that embeds blue activities and benefit flows within the wider economy and within wider society. Thus, in Figure 2, the edges of the blue economy gradually blend into the grey sphere of the wider economy, with no clear dividing line between the two.

Environmental connections and impacts generate a further set of interlinkages between the blue and grey spheres. Land-based activities impact on the ocean in many ways (e.g. through plastic waste and other forms of pollution that originate on land). Several activities in the dark blue sphere (e.g. fishing and coastal tourism) depend on clean and healthy ocean ecosystems, which means that the sustainable development of the blue economy depends on sustainable practices being implemented within the wider economy. The reverse is also true: maritime activities can have negative impacts on the terrestrial and global environment, and on coastal communities and coastal economies (e.g. through emissions of greenhouse gases from ships, oil spills, and the visual and noise impacts of maritime industries). Sustainable blue economic development can therefore be regarded as an integral part of a wider process of economic transformation to a sustainable economy in general.



**Table 1:** Components of the blue economy. *Source:* (adapted from World Bank, 2017)

Type of activity	Ocean service	Industry	Drivers of development
Harvesting and trade of marine living resources	Seafood	Fisheries	Food security, demand for protein
	Marine biotechnology	Aquaculture	Research and development (R&D) for healthcare and industry
Pharmaceuticals, chemicals			
Extraction and use of marine non-living resources	Minerals	(Seabed) mining	Demand for minerals
	Energy	Oil and gas	Demand for energy sources
		Renewables	Demand for alternative energy sources
Freshwater	Desalination	Demand for freshwater	
Commerce and trade in and around the ocean	Transport and trade	Shipping	Growth in seaborne trade; international regulations
		Port infrastructure and services	
	Tourism and recreation	Tourism	Growth of global tourism
		Coastal development	Coastal urbanization
Response to ocean health challenges	Ocean monitoring and surveillance	Technology and R&D	R&D in ocean technologies
	Carbon sequestration	Blue carbon	Growth in coastal and ocean protection and conservation activities
	Coastal protection	Habitat protection and restoration	
	Waste disposal	Assimilation of nutrients and wastes	Wastewater management

## A vision for a Sustainable Blue Economy



The previous section defined what we mean by blue economy and highlighted its interconnectedness with the wider economy. This section takes a closer look at the characteristics that would make the blue economy a sustainable one.

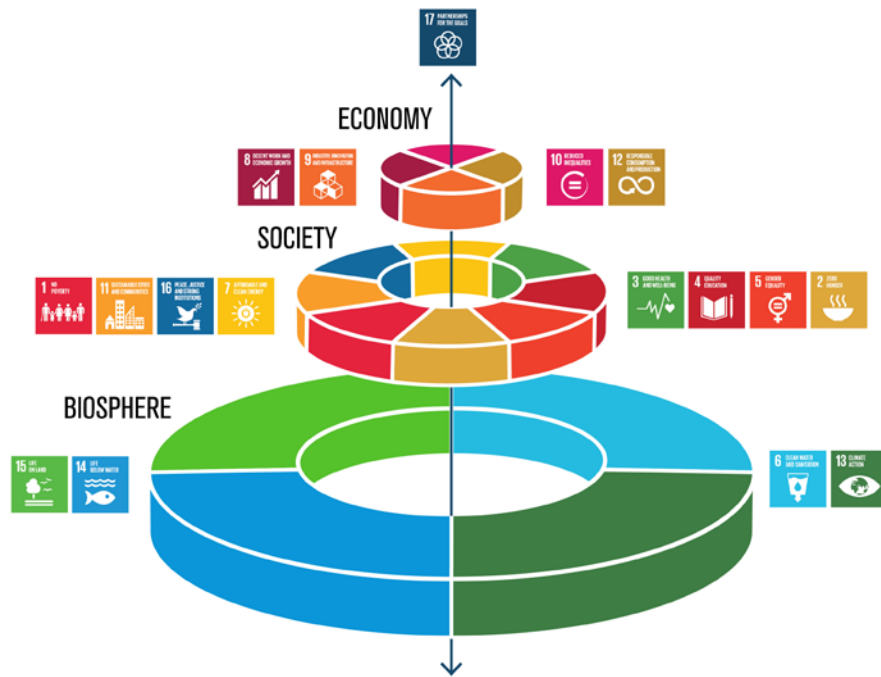
The United Nations Environment Programme (UNEP) (2021) defines the Sustainable Blue Economy as follows:

”

*A Sustainable Blue Economy aims at enhancing prosperity and increasing social equity through initiatives which restore or maintain the integrity and productivity of marine and coastal ecosystems. In a Sustainable Blue Economy, effective protection, sustainable production and equitable prosperity go hand in hand to create a triple win for people, nature and the economy.*

This definition aligns with the 17 global SDGs of the 2030 Agenda, set by the United Nations General Assembly in 2015, which represent an internationally agreed definition of sustainability across environmental, social and economic realms. The SDGs are often represented as separate boxes positioned alongside each other, but

Figure 3 offers an alternative representation that illustrates some of the interconnections and relationships between the SDGs. The lowest tier of the illustration comprises the four environment-focused SDGs, representing a healthy environment as a foundation for a healthy society (represented by the SDGs in the middle tier), which, in turn, provides the foundation for a healthy economy (the SDGs in the upper tier).



Graphics by Jenifer Linnestad/Bluewin

**Figure 3:** The SDG Cake. *Source:* Azote for Stockholm Resilience Centre, Stockholm University (2016)

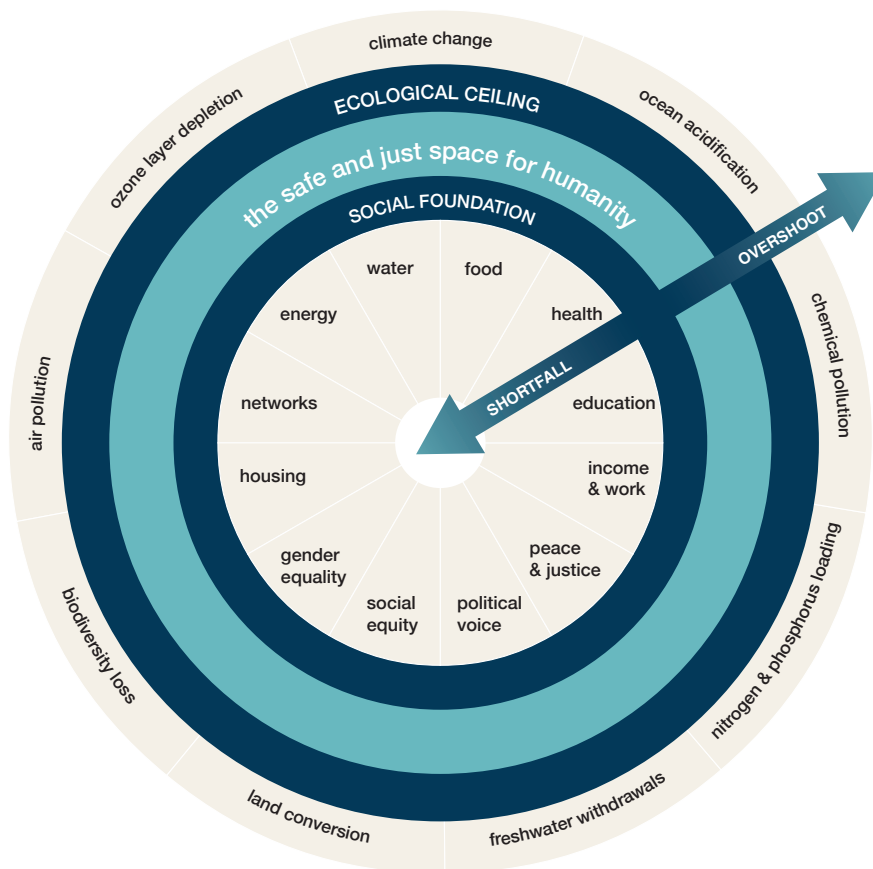
Ocean managers tend to focus heavily on SDG 14 (which relates to safeguarding the health of life below water), but a Sustainable Blue Economy would, in fact, contribute substantially to a wide range of other SDGs by reducing hunger, improving human health and well-being, providing educational opportunities, providing clean energy, reducing inequities by providing income and fair access to resources for people of all nationalities, genders and social groups, etc. Ultimately, every SDG is relevant for framing what a Sustainable Blue Economy should look like, because every SDG stands to benefit from a Sustainable Blue Economy. As stated in the introduction, our planet is truly a blue planet, and the ocean environment and ocean-related activities intersect with all dimensions of economic, social and environmental well-being. As such, a Sustainable Blue Economy can contribute significantly to the implementation and achievement of



the 2030 Agenda goals, as well as other biodiversity goals, the goals of the Paris Agreement and any future climate goals that build on that Agreement, as well as regional and national development agendas.

Achieving a Sustainable Blue Economy will require a transition from “business as usual” models that perceive the ocean as a free commodity, where resources can be extracted and waste dumped, towards holistic models that recognize socioecological system dependencies and strive to provide a good life for every human being within the limits of ecosystem boundaries. This vision is depicted as a “safe and just space for humanity”, as shown in Figure 4.

The safe and just space—the green, doughnut-shaped area—represents the space that the economy as a whole needs to fit within to ensure that we stay safe (within the ecological ceiling, depicted as nine planetary boundaries in this representation), and to create a world that is just (where the social foundation, made up of basic human needs, is guaranteed for all). The arrows represent overshoots (where we put more pressure on ecosystems than they can withstand) and shortfalls (where the benefits generated by our economy are insufficient, or distributed unfairly, so that the basic needs of all are not met).



**Figure 4:** The safe and just space for humanity.  
*Source:* Raworth (2017)



The Sustainable Blue Economy would safeguard the ecological ceiling for ocean ecosystems through regenerative activities, environmental protection measures, nature-based solutions, mitigation and management of impacts, and by keeping damaging activities and impacts within the limits of what ocean ecosystems can repair and recover from. This curb on damaging activities and impacts would apply to ocean-based activities in the dark blue sphere, as well as land-based activities in the wider economy that cause downstream impacts on the ocean environment. The Sustainable Blue Economy would further ensure that ocean-based activities do not contribute to overshoots of terrestrial and atmospheric planetary boundaries, especially in relation to carbon emissions and the use of fossil fuels in maritime industry.

The social foundation, and especially the principle of equity, is just as fundamental to a sustainable ocean economy as the need for environmental protection. A Sustainable Blue Economy would ensure that the values and benefits that are generated in the dark and light blue spheres are distributed fairly and equitably, both within countries and internationally, ensuring that developing countries can optimize the benefits received from the development of their marine environments, promote national equity, including gender equality, and the generation of inclusive development and decent jobs for all. This mainstreaming of equity at international and national levels offers developing countries the option to gain greater revenue from their resources, to be reinvested in national development strategies, environmental management, the reduction of national debt and the eradication of poverty and hunger.

## How to get there: UNEP's Sustainable Blue Economy Transition Framework

Creating a Sustainable Blue Economy is a joint task for everyone across the world. While both boundaries—the ecological ceiling and the social foundation—require attention in all countries, the relative amount of emphasis needed varies across countries.

The transition towards a Sustainable Blue Economy is a multifaceted process and a shared task for every nation on earth. Every country has different environmental, social and economic priorities, so the transition to a Sustainable Blue Economy will need to be tailored to each nation's circumstances. In developed countries, where the social foundation tends to be more secure, relatively greater attention needs to be given to eliminating environmental overshoots and to ensuring that all countries have equitable access to global markets and resources in international waters. In developing nations, where environmental overshoots tend to be lower, relatively more emphasis is needed on the creation of benefits and value flows to address gaps in the social foundation, in particular to lift poorer and more marginalized parts of society into the safe and just space, guaranteeing a dignified life for all.

While different countries cannot follow identical pathways, they can be guided by the same principles and make use of established frameworks, approaches and methods. At the time of writing, UNEP is working on a package of guidance called the Sustainable Blue Economy Transition Framework, in collaboration with a number of partners. This Transition Framework aims to guide countries in their transition process and assist in the delivery of national and international policy and development goals, including the SDGs and other global commitments.

The Transition Framework is targeted primarily at governments and public sector officials, given their role in implementing policy at a national level and leading Sustainable Blue Economy programmes in their country. However, many other actors have equally important roles to play in developing a Sustainable Blue Economy, including public and private financiers of blue economy sectors and activities, public sector organizations, multinational corporations and small



or medium enterprises, as well as educational institutions, non-governmental organizations (NGOs), communities and private citizens. All of these actors may find use for the tools and guidance contained in the Transition Framework.

At the core of the Transition Framework is a set of five principles that provide both the context to support national implementation and practical steps to enable the transition. These five principles align with the concept of a safe and just space for humanity in that they stress the importance of regenerating and protecting the health of marine ecosystems as well as the importance of fair and equitable distribution of benefits derived from the blue economy. The five principles are shown in Box 1.

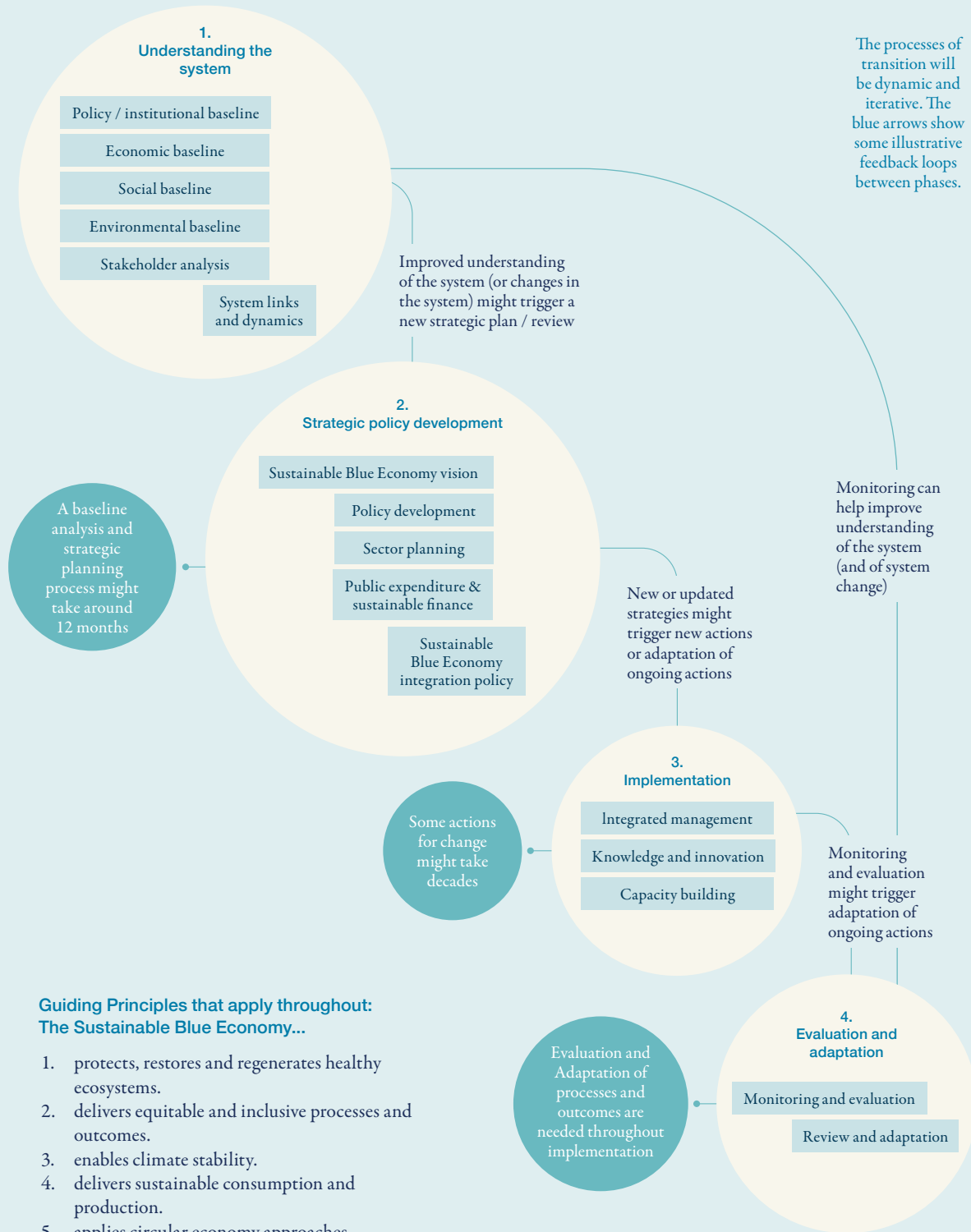
The Transition Framework itself identifies different phases of the transition process (illustrated in Figure 5), which are interconnected through iterative feedback cycles. Each phase encompasses a set of tasks and actions that need to be taken. In addition, there is a set of cross-cutting tasks and actions related to leadership and coalitions-for-change that governments need to take responsibility for throughout the entire transition process. For each of the phases (as well as the cross-cutting elements), the guidance identifies and signposts a series of useful tools and knowledge management approaches that can support the transition process. As such, the Transition Framework allows countries to build on work that they are already undertaking (e.g. integrated ocean management approaches, Marine Spatial Planning, or other strategic coastal and ocean management processes) rather than invent an entirely new process.



## Leadership and coalitions for change

These cross-cutting responsibilities run through every transition phase

- Leadership for Sustainable Blue Economy
- Sustainable finance
- Stakeholder engagement and building coalitions for a Sustainable Blue Economy



**Figure 5:** An overview of UNEP’s Sustainable Blue Economy Transition Framework (in its draft form, as at November 2021—the structure may change once the final version is published). *Source:* (UNEP 2021)

## Box 1: Five principles of a Sustainable Blue Economy

### Principle #1. A Sustainable Blue Economy that protects, restores and regenerates healthy ecosystems:

- increases the extent and quality of ecosystems with clear evidence of restoration
- identifies drivers of biodiversity loss and ecosystem degradation that are affecting the delivery of ecosystem services
- increases the extent of effectively managed networks of marine protected areas
- uses a certain percentage of structural finance for conservation, restoration and regeneration efforts.

### Principle #2. A Sustainable Blue Economy that delivers equitable and inclusive processes and outcomes:

- improves access to benefits and use rights and improves equity of allocation
- increases representation of women, youth and marginalized groups in blue economy sectors, particularly in high-level positions
- improves sanitation and health conditions for all communities living close to the ocean
- expands the inclusion of small-scale users and businesses.

### Principle #3. A Sustainable Blue Economy that enables climate stability and resilience:

- achieves carbon neutrality or negativity across blue economy activities, infrastructure and communities
- integrates nature-based carbon sequestration and ecosystem-based adaptation solutions into conservation and restoration efforts, sustainable resource management and coastal development planning
- ensures measures to mitigate and adapt to the risks of climate change and related natural disasters are in place, including nature-based solutions.

### Principle #4. A Sustainable Blue Economy that supports sustainable consumption and production:

- identifies, understands and addresses discrete and cumulative impacts of blue economy sectors on ecosystems
- ensures regulatory and financial incentives are in place to generate innovation for sustainable extraction and production
- increases use of good practice and technologies that minimize negative environmental impacts (including waste) and natural resource use and that phase out harmful technologies and production methods
- establishes policies and regulations to ensure resource consumption is within sustainable limits.

### Principle #5. A Sustainable Blue Economy that applies circular economy approaches:

- has systems in place to achieve a reduction in the waste of resources and input of pollution to coastal ecosystems
- has financial or regulatory systems in place to encourage reuse and recycling of resources
- increases the contribution of sectors dependent on nature to restoring the regenerative cycle of nature
- enables consumers to easily identify and access products that are produced with resource efficiency and less waste and are designed for long-term use.



# Illustrating pathways towards a Sustainable Blue Economy: learning from practice

## Blue Solutions and the PANORAMA platform

The previous sections have provided a definition and broad vision for the Sustainable Blue Economy, and described an overarching framework and package of guidance that can support countries in the strategic planning and management of a transition process. System-level transition requires this vision and strategic oversight, but change in practice can only be achieved by a multitude of actions and initiatives, each operating at a local scale, within their own specific context.

The remainder of this document will illustrate what these specific transition pathways can look like in practice, by briefly outlining 11 real-life examples of initiatives related to Sustainable Blue Economy development. Many of these are local-scale initiatives, demonstrating that while the overarching transition needs a strategic overview guided by a clear vision, the practical actions that drive the transition can be carried out locally, and they might look very different depending on local needs and circumstances. Other initiatives illustrated here are international in scale. The common feature of all these examples is that they operate in the dark and light blue economic spheres, generating values and benefit flows that help to consolidate the social foundation for local communities and stakeholders while also protecting and regenerating ecosystems and contributing to the safeguarding of ecosystem boundaries.



This report showcases 11 Solutions that constitute Sustainable Blue Economy development pathways, outlining the key methods and approaches used in each one, and providing a link to a full description of the initiative on PANORAMA. These 11 Solutions provide a practical counterpoint to the strategic guidance described in the previous section, grounding the theory and framework by illustrating what the transition can look like to real-world actors and stakeholders. These 11 Solutions were selected to illustrate the implementation of each of the five principles of UNEP's Transition Framework (Table 2) and of different phases within the Transition Framework in its current draft (see Figure 6).

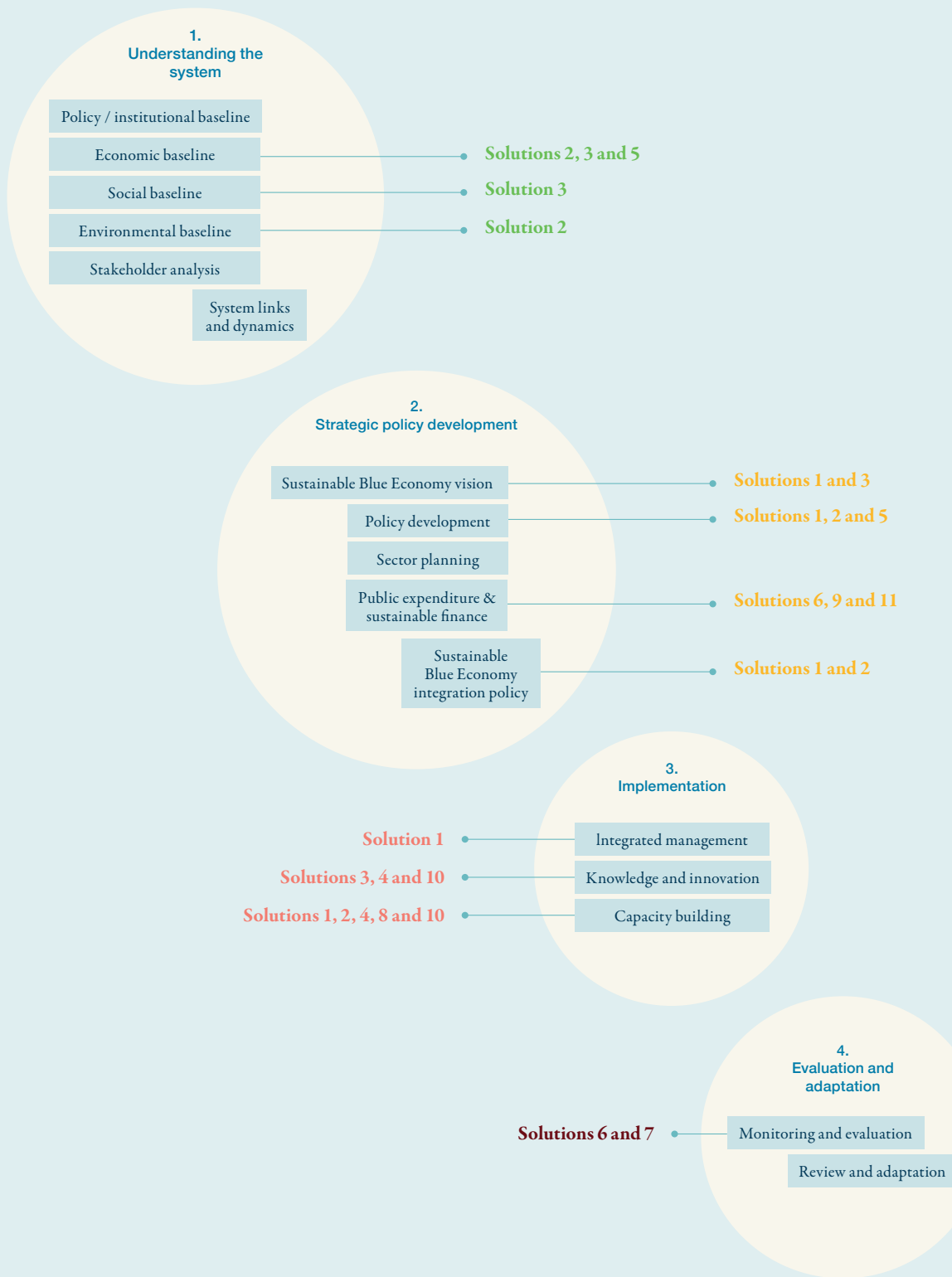
These examples do not provide one-size-fits-all solutions, nor do they cover all aspects of the transition towards a Sustainable Blue Economy. They should be considered and understood as real-life examples of how certain phases or principles of the Sustainable Blue Economy approach have been addressed in practice, in different corners of the world and in very different contexts. Documented in the standardized PANORAMA Solutions format, they provide insights and lessons learned, as well as inspiration for other countries' transition processes. Publishing the Sustainable Blue Economy Solutions on the PANORAMA platform gives these case studies visibility, while allowing others to learn from recent experiences and potentially take up and adapt certain aspects of a Solution to their own context.

**Table 2:** List of the 11 Sustainable Blue Economy Solutions included in this document, showing their links to the five guiding principles

#	Title	Location	Guiding principles (The Sustainable Blue Economy...)				
			1. Protects, restores and regenerates healthy ecosystems	2. Delivers equitable & inclusive processes & outcomes	3. Enables climate stability	4. Delivers sustainable consumption & production	5. Supports efficient & clean industry using circular processes
1	<a href="#">Blue recovery of the Mediterranean</a>	Mediterranean	X	X		X	X
2	<a href="#">Supporting transboundary dialogue on Marine Spatial Planning towards a Sustainable Blue Economy for the Western Mediterranean</a>	Mediterranean	X	X			
3	<a href="#">Exploring community-based approaches to the blue economy</a>	Australia	X	X			
4	<a href="#">Social enterprise approach to ecotourism</a>	Barbados	X			X	
5	<a href="#">Nature's contribution to the economy</a>	Bonaire	X				
6	<a href="#">Private sector investment in conservation of dry forests and mangrove restoration</a>	Costa Rica	X	X	X	X	
7	<a href="#">Ensuring the sustainability of wastewater operations in West End, Roatán</a>	Honduras	X	X			X
8	<a href="#">Blue carbon credits financing community-based mangrove management</a>	Kenya	X	X	X		
9	<a href="#">The first debt-for-nature swap for ocean conservation</a>	Seychelles	X	X			
10	<a href="#">Sea PoWer: an innovative seaweed farming technology to empower women</a>	Tanzania		X	X	X	
11	<a href="#">TONTOTON - Influencing impact from the ground up</a>	Viet Nam		X			X

## Cross-cutting responsibilities and wider enabling actions

- Solutions 1 and 3** ● Leadership for Sustainable Blue Economy
- Solutions 6, 7, 8, 9 and 11** ● Sustainable finance
- Solutions 1, 2, 3, 7, 8, 9, 10 and 11** ● Stakeholder engagement and building coalitions for a Sustainable Blue Economy



**Figure 6:** UNEP’s Sustainable Blue Economy Transition Framework—steps and solutions that illustrate particular elements. *Source:* (UNEP 2021)



# Solution 1:

## Blue recovery of the Mediterranean

**Key stakeholder/provider of the solution:**  
UfM (Union for the Mediterranean)

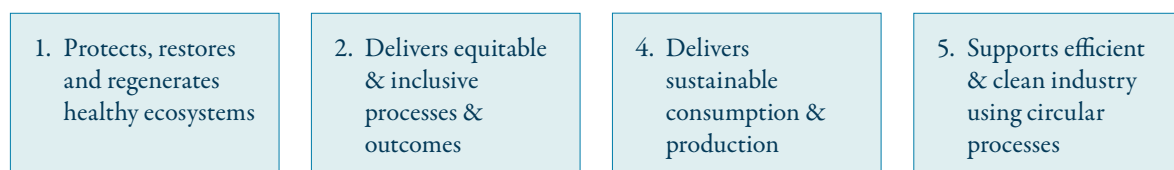
### A coordinated and comprehensive regional approach for a Sustainable Blue Economy for the Mediterranean Sea

The Union for the Mediterranean (UfM) is an intergovernmental organization of 42 countries, bringing together all countries of the European Union and 15 countries of the Southern and Eastern Mediterranean. It is a unique framework for cooperation and dialogue in the Mediterranean region with a clear mandate to foster regional cooperation and integration with a view to improve stability and social well-being. The objective is to foster regional dialogue and reinforce action around the shared priority areas of blue economy identified through the UfM Ministerial Declarations on Sustainable Blue Economy adopted by the 42, together with the governance structure set up to manage them and the stable mechanisms for stakeholders 'involvement (through the Med Blue Economy Platform; regular Stakeholders Conferences and Consultations; etc.).

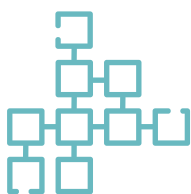
The 2nd UfM Ministerial Declaration on Sustainable Blue Economy was adopted on the 2nd of February 2021; the 1st was approved in November 2015.



**Relates to the following Transition Framework principles:**



### Building blocks for success



1. Regional coordination
2. Marine Spatial Planning improving inter-sectoral collaboration
3. A legal framework for action
4. Capacity-building for a Sustainable Blue Economy
5. Developing impact investment opportunities
6. Sustainable Blue Economy at the community level

# Solution 2: Supporting transboundary dialogue on Marine Spatial Planning towards a Sustainable Blue Economy for the Western Mediterranean

**Key stakeholder/provider of the solution:**  
Intergovernmental Oceanographic Commission of the United Nations  
Educational, Scientific and Cultural Organization (IOC-UNESCO)

## Assisting countries to generate approaches, tools and actions at transboundary level for coherent Marine Spatial Planning in the Western Mediterranean

This solution is part of the Marine Spatial Planning global initiative, designed to support the Joint Roadmap to Accelerate Marine Spatial Planning Processes Worldwide, adopted by IOC-UNESCO and the European Commission, in line with SDG 14 of the 2030 Agenda.

More specifically, this solution aimed to assist its beneficiary countries in generating approaches, tools and actions at transboundary level to contribute to coherent Marine Spatial Planning in the Western Mediterranean.

The Western Mediterranean is under intense pressures deriving from increasing coastal development and maritime activities. Therefore, Marine Spatial Planning and Sustainable Blue Economy are crucial policies to address these challenges. Institutional capacities were reinforced, technical tools were developed and transboundary dialogue was coordinated, resulting in a regional roadmap for transboundary Marine Spatial Planning and Sustainable Blue Economy.

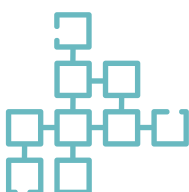


### Relates to the following Transition Framework principles:

1. Protects, restores and regenerates healthy ecosystems

2. Delivers equitable & inclusive processes & outcomes

### Building blocks for success



1. Planning, reporting and monitoring stakeholder participation and communication
2. Strengthening stakeholders' capacities
3. Analysing current conditions of the marine environment and maritime uses
4. Building scenarios for Marine Spatial Planning and Sustainable Blue Economy
5. Showcasing key results through a simplified and interactive storytelling tool
6. Supporting the formulation of institutional recommendations at regional scale

## Solution 3: Exploring community-based approaches to the blue economy, Australia

**Key stakeholder/provider of the solution:**  
University of Wollongong, Australia

### Collaboration between researchers and the Illawarra Local Aboriginal Land Council to explore governance, relationships and innovations around the future of a blue economy

The University of Wollongong, through the Global Challenges programme, has been exploring community-based approaches to the blue economy since 2016. The programme of works began with a small internal “scoping” study, which explored the capacity of the University to contribute to a sustainable and socially equitable blue economy in the region (southeast New South Wales). It then examined the historical contribution of maritime industries to our region, and subsequently did a “stocktake” of existing businesses and activities in the region that rely on healthy ocean ecosystems. The current Blue Futures “keystone” project is a collaboration between university researchers and the Illawarra Local Aboriginal Land Council, whose objective is to explore and improve governance, relationships and innovations around the future of a blue economy in the region. The project operates from and is informed by a local Aboriginal worldview and relationship to knowledge.

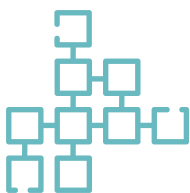


**Relates to the following Transition Framework principles:**

1. Protects, restores and regenerates healthy ecosystems

2. Delivers equitable & inclusive processes & outcomes

### Building blocks for success



1. Taking stock of the existing blue economy
2. Fostering relationships across disciplines and across the community
3. Decolonizing research

# Solution 4: Social enterprise approach to ecotourism, Barbados

**Key stakeholder/provider of the solution:**  
Pinelands Creative Workshop

## Creating sustainable and innovative enterprises in ecotourism and sociocultural tourism

The blue economy concept seeks to promote economic growth, social inclusion and the preservation or improvement of livelihoods, while at the same time ensuring environmental sustainability of the ocean and coastal areas.

To realize these objectives, NGOs were introduced to the concept of social enterprise, with the goal of creating sustainable and innovative enterprises/businesses that can have a positive impact on sustainable livelihoods, specifically those of the most vulnerable. In addition, social enterprise was recognized as a potential alternative funding modality that could improve organizational sustainability while also promoting an inclusive or whole-of-society approach to the growth and development of the blue economy and the ecotourism sub-sectors.

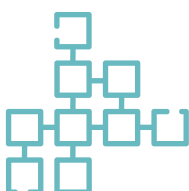


**Relates to the following Transition Framework principles:**

1. Protects, restores and regenerates healthy ecosystems

4. Delivers sustainable consumption & production

### Building blocks for success



1. Training in social entrepreneurship
2. Incubator and mentorship programme
3. Course development



## Solution 5: Nature's contribution to the economy, Bonaire

**Key stakeholder/provider of the solution:**  
Wolfs Company

### Establishing the economic value of ecosystem services to justify funding for conservation and mobilize political support

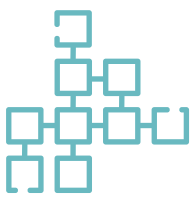
It can be challenging for decision makers to assess when market-based solutions to biodiversity loss are likely to be culturally acceptable, as well as effective, efficient and equitable. Establishing the economic value of ecosystem services can justify funding for nature conservation and mobilize political support.



**Relates to the following Transition Framework principles:**

1. Protects, restores and regenerates healthy ecosystems

### Building blocks for success



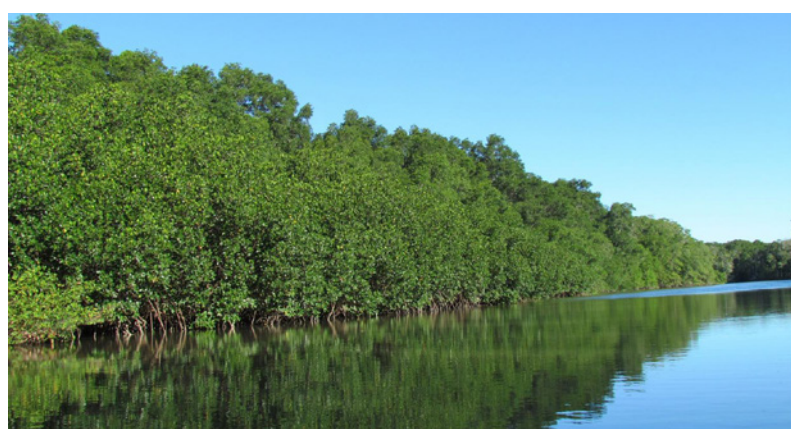
1. Scoping and setting a policy question
2. Understanding what ecosystem services are
3. Ecosystem service valuation following the Economics of Ecosystems and Biodiversity (TEEB) framework
4. Value scenarios for cost of (in)action
5. Communication about ecosystem service values

# Solution 6: Private sector investment in conservation of dry forests and mangrove restoration, Costa Rica

**Key stakeholder/provider of the solution:**  
GIZ, Costa Rica

## A private sector-financed system of payments for ecosystem services

The Global Conservation Standard is an innovative financial mechanism: a private sector-financed system of payments for ecosystem services. Companies buy conservation credits and the revenue generated is managed by a Costa Rican NGO that invests in sustainable development activities. One example is that of a German, certified organic shrimp producer in Costa Rica, which bought conservation credits linked to the restoration of mangroves. The organic shrimp are



sold in Germany by certified organic retailers, and for every 250g of shrimp sold, 0.15 uros are channelled to the Global Conservation Standard Fund and used for conservation activities.

**Relates to the following Transition Framework principles:**

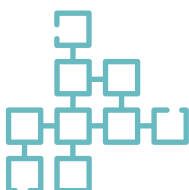
1. Protects, restores and regenerates healthy ecosystems

2. Delivers equitable & inclusive processes & outcomes

3. Enables climate stability

4. Delivers sustainable consumption & production

## Building blocks for success



1. The Global Conservation Standard
2. Feasibility study and benefit validation
3. Conservation credit unit marketing
4. Implementation and monitoring

## Solution 7: Ensuring the sustainability of wastewater operations in West End, Roatán, Honduras

**Key stakeholder/provider of the solution:**  
Coral Reef Alliance

### Improving marine water quality in Honduras' tourism hotspot

The community of West End, Roatán, is located in the Mesoamerican Reef area and is one of the hubs of the tourism industry that is essential to the Honduran economy. Over a million tourists visit the island of Roatán in the Bay Islands each year, drawn to its colourful reefs, white-sand beaches, and clear waters.

To ensure the protection of the Roatán reefscape, the Coral Reef Alliance has been leading efforts to improve marine water quality in Honduras since 2012, the same year that an activated sludge wastewater treatment plant was built in West End. The plant is currently managed and operated by Polo's Water Board with support from the Coral Reef Alliance and the Mesoamerican Reef Fund. Unfortunately, the COVID-19 pandemic led to a significant loss of operating revenue for the plant due to Roatán's tourism-dependent economy.



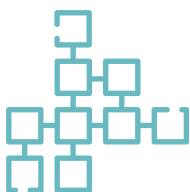
### Relates to the following Transition Framework principles:

1. Protects, restores and regenerates healthy ecosystems

2. Delivers equitable & inclusive processes & outcomes

5. Supports efficient & clean industry using circular processes

### Building blocks for success



1. Marine water quality monitoring
2. Budget modelling for sustainable financing
3. Multi-stakeholder and community engagement
4. Planning for the future

# Solution 8: Blue carbon credits financing community-based mangrove management, Kenya

**Key stakeholder/provider of the solution:**  
Mikoko Pamoja

## The first community-run project of its kind, generating and selling mangrove carbon credits

The first community-run project of its kind in the world, Mikoko Pamoja promotes the restoration and protection of mangrove forests for the benefit of the local community. It is certified by the Plan Vivo Foundation to generate and sell mangrove carbon credits to companies and individuals who want to improve their green credentials. The revenue generated from the trading of carbon credits flows into a community benefit fund, which is managed by the community-led Mikoko Pamoja steering group. The fund supports local development projects in education, water and sanitation, and mangrove reforestation.



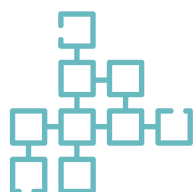
### Relates to the following Transition Framework principles:

1. Protects, restores and regenerates healthy ecosystems

2. Delivers equitable & inclusive processes & outcomes

3. Enables climate stability

### Building blocks for success



1. Participatory forest management plan
2. Forest management agreement
3. Carbon know-how through strong partnership
4. Community environmental education and awareness



## Solution 9: The first debt-for-nature swap for ocean conservation, Seychelles

**Key stakeholder/provider of the solution:**

Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT)

### The first deal of its kind: a debt-for-nature swap for ocean conservation through a US\$ 21.6 million debt restructure

In 2013, the Government of Seychelles identified the need to reduce economic vulnerability and dependence on tourism, increase GDP from marine sectors, create high-value jobs and ensure food security through the protection and sustainable use of marine resources.

Having created SeyCCAT in 2015, the Government of Seychelles and The Nature Conservancy concluded the first debt-for-nature swap for ocean conservation, through a US\$ 21.6 million debt restructure. SeyCCAT was given the management of two innovative financing deals: the Blue Grants Fund (total of US\$ 11.6 million) and the Blue Endowment Fund.

SeyCCAT is now a conservation trust fund tasked with mobilizing resources to advance the Seychelles' blue economy.

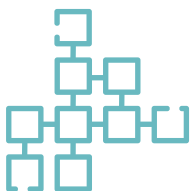


**Relates to the following Transition Framework principles:**

1. Protects, restores and regenerates healthy ecosystems

2. Delivers equitable & inclusive processes & outcomes

### Building blocks for success



1. Public-Private-Partnership
2. Autonomy and independence of the trust
3. Representativeness of the board
4. Capacity-building to access funding opportunities

# Solution 10: Sea PoWer: an innovative seaweed farming technology to empower women, Tanzania

Key stakeholder/provider of the solution:  
Soulfish Research & Consultancy

## Establishing seaweed farms through the empowerment of women and participation of local communities

In Zanzibar, seaweed farming is a small-scale but important livelihood activity, in which 80 percent of the workers are women. Recently however, declines in production have been observed, proved to be mostly due to climate change.

Tubular nets—an innovation piloted in the context of the Sea PoWer initiative—have shown promise over the traditional "off-bottom" peg and rope technology to improve seaweed productivity and local ecosystem conditions. However, tubular nets are used in deeper waters and thus require swimming or boat-handling skills that most women do not have. For this to be a successful adaptation option therefore requires institutional support and significant investment, the empowerment of women and the participation of local communities.



Photo credit: C. Brugere

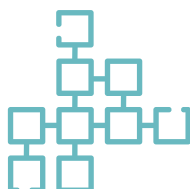
### Relates to the following Transition Framework principles:

2. Delivers equitable & inclusive processes & outcomes

3. Enables climate stability

4. Delivers sustainable consumption & production

### Building blocks for success



1. Building women’s capacity and social capital
2. Progressive challenging of gender norms
3. Engaging with seaweed buyers and other community members
4. An adapted technology co-designed with women seaweed producers

## Solution 11: TONTOTON - Influencing impact from the ground up, Viet Nam

**Key stakeholder/provider of the solution:**  
TONTOTON

### Preventing post-consumer non-recyclable plastic from reaching the ocean and creating a new market for it

TONTOTON connects businesses to environmental impact via a certified plastic credit system. It prevents post-consumer non-recyclable plastic, called “orphan plastic”, from reaching the oceans and creates a new market for it.

Together with local communities, TONTOTON identifies the locations with significant environmental leakage. It then employs local waste pickers to collect orphan plastics in these locations, offering them new sources of income and better working conditions. The majority of these waste pickers are women.

Subsequently, the plastic waste collected is converted into energy through co-processing. Everything is certified by the Ocean-Bound Plastic Neutrality Standard and audited by a third-party control body. Businesses that support our projects are able to neutralize a portion of the plastic that they cannot yet remove from their supply chain. More importantly, they support social and environmental activities through the purchase of plastic credits.

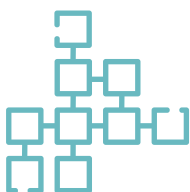


**Relates to the following Transition Framework principles:**

2. Delivers equitable & inclusive processes & outcomes

5. Supports efficient & clean industry using circular processes

### Building blocks for success



1. Collection of ocean-bound plastic
2. Collaboration with local communities
3. Valorization of the collection of orphan plastic
4. Certified solutions
5. Plastic credits







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