

# Main theme: The blue economy and the 2030 Agenda for Sustainable Development

## Protecting the blue economy for future generations



When maintained and protected, aquatic resources can contribute to sustainable and inclusive global development.

Sustainable global development greatly depends on the strength of our blue economy. The 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) outline this prominent connection and ways to achieve sustainability by 2030.

The blue economy relates to the sustainable use and conservation of aquatic resources, including:

- Seas
- lakes
- rivers
- oceans

Many countries have embraced the benefits and immense potential of these resources and are using them to further their:

- social progress
- economic growth
- protection of the environment

When maintained and protected, aquatic resources can contribute to sustainable and inclusive global development.

### Blue economy by the numbers

The United Nations Environment Programme estimates that half the world's population lives within 60 kilometers of the sea. They also estimate that three quarters of all large cities are located along the coast. According to the International Maritime Organization, the sea facilitates global trade by:

- up to 70% by value
- up to 90% by volume



The Food and Agriculture Organization estimates that blue economy industries assure the livelihoods of 660 to 820 million people worldwide. It estimates that women account for about 15% of people directly engaged in fisheries.

The World Bank estimates that oceans absorb about 25% of the extra carbon dioxide added to the atmosphere by burning fossil fuels. Oil and gas remain major sources of world energy with roughly 30% of production being offshore. The International Energy Agency estimates that renewable energy could meet 100% to 400% of current global energy demand.

### Challenges

Despite the benefits of using aquatic resources, there are

many challenges that also need to be addressed. These include:

- maritime insecurity
- unsustainable mineral extraction
- poorly planned and unregulated coastal development
- unsustainable human activities around and in bodies of water
- lack of protection from the negative impacts of climate change
- biodiversity loss that compromises human health and food security, caused by:
  - pollution
  - invasive species
  - ocean acidification

Regulatory challenges include:

- lack of shared prosperity
- weak legal, policy, regulatory and institutional frameworks
- weak inclusion of those most affected in decision-making processes
- lack of consideration for ecosystem service values to support sustainable policy decisions

To overcome these challenges and seize growth opportunities, we must allocate more resources to sustainable investment. Transformative thinking and integrated actions make the blue economy more inclusive, productive and sustainable.

### Working together

The survival of humanity, biodiversity and ecosystems depends on bold and collective action. A global strategy that puts people and the blue economy at the center of sustainable partnerships and projects will increase:



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Marine protected areas help to restore ocean productivity, prevent further degradation and provide natural solutions to climate impacts.

- social inclusivity
- economic prosperity
- resilience of all marine and aquatic resources
- resilience of communities supported by marine and aquatic resources

Maritime transport and global connectivity can facilitate economic growth and poverty eradication by promoting:

- gender equality
- full employment
- decent work for all

Coastal and lake-facing cities can increase their GDP growth and resilience by promoting tourism while conserving coastal and aquatic ecosystems. They can easily take advantage of renewable energy sources, such as:

- wind
- tidal waves
- biomass and biofuel from aquatic invasive plants

Empowering small-scale fishers and entrepreneurs to adopt sustainable practices can create business



opportunities that end hunger and malnutrition by:

- securing food supplies
- promoting good health
- improving dietary practices

### Marine protected areas

Sustainable management of marine life is important in marine protected areas. Marine parks, nature reserves and locally managed marine areas can protect aquatic resources, such as:

- reefs
- mudflats
- mangroves
- salt marshes
- tidal lagoons
- sea grass beds

They can also protect:

- shipwrecks
- rock platforms

- important habitats
- archaeological sites
- representative samples of marine life

Marine protected areas help to restore ocean productivity, prevent further degradation and provide natural solutions to climate impacts. They're also sites for scientific study and can generate income through tourism and sustainable fishing.

### Economic considerations

Considering the full economic value of aquatic ecosystem services can help with sustainable development decision making and the use of aquatic resources.

Evaluating ecosystems and their services helps us to:

- unlock public and private investments



- understand the goods and services aquatic ecosystems generate
- make decisions on economic development and conservation planning
- support communities and decision makers as they assess alternative policies on ocean protection and economic growth

To govern sustainable blue economy resources, we need best practices and knowledge that reinforce maritime:

- safety
- security
- regulation
- enforcement

This creates a productive, inclusive and sustainable blue economy that empowers

countries, peoples and communities.

### Goals

The 14 Sustainable Development Goals (SDGs) from the 2030 Agenda for Sustainable Development implore the global community to 'conserve and sustainably use the oceans, seas, and marine resources for sustainable development.' Achieving this goal requires that we also reach gender equality and empower women and girls.

To realize these critical goals, we must take urgent actions and appropriate measures. We must approach blue economy conversation in a gender-transformative way to avoid increasing gender inequality, which alienates a significant part of the population.

The 2030 Agenda for Sustainable Development envisions a present and future that is:

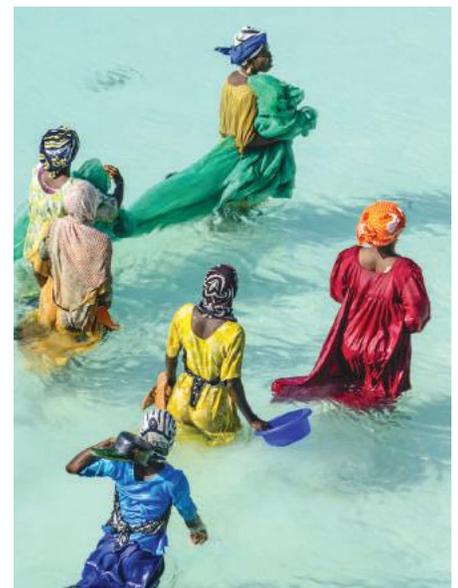
- socially inclusive
- economically sustainable
- environmentally resilient

The global community can meet these goals by working together to promote sustainable use and conservation of blue economy

natural resources. Global leaders in public and private sectors can turn the challenges facing them into opportunities through:

- building capacity
- good governance
- adequate financing
- new technologies and innovations
- investing in underdeveloped sectors of the blue economy

Public and private investments can ensure the world derives maximum benefits from the blue economy, while supporting community resilience. The time to build and escalate sufficient global momentum is now.





## Questions

Panelists will guide discussions on:

- 1.** How can countries and stakeholders work together to structurally transform their economies using the blue economy? How will they use it to become more inclusive, robust and resilient?
- 2.** How can countries and stakeholders ensure that sustainable growth from the use of the blue economy:
  - is inclusive
  - is broadly shared
  - considers traditional and customary users such as Indigenous peoples
- 3.** What best practices can advance sustainable blue economy investments, conservation and coastal resilience? Can they be replicated on a global scale? Consider technologies, innovative solutions and available information.
- 4.** What incentives does the private sector need to scale up investments in the blue economy? How do we ensure that small scale investors aren't locked out at the same time?
- 5.** How can we design global and regional partnerships that help countries develop and implement reforms that facilitate blue economy opportunities?

# Theme: Smart shipping, ports, transportation and global connectivity

## Ensuring healthy and productive waters



Maritime transport and related technology developments play a crucial role in the global economy. Maritime transport is the cheapest mode for bulk transportation, and globally transports over 90% of all items and makes up to 70% of total global sales revenue.

The 2030 Agenda for Sustainable Development highlights the role of seaborne trade as an engine for inclusive and sustainable growth and development.

### Economic development

Globalized production and distribution of goods requires effective logistics. Shippers must focus on balancing costs of inventory holding against costs of transportation.

Maritime transport services create job opportunities in other areas, such as:

- shipping
- insurance
- seafaring
- port operations
- financial services
- vessel registration
- ship building and repairs
- shore based auxiliary support

Recognition of the important role of maritime transportation in developed economies has attracted huge investments in infrastructure and operations. It has also encouraged emerging economies to build the necessary capacity to raise their level of participation.

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## Regulatory frameworks

Countries looking to increase their participation in global transportation must improve their regulatory framework and physical and electronic connectivity. In this context, governments need to understand:

- factors that affect the performance of different types of transportation
- effects of transportation and connectivity on different stages of development
- how different types of transportation interact and what policies are needed to support this

Ratification and adoption of relevant international conventions is essential for growth, as well as responsibly creating sustainable environments for future generations.

## Port efficiency

Ports are important water-land interfaces in the logistics chain. They are also becoming important points for other maritime economic activities, such as:

- fishing
- oil drilling
- cruise vessels
- coastal shipping
- passenger ferries
- international shipping
- mining of marine minerals

- other offshore economic activities

Port efficiency and connectivity can unlock or undermine the economic potential of a country. Today, ports are enhancing efficiency with the overall goal of transforming into transshipment hubs, which will:

- raise port earnings
- attract frequent feeder services
- create opportunities for coastal shipping
- generate cost savings from economies of scale

Other than cargo handling, a well-developed transshipment hub provides incentives to establish industries that intercept cargo for intermediate:

- sorting
- valuing
- labeling
- sampling
- inspecting
- processing
- repackaging

The entire transport sector is therefore an area of great opportunity.



Port efficiency and connectivity can unlock or undermine the economic potential of a country.



## Challenges

Opportunities do not come void of challenges. Low shipping connectivity continues to undermine access to global markets. The few, less reliable, direct port calls require efficiency and capacity improvement to attract more shipping traffic.

Other key challenges include:

- crime
- piracy
- terrorism
- illicit trade
- marine pollution
- human trafficking
- cybercrime disruptions
- climate change impacts
- greenhouse gas emissions
- inadequate capacity of resources, such as:
  - human
  - financial
  - technological

## Cooperation

Growing the transport sector and overcoming challenges calls for the public and private sector to cooperate in:

- building resilient infrastructure
- promoting inclusive and sustainable industrialization
- fostering innovation in an effective regulatory framework

The business community can further enhance their role in promoting investments in the sector through deliberate linkages between research institutions. Research institutions share knowledge and information to enhance investment:

- safety
- efficiency
- sustainability



## Questions

Panelists will guide discussions on:

- 1.** How can countries attract and maintain sustainable and climate change-proof investments in the underutilized areas of maritime transport? How can we enhance environmental and social corporate responsibility and accountability measures?
- 2.** How can the transportation potential of inland waters be developed to enhance connectivity in uncharted areas?
- 3.** What kinds of incentives are needed to strike a balance between the use of fossil fuels and renewable energy to drive the transport sector?
- 4.** What opportunities are there for ports and shipping lines to enhance global maritime connectivity, and how can they be enhanced?
- 5.** What measures are needed to integrate women, youth and marginalized populations into mainstream maritime transport sectors?
- 6.** How can access to technological milestones and innovations be enhanced to promote energy efficiency in maritime transport?



# Theme: Employment, job creation and poverty eradication

Creating economic growth that is inclusive & sustainable



The maritime industry is male-dominated and is missing out on the skills and talents of outstanding female maritime and ocean leaders.

According to the FAO, 120 million people reach working age every year, but many struggle to find jobs.

The maritime industry is male-dominated and is missing out on the skills and talents of outstanding female maritime and ocean leaders. While women form about 50% of the global population, only about 1% are in the seafaring industry. Of those, only 4% are in decision-making positions.

This lack of inclusivity poses challenges to the long-term viability of the blue economy sector.

## The potential

In delivering on the UN's 2030 Agenda for Sustainable Development, blue economy sectors have the potential to unlock opportunities for all with specific focus on:

- gender equality (SDG 5)
- decent work and economic growth (SDG 8)

Industries based on the blue economy contribute approximately 1.5 trillion USD (2.5%) to global gross value added. There is also the potential to deliver growth and jobs in activities such as:

- ports
- marine:
  - energy
  - insurance
  - industries
- tourism
- shipping



- fisheries
- oil and gas
- aquaculture
- deep sea archeology
- transport and logistics
- workforce training and development
- ship building equipment and services

### Regional strategies

The blue economy features strongly in several regional strategies aimed at attaining the UN's 2030 Agenda for Sustainable Development.

To contribute to the Europe 2020 strategy for sustainable and inclusive growth, the European Union announced its 'Blue Growth' strategy for

sustainable development of marine and maritime sectors.

In its 2050 Africa Integrated Maritime Strategy, the African Union recognized the blue economy as 'the new frontier for African renaissance.'

A number of institutions are working towards sustainable development of marine resources by pursuing multilateral:

- strategies
- approaches
- actions plans

These institutions include:

- the APEC
- African Union

- East Asia Summit (EAS)
- the Indian Ocean Rim Association (IORA)
- the South Asian Association for Regional Cooperation (SAARC)

### Challenges

There are challenges, however, that limit the ability of countries to achieve the full potential of the blue economy. These challenges include a lack of:

- human capacity
- financial capability
- relevant technology
- inclusion of women and girls from the sector



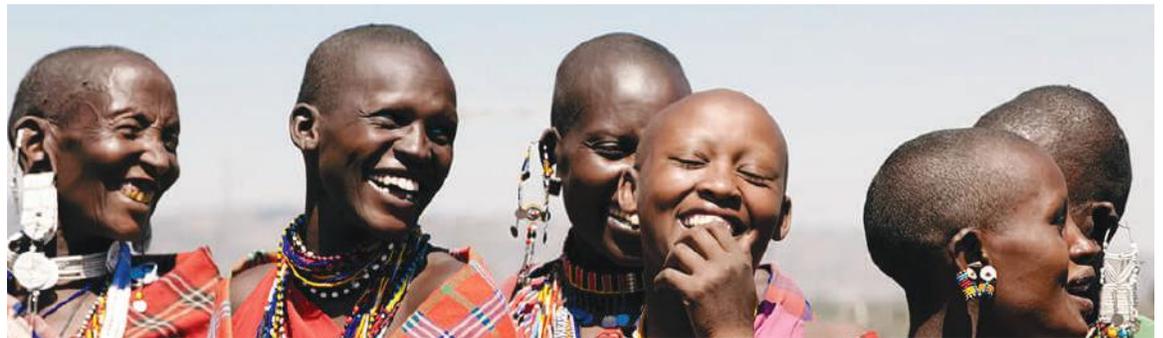
In its 2050 Africa Integrated Maritime Strategy, the African Union recognized the blue economy as 'the new frontier for African renaissance.'



## Questions

Panelists will guide discussions on:

- 1.** What untapped opportunities can be leveraged to sustainably provide decent work and create wealth within the blue economy?
- 2.** How can we address the difficulties blue economy sectors face in finding the right labour force for highly qualified technical positions?
- 3.** In terms of the knowledge and skills provided by training institutions, what gaps exist in meeting the blue economy's needs?
- 4.** What legal and policy frameworks are available for ensuring equal opportunities for women and girls within the blue economy sector?
- 5.** How can the blue economy sectors be made more attractive to empower women, youth and vulnerable groups economically?
- 6.** How can we strike the right balance between the needs of the current and future generations in creation of blue economy jobs, as well as harness the role of Indigenous knowledge and community-led management?
- 7.** What are the employment opportunities for the conservation, management, rehabilitation, and data collection and observation of aquatic resources? How can these opportunities, including training and recruitment, be funded?



# Theme: Cities, tourism, resilient coasts and infrastructure

## Building safe and resilient communities



For thousands of years, people have been living along the coastlines and centering their economic activities around:

- lakes
- rivers
- oceans

The United Nations Environment Programme estimates that half of the world's population lives within 60 kilometers of coastlines. Three quarters of all large cities of the world are located along coasts, such as:

- Tokyo
- Osaka
- Seoul
- Shanghai
- Jakarta
- Mumbai
- New York

About 90 percent of world trade goes through port cities, reinforcing global value chains and generating employment.

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### Population increases

The global population is currently estimated at 7.6 billion people and is projected to increase to 9.8 billion people by 2050. The current degradation and unsustainable exploitation of over 60 percent of marine ecosystems will be further affected by this population increase and the:

- increased global trade flows
- unplanned rapid urbanization
- fast growing coastal and maritime industries



The blue economy offers significant opportunities to improve the livelihoods of all while developing urban areas sustainably. The blue economy contributes to increasing land value in cities and the creation of a broad range of direct and indirect livelihood and economic opportunities.

One example of a coastal city blue economy opportunity is its sandy beaches. These beaches offer economic opportunities to all income levels as they attract numerous tourism-related activities, such as leisure accommodation and water sports.

## West Indian Ocean coastal cities

In the continental Africa, coastal cities in West Indian Ocean (WIO) include:

- Beira
- Durban
- Pretoria
- Mombasa
- Dar es Salaam

These WIO cities have close to 60 million inhabitants and an estimated annual economic value of US\$25 billion per annum from:

- mining
- tourism
- fisheries
- aquaculture

- coastal agriculture
- ports and coastal transport sector

Their ocean asset base is estimated at US\$333.8 billion. This makes WIO's productive potential comparable to the largest national economies in the region.

## Costal city challenges

Coastal cities have significant historical and cultural importance. They play a crucial role in harnessing the potential of the blue economy and improving the living standards of coastal communities.

However, some coastal communities and cities have been rendered vulnerable by the impacts of climate change. A number of cities, such as those in the Netherlands, lie below sea level. They are exposed to the impacts of rising sea levels. While many communities have adopted measures to mitigate and adapt to climate change, more needs to be done.



The blue economy offers significant opportunities to improve the livelihoods of all while developing urban areas sustainably.



Local communities along the water front in these countries face the highest impacts of climate change.

Small Island Developing States (SIDs) are particularly vulnerable to threats of:

- tourism
- unsustainable coastal urban development
- other economic activities

Local communities along the water front in these countries face the highest impacts of climate change. For example, severe storms in the Caribbean have increased eight times in the past 25 years.

Climate change impacts on oceans and coasts include:

- increased:
  - salinization
  - flooding and storm surge
- damaged:
  - shorelines
  - infrastructure
  - natural environment
- acidification
- ocean warming
- worsening water quality and supply
- higher frequency and severity of extreme weather conditions

In 2012, the World Bank noted



that projected increases in sea level and the frequency and severity of tropical storms will endanger coastal cities such as:

- Jakarta
- Bangkok
- Ho Chi Minh City

Regional Risk Pools are vital in allowing SIDS and other developing countries to protect coastal areas and build back after extreme weather events. For example, the Caribbean Catastrophe Risk Insurance Facility (CCRIF) is a multi-donor facility hosted by the World Bank which provides parametric insurance coverage.

### Assessing environmental impacts

The scale and nature of these economic activities typically

create proportional environmental impact and cost. Given the frequent fragility of coastal zones and oceans, this needs careful management to ensure sustainability.

Urbanization and tourism activities have resulted in large-scale investments. This includes port upgrades and renewed and resilient urban infrastructure along the coast and other water bodies, such as lakes and rivers.

A balance must be created to ensure the use and conservation of marine and other aquatic resources is done in an environmentally sustainable and inclusive way.





Information on the economic value of marine and freshwater ecosystem services, especially for services without a market price, can:

- inform the development of incentive-based policies that support sustainable economic development
- enable more comprehensive assessments of the positive and negative impacts of policy alternatives to achieve the desired balance

### Finding innovative financial mechanisms

An important tool for preserving coastal zones is private sector investment in the preservation and rehabilitation of natural and built infrastructure.

Innovative financial mechanisms, such as insurance for natural infrastructure, can help stimulate private investment. For instance, to protect a 60 kilometer stretch of coral reef in Quintana Roo, Mexico, the regional government is working with the:

- insurance industry
- Nature Conservancy
- Cancun Hotel Owners Association

The hotel owners are funding the preservation and rehabilitation of the reef as a condition of an insurance policy. The insurance protects the reef and beach in the case of extreme weather events. This approach appears to be highly scalable.

### Controlling waste management

Cities and related activities generate considerable amounts of solid and liquid waste and air pollution that end up in the aquatic ecosystem.

This issue requires the development of solid as well as liquid waste management strategies to curb pollution and its effects on the ecosystem.

### Planning and governance

Blue economy opportunities and challenges require adequate:

- urban planning
- city development
- governance structures

There is an urgent need to limit the environmental impacts of urbanization and tourism activities while responding to the increasing frequency and intensity of climate-induced events.

Ensuring sustainable development of coastal cities

and communities requires an urban planning approach that takes into consideration:

- resilience
- climate impacts
- marine spatial planning

This will also aid in:

- protecting heritage
- preserving ecosystems
- harnessing socio-economic opportunities

### Policies and strategies

Cities need policies and strategies that address:

- impacts
- challenges
- opportunities

These should include practical solutions to urbanization challenges through:

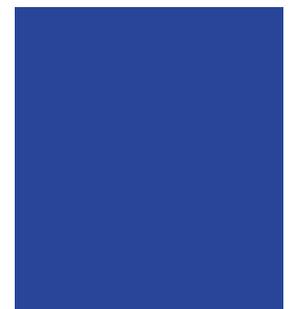
- integrating:
  - urban planning and management
  - land and water resources management
- promoting sustainable land management practices
- establishing sustainable blue economy strategies for practical:
  - resilience
  - mitigation
  - adaptation
  - transformation



## Questions

Panelists will guide discussions on:

- 1.** How does the spatial development of coastal cities optimally harness the potential of the blue economy while addressing resilience?
- 2.** How can waterfront cities and towns optimize the opportunities offered by the blue economy in a sustainable and inclusive way?
- 3.** What legal and institutional frameworks should be put in place to regulate, identify priorities and guide the development of waterfront cities and towns and to promote local and international investment in these cities?
- 4.** How does the governance and management of coastal regions and ecosystems respond to the challenges of communities depending on the blue economy?
- 5.** How should coastal cities restructure their public expenditures and investments to fully harness the potential of the blue economy? Acknowledging that the public sector alone will not be able to provide sufficient funding to sufficiently boost and protect the blue economy, how can we attract sustainable and innovative blue finance?
- 6.** Transformation of coastal cities will likely impact various population sub-groups differently. City expansion for instance usually claims agricultural land. Women are over-represented in agriculture with limited ownership on the critical land input. How do we involve various population sub-groups in the conversation? How do we account for the differentiated impacts?



# Theme: Sustainable energy, mineral resources and innovative industries

Creating economic growth that is inclusive & sustainable



The sustainability of energy and mineral resources within and around water bodies is important in the public discourse on the blue economy. There is an increasing primary energy demand across key fuels, including:

- oil
- gas
- coal
- hydro
- nuclear
- biomass
- other renewables

This makes the subject of energy efficiency a critical driver for sustained blue economy developments.

## Sustainable extraction

Many countries, especially Least Developed Countries (LDCs) and Small Island Developing States (SIDS), rely directly on seas, lakes, oceans and other water bodies.

Many of the world's minerals are found around inland water courses and within nearby seas, lands and oceans.

States want to benefit from the resources within their jurisdictions and in shared trans-boundaries. This makes protecting fragile marine and water ecosystems with sustainable extraction vital. Greening the blue economy provides the world with an important avenue for realizing the sustainable development objectives under the UN's 2030 Agenda for Sustainable Development.

Many countries, especially Least Developed Countries (LDCs) and Small Island Developing States (SIDS), rely directly on seas, lakes, oceans and other water bodies.



## Alternative energy

The blue economy has diverse components, including:

- traditional ocean industries, such as:
  - tourism
  - fisheries
  - maritime transport
- new and emerging activities, including:
  - offshore renewable energy, like:
    - wind
    - tidal waves
    - salinity gradient and biomass
    - ocean thermal energy conversion
  - seabed extractive activities, like oil and gas

These are important to the energy sector as they offer alternative sources of energy from renewable and nonrenewable sources. Sustainable marine energy

exploration and development can play a vital role in social and economic growth. It can also offer realistic alternatives for climate adaptation and mitigation.

Offshore wind energy is becoming more common, but other forms of marine energy extraction are still at the experimental phase. In most cases, they have not yet been fully developed to a commercial scale.

## Opportunities

Adopting sustainable blue economy interventions will result in a low-carbon pathway based on sharing, resilience, opportunity, collaboration and interdependence.

It is an economy driven by investments that:

- enhance energy efficiency
- reduce carbon emissions and pollution

- harness the power of natural capital, such as the oceans
- halt the loss of biodiversity and the benefits that ecosystems provide

The blue economy is a framework for achieving the sustainable development goals. Exploiting marine energy and mineral resources can provide valuable ecosystem goods and services, but it also impacts other valuable ecosystem services. Consideration of the economic value of both positive and negative impacts on ecosystem services supports blue economy sustainable economic growth objectives.

The blue economy has the potential to contribute to:

- carbon sinks
- food security
- transportation
- bio-prospecting
- tourism development
- hydrocarbon sources

It also offers huge untapped potential for renewable energy from:

- wind
- tides
- waves
- biomass sources
- salinity gradients
- Ocean Thermal Energy Conversion (OTEC)





## The International Seabed Authority

The United Nations Convention on the Law of the Sea (UNCLOS) established the International Seabed Authority (ISA). The ISA is the international body that organizes and controls seabed mining-related activities in the area beyond national jurisdiction.

Multilateral Agreements and SDGs deal with prospecting and exploration for mineral resources by providing a comprehensive set of rules, procedures and regulations.

## Deep-sea habitats

Little is still known about:

- deep-sea habitats
- their recovery potential
- the impact that mining operations are likely to have on:
  - ecosystems
  - the wider functioning of oceans

The short and long-term impacts of deep-sea habitats on economy and society in general remain largely unknown. The problem is made worse by the lack of information across Exclusive Economic Zones (EEZs) on the economic values of:

- ecosystem services
- enforcement regimes
- comprehensive and dedicated regulation

## Challenges to transitioning to renewable energy

The transition from nonrenewable to renewable sources of energy has been slow. To sustainably develop and support the transition, countries need:

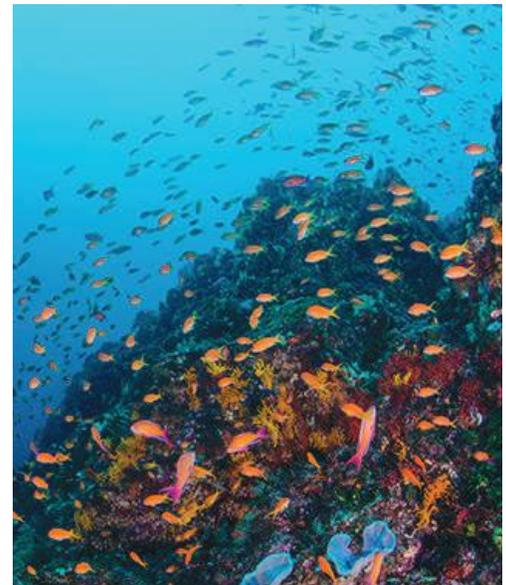
- capacities
- technologies
- comprehensive policies and regulatory frameworks

There is a need to strengthen institutions and frameworks for regulating and managing the exploration and extraction of coastal and marine resources, including deep-sea activities. This is to ensure sustainability and compliance with global instruments, such as ISA, UNCLOS and regional and sub-regional frameworks.

## Realizing the potential

Since the blue economy is a relatively new concept, countries need to:

- invest in, and use, the best available data, science and technology
- support diverse groups of scientists, including women



- develop expertise and contribute innovatively in these areas

For long-term changes, they need to strengthen:

- reforms
- governance
- knowledge bases
- management decisions

Managers should apply the precautionary approach principle to avoid irreversible damage to the ecosystem. They need to ensure appropriate social and environmental safeguards are put in place as part of strong governance arrangements.

There is also need for capacity building and strengthening partnerships for regional and global cooperation in order to realize the full potential of blue economy.



## Questions

Panelists will guide discussions on:

- 1.** What innovative renewable energy technologies should be used to ensure the blue economy is both sustainable and inclusive?
- 2.** What effective policy and industry mechanisms can drive successful leapfrog transitions into sustainable energy sources?
- 3.** Which hydro and marine energy technologies are suitable for use in developing countries?
- 4.** What are some of the best practices in social enterprise models for sustainable and inclusive (women, youth and the vulnerable) energy and mineral extraction development?
- 5.** What social innovations could be developed and deployed to assess who is participating and benefiting from ocean-based mining and energy sources? Who is excluded, and what can be done to ensure inclusivity?



# Theme: Ending hunger, securing food supplies and promoting good health and sustainable fisheries

## Building safe & resilient communities



Despite progress toward global food and nutrition security in the past 2 decades, almost 1 billion people remain undernourished and deficiencies in vitamins and minerals persist.

The UN's Sustainable Development Goal 2 seeks sustainable solutions to ending world hunger in all its forms by 2030 and achieving food and nutritional security.

### About food and nutrition security

Food and nutrition security involves:

- food availability including production, food stocks and food imports
- access to food through business, food stocks, employment and social protection
- food and nutrition interventions for vulnerable groups and nutrition education

Further, the affordability of food promotes good societal health.

Sustainable fisheries, mariculture and aquaculture are well placed to meaningfully contribute to the achievement of this objective.

### The hunger situation

Despite progress toward global food and nutrition security in the past 2 decades, almost 1 billion people remain undernourished and deficiencies in vitamins and minerals persist. This increases morbidity and mortality among the billions of people who suffer from this "hidden" hunger.

World-wide, 1 in 8 people are affected by the life-long negative impacts of under-nutrition. Children are impacted the most, with effects including:

- poor health
- learning disabilities
- delayed cognitive development
- increased morbidity and mortality



Given these various forms of malnutrition, the hunger situation in many developing countries remains serious. It negatively impacts economic growth by compromising human capital, productivity and development.

### Climate change effects

Climate change compromises food security and has increased the vulnerability of the poor. Developing countries are expected to suffer most from the negative effects of climate change, and may bear up to 80% of the costs.

By 2050, climate change may reduce food availability per capita, resulting in general well-being falling below current levels. Estimates project that the number of malnourished children could increase by about 20%.

### Women

Women bear a disproportionate share of the food insecurity burden. Their coping capacity is limited by barriers that are social, political and economic.

For example, if women had access to resources to the degree men do they could increase yields on their farms by 20 to 30%. This would boost food security and family health.

### Addressing food insecurity

Addressing availability and access to food and nutrition involves:

- decentralization and price stabilization
- market-based economic development, including finance, inputs and

- outputs and aquatic land resources
- helping communities to withstand shocks and strengthen their resilience

All of these issues must be mediated to a significant degree by local influences and processes. They need to be addressed in specific local contexts with a view of incorporating global good practices.

### Food security interventions

Food security can also be strengthened through interventions such as:

- safety nets
- opening up regional and international markets
- improving early warning systems to detect risks and hazards
- boosting agricultural productivity, including integrating smart and appropriate technologies for storage and transport of water-derived food resources



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Healthy oceans and water bodies have a central role to play in solving one of the biggest challenges of the 21st century: how to feed 9 billion people by 2050.

Food and nutrition security can be tackled through:

- land reclamation
- water harvesting and storage
- combating desertification/land degradation
- rehabilitation of arid areas through afforestation
- tapping of renewable energy adaptable technology
- prevention of soil erosion, including the optimum utilization of water bodies
- promoting participation of vulnerable groups, such as youth, women and people with disabilities

Food and nutrition security can also be strengthened through interventions like:

- value addition
- reducing food wastes and post-harvest losses
- accessing credit facilities by small scale fishers and farmers



It can also be strengthened through opening up more arable land and water bodies through application of high water-saving irrigation technologies. This reduces over-dependence on rain-fed agriculture.

In addition, policies to address chronic food insecurity must embrace economic growth (raising incomes) and social protection to reduce the variance of incomes and thus vulnerability. This will protect the consumption patterns of the chronically poor, and improve access to basic services.

Food and nutrition security can be achieved through:

- information
- evidence-based interventions
- agricultural production diversification
- enhancing fisheries resources utilization

### Opportunities

Healthy oceans and water bodies have a central role to play in solving one of the biggest challenges of the 21st century: how to feed 9 billion people by 2050.

Currently, 70% of the globe constitutes oceans which provide only 2% of the food required – highlighting the need to find ways to increase the production and harvest of edible aquatic resources. This can be done through sustainable fisheries and enhanced aquaculture practices to feed and provide livelihoods to growing populations.

Globally, fish supply is expected to reach 190 million tonnes in 2030. This is an increase of 36 million tonnes from 2011.



There should be deliberate and concerted efforts to increase utilization of these fish supplies through promotion of sustainable aquaculture and small scale fisheries to bridge the gap of food insecurity. In order to achieve this, attention must be given to appropriate storage and transportation of edible fisheries resources.

Depletion of food stocks and destruction of breeding grounds has a detrimental impact on food and the economic security of local populations. This includes

**Ensuring mutual learning and collaboration is vital for advancing a coherent and coordinated reduction of food and nutrition security risks and vulnerabilities.**

Indigenous communities living along or around bodies of water.

Mainstreaming risk reduction and enhancing resilience for food security requires focusing efforts on recovery, response, preparedness and developing policies for all stakeholders including:

- local communities
- non-governmental organizations
- national and regional governments
- humanitarian and development agencies

Ensuring mutual learning and collaboration is vital for advancing a coherent and coordinated reduction of food and nutrition security risks and vulnerabilities.

### Forecasting

Forecasting and response capacities must be strengthened and the dissemination of early warnings must be improved locally and globally. Advance warning enables the necessary actions to reduce people's exposure to risk while preparing for effective responses and recovery.

Populations can better understand food and nutrition security risks with

community-based early warning and monitoring systems and adaptable, innovative methods of disaster prediction and hazard mitigation. These can play a critical role in saving lives and livelihoods. Crucial tools for reducing vulnerability include those that help predict and monitor price volatility, natural disasters and extreme weather events.

**Forecasting and response capacities must be strengthened and the dissemination of early warnings must be improved locally and globally.**





## Questions

Panelists will guide discussions on:

- 1.** What strategies can be employed to protect the aquatic environment from pollution that impacts fisheries resources (food safety and fish stocks)?
- 2.** What government opportunities can promote aquaculture through inclusion and empowerment of women, youth and people in vulnerable situations?
- 3.** To tackle food and nutrition insecurity and improve livelihoods in vulnerable communities, what business models can be adopted to promote sustainable business-oriented fisheries and aquaculture production?
- 4.** What clean technologies can be adopted to ensure safe and appropriate food storage and transportation over waterways?
- 5.** Women play a critical role in food systems but are the most vulnerable to, and affected by, malnutrition and health issues. How can we:
  - involve women as key stakeholders as we seek sustainable solutions?
  - make sure that solutions are sensitive to women's specific needs and constraints?
  - support and strengthen the role that women already play in food and health systems?
- 6.** How can governments leverage blue economy opportunities to enhance global food security with water harvesting and increased percentage of irrigated lands?

# Theme: Managing and sustaining marine life, conservation and sustainable economic activities

## Ensuring healthy and productive waters



In 2014, approximately 10 to 12% of the world's population made their livelihoods from capture fisheries and aquaculture. This amounted to 167 million tonnes of fish valued at \$148 billion in exports.

The world's aquatic ecosystems constitute a rich diversity of resources and services. This includes about 2.2 million species of plants, animals and other organisms which represent between 50 to 80% of all life on earth.

Together with their terrestrial counterparts, aquatic resources provide important goods and services such as food, medicines, carbon storage and coastal protection. They contribute to the livelihoods of humankind and to socio-economic development around the world.

### Value-added

According to the Organisation for Economic Co-operation and Development (OECD), the annual total value-added of aquatic ocean resources is approximately \$1.5 trillion (2016). This doesn't include non-market goods and services from small-scale activities and ocean ecosystems that support human well-being but are not traded in markets. About 17% of total global animal protein is provided by fisheries, thereby contributing to the nutrition requirements for billions of people.

In 2014, approximately 10 to 12% of the world's population made their livelihoods from capture fisheries and aquaculture. This amounted to 167 million tonnes of fish valued at \$148 billion in exports.

Further, mangroves (shrubs or small trees growing in coastal saline or brackish water) and other vegetated ocean habitats are important carbon sinks (storage). They hold about 25% of carbon dioxide (CO<sub>2</sub>) and provide protection from floods and storms to coastal communities.

### Negative impacts

As aquatic resources are the life-force that makes human prosperity possible, sustainable development is essential. This includes aquatic resource protection, restoration and management.



However, human activities continue to negatively impact aquatic health and productivity. This decrease of natural capital is not accounted for in traditional national economic indicators.

Aquatic life is being harmed and its full potential hindered by unsustainable and unmanaged activities such as pollution, overexploitation, underwater noise, habitat destruction and the introduction of aquatic invasive species.

### Coral reefs

Over one quarter (27%) of the world's 845 species of reef-building corals have been listed as threatened. An additional 20% are considered near-threatened.

It has been predicted that without urgent management measures a further 50 to 60% of the world's reefs may be destroyed within the next 30 years.

### Mammals, turtles and fish stocks

One quarter (25%) of marine mammals and six of the seven species of marine turtle are now threatened. Plastic debris in the ocean is estimated to kill over 100 million marine animals annually.

Overexploitation of fisheries resources has led to about 50% of fish stocks being fully utilized, and another 25% overfished. This leaves only 25% with some potential for increased harvests.

The worldwide spread of aquatic invasive species is harming biodiversity and negatively impacting economies, public health and the environment.

Ocean-going ships continue to contribute to the aquatic invasive species problem through vessel bio-fouling and uptake and discharge of ballast water.

### Strengthening cooperation

Many aquatic resources are trans-boundary in nature. Strengthening cooperation and policy coherence is essential in fighting drivers of aquatic resource degradation and in ensuring sustainable management. This requires coordination among nations and institutions at all levels, including international organizations, regional and sub-regional organizations and arrangements and programs.

These tools will help strengthen cooperation:

- marine spatial planning
- natural capital accounts
- community-based protected areas
- integrated coastal zone management

A comprehensive initiative that finances various ways to sustainably manage to restore the health of the world's aquatic ecosystems is critical.



Overexploitation of fisheries resources has led to about 50% of fish stocks being fully utilized, and another 25% overfished.



It is important to mainstream aquatic biodiversity conservation in all productive sectors of the economy.

### Innovative solutions

Steps should be taken to develop comprehensive strategies to:

- support aquatic ecosystem-related education
- promote blue economy literacy and a culture of restoration, conservation and sustainable use
- raise awareness of the natural and cultural significance of the aquatic realm

Local innovations must be identified and put into practice all over the world to balance:

- economies
- social needs of women, girls and marginalized groups
- the protection of aquatic ecosystems

It is important to mainstream aquatic biodiversity conservation in all productive sectors of the economy.



Promising mechanisms for financing the conservation of marine ecosystems include ideas such as debt-for-nature swaps and the use of green, blue and other types of bonds.

For instance, an innovative Seychelles debt transaction was negotiated in the Paris Club with support from the French government and The Nature Conservancy. This transaction converted a portion of the Seychelles' debt into service payments that could be used to fund on-the-ground work for improved management of coasts, coral reefs and mangroves. The deal will ensure approximately 400,000 km<sup>2</sup> will be managed as marine protected areas within five years.

### Opportunities

To achieve sustainability objectives and initiatives, blue economy and blue growth approaches must provide a platform and strategic

framework for achieving the objectives of:

- legal frameworks and action plans that are regional, national and international
- the Sustainable Development Goals (SDGs), particularly SDG 14, which focuses on conservation and sustainable development of seas, oceans and marine resources

Finally, nations need to dedicate greater resources to aquatic ecosystem research and scientific collaboration. They also need to create better networks for:

- observations
- research coordination
- collecting and sharing data and knowledge on health, productivity and aquatic life sustainability



## Questions

Panelists will guide discussions on:

- 1.** How can blue growth and blue economy approaches be used to promote sustainable use of aquatic life?
- 2.** What public engagement strategies are effective in supporting ocean-related education and raising awareness of the natural and cultural significance of marine life?
- 3.** What policies and programs are needed to strengthen understanding of the status and trends of aquatic ecosystems, and incorporate this knowledge (including Indigenous knowledge), into decision-making for a blue economy?
- 4.** How can innovative financial instruments, such as green and blue bonds and debt-for-nature swaps, serve to promote conservation and resilience?
- 5.** What role can communities play to help conserve, preserve and protect aquatic ecosystems? How can they be engaged through education and awareness?



# Theme: Climate action, agriculture waste management and pollution-free oceans

## Ensuring healthy and productive waters



The world's oceans and coasts support the livelihoods of billions of people around the world. However, increased human activities, coupled with the impacts of climate change, have put additional pressure on our world's aquatic ecosystems while undermining their health.

The blue economy seeks to improve human well-being and social equity while addressing current economic and environmental challenges.

### Blue economy value

The blue economy protects aquatic ecosystems and coastal regions through sustainable initiatives. It also stabilizes and sustainably provides food security.

Blue economy initiatives can help mitigate pressures and increase the resilience of:

- tourism
- marine resources
- port infrastructure
- aquatic ecosystems
- coastal communities
- recreational facilities

Environmentally-friendly blue economy businesses have the potential to create jobs, adding gross value to the annual global economy.

### Climate change

Climate change and pollution both contribute substantially to ocean degradation.

The blue economy protects aquatic ecosystems and coastal regions through sustainable initiatives. It also stabilizes and sustainably provides food security.



Climate change impacts oceans through:

- warming
- raising sea levels
- melting polar ice
- causing ocean acidification
- changing the oceans' major current systems

Elevated temperatures affect biological diversity and causes:

- coral bleaching
- forced migration of many species
- life cycle interference of marine species
- decreased nutrient availability in marine ecosystems

The rise in sea levels endangers the survival of:

- coral reefs
- mangroves

- sea grasses
- nesting beaches for marine life
- other critical habitat-forming species

Small island states are also directly threatened by sea level rise. Some Kiribati citizens are already among the world's first refugees of sea level rise, as 2 of the nation's islands have disappeared into the ocean.

Ocean acidification is caused by increased carbon dioxide (CO2) absorption. It directly harms or kills ocean plants and animals that are sensitive to acidic conditions in aquatic ecosystems.

### Pollution

The cumulative release of pollutants into oceans and water bodies greatly affects the growth of the blue economy.

### Causes of pollution

Pollution that affects the oceans includes:

- underwater noise
- chemicals and oil
- marine litter, such as plastics
- non-biodegradable pollutants
- nutrient over-enrichment from:
  - atmospheric deposition
  - agricultural and urban runoff
  - polluted groundwater seepage
  - inefficient wastewater treatment plants
  - release of previously accumulated nutrients from sediments
- contamination from ships, including greenhouse gas emissions

Non-sustainable agricultural activities along bodies of water promote increased pollution in aquatic environments.



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It's estimated that over 10% of the total ocean contamination is caused by lost or discarded fishing gear.

### Effects of pollution

The effects of pollution on oceans include:

- reduction of amenities
- contamination of food chains
- hindrances to marine activities
- toxicity of the marine environment
- impairment of quality for water use
- hazards to human and aquatic health
- depletion of oxygen content in the water
- disruption to reproductive systems and cycles of coral reefs

Large algal blooms lead to very low levels of oxygen in waters, killing fish, shellfish and aquatic plants.

### Marine litter

Marine litter in oceans is another major source of pollution. The World Economic Forum projects that in 2050, the dumping of plastics into oceans will be over 8 million



tonnes per year and result in more plastics than fish in the ocean.

It's estimated that over 10% of the total ocean contamination is caused by lost or discarded fishing gear. This can result in entanglement and death of marine mammals and other aquatic organisms.

### Integrated Water Resources Management

The Integrated Water Resources Management (IWRM) approach supports aquatic environment integrity and its economic sustainability through proper management of aquatic resources.

IWRM activities to improve the quality of water entering the oceans include:

- implementing basin plans
- establishing feedback systems

- complying with legal frameworks
- involving stakeholders and users
- improving flag state implementation
- using new technologies in spatial planning
- creating capacity and awareness campaigns
- building climate resilient communities in protected areas
- employing strategies for best practices on the management of waste and floods
- enforcing port state control measures and international cooperation on trans-boundary issues

In addition, management of the risks associated with the nuclear pollution of the oceans will be important to the sustainability of oceans and other water bodies.



### Forecasting and detection

Pollution sources and their conduits need to be mapped, and their subsequent integrated strategies developed and implemented. The establishment of a robust monitoring system would guide policy decisions toward pollution-free oceans. It should include monitoring of:

- maritime forecasts
- sea data observations
- weather and water quality data networks

- greenhouse gasses from the shipping industry

Also needing improvement is:

- pollution detection
- response capacity to oil spills
- disaster preparedness and response

The reduction of pollution in the oceans will enhance and sustain the blue economy. It will also reduce pressure on land-based livelihoods by reducing land-based pollution and improving the sustainability of a pollution-free aquatic environment.

### Opportunities

The outcomes and prospects for effective climate change mitigation and adaptation measures will depend on the choices humanity makes.

Developing climate change mitigation and adaptation strategies could:

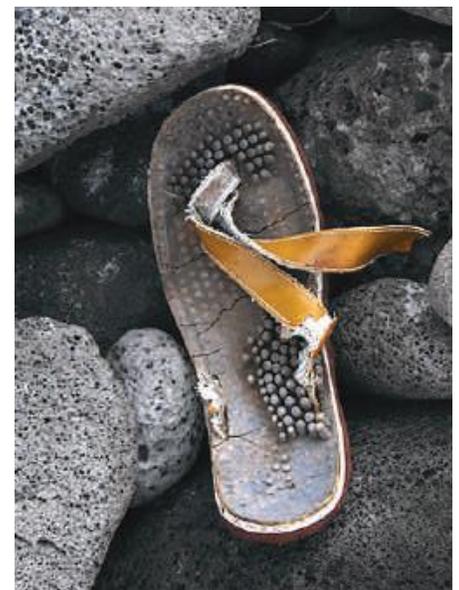
- build coastal resilience
- lead cost-effective energy supply
- support sound environmental stewardship
- improve ecosystem service and natural capital values

This could be provided through the development and adoption of low-carbon and carbon-free energy technologies. Best practices involving eco-initiatives and innovations should be focused on for the sustainability of the blue economy.

Agricultural and aquaculture best practices have the potential to:

- act as carbon sinks
- lessen water pollution
- manage climate change
- limit climate change impacts

We need to achieve pollution-free bodies of water to protect and preserve the marine environment.



The establishment of a robust monitoring system would guide policy decisions toward pollution-free oceans.



## Questions

Panelists will guide discussions on:

- 1.** What policies and legal, regulatory, and institutional frameworks can be implemented to reduce aquatic pollution?
- 2.** What strategies and enabling conditions are best for implementing the “polluter pays” principle within developing economies?
- 3.** What innovative technologies and financial mechanisms are there to support sustainable management of aquatic resources, coastal resilience and pollution reduction? How do we support these in small-scale (under \$500,000) or middle market operations (between \$500,000 and \$5 million) versus large-scale operations (over \$5 million)?
- 4.** What key factors drive effective and sustainable public/private partnerships for reducing pollution and climate change?
- 5.** How should existing multilateral environmental agreements be best implemented to sustainably manage aquatic ecosystems?
- 6.** What concerted actions by the international community are required to stop the flow of plastics and marine waste into the aquatic environment?
- 7.** How do we turn waste management into attractive business opportunities for women and youths?

sea levels endangers

# Theme: Maritime security, safety and regulatory enforcement

## Building safe & resilient communities



Emerging threats such as terrorism and cybercrime continue to demand even more complex solutions for port operations and surveillance systems.

Secure and safe maritime resources are essential for trade, communication, and job and wealth creation.

However, security challenges have escalated with attacks from criminals and terrorists on ports, offshore installations and ships. These attacks are showing increased innovation and sophistication, and endangering crew, ships, cargo, marine life and other investments.

Maritime security and safety concerns are at a new level of importance, due to the:

- impact of insecurity
- financial implication of mitigation measures, such as:
  - surcharges
  - use of armed guards

Emerging threats such as terrorism and cybercrime continue to demand even more complex solutions for port operations and surveillance systems.

The need to adopt international conventions on maritime safety and develop the necessary capacity for compliance will be crucial to ensure environmental protection and sustainability.

### Collaboration

Maritime safety and security challenges continue to affect many states and sectors. Collaboration is essential to align and ensure the effectiveness of individual states' deterrent measures.

At the international level, the International Maritime Organization (IMO) has championed the development of regulatory and infrastructural initiatives.



The initiatives address areas such as:

- inter-agency response to threats
- human resource capacity building
- maritime cyber risk management
- comprehensive ship-boarding protocols
- regional piracy information exchange centres
- electronic systems that track real time location of ships
- bilateral inspections of shipping containers before they are loaded

These tools can be used to address a range of illegal activity. This includes illegal, unregulated and unreported (IUU) fishing.

### Local and regional initiatives

There are also a number of local and regional initiatives aimed at realizing secure and safe maritime resources.

The need for collaboration has seen increased desire to address security and safety through establishment of regional frameworks and consultations. These would have far-reaching recommendations for enhancing cooperation among states on maritime security and safety.

### Opportunities

Maritime resource stakeholders need to reflect on the state of maritime safety and security, and regulatory frameworks. They also need to think critically about measures

needed to address challenges in the short and long term. These stakeholders include:

- academia
- lawmakers
- security agencies
- industry operators

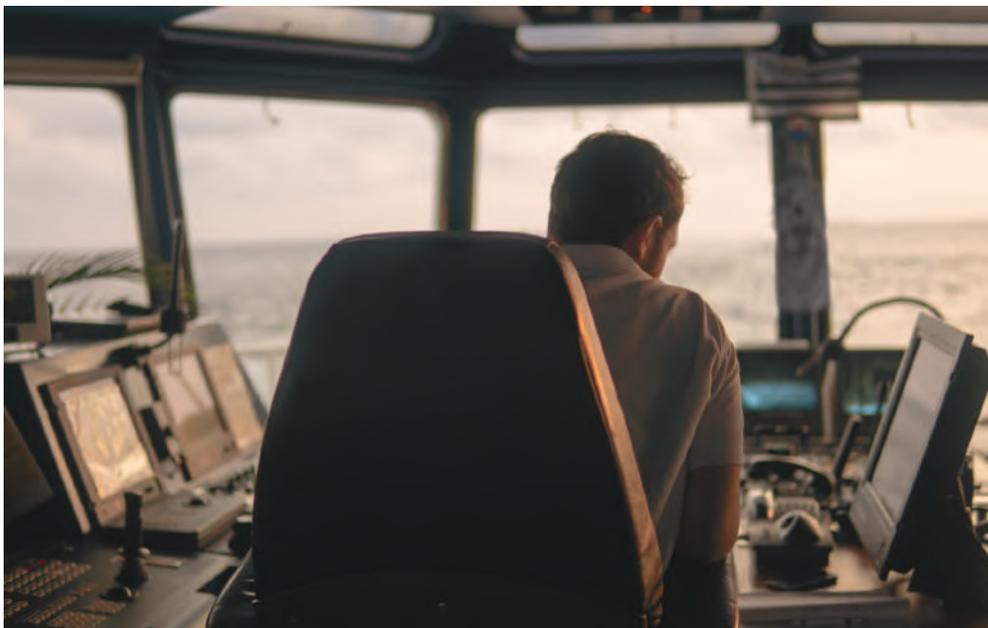
It is important to look into gaps within existing:

- infrastructure
- human capacity
- technological knowledge
- institutional and legal frameworks

This will allow us to build and sustain strategies on addressing orderly migration while aware of:

- the upcoming Global Compact for Migration
- national and global levels of maritime security and safety

To address existing and emerging maritime security threats and safety and governance issues, we must have conversations around technology, legal frameworks and enforcement capacity.





## Questions

Panelists will guide discussions on:

- 1.** How can effective coordination among states and security agencies be realized to eliminate duplication of efforts and resources targeting maritime security and safety?
- 2.** What legal and institutional frameworks are needed to address various existing maritime threats?
- 3.** To what extent is the maritime industry prepared to anticipate, adapt and respond to insecurity challenges presented by an increasingly dynamic maritime sector?
- 4.** To ensure the health, safety and protection of maritime zones, what effective detection, responses and enforcement mechanisms can be used for threats and illegal activity (e.g. IUU fishing)?
- 5.** What measures could be put in place to combat drug trafficking, respond to humanitarian disasters and keep pace with the evolving political, legal, safety and security considerations in the sector?
- 6.** What clean and blue technology (including block chain and remote sensing) advancements are there to deal with maritime security issues in ports and waters, particularly in regards to addressing lack of awareness, intelligence collection, processing and exchange of information?

# Theme: People, culture, communities and societies – the inclusive blue economy



Creating economic growth that is inclusive & sustainable



Culture has been identified as one area that needs to be recognized in discussing matters of sustainability in the management of water bodies.

Our coastlines are vitally important resources for many of the world's most vulnerable people, communities and societies.

Communities living around water bodies have traditionally interacted with these aquatic resources and derived a means of livelihood from them. Through time, they have built a wealth of knowledge on the sustainable utilization of ocean-based resources.

Most governments have focused their socio-economic and environmental development on the exploitation of terrestrial resources. However, there is increasing realization that aquatic resources are fundamental in:

- preserving culture
- supporting livelihoods
- creating social well-being

The blue economy concept seeks to ensure environmental sustainability of these water bodies and their surroundings, while also promoting:

- social inclusion
- economic growth
- preservation of culture
- improvement of livelihoods

## Cultural value

Culture has been identified as one area that needs to be recognized in discussing matters of sustainability in the management of water bodies.

A 2005 World Bank report stated that the ocean's economic contribution to humankind has been significantly undervalued. In particular, we've failed to appreciate non-market goods and services, such as:



- recreation
- coastal protection
- carbon sequestration
- cultural and spiritual values

This calls for a new way of understanding the oceans which incorporates environmental and social dimensions.

### Community engagement

Communities that live around water bodies have significant roles in ensuring and promoting healthy water ecosystems.

Millions of people around the world depend on healthy marine and fresh water ecosystems for their livelihoods, culture and security. To establish an inclusive blue economy, it is important to engage communities living around

water bodies in practical action to conserve and manage water ecosystems.

Engagement of communities is an essential step but also a challenging one in practice.

### Traditional knowledge

Vulnerable fishers and people living around water bodies need support to be able to devote scarce time and resources to conservation. This can be done through incentive-based conservation management plans.

Traditional knowledge systems applied by communities to conserve the natural environment can be integrated into the management of oceans and other water bodies.

Harnessing the full potential of the blue economy requires the

effective inclusion and active participation of all societal groups to protect community culture, heritage and way of life.

### Considerations

A unique opportunity for an inclusive blue economy involves global processes to develop international legally binding treaties. These focus on the governance of areas that lie outside national jurisdictions.

Due consideration should also be given for applying appropriate Indigenous knowledge systems for conservation.

There are also opportunities for economic empowerment of communities, such as income generation and wealth creation. This can be done through the development of creative cultural industries along various water bodies.

A well-developed hospitality industry provides employment to communities and promotes investment in infrastructure and growth of related service industries.



Millions of people around the world depend on healthy marine and fresh water ecosystems for their livelihoods, culture and security.



**Communities suffer health hazards from the degradation of marine ecosystems caused by oil discharge, toxic waste dumping and environmental pollution.**

Harnessing medicinal substances and extracts from ocean and other water body resources can contribute to improved health standards for communities.

To achieve sustainable development, investments are needed in community programs that explain their roles and responsibilities in protecting, managing and conserving their water ecosystems.

## Challenges

Leveraging the blue economy for sustainable development and inclusive growth faces various challenges that negatively impact individuals and communities. These challenges include:

- piracy
- armed robbery
- human trafficking
- maritime terrorism
- smuggling of contraband goods
- illicit trade in crude oil, arms and drugs
- illegal, unreported, and unregulated (IUU) fishing

Also, tax evasion by enterprises involved in unregulated fishing denies governments and local authorities much needed revenue.

Communities suffer health hazards from the degradation of marine ecosystems caused by oil discharge, toxic waste dumping and environmental pollution.

Illegal sand harvesting and the destruction of coral reefs and coastal forests lead to irreversible environmental damage. This damage reduces the resilience of coastal communities by removing natural barriers that limit climate change impacts, such as storm surge, sea-level rise and coastal erosion.

Other challenges that communities living around water bodies experience include:

- unclear property rights
- overreliance on aquatic resources resulting in the need for alternative sources of livelihoods
- exclusion of Indigenous knowledge systems when taking action to sustain marine and water ecosystems



## Opportunities

An inclusive blue economy requires short and long-term efforts.

We can take existing opportunities to bring together stakeholders to establish reforms and sustainable global governance processes. In addition, the blue economy requires the building of inclusive processes, including a concerted effort to identify and involve vulnerable groups.

Improving market infrastructure and access for small-scale fishers and artisans can create more sustainable outcomes that benefit vulnerable communities. The blue economy requires a multi-sectoral approach to design appropriate policies to promote societal well-being and balance the interests of people, communities and societies.



## Questions

Panelists will guide discussions on:

- 1.** How can reforms establish and sustain a more effective governance process on water bodies that is inclusive to all people, communities and societies?
- 2.** How can we mobilize resources for a global and comprehensive review to make a more inclusive blue economy?
- 3.** What program investments can be used to sensitize and facilitate people and communities to understand their roles and responsibilities in protecting, managing and conserving water ecosystems to achieve sustainable development and coastal resilience?
- 4.** How do we ensure that women, youth and vulnerable members of communities are involved in the management of oceans and other water body resources and increase local content in the blue economy?
- 5.** How do we:
  - diversify economic activities undertaken by communities to reduce poverty and overreliance on water body resources?
  - expand the value chains in the blue economy to open up economic opportunities for these communities?
  - diversify economic activities to reduce poverty among communities in regions where there has been under-reliance of ocean and other water body resources?