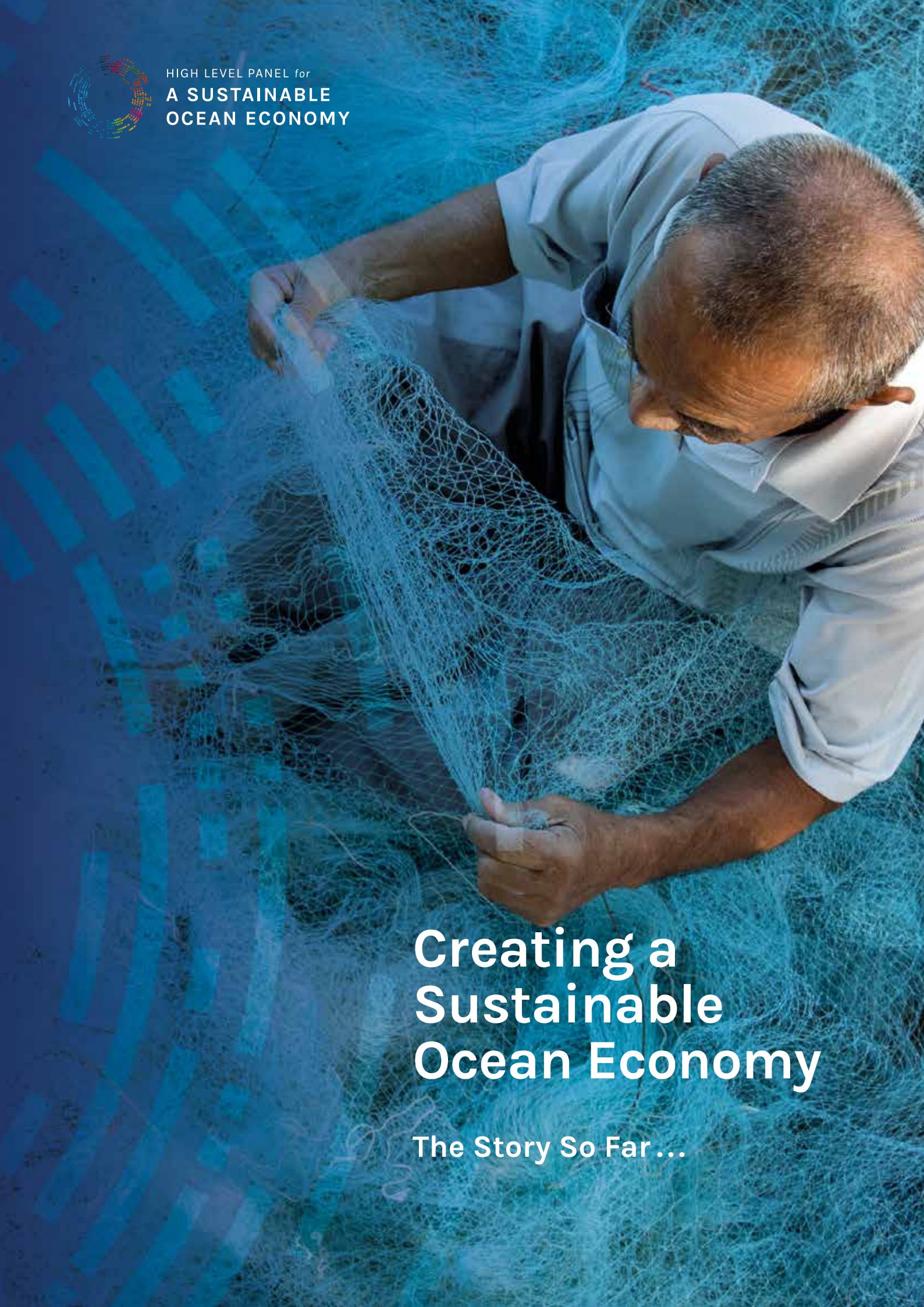

HIGH LEVEL PANEL *for*
A SUSTAINABLE
OCEAN ECONOMY

Creating a Sustainable Ocean Economy

The Story So Far...

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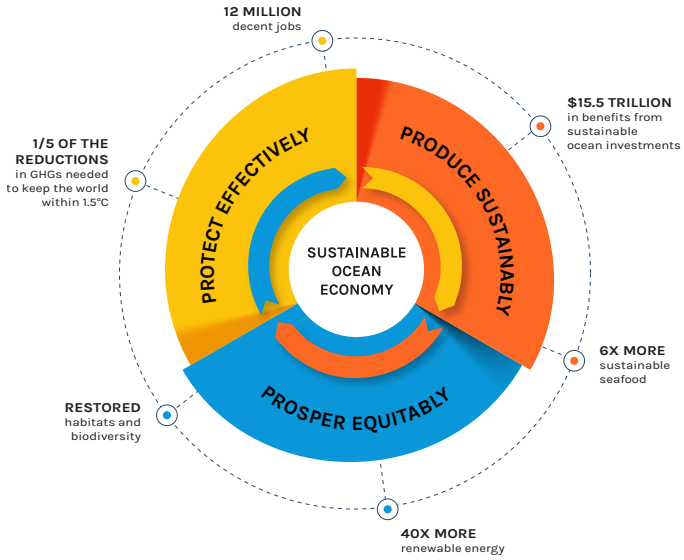
The High Level Panel for a Sustainable Ocean Economy

The High Level Panel for a Sustainable Ocean Economy (Ocean Panel) is a unique initiative led by heads of state and government from around the world who are building momentum for a sustainable ocean economy in which effective protection, sustainable production and equitable prosperity go hand in hand. By enhancing humanity's relationship with the ocean, bridging ocean health and wealth, working with diverse stakeholders and harnessing the latest knowledge, the Ocean Panel aims to facilitate a better, more resilient future for people and the planet.

The Ocean Panel represents nations of highly diverse oceanic, economic and political perspectives. They are nations large and small, across all ocean basins, at every stage of economic development and at every extreme of the ocean environment, from the tropics to the Arctic. Co-chaired by Norway and Palau, the Ocean Panel is the only ocean policy body made up of serving world leaders with the authority needed to trigger, amplify and accelerate action worldwide for ocean priorities.

In December 2020, the 14 members of the Ocean Panel committed to sustainably manage 100% of the ocean area under national jurisdiction, guided by Sustainable Ocean Plans, by 2025. The Ocean Panel countries also supported a global target to protect 30 percent of the ocean by 2030. The leader-endorsed document *Transformations for a Sustainable Ocean Economy: A Vision of Protection, Production and Prosperity (Transformations)* identifies 74 priority actions that focus on five critical areas: ocean wealth, ocean health, ocean equity, ocean knowledge and ocean finance.



Together, these priority actions chart the route ahead for the next decade, when the UN Decade of Ocean Science for Sustainable Development (2021–2030) and the 2030 Agenda for Sustainable Development conclude.

The Ocean Panel's bold yet pragmatic set of priority actions are underpinned by an unprecedented scientific knowledge base, including 16 commissioned Blue Papers and four Special Reports written and peer-reviewed by a group of over 250 ocean experts representing 48 countries.

This report provides a snapshot of just some of the actions undertaken by members of the Ocean Panel, since the panel's formation in 2018, to help create a sustainable ocean economy. These examples are not exhaustive but present a selection of highlights to showcase the breadth of action taking place across all Ocean Panel countries so far.

This report has been prepared by the Ocean Panel Secretariat, informed by desk-based research in English and interviews with selected Ocean Panel countries.

Progress Towards the 100% Approach - Sustainable Ocean Plans by 2025

The ocean is a complex natural system that is inextricably linked to land-based activities and ecosystems. Ocean management must therefore be approached holistically to create a sustainable ocean economy in which protection, production and prosperity go hand in hand. That is why the members of the Ocean Panel committed to sustainably manage 100 percent of the ocean area under national jurisdiction by 2025. A Sustainable Ocean Plan is the foundation for the implementation of this target and the other recommendations identified in the Transformations.

"Our future prosperity relies on a healthy and productive ocean. That is why Australia is committing to sustainably manage 100% of our ocean area, guided by a Sustainable Ocean Plan, by 2025, and why we are working with our Indo-Pacific neighbours to address key threats to our ocean."

Scott Morrison, Prime Minister of Australia

A Sustainable Ocean Plan is a tool that will help nations sustainably manage 100% of their ocean area in accordance with national capacities and circumstances. Rather than focusing on one sector or space, a Sustainable Ocean Plan looks at the collective impact of human activities on the ocean and bridges sectors and stakeholders to help identify gaps and trade-offs and ultimately create solutions that benefit people, nature and the economy.

As the foundation for a sustainable ocean economy, these plans should be developed and implemented through an inclusive, participatory and transparent process. The Ocean Panel has developed a guide to create a common, science-based departure point for countries as they set out on this journey.

Ocean Panel countries have already started developing these plans. Boxes 1, 2 and 3 provide a snapshot of the recent progress made by Fiji, Mexico and Portugal in elaborating their national strategies.

Box 1: Fiji's National Ocean Policy

In 2021, Fiji published its National Ocean Policy (NOP). Fiji's NOP provides a holistic framework for integrated action across all national, regional and global ocean-related commitments. The policy supports and promotes best practices for ocean resource management, incorporating the views of community groups, non-governmental organisations and the private sector. It also establishes the processes and principles to encourage coordination and collaboration across sectors directly or indirectly involved in the ocean space.

The NOP will be reviewed and updated periodically to incorporate lessons learned and updated knowledge with an annual progress report being made publicly available each year to show the status of NOP implementation.

Source: Ministry of Economy 2021

Box 2: Mexico's Sustainable Ocean Strategy

For Mexico, the Estrategia para una Economía Oceánica Sostenible en México 2021–2024 (Strategy for a Sustainable Ocean Economy in Mexico 2021–2024) is an unprecedented effort in multi-sectoral and multi-lateral engagement. Its main objective is to guide national and international actions and initiatives across the different government agencies and institutions of the Federal Public Administration towards a sustainable ocean economy. It positions a sustainable ocean economy as an economy in which effective protection, sustainable production and equitable prosperity go hand in hand. It was developed in accordance with the priorities established in the Ocean Panel's *Transformations for a Sustainable Ocean Economy (Transformations)*. It aims to identify Mexico's priorities when enacting this transition and puts them on course to achieve the headline commitment of the Ocean Panel.

The strategy is not intended to replace any of the existing instruments, plans or programmes but rather to complement them and provide elements for a more effective articulation.

To create the strategy, an analysis was conducted to identify how existing policy instruments align with the *Transformations*. Seventeen national policy instruments were reviewed, identifying the relevant priority actions from the *Transformations* in each instrument.

A national consultation process was then undertaken to identify Mexico's priorities from the *Transformations*. This included 17 federal government agencies, members of the Ocean Panel Expert Group and experts from 19 civil society organisations and research institutes.

This strategy serves a guide for the plans, programmes, actions and initiatives being made in the Federal Public Administration to help Mexico achieve a sustainable ocean economy.[a]

Source: a. Delgado 2021.

Box 3: Portugal's National Ocean Strategy

In 2021, Portugal approved the 2021–2030 National Ocean Strategy.[a] The purpose of the strategy is to enhance the contribution of the ocean to Portugal's economy and promote a healthy ocean that increases the welfare of the Portuguese people. It centres around 10 objectives, including food security, restoring marine ecosystems and combatting climate change. The consultation process included large amounts of public participation, which has resulted in an innovative approach to ocean management.

In September 2021, Portugal enacted the corresponding Action Plan containing over 180 concrete measures to execute until 2030, which serve as the basis for monitoring the progress of the strategy.[b]

Sources: a. DGPM 2021; b. Lusa News Agency 2021.

Additional highlights include the following:

- **Ghana** held a National Integrated Maritime Strategy (NIMS) implementation workshop in July 2021, which was attended by numerous ocean stakeholders. NIMS provides a framework upon which Ghana can build a sustainable and equitable ocean economy by focusing on six strategic objectives that cover topics such as illegal, unreported and unregulated (IUU) fishing, ecosystem protection and ocean-based research (BusinessGhana 2021).
- To strengthen sustainable utilisation of its blue resources, in 2020 the government of **Kenya** established the Oceans and Blue Economy Office with a commercialisation mandate. The State Department for Maritime and Shipping is leading the development of a National Integrated Maritime Policy, and the Kenya Coast Guard Service is strengthening maritime domain awareness through increased monitoring and surveillance in its territorial waters and exclusive economic zones (Government of the Republic of Kenya 2018).
- In 2021, **Chile** approved the Ocean Programme; this programme generates the strategic policy framework with concrete initiatives for the achievement of the National Ocean Policy objectives and the development of a sustainable ocean economy in line with Ocean Panel strategy (Minrel 2021).

"Canada is committed to working with our international Ocean Panel leaders, and to developing a comprehensive blue economy strategy. We are also calling on more world leaders and other partners to join us in turning our goals into reality."

Justin Trudeau, Prime Minister of Canada

Progress Towards: Ocean Wealth

The ocean drives the global economy. It contributes trillions to the global economy each year and provides hundreds of millions of jobs. However, this potential is undermined by unsustainable human activity, which is putting ocean health—and the economic benefits it provides—at risk. To produce sustainably for future generations, the relationship between people and the ocean must be transformed. As countries reset after the COVID-19 pandemic, investing in a sustainable ocean economy can provide an opportunity to build a more equitable, resilient and prosperous future that is in harmony with nature.

In the *Transformations*, the Ocean Panel members committed to six outcomes to deliver ocean wealth:

Sustainable Ocean Food - 2030 Outcome:
Wild fish stocks are restored and harvested at sustainable levels, aquaculture is sustainably grown to meet global needs and waste is minimised and managed throughout the value chain.

Sustainable Ocean Energy - 2030 Outcome:
Ocean-based renewable energy is fast-growing and, on the path, to becoming a leading source of energy for the world.

Sustainable Ocean Transport - 2030 Outcome:
Shipping investments have effectively accelerated the shift towards zero-emission and low-impact marine vessels.

Sustainable Ocean Tourism - 2030 Outcome:
Coastal and ocean-based tourism is sustainable, resilient, addresses climate change, reduces pollution, supports ecosystem regeneration and biodiversity conservation and invests in local jobs and communities.

Sustainable New Ocean Industries – 2030 Outcome: *Innovation and investments in new ocean industries have boosted environmentally responsible and inclusive economic growth.*

A Precautionary Approach To Seabed Mining – 2030 Outcome:
Sufficient knowledge and regulations are in place to ensure that any activity related to seabed mining is informed by science and ecologically sustainable.

Ocean Panel countries are already delivering on many of the priority actions underpinning these ambitious 2030 outcomes. A number of these actions are highlighted in this section.

Sustainable Ocean Food - 2030 Outcome:

Wild fish stocks are restored and harvested at sustainable levels, aquaculture is sustainably grown to meet global needs, and waste is minimised and managed throughout the value chain.

Food from the sea is a cornerstone of the global food system, providing an affordable source of nutrition for more than 3 billion people worldwide and livelihoods for hundreds of millions, often with a lower environmental footprint than land-reared meat (FAO 2018). Blue foods have even greater potential to provide food for a growing population, but this requires significant changes in how ocean resources are managed to eliminate IUU fishing, to reduce bycatch and waste which undermine the sustainability of capture fisheries and to expand sustainable mariculture.

Ocean Panel countries have already made tremendous progress. Boxes 4, 5 and 6 provide a snapshot of the recent progress made by Canada, Norway and Namibia to secure sustainable food from the sea.

Box 4: Canada's Dark Vessel Detection Programme

At the start of 2021, Canada launched a US$ 5.6 million (C$ 7 million) Dark Vessel Detection programme to detect vessels engaging in illegal, unreported and unregulated fishing, also known as "dark vessels." Dark vessels typically do not have identification systems and thus cannot be tracked. With this radar imaging technology, all vessels become visible in all weather conditions—in less than one minute, 250,000 square kilometres (km2) of the ocean can be imaged.[a] Vessels that do have transmitting devices but have switched them off, sometimes in an attempt to evade monitoring, control and surveillance, will also be located and tracked.[b]

Sources: a. MDA n.d.; b. Baker 2021.

Box 5: Norway's New Sustainable Aquaculture Strategy

In 2021, the Norwegian government launched its aquaculture strategy, directing how to further develop aquaculture production in Norway in a sustainable way. Special emphasis is given to ensuring good fish health and welfare and reduced climate and environmental impacts.[a] Additionally, Norway has allocated funding through the Green Platform Initiative to projects such as developing a low-emissions value chain for offshore aquaculture and a new, sustainable food chain for salmon based on the production of microalgae biomass produced by waste (carbon dioxide, nitrogen oxides, heat and water) at a ferro-silicum plant.[b]

Sources: a. Ministry of Trade, Industry and Fisheries 2021; b. Wiik 2021.

Box 6: Namibia Improves Sustainability of Fisheries

The Namibia hake trawl and longline fishery is the first fishery in the country, and the second in Africa, to meet the globally recognised standard for sustainable fishing with guidelines set up by the Marine Stewardship Council.[a] The government also worked alongside the Royal Society for the Protection of Birds (RSPB) and local partners to legislate the use of measures such as bird-scaring lines to protect birds like the endangered Atlantic yellow-nosed albatross from becoming caught in baited longlines. A recent research paper has found that bird deaths in this fishery have now been reduced by 98 percent, equalling 22,000 birds saved every year.[b]

Sources: a. MSC 2020; b. Da Rocha et al. 2021

Additional highlights include the following:

- In 2020, **Japan** passed a new law to help prevent IUU-sourced specified aquatic animals and plants from entering the market—another way to discourage IUU fishing (IUU Watch 2020).
- To increase transparency in fisheries, **Chile** and **Indonesia** have made their countries' vessel tracking data publicly available through Global Fishing Watch, which tracks the movements of commercial fishing vessels in near real time (Bladen 2019). **Namibia** has pledged to make this data available in the future (Gokkon 2018).
- **Norway** holds the secretariat for the Copenhagen Declaration on Transnational Organised Crime in the global fishing industry which, during 2020 and 2021, increased its members to 36. The Blue Justice Initiative, which assists developing countries within the framework of the Copenhagen Declaration, has funded a number of projects on governance and inter-agency cooperation (led by the United Nations Development Programme), fisheries law enforcement (led by the United Nations Office on Drugs and Crime [UNODC]) and modern slavery in fisheries (led by the International Labour Organization in cooperation with the UNODC and the International Organization for Migration) (BJI n.d.).
- As a response to the COVID-19 pandemic, the government of **Jamaica** issued a one-time income support grant to 17,000 artisanal fishers with the condition that they register their boat and install a global positioning system tracker. As a result of this initiative, Jamaica has enhanced its understanding of the scale of small-scale fishing in the country and began the transition to a sustainable fisheries management (Northrop et al. 2020).
- **Australia** announced in its Oceans Leadership Package US$ 3.7 million (AUD$5 million) to support the marine environment and sustainable fisheries through the development and implementation of new and innovative measures to mitigate fisheries bycatch of threatened and migratory marine species (Prime Minister of Australia 2021).
- In 2019, **Ghana** launched the Canoe Identification Cards initiative to better regulate the artisanal marine fisheries sector. The registration will allow the Fisheries Commission, the Ghana National Canoe Fishermen Council and other partners to implement management measures to help Ghana build a more sustainable and profitable fisheries industry (Benghan n.d).
- The Ministry of Maritime Affairs and Fisheries in **Indonesia**, through the Marine and Fisheries Research and Human Resources Agency, is supporting research on how to process seaweed without creating waste (Kabarnusa 2021).
- **Mexico**'s government is currently working on the design of the Sembrando Vida en el Mar (Sowing Life in the Sea) programme, which aims to contribute to marine and coastal environmental regeneration for food self-sufficiency and the well-being of coastal fishing communities and considers climate change variables in its management. The project aims to reactivate the economy of fishing communities, getting them involved in the strengthening and expansion of fishing ordinances, through fishing refuge areas, promoting a joint ocean governance. The goal is to establish at least 100,000 hectares of new fishing refuge zones from 2021 to 2024 (Ernesto 2020).
- **Kenya** is in the process of implementing a rights-based fisheries management for its marine fisheries to ensure sustainability and to optimise benefits towards national development in terms of jobs and wealth created. Two anchor tuna processing hubs are currently being developed in Mombasa and Lamu Counties by the State Department for Fisheries, Aquaculture and the Blue Economy. Growth in food from the sea is also dependent on expanding sustainable mariculture, in particular species such as seaweed that do not depend on direct feed inputs. Kenya has teamed up with the World Bank to undertake a five-year, US$100 million fisheries and mariculture expansion project. The current proposal includes the construction of at least one national mariculture and training centre (Oirere 2019).

Sustainable Ocean Energy - 2030 Outcome:

Ocean-based renewable energy is fast-growing and, on the path, to becoming a leading source of energy for the world.

Ocean-based renewable energy (including wind, tidal, current and solar) can provide a significant role in helping to increase renewable energy and achieving the goals set out in the Paris Agreement. Investing in sustainable ocean-based renewable energy could create 440,000 new jobs by 2030 and boost economic development (OECD 2016). Every dollar invested in scaling up global offshore wind production generates a benefit estimated at $2–$17, delivering an average 12:1 benefit-to-cost ratio (Konar and Ding 2020).

Boxes 7 and 8 look at the recent investments made by Canada, Japan, Portugal and Norway to accelerate the development of ocean-based renewable energy projects.

Box 7: Canada Invests in Tidal Energy

In September 2020, Canada announced a C$9.4 million investment in four tidal energy projects. Investing in tidal energy research and development projects has the potential to significantly reduce Canada's greenhouse gas emissions and improve local air quality by replacing fossil fuels as a source of power.

Source: Natural Resources Canada 2020.

Box 8: Japan, Portugal and Norway Accelerate Offshore Wind Projects

Japan announced the offshore wind target of 10 gigawatts by 2030 and 30–45 gigawatts by 2040.[a] Portugal launched an offshore wind project that will provide energy to 60,000 users each year.[b] Norway opened up over 3,500 additional square kilometres for additional offshore wind projects. Developers can now apply for project licences, with the two areas offering a possibility to develop up to 4,500 megawatts of capacity.[c]

Sources: a. Out-Law News 2021; b. EDP n.d.; c. Adomaitis 2020.

"Namibia is committed to sustainable ocean management through an integrated approach that reduces the carbon footprint and the impact of ocean industries. We hold hands with global community in charting a pathway towards a low carbon, climate resilient future that secures a healthy ocean and human wellbeing."

Hage G. Geingob, President of Namibia

Sustainable Ocean Transport - 2030 Outcome:

Shipping investments have effectively accelerated the shift towards zero-emission and low-impact marine vessels.

Although shipping is vital to the global economy and facilitates around 90 percent of global trade, it also can have a negative impact on the environment. Global ocean transport currently represents around 3 percent of carbon dioxide (CO2) emissions. If current trends continue, greenhouse gas emissions could roughly double by 2050 (Olmer et al. 2017). Decarbonising the marine transport sector is therefore crucial to limiting global temperature rise and meeting the Paris Agreement goals. Decarbonising the sector will also create jobs, build the long-term resiliency of the sector and present an excellent investment—every dollar invested in decarbonising shipping yields an average of $12 back in benefits (Konar and Ding 2020). In addition to emissions, heavy shipping traffic can also create damaging underwater noise and transfer invasive aquatic species into foreign ports.

Ocean Panel members have made considerable progress on accelerating efforts to green their shipping sectors. Boxes 9, 10 and 11 highlight three new initiatives launched by Fiji, Chile and Canada.

Box 9: Pacific Blue Shipping Partnership

The Pacific Blue Shipping Partnership has been established by Fiji and the Republic of the Marshall Islands to catalyse a multi-country regional transition to sustainable, resilient and low-carbon shipping. Members of the partnership, including Fiji, have committed to reducing domestic shipping emissions to zero carbon by 2050, with a 40 percent reduction by 2030.

Transportation and mobility are cross-cutting issues central to the sustainable development of the Pacific. Domestic ferries and inter-island transport vessels are commonly old, fuel inefficient and unsafe, functioning as critical links between remote destinations. Shipping within and between islands in the Pacific is the most expensive per unit distance and per capita in the world. These islands are precariously dependent on imported fossil fuels, raising critical issues of fuel price vulnerability and security of supply. A regional transition to sustainable, resilient and decarbonised sea transport will require substantial investment. Current evidence highlights the significant and enduring potential benefits (social, economic and environmental) of a rapid transition to sustainable, resilient and low-carbon sea transport in the Pacific.

Source: Micronesian Center for Sustainable Transport n.d.

Box 10: Chile Launches New Green Hydrogen Strategy

In November 2020, Chile launched its National Green Hydrogen Strategy, which promotes the creation of a new economy based on the use of this new fuel based on renewable energies, mainly solar and wind. Ammoniac, as a derivative of green hydrogen, will contribute to advances in shipping decarbonisation as a possible new source of clean fuel.

Source: International Climate Initiative 2021.

Box 11: Canada Advances Quiet Vessels

In 2020, Canada launched the US$ 21 million (C$26 million), five-year Quiet Vessel Initiative. The initiative is testing the most promising, safe and efficient quiet-vessel designs, retrofits and operational practices to reduce noise in the Salish Sea. It aims to protect the marine environment and vulnerable marine mammals, including the southern resident killer whale.

Source: Transport Canada 2020.

Additional highlights include the following:

- **Jamaica** introduced the Ballast Water Management Bill to implement measures or systems to prevent ships that are entering Jamaica's waters from introducing foreign aquatic species and diseases to the country (Linton 2018).
- In 2021, **Japan** announced its intention to begin commercially producing the world's first ocean-going, zero-emission shipping vessel by 2028 (Suda 2021).
- **Norway** is committed to developing its green shipping industry and to promoting the deployment of zero- and low-emission solutions in all vessel categories. The world's first liquid hydrogen–powered ferry, the Hydra, will begin operations in 2022. The Norwegian government's goal is to cut climate gas emissions from domestic shipping and fisheries in half by 2030, and it has enhanced the schemes to incentivise the transition to green shipping (Radowitz 2021).

Sustainable Ocean Tourism - 2030 Outcome:

Coastal and ocean-based tourism is sustainable, resilient, addresses climate change, reduces pollution, supports ecosystem regeneration and biodiversity conservation and invests in local jobs and communities.

Before the COVID-19 pandemic, tourism was projected to become the single-largest ocean-based industry by 2030. It is one of the sectors hardest hit by the COVID-19 pandemic worldwide and is the backbone of the economies of many coastal and island nations. Ensuring the long-term sustainability and viability of this sector is crucial to developing a sustainable and inclusive ocean economy.

Ocean Panel members have taken a global leadership role in demonstrating how a sustainable ocean economy can support economic recovery from COVID-19. Boxes 12, 13 and 14 provide highlights showing how Australia, Fiji and Palau have sought to "build back bluer" from the COVID-19 crisis.

Box 12: Australia Invests in Sustainable Tourism

As part of Australia's COVID-19 Relief and Recovery Fund, a suite of marine tourism support packages was delivered, including A$3.2 million allocated to Great Barrier Reef tourism operators to support business continuity and protect high-value reef tourism sites by undertaking reef monitoring and conservation activities. This ensures that tourism sites are properly maintained and ready to welcome guests as COVID-19 travel restrictions are eased.

Source: Great Barrier Reef Marine Park Authority n.d.

Box 13: Fiji Advances Blue Recovery to COVID-19

In the 2020/21 budget, Fiji invested in the Savusavu Blue Town Model to support a blue economic recovery.[a] Under this model, Savusavu will focus on seven result areas that place the ocean at the heart of economic development and that will ensure that the town preserves and improves the health of the marine environment through projects encouraging renewable energy, recycling, sustainable livelihoods, eco-tourism and education.[b]

Sources: a. Republic of Fiji 2020; b. Turagaiviu 2020.

Box 14: Palau Aims to be World's First Carbon Neutral Tourism Destination

In August 2020, the Palau Bureau of Tourism and the organisations Sustainable Travel International and Slow Food launched a new project to mitigate the tourism sector's carbon footprint. The end goal of this project is to establish Palau as the world's first "carbon neutral tourism destination".

Source: Brajcich 2020.

Sustainable New Ocean Industries – 2030

Outcome: *Innovation and investments in new ocean industries have boosted environmentally responsible and inclusive economic growth.*

The ocean has the potential to deliver new medicines, materials and carbon-storage solutions. The need for such innovation has been further evidenced and strengthened by the COVID-19 pandemic and its repercussions. However, investment in new ocean technologies and industries must be based on science and must be environmentally responsible and inclusive.

- **Namibia** announced that it will create the world's largest kelp farm in a joint project working with Climate Investor Two, the Namibia Infrastructure Development and Investment Fund and the Kelp Blue company (Fish Site 2020). The project has received in-principle funding for the first five years from Climate Fund Managers and Eos Capital, forecast at US$60 million (Maritz 2020). The government of Namibia has since granted environmental clearance for Kelp Blue to start farming off its coast in a location that has the perfect conditions for seaweed cultivation. Kelp Blue runs large underwater farms for the growing of seaweed crops, which are then harvested for agri-foods, fertilisers, pharmaceuticals and cosmetics (Azeez 2021). The kelp in this farm will eventually be used to produce food and textile products (Maritz 2020).
- **Norway** has initiated a full-scale carbon capture and storage project initially capturing 400,000 tonnes of CO2 annually and with 1.5 million tonnes of CO2 storing capacity annually in phase one of the project. This is the very first industrial, full-scale carbon capture and storage project that has the capacity to store large volumes of CO2 from across the European continent (Fortum n.d.).

"When the world faces a climate, health and economic crisis, Portugal is committed to a blue economic recovery and to sustainably manage 100% of our ocean, linking health, wealth and social justice."

António Costa, Prime Minister of Portugal

Progress Towards: Ocean Health

We cannot have healthy people and planet without a healthy ocean. The pressures of climate change, overfishing, habitat loss and pollution are intense, but recovery is possible.

In the *Transformations*, the Ocean Panel members committed to three outcomes to deliver Ocean Health:

Reduce Greenhouse Gas Emissions - 2030 Outcome: *Ambitious climate action has set the world on track to achieve the goals of the Paris Agreement and restore ocean health.*

Protect and Restore Marine and Coastal Ecosystems - 2030 Outcome: *Marine and coastal ecosystems are healthy, resilient and productive, and nature-based solutions are key elements in developing coastal infrastructure.*

Reduce Ocean Pollution - 2030 Outcome: *The ocean is no longer a sink for pollution and ocean dead zones are minimised.*

Ocean Panel countries are already delivering on many of the priority actions underpinning these ambitious 2030 outcomes. A number of these actions are highlighted in this section.

"The climate emergency is an oceanic emergency. Widespread recognition of the ocean-climate nexus—I believe—it is the most powerful aim of our ocean action agenda."

Frank Bainimarama, Prime Minister of Fiji

Reduce Greenhouse Gas Emissions - 2030 Outcome: *Ambitious climate action has set the world on track to achieve the goals of the Paris Agreement and restore ocean health.*

The ocean plays a fundamental role in regulating global temperatures, absorbing 93 percent of heat and around 25 percent of CO2 emissions from human activities (IPCC 2013). The ocean is under increasing threat from climate change and increasing emissions, but the ocean can also be a powerful solution to climate change. Ocean Panel–commissioned research found that implementing ocean-based solutions such as investing in ocean-based renewables and protecting 'blue' carbon ecosystems can contribute 21 percent of the reduction we need in greenhouse gas emissions to stay within 1.5°C of warming by 2050 (Hoegh-Guldberg et al. 2019).

- In 2020, **Chile** included the ocean component in the update of its nationally determined contribution, consistent with the effort to ensure inclusion of ocean-based climate measures to strengthen ambition (Government of Chile 2020).
- **Fiji** aims to reach net-zero carbon emissions in all parts of its economy by 2050 by implementing its "living" Low Emission Development Strategy 2018–2050 (Ministry of Economy 2018).

Protect and Restore Marine and Coastal Ecosystems - 2030 Outcome: *Marine and coastal ecosystems are healthy, resilient and productive, and nature-based solutions are key elements in developing coastal infrastructure.*

Healthy ocean ecosystems are key to a thriving and sustainable ocean economy and provide numerous benefits to people, nature and the economy. Mangroves and other "blue" carbon ecosystems sequester and store carbon, sea grasses support fisheries and coral reefs reduce wave energy, protecting coastal communities from storm surges. As the world looks to rebuild from the COVID-19 pandemic, investing in conserving and restoring these ecosystems can also create jobs and a host of other benefits for communities. In the United States, for every $1 million invested in coastal restoration, an average of 17 jobs are created (Edwards et al. 2013). By comparison, the same $1 million invested in a traditional energy-intensive industry such as coal, only creates 6.8 jobs (Hurowitz 2010). The creation and implementation of effective marine protected areas (MPAs) and other effective area-based conservation measures are critical tools for protecting and conserving biodiversity.

Boxes 15, 16 and 17 highlight three recent announcements from Australia, Kenya and Indonesia.

Box 15: Australia's Oceans Leadership Package

Australia announced in its Oceans Leadership Package that almost A$19 million will be invested across four restoration and accounting projects in coastal ecosystems such as tidal marshes, mangroves and sea grasses. A further $10 million is designated to aid developing countries in restoring and protecting their blue carbon ecosystems. As part of this funding, project-level environmental-economic accounting will be used to measure and value the benefits to climate, biodiversity and livelihoods resulting from blue carbon restoration and conservation activities.[a] The Australian government is also providing $20 million as part of the COVID-19 Relief and Recovery Fund to restore up to 13 natural shellfish reefs that once stretched along much of Australia's coastline. This initiative, delivered in partnership with The Nature Conservancy, will rescue native marine ecosystems from the risk of local extinction, rejuvenate local fish stocks and create tourism dive sites as well as boost local economies and deliver up to 170 new direct and indirect jobs.[b]

Sources: a. Prime Minister of Australia 2021; b. TNC Australia 2020.

Box 16: Kenya Expands Mangrove Protection for Blue Carbon

Kenya launched the National Tree Planting Campaign, which is a high-priority, government-driven initiative implementing the presidential directive and National Strategy for Achieving and Maintaining over 10 percent Tree Cover by 2022. Under this project, various state agencies and public entities have rehabilitated degraded mangrove ecosystems through re-planting initiatives. The Kenya Forest Service has a target of planting at least 6 million trees, mostly mangroves, across Lamu County, before the end of 2021. The mangrove blue carbon work in Kenya has further expanded from Gazi Bay to Vanga (South Coast, Kenya), with the Mikoko Pamoja in Gazi and the Vanga Blue Forest being verified by Plan Vivo standards to trade around 3,000 and 6,000 tonnes of carbon dioxide per year, respectively, in a crediting period of 20 years.[b]

The Kenya Marine and Fisheries Research Institute has helped to rebuild degraded coral reefs in Wasini Island, a tiny strip of land off Kenya's southeast coast. Funding was secured from the Kenya Coastal Development Project due to the success of a pilot study, and as of 2019, the community has been able to grow over 3,000 corals.[c] Further participatory coral reef restoration work is ongoing in the Pate Marine Community Conservancy, located in the Lamu County, in partnership with the Lamu County government, The Nature Conservancy and the Northern Rangeland Trust.[d]

Sources: a. Hussein n.d.; b. Blue Forests Project 2019; c. Kamadi 2019; d. NRT 2020.

Box 17: Indonesia Protects Mangroves to Deliver Net Zero Commitment

Indonesia, home to nearly a quarter of the world's mangroves, is accelerating its pilot project for net-zero emissions and announced in 2021 that it will rehabilitate over 600,000 hectares of mangroves by 2024.

Sources: NewsDesk 2021; World Bank 2021.

Additional highlights include the following:

- **Australia** has announced and is progressing in its planning to establish community co-designed marine parks spanning up to 740,000 square kilometres (km2) in its Indian Ocean territories (around Christmas Island and the Cocos [Keeling] Islands) to support the health and sustainability of these pristine waters. This could increase Australia's marine park coverage from 37 percent up to 45 percent of Australia's oceans. Funding totaling A$5.4 million will enable local grants for marine park projects, ranger positions, community engagement and research projects to help promote and manage these parks after their establishment (Readfearn 2021). This investment is part of the A$39.9 million for marine park management delivered as part of Australia's Oceans Leadership Package.
- **Canada** announced in its 2021 Budget an investment of US$792 million (C$976.8 million) over five years for the establishment and management of new MPAs and other effective area-based conservation measures. This will build on the 14 MPAs, 3 national marine conservation areas, 1 marine national wildlife area and 59 marine refuges already in place in Canada, which together protect 13.81 percent of the country's marine and coastal areas (Government of Canada 2021).
- **Chile** has been leading the way in creating MPAs, protecting over 40 percent of its national waters to date. In 2018, Chile signed into law protections for an MPA covering around 1.1 million square kilometres of water, including Rapa Nui Marine Park, which is one of the world's largest MPAs (LT&C 2018). In April 2021, Chile announced it will lead the process to create the first fully protected area of the high seas in the southeastern Pacific (Dirección de Medio Ambiente y Asuntos Oceánicos 2021).
- In 2020, **Ghana** and **Côte d'Ivoire** met to approve preliminary documents to establish the first transboundary MPA in the region (Pille-Schneider 2020).
- In 2019, **Indonesia** established three new MPAs within the Coral Triangle, a region home to the highest diversity of corals and reef fishes anywhere on the planet (Ichi 2019).
- In 2020, **Japan** established a new MPA system and designated new MPAs. The percentage of MPAs has increased from 8.3 percent to 13.3 percent (Reed 2021). Japan, as a member of the Group of Seven, announced it will lead by example, effectively conserving or protecting at least 30 percent of national land, including terrestrial and inland waters and coastal and marine areas, by 2030, according to national circumstances and approaches (Climate and Environment Ministers of the G7 2021).
- In 2019, **Mexico** committed to increase at least 100,000 hectares of fishing refuge zones to an additional 31 fishing refuge areas—bringing more than 1,000 km2 of new coastal habitats under sustainable management—as well as to restore 265,000 corals for 2022 (Fish Focus 2019).

"With a coastline of about 550km, Ghana is well positioned to benefit from the world's ocean resources if sustainably managed. This requires a holistic approach to managing coastal and marine resources to meet present demands without compromising future development needs."

Nana Addo Dankwa Akufo-Addo, President of Ghana

Reduce Ocean Pollution - 2030 Outcome: *The ocean is no longer a sink for pollution and ocean dead zones are minimised.*

Ocean pollution can have a devastating impact on the marine environment. Each year, up to 13 million tonnes of plastic enter the ocean, the equivalent of one garbage truck of waste every minute (Jambeck et al. 2015). Plastic is not the only pollutant damaging marine environments. Pollutants such as wastewater and nutrients such as nitrogen and phosphorous can cause harm, with excess nutrients fueling harmful algae blooms.

Ocean Panel countries are working to reduce all forms of pollution by tackling the sources on land. Boxes 18, 19 and 20 highlight the recent efforts by Ghana, Indonesia and Japan to tackle this problem.

Box 18: Ghana's Drainage and Sanitation Project

In 2019, Ghana approved a $200 million drainage and sanitation project to improve solid waste management. The project is expected to address the indiscriminate dumping of plastic waste, resulting in a reduction of marine litter.

Source: Ekufu I n.d.

Box 19: Indonesia's Public-Private Partnership for Waste Collection and Processing

To address the underlying drivers of pollution entering the ocean, Muncar, a small village in East Java, Indonesia, established a public-private partnership between the city government and technical partners to build a waste management system to optimise waste collection and processing. As of December 2019, these facilities employed 80 local people and had collected 3,000 tonnes of waste that could have otherwise ended up in the ocean. The project meant that 47,500 people received waste collection services, mostly for the first time.

Source: Alliance to End Plastic Waste 2020.

Box 20: Japan Innovates for a Circular Economy

At the Osaka G20 Summit in June 2019, Japan advocated the Osaka Blue Ocean Vision that aims to reduce additional pollution by marine plastic litter to zero by 2050, which has been shared with all 14 Ocean Panel countries.[a] In June 2021, Japan established a new law that facilitates the circulation of plastics from their design to their disposal and realises the transition to a circular economy (Nakagawa 2021). Japan also released "Good Practices by Japanese Companies for Reducing Microplastics," compiling a collection of good practices on the efforts and technologies to reduce microplastics in May 2021.[b]

Sources: a. IGES n.d.; b. Ministry of the Environment 2021.

Additional highlights include the following:

- **Australia, Indonesia, Jamaica, Japan, Kenya, Norway** and **Mexico** have all introduced new legislation or strategies to tackle plastic pollution since 2018.
- In 2020, **Norway** provided some US$27 million in support of 32 projects in different countries worldwide to prevent and reduce marine plastic litter and pollution through the Norwegian Development Programme (Ministry of Foreign Affairs 2020).
- In 2020, **Mexico** announced its adherence to the Global Ghost Gear Initiative (Global Ghost Gear Initiative 2020). Since then, Mexico has been working on a national diagnosis for hot spot mapping of lost or abandoned ghost fishing gear in national waters; additionally, the country has collaborated with non-governmental organisations (NGOs) in quick start-up activities such as pilot projects for the removal of ghost gear in territorial seas. Mexico is also designing a national action plan for the adequate removal and disposal of ghost gear and is reviewing necessary logistical details to organise capacity building and general workshops along with Global Ghost Gear Initiative to reinforce the previously mentioned actions.
- **Norway** will establish a centre for research and technological innovation in northern Norway to test new equipment and methods to prevent environmental damage from acute marine pollution, also considering carbon-free and low-carbon fuels (Ministry of Transport and Communications 2021).
- In 2021, **Chile** established the National Strategy on Marine Debris and Microplastics and the Action Plan 2021–2030 to implement concrete actions to prevent and control the impacts of marine debris on the aquatic environment, taking into account their respective internal circumstances and those of the country, also recognising that marine debris is a global and multidisciplinary challenge (Brito 2021). Chile, since 2019, prohibits the delivery and use of plastic bags (Lutkin 2018). In 2021, Chile approved a law that establishes limitations on the distribution of single-use plastic products (Plastic Oceans International 2021).

Progress Towards: Ocean Equity

A sustainable ocean economy puts people at the core, works for everyone, enables human rights and facilitates the equitable distribution of ocean wealth and equality of opportunity.

In the *Transformations*, the Ocean Panel members committed to an ambitious outcome to deliver Ocean Equity:

Promote Equal Opportunity for People to Benefit from the Ocean – 2030 Outcome: *People have equitable access to ocean resources; benefits are fairly distributed and the most vulnerable are protected from the risk of harm.*

Ocean Panel countries are already delivering on this ambitious 2030 outcomes. A number of these actions are highlighted in this section.

"The protection of the ocean and its sustainable uses is not just a necessary condition to guarantee world economic prosperity, but also a moral imperative to make sure we leave no one behind and we leave no one out."

Andrés Manuel López Obrador, President of Mexico

Promote Equal Opportunity for People to Benefit from the Ocean – 2030 Outcome: *People have equitable access to ocean resources; benefits are fairly distributed and the most vulnerable are protected from the risk of harm.*

The transition to a sustainable ocean economy must include all people from all sections of society. There must be a fair and just transition out of the COVID-19 pandemic and to a sustainable ocean economy that leaves no one behind, enables equitable access to resources, supports the fair distribution of benefits and protects the most vulnerable from further risks of harm.

Reducing inequality both within and among countries has been a priority of the Ocean Panel and is an essential foundation for a sustainable ocean economy. Boxes 21, 22 and 23 examine recent initiatives from Australia, Canada and Fiji to ensure inclusive and sustainable ocean economies.

Box 21: Australia Advances Sea Country Planning for Indigenous Protected Areas

Australia announced in April 2021 A$11.6 million to be invested over two years to include sea country in Indigenous protected areas across nine locations. This will help conserve and protect the marine environment while also supporting Indigenous communities to explore new economic opportunities.

Source: Department of Agriculture, Water and the Environment 2021.

Box 22: Canada's Marine Training Programmes

In 2019, Canada committed US$5 million (C$6.2 million) in funding for marine training programmes for Indigenous peoples. This funding will facilitate a joint project to engage and consult with Indigenous communities to construct and deliver a comprehensive training programme.[a] Following consultations with First Nation peoples, the Canadian government announced that all open-net salmon farm licences will be phased out by 30 June 2022 in the Discovery Islands following concerns from First Nations peoples that the farms contribute to the decline of wild Fraser River salmon stocks. This transition was supported in Canada's 2021 budget, which included a $20 million investment for Fisheries and Oceans Canada to expand engagement within the province of British Columbia and with Indigenous communities, industry, scientists and other stakeholders. This consultation will inform the development of a responsible plan to transition from open-net pen salmon farming in coastal British Columbia waters by 2025.[b]

Sources: a. Transport Canada 2019; b. Larsen 2020.

Box 23: Fijian Partnership to Ensure Supply of Oysters

The Fiji Ministry of Fisheries partnered with the local Vutia community and the Muanaira Women's Group to ensure a steady and sustainable supply of edible oysters—a food that is a key part of life and a source of income for this community. Observation of aquaculture techniques used overseas and in other parts of Fiji guided a trial that resulted in good-sized oysters being grown in less time. Following the trial, members of the Muanaira Women's Group were hopeful that the oysters would become more abundant and easier to harvest, resulting in additional income for the community for generations.[a]

Source: a. Pacific Community 2019.

Additional highlights include the following:

- In April 2021, **Ghana** hosted the European Union–Africa Green Talks to highlight the vital role of the blue economy for sustainable development and form the Blueprint for Africa's Blue Economy Strategy (AU-IBAR 2019). During this talk, best practices for developing the blue economy were shared among countries and outlines on how to enable more sustainable investment for vulnerable coastal communities were created (News Ghana 2021).
- **Jamaica** has facilitated the repatriation of over 3,700 seafarers since the start of COVID-19. Designating seafarers as key workers enabled them to transit through Jamaica's airports and ports despite restrictions on travel through quarantine measures (Hodges 2021).
- **Kenya** has embarked on a training programme targeting 1,000 youth to build in-country capacity for fish crew and provide the necessary skills for the fishing industry (Agridigitale 2020). Additionally, in 2019 Kenya established its first maritime training facility exclusively for seafarers at the Bandari Maritime Academy (Bandari Maritime Academy n.d.). This development will harness the potential in shipping and initiate a process of certification for Kenyan seafarers, with potential to serve the entire East Africa region and provide the workforce needed in the shipping industry. Its trigger impact is in employment and job creation; hence, a major impetus is the youth unemployment crisis.
- **Portugal** is strongly involved in the topic of gender equality and equity in the sea. During the Portuguese Presidency of the Council of the European Union, Portugal brought this issue to the forefront and organised a conference on the topic on 5 May 2021 entitled *A Sea of Equality*. Different realities from different European countries were portrayed, and future work will involve non-European countries (2021Portugal.EU 2021).

Progress Towards: Ocean Knowledge

The ocean is a vast, complex natural system that makes up the majority of the Earth's surface. Building strong literacy and ocean skills is therefore critical to share and apply knowledge of how ocean ecosystems work and to inform science-based decision-making.

In the *Transformations*, the Ocean Panel members committed to three outcomes to deliver Ocean Knowledge:

Build Ocean Literacy and Skills – 2030 Outcome: *Through the UN Decade of Ocean Science, ocean literacy has been enhanced worldwide. People understand the value of the ocean and have acquired the skills and knowledge to participate in the sustainable ocean economy.*

Account For The Value Of The Ocean – 2030 Outcome: *Decision-making affecting the ocean reflects the value of and impacts on the ocean's natural capital.*

Harness Ocean Science, Technology And Data – 2030 Outcome: *A globally shared data revolution has contributed to sustainable ocean management worldwide.*

Ocean Panel countries are already delivering on many of the priority actions underpinning these ambitious 2030 outcomes. A number of these actions are highlighted in this section.

"The effort for a sustainable ocean economy must be multisectoral and multilateral."

Sebastián Piñera, President of Chile

Build Ocean Literacy and Skills – 2030 Outcome:

Through the UN Decade of Ocean Science, ocean literacy has been enhanced worldwide. People understand the value of the ocean and have acquired the skills and knowledge to participate in the sustainable ocean economy.

Ocean literacy enables all members of society to acquire the knowledge, skills and capacity to participate in and benefit from the ocean economy. It is important for people to understand the significance and influence of the ocean on their well-being as well as the influence of their activities upon the ocean.

Boxes 24, 25 and 26 showcase three exciting new initiatives from Kenya, Jamaica and Portugal to close the ocean literacy gap

Box 24: Kenya's Go Blue Project

The government of Kenya, under the umbrella of the Go Blue project, has partnered with global non-governmental organisations, the European Union and the six coastal counties to train youth in vocational and technical skills relevant to the ocean economy, including maritime security, maritime transport and maintenance, tourism and hospitality and boat repair.[a] The training seeks to equip young people with industry-relevant skills as well as connect them to formal and self-employment opportunities.[b]

Sources: a. UN-Habitat n.d.; b. Kenya News Agency 2021.

Box 25: Jamaica's Blue Economy Training Programme

In Jamaica, the Jamaica Social Investment Fund's blue economy training programme was established to equip young people with training in key skills, including boat and equipment handling and repairs, lifeguarding, scuba diving and underwater filming, that can support the blue economy. This is of vital importance to the future development of the island because 90 percent of Jamaica's gross domestic product is generated in coastal areas.

Source: Grant 2020.

Box 26: Portugal's Blue School Programme

The government of Portugal has created and implemented the Blue School programme in the country's public schools. Through this literacy and education programme, students in different grade levels receive lessons on a number of ocean issues (environment, geography, social and cultural dimension, marine research, etc.).

Source: Blue School n.d.

Additional highlights include the following:

- In 2019, the **Ghana** Maritime Authority launched the Clean Sea campaign to educate people about the harmful effects of plastic waste on the ocean (Sambou n.d.).
- In 2020 and 2021, **Norway** has updated the assessments of means and measures to prevent and reduce marine plastic litter and microplastics, including the knowledge base to inform policymaking, of which one example is the assessment of sea-based sources of microplastics in the Norwegian environment (Lusher and Pettersen 2021). In 2020 Norway opened the Lofoten-Vesterålen Ocean Observatory (LoVeOcean), a national research infrastructure providing real-time physical, biological and chemical observations from the ocean. This area has some of the most important spawning grounds for cod. Now a new data portal has been made available to everyone all over the world. The aim is that the data will inform fisheries management (LoVeOcean n.d.).
- Upon entry to **Palau**, visitors need to sign a passport pledge mandating them be ecologically and culturally responsible for the sake of Palau's future generations. The pledge launched in December 2017 and is part of a wider suite of policies under the Responsible Tourism and Education Act (Swinton 2019). This act introduced a number of measures to ensure the sustainability of the tourism sector, including measures that require businesses to educate visitors on the environmental protection policies of Palau and provide environmentally responsible options for customers. Most recently, Palau prohibited reef-harming sunscreens from being imported, distributed, sold, manufactured or brought into the republic—the first country in the world to do so (PalauGov.pw 2020).

Account For The Value Of The Ocean – 2030

Outcome: *Decision-making affecting the ocean reflects the value of and impacts on the ocean's natural capital.*

"Jamaica has an inextricable connection to the ocean. The richness of our ocean capital must be managed sustainably, to ensure productivity and diversification is achieved for the benefit of the people and communities whose livelihoods depend on it, and also for the benefit of a healthy planet."

Andrew Holness, Prime Minister of Jamaica

Accounting that captures the full value of ocean assets and the ocean economy is critical to guide the sustainable development of ocean industries. In the past, most countries have relied on gross domestic product as the sole measure of performance of the economy. However, this measure does not indicate whether growth of an economy is happening sustainably. With current data and technology, it is now possible for all countries to account for the status of the natural wealth of the ocean and develop ocean accounts that can reflect the full value of the ocean economy.

Boxes 27 and 28 provide an overview of the recent progress made by Australia and Mexico to develop national ocean accounts.

Box 27: Australia Invests in National Ocean Accounts

Australia has committed US$ 800,000 (A$1.1 million) to support implementation planning for its national ocean accounts. It is scoping the feasibility of a national ocean ecosystem account that focuses on the extent and condition of key blue carbon ecosystems and the ecosystem services they provide.

Source: Department of Agriculture, Water and the Environment 2020.

Box 28: Mexico Establishes Inter-institutional Working Group to Establish a System of National Ocean Accounts

Mexico has an inter-institutional working group to consider the status of ocean information in the country. This working group is designing an ocean data hub, which integrates and articulates existing ocean information, aiming to establish a system of national oceans accounts. Members of the working group include several government institutions, such as the Ministry of Foreign Affairs, the Ministry of the Navy, the Ministry of the Environment and Natural Resources, the National Commission for the Knowledge and Use of Biodiversity and the National Institute of Statistics and Geography, as well as several non-governmental organisations, including WRI Mexico, the Ocean Foundation and Oceana, alongside academics and scientific institutions.

The main objective is to increase the country's existing knowledge about the health of the ocean and coastal ecosystems in order to establish a system of national ocean accounts. Initial surveys of 51 ongoing projects in Mexico have informed the current development of the data hub as an effective tool for decision-makers.[a]

The working group has held two workshops to begin the process of designing the data hub, identifying its vision, mission and governance.[b]

Sources: a. Ocean Foundation 2020; b. SNIEG 2020.

Harness Ocean Science, Technology And Data – 2030 Outcome: *A globally shared data revolution has contributed to sustainable ocean management worldwide.*

Scientific research and monitoring are critical to decision-making and ocean management. Advances in technologies such as remote sensing and big data management can revolutionise how ocean data are collected, stored and used for better ocean management, business development and job creation.

Boxes 29, 30 and 31 highlight some of the recent innovations from Ghana, Canada, Fiji and Palau to accelerate the collection and accessibility of ocean data to inform decision-making.

Box 29: Ghana Establishes Regional Monitoring, Control and Surveillance Centre

In April 2021, the Fisheries Committee for the West Central Gulf of Guinea, an inter-governmental organisation with headquarters in Ghana, established the Regional Monitoring, Control and Surveillance Centre.[a] The centre will enable the country to effectively monitor fishing in the Gulf of Guinea by supporting and developing vessel monitoring; maintaining lists of both authorised and illegal, unreported and unregulated fishing vessels; and conducting regional and joint at-sea patrols to identify vessels operating illegally.[b]

Sources: a. FCWC 2021; b. Oirere 2021.

Box 30: Canada Invests in Integrated Ocean Observing System

In January 2021, Canada announced US$2.4 million (C$3 million) in funding to support four Canadian Integrated Ocean Observing System projects over two years to help improve ocean monitoring.

Source: Fisheries and Oceans Canada 2021.

Box 31: The Pacific Ocean Portal

In 2019, the Pacific Ocean Portal was created to provide easily accessible, real-time, historical and forecast data for a variety of sectors, including tourism, fishing, shipping, coastal inundation and environmental management for Fiji, Palau and other Pacific Island countries. Training modules have also been designed for portal users, and the tool has been informed by in-country stakeholder engagement workshops, allowing sector users to make requests for ocean information products.

Source: Powers et al. 2019.

Progress Towards: Ocean Finance

The transition to a sustainable ocean economy will have to be adequately financed. Just US$13 billion has been put towards sustainable ocean projects through philanthropy and official development assistance over the past 10 years—less than 1 percent of the total value of the ocean economy. Finance is readily available: US$90 trillion is projected to be invested over the next decade on infrastructure alone. If grounded in global principles and standards, finance can catalyse responsible policy and business practices across the land-sea interface.

In the *Transformations*, the Ocean Panel members committed to an ambitious outcome to deliver ocean finance:

Ocean Finance – 2030 Outcome: *Sustainable ocean finance is accessible for all and drives ecologically sustainable and socially equitable economic growth.*

Ocean Panel countries are already delivering on many of the priority actions underpinning this 2030 outcome.
A number of these actions are highlighted in this section.

"Guided by the African Union Blue Economy Strategy, we will walk hand in hand with other African countries to ensure that the ocean becomes a significant contributor to continental transformation for generations to come."

Uhuru Kenyatta, President of Kenya

Ocean Finance – 2030 Outcome: *Sustainable ocean finance is accessible for all and drives ecologically sustainable and socially equitable economic growth.*

Capital to finance the transformation to a sustainable ocean economy is readily available. If grounded in global principles and standards, finance can catalyse responsible policy and business practices across the land-sea interface. We need to ensure that access to finance is equitable and supports sustainability, recognising the needs of developing countries, particularly Small Island Developing States and Least Developed Countries.

Boxes 32, 33 and 34 highlight three new mechanisms advanced by Ocean Panel countries.

Box 32: First Reef Protected under an Insurance Scheme

Mexico is home to the first reef to be protected under an insurance scheme. The premiums are paid by both the government and local hotels, providing money for necessary repairs if a storm hits. There is a trust fund which has bought the insurance policy and is designed to accept funds from different sources to help maintain the reef and beaches of Quintana Roo, Cancún. The insurance policy is triggered when a specified set of conditions are met, not by financial losses. For example, when wind speeds of over 100 knots are recorded in a specific area, payout is made quickly to allow for a quick damage assessment, removal of debris and initial repairs; this was demonstrated after the insurance policy was trigged in 2020 by Hurricane Delta.

Source: TNC 2020.

Box 33: Ocean Risk and Resilience Action Alliance

Canada set up the Ocean Risk and Resilience Action Alliance (ORRAA) in 2018 to bring together public, private and civil society organisations to develop risk management strategies relevant to ocean investments. ORRAA's specifically aims to drive US$500 million of investment into coastal natural capital by 2030 through pioneering innovative financial and insurance products. Initial projects and programmes of ORRAA include supporting the development of a new blue carbon resilience credit project and the creation of a ground-breaking Coastal Risk Index that integrates the protective benefits of coastal ecosystems into insurance risk models.

Source: ORRAA n.d.

Box 34: Innovative Financial Mechanisms in the Pacific

In February 2021, the attorney general of Fiji announced that work had started on the country's blue bond.[a] Blue bonds are a new type of sustainability bond which are used to raise capital from investors to finance ocean-based conservation efforts that have positive environmental, economic and climate benefits. Like green bonds, blue bonds operate similarly to any other debt instrument by providing capital to issuers who repay the debt with interest over time.[b]

For Fiji and Palau, the Pacific Ocean Finance Program is funding the analysis and development of novel ocean insurance products for the region in partnership with Willis Towers Watson. The insurance policies supporting ocean health that are currently in development include cyclone insurance for a segment of the Great Sea Reef in Fiji and insurance for marine thermal shock events in Palau to protect the tourism industry.[c]

Sources: a. Stanton 2021; b. Deo 2020; c. Sumaila et al. 2020.

Additional highlights include the following:

- **Fiji** is working with a number of private and public sector partners on the Investing in Coral Reefs and the Blue Economy project. This project provides catalytic investments to unlock private and public investment capital for initiatives that have a positive impact on Fijian coral reefs and the communities that rely on them. The project is expected to provide much-needed capital for marine areas during the COVID-19 pandemic, diversifying their revenue and continuing conservation work until normal activities return. The

project is expected to create more than 100 jobs and to sustain the incomes and food security of more than 6,000 fisher households (Bouadze 2021).

- In August 2019, **Ghana** introduced two funds with the objective of attracting finance to the country's effort to achieve the UN Sustainable Development Goals (SDGs). The funds, known as the SDG Green Fund and the SDG Delivery Fund, will be mobilised and managed by the private sector, with government support—a kind of public-private partnership arrangement. The Green Fund is geared towards the provision of clean and renewable energy (Think Ocean) for use by industry (Sumaila et al. 2020).
- **Norway** has the largest sovereign wealth fund in the world, valued at more than US$1 trillion and holding investments in more than 9,000 companies globally (McCarthy 2018). In 2018, it began divesting from companies that cause harm to the ocean, with particular focus on reducing marine plastic pollution (Fouche and Solsvik 2018). In 2021, the government of Norway began offering banks a free tool to measure the climate risk of their investment portfolios. Over 1,500 financial institutions have used the tool since a version for banks was released last year (Schwartzkopff 2021).
- **Jamaica**'s Junior Stock Exchange could act as a blueprint for how countries across the region could utilise the stock market to raise capital that would support the development of the blue economy (Grant 2019).
- **Portugal** endorsed the Sustainable Blue Economy Finance Principles in April 2021. These voluntary principles act as a framework for investment and development policy decisions and point the way to what sustainable investment looks like in an ocean context (EIB 2021).

"Indonesia believes with sustainably managing the ocean our abundant maritime resources will be able to support the economic recovery from the impact of the COVID-19 pandemic and become the foundation for building more sustainable development in the future."

Joko Widodo, President of Indonesia

Responding to the Transformations: Inspiring Others to Act

From the outset, the Ocean Panel has sought to inspire a much broader range of actors to support the transition to a sustainable ocean economy. Given the multi-sectoral nature of the challenges facing the ocean, no outcome can be achieved through the actions of just one actor or even one sector. Leveraging action from the private sector, financial institutions, philanthropy and non-governmental organisations is therefore critical to success.

There are currently seven multi-stakeholder efforts responding to the Ocean Panel's "Call to Ocean-Based Climate Action" and *Transformations*. These efforts operate at tipping points, accelerating the creation of a sustainable ocean economy through collaboration. We envisage further coalitions and partnerships emerging in the coming months, focusing on other key topics in response to the Ocean Panel's work.

- The **Ocean Renewable Energy Action Coalition (OREAC)** is an industry-led initiative launched in November 2019 with a vision to have 1,400 gigawatts of offshore wind generating capacity installed worldwide by 2050. If this goal is achieved, the ocean would supply around 10 percent of the world's electricity. As a response to the *Transformations*, OREAC published *The Power of Our Ocean*, which serves as a guide to help countries accelerate the development of their ocean energies to reap the socioeconomic benefits. Furthermore, OREAC commissioned a series of maps that show the offshore wind potential within 200 km of the shoreline of countries around the world.
- The **Global Ocean Accounts Partnership** formally launched in July 2020. This initiative seeks to help ocean nations develop and maintain national accounting systems that integrate available social, economic and environmental information about the ocean and the ocean economy. In 2021 the partnership was very active on the launch of the UN Statistical System Roadmap that is working towards developing an environmental-economic accounting standard.

  For 2021–22, activities will focus on the following:

  - Development of common technical and use guidance for ocean accounts: towards formal adoption of global guidance in 2023
  - Financial and in-kind support for ocean accounting pilot projects in member countries
  - Appointment of a global expert panel as a support mechanism for interested countries and an advisory mechanism for methodology work
  - Convening of global, regional and thematic dialogues as well as regional communities of practice

- The **Ocean Data Action Coalition (ODAC)** launched in December 2020 with a vision to achieve a globally shared data revolution that will contribute to sustainable ocean management worldwide. ODAC will build bridges between ongoing multilateral programmes with countries and key players in business and industry to unlock and share ocean data.

- The coalition **1000 Ocean Startups** launched in May 2021 and seeks to accelerate ocean impact innovation by bringing together incubators, accelerators, competitions, venture capital firms and matchmaking platforms from around the world to back ocean start-ups and help them scale. These start-ups are focusing on using ocean resources sustainably, addressing pollution and tackling climate change. The coalition is committed to backing at least 1,000 transformative ocean start-ups by 2030 and has already supported 168 start-ups, 115 of these focusing on the sustainable use of ocean resources, 33 on addressing ocean pollution and 20 on tackling climate change.

- The **Tourism Action Coalition for a Sustainable Ocean** launched in May 2021 and brings together diverse actors from businesses, the financial sector and non-governmental organisations to lead the way towards a sustainable tourism ocean economy. The coalition will serve as a knowledge hub and action platform to drive sustainable coastal and ocean-based tourism. It has partnered with the International Union for Conservation of Nature (IUCN) to serve as the tourism hub for the implementation and capturing of information on the use of the IUCN's Global Standard on Nature-Based Solutions within the tourism sector. In partnership with the World Bank, a platform of tools has been created to add the necessary resources for tourism actors to start implementing action.

- The **Shipping Decarbonisation Action Coalition** was formed to amplify and accelerate existing decarbonisation efforts. In June 2021 the coalition developed and agreed upon a road map targeted towards industry and government to enable the full decarbonisation of marine transport—both domestic and international—by 2050 and ensure zero-emission vessels are commercially viable by 2030.

- The **Blue Food Partnership** is a multi-stakeholder partnership platform that launched in September 2021 with the aim of catalysing science-based actions towards healthy and sustainable blue food value chains. Currently work is under way to launch the Sustainable Aquaculture 2030 Working Group, which aims to co-create a science-based global road map to 2030 that will provide guidance towards the design and delivery of sustainable aquaculture production. The partnership also aims to deliver a Sustainable Aquaculture 2030 Road Map by the end of 2022.

Abbreviations

CO2	Carbon Dioxide
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated
MPA	Marine Protected Area
NGO	Non-Governmental Organisation
NIMS	National Integrated Maritime Strategy
NOP	National Ocean Policy
ODAC	Ocean Data Action Coalition
OREAC	Ocean Renewable Energy Action Coalition
ORRAA	Ocean Risk and Resilience Action Alliance

Endnotes

1. This update reflects the activities of the original 14 member countries of the Ocean Panel only and does not include information on the new members who joined the panel in 2021.
2. For more information about OREAC, see gwec.net/oreac
3. For more information about the Global Ocean Accounts Partnership, see oceanaccounts.org/
4. For more information about ODAC, see foundation.oceandata.earth/perspectives/c4ir-ocean-to-lead-action-coalition-on-ocean-data
5. For more information about 1000 Ocean Startups, see 1000oceanstartups.org/
6. For more information about the Tourism Action Coalition for a Sustainable Ocean, see oceanfdn.org/projects/tourism-action-coalition-for-a-sustainable-ocean/
7. For more information about the Shipping Decarbonisation Action Coalition, see oceanpanel.org/sites/default/files/2021-06/Final_Shipping percent20Decarbonisation%20by%202030%20Roadmap%20%281%29.pdf
8. For more information about the Blue Food Partnership, see weforum.org/friends-of-ocean-action/blue-food-partnership

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