

# The Global Blue New Deal

Sustainable Ocean Alliance Youth Policy Advisory Council  
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## Summary

As the current state of the ocean and climate is in desperate decline as a result of human activity, Sustainable Ocean Alliance’s Youth Policy Advisory Council created the Global Blue New Deal (GBND): our youth-led public policy agenda based on youth demands for ocean and climate action. The GBND is a call for intergenerational environmental justice that elevates the voices and priorities of global youth in building a healthy ocean and a just future. Our policy agenda contains four main pillars that address the top priorities for ocean-related policy: 1) creating a net-zero carbon future, 2) preserving biodiversity, 3) achieving sustainable seafood, and 4) improving stakeholder engagement for better ocean governance. The GBND requires all levels of government, the private sector, civil society organizations, and stakeholders to work together in order to successfully enact our calls to action outlined below. We must invest in the continued research and development of ocean solutions now to avoid irreparable damage to the environment in the near future. The Global Blue New Deal seeks to leverage the ocean as a solution in the fight against climate change, and if implemented correctly, the impacts of a changing climate, such as ocean acidification, rising sea levels, and slowing current circulation patterns, will be mitigated. The solutions offered seek to end marine pollution, restore marine ecosystems at large, balance seafood production with sustainability, and address sociopolitical gaps in ocean resource management.

## Calls to Action

<p><b>Governments</b></p>	<p><b>Pillar 1: Net Zero Carbon Future: Address the Climate Emergency</b>            We call on local, national, and international governments to...</p> <ol style="list-style-type: none"> <li>1. Divest from the fossil fuel industry and to implement a moratorium on offshore drilling and nonrenewable ocean energy development.</li> <li>2. Instate a tax or penalty fee on petroleum production from existing offshore drilling installations, and use revenues to invest in renewable ocean energy research and development.</li> <li>3. Implement carbon pricing policies that will reduce emissions, such as a carbon tax or cap-and-trade scheme, and direct revenues to renewable energy development and improving sustainability.</li> <li>4. Deploy alternative energy sources such as offshore wind, wave, tidal, thermal, salinity, and floating solar PV clean ocean energy technologies as quickly as possible.</li> <li>5. Fund research and development into clean ocean energy technologies.</li> <li>6. Increase investment in the research and development of alternative fuel sources such as next generation biofuels, hydrogen, and ammonia.</li> <li>7. Set a cap on global shipping and fishing industry emissions.</li> <li>8. Incentivize the use of low-impact fishing methods and gear.</li> <li>9. Green our ports by 1) inventorying their ports’ environmental impacts, 2) adopting ambitious procurement, concessions, and</li> </ol>
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	<p>regulatory policies to support port electrification and decarbonization, and 3) scaling green, resilient port equipment, greening services, and infrastructure, including shoreside electricity.</p> <ol style="list-style-type: none"> <li>10. Adopt laws that regulate the production and use of land-based materials causing marine litter, such as prohibiting and disincentivizing manufacturing and use of single-use plastics via bans, taxes, and other requirements.</li> <li>11. Collaborate between developed and developing nations to create landfill disposal requirements and infrastructure for solid and liquid waste, including recycling facilities.</li> <li>12. Call on the UN to gather international stakeholders to discuss a global plastics treaty to create a framework to transition to a global circular economy.</li> <li>13. Create carbon and plastic reduction and removal strategies.</li> <li>14. Expand regenerative agricultural practices and implement policies that support sustainable farming strategies with respect to diversified crops, agroecological systems, nutrient management, cover crops, buffer vegetation, low to no tillage, livestock waste, and drainage water.</li> <li>15. Encourage entrepreneurship through subsidies to and other market incentives for environmentally-friendly alternatives to agricultural, industrial, and chemical marine contaminants.</li> <li>16. Apply a watershed-based approach to understand how marine contaminants enter our water systems, and improve stormwater and wastewater management systems.</li> <li>17. Ratify the London Convention and Protocol.</li> <li>18. Set specific target goals to remove non-biodegradable or toxic waste from the environment, and encourage compliance.</li> <li>19. Weigh shipping cargo before it leaves port to ensure that the litter arrives on land.</li> <li>20. Impose fines and/or criminal sentences on parties responsible for marine contamination.</li> <li>21. Mandate responsible parties to restore the environment damaged by their actions.</li> <li>22. Implement regulations and market-based instruments that promote circular products and businesses, such as establishing eco-design and circularity incentives, implementing extended producer responsibility (EPR) schemes, and introducing bans, subsidies and taxes.</li> </ol>
	<p><b>Pillar 2: Restore Marine Biodiversity: Promote Nature-based Solutions</b>  We call on local, national, and international governments to...</p> <ol style="list-style-type: none"> <li>1. Support the global 30x30 movement and scale no-take Marine Protected Areas (MPAs) to cover a third of the world's ocean.</li> <li>2. Establish new MPAs with robust scientific foundations that take socio-ecological contexts into account that are designated as no-take zones where extractive activities are prohibited.</li> <li>3. Fund more research into understanding the social impacts and carbon sequestration potential of preserving 30% of a country's territorial waters through MPAs.</li> </ol>

	<ol style="list-style-type: none"> <li>4. Analyze the potential of implementing MPAs with flexible borders to account for climate change, species movements, and ocean currents.</li> <li>5. Collaborate with neighboring countries to create marine corridors that go beyond boundaries of national jurisdiction.</li> <li>6. Integrate stakeholders into the decision-making process in creating future MPAs.</li> <li>7. Create incentives for community enforcement of MPAs, systems for conflict resolution, and strong enforcement channels between nations to support prosecution.</li> <li>8. Enforce laws that remove invasive species and prosecute parties who introduce non-native species or commercialize or traffick marine species illegally, especially endangered species.</li> <li>9. Call on the UN Convention on the Law of the Sea (UNCLOS) to create an international, legally-binding agreement for the conservation and sustainable use of Areas Beyond National Jurisdiction at its 2022 meeting.</li> <li>10. Ban fishing for IUCN Red List endangered species.</li> <li>11. Limit fishing for IUCN Red List vulnerable species.</li> <li>12. Comply with the ballast water management recommendations from the International Maritime Organization Ballast Water Management Convention.</li> <li>13. Call on the International Seabed Authority (ISA) to immediately open public consultation periods on its process and structure based on its current issues with inclusion, transparency, accountability, and accounting for intergenerational equity.</li> <li>14. Take a firm stance before the ISA to stop issuing exploratory licenses, and adopt a global moratorium on deep-seabed mining.</li> <li>15. Protect key spawning grounds and migratory routes for anadromous species, and replenish the flow of sediments and nutrients in rivers and coastal watersheds.</li> <li>16. Reprioritize and refinance investments in land development to further research, encourage, and scale the preservation, restoration, and reintroduction of coastal and marine ecosystems.</li> </ol>
	<p><b>Pillar 3: Sustainable Seafood: Strengthen Sustainable Seafood to Match Increasing Global Demand</b></p> <p>We call on local, national, and international governments to...</p> <ol style="list-style-type: none"> <li>1. Build stronger governance agreements to sustainably manage the fish stocks within and outside of countries' Exclusive Economic Zones (EEZ) (including Boundaries Beyond National Jurisdiction).</li> <li>2. Adopt precautionary and ecosystem-based approaches to fisheries management.</li> <li>3. Collect data for fisheries management strategies, especially as the climate changes and fish migrate.</li> <li>4. Set catch limits lower than a fish stock's maximum sustainable yield (MSY) or demand if lower than the MSY.</li> <li>5. Invest in A) researching ecosystem dynamics and fish stocks' MSY with an ecosystem-based approach; B) inventing and incentivizing the use of selective gear technologies to reduce bycatch; C)</li> </ol>

	<p>supporting the adoption of Vessel Monitoring Systems and Global Positioning Systems technology to facilitate control and surveillance in growing fisheries; and D) eliminating ghost gear through gear marking and removal from the marine environment.</p> <ol style="list-style-type: none"> <li>6. Adopt and follow the Port State Measures Agreement to develop clear supply chain inspection processes to certify the origin and legality of fish landing in ports.</li> <li>7. Collaborate with other countries to establish a stronger legal basis under the International Maritime Organization to legitimize the connection between a vessel's owner and the vessel's associated flag state, and penalize countries who encourage flying flags of convenience.</li> <li>8. Direct greater political will behind detecting IUU fishing activity and patrolling and enforcing waters, both within and outside of countries' EEZ.</li> <li>9. Redirect subsidies that contribute to overfishing to fisheries management, fisheries research and development, MPAs, and increased economic opportunity for coastal communities.</li> <li>10. Develop clear process regulatory guidelines, including on the best location and best size, for aquaculture sites.</li> <li>11. Incentivize integrated multi-trophic aquaculture.</li> <li>12. Evaluate the environmental impacts of aquaculture operations.</li> <li>13. Develop and incentivize non-wild fish feed alternatives.</li> <li>14. Encourage bivalve and algae farming to help transition high-impact fisheries and aquaculture to profitable, low-impact, sustainable mariculture practices.</li> <li>15. Invest in technological innovation behind breeding technology, low-impact production, and nutrition and feed supply for aquaculture.</li> <li>16. Fund research on the potential risks and benefits of plant-based and cell-cultured seafood, which includes understanding the potential carbon emissions and environmental impacts of their supply chains.</li> <li>17. Create healthy entrepreneurial environments that support and incentivize innovation in plant-based and cell-cultured seafood.</li> <li>18. Partner with the private sector and civil societies to innovate sustainable plant-based and cell-cultured seafood products.</li> </ol>
	<p><b>Pillar 4: Stakeholder Engagement: Include Youth and Local Communities in Natural Ocean Resource Management</b></p> <p>We call on local, national, and international governments to...</p> <ol style="list-style-type: none"> <li>1. Affirm their commitment to the UN Human Rights Commission Global Compact on Refugees.</li> <li>2. Embrace inclusion and diversity as guiding principles as we welcome a new generation of environmental refugees and a new generation of scientists, producers, policymakers, and stakeholders from historically marginalized groups.</li> <li>3. Create financial incentives to ensure the economic competitiveness of the most sustainable ecotourism companies, and incentivize ecotourism companies to become increasingly sustainable.</li> <li>4. Apply fines and penalties on ecotourism companies that violate</li> </ol>

	<p>sustainability and conservation regulations.</p> <ol style="list-style-type: none"> <li>5. Invest in innovative marine data technologies such as big data, artificial intelligence, advanced modelling, satellite monitoring, sophisticated remote, coastal, and marine sensors, and autonomous systems.</li> <li>6. Invest in youth-led entrepreneurship, innovation, and technologies that promote ocean conservation.</li> <li>7. Standardize data, and make data publicly accessible through international partnerships.</li> <li>8. Partner with private and civil societies to advance the Seabed 2030 initiative and map 100% of the world’s seafloor by 2030.</li> <li>9. Develop an international formal policy framework and agreement, aligned with the UN Decade of Ocean Science for Sustainable Development 2021-2030, on ocean literacy.</li> <li>10. Facilitate the participation of a broad stakeholder base in ocean governance by including governmental institutions, the private sector, NGOs, academics, scientists, producers (farmers and fishermen), recreational ocean users, Indigenous groups, and youth.</li> <li>11. Build on sound legal and institutional mechanisms to ensure full transparency in decision-making processes and grow self-sufficient community management.</li> </ol>
<p><b>Private Sector</b></p>	<p><b>Pillar 1: Net Zero Carbon Future: Address the Climate Emergency</b>  We call on the private sector to...</p> <ol style="list-style-type: none"> <li>1. Divest from the fossil fuel industry.</li> <li>2. Deploy alternative energy sources such as offshore wind, wave, tidal, thermal, salinity, and floating solar PV clean ocean energy technologies as quickly as possible.</li> <li>3. Fund research and development into clean ocean energy technologies.</li> <li>4. Increase investment in the research and development of alternative fuel sources such as next generation biofuels, hydrogen, and ammonia.</li> <li>5. Incentivize the use of low-impact fishing methods and gear.</li> <li>6. Call on the UN to gather international stakeholders to discuss a global plastics treaty to create a framework to transition to a global circular economy.</li> <li>7. Create carbon and plastic reduction and removal strategies.</li> <li>8. Expand regenerative agricultural practices with respect to diversified crops, agroecological systems, nutrient management, cover crops, buffer vegetation, low to no tillage, livestock waste, and drainage water.</li> <li>9. Innovate cost-competitive environmentally-friendly alternatives to agricultural, industrial, and chemical marine contaminants.</li> <li>10. Champion improving circularity within corporate supply chains, with an onus on companies who are most responsible for carbon emissions and plastic, agricultural, industrial, and chemical pollution.</li> </ol>
	<p><b>Pillar 2: Restore Marine Biodiversity: Promote Nature-based Solutions</b>  We call on the private sector to...</p>

	<ol style="list-style-type: none"> <li>1. Join in partnership with governments and civil society to direct greater funding and technological support behind identifying, monitoring, and enforcing against non-compliant activities that threaten protected marine ecosystems and biodiversity.</li> <li>2. Take a firm stance against deep seabed mining and refuse to include minerals sourced from the seabed in corporate supply chains.</li> <li>3. Reprioritize and refinance investments in land development to further research, encourage, and scale the preservation, restoration and reintroduction of coastal and marine ecosystems.</li> </ol>
	<p><b>Pillar 3: Sustainable Seafood: Strengthen Sustainable Seafood to Match Increasing Global Demand</b></p> <p>We call on the private sector to...</p> <ol style="list-style-type: none"> <li>1. Build stronger governance agreements to sustainably manage the fish stocks within and outside of countries' Exclusive Economic Zones (EEZ) (including Boundaries Beyond National Jurisdiction).</li> <li>2. Adopt precautionary and ecosystem-based approaches to fisheries management.</li> <li>3. Collect data for fisheries management strategies, especially as the climate changes and fish migrate.</li> <li>4. Set catch limits lower than a fish stock's maximum sustainable yield (MSY) or demand if lower than the MSY.</li> <li>5. Invest in A) researching ecosystem dynamics and fish stocks' MSY with an ecosystem-based approach; B) inventing and incentivizing the use of selective gear technologies to reduce bycatch; C) supporting the adoption of Vessel Monitoring Systems and Global Positioning Systems technology to facilitate control and surveillance in growing fisheries; and D) eliminating ghost gear through gear marking and removal from the marine environment.</li> <li>6. Direct greater funding and technological support (including Vessel Monitoring Systems) behind detecting IUU fishing activity and patrolling and enforcing waters, both within and outside of countries' EEZ.</li> <li>7. Shift toward integrated multi-trophic aquaculture systems.</li> <li>8. Innovate non-wild fish feed alternatives.</li> <li>9. Invest in technological innovation behind breeding technology, low-impact production, and nutrition and feed supply for aquaculture.</li> <li>10. Fund research on the potential risks and benefits of plant-based and cell-cultured seafood, which includes understanding the potential carbon emissions and environmental impacts of their supply chains.</li> <li>11. Partner with governments and civil societies to innovate sustainable plant-based and cell-cultured seafood products.</li> </ol>
	<p><b>Pillar 4: Stakeholder Engagement: Include Youth and Local Communities in Natural Ocean Resource Management</b></p> <p>We call on the private sector to...</p> <ol style="list-style-type: none"> <li>1. Include stakeholders, such as local communities and Indigenous groups, in ecotourism operations and management.</li> </ol>

	<ol style="list-style-type: none"> <li>2. Invest in innovative marine data technologies such as big data, artificial intelligence, advanced modelling, satellite monitoring, sophisticated remote, coastal, and marine sensors, and autonomous systems.</li> <li>3. Invest in youth-led entrepreneurship, innovation, and technologies that promote ocean conservation.</li> <li>4. Standardize data, and make data publicly accessible through international partnerships.</li> <li>5. Partner with private and civil societies to advance the Seabed 2030 initiative and map 100% of the world’s seafloor by 2030.</li> <li>6. Facilitate the participation of a broad stakeholder base in ocean governance by including governmental institutions, the private sector, NGOs, academics, scientists, producers (farmers and fishermen), recreational ocean users, Indigenous groups, and youth.</li> </ol>
<b>Civil Society</b>	<p><b>Pillar 1: Net Zero Carbon Future: Address the Climate Emergency</b>  We call on civil society organizations to...</p> <ol style="list-style-type: none"> <li>1. Divest from the fossil fuel industry.</li> <li>2. Increase investment in the research and development of alternative fuel sources such as next generation biofuels, hydrogen, and ammonia.</li> <li>3. Incentivize the use of low-impact fishing methods and gear.</li> <li>4. Call on the UN to gather international stakeholders to discuss a global plastics treaty to create a framework to transition to a global circular economy.</li> <li>5. Expand regenerative agricultural practices with respect to diversified crops, agroecological systems, nutrient management, cover crops, buffer vegetation, low to no tillage, livestock waste, and drainage water.</li> </ol>
	<p><b>Pillar 2: Restore Marine Biodiversity: Promote Nature-based Solutions</b>  We call on civil society organizations to...</p> <ol style="list-style-type: none"> <li>1. Support the global 30x30 movement.</li> <li>2. Join in partnership with governments and the private sector to direct greater funding and technological support behind identifying, monitoring, and enforcing against non-compliant activities that threaten protected marine ecosystems and biodiversity.</li> <li>3. Call on the UN Convention on the Law of the Sea (UNCLOS) to create an international, legally-binding agreement for the conservation and sustainable use of Areas Beyond National Jurisdiction at its 2022 meeting.</li> <li>4. Call on the International Seabed Authority (ISA) to immediately open public consultation periods on its process and structure based on its current issues with inclusion, transparency, accountability, and accounting for intergenerational equity.</li> <li>5. Reprioritize and refinance investments in land development to further research, encourage, and scale the preservation, restoration and reintroduction of coastal and marine ecosystems.</li> </ol>
	<p><b>Pillar 3: Sustainable Seafood: Strengthen Sustainable Seafood to</b></p>

	<p><b>Match Increasing Global Demand</b></p> <p>We call on civil society organizations to...</p> <ol style="list-style-type: none"> <li>1. Collect data for fisheries management strategies, especially as the climate changes and fish migrate.</li> <li>2. Invest in A) researching ecosystem dynamics and fish stocks' MSY with an ecosystem-based approach; B) inventing and incentivizing the use of selective gear technologies to reduce bycatch; C) supporting the adoption of Vessel Monitoring Systems and Global Positioning Systems technology to facilitate control and surveillance in growing fisheries; and D) eliminating ghost gear through gear marking and removal from the marine environment.</li> <li>3. Direct greater funding and technological support (including Vessel Monitoring Systems) behind detecting IUU fishing activity and patrolling and enforcing waters, both within and outside of countries' Exclusive Economic Zones (EEZ).</li> <li>4. Evaluate the environmental impacts of aquaculture operations.</li> <li>5. Encourage bivalve and algae farming to help transition high-impact fisheries and aquaculture to profitable, low-impact, sustainable mariculture practices.</li> <li>6. Invest in technological innovation behind breeding technology, low-impact production, and nutrition and feed supply for aquaculture.</li> <li>7. Fund research on the potential risks and benefits of plant-based and cell-cultured seafood, which includes understanding the potential carbon emissions and environmental impacts of their supply chains.</li> <li>8. Partner with governments and the private sector to innovate sustainable plant-based and cell-cultured seafood products.</li> </ol>
	<p><b>Pillar 4: Stakeholder Engagement: Include Youth and Local Communities in Natural Ocean Resource Management</b></p> <p>We call on civil society organizations to...</p> <ol style="list-style-type: none"> <li>1. Facilitate stakeholder inclusion in ecotourism operations and management.</li> <li>2. Invest in innovative marine data technologies such as big data, artificial intelligence, advanced modelling, satellite monitoring, sophisticated remote, coastal, and marine sensors, and autonomous systems.</li> <li>3. Invest in youth-led entrepreneurship, innovation, and technologies that promote ocean conservation.</li> <li>4. Standardize data and make data publicly accessible through international partnerships.</li> <li>5. Partner with governments and the private sector to advance the Seabed 2030 initiative and map 100% of the world's seafloor by 2030.</li> <li>6. Develop an international formal policy framework and agreement, aligned with the UN Decade of Ocean Science for Sustainable Development 2021-2030, on ocean literacy.</li> <li>7. Facilitate the participation of a broad stakeholder base in ocean governance by including governmental institutions, the private sector, NGOs, academics, scientists, producers (farmers and</li> </ol>

	<p>fishermen), recreational ocean users, Indigenous groups, and youth.</p> <p>8. Build on sound legal and institutional mechanisms to ensure full transparency in decision-making processes and grow self-sufficient community management.</p>
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## Preamble

Our ocean is overfished, rife with plastic, and exploited for non-renewable resources like minerals and fossil fuels. It is clear that, to date, we have not adequately considered the impact of our decisions on current and future generations. A generational cycle of injustice has been created where each generation inherits an increasingly degraded environment with less and less time to address this imbalance. Not only is this detrimental to progress at large, but our poorest, most vulnerable communities, who contribute the least to global emissions, feel the effects of our degraded environment the most. The state of the ocean impacts all of humanity, coastal and inland communities alike.

Youth today recognize the crucial role the ocean plays in ensuring the survival of our species and a habitable planet. Our ocean regulates our climate and provides food, oxygen, and ecosystem services essential to our well-being. In addition to how the ocean supports life on Earth, the ocean economy directly supports livelihoods. The annual economic turnover of ecosystem services, jobs, and cultural services provided by the ocean is estimated to be at least USD\$3 trillion. Fisheries and aquaculture alone contribute USD\$160 billion per year and 60 million jobs. As countries build their ocean economies, we, as youth, call on countries to adopt the same definition of the ocean (“blue”) economy as defined by the United Nations where ocean economies should aim for “the improvement of human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.”

With the climate crisis representing an environmental catastrophe of unprecedented scope and scale, we must reflect on humanity’s relationship with the environment and embrace ambitious solutions to ensure marine resources are sustainably used. By ensuring that we prioritize environmental health, we could secure equitable access to marine resources for future generations, providing them with opportunities that result from sustainably balancing ocean, climate, human, and economic health.

While international environmental agreements may signal a shift toward sustainability, global leaders were surveyed in 2018 on which UN Sustainable Development Goals (SDGs) were prioritized and which were not. SDG 14, which consists of conserving and sustainably using the oceans, seas, and marine resources for sustainable development, was prioritized the least. Working towards these goals has profound positive impacts on achieving other SDGs, including Zero Hunger (SDG 2), Responsible Consumption and Production (SDG 12), and Climate Action (SDG 13). As youth, not only do we need to advocate for progress on achieving the SDGs, but we also need to hold the global community accountable to the commitments they have made between each other and to youth as the greatest stakeholders in the health of our environment.

The United Nations has recognized how the ocean is being overlooked and has declared 2021-2030 a Decade of Ocean Science for Sustainable Development to gather global ocean stakeholders behind a common framework to deliver “the ocean we need for the future we want.”<sup>1, 2, 3, 4, 5, 200</sup>

**SOA's Youth Policy Advisory Council** seeks to do the same. **We, as youth, seek to contribute to the Ocean Decade's success by offering our own perspective on ocean-specific policy solutions and call on the international community to implement them.**

To understand what ocean challenges we need to address, we wanted to hear from global youth, subject matter experts, and ocean and coastal stakeholders. In late 2019, SOA gathered more than 100 surveys from its Young Ocean Leaders from more than 35 countries in five different languages to understand what are the greatest ocean challenges in their region. Between June and September, we consulted subject matter experts, hosted workshops to collect feedback, and received more than 60 public comments from 28 countries to refine the Global Blue New Deal and ensure it is accurate and representative of youth demands for ocean and climate action. We identified four main themes of ocean challenges based on our feedback. These themes, also known as Pillars, each have their own Subpillars that include specific ocean policy recommendations. Given the interconnectivity of the issues, Subpillars should not be considered in isolation but instead seen as intersectional and complementary.

**Our vision is to:**

***“outline an ocean policy **framework** that integrates crowdsourced **youth priorities** that will be **proposed to governments** on international, national, and local scales for **amplification** and **implementation.**”***

# 1. Net Zero Carbon Future: Address the Climate Emergency

Carbon dioxide levels today are higher than at any point in the past three million years. The sharp increase in the presence of greenhouse gasses in our atmosphere, particularly carbon dioxide, is the consequence mainly of burning fossil fuels to meet global energy demand. The ocean acts as a key carbon sink and has absorbed roughly one third of the CO<sub>2</sub> produced around the world, resulting in dramatic changes such as ocean acidification, temperature rise, deoxygenation, and slowing current circulation patterns. With growing global energy demands, more greenhouse gasses will pollute our atmosphere and ocean unless radical change takes place. Shifting globally to a net zero carbon economy is necessary to achieve the Paris Agreement which seeks to limit global warming to below 2°, preferably to 1.5° Celsius, compared to pre-industrial levels. However, the UN Framework Convention on Climate Change published the NDC Synthesis Report this year, which showed that countries are not on track to achieve their Paris Agreement goals. The need for countries to be more ambitious in their climate plans is urgent. Due to the impact of a changing climate on ocean acidification, marine biodiversity, sea level rise, sea surface temperature, ocean circulation patterns, and the livelihoods of coastal communities, especially in Small Island Developing States, reducing carbon emissions is of utmost importance to preserve and improve ocean health.<sup>6, 7, 8, 9, 176</sup>

## 1.1. Ending Offshore Drilling and Divesting from Fossil Fuels

To address the climate crisis and its far-reaching impacts on ocean acidification, ocean temperatures, and sea level rise, we can no longer support investment into an industry that furthers the problem. The International Energy Agency corroborates that there is “no need for investment in new fossil fuel supply in our net-zero pathway.” As youth, we must not seek to continue or expand exploitative practices that undermine progress toward achieving a sustainable, circular economy. We call on countries to divest from the fossil fuel industry and to implement a moratorium on offshore drilling and nonrenewable ocean energy development. For existing offshore drilling installations, we call on governments to instate a tax or penalty fee on their petroleum production and to use revenues to invest in renewable ocean energy research and development. We also call on governments, at all scales, to implement carbon pricing policies that will reduce emissions, such as a carbon tax or cap-and-trade scheme, and to direct revenues to renewable energy development and improving sustainability.<sup>10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 177, 178</sup>

## 1.2. Investing in Renewable Ocean Energy

While offshore drilling pollutes our atmosphere and ocean with greenhouse gasses, the current renewable energy potential of the ocean can meet the annual global energy demand by roughly four times. Many island and coastal states currently rely on importing fossil fuels to meet energy demand, and harnessing the ocean’s energy potential could improve the energy independence of these communities to safeguard their economies against external shocks. Alternative energy sources such as offshore wind, wave, tidal, thermal, salinity, and floating solar PV clean ocean energy technologies provide immense potential toward achieving decarbonization, and we

should deploy these technologies as quickly as possible. We call on governments and the private sector to fund research and development into clean ocean energy technologies to: 1) mitigate any potential risks, 2) ensure scalability and efficiency, and 3) understand how best to integrate local communities in the deployment of such technology.<sup>10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27</sup>

### **1.3. Decarbonizing the Shipping and Fishing Industries**

Shipping goods across ocean basins is responsible for the vast majority of global trade. However, it comes at a cost: almost one billion tonnes of carbon dioxide is emitted annually. Considering that the shipping industry is responsible for approximately 3% of global greenhouse gas emissions annually and the industry's projected growth, decarbonizing the shipping sector is critical to obtain a net zero carbon future. The fishing industry must also decarbonize to achieve a net zero carbon future. For every ton of fish caught, 1.7 tons of carbon pollution is emitted. The emissions are attributed to the use of large amounts of fuel for activities such as onboard processing, refrigeration, freezing, and vessel propulsion. Some fishing methods are more carbon intensive than others, with the beam and bottom trawl method being the most fuel intensive. To decarbonize the shipping and fishing industries, governments, the private sector, and civil societies must increase investment in the research and development of alternative fuel sources such as next generation biofuels, hydrogen, and ammonia, as well as incentivize the use of low-impact fishing methods and gear. Countries must join together to set a cap on global shipping and fishing industry emissions and introduce carbon pricing instruments to incentivize and catalyze the deployment of net zero carbon shipping and fishing industries at scale. Additionally, as global shipping and fishing fleets are electrified, noise pollution will also be reduced. The ports where shipped goods and fish arrive must also be greened. To green our ports, we call on governments to 1) inventory their ports' environmental impacts, 2) adopt ambitious procurement, concessions, and regulatory policies to support port electrification and decarbonization, and 3) scale green, resilient port equipment, greening services, and infrastructure, including shoreside electricity.

<sup>28, 29, 30, 31, 32, 33, 34, 170, 171, 179, 180</sup>

### **1.4. Eliminating Single-use Plastics**

By 2050, there may be more plastic than fish in the ocean. Petroleum products like plastics may originate on land but often end up in our ocean. Plastics and other solid waste materials are accumulating in ocean gyres, creating large, dense, floating waste aggregations, such as the Great Pacific Garbage Patch, and are often consumed by marine mammals and birds, which has caused significant biodiversity loss. Almost 100% of plastics are sourced from chemicals from fossil fuels, and about 4-8% of annual global oil consumption is associated with plastics, representing part of the oil industries' exit strategy from energy. We call on countries to adopt laws that regulate the production and use of land-based materials causing marine litter, such as prohibiting and disincentivizing manufacturing and use of single-use plastics via bans, taxes, and other requirements. Responsible waste management is also key to solving the plastics

issue: instead of shipping waste away from its source, developed nations must work with developing nations to create landfill disposal requirements and infrastructure for solid and liquid waste, including recycling facilities. Recognizing the prevalence of plastics across the global supply chain, we must encourage entrepreneurship through subsidies and other market incentives for plastic alternatives. We call on the UN to gather international stakeholders to discuss a global plastics treaty to identify the biggest challenges in moving away from plastic and create a framework for reimagining a circular economy. Furthermore, we call on businesses and governments to create carbon and plastic reduction strategies to become accountable partners in ocean resource management, regulation, and in removing their products from environments that they have polluted. [35](#), [36](#), [37](#), [38](#), [39](#), [40](#), [41](#), [42](#), [43](#), [44](#), [45](#), [46](#), [52](#), [53](#), [54](#), [55](#), [56](#), [57](#), [58](#), [181](#), [182](#)

## **1.5. Limiting Agricultural, Industrial, and Chemical Ocean Pollution**

Our ocean's dead zones, where low oxygen concentrations suffocate and kill animal life, are cumulatively the size of the United Kingdom. Chemical, industrial, and agricultural contaminants, including nitrogen-, sulfur- and phosphorus-based fertilizers and pesticides, run off into and contaminate our rivers and ocean. However, responsible parties are rarely held accountable when water sources become contaminated and marine life suffers. Agriculture is the second-largest source of greenhouse gas emissions, and the manufacturing of fertilizers, pesticides, and other chemical and industrial contaminants accelerate climate change. We must call on governments, private, and civil societies to expand regenerative agricultural practices and implement policies that support sustainable farming strategies with respect to diversified crops, agroecological systems, nutrient management, cover crops, buffer vegetation, low to no tillage, livestock waste, and drainage water. For all agricultural, industrial, and chemical contaminants, we must encourage entrepreneurship through subsidies to and other market incentives for environmentally-friendly, zero to low carbon alternatives. We also call on governments to apply a watershed-based approach to understand how these contaminants enter our water systems and to improve stormwater and wastewater management systems. Not only do we call on all countries to ratify the London Convention and Protocol to combat marine litter from being disposed of at-sea, but we ask them to set specific target goals to remove non-biodegradable or toxic waste from the environment and encourage compliance. Furthermore, weighing shipping cargo before it leaves port to ensure that the litter arrives on land, imposing fines and criminal sentences on infractions detected, and mandating that responsible parties restore the environment they have damaged are all necessary steps to hold people and businesses accountable for polluting. [35](#), [36](#), [37](#), [38](#), [39](#), [40](#), [41](#), [42](#), [43](#), [44](#), [45](#), [46](#), [52](#), [53](#), [54](#), [55](#), [56](#), [57](#), [58](#), [184](#), [185](#), [186](#), [187](#), [188](#), [189](#)

## **1.6. Transitioning to a Circular Economy**

The circular economy (CE) proposes a new economic system to move away from the current linear model of “take-make-dispose”. The CE aims to redesign how we keep products and materials in use by diverting land-based, human-generated waste away from entering the

marine environment. This would limit waste generation and the need for extractive practices for new materials. For example, when materials like precious metals are recovered instead of disposed of, the raw extraction of a nonrenewable material is avoided. Additionally, the negative social impacts affiliated with the supply chains of deep-sea and land-based mining can be bypassed, which can come with significant human rights implications. By requiring less natural resource extraction and virgin manufacturing, the circular economy would reduce greenhouse gas emissions and play a significant role in ensuring a sustainable economic transition. We call on governments to implement regulations and market-based instruments that promote circular products and businesses on individual, local, regional and country levels, such as establishing eco-design and circularity incentives, implementing extended producer responsibility (EPR) schemes, and introducing bans, subsidies and taxes. We echo our previous call for the UN to convene global stakeholders on how we can shift toward a sustainable, circular economy. Especially for those companies who are most responsible for carbon emissions and plastic, agricultural, industrial, and chemical pollution, we call on them to champion improving circularity within their corporate supply chains and to balance accountability with action. <sup>47, 48, 49, 50, 51</sup>

## 2. Restore Marine Biodiversity: Promote Nature-based Solutions

Across the globe, corals are bleaching, formerly thriving ecosystems are becoming dead zones, and kilometers of wetlands and mangroves are being destroyed everyday. We are in an ecological emergency. While today's history may write of the diverging poles between humanity and nature in the Anthropocene era, as youth, we are given the opportunity to rewrite this history: by safeguarding biodiversity and embracing nature-based solutions, we can mitigate the impacts of the planet's sixth mass extinction event and the climate crisis. By protecting, restoring, and managing marine ecosystems and wildlife well, thriving communities of healthy ocean life operate as a carbon sink where carbon is sequestered for free. We must prioritize the conservation of our planet's ecosystems for their use values, such as greenhouse gas sequestration, cleaner air, cleaner water, reduced coastal erosion, climate resilience, and habitat creation, and for the non-use values associated with the inherent value of biodiversity. Wildlife must be managed responsibly and sustainably in order to protect critical species, maintain and restore ecosystems, and protect human livelihoods and food security. Ocean ecosystems are not defined by a country's borders, and cooperative international governance is necessary to support effective ecosystem management and prevent captured carbon from being released back into the atmosphere and ocean. <sup>59, 60, 61, 62, 63, 64, 65, 183</sup>

### 2.1. **Achieving 30x30**

Less than 10% of the ocean is designated for protection as a Marine Protected Area (MPA) even as the climate changes and fish populations collapse. We support the global 30x30 movement to protect 30% of the world's land and ocean by 2030. As new MPAs are established, they must be built with a robust scientific foundation that takes socio-ecological contexts into account and be protected as no-take zones where extractive activities are prohibited. As these MPAs are created, a "bottom-up" rather than a "top-down" method should be utilized, where local communities, Indigenous peoples, small-scale fishers, and other traditional marine space users are prioritized and engaged in participatory decision-making to ensure that their needs, priorities, and traditional knowledge are taken into account. Engaging these communities will also establish a sense of ownership that leads to effective protection and sustainable management of the MPA. MPAs should be designed to protect important wildlife migration corridors, areas of high biodiversity, and key habitats for breeding and feeding. We call on governments to scale no-take MPAs to cover a third of the world's ocean to not only protect biodiversity but to also 1) buffer our coasts against extreme weather and coastal erosion, 2) provide economic and health benefits to local coastal and indigenous communities through sustainable tourism and decreased pollution, and 3) support natural carbon sequestration. Although less than 10% of the global fisheries catch comes from high seas, creating protected no-take zones beyond the boundaries of national jurisdictions would allow fish stocks to rebuild, protect migratory species, and support island and coastal livelihoods, biodiversity, and ecosystem services. We call on governments to 1) fund more research into understanding the social impacts and carbon sequestration potential of preserving 30% of their territorial waters as an MPA, 2) analyze the potential of implementing MPAs with flexible borders to account for

climate change, species movements, and ocean currents, 3) collaborate with neighboring countries to create marine corridors that go beyond boundaries of national jurisdiction, and 4) integrate stakeholders into the decision-making process in creating future MPAs.<sup>66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 172, 173, 190, 197</sup>

## **2.2. Enforcing Against Non-compliance in Biodiversity Conservation Efforts**

Without enforcement and compliance, policies designed to conserve biodiversity compromise much of their intended conservation value. From the outset of designing an MPA, strategizing how to monitor and enforce compliance is a crucial part of being able to achieve an MPA's defined long-term conservation goals to preserve and promote biodiversity. We call on countries to create incentives for community enforcement, systems for conflict resolution, and strong enforcement channels between nations to support prosecution. Unfortunately, many countries do not have the resources to patrol and enforce their waters or the high seas: to this end, we call on the private sector and civil societies to join in partnership to direct greater funding and technological support behind identifying, monitoring, and enforcing against non-compliant activities that threaten protected ecosystems that offer benefit to all. Additionally, two-thirds of the ocean is in areas beyond national jurisdiction (ABNJ), where laws on management and governance are less clear. We call on the UN Convention on the Law of the Sea (UNCLOS) to create an international, legally-binding agreement for the conservation and sustainable use of ABNJ at its next meeting in 2022. Non-compliance in MPAs and ABNJs are not the only enforcement issues that endanger biodiversity: we call on governments to enforce laws that remove invasive species and that prosecute the illegal trafficking and commercialization of marine biodiversity, especially endangered species. We call on countries to 1) ban fishing for IUCN Red List endangered species, 2) limit fishing for IUCN Red List vulnerable species, 3) comply with the ballast water management recommendations from the International Maritime Organization Ballast Water Management Convention, and 4) enforce stricter regulations against those who introduce non-native species and harm protected biodiversity.<sup>85, 86, 87, 88, 199</sup>

## **2.3. Establishing a Global Deep-Seabed Mining Moratorium**

With less than 20% of our seafloor mapped, we cannot and do not understand the role of deep-sea biodiversity in the larger climate or biosphere systems. However, we do know that the deep sea plays a crucial role in climate mitigation by absorbing and storing CO<sub>2</sub> and heat. Disrupting the seabed by mining could release carbon that has been previously stored. However, the Pacific Islands nation, Nauru, triggered the “two-year rule” at the International Seabed Authority, which would begin deep seabed mining in as soon as two years. We remind the international community of the Precautionary Approach of the Rio Declaration on Environment and Development, which states that “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” Especially as youth, we must not seek new frontiers that exploit natural resources for manufacturing technologies (e.g. solar panels, electric vehicles, etc.) to achieve a sustainable, circular economy. Decision-making

processes for deep-seabed mining, specifically at the International Seabed Authority (ISA), need to be inclusive, transparent, accountable, and adequately account for intergenerational equity. The ISA has significant structural issues surrounding the lack of transparency in process and governance, monitoring and compliance, absence of science-based decision-making and the precautionary principle, conflicts of interest, and incentives to mine. Because of these issues, we call on the ISA to immediately open public consultation periods on its process and structure based on its current lack of fit for purpose. Deep-seabed mining is an unjustified threat to unique deep-sea biodiversity under the guise of a green revolution, which is why we call on countries to take a firm stance before the ISA to stop issuing exploratory licenses and to adopt a global moratorium on deep-seabed mining before there are severe environmental impacts that we cannot fully understand, let alone predict or mitigate.<sup>89, 90, 91, 92, 191, 192, 198</sup>

## **2.4. Restoring Marine Ecosystems for Resilience and Mitigation**

Global sea levels are rising, and natural disasters such as tropical storms and cyclones are becoming more intense. Fortunately, restoring and rewilding marine ecosystems is one of our best solutions to protect us from these threats. While traditional (“gray”) manmade infrastructure, such as culverts and seawalls, may need to be maintained, repaired, or replaced, blue carbon infrastructure, such as wetlands, mangroves, marshes, oyster reefs, coral reefs, kelp forests, and the installation of living shorelines maximize the potential of nature-based solutions to build resilience in coastal communities while reaping the additional benefits of sequestering carbon, mitigating climate change, and protecting biodiversity. However, to protect these critical marine ecosystems, we must also protect key spawning grounds and migratory routes for marine and anadromous species and replenish the flow of sediments and nutrients in rivers and coastal watersheds. We call on the global community to reprioritize and refinance national, local, and private investments in land development to further research, encourage, and scale the preservation, restoration and reintroduction of coastal and marine ecosystems, especially now during the UN Decade of Ecosystem Restoration. Most importantly, before we restore and reintroduce blue carbon, we must preserve what’s left and harness biodiversity instead of destroying it.<sup>93, 94, 95, 96, 97, 98, 99</sup>

### 3. **Sustainable Seafood: Strengthen Sustainable Seafood to Match Increasing Global Demand**

According to the UN Food and Agriculture Organization (FAO) “The State of World Fisheries and Aquaculture 2020,” total food fish consumption has risen by 122% over 28 years. As individual wealth builds, the demand for seafood increases. While the world increases consumption as stocks are depleted, consuming locally-sourced seafood supports local communities, offers greater food security, and eliminates the carbon emissions that come from shipping fish great distances. Unfortunately, as consumers seek sustainable seafood options, some ecolabel certification schemes mislead consumers into buying seafood that is not actually sustainable. While some ecolabels may advertise seafood as sustainably sourced, oftentimes there is too little information or transparency from the seafood supplier or from the certification organization to trust that what is labeled as sustainable is actually sustainable. Across seafood industries, certification processes should be free of conflicts of interest and/or regulated by an independent body to limit greenwashing. Ecolabels may be an important tool for consumers to support sustainable seafood industries, but the certification process requires major reform and cannot be the sole solution in approaching the unsustainable seafood problem. Especially as climate change impacts seafood catch and production, strong fisheries governance and adaptive management systems are the foundation for a sustainable global seafood supply that can combat food insecurity and malnutrition. With more fish being caught and eaten than ever before, with 34% of global fish stocks declared as overexploited, with more than 50 million tons of potential seafood discarded every year, and with climate change exacerbating the pressure placed on already vulnerable fish populations, we must ensure the viability of global ocean ecosystems and address the need for climate-resilient ocean ecosystems. Balancing the health of these ecosystems with sustainable harvest ensures that as we feed ourselves, future generations will be able to enjoy seafood as well. [100](#), [101](#), [102](#), [103](#), [174](#), [193](#), [194](#)

#### **3.1. Encouraging Sustainable Governance of Capture Fisheries**

More than a third of the world’s fish stocks are overexploited, which means that some fish stocks are being harvested at a rate faster than they can replenish themselves. Not only are fish populations subject to overexploitation, but marine biodiversity at large is threatened by non-selective gear and ghost gear. Non-selective gear results in millions of tons of bycatch every year, and ghost gear is a predominant source of marine litter, with notable negative ecological consequences including entanglement and habitat destruction/degradation. Despite many international agreements to manage fish stocks in international and domestic waters sustainably, the rate at which we take fish from the ocean struggles to keep pace with the increasing demand for seafood around the world. We call on governments, as well as private and civil societies, to join in 1) building stronger governance agreements to sustainably manage the fish stocks within and outside of countries’ Exclusive Economic Zones (EEZ) (including Areas Beyond National Jurisdiction); 2) adopting precautionary and ecosystem-based approaches to fisheries management; 3) collecting data for fisheries management strategies, especially as the climate changes and fish migrate; and 4) setting catch limits lower than a fish stock’s maximum sustainable yield (MSY) or demand if lower than the MSY. We also call on

governments, private, and civil societies to invest more in 1) researching ecosystem dynamics and fish stocks' MSY with an ecosystem-based approach; 2) inventing and incentivizing the use of selective gear technologies to reduce bycatch; 3) supporting the adoption of Vessel Monitoring Systems and Global Positioning Systems technology to facilitate control and surveillance in growing fisheries; and 4) eliminating ghost gear through gear marking and removal from the marine environment. As fisheries collapse remains a looming threat, adaptive and sustainable fisheries management strategies are necessary to ensure the balance of a global marine ecosystem. <sup>104, 105, 106, 107, 108, 109, 110, 111, 195</sup>

### **3.2. Enforcing Against Illegal, Unreported, and Unregulated (IUU) Fishing**

IUU fishing puts already vulnerable fish populations at greater risk of collapse while diminishing the food supply and livelihoods of coastal communities dependent on fisheries. We call on countries to adopt and follow the Port State Measures Agreement to develop clear supply chain inspection processes to certify the origin and legality of the fish landing in their ports. To encourage flag state responsibility, we call on countries to collaborate to establish a stronger legal basis under the International Maritime Organization to legitimize the connection between a vessel's owner and the vessel's associated flag state and to penalize countries who encourage flying flags of convenience. We also call on the private and civil societies to direct greater funding, technological support (including Vessel Monitoring Systems), and political will behind detecting IUU fishing activity and patrolling and enforcing waters, both within and outside of countries' Economic Exclusive Zones (EEZ). Simultaneously, governments must be transparent and disclose information on the activities of their fishing fleets for scientific and enforcement purposes in and across their national boundaries. Being able to detect illegal fishing vessels and practices, enforce regulations, and impose penalties are critical to promoting a fairer economy, a healthier ecosystem, and greater equity for coastal communities, all while ensuring future generations can enjoy fish for dinner too. <sup>112, 113, 114, 115, 116, 117</sup>

### **3.3. Eliminating Subsidies that Contribute to Overfishing**

Every year, countries direct tens of billions of dollars to subsidize overcapacity and overfishing. Fisheries subsidies that contribute to overfishing, such as fuel subsidies and tax exemption, provide an incentive for fish to be taken out of the ocean at a rate faster than fish stocks are able to replenish themselves. They also create unfair competition that jeopardizes the economic profitability of small-scale fisheries, where 90-95% of fish landings are destined for local human consumption. We echo the international community's commitment to the UN Sustainable Development Goals and the Aichi Targets, as well as the sentiment of World Trade Organization Director-General Ngozi Okonjo-Iweala "to protect the fish and to protect the many millions of fishermen and women who directly depend on the fish." We call on governments to redirect capacity-enhancing subsidies to fisheries management, fisheries research and development, Marine Protected Areas, and increased economic opportunity for coastal communities. <sup>118, 119, 120,</sup>

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### **3.4. Providing a Sustainable Path for Aquaculture**

Marine aquaculture can involve breeding, raising, and harvesting fish, shellfish, and aquatic plants. Aquaculture has experienced exponential growth in the past three decades but faces key sustainability challenges in 1) supplying fishmeal for carnivorous fish, 2) preventing disease, organic enrichment, antibiotics, and pesticides from negatively affecting wild fish populations and local ecosystems, and 3) ending habitat destruction and degradation for the creation of new aquaculture sites. With aquaculture now supplying more than half of the world's fish available for human consumption and given its projected growth, identifying and promoting low-impact and sustainable aquaculture practices is crucial to match the increasing global demand for seafood without further exploiting and degrading current fish stocks and marine ecosystems. To address key sustainability challenges such as pollution, disease, and habitat destruction, we call on governments, the private sector, and civil societies to cooperate to 1) develop aquaculture sites based on clear regulatory guidelines, including on the best location and best size for these sites, 2) encourage greater genetic diversity through integrated multi-trophic aquaculture, 3) evaluate the environmental impacts of a farm's operations, 4) adopt non-wild fish feed alternatives, and 5) invest in technological innovation behind breeding technology, low-impact production, and nutrition and feed supply. Additionally, encouraging bivalve and algae farming could help high-impact fisheries and aquaculture operations transition to profitable, low-impact, sustainable mariculture practices. [122](#), [123](#), [124](#), [125](#), [126](#), [127](#), [128](#), [129](#), [175](#)

### **3.5. Funding Research and Development for Plant-based and Cell-cultured Seafood**

While capture fisheries and aquaculture currently supply the world's seafood, plant-based and cell-cultured seafood could provide more sustainable seafood alternatives to consumers in the face of overexploited global fish stocks and the sustainability challenges of aquaculture. We call on governments, the private sector, and civil societies to direct greater funding to research the potential risks and benefits of this new seafood supply, which includes understanding the potential carbon emissions and environmental impacts of plant-based and cell-cultured seafood supply chains. Countries should be proactive in creating healthy entrepreneurial environments that support and incentivize innovation in this space. Partnerships between governments, the private sector, and civil societies will be a critical vehicle in innovating solutions that ensure the compatibility of global food security and sustainability for generations to come. <sup>130</sup>

## **4. Stakeholder Engagement: Include Youth and Local Communities in Natural Ocean Resource Management**

More than a third of the world's population lives within 100 km from a coastline. Marine and coastal ecosystems provide a wide range of services to humans, including seafood, energy sources, genetic resources, climate regulation, carbon sequestration, mitigation of extreme weather events, nutrient cycling, primary production, tourism, and recreational, aesthetic, cultural, and spiritual significance. These services are distributed across economic sectors and sometimes stand in conflict with each other. It is thus crucial to involve stakeholders in the conservation decision making process, specifically those most vulnerable and directly affected by management decisions. As youth, we affirm our commitment to generational knowledge transfer and intergenerational justice and stand in solidarity with women, children, Indigenous peoples, the poor, refugees, and other marginalized communities in working together to elevate the voices of the vulnerable and bring greater equity for a more just future. With an expected 200 million climate refugees by 2050, more and more stakeholders in coastal and island communities will become stateless as climate change displaces populations, livelihoods, and cultures. We call on countries not just to affirm their commitment to the UN Human Rights Commission Global Compact on Refugees, but to embrace inclusion and diversity as guiding principles as we welcome a new generation of environmental refugees and a new generation of scientists, producers, policymakers, and stakeholders from historically marginalized groups. Effective public-private partnerships involving government officials, local and Indigenous communities, non-governmental organizations, companies, academia, and youth will be key to ensuring that management decisions related to marine and coastal ecosystems keep inclusion as a guiding principle for wide adoption and sustainable implementation. <sup>131, 132, 133, 134</sup>

### **4.1. Ensuring the Sustainability of Coastal Ecotourism**

While marine ecotourism may contribute significantly to the economic development of small island and coastal states, without proper execution, ecotourism can also damage the environment and disrespect the socio-cultural authenticity of host communities. Sustainable ecotourism is not truly sustainable until it is responsible tourism, where current and future economic, social, and environmental impacts are taken into full account to address the needs of visitors, the industry, the environment, and host communities. Visitors and service providers must be informed of the location's ecological capacity and each individual's role in respecting the local environment. We call on governments to create financial incentives to ensure the economic competitiveness of the most sustainable ecotourism companies and to incentivize ecotourism companies to become increasingly sustainable. For companies that violate sustainability and conservation regulations, fines and penalties must be applied. To foster partnership development to support conservation, full stakeholder participation is a necessary part of an integrated approach to ensure communities can sustainably manage and reap the benefits of their own natural resources long-term. <sup>135, 136, 137, 138, 139, 140, 141</sup>

## **4.2. Promoting Ocean Research and Innovation**

While our ocean covers more than 70% of our planet, there is still so much left to discover. In 2021, less than 20% of the world's seafloor has been mapped. Marine research and ocean data collection better informs stakeholders, such as coastal communities or shipping, fisheries, and tourism industries, on how to manage current and future threats to ocean ecosystems, support the blue economy, perform marine spatial planning, and decarbonize globally. We call for greater public and private investment in innovative marine data technologies such as big data, artificial intelligence, advanced modelling, satellite monitoring, sophisticated remote, coastal, and marine sensors, and autonomous systems to bolster informed decision-making for marine industries, governing bodies, and the scientific research community. We also call for greater investment in youth-led entrepreneurship, innovation, and technologies that promote ocean conservation. Importantly, the data we collect must be standardized and public so as to ensure the wide accessibility of collected information. Country-to-country partnerships will be critical tools in resource-sharing and global capacity building to support collaboration between academic and civil societies. We also call for greater public-private partnerships to advance the goal of the Seabed 2030 initiative to map 100% of the world's seafloor by 2030-- not just to bolster stakeholder knowledge of the state of the ocean, but to promote the potential the ocean holds in advancing progress for humanity at large. <sup>142, 143, 144</sup>

## **4.3. Improving Ocean Literacy and Capacity-building for Ocean Governance**

Ocean literacy is defined as “an understanding of the ocean’s influence on you - and your influence on the ocean.” However, given the poor health status of the ocean, it is clear that the gravity of the ocean’s influence is not fully understood. Implementing ocean literacy curricula that includes science, culture, and traditional ecological knowledge in the formal education sector in both coastal and inland schools is a key component of bridging the ocean knowledge gap, supporting informed decision-making on sustainable ocean management, and growing a new generation of ocean leaders. We call on the international community to develop a formal policy framework and agreement, aligned with the UN Decade of Ocean Science for Sustainable Development (2021-2030), on ocean literacy to build the necessary skills and networks that are required for effective leadership, policy development, negotiation, stakeholder engagement, and communication to conserve and protect the ocean through community management. <sup>145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 196</sup>

## **4.4. Building Stakeholder Participation in Ocean Governance and Decision-making**

When involving communities in co-management of ocean resources, the financial, political pressure, and logistical problems that the poor and vulnerable may face in building livelihoods dependent on the ocean need to be taken into account. Through the participation of a broad stakeholder base, including governmental institutions, the private sector, NGOs, academics,

scientists, producers (farmers and fishermen), recreational ocean users, Indigenous groups, and youth, communities are empowered to fight against unsustainable activities such as habitat destruction, marine debris disposal, or intensive mining. Ocean governance should build on sound legal and institutional mechanisms to ensure full transparency in decision-making processes and build self-sufficient community management. As the caretakers and stewards of the land and sea for thousands of years, it is crucial to include the traditional ecological knowledge and cultural practices of Indigenous coastal-dwelling communities when making these ocean management decisions. Access to healthy oceans and waterways is a right, which is why facilitating public participation in important decision-making on ocean resource management must be as well. We emphasize the specific provision of the inclusion of youth in natural resource management decision-making spaces given their stake in the generational inheritance, continued generational borrowing of the state of the environment, and the unique perspective of solutions they offer. [160](#), [161](#), [162](#), [163](#), [164](#), [165](#), [166](#), [167](#), [168](#), [169](#), [196](#)

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