Global Blue New Deal

Sustainable Ocean Alliance Youth Policy Advisory Council

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Preamble

As 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 future generations. A generational cycle of injustice has been created where each generation inherits an increasingly degraded environment with less and less time to rectify this imbalance. Not only is this detrimental to progress at large, but our poorest, most vulnerable communities, who contribute the least to global emissions, will feel the effects of our degraded environment the most severely.

Youth recognize the crucial role the ocean plays in keeping us alive by regulating climate and providing food, oxygen, and ecosystem services essential to our well-being. Not only does the ocean support life on Earth, but the ocean economy supports livelihoods. The annual economic turnover of the ecosystem services, jobs, and cultural services provided by the ocean is valued between USD$3 and 6 trillion. Fisheries and aquaculture alone contribute USD$100 billion per year and 250+ million jobs. While the definition of the blue economy may not be clear across the world, our generation posits that the only acceptable definition is one that ensures the sustainable use of ocean resources for economic growth, while preserving the health of the ocean ecosystem.

With the climate crisis representing an environmental catastrophe of unprecedented scope and scale and COVID-19 reminding us of the havoc that the natural world can inflict on our lives and livelihoods, we must reflect on humanity's relationship with the environment and seek comprehensive reform. By ensuring that we are prioritizing environmental health as we recover from the pandemic to build a sustainable blue economy, future generations may appreciate greater equity in success and opportunities that come from sustainably balancing ocean, human, climate, and economic health.

While international environmental agreements may signal a shift toward sustainability, global leaders were surveyed in 2018 to understand which UN Sustainable Development Goals were being prioritized and which were not. The SDG 14: Life Under Water was prioritized the least, even though it has profound positive impacts on achieving other SDGs, including SDG 2, 12, and 13. As youth, not only do we need to be proactive advocates for the SDGs, but 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 future health of our environment.

The United Nations has also recognized the lack of priority in addressing the degraded state of our ocean 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."[1, 2, 3, 4, 5]

SOA's Youth Policy Advisory Council seeks to do the same. **We, as youth, seek to contribute to the success of the Ocean Decade and call on the international community**

to recognize our ocean-specific policy suggestions as part of the solutions to the environmental crises that threaten the existence of future generations and our planet.

To understand what ocean challenges we need to address as a priority, in late 2019, SOA internally gathered more than 100 surveys among youth from more than 35 countries in five different languages. These priorities are outlined in our four Blue New Deal Pillars and their subpillars below. **Our Blue New Deal 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 **implementation**."*

1. **Carbon Neutrality**: Transition to a Zero Carbon Future

Carbon dioxide levels today are higher than at any point in at least the past three million years. The sharp increase in the presence of greenhouse gasses in our atmosphere, particularly carbon dioxide, is the consequence of burning fossil fuels to meet global energy demand. The ocean acts as a key carbon sink and has absorbed roughly one third (~500 billion tons) of the CO_2 produced by the combustion of fossil fuels, resulting in dramatic changes such as acidification, temperature rise, and deoxygenation. With population growth and the increasing global energy demands, more and more greenhouse gasses will pollute our atmosphere and ocean unless radical change takes place. Shifting industry globally to a low-carbon economy is necessary to achieve the Paris Agreement which seeks to limit global warming to below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. Limiting carbon emissions is thus of utmost importance to preserving ocean health due to its impact on ocean acidification levels, marine biodiversity, sea level rise and livelihoods of coastal communities, especially in Small Island Developing States.[6, 7, 8, 9]

1.1. Ending Offshore Drilling and Investing in Renewable Ocean Energy

While offshore drilling pollutes our atmosphere and ocean with greenhouse gasses, the current renewable, hydrokinetic energy potential of the ocean can meet roughly four times the annual global energy demand. By 2027, marine renewable energy is projected to reach a global market size of approximately USD$5.1 billion. Many island and coastal states currently rely on importing fossil fuels to meet energy demand, and harnessing the ocean's energy potential could augment the energy independence of these communities and safeguard their economies against external shocks. As the ocean offers renewable energy sources that can yield viable economic opportunity and resource potential for the development of renewable energy technologies, we call for a moratorium on offshore drilling and nonrenewable ocean energy development. The International Energy Agency corroborates that there is "no need for investment in new fossil fuel supply in our net-zero pathway," and especially as youth, we must not seek to continue or expand exploitative practices that undermine progress toward achieving a sustainable, circular economy. Although offshore wind, wave, tidal, ocean thermal, salinity and floating solar PV clean ocean energy technologies provide an immense potential toward achieving decarbonization, they require further research and development 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. Governance and international agreements need to further align to scale up these technologies to their fullest potential for a zero carbon future and to prevent further nonrenewable energy development in our ocean.[10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27]

1.2. Decarbonizing the Shipping Industry

While shipping goods across ocean basins may be responsible for the vast majority of global trade, almost one billion tonnes of carbon dioxide is emitted annually. Considering that the shipping industry is responsible for approximately 2.5% of global greenhouse gas emissions annually and the industry's projected growth, decarbonizing the shipping sector is a vital piece of delivering a zero carbon future. To reach the International Maritime Organization's goals for emissions reductions, countries and international bodies must increase investment in the research and development of alternative fuel sources such as biofuels, hydrogen, and ammonia. Market-based carbon pricing instruments, such as carbon taxes, can be used to incentivize greater price competitiveness between fossil fuels and alternative sources. Countries must join together to set a cap on global shipping emission to incentivize and catalyze the deployment of a zero carbon shipping industry at scale.[28, 29, 30, 31, 32, 33, 34]

1.3. Reducing Land-based Marine Pollution

Petroleum products like plastics, pesticides, chemical waste, cleaning agents, mining waste, garbage, and sewage may originate on land but have ended up in our ocean. Approximately 80% of all global marine pollution originates from land-based sources. Runoff from nitrogen-based fertilizers, commonly used in agriculture, can cause harmful algae growth leading to eutrophication zones. Single-use plastics and other solid waste materials can accumulate 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 fatalities. Not only must we protect our ocean from pollution after waste materials are already created, but we must radically shift away from plastic production and its associated carbon emissions. Almost 100% of plastics are sourced from chemicals from fossil fuels, and about 4-8% of annual global oil consumption is associated with plastics. With locally and regionally focused enforceable regulations and economic incentives, wasteful business models that pollute our ocean physically and chemically can undergo a paradigmatic shift to low-carbon and circular operations. These laws must regulate the production and use of land-based materials causing marine litter, such as prohibiting and disincentivizing manufacturing and use of nurdles, plastic bags, and microplastics via bans, taxes, and other requirements. Responsible waste management must also be promoted as part of a regulatory framework, focusing on landfill disposal requirements, recycling separation, infrastructure for wastewater management, and waste clean-ups.[35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46]

1.4. 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 main principles behind the CE are based on the waste hierarchy of reducing, reusing, and recycling the maximum amount of materials possible and

incinerating or landfilling only what could not be addressed in earlier stages. The circular economy would divert land-based, human-generated waste from entering the marine environment, reducing waste generation and can even stem the need for extractive practices like deep-sea mining. For example, when materials like precious metals are recovered instead of disposed of, the raw extraction of a nonrenewable material and negative social impacts affiliated with the supply chains of deep-sea and land-based mining can be bypassed instead of continually exploited (which often comes with significant human rights implications, especially in the Global South). The circular economy would also have significant implications for decarbonization and slowing ocean acidification, as it would imply less natural resources extraction and less manufacture of new products to supply the global demand. We seek to encourage regulations and market-based instruments, such as implementing extended producer responsibility (EPR) schemes, deposit-refund schemes, bans and taxes, that promote circular products and businesses on individual, local, regional and country levels.[47, 48, 49, 50, 51]

1.5. Strengthening Legislation and Enforcement Against Ocean Contamination

Whether it is a major oil spill, illegal littering, or vessel pollution, parties responsible for destruction and degradation of the environment are rarely held accountable. Strict legislation and prosecution are powerful mechanisms to ensure parties comply with the international agreements in place. The London Convention and the London Protocol (intended to eventually replace the London Convention) are the most relevant agreements regarding marine litter, and seek to control the deliberate disposal of waste from vessels, aircraft, platforms and other man-made structures at sea. As of today, the agreement comprises 87 states, including all the G20 member nations. Not only do we call on more countries to ratify the London Convention, but we ask them to set specific target goals to stimulate accountability. Furthermore, weighing shipping cargo before it leaves port to ensure that the litter arrives on land, redesigning global business practices to apply circular economy principles, imposing fines and criminal sentences to all infractions detected, and mandating responsible parties to restore the environment damaged by their actions are all necessary steps to hold people and businesses accountable for polluting.[52, 53, 54, 55, 56, 57, 58]

2. **Preserve Biodiversity:** Apply Nature-based Solutions to Promote Healthy Ecosystems and Climate Resilience

Across the world, corals bleach, formerly thriving ecosystems become dead zones, and kilometers of wetlands and mangroves are 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, safeguard biodiversity, and embrace nature-based solutions, especially in the face of the planet's sixth mass extinction. Not only does protecting the ecosystems left on Earth present inherent value, but nature-based solutions are going to be one of the most effective solutions we have in mitigating climate change and its impacts. By protecting, restoring, and managing marine ecosystems well, thriving communities of healthy ocean life operate as a carbon sink where carbon is sequestered for free while humanity anxiously innovates our own carbon sequestration technologies. We must prioritize the conservation of our planet's ecosystems as they remove greenhouse gases like carbon dioxide and methane from our atmosphere while also providing the benefits of cleaner air, cleaner water, reduced coastal erosion, climate resilience, and habitat creation. Especially in the 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.[59, 60, 61, 62, 63, 64, 65]

2.1. Achieving 30x30

Less than 10% of the world's ocean is designated for protection as a Marine Protected Area (MPA) as the climate changes and fisheries collapse. We support the global movement behind 30x30 to protect 30% of the world's ocean by 2030 and urge that these MPAs are established with a robust scientific foundation and protected as no-take zones where extractive activities are prohibited. Scaling MPAs to cover a third of the world's ocean would not only protect biodiversity, but it would also 1) buffer our coasts against extreme weather and coastal erosion, 2) provide economic and health benefits to local communities through sustainable tourism and decreased pollution, and 3) support natural carbon sequestration. We call on governments to 1) fund more research into understanding the carbon sequestration potential of preserving 30% of their territorial waters as an MPA, 2) to work together with neighboring countries to create marine corridors that go beyond boundaries of national jurisdiction, and 3) to integrate stakeholders into the decision-making process in creating future MPAs.[66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84]

2.2. Enforcing Against Non-compliance in MPAs

While MPAs may appear as a solution to preserve biodiversity, without enforcement and compliance, both current and future MPAs cannot be managed effectively and compromise much of their intended conservation value. Bolstering effective management, monitoring, and

investment in designing and overseeing MPAs is crucial in 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 self-enforcement, opportunities for locals to lead or participate in 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: to this end, the private sector and civil societies must 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.[85, 86, 87, 88]

2.3. Establishing a Global Deep-sea Mining Moratorium

Deep-sea mining is an unjustified threat to unique deep-sea biodiversity under the guise of a green revolution. 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. We remind the international community of the Precautionary Approach of the Rio Declaration on Environment and Development, which states that: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. 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 of exploitation to achieve a sustainable, circular economy. Any decision-making processes around deep-seabed mining, namely those taking place at the International Seabed Authority (ISA), the body that regulates mining in the international seabed, need to be inclusive, transparent, accountable, and adequately account for intergenerational equity. With the ISA's 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, the ISA must immediately open public consultation periods on the very due process and structure of itself as a governing body based on its current lack of fit for purpose. We must preserve these incredibly biodiverse and fragile deep-sea ecosystems through establishing a global deep-sea mining moratorium before there are severe environmental impacts that we cannot fully understand, let alone predict or mitigate.[89, 90, 91, 92]

2.4. Transitioning from Gray to Blue Carbon Infrastructure

As global sea levels rise and storm surges caused by tropical storms and cyclones become more frequent and severe, coastal communities must be able to mitigate the risk posed by a changing climate. 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, maximizes the potential of nature-based solutions to build resilience in coastal communities while reaping the additional benefits of proximal ecosystem services. The global

community needs to reprioritize and refinance national, local, and private investments in land development to further research, encourage, and scale the restoration and reintroduction of blue carbon infrastructure projects. Better data on how to finance and scale these nature-based solutions enable those developing our coasts to build climate resilience. Most importantly, before we restore and reintroduce blue carbon, we must preserve what's left and harness biodiversity instead of destroying it.[93, 94, 95, 96, 97, 98, 99]

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, especially in developing countries, the demand for seafood increases. While the world increases consumption as stocks are depleted, consuming locally-sourced seafood supports your community and eliminates the carbon emissions that may come from shipping fish from one distant part of the world to another. As organizations like the Marine Stewardship Council falsely certify fisheries as sustainable when they are not, supporting local small-scale fisheries circumvents bluewashing and improves the economic competitiveness of sustainable fisheries. With more fish being caught and eaten than ever before, with 34% of global fish stocks declared as overfished, 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 how we feed future generations.[100, 101, 102, 103]

3.1. Encouraging Sustainable Governance of Capture Fisheries

More than a third of the world's fish stocks are overexploited, which means these fish are being harvested at a rate faster than they can replenish themselves. Not only are fish populations subject to overexploitation, but non-selective gear results in millions of tons of bycatch every year, and ghost gear is a predominant source of marine litter, with significant 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. Governments, as well as private and civil societies, must join in 1) building stronger governance agreements to sustainably manage the fish stocks within and outside of countries' Exclusive Economic Zones (EEZ) (including Boundaries Beyond National Jurisdiction); 2) adopting precautionary and ecosystems-based approaches to fisheries management; and 3) directing greater public and private funding to a) research a fish stock's maximum sustainable yield (MSY); b) enforce penalties against parties who take more than the MSY allows; c) invent and incentivize the use of selective gear technologies to reduce bycatch; d) support the adoption of Vessel Monitoring Systems and Global Positioning Systems technology to facilitate control and surveillance in growing fisheries; and e) eliminate ghost gear through gear marking and removal from the marine environment. Strengthening regulatory and enforcement frameworks on a regional and national basis minimizes the incidental ecological damages caused by non-selective and derelict gear and reinforces the potential for capture fisheries to contribute positively to global food security while ensuring there are fish left for future generations.[104, 105, 106, 107, 108, 109, 110, 111]

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 encourage 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 encourage all countries to work collectively 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. We also encourage the private sector and civil societies to join in partnership to 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' 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 fines or criminal sentences 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.[112, 113, 114, 115, 116, 117]

3.3. Eliminating Capacity-enhancing Fisheries Subsidies

Every year, countries direct tens of billions of dollars to subsidize overcapacity and overfishing. Capacity-enhancing fisheries subsidies, 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 while creating 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." By redirecting capacity-enhancing subsidies to fisheries management, fisheries research and development, marine protected areas, and increased economic opportunity for coastal communities, sustainable fisheries would experience greater economic competitiveness, and fewer vulnerable fish stocks risk collapse.[118, 119, 120, 121]

3.4. Providing a Sustainable Path for Aquaculture

Aquaculture has experienced exponential growth in the past three decades but faces key sustainability challenges in addressing 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 its projected growth, identifying and promoting sustainable aquaculture practices is crucial to match the increasing global demand for seafood without further exploiting and degrading current fish stocks and marine ecosystems. Key sustainability challenges such as pollution, disease, and habitat destruction may be mitigated 1) when aquaculture sites are developed based on clear regulatory guidelines on the best location and best size for these sites, and 2) through integrated multi-trophic aquaculture which can ensure greater genetic diversity. We call on countries to develop strong and clear process regulations for aquaculture and to invest in technological innovation behind breeding technology, low-impact production, and nutrition and feed supply to ensure that as we feed ourselves, we can also feed the generations of tomorrow.[122, 123, 124, 125, 126, 127, 128, 129]

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 expand consumer choice in seafood consumption and may have significant implications in supporting ocean conservation. While most plant-based and cell-cultured seafood products have not yet been introduced to the global market, acknowledging the current overexploitation of many global fish stocks and the sustainability challenges of aquaculture, plant-based and cell-cultured seafood may provide an alternative supply as countries industrialize and global demand for seafood increases. Understanding the potential risks and benefits of this burgeoning third pillar of seafood supply is only possible through greater directed research and development. 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.[130]

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

More than a third of the world's population lives 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, moderation of extreme events, nutrient cycling, primary production, tourism, and recreational, aesthetic, and spiritual significance. These services are distributed across economic sectors and sometimes stand in conflict with each other. It is thus crucial to involve as many stakeholders as possible in their management, most importantly those that are directly affected by management decisions. As youth, we affirm our commitment to 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 following the UN Human Rights Commission Global Compact on Refugees, but to embrace inclusion and diversity as guiding principles as we welcome both a new generation of environmental refugees and a new generation of scientists, producers, policymakers, and stakeholders who are women and non-white. Effective public-private partnerships involving government officials, local 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.[131, 132, 133, 134]

4.1. Ensuring the Sustainability of Coastal Ecotourism

While ecotourism may contribute significantly to the economic development of small island states, without proper execution, ecotourism, when done wrong, can also be damaging to the environment and disrespect 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. This includes informing visitors and service providers of the location's carrying capacity and each individual's role in respecting the local environment. Governments need to create financial incentives to ensure the economic competitiveness of the most sustainable ecotourism companies and to incentivize ecotourism companies to become more and more 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.[135, 136, 137, 138, 139, 140, 141]

4.2. Promoting Ocean Research and Innovation

While our ocean covers more than 70% of our planet, there is still so much left to understand: In 2021, less than 20% of the world's seafloor has been mapped. Marine research and general 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 investment in innovative marine data technologies such as big data, artificial intelligence, advanced modelling, sophisticated sensors, and autonomous systems to bolster informed decision-making for marine industries, governing bodies, and the scientific research community. Not only must investment be international, but country-to-country partnerships will be critical tools in resource-sharing and global capacity building to support collaboration between academics 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.[142, 143, 144]

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

Ocean literacy can be defined as "an understanding of the ocean's influence on you - and your influence on the ocean." However, given the status of the ocean and its environmental challenges, it is clear that the ocean's influence is underestimated. Supporting ocean literacy curriculum in the formal education sector, especially in coastal/island primary schools, is a key component of informed decision-making on sustainable ocean management and necessary to support the development of a new generation of ocean leaders by 2030. We call for greater emphasis on developing 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 ocean through community management.[145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159]

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

When involving communities in co-management of ocean resources, the financial, political pressure, 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), and youth, communities are empowered to fight against dangerous activities such as unsustainable coastal development, 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. We emphasize the specific provision of the inclusion of youth in decision-making spaces surrounding natural resource management, given their stake in the generational inheritance and continued generational borrowing of the state of the environment.[160, 161, 162, 163, 164, 165, 166, 167, 168, 169]

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