COVID-19 and the future of Ocean Sustainability



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## Introduction

The COVID-19 pandemic has impacted the health and wellbeing of millions of people and caused global disturbance across many sectors. It may not be obvious at first sight, but much like the health sector, the ocean has been and will be heavily impacted by the current crisis.

The future of the ocean resources, the communities that depend on them, and key blue economy industries are uncertain. Marine and coastal social and ecological systems face a wide array of threats, mainly deriving from human activities. The COVID-19 pandemic is exacerbating some of these challenges and alleviating others, creating conditions that could enable change, and bringing many issues to the forefront of reality for actors in the blue economy and coastal communities. How we respond will determine whether the future of the ocean is a more or less sustainable one.

This report:

- describes how COVID-19 is affecting ocean sustainability in the short-term
- illuminates how the long-term impacts of COVID-19 could either contribute to or undermine ocean sustainability
- points to strategic priorities and actions that can support ocean sustainability in this context

# Executive Summary

The COVID-19 pandemic is generating significant changes for the future of the ocean. This report summarizes the findings of a participatory process that brought together 25 diverse stakeholders from across the globe to understand what those changes are and to identify their strategic implications. This report summarizes our findings.

The report looks at the short term and long term impacts of COVID-19 on seven areas that are key to ocean sustainability:

- Healthy, sustainable ecosystems
- Community resilience and sustainable livelihoods
- Inclusive, sustainable economies
- Equality and equity
- Effective governance
- Climate Change Adaptation and Mitigation
- Awareness and understanding

It identifies how, in the short term, the medical response and associated lockdowns are impacting these seven key areas. The report also looks at how three priority long term impacts areas might impact ocean sustainability:

- widespread economic recessions,
- increasing digitalization
- changes to data and research

It also reveals that these impacts may be positive or negative depending on different alleviating and exacerbating factors.

From these impacts, exacerbates and allevators, we identified six areas for strategic action to shift the balance of impacts, particularly in the long term, towards positive outcomes and away from negative ones. These six areas emphasize the opportunity COVID provides to select inclusive, equitable and sustainable options over inequitable and unsustainable options in all actions; to leverage the inevitable digitalization towards positive outcomes; to embrace interconnectivity and complexity; to leverage the unique global event to support shifts in mindsets towards long term solutions; to reduce compounding ecosystem pressures and threats particularly that affect the most vulnerable people; and to build resilience at all levels – across social and ecological domains.

Pathways to a more sustainable future will involve transitioning responses to short term impacts into long term actions and responses, promoting factors that alleviate impacts and transforming factors that exacerbate impacts.

#### Exacerbators

- Tendency towards business as usual
- Unsupportive political environments
- Siloed thinking and action
- Climate change impacts
- Reduced focus on climate change and environment
- Degraded quality of international negotiations and other governance dialogues
- Poor capacity in key actors
- Increasing inequality

#### Strategic Implications of Findings



Ensure COVID-19 recovery is inclusive and blue

interconnectivity and

Build resilience

Embrace

complexity



Leverage digitalization for ocean sustainability







Support mindset shifts

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#### Alleviators

- Cooperation
- Effective governance
- Empowered and supported local communities
- Strategic use of the disruption
- Funding
- Inspired youth leaders
- Improving equity

# Methodology

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The COVID-19 and the Future of Oceans Sustainability process brought together 25 diverse stakeholders from across the globe to understand how COVID-19 is impacting ocean sustainability. The contributors to the process and co-creators of this report all work extensively in ocean sustainability and together provided a systemic perspective. The stakeholders who came together for this process come from 15 countries across 6 continents, from the nonprofit sector, government, and the private sector, and work in diverse domains of ocean sustainability.

The process did not have strong participation from the sectors of shipping or from corporate tourism or corporate fishing. As a result, these areas are under-explored in this report, and remain areas for further investigation.

In order to explore the relationships between COVID-19 and ocean sustainability we used the COVID Futures Framework, which explores the relationship between ocean sustainability and:

- Short-term impacts caused by COVID-19 and our response • to it
- Long-term impacts, focusing on the subsequent • consequences that will persist, regardless of the current state of the global pandemic
- Exacerbators and alleviators of impacts

#### Central to the process were the informed and grounded perspectives of the report co-creators.

These perspectives were gained over the previous 6 months as they watched and experienced how COVID-19 was impacting on the systems that they work in. These perspectives were gathered through a series of interviews, surveys, and eight dialogue sessions. Together we engaged in participatory elaboration and analysis of these inputs, and identified the strategic implications of this analysis for our individual and shared work. The summarized findings of this process are contained in this report.

## The COVID **Eutures** Framework

In order to explore the relationships between COVID-19 and ocean sustainability we used the COVID Futures Framework, which explores the relationship between ocean sustainability and two main areas of impact, and influencers of how those impacts are experienced

# Short-term impacts Short-term impacts caused by COVID-19 and responses to it. Exacerbators of impact

Long-term impacts Long-term impacts, focusing

on the subsequent consequences that will persist, regardless of the current state of the global pandemic



Eactors that can make negative impacts worse and constrain positive impacts.



Factors that can amplify positive impacts worse and constrain negative impacts.

# Key Areas of Ocean Sustainability

The COVID-19 and the Future of Ocean Sustainability Process looked at seven key areas of importance for ocean sustainability. For more details on what each sustainability area includes, see Appendix 1: Sustainability Areas



# Impacts of COVID-19 on Ocean Sustainability

COVID-19 is undoubtedly an unprecedented global challenge and a precursor of more to come. In nearly all domains and in both the short- and longterm, COVID-19 is generating positive, negative, and mixed impacts for ocean sustainability. How people, communities and governments respond will determine whether these impacts will positively or negatively affect ocean sustainability.

## The first layer of impact: Short-term

Responses by countries to COVID-19 have complex impacts on ocean sustainability. The two primary areas of short-term impact are from the medical response and the lockdown response.

The lockdown response to COVID-19 by many countries around the world, and the consequent restricted physical movement and contact among people and massive global disruption, are affecting ocean sustainability in diverse and complex ways.

Restricted movement and physical contact is generating the following short-term human behaviour changes:

- Reduced domestic and international trade
- Reduced international tourism and travel
- Reduced fishing and trade in ocean products
- Reduced fossil fuel use
- Changes to format of international conversations and negotiations
- Reduced enforcement of environmental regulations
- Changes to research and monitoring

The massive general global disruption caused by COVID-19 and the response to it is generating changes in what people think about and how. In particular, it has generated:

- A global focus on COVID-19
- A sense of a much larger range of responses and futures being possible
- Prevalence of short-term thinking



These impacts present both risks and opportunities in the short-term for ocean sustainability.

These changes in thought and behavior are, in turn, having the following short-term impacts on ocean sustainability:

- Reduced markets for products from the ocean
- Disruption of tourism-supported conservation
- Disruption of international and domestic policy and governance dialogue
- Disruption of fossil fuel extraction, transportation, and consumption
- Disruption of social structures and processes
- Increase in illegal activity
- Disruption of on-going scientific monitoring
- Opportunities for research that exploit the unusual circumstances caused by the pandemic
- Shifting awareness about the ocean
- Reduction in carbon emissions
- Changes to the strategies of many actors who are influential in ocean sustainability

The extent to which the medical response to COVID-19 is affecting ocean sustainability is less clear. The one effect which is evident is an increase in plastic pollution from improper disposal of personal protective equipment. This increase in plastics production in the ocean is causing direct damage to wildlife and ecosystems.

## **Short-term impacts**



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Sustainability Area	Threats	Opportunities
Healthy, sustainable ecosystems	Increase in the extraction of ocean resources due to increased subsistence needs, and increased illegal activity due to less enforcement	Reduction in the extraction of ocean resources due to reduced fishing and tourism, reduced local and global markets, and subsequent ecosystem regeneration
:	Immediate threat to tourism-supported conservation	Impetus to diversify activities in tourism-dependent areas
	Irreparable ecosystem damage from pollution and illegal activity	Development of local and/or digitized regulatory enforcement tools and approaches
	Less attention on monitoring the impact of ocean use	New plans to act on the link between ecosystem health, human health, and human vulnerability to disease
Community resilience and sustainable livelihoods	Job loss or decreased income causing food and economic insecurity	Development and strengthening of domestic and local networks, markets, and livelihoods
Inclusive, sustainable economies and Equality and equity	Increase in the extraction of ocean resources due to increased subsistence needs, and increased illegal activity due to less enforcement Immediate threat to tourism-supported conservation Irreparable ecosystem damage from pollution and illegal activity Less attention on monitoring the impact of ocean use	Stimulus packages that support increasing equality and sustainability

Sustainability Area	Threats	Opportunities
Effective governance	Potential exclusion of groups and countries who have poor access to digital platforms for engagement and/or lack digital skills	Increase in ability to have more frequent and inclusive dialogue about policy and governance
Climate change adaptation and mitigation	Perception that short-term reduction in carbon emissions has reduced climate change, undermining additional effort	Minor environmental improvement as a result of reduced carbon emissions
Awareness and understanding	Disconnection from the ocean for people living far from it Reduction in focus on ocean and sustainability agendas	Increased appreciation for nature and the ocean and increased understanding of impacts of encroaching on remote ecosystems Openness to new ways of seeing and doing

# What will make the difference

The severity of the short- and long-term impacts of COVID-19 on ocean sustainability, and the degree to which risks vs. opportunities predominate in moving from short- to longterm impacts, depends on a number of contextual factors that can alleviate or exacerbate the situation. The future will be heavily influenced by how these play out over the coming months and years.

#### Exacerbators

Alleviators

- Tendency towards business as usual
- Unsupportive political environments
- Siloed thinking and action
- Climate change impacts ٠
- Reduced focus on climate change and environment
- Degraded quality of • international negotiations and other governance dialogues
- Poor capacity in key actors
- Increasing inequality

- Cooperation
- Effective governance
- Empowered and supported local communities
- Strategic use of the disruption
- Funding
- Inspired youth leaders
- Improving equity ٠

## Key shortterm actions

- Ensure that the immediate subsistence and livelihood needs of people dependent on tourism and small scale fishing are addressed as soon as possible, and in ways that diversify their short- and long-term options.
- Find new ways to enforce and develop environmental regulations
- Find ways to meaningfully include all relevant voices in governance conversations that are taking place online
- Keep a focus on environmental and climate change agendas
- As guickly as possible, address any ocean monitoring gaps, and put in place new research that takes advantage of the real-world experiment of the widespread lockdown
- Keep people informed about the importance and value of the ocean



## The second layer of impact: Long-term

Based on a survey of the respondents and participants we prioritized three long-term impacts of COVID-19 that are relevant to ocean sustainability. Each of these impacts brings with it opportunities and threats to almost every domain of ocean sustainability.



# Economic Recession

It is widely expected that the responses to COVID-19 by people and governments is going to lead to a widespread economic recession. This recession, should it emerge, can bring opportunities to advance ocean sustainability or threaten to undermine it.

Two scenarios illustrate how economic recession could impact on ocean sustainability. In the "Regrow and Adapt" scenario the alleviators are activated, and in the "Retreat and Protect" scenario, it is the exacerbators that drive this change.

#### Scenarios

#### Withdraw and Protect

The hardships of the COVID-19 response strengthen tendencies towards 'business as usual', siloed thinking, and narrow political approaches. This rapidly reduces resources for ocean and sustainability issues, undermining commitments to conservation, climate action, and inclusive and multilateral governance. Stimulus programs produce rapid growth in some sectors, with expected increase in environmental and social impacts, and undermine adoption of sustainable technologies, and support for community resilience. Climate change impacts expand, erasing the transient 'dip' caused by the lockdowns. Increased inequalities and poverty of those 'left behind' result in greater extraction of resources from nature for survival, competition among sectors with many collapses, and 'grabs' of ocean space and resources.

#### Regrow and Adapt

The hardships of the COVID-19 response inspire people to look beyond economic growth to focus on a more holistic view of wellbeing and equity among people. As a result, civil society and local communities are empowered, fostering strategic use of the disruption to address local challenges. Constrained resources are used to leverage multilateral system reform, diversification of livelihoods and building resilience of local economies and communities, including to predicted threats such as climate change. Tourism transforms towards new more local models and ecotourism, and across national boundaries states cooperate towards greater inclusivity and sustainability.

## Opportunities and threats of an economic recession on each sustainability area

Sustainability Area	Threats	Opportunities
Healthy, sustainable ecosystems	Increase in poverty and subsistence needs results in harmful levels of extraction from ecosystems	Long-term reduction in large scale tourism leading to opportunities to rethink and improve tourism linked to conservation
Community resilience and sustainable livelihoods	Reduced economic activity globally constrains options for livelihoods and limits funding available to support community resilience efforts	Strengthening of local economies Diversification of livelihoods
Inclusive, sustainable economies	Shrinking economies lead to long-term collapse of economic sectors Pressure to grow economies leads to increasing ocean grabbing	Economic recovery can focus on inclusive, blue economy Countries aligning and moving forward together can lead to significant economic shifts
Equity and equality	Economic recovery focuses primarily on economic growth without looking at other factors, exacerbating inequality	Economic recovery that focuses on supporting the most vulnerable, reducing inequality

Sustainability Area	Threats	Opportunities
Effective governance	Potential exclusion of groups and countries who have poor access to digital platforms for engagement and/or lack digital skills	Increase in ability to have more frequent and inclusive dialogue about policy and governance
Climate change adaptation and mitigation	Perception that short-term reduction in carbon emissions has reduced climate change, undermining additional effort	Minor environmental improvement as a result of reduced carbon emissions
Awareness and understanding	Disconnection from the ocean for people living far from it Reduction in focus on ocean and sustainability agendas	Increased appreciation for nature and the ocean and increased understanding of impacts of encroaching on remote ecosystems Openness to new ways of seeing and doing

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## Increasing Digitalization

As a result of the widespread lockdown, many activities that were previously held in-person have gone online. The COVID-19 lockdown period has seen massive uptake of digital technologies and ways of doing. While it can be expected that an end to the pandemic will include some resumption of travel and in person gatherings, it is also expected that many activities that now take place online will continue, regardless of the global public health situation.

The scenarios of "Connecting Worlds" and "Digital Divide" illustrate the threats and opportunities that increasing digitalization presents for ocean sustainability.



misinformation about oceans and sustainability increases, and governance and decision-making become disconnected from reality. The digital divide exacerbates inequality, widening the disempowerment of the disadvantaged and undermining their participation. Increasing digitalization feeds greater polarization and continues to drive politically driven climate change and sustainability discourse, stifling the voices of those most affected, and the contribution of evidence.

#### Connecting Worlds

Many months spent online during the COVID-19 lockdowns gives people greater hunger for an emotional and physical connection with nature. At the same time increasing digitalization provides tools for new ways of working and jobs. The associated reductions in travel and movement are positive for climate and environment. Greater linking of people, cultures and countries across prior barriers, and a sense of the potential for greater participation, accountability and transparency help bridge the digital divide, and people are inspired to innovative actions and campaigns for people and planet.

# Opportunities and threats of increasing digitalization on each sustainability area

Sustainability Area	Threats	Opportunities
Healthy, sustainable ecosystems	Reduced linkage and contact with the environment results in decreased awareness and reduced activity in support of ecosystems	Innovative actions and campaigns enable new approaches to protection Reduction in travel reduces pressure on ecosystems
Community resilience and sustainable livelihoods	Reduced opportunities for those lacking digital skills Increase in teleworking degrades mental health	Adoption of digital technologies enable new livelihoods Increasing teleworking opens up new non-place- bound opportunities for livelihoods
Inclusive, sustainable economies	Businesses with larger marketing budgets are better positioned to leverage digital marketing to promote themselves, putting smaller companies at a disadvantage As online shopping and procurement systems advance, local products struggle to compete with globalized ones	Small and sustainable business are able to use digital marketing for increased promotion Sustainable businesses develop more digital networks, which enable them greater market reach
Equity and equality	Lack of attention to access can exacerbate exclusion, inadequate participation in dialogue, and imbalances in access to data and information	Increased access to knowledge for those who have digital access Increase in access and meaningful participation in digital fora makes overall access and engagement

Threats	Opportunities
Decisions that are made are disconnected from the reality on the ground	New mechanisms for transparency, accountability, and participation are possible
With governance conversations largely held in digital spaces some groups with poor bandwidth, poor access to technology, or poor access to spaces that enable effective digital	People from remote countries and communities have increased access to being engaged in governance conversations
engagement are not meaningfully able to participate	and affordably, without requiring investments in and organization of travel
New norms and ways of engaging in digital spaces make effective influence of governance decisions more difficult	
Increasing digitalization feeds greater polarization and continues to drive politically driven climate change discourse	Significant reduction in all travel leads to long-term reductions in associated carbon emissions
Potential for greater misinformation about climate change Conversations about climate change become disconnected from the grounded reality of people who are most affected, reducing their effectiveness	Digitalization increases access to networks and information that can support mitigation and adaptation
Greater misinformation about the ocean and sustainability, with conventional vetting processes not in place	With so much time spent using digital technology, people may seek more connection with nature and understand its value Accurate information is shared and disseminated more easily, leading to increased understanding and awareness.
	<ul> <li>Threats</li> <li>Decisions that are made are disconnected from the reality on the ground</li> <li>With governance conversations largely held in digital spaces some groups with poor bandwidth, poor access to technology, or poor access to spaces that enable effective digital engagement are not meaningfully able to participate</li> <li>New norms and ways of engaging in digital spaces make effective influence of governance decisions more difficult</li> <li>Increasing digitalization feeds greater polarization and continues to drive politically driven climate change discourse</li> <li>Potential for greater misinformation about climate change</li> <li>Conversations about climate change become disconnected from the grounded reality of people who are most affected, reducing their effectiveness</li> <li>Greater misinformation about the ocean and sustainability, with conventional vetting processes not in place</li> </ul>

## Changes to Data and Research

COVID-19 has disrupted research relevant to ocean sustainability around the world. As a result of the lockdown, monitoring and other field research have paused in many areas, degrading the quality of data and research. At the same time, the massive global disruption and reduction in travel and in disruptive human activity around the world has created unprecedented conditions, which have created possibilities for new research in many domains.

The "Discovery" scenario describes what might result if the "realworld-experiment" of COVID-19 is leveraged to generate new understanding. The "Closing Down" scenario describes what might result if the disruptions to research from COVID-19 are not addressed.

#### Scenarios

#### Closing Down

As people lose contact with nature and impersonal teleworking expands, the links between people erode, misinformation about the ocean and sustainability increases, and governance and decision-making become disconnected from reality. The digital divide exacerbates inequality, widening the disempowerment of the disadvantaged and undermining their participation. Increasing digitalization feeds greater polarization and continues to drive politically driven climate change and sustainability discourse, stifling the voices of those most affected, and the contribution of evidence.

#### Discovery

The COVID-19 "real-world experiment" teaches communities, businesses, scientists and governments about surprising connections and opportunities, unlocking inspiration, transdisciplinary learning and cooperation to make strategic use of the disruption to "build forward better". With better understanding of the foundations of community and ecosystem resilience, particularly of the contributions of environment, equality, gender, race, youth and other factors, local actors and solutions are empowered and supported. Data and knowledge systems are designed to support them, using open systems and tools to bridge the divide.

# Opportunities and threats of changes to data and research on each sustainability area

Sustainability Area	Threats	Opportunities
Healthy, sustainable ecosystems	Challenges to monitoring and innovation research undermine ability to advance healthy, sustainable ecosystems	Increasing collaboration with local researchers/ communities and more collaborations overall result in more open and relevant data
Community resilience and sustainable livelihoods	Disrupted field work and reporting undermine design and implementation of effective interventions supporting resilience and livelihoods	The opportunity presented by COVID-19 increases research and knowledge about what enables community resilience, driving more effective interventions Need to localize field research leads to development of newly skilled local populations able to conduct and make sense of relevant, local research
Inclusive, sustainable economies	Prioritizing research that focuses only on immediate economic recovery or health issues Disruptions exacerbate existing divides in capacities and accessibility of data globalized ones	More inclusive approaches result in improved accessibility and capacities in dealing with data of multiple types
Equity and equality	Disruptions to research and reduced attention to equity and equality issues leads to impeded effectiveness of action	Understanding of linkages between equality, equity, gender, race, and other sustainability areas increases Increase in research capacity by local and vulnerable community members creates new capacity to reveal and advocate for vital priorities

26 Sustainability Area	Threats	Opportunities
Effective governance	Disruptions to research undermine evidence- based decision making	Research is increasingly cross-disciplinary and trans- boundary, and uses the disruption of COVID-19 to generate new insights, which are used to inform governance decisions
Climate change adaptation and mitigation	Disruptions to climate change monitoring, early warning systems, and learning about adaptation undermine mitigation and adaptation	New, relevant research leads to new tools for mitigation, adaptation, and resilience
Awareness and understanding	Long-term disruption to field and lab work and cuts to research reduce understanding of the importance of and connections to ocean sustainability	New research using the "real world" experiment of COVID-19 reveal surprising connections and opportunities, increasing understanding and awareness of the importance and value of ocean sustainability

# Strategic Implications of Findings

COVID-19 has changed the landscape of strategic interventions that can help to advance ocean sustainability and achieve SDG
14. Through the COVID-19 and the Future of Ocean Sustainability Process we have identified six major areas for strategic action.



Ensure COVID-19 recovery is inclusive and blue



Build resilience



Embrace interconnectivity and complexity



Leverage digitalization for ocean sustainability



Reduce ecosystem pressures and threats



Support mindset shifts

# 1. Ensure COVID-19 recovery is inclusive and blue



COVID-19 recovery processes could be detrimental to the SDGs if they focus only on economic growth. Ensure that COVID-19 recovery processes advance inclusive, blue economies.



#### Action Idea

Launch a Global Platform of Inclusive Blue Economy Labs in countries, cities, and regions around the world that innovate and scale approaches to effectively transition to inclusive, blue economies.

Tactics for inclusive, blue recovery

- Ensure that the design of recovery approaches takes a fullsystem and evidence-informed view including
  - Ensuring that the voices and concerns of vulnerable and excluded groups are present, heard and addressed
  - Providing support to key research areas to enable evidence-informed decisions
- Focus recovery on the goals of building resilience and longterm sustainability
- Advance cooperative and integrative approaches in recovery
- Prioritize activities that work with and enhance nature for food security, resilience, and other needs

- Use the recovery process to advance more sustainable approaches such as ecosystem services, blue economy, circular economy, donut economy and integrated coastal zone management
- Use recovery process to advance and improve existing sustainable approaches such as Marine Spatial Planning and Marine Protected Areas.

## 2. Build Resilience



COVID-19 has eliminated any doubts about the importance of resilience. Build resilience in coastal communities and use COVID-19 as an opportunity to better understand what enables resilience.

Action Idealea

Undertake action research with vulnerable coastal communities to understand what supported and undermined resilience during COVID-19 and to build further resilience.

Tactics for building resilience

- Undertake research into community resilience
- Use existing approaches to build resilience in vulnerable communities
- Develop new approaches for building resilience

## 3. Embrace interconnectivity and complexity



COVID-19 has further revealed how interconnected all systems are. Working across silos and embracing social and environmental complexity can lead to a broader array of feasible, inclusive, sustainable solutions. Embrace interconnectivity and complexity in working towards ocean sustainability.



### ActionAldean Idea

Advance practice in Marine Spatial Planning by bringing the voices of stakeholders to the process of creating, implementing, and updating Marine Spatial Plans.

## Tactics for embracing interconnectivity and complexity

- Build a central convening platform that can support integrative, systemic thinking regarding COVID-19 recovery
- Strengthen science-policy interactions towards socio-economic impact
- Create opportunities for knowledge and practice to be developed and delivered across silos
- Innovate in shared governance models

## 4. Leverage digitalization for ocean sustainability



Driven by the lockdown, digitalization has accelerated in many areas and for many people, but not for all. Ensure that no one is left out as dialogue and governance are increasingly done online. Additionally, use digital technologies to develop new approaches to addressing longstanding ocean sustainability challenges.

## Tactics for leveraging digitalization for ocean sustainability

- Innovate in bridging the digital gap for under-connected communities and countries
- Develop understanding of what systems and processes are required to enable relevant communities to meaningfully influence online dialogues and decision making processes
- Innovate in using digital technologies to address new ocean sustainability challenges such as monitoring and regulatory enforcement
- Find ways to help people living terrestrially to feel connected to the importance of ocean through digital means, though they remain physically distant

# 5. Reduce ecosystem pressures and threats



Many of the changes brought by COVID-19 have the potential to either reduce or exacerbate existing environmental pressures. For areas where pressures are currently reduced, find ways to maintain the new ways of doing things. For areas where pressures are currently exacerbated, they may cause irreversible damage. Act immediately to protect these threatened ecosystems.

Tactics for reducing ecosystem pressures and threats

- Adopt new/low impact materials and methods and interventions
- Transform impact chains across sectors, such as in food industry
- Prioritize ecosystem-based and sustainable practices to reduce threats while supporting recovery
- Assess all fragile ecosystems to find which are most threatened by changes due to COVID-19. Provide immediate support to protect ecosystems and the local communities that depend on them over the long term. This includes creating resilience to climate change and other global phenomena that increase pressures on these systems

# 6. Support mindset shifts



COVID-19 has made new ways of thinking and doing possible in an unprecedented way. Do not let this opportunity pass by. Support new mindsets and understanding to the full extent possible to advance the changes needed for ocean sustainability.

# Tactics for supporting mindset shifts

- Create analyses of what can be learned from the COVID-19
   disruption
- Undertake strategic communications
- Support powerful advocates, thinkers, and communicators to reach more broadly and deeply

# Appendices

# Appendix 1: Sustainability Areas

The following are the seven domains key to ocean sustainability that the process analysed. These are the elements that were identified as being vital to meeting SDG 14 while supporting other SDGs, and to building forward better

Healthy, Sustainable Ecosystems

- Healthy socioecological systems
- Regulatory enforcement
- Sustainable aquaculture
- Sustainable Fisheries
- Regeneration enabled
- Income opportunities from conservation
- Reducing all forms of pollution
- Making protected areas more effective

#### Community Resilience and Sustainable Livelihoods

- Diversified economies
- Local decision-making
- Holistic community health
- Urgent needs are met in a way that doesn't compromise ability to meet future needs
- Income for conservation activities
- Development of livelihoods that complement or support conservation

- Marine and non-marine alternatives
- Local ecological knowledge

#### Equality and Equity

- Gender equity
- Racial equity
- Improving equitable distribution of benefits
- Reducing disproportionate negative impacts from vulnerable
  groups
- Addressing inequity between countries

#### Climate Change Mitigation and Adaptation

- Effective international agreements and action
- Effective local, bottom-up mitigation action and adaptation plans

#### Inclusive and Sustainable Economies

- Natural capital recognized and used
- Investments in in nature and social resilience
- Ecological accounting
- Subsidies removed from ecologically harmful behaviours (fisheries, oil and gas, building in fragile contexts)
- Collaborative economic policy
- Markets for blue carbon
- Thriving and sustainable ocean-dependent industries (e.g. fisheries, shipping, tourism)

Understanding and Awareness

- Mindset shift to understanding that humans are not separate from each other or from ecosystems
- People understand
- o not encroaching further on ecosystems is vital
- o value of ocean and how to support sustainability
- how important ocean sustainability is to climate change, to food systems, and to livelihoods is known
- o how to think systemically
- o planetary boundaries
- o inherent value of the ocean
- Educational curriculum addresses these topics
- People have experiential, emotional connection to the ocean

#### Effective Governance

- Bottom-up governance
- Communities engaged in effective local governance
- Policy at all levels aligned with sustainability goals
- Effective international agreements and action
- Collaborative governance and decision-making
- Evidence-based policy
- Transparency

Additionally, the process looked at the cross-cutting area of informative, relevant, and robust ocean science.

Appendix 2: Impacts and strategic implications by 39

## Healthy, Sustainable Ecosystems

Threats	Opportunities	
Short term		
Potential increase in the extraction of ocean resources due to increased subsistence needs and increased illegal activity	Potential reduction in the extraction of ocean resources due to reduced fishing and tourism, reduced local and global markets, and subsequent ecosystem regeneration	
Irreparable ecosystem damage from pollution and illegal activity	Development of local and/or digitized regulatory enforcement tools and approaches	
Immediate threat to tourism- supported conservation	Impetus to diversify activities in tourism-dependent areas	
Long Term		
Increase in poverty and subsistence needs results in harmful levels of extraction from ecosystems	Long-term reduction in tourism leads to opportunities to do rethink and improve eco-tourism	
Reduced linkage and contact with the environment results in decreased awareness and reduced activity in support of ecosystems	Innovative actions and campaigns enable new approaches to protection	
Challenges to monitoring and innovation research undermine ability to advance healthy, sustainable ecosystems	Increasing collaboration with local researchers/ communities and more collaborations overall result in more open and relevant data	
	Reduction in travel reduces pressure on ecosystems	

## Implications for strategic action

- In the short term, the increase in plastic pollution as well as illegal activities may cause irreparable ecosystem damage. At the same time, the disruption to current ways of doing and increasing digitalization could lead to useful and effective innovations in regulatory enforcement using digital technologies.
- Similarly, disruptions to monitoring, may degrade the current quality of scientific understanding of ecosystems, while improving scientific skills in local communities and embracing digital technologies for monitoring could lead to more and better understanding.
- The reduction in travel and tourism brought by COVID-19 offers an opportunity to reduce pressure on ecosystems and to enable regeneration. However, if communities living near fragile ecosystems do not have access to adequate livelihoods, those ecosystems may be seriously degraded as the communities need to extract from them in order to survive.
- Feelings of awareness and connection to the ocean may be undermined by physical distance of those living terrestrially, or strengthened as people discover the importance of nature in their lives.



# **Community Resilience and Sustainable Livelihoods**

Threats	Opportunities	
Short term		
Threatened livelihoods of small scale fishers and people working in tourism	Development and strengthening of domestic and local networks, markets, and livelihoods	
Long	Term	
Reduced economic activity globally constrains options for livelihoods and limits funding available to support community resilience efforts	Strengthening of local economies	
Reduced opportunities for those lacking digital skills	Diversification of livelihoods	
Increase in teleworking degrades mental health	Increasing teleworking opens up new non-place-bound opportunities for livelihoods	
Disrupted field work and reporting undermine design and implementation of effective interventions supporting resilience and livelihoods	Adoption of digital technologies enable new livelihoods	
	The opportunity presented by COVID-19 increases research and knowledge about what enables community resilience, driving more effective interventions	
	Need to localize field research leads to development of newly skilled local populations able to conduct and make sense of relevant, local research	

### Implications for strategic action

- The changes brought about by COVID-19 in the short and long term will require diversification of livelihoods in communities that depend on the ocean. Areas with strong potential for development of new areas of livelihood for ocean-dependent communities in the areas of research, use of new digital technologies, teleworking opportunities.
- At the same time, the disruption to current ways of working threatens vulnerable people in the short and long term. In particular, those who lack access to resources to transition to new livelihoods, and those lacking digital skills may be left behind
- The massive disruption of COVID-19 provides an unprecedented opportunity to develop understanding of what supports and undermines community resilience.



## Inclusive, Sustainable Economies



### Implications for strategic action

 The short-term and long-term economic impacts of COVID-19 are already changing behaviours and will continue to do. Most countries will take action to support economic recovery. If these economic recovery actions are undertaken in a way that supports increasing equity and sustainability, the net result can be positive, despite reduced revenues. However, if economic recovery is undertaken supporting business as usual, the social and environmental impacts will be felt by vulnerable communities, industries, and ecosystems for a long time to come.



Threats	Opportunities	
Short term		
Disconnection from the ocean for people living far from it	Increased appreciation for nature and the ocean and increased understanding of impacts of encroaching on remote ecosystems	
Reduction in focus on ocean and sustainability agendas	Openness to new ways of seeing and doing	
Long Term		
Reduced resources to support education and awareness raising	People look beyond economic growth to other indicators and contributors to wellbeing. Ideas such as donut and steady-state economy, degrowth, and wellbeing indexes gain traction	
Potential for greater misinformation about ocean and sustainability	With so much time spent using digital technology, people may seek more connection with nature and understand its value	
Long-term disruption to field and lab work and cuts to research reduce understanding of the importance of and connections to ocean sustainability	New research using the "real-world- experiment" of COVID-19 reveals surprising connections and opportunities, increasing understanding and awareness of the importance and value of ocean sustainability	

#### Implications for strategic action

COVID-19 has brought unprecedented behaviour change. With this massive change, policies and practices that previously were unthinkable have become reality. If this moment can be leveraged into further questioning, thinking, and grounded research, it could set the stage for significant progress towards sustainability. However, the massive increase in digitalization is leading to increasing polarization and misinformation, which could undermine progress towards mindset shifts.



Threats	Opportunities
Short term	
Potential deepening of inequalities	Potential for stimulus packages that support increasing equality and sustainability
Reduced availability of development funds	
Long Term	
Economic recovery focuses primarily on economic growth without looking at other factors, exacerbating inequality	Economic recovery focuses on supporting the most vulnerable, reducing inequality
	Increased access to knowledge for those who have digital access
Lack of attention to access to digital technologies can exacerbate exclusion and inadequate participation in dialogue and imbalances in access to data and information	Increase in access and meaningful participation in digital fora makes overall access and engagement more equitable
Disruptions to research and reduced attention to equity and equality issues leads to impeded effectiveness of action.	Increase in research capacity by local and vulnerable community members creates new capacity to reveal and advocate for vital priorities
	Understanding of linkages between equality, equity, gender, race, and other sustainability areas increases.

## Implications for strategic action

- If stimulus and recovery are undertaken without attention to equality and equity, they are likely to have a negative impact in this area. With attention, however, they have tremendous potential to bring about significant progress towards equality and equity.
- Digitization is disrupting the way conversations happen and decisions are made. If care is taken to ensure that excluded and disempowered communities are able to fully and meaningfully participate in influential dialogue, this could increase inclusion significantly. However, if these communities lack the conditions to engage on digital platforms, digitalization will further exacerbate exclusion.
- Needing to localize research could build skills in vulnerable and excluded communities, which could be leveraged for greater influence and improvement in those communities. At the same time, disruptions to current research could degrade current equality and equity interventions.



## **Effective Governance**

Threats	Opportunities	
Short term		
Exclusion of groups and countries who have poor ability to access or use digital platforms for dialogue	Increase in ability to have more frequent and inclusive dialogue about policy and governance	
Long Term		
Deprioritization of conservation and participatory governance, focus exclusively on economic recovery	Diversification of governance approaches as governments find new ways to cope with local governance demands.	
Shrinking space for multilateral action	Constrained resources spur multilateral system reform and improvement	
Decisions that are made are disconnected from grounded reality	Importance of civil society becomes clear due to their role in the crisis	
With governance conversations largely held in digital spaces some groups with poor bandwidth, poor access to technology, or poor access to spaces that enable effective digital engagement are not meaningfully able to participate	People from remote countries and communities have increased access to being engaged in governance conversations	
New norms and ways of engaging in digital spaces make effective influence of governance decisions more difficult	New mechanisms for transparency, accountability, and participation are possible	
Disruptions to research undermine evidence-based decision making	Research is increasingly cross- disciplinary and trans-boundary, and uses the disruption of COVID-19 to generate new insights, which are used to inform governance decisions	
	Governance conversations can be held more quickly and affordably, without requiring investments in and organization of travel	

#### Implications for strategic action

- The rapid acceleration of digitalization has made it possible to organize national and international dialogues and decision making with far less time, cost, and effort than ever before. This can mean that governance dialogues have the potential to be more inclusive. At the same time, in this transition to online dialogue, there is a risk that some groups will not have access to joining or meaningfully participating in governance conversations.
- With shifting priorities and perspectives among influential stakeholders, COVID-19 could spur changes in governance to take more interconnected approaches and tackle the roots of challenges. Alternatively, it could lead to more narrow thinking and focus on economic recovery to the exclusion of other important issues.



# Climate Change Mitigation and Adaptation

Threats	Opportunities	
Short term		
Perception that short term reduction in carbon emissions has reduced climate change, undermining additional efforts	Minor environmental improvement as a result of reduced carbon emissions	
Long Term		
Exclusive focus on economic growth during recovery period leads to increased climate change impacts	Need for economic recovery provides opportunity to recover in ways that support climate change mitigation and adaptation	
Constrained investment landscape results in slow-down in development and adoption of sustainable technologies	Significant reduction in all travel, leads to long-term reductions in associated carbon emissions	
Increasing digitalization feeds greater polarization and continues to drive politically driven climate change discourse	Digitalization increases access to networks and information that can support mitigation and adaptation	
Potential for greater misinformation about climate change	New, relevant research leads to new tools for mitigation, adaptation, and resilience	
Conversations about climate change become disconnected from the grounded reality of people who are most affected, reducing their effectiveness	Global disruption enables systemic rethinking, which could lead to major systemic changes	
Disruptions to climate change monitoring, early warning systems, and learning about adaptation undermine mitigation and adaptation		

### Implications for strategic action

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- While the short-term reduction in travel-related climate change emissions might seem beneficial for climate change, it is possible that in the long-term COVID-19 could slow climate change action by distracting attention from climate change mitigation and fueling further polarization and misinformation. If, however, the disruption of COVID-19 is leveraged to help shift mindsets to take the kind of action that was taken in the face of COVID -19 to stop climate change, it could significantly contribute to climate change mitigation.
- If COVID-19 recovery is designed to advance climate change mitigation and adaptation this can significantly speed progress towards slowed and managed climate change. If, however, COVID-19 recovery is focused exclusively on economic growth, this will be a major setback to fighting climate change.
- While COVID-19 is disrupting climate monitoring and science, it also is enabling new research and learning, which could generate new and impactful solutions.

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Acqua Mater Brazilian Future Ocean Panel Brazilian Institute for Biodiversity - BrBio Coral Triangle Center CORDIO, East Africa Department of Environment, Zanzibar, Tanzania EcoPacific+ Federal Ministry of Environment, Department of Forestry, Utako, Abuja-Nigeria National Environment Management Authority, Kenya The Peopled Seas Initiative, Vancouver, BC Reos Partners Voice of the Oceans This process was collaboratively designed, facilitated, and documented by CORDIO East Africa and The Sustainable Ocean Lab, which is hosted by Reos Partners.

#### Sustainable Oceans Lab

The Sustainable Oceans Lab is hosted by Reos Partners and collaborates with actors working on advancing ocean sustainability to design and deliver activities that can foster collaboration, innovation, and systemic approaches. The aim of the Lab is to foster systemic transformation leading to sustainability for the ocean.

#### Sustainableoceanlab.org



CORDIO is a non-profit research organization, registered in Kenya, with a network of projects, collaborators, and partners that extends across the Indian Ocean and coral reefs globally. We specialise in generating knowledge to find solutions that benefit marine ecosystems and people.

#### <u>cordioea.net</u>



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We operate both globally and locally, with offices in Cambridge (Massachusetts), Geneva, Johannesburg, Melbourne, Montréal, and São Paulo. Our name comes from the Greek "rheos," which means "flow."

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