



## **Pacific Ocean 2020 Challenge**

### *The Pacific Ocean Report: The Costs of Inaction*

#### *Phase 1: Preparing the Report*

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## INTRODUCTION

The Pacific Ocean is under considerable stress from ongoing human activities, according to the *Pacific Ocean Synthesis Report and Scientific Consensus Statement*, recently produced by the Centre for Ocean Solutions (COS) in collaboration with the International Union for Conservation of Nature (IUCN).

The Pacific Ocean spans 165.2 million square kilometers, which is about one-third of the earth's surface area and almost half of the world's ocean area. The Pacific Ocean is home to a diversity of plant and animal species within many complex ecosystems. It is the engine room for Earth's climate, as well as being an integral part of the global economy, politics and security.

It directly supports almost 3 billion people living in Pacific Rim countries and the island nations and territories of the Pacific. The Pacific Ocean directly and indirectly supports the economies of the Pacific Rim and Pacific countries and territories, which in 2008 was valued at about US\$34 trillion, or 57 percent of the world's \$60 trillion gross domestic product (GDP).

Despite such ecological, economic and social importance, the Pacific Ocean is being unsustainably managed. The Pacific Ocean *Scientific Report* presents a comprehensive picture of the threats confronting the Pacific Ocean. These threats are summarized in the *Consensus Statement* (Annex 1), including from:

- **Pollution:** Pollutants from sources, such as sewage, ballast water discharges, fertilizer run-off, plastic marine debris, and urban run-off and dispersed pollutants combine to create one of the most critical classes of ocean threats. These pollutants fundamentally alter the basic ecosystem structure and clog habitats, which all create human health risks, and put stresses on local economies.
- **Habitat destruction:** Productive marine habitats are lost to activities such as destructive fishing practices, poor agricultural land use, inappropriate coastal development, affecting livelihoods of people that depend on ecosystem productivity.
- **Overfishing and exploitation:** Unsustainable resource use reduces fish stocks throughout the Pacific, limiting fish catches and often causing ecological shifts that further reduce biodiversity and productivity, affecting subsistence, artisanal and commercial fishing, reduced income and insecure food supply.
- **Climate change:** Pacific countries have already seen strong effects of ocean warming, changes in ocean circulation and abrupt shifts in precipitation patterns, affecting natural ecosystems and environments as well as all sectors of the economy.

The current rates of environmental change far outpace anything seen in human history. Such changes are likely to accelerate in the near future, as population grows, needs and aspirations change, and as the effects of climate change becomes more pronounced. These new conditions present serious challenges to the Pacific Ocean Community for decades to come. Many habitats may become lost and resources may become depleted or get close to economic extinction. Many coastal areas and islands in and around the Pacific Ocean may become uninhabitable due to sea level rise and coastal inundation. Communities will become exposed to increased risks

due to changing rainfall patterns, decreased fresh water supplies, as well as changes in the distribution of food species. These changes will increase the number of impoverished people and increase the vulnerability of many nation states.

The Pacific Ocean *Scientific Consensus Statement* concluded that continuation of the 'business as usual' practices is a major threat to the health of the Pacific Ocean and its ecosystems, the economies it supports and ultimately the livelihood of people. The *Scientific Consensus Statement* notes "the best science indicates that over the next century we can expect to see dramatic declines in the health of the Pacific Ocean, its ecosystems, and the people that rely on this shared resource, unless concerted and prompt action to address known threats is taken". It also summarized potential solutions and options for the future, including:

- Maintaining ecosystem health and sustainability should be as fundamental a goal as economic development;
- New technologies, innovative market mechanisms, and financial tools that promote adoption of sustainable practices to empower local communities and help maintain the cultural richness of the Pacific Ocean (Island and Rim) nations, and reduce the human footprint on the Pacific;
- Each region within the Pacific must adopt sustainable adaptation strategies for ecosystems and human communities in the face of climate change; and
- Collaboration at many levels, including social, scientific, regulatory, institutional, and information technologies.

## **PACIFIC OCEAN 2020 CHALLENGE – THE PROPOSAL**

While many in the scientific community have signed the *Scientific Consensus Statement*, the more critical challenge is to obtain commitment from Leaders from the Pacific Rim and Island nations to act urgently and collectively address the threats. Those who control public purses need to urgently adopt a governance framework that focuses on the Pacific Ocean as a whole and adopt a governance system that transcends sovereign boundaries, jurisdictions and mandates. In finding a way forward there is an urgent need to adopt a stakeholder based approach to address common problems in a coordinated manner. The stakeholders must uncover underlying causes, identify appropriate solutions and implement a collective action for healthy, vibrant, and economically and ecologically sustainable Pacific Ocean ecosystems and communities.

Several recent experiences in dealing with global issues, such as climate change, the Coral Triangle Initiative, and the Micronesian Challenge, have highlighted many lessons. Included in the lessons learnt are: the importance of adopting a stakeholder based political process and the role of technically robust information in getting political buy-in, and broad-based ownership of the process as well as the solutions. The Stern Report, and developments following it, has highlighted the role and relevance of translating scientific information into economic values and arguments in appealing to the conscience of decision-makers about potential imperatives of inaction and mobilizing resources.

The IUCN in collaboration with its partners is proposing *The Pacific Ocean 2020 Challenge* to focus global attention on the threats to the world's largest natural asset, to build new partnerships and generate the necessary commitments to collectively find solutions to the underlying causes of the declining health of the Pacific Ocean.

**THE VISION:** *A healthy and bountiful Pacific Ocean that sustains livelihoods and cultures of the Pacific peoples and contributes significantly to the health and economic vitality of the world.*

## **THE PROPOSAL**

The IUCN-Oceania is proposing a three-phased approach for tackling the challenges facing the Pacific Ocean, building on the Pacific Ocean Synthesis Report and the Consensus Statement, and other regional initiatives, including the Pacific Islands Regional Ocean Policy.

Phase 1: Preparation of *The Pacific Ocean Report: The Costs of Inaction*

Phase 2: Political endorsement of the *Pacific Ocean Report*

Phase 3: Preparation and endorsement of the *Pacific Ocean 2020 Strategy*

The relationship between these phases is summarized in Figure 1. This proposal only deals with Phase 1.

### **Phase 1: Preparation of *Pacific Ocean Report: The Costs of Inaction***

**Objective:** To prepare *The Pacific Ocean Report: The Costs of Inaction*, focusing on the economic cost of doing business as usual, and benefits of alternative ocean-wide management of the Pacific ocean's ecosystems and resources.

The purpose of the Pacific Ocean Report is to provide necessary motivation to political Leaders of the Pacific Rim countries and the small island states and other stakeholders to take urgent actions towards adopting a Pacific Ocean-wide management approach. A well compiled and compelling body of evidence of the economic cost of staying on the path of 'business as usual', and the benefits of improved Pacific Ocean-wide management, is an integral element of this process.

The nature of issues and key messages to be covered in *The Pacific Ocean Report* are reflected in the attached draft report outline (Annex 2).

### **Preparing the Pacific Ocean 2020 Report: The Plan**

The preparation of *The Pacific Ocean Report* will be managed at two levels: political and technical levels, with policy briefs and advocacy material used to get political endorsement of the key outputs. The interaction between the two levels is illustrated in Figure 1, covering all the three phases.

#### ***Pacific Ocean 2020 Steering Committee***

It is proposed that a Steering Committee be established, with high level representatives from partners willing to play an active role in this initiative, including financial support.

Steering Committee members may include key representatives of co-financial partners, International organizations, NGOs and Representatives from a Government from each sub region (Central Asia, South East Asia, Latin America, Central America, North America, and subregions (such as Australia & New Zealand, Melanesia, Polynesia and Micronesia, and California.

The key role of the Steering Committee will be to:

- provide political oversight of the production of the Pacific Ocean Report: The Costs of Inaction (and Phase 2 and Phase 3)
- appoint a lead author and support team to develop report
- help obtain support for the Pacific 2020 Initiative from key political leaders in the Pacific Rim Countries, including the leaders from the APEC, and the Island Nations, and development partners.

### ***Writing of the Report***

*The Pacific Ocean Report: The Cost of Inaction*, to be published by July 2010. To efficiently produce a quality report, a combination of a strong technical expert team and a supportive secretariat is essential. (Note: the delivery date can be brought forward with effective partnerships and resources.)

#### *The Expert Group*

An Expert Group is recommended to be appointed urgently. This Expert Group will comprise of an overall Project Leader and thematic specialists preferably drawn from the different regions. Ideally, the Project Leader will be an internationally recognized economist, and the respective thematic experts will have recognized standing in at least one of the relevant natural and social disciplines. The Expert Group will ideally also include a person with appropriate experience/expertise in ocean policy and management/regional and or international law on ocean issues.

Collectively, the Expert Group members will have appropriate combination of disciplinary background, thematic knowledge, and experience in ocean management as well as have appropriate experience leading in large/complex projects. Ideally there will also be a balanced regional representation on the Expert Group. The team members will also have excellent writing skills.

The key tasks for the Project Leader will be to oversee the preparation of *The Pacific Ocean Report*. He/She will, in collaboration with the other members of the Expert group:

- identify key gaps in the literature in relation to the economic costs of business as usual in the Pacific Ocean use and management, including international and regional instruments;
- identify additional papers that may need to be commissioned to fill known gaps in knowledge related to sustainable use and management of the Pacific Ocean, including ocean governance; and
- Coordinate the synthesis of key thematic papers and lead the preparation of the draft *Pacific Ocean Report* for peer review.

The Report will highlight the economic cost of business as usual, the value of science-based thematic and cross thematic targets to achieve a healthy, productive and sustainable Pacific Ocean. For each theme, the report must also include specific thematic/ resource case studies drawn from the different regions/ key countries.

A workshop will be held in June 2010 to discuss the draft Pacific Ocean Report, involving key regional and thematic experts and representatives of the Pacific Rim and Oceania countries. Following this workshop, the report will be finalized for endorsement by the Steering Committee and then by the political Leaders.

### *Secretariat*

To support the Expert Group, a small research team of at least three senior research advisers (natural and physical scientists (1 each), economist (1), and marine policy/ environmental lawyer/ international lawyer), plus an officer level social scientist, is also recommended. These researchers, can be based with the IUCN-Oceania office in Suva (or dispersed), will help undertake additional research required by, and support the work of the Pacific Oceans Expert Group.

### ***Key Steps***

Once the Partners have agreed to this initiative, and appropriate resources have been secured, the following implementation plan (Table 1), together with a time line (Figure 2), is suggested. In addition, it is expected the Steering Committee would regularly meet at strategic times as necessary and interact with the Expert Group and the Secretariat.

### ***Post Phase 1: The Pacific Ocean 2020 Strategy***

The preparation of *The Pacific Oceans Report* is but a first step in the journey towards achieving a healthy and dynamic Pacific Ocean. Two more steps, Phase 2 and Phase 3 are suggested.

In the *Phase 2 – Launching, Advocacy and Endorsement, The Pacific Ocean Report*, together with other information, will be used to produce policy briefs and advocacy materials for politicians and other key decision-makers to understand the socioeconomic costs of inaction. The Leaders will be asked to support and endorse a call for a Pacific Ocean 2020 Strategy for creating a healthy and sustainable *Pacific Ocean*. These advocacy material and policy briefs would be targeted at key regional and global foras, such as Pacific Islands Forum leaders meeting, East West Centre Pacific Island Conference, ASEAN, APEC and other UN thematic meetings and a specially convened Pacific Ocean Summit.

The launching will also include a media campaign with champions in each target region who will carry the messages from the report into their regions.

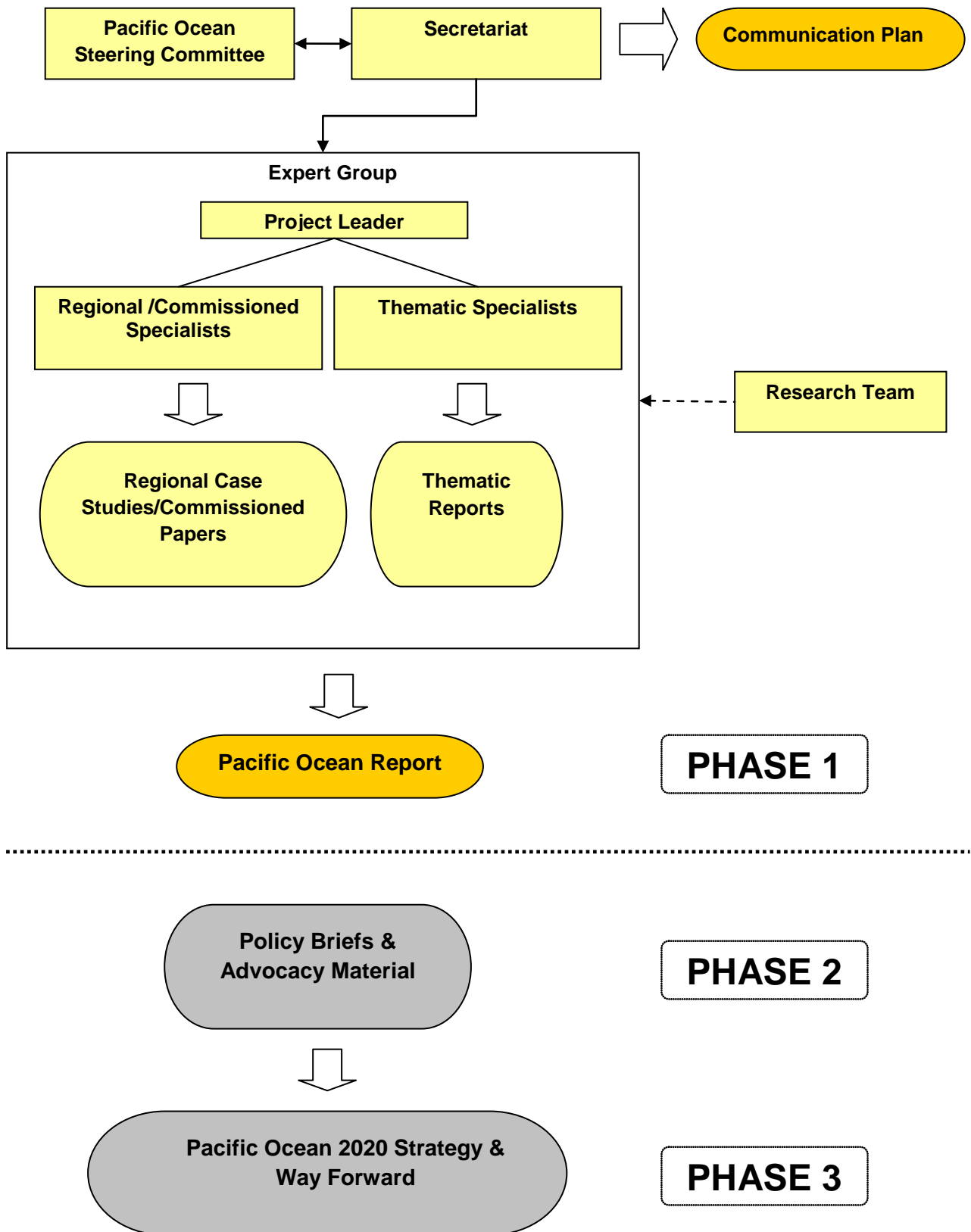
Once endorsed, the Expert Group would prepare, during Phase 3, the *Pacific Ocean 2020 Strategy*, with the assistance of a strategic planning expert/ adviser. The purpose of the *Pacific Ocean 2020 Strategy* is to confirm clear desirable 2020 and beyond targets towards a healthy, productive and sustainable Pacific Ocean and to provide a framework and broad roadmap for the management of resources and ecosystems at all national, regional and inter-regional levels. For the *Pacific Ocean 2020 Strategy* to be effective in achieving its purpose it must target high level outcomes or goals, reflect principles of sustainable development and address stakeholder based adaptive management of resources and ecosystems in the face of changing local and global environments.

The *Pacific Ocean 2020 Strategy* is a long term strategic document, which subsequently will need to be operationalised into action that reflects prioritised strategies for each outcome and a program of initiatives required across the Pacific Rim countries and small island states to achieve the desired targets for 2020.

The desired outcomes of the *Pacific Ocean 2020 Strategy* can only be achieved through coordinated partnerships across nations and regions. Thus, the draft strategy document would need to be discussed in a workshop involving key national and technical stakeholders

before it is finalized. The Leaders and other stakeholders would also agree on a practical way forward for operationalising the Pacific Ocean 2020 Strategy. A Pacific Ocean 2020 Strategy Summit is expected to be held around June 2011.

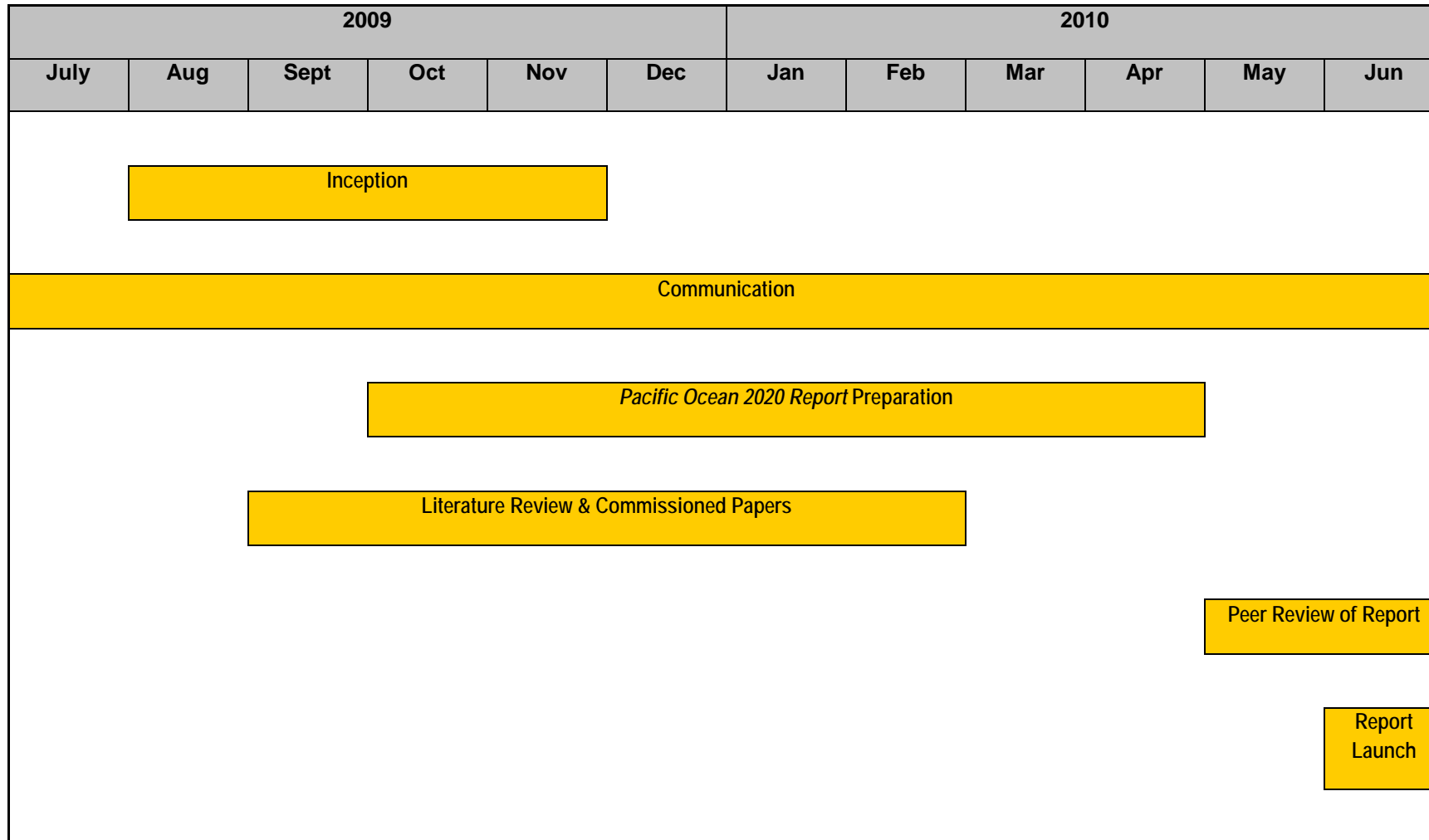
**Figure 1. Pacific Ocean 2020 Initiative – Political and Technical Management Structure**



<b>Table 1: Proposed activities for each of the three Phases</b>		
	<b>Activities(need to confirm with the core planning team)</b>	<b>Time line (need to confirm with the core planning team)</b>
<b>Phase 1 Preparation of the Pacific Ocean Report</b>		August 2009- June 2010
Inception Phase		August-November 2009
	Establish Core Planning Team, comprising representatives from the Center for Ocean Solutions and the IUCN-Oceania	<i>Completed</i>
	Establish Steering Committee (at least initial core team)	
	Appoint Project Leader	
	Establish Expert Group	
	Appoint core research team of Advisers and Project Officers	
	Establish the Pacific Ocean 2020 Secretariat and appoint Communication Specialist and Administration Officers	
Communication	Communication Specialist, in collaboration with the IUCN-Oceania Regional Director and the core planning team, prepare/ finalise and implement the Communication Plan the <i>Pacific Ocean 2020 Initiative</i>	July 2009-July 2010
Report Preparation Framework & Report Outline	<p>Expert Group meet to:</p> <ul style="list-style-type: none"> <li>• develop the outline of the <i>Pacific Ocean Report</i></li> <li>• identify broad areas of issues for which published literature may be scarce and which may need particular attention</li> </ul> <p>(Will be good to do this in person over a meeting scheduled for 1-2 days)</p>	October 2009

Literature scoping and identification of gaps and actions for filling in the gaps	Expert Group and the Research staff to: <ul style="list-style-type: none"> <li>• identify the scope, depth and breadth of published and other literature on the management of the Pacific Ocean, including international instruments of relevance to key natural resources, environmental/thematic management;</li> <li>• identify gaps in literature;</li> <li>• develop TOR for specialized overview economics papers to be commissioned and select experts to prepare these</li> </ul>	September 2009–February 2010
	Commissioned experts prepare their economic reports and specific regional/country case studies	
Pacific Ocean Report	Project Leader and Expert Group prepare the draft Pacific Ocean Report  Peer Review, including Pacific Ocean 2020 Workshop  Report Launch	March 2010 – May 2010  June 2010

**Figure 2: Indicative Timeline for the Pacific Ocean Report**



# **Ecosystems and People of the Pacific Ocean - Threats and Opportunities for Action:**

## **A Scientific Consensus Statement<sup>1</sup>**

### **Executive Summary**

The people from around the Pacific Ocean, from the Arctic to Antarctic, from countries populous and sparse, are witnessing a decline of the Pacific Ocean's vast resources and in the ability of people to use those resources. Pollutants, nutrient and sediment run-off from land, overfishing, habitat destruction, and climate change emerge repeatedly as the major causes. Though this wide-spread similarity of threats across the Pacific Ocean is alarming, it also provides the opportunity to craft solutions that target pan-Pacific problems and therefore provide hope to hundreds of millions of people who rely on the Pacific Ocean and its ecosystems.

### **The Pacific, Covering Half the Global Ocean**

The Pacific Ocean is the largest single geographic feature on our planet. It represents half the world's ocean area, occupies one-third of the earth's surface, and helps support hundreds of millions of people. The Pacific Ocean contains complex ecosystems and supports ocean based economies that produce a wealth of resources for local and global benefit. The Pacific is also the engine room of Earth's climate and the storeroom of its ocean biodiversity. However, Pacific Ocean is not being managed sustainably. A host of interacting impacts threaten the future of the human communities around it, the future of life within the Pacific, and the future of our global climate.

### **A Complex Ocean, a Common Crisis**

The Pacific Ocean supports much of the world's marine and terrestrial biodiversity. Threats to the Pacific's ecosystems and to communities that depend on its bounty continue to intensify as its resources are over-harvested, and sediments, nutrients and chemical pollution pour off the land. Marine habitats ranging from shallow corals, mangroves and sea grasses to previously inaccessible deep sea beds show decaying health. Some species of large tuna, sharks and turtles have experienced significant declines, marking the progressive depletion of top predators and other large species in the Pacific Ocean. These reductions jeopardize economies, local livelihoods, and food security across the globe. Climate change exacerbates these threats and increases the vulnerability of coastal and ocean ecosystems and resources.

Scientists who study Pacific Ocean ecosystems have worked together to summarize the most important environmental threats to the Pacific Ocean and its people, and to identify opportunities for addressing many of these threats. This consensus statement:

1. Identifies and prioritizes key threats to the health and productivity of the Pacific Ocean - many accelerated by climate change – for which there is broad consensus in the scientific community.
2. Highlights the environmental and socioeconomic impacts of these threats.
3. Outlines a 'road map' that identifies available solutions for these broad categories of threats.

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<sup>1</sup>[http://www.centerforoceansolutions.org/data/consensus\\_statement.pdf](http://www.centerforoceansolutions.org/data/consensus_statement.pdf)

Although the threats are serious, it is not too late to take decisive action to prevent almost certain future catastrophes, and that will bolster a critical part of the life of our planet.

### **Threats Facing the Pacific Ocean:**

A review of environmental threats across the Pacific Ocean shows remarkable similarity between the major problems experienced in poor and rich countries alike, in densely settled areas and rural zones, in populous nations and on small islands. Across these diverse areas, three rank as the most pervasive and serious local threats: habitat destruction, pollution from sewage and land run-off, and over-fishing. In addition, climate change imperils all Pacific ecosystems, already creating pulses of warm water, hypoxic dead zones, and acidic conditions. These threats interact with one another to damage natural ecosystems, reduce biological and human economic diversity, destroy productivity, and make human use of the sea more difficult. Each is described briefly below.

Though this summary suggests that the Pacific Ocean faces ecological peril, it also reveals that countries very different in wealth, population, size, and culture face similar problems. The presence of these same dominant threats across the Pacific suggests that effective solutions to these problems will have major beneficial impacts for societies across the Pacific Ocean. These societies form a network of nations and communities connected by the vast Pacific Ocean, joined by their mutual reliance on the ocean, and united in their need and will to repair its damage.

**Pollution:** Organic pollutants from sewage, nutrient pollution from fertilizer run-off, plastic marine debris, toxic dumping and oil spills, urban run-off and dispersed pollutants combine to create one of the most critical classes of ocean threats. Sewage and farm run-off can create dead zones, algal blooms, and acidic areas. Across the Pacific organic pollution can fundamentally alter the basic ecosystem structure, create human health risks, and stresses economies. Plastics and other long-lived industrial products accumulate in vast areas in the North Pacific Gyre and on beaches and shorelines around the Pacific. They clog habitats and strangle seabirds, turtles, sea mammals, and fish, and, in certain areas, outnumber plankton. The rate of breakdown of some chemicals is so slow that they persist for decades. In the case of old fishing gear, nets and long lines continue to fish long after they are lost at sea. Toxic chemicals, oil and run-off debilitate coastal marine life, reduce birth rates, and create hormonal disruption.

**Habitat destruction:** Productive marine habitats are lost to destructive fishing practices, poor agricultural land use, inappropriate coastal development, and industrial wastewater. Destructive fishing, including coastal trawling, the use of dynamite or poisons, and indiscriminate netting, can destroy habitats and reduce fishery productivity. Land use practices that create erosion, or eat up mangroves and smother sea grass beds reduce coastal ecosystem health and impair local productivity. Poorly designed development projects for tourism, roads, housing, urban centres, and aquaculture needlessly destroy coastal habitats across the Pacific and limit livelihoods that depend on ecosystem productivity.

**Overfishing and exploitation:** Unsustainable resource use reduces fish stocks throughout the Pacific, limiting fish catches and often causing ecological shifts that further reduce biodiversity and productivity. Over-hunting of herbivores results in uncontrolled growth of algae and seaweeds, which can smother corals and other bottom-dwelling organisms. Fishing on the high seas for top predators such as sharks has made these creatures rare across the Pacific. International tuna fleets often fish unsustainably in waters controlled by small countries, strip stocks to low levels and move on. By-catch further reduces fish stocks because large numbers of non-target species with low economic return are discarded as waste back into the ocean. Artisanal and recreational fishing suffer when local needs outstrip local supply, causing misplacement of fishing activity, reduced income and insecure food supply. Habitat destruction exacerbates overfishing by reducing fishable area and productivity.

**Climate change:** Pacific countries have already seen strong effects of ocean warming, changes in ocean circulation and abrupt shifts in precipitation patterns. The bleaching and subsequent death of reef-building corals caused by warm water pulses have destroyed reef ecosystems, or required decades to recover. Shifts in ocean and atmospheric currents have created massive dead zones or changed migration patterns of whales and seabirds. Some ocean areas have already acidified to levels known in laboratory studies to cause harm to ocean life. In addition, decreasing pH levels due to CO<sub>2</sub> acidosis are shifting the ecological balance of

marine plankton and bottom dwelling species that form calcium skeletons. The rates of current environmental change far outpace anything seen in human history, and are likely to accelerate in the near future. These new conditions present serious challenges to the Pacific Ocean Community for the next decades or centuries. Many areas of the Pacific Ocean may become uninhabitable due to sea level rise, coastal inundation, shifting rainfall, collapse of fresh water supplies, or changes in the migration patterns of food species. These changes will increase the number of impoverished people and reduce the stability of many nation states.

**Multiple stressors multiply harm:** When marine life is subjected to multiple stressors, such as pollution, habitat destruction, over-fishing, and changing climate, populations of ecologically and economically important species can collapse. From coral reefs to kelp forests to cold water deep seas, an increase in harm and a decrease in growth and reproduction can wipe out once productive communities. In this sense, global climate change is coming at the worst possible time, when many communities around the Pacific – both human and ecological – are threatened by other powerful problems.

### **Solutions and options for a better future**

**Maintaining ecosystem health and sustainability should be as fundamental a goal as economic development.** While there are currently no solutions in place to solve all these problems across the Pacific Ocean, a set of sensible approaches to pervasive environmental problems can be deployed in a concerted way to limit and even reverse environmental harm, returning Pacific ecosystems and communities to greater health. Overall, solutions must significantly reduce pollution from human sewage, sediment and run-off from poor land use practices, flows of debris and toxic material into the sea from point and nonpoint sources, and unsustainable extraction of marine organisms. Major reductions (some up to 95% of current rates) are probably required in discharges of nutrients and sediments from land to sea.

**New technologies, innovative market mechanisms, and financial tools that promote adoption of sustainable practices can empower local communities, help maintain the cultural richness of the Pacific Ocean nations, and reduce the human footprint on the Pacific.** In many cases, the straightforward response to an environmental problem (such as pollution or habitat destruction) might be simply to prohibit the human activities that cause the pollution or habitat loss. But for large and complex problems such as those that span the whole Pacific, learning *how* to stop or alter the activities that give rise to these problems is the key to a set of enduring environmental solutions. Strategic changes that can lead to effective solutions include incorporation of ecological principles in economic decisions, use of financial and market instruments such as environmental bonds, legacy trusts, catch share programs, and tax systems to create incentives for activities that promote rather than degrade ecosystem health, and environmental education across the age spectrum to build capacity for local populations in ecosystem and economic management.

**Climate change mitigation is a global task, and yet a united Pacific can be instrumental in promoting frank global dialogue about establishing and achieving mitigation targets.** The long term health of Pacific ecosystems and human communities across the ocean requires aggressive mitigation of global greenhouse gas emissions. Key to the solution is the observation that the Pacific contains some of the highest and lowest emitting countries.

**In addition to mitigation, each region within the Pacific must adopt sustainable adaptation strategies for ecosystems and human communities in the face of climate change.** Though these strategies will need to be locally tailored, they can draw on similar principles to solve common problems. For example sea level rise will impose different challenges for highly urbanized coastal communities than for rural areas, but both geographies can consider a common range of adaptation options to achieve some protection for vulnerable human settlements and ecosystems.

**Effective and enduring solutions require capacity-building within the Pacific Ocean Community and integrated problem solving.** The solution to the spatial and economic challenges in sustainable management of the Pacific Ocean lies in collaboration at many levels, including social, scientific, regulatory, institutional, and information technologies. To help promote sustainable change in how communities across the Pacific interact with their common ocean, we propose a new executive institution – one that joins banking, industrial, ecological, and educational expertise into a single collective enterprise that can help build capacity within and advise Pacific nations and evaluate overall progress. Combining financial, livelihood,

conservation, and educational goals and functions into a collaborative institution would encourage managers and decision makers to examine and address issues across the larger whole, and cultivate the integrated ecological, economic and education understanding and problem solving that progress requires. Pacific Ocean countries need to coordinate their expertise, creating open access online information systems, for example, for education, research, and resource management. A Pan-Pacific Century Trust could provide economic resources and management knowledge for the entire Pacific community, and could deliver education and expertise in how to apply sustainability principles to economic development.

**We must act now.** The best science indicates that over the next century we can expect to see dramatic declines in the health of the Pacific Ocean, its ecosystems, and the people that rely on this shared resource, unless concerted and prompt action to address known threats is taken. Identifying common problems, uncovering their underlying causes, and addressing them now may allow the Pacific nations to enter the next century as world leaders in the creation of vibrant, intact and highly functioning economically and ecologically sustainable communities.

## Annex 2 Suggested Outline of the Report

### *The Pacific Ocean Report: The Costs of Inaction*

**Report based on already existing synthesis documents and analysis (45-60 page report)**

#### **Executive Summary: Key Findings of Report** (3-5 pages)

#### **Section 1: State of the Pacific Ocean - connecting Pacific Ocean Health and Environmental and Socioeconomic Impacts**

- Brief synthesis and overview of meta-analysis findings on Pacific Ocean health and threats, including regional diversity of issues(5-10 pages)
- Brief synthesis of the economic value of Pacific Ocean resources and ecosystem with a focus on key economic sectors (such as tourism, wild and culture fisheries, and transport) and covering key thematic issues ( such as food security; livelihood; human health; ecosystem health; and ecosystem services), including regional information where possible(10-20 pages)

#### **Section 2: State of the Pacific Ocean Management**

- Brief overview of international and regional instruments relevant to the management of resources and ecosystems of the Pacific Ocean, and gaps and areas that need strengthening for improved governance of the Pacific Ocean, focusing on the key categories of threat identified by the meta analysis. (5-10 pages).

#### **Section 3: Costs of business as usual and alternative action scenarios** (20-30 pages with graphics)

This section will present three different scenarios of management, for the entire Pacific Ocean – Insular and Rim countries and territories, based upon already existing data and analysis. A different set of scenarios for management will be defined for each of the broad category of threats, addressing ‘root causes. Where possible to provide regionally disaggregated information

These three scenarios will show the economic, social, and environmental consequences and vulnerabilities of various coastal and ocean environmental management and conservation effort levels. A high level cost and benefit analysis based on already existing analysis, will be conducted for each scenario, taking into account accepted climate change predictions. (This may have to be primarily qualitative for some regions due to limited data and empirical analysis)

- Scenario 1: Business as usual
  - Define business as usual
  - Costs of ‘Business as Usual
  - Present consequences 5, 20, and 50 years in the future taking into account climate change
  - Estimate economic costs/benefits under Alternative Management Scenarios

- Scenario 2: Moderate Increase in Action
  - Define moderate action<sup>2</sup>
  - Present consequences 5, 20, and 50 years in the future taking into account climate change
  - Estimate costs/benefits
- Scenario 3: Aggressive Increase in Action, proactive action taken to address impacts around and across the Pacific
  - Define aggressive action
  - Present consequences 5, 20, and 50 years in the future taking into account climate change
  - Estimate costs/benefits

#### **Section 4: Solutions and Next Steps** (7-12 pages)

This section will present broad categories of solutions and next steps for call to action and the Pacific 2020 Strategy

- Outline 4 key threat areas, as identified in consensus statement and root causes from the regional reports, and based on scenarios level of action needed, present examples of activities, goals/ targets for the Pan Pacific Community taking into account already existing frameworks, instruments and building on them.
- Discuss key themes for creating solutions, identify achievable targets and mechanisms for achieving targets, with an emphasis on building commitment, capacity, and a Pacific Ocean community with aligned goals and objectives.

The key themes are:

- Improving the understanding of the Pacific Ocean.
- Sustainably developing and managing the use of the resources of the Pacific Ocean.
- Maintaining the health of the Pacific Ocean.
- Promoting the peaceful use of the Pacific Ocean.
- Improving the governance of the Pacific Ocean.
- Creating partnerships and promotion of cooperation.

#### **References:**

A complete list of references

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<sup>2</sup> We think defining moderate and aggressive action, as noted in scenario 3, is really important and a big challenge as this is what could lead to setting targets in the future for the region.