


PACIFIC ISLANDS REGIONAL MARINE SPECIES PROGRAMME 2008–2012

SPREP
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PACIFIC ISLANDS REGIONAL MARINE SPECIES PROGRAMME 2008–2012

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ABBREVIATIONS & ACRONYMS

ABS	access and benefit sharing
CBD	Convention on Biological Diversity
CITES	Convention on International Trade of Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CMT	customary marine tenure
DAP	Dugong Action Plan
DWFN	distant-water fishing nation
EIA	environmental impact assessment
EEZ	exclusive economic zone
FAO	Food and Agriculture Organization of the United Nations
FFA	Pacific Islands Forum Fisheries Agency
FFEM	Fonds Français pour l'Environnement Mondiale (French Global Environment Facility)
IAC	Inter-American Convention for the Protection and Conservation of Sea Turtles
IFAW	International Fund for Animal Welfare
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer (French Research Institute for Exploitation of the Sea)
IGO	inter-governmental organisation
IOSEA	Indian Ocean–South-East Asian Marine Turtle Memorandum of Understanding
IPR	intellectual property rights
IUCN	The World Conservation Union (International Union for the Conservation of Nature)
IUU	illegal, unreported and unregulated fishing
IWC	International Whaling Commission
MMA	marine managed area
MOU	memorandum of understanding
MPA	marine protected area
MTAP	Marine Turtle Action Plan
NBSAP	National Biodiversity Strategic Action Plan
NCSA	National Capacity Self Assessment
NGO	non-governmental organisation
NMFS	United States National Marine Fisheries Service
NSDS	National Sustainable Development Strategies
PICTs	Pacific Island countries and territories
PIR	Pacific Islands region
RFMOs	regional fisheries management organisations
RMTCP	Regional Marine Turtle Conservation Programme
SPC	Secretariat of the Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SPTO	South Pacific Tourism Organisation
SPWRC	South Pacific Whale Research Consortium
TK	traditional knowledge
TREDS	Turtle Research and Monitoring Database System
TRM	traditional resource management
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
USP	University of the South Pacific, Fiji
WCPFC	Western and Central Pacific Fisheries Commission
WDAP	Whale and Dolphin Action Plan
WDCS	Whale and Dolphin Conservation Society
WPRFMC	Western Pacific Regional Fishery Management Council

PACIFIC ISLANDS REGIONAL MARINE SPECIES PROGRAMME 2008–2012

OVERALL VISION

The Marine Species Programme of the Secretariat of the Pacific Regional Environment Programme (SPREP) outlines a regional strategy for the cooperative conservation and management of dugongs, marine turtles, whales and dolphins. The strategy, which will be implemented through Action Plans during 2008–2012, will enable Pacific Islanders to take a primary role in achieving the following vision:

A healthy Pacific Ocean that sustains populations of whales, dolphins, dugongs and marine turtles, and meets the aspirations of Pacific Island peoples and protects their natural and cultural heritage.

INTRODUCTION

The Pacific Islands region that is served by SPREP covers 32 million km^2 and is in the middle of the largest continuous marine habitat on the planet, the Pacific Ocean. This region is home to a diverse range of large marine animals, including cetaceans, sirenians and marine turtles. Over half of the world's known species of cetaceans are found in the region. The area also supports the world's largest remaining populations of dugongs, and green, hawksbill and loggerhead turtles.

Dugongs, turtles, whales and dolphins play a significant ecological role in the functioning of coastal and oceanic habitats. They are widely regarded as flagship species for Pacific marine ecosystems and often feature prominently in promotional tourist materials for many Pacific Island countries and territories (PICTs). Therefore, the continuing health of populations of whales, dolphins, dugongs and turtles is essential to maintaining a healthy Pacific Ocean.

These marine creatures are also recognised as being a fundamental element of Pacific Islanders' culture and heritage. Many Pacific Island cultures have legends and traditional uses of marine mammals and turtles, which indicates the importance of these creatures to people's identities, way of life and heritage.

Most of these marine species are long-lived and have low reproductive rates, making them vulnerable to overharvesting. Dugongs and turtles have been hunted extensively in the region, both for traditional and subsistence purposes, and more recently for commercial gain. They are now considered endangered throughout their range and many small and/or isolated populations are vulnerable to extinction. Dolphins have also been sought after for food, often through local drive hunts. These species remain a highly valued food item (meat and oil) and medicine (oil), and their shells, skin and bones are often used for jewelry and ornaments. Dugong bone and the teeth of small cetaceans have been important in certain ceremonies (e.g. marriages and funerals) in New Caledonia, Papua New Guinea (Manus Province), and the Solomon Islands (Malaita). In Fiji, *tabua* (sperm whale teeth) are a highly valued commodity in cultural ceremonies and exchanges.

While subsistence hunting of dugongs and turtles may have been sustainable in the past, the combination of increasing human populations and the introduction of new harvesting technologies (e.g. outboard motors and gill nets) has severely impacted several species, resulting in fragmentation of populations and even local extinctions.

For many species of large whales, commercial whaling during the nineteenth and twentieth centuries, largely by countries from outside the region, has reduced the breeding populations of South Pacific whales to extremely low levels, possibly to local extinction for some species. For all marine species, there is a growing awareness of their non-consumptive values and benefits to local communities (e.g. boat or shore-based tourism activities, such as whale watching).

Most of these species have distribution and migratory pathways that extend across and beyond international boundaries. Thus, Pacific Island countries have a shared responsibility to ensure the recovery and maintenance of viable populations of these species, including under the provisions of various international agreements such as the Convention on Biological Diversity (CBD), Convention on the Conservation of Migratory Species of Wild Animals (CMS), and the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES).

In recent years, there has been a growing awareness of the increasingly threatened status of many of these iconic species and of the need for a concerted and coordinated approach among Pacific Island nations to arrest and reverse declining population trends.

CONSERVATION CHALLENGES

In addition to the above-mentioned threats to these species, the overarching problems and challenges surrounding conservation efforts in the Pacific Islands region (PIR) include:

- Lack of data and information, including basic population parameters and long-term data sets;
- Absence and lack of ongoing and long-term research, survey and monitoring programmes;
- Limited public awareness and education programmes;
- Limited in-country skills / capacity to provide leadership in marine species conservation management;
- Limited national management mechanisms to protect marine animals and their habitats;
- Lack of resources, including accessing sustained funding; and
- Limited information exchange, linkages and collaboration.

The implementation and coordination of the 2003–2007 Regional Marine Species Programme Action Plans were significantly constrained by the lack of consistent funding for the SPREP Marine Species Officer position, whose job is to facilitate implementation of the Action Plans. This is addressed in the 2008–2012 Action Plans by the development of a resourcing strategy. Despite this situation, substantial progress has been achieved.

Strategic Approach

Pacific Island peoples are stewards of their marine environment and depend on these resources for their way of life. The 2008–2012 Marine Species Programme supports them by:

- Identifying and mitigating threats;
- Promoting customary management practices and traditional stewardship;
- Improving the status of marine species and their habitats;
- Ensuring that marine species populations recover and continue to fulfill their ecological roles;
- Fostering the sustainable use of marine species, including non-consumptive uses (e.g. tourism);
- Building capacity and securing human and financial resources;
- Enhancing cooperation and coordinated action at national, regional and international levels; and
- Increasing knowledge, awareness and understanding of these species and their habitats, and their ecological and cultural values.

ROLES AND RESPONSIBILITIES

These Action Plans and their implementation are the collective responsibility of SPREP member states[1], the SPREP Secretariat, partner non-governmental and intergovernmental organisations, and private sector organisations.

COMMITMENT, FUNDING AND HUMAN RESOURCES

The SPREP Secretariat will continue to play an important role in facilitating the exchange of information, coordinating efforts, building capacity, securing resources, and regularly monitoring and reporting on Action Plans implementation.

It is recognised that, beyond existing in-country capacity, significant additional resources will be needed to achieve the aims and objectives of these Action Plans. We in the Pacific Islands region call upon all donor partners and supporters to assist in providing the necessary resources for implementing the Action Plans at regional and national levels.

NETWORKING, REPORTING AND INFORMATION MANAGEMENT

The SPREP Secretariat will take the primary responsibility for networking, information management, archiving and regional reporting. It will continue to rely on reporting and information from members and partners to achieve this.

[1] SPREP members include: American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States of America, Vanuatu, and Wallis and Futuna.

IMPLEMENTATION AND COORDINATION

OBJECTIVE: Ensure successful Marine Species Programme implementation through effective and sustained management, coordination and communication

ACTIONS ↓	LEAD ↓	PRIORITY ↓
1 Provide sustained regional and national facilitation and coordination by:		High
▪ Ensuring continuation of the Marine Species Officer position within SPREP;	SPREP	
▪ Facilitating the establishment of an additional SPREP officer to be recruited at the associate programme officer level or through other partnership arrangements;	SPREP	
▪ Nominating appropriate national officers for implementation and reporting of the Marine Species Programme Action Plans at the national level.	members	
2 Build and strengthen dugong, marine turtle, whale and dolphin networks, consisting of SPREP members and partners including intergovernmental organisations (IGOs), non-governmental organisations (NGOs), donors, technical experts and other interested parties by:		High
▪ Establishing list servers;	SPREP	
▪ Maintaining a contacts database;	SPREP	
▪ Disseminating the Action Plans network list of contacts on a regular basis;	SPREP	
▪ Ensuring SPREP has updated information;	members	
▪ Encouraging in-country networks;	members	
▪ Facilitating access to information and resources including scientific and technical reports.	SPREP / partners	
3 Develop and implement a Resourcing Strategy (including financial and human resources and associated capacity building required) for the Action Plans by:		High
▪ Identifying and securing the human and financial resources and partnerships required for the management and coordination of the Action Plans;	SPREP	
▪ Developing proposals and securing resources for the implementation of Action Plan priorities;	SPREP / members / partners	
▪ Encouraging interested parties, individuals and agencies to develop and implement project proposals consistent with Action Plans and national priorities of target countries.	SPREP / members / partners	
4 Develop and implement a Communication Strategy that ensures effective outreach and support at the national, regional and international levels by:		High
▪ Developing a communication outreach package in consultation with SPREP members and partners;	SPREP / members	
▪ Providing training for national coordinators to effectively use and communicate information, including support for language translation;	SPREP / partners / members	
▪ Ensuring target audiences include politicians, local communities, donor agencies, IGOs, NGOs, technical experts;	members	
▪ Promoting understanding and supporting input from communities and decision-makers.	members	
5 Develop and implement monitoring, evaluation and reporting mechanisms by:		High
▪ Developing a streamlined and simple reporting format for SPREP members and partners, drawing from lessons learned from other reporting requirements. Further developing this as an online reporting mechanism;	SPREP	
▪ Incorporating information from Action Plans reports into other national reporting mechanisms, where possible and appropriate (e.g. Convention on Biological Diversity–CBD, Convention on the Conservation of Migratory Species of Wild Animals–CMS, United Nations Framework Convention on Climate Change–UNFCCC, Convention on International Trade of Endangered Species of Wild Fauna and Flora–CITES, and United Nations Convention to Combat Desertification–UNCCD);	members / SPREP / partners	
▪ Preparing an annual report on Action Plans implementation for SPREP meetings, with a focus on in-country progress, including successes and constraints, and also implementation of arrangements under CMS;	SPREP	
▪ Undertaking mid-term and final review of Action Plans implementation, including lessons learned, and providing status report to SPREP members and partners.	SPREP / members	

ACTIONS ↓	LEAD ↓	PRIORITY ↓
6 Develop and maintain an information management system that includes databases — covering lessons learned, achievements and investments — that is accessible and promotes information sharing by: ▪ Maximizing online access to Action Plans information and databases; ▪ Securing archiving of reports and information through the SPREP Library and Information Centre; ▪ Ensuring the information management system is readily available and easily accessible; ▪ Ensuring that any restrictions on source information should be respected.	SPREP SPREP / members SPREP SPREP SPREP	High
7 Promote the integration of Marine Species Programme and Action Plans priorities into national strategies, plans and projects as appropriate and relevant to national needs.	members	High
8 Promote the integration of Marine Species Programme and Action Plans priorities into regional and international strategies, plans and projects as appropriate and relevant to regional and international needs.	members / SPREP / partners	High
9 Facilitate an informal and open-ended technical working group, comprising scientists, policy-makers, and managers, to provide technical advice on Action Plans implementation as required. As part of this technical working group, promote linkages with the relevant groups of the IUCN Species Survival Commission.	SPREP	High
10 Continue to foster collaboration with the CMS Secretariat.	SPREP	High
11 Further national, regional and international collaboration and cooperation by: ▪ Initiating dialogue and collaboration with the fisheries, tourism and transport sectors at the regional and national levels in relation to information, awareness raising and management actions to address impacts; ▪ Fostering interagency collaboration at the national level and engagement with the private sector; and ▪ Fostering NGO partnerships at the national, regional and international levels.	 members members members / SPREP / partners	High
12 Identify and develop appropriate responses for the conservation needs of other marine species for SPREP members' consideration.	SPREP / partners / members	Medium

INDICATORS

- Dugong, marine turtle, whale and dolphin networks established / strengthened and fully operational.
- Resource Strategy in place and implemented.
- Communication Strategy in place and implemented.
- Monitoring, evaluation and reporting mechanisms in place and implemented.
- Information management system in place and operational.
- Marine Species Programme priority actions integrated into national, regional and international plans and projects.

Below: Underside of *Dugong dugon* –
subject appears to be "rolling" on the sea floor.
Alberto Scarani, Source: Wikimedia Commons

DUGONG ACTION PLAN 2008–2012

PACIFIC ISLANDS REGION

GOAL: To maintain and improve the status of dugong populations and their habitats, in keeping with the traditions of the people of the Pacific Islands range states.[2]

INTRODUCTION

The dugong (*Dugong dugon*) is the only member of the family Dugongidae and the only strictly herbivorous marine mammal. Dugongs are long-lived (some live for more than 70 years) and are slow breeders. Dugongs first breed when they are between ages 6 and 17 years, and suckle their young for up to 18 months. A female dugong produces only one calf every 2.5–7 years, depending on her food supply. Adult survival is the most critical life history parameter for dugongs, and populations can only be sustained through low levels of human-induced mortality.

Dugongs spend most of their time feeding on seagrass beds in shallow waters less than 10 metres deep. Because they are dependent on seagrass, dugongs play an important ecological role in the structure of seagrass ecosystems. If a particular seagrass habitat is lost, dugongs may postpone their breeding and move to another area. Dugongs are capable of undertaking long-distance movements of up to several hundred kilometres in two to three days.

Because of their life history characteristics, dugong populations are slow to recover when they are lost from a particular area. Furthermore, without the influence of dugong grazing activities, seagrass communities in an area may change to less favourable species for dugongs, thus discouraging their return.

Dugongs are a highly significant subsistence food source, and are an important element of many Pacific Island cultural traditions.

SPECIES DISTRIBUTION

Dugongs have a large range that spans 140,000 km of coastline across 48 countries and territories, and includes tropical and subtropical coastal and island waters from East Africa to Vanuatu.

It is generally believed that throughout much of its range, the dugong is represented by relict populations separated by large areas where its numbers have been greatly reduced or already extirpated. The only remaining large populations of dugongs are those in northern Australia, southwestern Papua New Guinea, and the Arabian Gulf.

[2] "Range" as defined by the Convention on the Conservation of Migratory Species of Wild Animals, means all the areas of land or water that a migratory species inhabits, stays in temporarily, crosses at any time on its normal migration route. "Range State" in relation to a particular migratory species means any State that exercises jurisdiction over any part of the range of that migratory species, or a State, flag vessels of which are engaged outside national jurisdictional limits in taking that migratory species.

Dugongs occur in six countries and territories in the Pacific that are members of SPREP: Australia, New Caledonia, Palau, Papua New Guinea, Solomon Islands and Vanuatu. Palau's dugong population is considered to be the most isolated in the world and unlikely to be supplemented by recruitment from any other area. According to one report, "The Vanuatu Archipelago is the eastern limit of the dugong's range. Seagrass beds become less frequent and less diverse progressing eastwards across the Pacific, placing a natural barrier to the eastward extension of the dugong's range."[3]

Because they are highly mobile, dugongs are capable of moving across the exclusive economic zones of different countries.

SPECIES STATUS

The 2006 IUCN Red List classifies dugong as vulnerable to extinction on a global scale. All dugong populations are also listed on Appendix 1 of CITES, which prohibits commercial international trade of the species. Dugongs are additionally listed in Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), which means they are considered to have an unfavourable conservation status and require international agreements for their conservation and management.

In the Pacific Islands region the status of dugong populations is generally unknown (with the exception of the Torres Strait) but of concern, particularly in Palau where the population is likely to be facing extinction.

TRADITIONAL KNOWLEDGE AND CUSTOMS

The dugong plays a significant role in the culture of Pacific Island communities. In some societies, the dugong is considered to be an important totem (because of its large size and strength), and features prominently in stories and legends. The activities associated with hunting dugongs and the preparation of the meat also have great significance and are an expression of long cultural traditions.

Specific parts of the dugong are used in customary events (e.g. weddings, funerals and traditional feasts) as well as for making traditional items, including drums, spoons, scrapers, hooks, laces and necklaces. Although dugong meat is a traditional and sometimes highly prized meat in some societies, some cultures place traditional taboos against killing them.

INCOME GENERATING OPPORTUNITIES THROUGH ECO-TOURISM

Similar to other eco-tourism activities that are based on marine animals (e.g. whales and dolphin watching), dugong watching and "swim with dugongs" operations have been established in several countries, including Australia, the Philippines, and Vanuatu.

THREATS

Threats to dugong have been broadly categorised into two areas: those that cause direct mortality to dugongs, and those that result in loss or degradation to their habitat.

[3] Dugong Status Report and Action Plans for Countries and Territories. UNEP / DEWA / RS.02-1. ISBN 92-807-2130-5. Compiled by Helene Marsh, Helen Penrose, Carole Eros and Joanna Hugues.

Threats that cause direct dugong mortality include:

- Harvesting for food, medicine and artefacts: Given the low numbers or unknown status of dugong populations in some areas, this is perhaps the greatest threat in the Pacific Islands region. For most countries, it is unknown whether the level of harvest is sustainable, and there is concern over the use of modern equipment for hunting them.
- Incidental by-catch, destructive fishing methods and vessel strikes: The incidental drowning of dugongs caught in fisheries gear, such as nets, is considered to have contributed to the decline of dugongs in some areas of the Pacific range states. The increase in vessel traffic also increases the likelihood of dugongs being killed by vessel strikes.

Because of their dependence on seagrasses, dugongs are very vulnerable to habitat loss and disturbance. Threats to their habitat include:

- Coastal development including human settlement: These activities increase sedimentation and turbidity in coastal waters where seagrasses are found. Sedimentation and turbidity not only smother seagrasses, but also reduce the amount of light reaching them, resulting in the degradation of seagrasses and a reduction in their density and productivity.
- Agricultural pollution: Herbicide runoff from agricultural activities also presents a potential risk to seagrass habitats.
- Nutrient runoff from land: This causes nutrient enrichment, which leads to increases in epiphytic growth in the water column, which in turn results in reduced light levels for seagrasses. Nutrient enrichment may also change the community structure of seagrass habitats.

THEMES AND OBJECTIVES

THEME	OBJECTIVE
▪ Education and Awareness	Raise awareness about the importance of dugongs and their habitats.
▪ Habitat Protection	Enhance protection of dugong foraging and breeding habitats.
▪ Management	Improve protection mechanisms for dugongs and their habitats.
▪ Traditional Knowledge, Customary Marine Tenure and Traditional Resource Management	Recognise the value of preserving and protecting the integrity of traditional knowledge, traditional resource management, and customary marine tenure, and incorporate these into management practices.
▪ Capacity Building	Build in-country capacity to enhance dugong management.
▪ Threats — Key Dugong Conservation Issues	Reduce direct and indirect causes of dugong injury and mortality.
▪ Research and Monitoring — Information and Databases	Improve the current understanding of dugong population status through research and monitoring.
▪ National, Regional, and International Collaboration	Enhance national, regional and international cooperation.
▪ Human and Financial Resources	Ensure ongoing and efficient facilitation of implementation, management and coordination of the Dugong Action Plan.

THEMES, OBJECTIVES AND PRIORITY ACTIONS

THEME 1 • EDUCATION AND AWARENESS

OBJECTIVE → Raise awareness about the importance of dugongs and their habitats.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
1.1 Provide assistance to the Pacific Islands range states to enable them to deliver effective and appropriate educational programmes to the public.	SPREP / partners	High
1.2 Increase community awareness of threats to dugongs and the need for the conservation of dugongs and their habitats.	range members[4] / partners	High
1.3 Encourage and support the incorporation of dugong life history information and conservation issues into school curricula and awareness programmes.	range members / partners	Medium
1.4 Facilitate and encourage networking and linkages to community monitoring groups, such as Seagrass Watch (http:// www.seagrasswatch.org) and other NGOs in information exchange.	SPREP / range members	Medium
1.5 Create a dugong webpage on SPREP's website, and include *inter alia* links for educational materials on dugongs.	SPREP	High
1.6 Declare 2010 as the Pacific Year of the Dugong and support the planning, development and implementation of in-country and regional range state conservation campaigns.	SPREP / range members / partners	Medium
1.7 Encourage the use of informal / traditional methods of education within villages utilising appropriate local knowledge custodians / competent village authorities, as resource people.	range members / partners	High
1.8 Work with watercraft users to raise awareness about the importance of dugongs and their habitats in order to encourage responsible boating behaviour (e.g. slower speeds, not anchoring in seagrass areas).	range members / partners	High
1.9 Develop a code of practice for responsible watercraft operation to avoid adverse effects on dugongs.	SPREP / partners / range members	High

INDICATORS

- Appropriate educational programme delivered to Pacific Island dugong range states.
- Information sheets on threats produced, translated where necessary, and distributed to communities and all relevant stakeholders.
- Dugong conservation issues and information included in school programmes in three Pacific range states.
- Dugong webpage established on SPREP website by 2010 for the Pacific Year of the Dugong campaign.
- Watercraft code of practice developed and implemented.
- Year of the Dugong campaign celebrated in 2010.

[4] Range member: a SPREP country or territory that is a range state of dugongs

THEME 2 • HABITAT PROTECTION

OBJECTIVE → Enhance protection of dugong foraging and breeding habitats.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
2.1 Facilitate and support the review of all levels of relevant legislation to incorporate habitat protection for dugongs.	range members	High
2.2 Identify and map areas of dugong habitat, particularly seagrass beds, taking note of their condition (e.g. intact, partially disturbed, degraded).	range members / partners	High
2.3 Encourage and support the establishment of measures, including customary measures, to protect and conserve dugong habitats.	range members / partners	High
2.4 Assess the risk of, and develop measures to mitigate against, the degradation of dugong habitats.	range members / partners	High
2.5 Where appropriate, rehabilitate degraded dugong habitats.	range members / partners	Medium
2.6 Promote water quality protection and, where possible, monitor the impacts of land-based and maritime pollution, including but not limited to, marine debris and sedimentation, which may adversely affect dugongs and their habitats.	range members / partners	Medium
2.7 Seek opportunities to strengthen the enforcement and awareness of existing laws against the use of poisonous chemicals and explosives in the marine environment.	range members / partners	Medium

INDICATORS

- Legislation review completed and other measures for dugong habitat protection incorporated.
- Important dugong habitat, particularly seagrass beds, mapped in at least two Pacific Island range states.
- Risk of habitat degradation assessed in at least two Pacific Island range states.
- A five-year monitoring programme of dugong habitat initiated in one Pacific Island range state.

THEME 3 • MANAGEMENT

OBJECTIVE → Improve protection mechanisms for dugongs and their habitats.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
3.1 Encourage the establishment of legislation that protects dugongs and their habitats, while recognising and promoting existing traditional management systems.	range members	High
3.2 Review and strengthen, where necessary, domestic policies and laws that improve dugong conservation (e.g. environmental impact assessment [EIA] processes for coastal development).	range members / partners	High
3.3 Seek opportunities to strengthen protection mechanisms for dugongs and their habitats (e.g. marine protected area [MPA] development, traditional closures, boat speed restrictions).	range members	High
3.4 Strengthen enforcement and engage local communities in monitoring, and surveillance and reporting of illegal activities.	range members	High

INDICATORS

- Legislation and policies that recognise appropriate traditional management systems to protect dugongs and their habitats in place in all Pacific Island range states.
- Mechanisms such as MPAs and EIA processes in place, including enforcement of laws relating to dugongs.

THEME 4 • TRADITIONAL KNOWLEDGE, CUSTOMARY MARINE TENURE AND TRADITIONAL RESOURCE MANAGEMENT

OBJECTIVE → Recognise the value of preserving and protecting the integrity of traditional knowledge, traditional resource management and customary marine tenure, and incorporating into management practices.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
4.1 Support documentation of traditional knowledge, practices and values based on agreements that respect and protect the rights of knowledge holders.	range members / partners	High / Med
4.2 Ensure that information collected is held and maintained by the appropriate in-country authority and the use of traditional knowledge is protected (i.e. intellectual property rights).	range members	High / Med
4.3 Incorporate relevant traditional knowledge and resource management, and customary marine tenure into dugong and habitat management.	range members	High
4.4 Promote and support appropriate community-based management and conservation.	range members / SPREP / partners	High
4.5 Provide feedback to local communities on dugong management, particularly if local people are involved in surveys, monitoring and / or enforcement.	range members	High
4.6 Where appropriate, promote awareness regarding the value of traditional knowledge and practices in the management of dugongs and their habitats.	range members / SPREP / partners	High / Med

INDICATORS

- Traditional knowledge in all dugong Pacific Island range states documented, maintained and, where appropriate, incorporated into management.
- Community-based management supported.
- Information and survey results disseminated to communities.

THEME 5 • CAPACITY BUILDING

OBJECTIVE → Build in-country capacity to enhance dugong management.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
5.1 Identify skills required by relevant government authorities and local communities for improving capacity for dugong management.	range members	High
5.2 Build national capacity to participate in dugong management, research and monitoring (access to expertise / resources).	SPREP / partners	High
5.3 Build community capacity to participate in dugong management, research and monitoring, including the ability of authorities involved in dugong management to work with local communities (e.g. cultural awareness training).	range members	High
5.4 Secure student scholarships for developing dugong and related marine science expertise in the region.	partners / range members / SPREP	High
5.5 Encourage Australia to strengthen its partnership with Pacific Island range states to increase provision of technical advice and support for effective dugong conservation management (e.g. internships in Australian dugong projects).	Australia / SPREP / partners	High

INDICATORS

- At least two scholarship students from Pacific Island range states enrolled in post graduate studies on dugong.
- Training to build national and community capacity in dugong management conducted.
- Internships from range states completed.

THEME 6 • THREATS — KEY DUGONG CONSERVATION ISSUES

OBJECTIVE → Reduce direct and indirect causes of dugong injury and mortality.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
6.1 Identify, assess and evaluate threats and potential threats to dugong populations.	range members w / access to expertise and resources (if required)	High
6.2 Develop appropriate management measures to address identified threats.	range members	High
6.3 Reduce (to the greatest extent practicable) the incidental injury and mortality of dugongs.	range members	High
6.4 Reduce (to the greatest extent practicable) the illegal taking of dugongs.	range members	High
6.5 Ensure that subsistence and customary use of dugongs is sustainable in areas where it is permitted.	range members	High

INDICATORS

- Assessment and report on threats (identification and evaluation) completed in at least three Pacific Island range states.
- Measures to address identified threats to dugongs developed and implemented in at least three Pacific Island range states.

THEME 7 • RESEARCH AND MONITORING — INFORMATION / DATABASES

OBJECTIVE → Improve our understanding of dugong population status through research and monitoring.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
7.1 Determine the distribution, abundance and trends of dugong populations in order to provide a base for conservation efforts and actions using traditional knowledge and / or scientific methodologies.	range members w / access to expertise (as required)	High
7.2 Collect genetic samples through non-lethal means (including from strandings) in accordance with procedures (e.g. the Great Barrier Reef Marine Parks Authority necropsy manual) and undertake genetic analyses to determine the distinctness / connectivity of Pacific Island dugong populations.	range members w / regional compilation by SPREP and supported by Australia	Medium
7.3 Where appropriate, undertake satellite tagging to assist in understanding dugong migratory patterns in the region.	range members w / regional compilation by SPREP and supported by Australia	Medium
7.4 Distribute the book, *Sirenian Conservation: Issues and Strategies in Developing Countries* (edited by Hines et al.), when published.	SPREP	High
7.5 Develop appropriate rescue / stranding protocols for dugong range states.	SPREP / partners	Medium

INDICATORS

- Updated baseline surveys completed for distribution and abundance for all Pacific range states by 2012.
- Relevant information on dugong population status distributed.
- Genetic sampling initiated in all range states and satellite tagging conducted in at least one.
- Rescue / stranding protocol developed.

THEME 8 • NATIONAL, REGIONAL, AND INTERNATIONAL COLLABORATION

OBJECTIVE → Enhance national, regional and international cooperation.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
8.1 Collaborate with range states to combat illegal trade, and to cooperate in enforcement activities relating to dugong products.	PNG, Australia, and others as appropriate	High
8.2 Encourage Pacific range states to sign the CMS MOU for the Conservation and Management of Dugongs and their Habitats.	SPREP / partners / range members	High
8.3 Develop and implement national databases of relevant information in relation to dugong conservation and management and ensure data is accessible to range members.	range members (as needed)	Medium
8.4 Encourage and strengthen partnerships among governments and all other existing and new stakeholders in research, conservation and management efforts.	range members/ partners	Medium

INDICATORS

- CMS MOU for the Conservation of Dugongs signed by all Pacific Island range states.
- Collaboration and partnership formalised to eliminate illegal trade of dugong products.
- Partnerships developed for research and conservation effort among most range states and stakeholders.

THEME 9 • HUMAN AND FINANCIAL RESOURCES

OBJECTIVE → To ensure ongoing and efficient facilitation of implementation, management and coordination of the Dugong Action Plan.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
9.1 Encourage Member range states to incorporate dugong actions for implementation as part of other national projects and / or programmes (such as national biodiversity strategies and action plans).	range members	High
9.2 Identify and seek opportunities to secure funding through bodies such as universities, NGOs, etc.	range members	Medium
9.3 Encourage range state members to develop and prepare funding proposals that specifically address dugong issues	SPREP / range members	Medium
9.4 Encourage "developed" range states to collaborate with other range states in dugong work (e.g. Australia / PNG partnership, New Caledonia / Vanuatu).	range members, particularly Australia	High
9.5 Request the Government of Australia to provide a technical adviser(s) to the Dugong Action Plan (e.g. Dr Donna Kwan and / or Prof Helene Marsh).	SPREP	Medium

INDICATORS

- Actions incorporated and carried out through national projects / programmes.
- Funding proposals submitted and work carried out.
- Partnership developed for all Pacific Island range states.
- Technical adviser available.

MARINE TURTLE ACTION PLAN 2008–2012

PACIFIC ISLANDS REGION

GOAL: To conserve marine turtles and their habitats, in keeping with the traditions of the people of the Pacific Islands region.

INTRODUCTION

Marine turtles have lived in the world's oceans for over 100 million years. Of the world's seven marine turtle species, six occur in the Pacific:

- Flat back turtle (*Natator depressus*)
- Green turtle (*Chelonia mydas*)
- Hawksbill turtle (*Eretmochelys imbricata*)
- Leatherback turtle (*Dermochelys coriacea*)
- Loggerhead turtle (*Caretta caretta*)
- Olive Ridley turtle (*Lepidochelys olivacea*).

Marine turtles play an integral ecological role in the functioning of marine habitats. They are long-lived and slow to mature, using a range of habitats at different stages of their life cycle. They are highly migratory, capable of traveling thousands of miles, and readily cross jurisdictional boundaries. Because of these life history characteristics, they are vulnerable to a variety of threats over their lifetime. Their migratory nature means that their survival and conservation requires a rigorous, coordinated regional effort among range states and territories. Marine turtles also play an integral part in the traditions of Pacific Island people, featuring in legends and traditional uses. Information exchanges, linkages and collaboration are needed at the national, regional and international levels in order for conservation and management efforts for marine turtles to be effective.

SPECIES DISTRIBUTION

Of the six marine turtle species that occur in the Pacific region, the green and hawksbill turtles are the most widely recorded species, with confirmed records in nearly all countries and territories (see Table 1). These two marine turtle species also nest in most Pacific Island countries and territories. The flatback turtle is known to occur only in Australia and southern Papua New Guinea.

TABLE 1: Marine Turtle Species Occurrence in the Pacific Islands Region

Species	AS	AU	CK	FM	FJ	FP	GU	KI	MI	NA	NC	NZ	NI	NM	PA	PG	SA	SI	TK	TO	TU	VA	WF
Leatherback		✓			✓	✓	✓?	✓?	✓		✓	✓			✓	✓	✓	✓		✓?	✓	✓	
Green	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hawksbill	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Loggerhead		✓	✓?		✓			✓?			✓	✓			✓	✓		✓	✓			✓	
Olive Ridley		✓			✓	✓		✓?	✓			✓			✓			✓		✓?		✓	
Flatback		✓														✓						✓?	

SPECIES STATUS

Marine turtles are recognised internationally as species of conservation concern. The 2006 IUCN Red List of Threatened Species lists marine turtles found in the Pacific as follows:

- **Leatherback**: critically endangered
- **Hawksbill**: critically endangered
- **Olive Ridley**: endangered
- **Loggerhead**: endangered
- **Green**: endangered
- **Flatback**: data deficient.

All species of marine turtles are listed in Appendix I of CITES, which means that all marine turtle species are considered to be threatened with extinction under this convention and commercial international trade in specimens of these species is generally prohibited. Under the Convention on the Conservation of Migratory Species of Wild Animals (CMS), marine turtle species are listed in Appendix I (migratory species that are categorised as being in danger of extinction throughout all or a significant proportion of their range) and Appendix II (migratory species that have an unfavourable conservation status or would benefit significantly from international cooperation organised by tailored agreements).

The status of marine turtles in the Pacific Islands region is generally unknown. In response to growing concern over the last 10 years on the need for conservation and sustainable use in the region, an increasing number of initiatives are being undertaken at local and regional levels.

TRADITIONAL KNOWLEDGE AND CUSTOMS

Marine turtles have long held economic, cultural and spiritual value to Pacific Island peoples. The spiritual and cultural importance of turtles is illustrated through stories, traditions and customs, including contemporary ceremonies.

Marine turtles have been an important food source for many coastal people for hundreds of years. Many communities continue to eat marine turtles on a subsistence level, and use their shell for traditional crafts. Many Pacific Islanders are extremely knowledgeable about marine turtles and are able to provide information on the biology of species found in their areas (e.g. information on where they occur and at what time of year, habitat preferences, etc.). Such information is often lacking within local government wildlife authorities, yet traditional knowledge is often overlooked.

Sometimes local communities are the best conservationists. Traditionally, people took only what was needed for their community and would only take turtles at particular times of the year or from particular areas, thus ensuring that this resource was available to them in the future.

Unfortunately, in many places, this traditional knowledge and sustainable use of turtles has been lost or is often ignored. This Action Plan recognises the fundamental role that traditional knowledge and customs play in turtle conservation, and aims to address the issue of community-based management.

INCOME GENERATING OPPORTUNITIES THROUGH ECO-TOURISM

In some places, marine turtles are fast becoming an eco-tourism attraction, whether it is watching nesters on the beach or watching them swim on a dive. Responsible eco-tourism with turtles can generate income for local communities in a positive way, while also conserving turtles and their habitats, and potentially offsetting the black market trade and overfishing.

Local fishermen are well placed to provide information on the local marine environment and make skilled and knowledgeable guides. There is potential for local fishermen to earn enough as guides to offset the money that they may otherwise make on the black market or from fishing.

Eco-tourism provides direct employment as well as a trickle-down effect to jobs in other businesses such as hotels, restaurants and taxis. This can become an incentive for entire communities to safeguard their natural environment, thus creating an economy where turtles are worth more alive than dead.

THREATS

The IUCN Marine Turtle Specialist Group (http://www.iucn-mtsg.org/hazards) has identified the five most significant threats to marine turtles as:

- fisheries impacts,
- direct take,
- coastal development,
- pollution and pathogens, and
- global warming.

These threats, if not mitigated against, will prevent the recovery of marine turtles and result in the decline and local extinction of populations.

Within the Pacific region the main threats to marine turtles are:

- unsustainable harvesting (direct take for meat and handicraft and egg harvesting);
- feral animal predation on turtle nests (eggs);
- incidental capture in commercial fishing;
- degradation of habitat (e.g. through coastal development and natural disaster);
- pollution, marine debris (e.g. plastic bags and fishing gear) and pathogens;
- boat strikes; and
- climate change.

The main challenges to effective conservation of marine turtles in the region include the lack of data on populations, harvesting and interactions with fishing activities due to limited research and monitoring. A major constraint is limited resources, both financially and in terms of manpower (including skills) available for implementing management actions in the region

THEMES AND OBJECTIVES

THEME	OBJECTIVE
▪ **Collaboration and Partnership**	Increase regional collaboration and partnerships for turtle conservation and management.
▪ **Threats**	Improve management and protection of marine turtles and their habitats by reducing threats to them in the Pacific Islands region.
▪ **Capacity Building**	Improve capacity within each participating country and territory for marine turtle protection, management, and population research and monitoring.
▪ **Education and Awareness**	Provide assistance to participating member agencies to enable them to deliver effective and accurate education and awareness programmes to the people of the Pacific Islands region.
▪ **Policy and Legislation**	Ensure a more cohesive approach in policy and legislation in SPREP member countries and territories to support the Regional Marine Turtle Conservation Programme (RMTCP) that incorporates traditional knowledge and customary marine tenure.
▪ **Traditional Knowledge and Customary Practices**	Encourage a cohesive approach to policy and legislation in SPREP member countries and territories that supports, promotes and formally protects traditional knowledge, practices and resource management.
▪ **Sustainable Development**	Promote the sustainable use of marine turtles.
▪ **Turtle Database**	Implement the Turtle Research and Monitoring Database System (TREDS) in SPREP member countries and territories.
▪ **Research and Monitoring**	Identify all major turtle nesting beaches in the Pacific Islands region. Identify major turtle stocks in the Pacific Islands region. Identify major foraging grounds in the Pacific Islands region.

School children in French Polynesia watching green turtles being prepared for satellite tagging. SPREP Photo 2008

Individuals from SPREP, the Kiribati Environment and Conservation Division, the Kiribati Fisheries Department and the local community in north Tarawa involved in turtle tagging. SPREP photo.

THEMES, OBJECTIVES AND PRIORITY ACTIONS

THEME 1 • COLLABORATION AND PARTNERSHIP

OBJECTIVE → Increase regional collaboration and partnerships for turtle conservation and management.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
1.1 SPREP members to decide by 2008 whether to participate in a CMS arrangement that extends beyond the SPREP region in the Pacific.	SPREP / CMS / members	High
1.2 Dr George Balazs (Marine Turtle Research Program, US National Oceanic and Atmospheric Administration, Honolulu) and Dr Colin Limpus (Queensland Environmental Protection Agency, Australia) to continue as Technical Advisers to SPREP and the RMTCP.		High
1.3 Establish direct contact and formal communication with various stakeholders in turtle conservation (i.e. Inter-American Convention for the Protection and Conservation of Sea Turtles–IAC, Western and Central Pacific Fisheries Commission–WCPFC, Secretariat of the Pacific Community–SPC, Pacific Islands Forum Fisheries Agency– FFA, University of the South Pacific–USP, Indian Ocean-South east Asian Marine Turtle Memorandum of Understanding–IOSEA, US National Marine Fisheries Service–NMFS, Western Pacific Regional Fisheries Management Council–WPRFMC, IUCN Marine Turtle Specialist Group, collaborating universities, and laboratories, for genetic analysis, and relevant Australian institutes and departments).	SPREP	High
1.4 Foster partnerships to support Marine Turtle Action Plan (MTAP) implementation at national and regional levels (including governments, NGOs and the private sector).	members / SPREP	High
1.5 Develop regular communication exchanges with countries / territories through media such as the "Turtle Talk" newsletter and MTAP list-server.	SPREP	Medium

INDICATORS

- MOU under CMS for the conservation of marine turtles in the Pacific finalised and signed by most members.
- Communication with agencies working on turtle conservation established and active.
- Partnership established for MTAP implementation.
- More than 80% of SPREP members participating and collaborating in the regional network.

THEME 2 • THREATS

OBJECTIVE → Improve the management and protection of marine turtles and their habitats by reducing threats to them in the Pacific Islands region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
2.1 Identify and prioritise the regional threats to turtles, including harvesting of turtles and eggs, tourism, pollution and waste (plastic debris), fisheries by-catch, habitat destruction, and climate change.	SPREP / SPC	High
2.2 Quantify the impacts of threats identified for each Pacific Island country and territory on the national level.	all / members / partners / SPREP	High
2.3 Develop and implement management and mitigating actions for the top three regional priority threats identified in action 2.1.	all / SPC / FFA / WCPFC / WPRFMC	High
2.4 Reduce the use of non-biodegradable materials (e.g. imported plastics) and encourage the development of alternative materials (e.g. cloth bags instead of plastic shopping bags).	all / members / partners / SPREP	High
2.5 Assess and document information on the amount of turtle harvesting, including collection of turtle eggs at national levels, where possible.	members / SPC / SPREP	High

→

2.6 Strengthen the environmental impact assessment process for coastal development by furthering survey work to identify critical turtle habitat and by building the capacity of policy makers and legislators to understand implications of decisions for turtle conservation management.	Members	High
2.7 Work with the fishing industry, fisheries authorities, regional fisheries management organisations (RFMOs) and other IGOs / NGOs to reduce turtle by-catch in coastal and oceanic fisheries.	SPC / FFA / WCPFC / WPRFMC	High
2.8 Promote observer programmes and improve documentation, identification, reporting, and observer coverage for information on turtle by-catch.	SPC / FFA / WCPFC / WPRFMC	Medium
2.9 Promote the protection of turtle nesting beaches and use mitigating measures for impacts on nesting beaches.	members	High

INDICATORS

- All PICTs have identified, quantified and ranked threats.
- Management actions and / or mitigation measures of at least three prioritised threats are developed and implemented.
- At least 50% of PICTs have introduced management measures to reduce the use of non-biodegradable materials.
- Number of PICTs involved in the observer programme has increased by 25%.
- Inventory, maps and protection plans of top two critical nesting beaches in each PICT are produced and implemented.
- Inventory, maps and protection plans of critical foraging areas are produced and implemented.
- At least 50% of PICTs have started collecting baseline information on nesting populations.
- At least 50% of PICTs are documenting information on turtle harvesting and turtle egg collection.
- EIA procedures, including legislations, have been improved and strengthened.

THEME 3 • CAPACITY BUILDING

OBJECTIVE → Improve capacity within each participating country and territory for marine turtle protection, management, and population research and monitoring.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
3.1 Identify skills required by relevant government agencies and local communities for turtle management and protection, using mechanisms such as the National Capacity Self Assessment.	members	High
3.2 Facilitate the provision of appropriate training, including attachments, tools, materials, technical assistance and expertise.	SPREP / USP / partners	High
3.3 Provide a regional workshop for policy and legislation drafters to build capacity in relation to turtle management.	SPREP / partners	Medium
3.4 Undertake a regional turtle nesting beach monitoring / survey training workshop, including survey methodologies, turtle tagging, best handling practices and genetic sampling.	SPREP / USP / partners /	High
3.5 Undertake in-country turtle nesting beach monitoring / survey training workshops for local staff, including survey methodologies, turtle tagging, best handling practices and genetic sampling.	members / partners	High
3.6 Provide training to SPREP members in the use of TREDS and in data analysis.	SPREP / members	High
3.7 Encourage partnerships with tertiary institutions, researchers, government agencies, local communities, NGOs, IGOs, etc.	SPREP / partners	Medium
3.8 Provide training to relevant personnel in cultural awareness.	SPREP / partners	Medium

INDICATORS

- National reports by at least 50% of PICTs include documentation of required national skills for turtle conservation.
- At least 1 regional and 10 in-country nesting beach monitoring / survey training workshops undertaken.
- Policy and legislation workshop conducted.
- Tools / materials made readily available to SPREP members.
- Partnerships developed with tertiary institutions, IGOs and NGOs to provide technical assistance and expertise.
- All members with marine turtle programmes effectively using TREDS.

THEME 4 • EDUCATION AND AWARENESS

OBJECTIVE → Provide assistance to participating member agencies to enable them to deliver effective and accurate education and awareness programmes to the people of the Pacific Islands region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
4.1 Collate and review existing available education materials on marine turtles, such as those available at http://www.seaturtle.org, to suit the needs of the region.	SPREP / members	High
4.2 Provide relevant educational materials (e.g. turtle migration, turtle biology and ecology, tagging) to schools, universities, and local communities.	SPREP / partners	Medium
4.3 Investigate options for including turtle information in school curricula.	members	Medium
4.4 Provide relevant educational materials in local languages.	members	High
4.5 Investigate options for providing scholarships in marine science for tertiary students.	members / partners	Medium
4.6 Provide feedback to communities regarding the results of turtle research and monitoring and other activities, including data sharing in accordance with adopted policies and protocols.	members / SPREP	High
4.7 Promote the tag recovery programme and make material available in local languages.	SPREP / members	High
4.8 Continue the regional "Turtle Talk" newsletter established under the Year of the Sea Turtle campaign for SPREP members. Include a column in the newsletter, "Notes from the field", to be coordinated by USP (Dr. Kenneth MacKay).	SPREP / USP	Medium
4.9 Seek opportunities to raise public awareness on marine turtle issues through local media.	members	High
4.10 Develop relevant regional promotional materials (e.g. documentary) to be made available to SPREP members.	SPREP / partners	Medium
4.11 Document traditional knowledge and customs with regards to turtles and their management that can be used in educational and awareness raising activities.	members	High
4.12 Develop agreements with cultural groups / leaders / individual knowledge holders, regarding intellectual property rights, appropriate use and dissemination of information.	members	High
4.13 Ensure any traditional knowledge and customs documented are properly held and maintained by appropriate in-country authority.	members	High
4.14 Include traditional knowledge in educational and awareness programmes.	members	High
4.15 Promote the value of traditional resource management (TRM) and traditional knowledge (TK), customary marine tenure (CMT) and community rights on intellectual property rights (IPR) and access and benefit sharing (ABS) through education and awareness at the community level, including the preparation and distribution of materials.	members	High

→

4.16 Encourage the use of informal / traditional methods of education within villages using traditional elders as resource people where appropriate.	members	High
4.17 Encourage community awareness using successful models such as Wan Smolbag's Vanua-tai monitors network.	members	Medium
4.18 Work closely with the organizing committee for the 2009 Sea Turtle Symposium in Australia to ensure significant Pacific Island participation.	SPREP / USP	Medium

INDICATORS

- Educational materials collated, reviewed, translated and disseminated.
- Tag recovery programme active in most member countries and territories.
- At least two issues of "Turtle Talk" newsletter produced and distributed per year.
- Educational materials available in local languages in at least 50% of PICTs.
- Traditional knowledge and customs documented appropriately, and report produced and distributed.
- Traditional knowledge and customary practices incorporated into informational materials.
- At least two students from member countries and territories on scholarships doing research on turtles in the region.
- At least five Pacific Island representatives participate in the 2009 Turtle Symposium.

THEME 5 • POLICY AND LEGISLATION

OBJECTIVE → Ensure a more cohesive approach in policy and legislation in SPREP member countries and territories to support the Regional Marine Turtle Conservation Programme that incorporates traditional knowledge and customary marine tenure.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
5.1 Review and identify gaps and conflicts in current policies and legislation (in member countries and territories) that support / limit the RMTCP, including conventions, treaties, MOUs, agreements etc.	members	High
5.2 Encourage the need to address gaps and conflicts found in the review of policies and legislation as described in action 5.1 where required.	members	High
5.3 Encourage and support compliance mechanisms that are more effective at the community level, drawing upon and supporting existing laws and controls and conflict resolution systems, and using local community members.	members	High
5.4 Amend relevant policies and legislation regarding turtle size limits to better reflect the impact of removing mature females from populations and, where possible, to ensure that preference is given to using smaller-sized animals.	members	High
5.5 Incorporate relevant traditional knowledge, customary marine tenure and practices into policy, legislation management plans where appropriate.	members	Medium
5.6 Ensure adequate protection is provided for nesting beaches and other known critical habitats for turtles through policy and legislation.	members	High

INDICATORS

- Review of current national policies / legislation completed and disseminated.
- Policies and legislation in PICTs amended to address gaps for marine turtle conservation, which also include the protection of critical habitats and application of minimum size limits that reflect the impact of removing mature female turtles.
- Traditional knowledge and management practices incorporated into legislation, policies and plans.
- Appropriate compliance mechanisms are put in place.

THEME 6 • TRADITIONAL KNOWLEDGE AND CUSTOMARY PRACTICES

OBJECTIVE → Encourage a cohesive approach to policy and legislation in SPREP member countries and territories that supports, promotes and formally protects traditional knowledge, practices and resource management.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
6.1 Review and identify gaps and conflicts in relevant policies and legislation that support / limit the protection and promotion of TRM, TK, IPR, ABS, and CMT.	members	High
6.2 Encourage the need to address gaps and conflicts found in the review of policies and legislation as described in action 6.1 where required.	members / SPREP	High
6.3 Promote integration of TRM, TK, CMT into national, provincial and community management plans, including National Sustainable Development Strategies (NSDS), National Biodiversity Strategic Action Plans (NBSAP) and other development plans.	members	High
6.4 Promote awareness on the value of TRM, TK, CMT and community rights on IPR and ABS through education and awareness at the community level, including the preparation and distribution of awareness materials.	members	High

INDICATORS

- Review of policies / legislation in relation to TK and other customary management and practices completed.
- TK, tenure and management practices integrated into development plans.
- Education and awareness of TK and other customary practices materials delivered to local communities in each PICT.

THEME 7 • SUSTAINABLE DEVELOPMENT

OBJECTIVE → Promote the sustainable use of marine turtles.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
7.1 Develop regional guidelines for responsible and sustainable eco-tourism in the wild.	SPREP / partners	High
7.2 Promote best practice eco-tourism in accordance with guidelines.	SPREP / members / partners	High
7.3 Identify and encourage / facilitate alternative livelihoods (including income generating activities) that are not detrimental to marine turtles and their habitats, in consultation with local communities and other stakeholders.	members / SPREP / partners	High
7.4 Prohibit the commercial[5] harvesting of marine turtles, their parts, and their derivatives.	members	High
7.5 Apply sustainable management principles to traditional / subsistence uses of turtles for food that are permitted.	members	High
7.6 Discourage the keeping of marine turtles in captivity (except for rehabilitation purposes).	members	High
7.7 Develop best practice guidelines for turtles permitted to be kept in captivity and make available to SPREP members.	SPREP / partners	High
7.8 Identify and remove situations where captive turtles are not kept in accordance with best practice guidelines.	members	High
7.9 Document the extent of marine turtle eco-tourism and turtle related activities.	members	Medium

[5] The exchange of turtles and turtle parts for money.

→

INDICATORS
▪ Guidelines developed and distributed to members on best practice for responsible and sustainable marine turtle eco-tourism and husbandry. ▪ Promotion of responsible eco-tourism ventures for turtles in the wild. ▪ All PICTs have identified, prioritised and implemented some form of alternative livelihood initiatives. ▪ Policy and legislative frameworks to prohibit commercial use of turtles and products derived from turtles, strengthened. ▪ Management principles applied to turtle use permitted for traditional and subsistence use. ▪ The number of marine turtles kept in captivity decreased by 50% with no new undertaking of this activity.

THEME 8 • TURTLE DATABASE

OBJECTIVE → Implement the Turtle Research and Monitoring Database System (TREDS) in SPREP member countries and territories.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
8.1 Develop Information and Data Sharing Policy and Protocol for TREDS: ▪ In place and used effectively by 2008; ▪ Policy and protocol to include restrictions on data access and sharing data with communities; ▪ Members to adopt agreed upon policy and protocol at SPREP meeting in 2008; ▪ Distribute adopted policy and protocol to members.	SPREP / members	High
8.2 TREDS is distributed to all members by early 2008 with in-country training and follow-up for use and report generation.	SPREP	High
8.3 All members are encouraged to use TREDS in accordance with the adopted policy and protocols.	SPREP / members	Medium
8.4 Members to submit data annually to TREDS Database Officer.	members	High
8.5 Reporting: ▪ Members report to SPREP at least annually on tagging records and activities, noting that tag re-issue will be dependent on reporting; ▪ Report recovered tags immediately to SPREP using appropriate form (where available) or providing standard information. Provide reward (such as a t-shirt, poster, etc.) for recovered tags; ▪ SPREP to report annually to members on tags distributed and recovered, results of mapping, and other significant data.	 members members / SPREP SPREP	 High High High
8.6 Institutional commitment: ▪ SPREP commits to long-term maintenance of the TREDS programme; ▪ Seek long-term funding from members and partners (including NGOs, IGOs and the private sector) to maintain TREDS Officer and programme.	 SPREP SPREP	 High High
8.7 Distribute tags and applicators to members undertaking tagging activities and engaged in SPREP approved tagging programme.	SPREP	High
8.8 Link to other databases that contain marine turtle data.	SPREP / SPC	Medium

INDICATORS
▪ All members effectively using TREDS and reporting annually to SPREP. ▪ SPREP produce five annual reports of summary data. ▪ Increased return of tags and reporting of tagging information. ▪ Information from TREDS used to provide a picture of turtle distribution and migration at the regional level. ▪ TREDS programme, including responsible officer, secured for the long term. ▪ Link to other relevant turtle databases completed.

THEME 9 • RESEARCH AND MONITORING

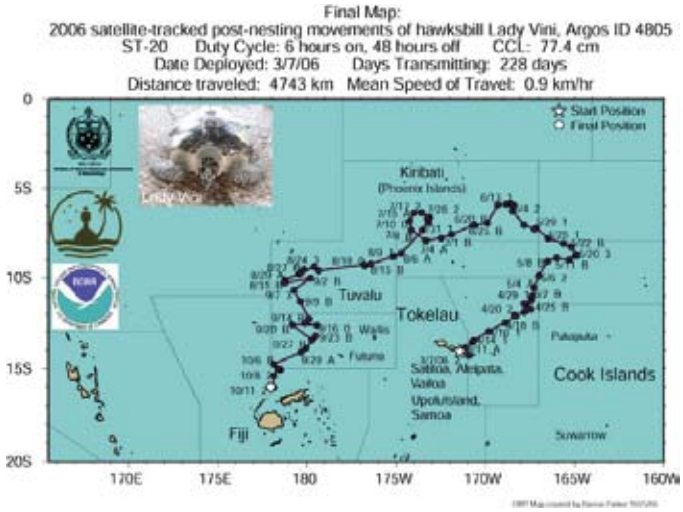
OBJECTIVE (i) → Identify all major turtle nesting beaches in the Pacific Islands region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
9.1 Undertake literature search of available information regarding turtle nesting sites in the Pacific Islands region, including previous flipper and satellite tagging activities.	USP / SPREP / WWF / members	High
9.2 Identify and report known information, including TK, provided by communities regarding turtle nesting sites.	members	High
9.3 Undertake regional aerial rapid assessment of turtle nesting beaches where feasible.	multi-agency collaboration	Medium
9.4 Identify and map turtle nesting beaches and prioritise index sites for long -term monitoring.	SPREP / members	High
9.5 Undertake turtle nesting beaches surveys (by relevant trained personnel): ▪ Collect initial baseline data for at least five years; ▪ Distribute relevant information to members via a listserver and upload relevant information to SPREP website.	USP / SPREP / NMFS members / SPREP	High
9.6 Initiate long-term monitoring at index nesting beaches, to include beach temperature data for climate change baseline information, and beach morphology.	countries w / support of USP / NMFS / SPREP / other experts	High
9.7 Enter turtle nesting beach monitoring data into TREDS.	SPREP	High

INDICATORS

- Literature search on turtle nesting completed and reported.
- Known information and TK identified and reported by all members.
- Key index nesting beaches in all PICTs identified and prioritised.
- Long-term monitoring initiated at five index nesting beaches in the Pacific region.
- Estimates obtained of current nesting beach populations for the Pacific.
- Baseline data collected and entered into TREDS, including beach temperatures.
- Key turtle nesting sites across the Pacific mapped.

→



Lady Vini's Journey.

Satellite-tagged green turtle. SPREP Photo.

OBJECTIVE (ii) → Identify major turtle stocks in the Pacific Islands region.		
ACTIONS ↓	**LEAD** ↓	**PRIORITY** ↓
9.8 Develop and distribute regional procedures and protocol for genetic sampling, which includes using non-lethal techniques and addresses ownership of genetic information and material collected.	USP / SPREP	High
9.9 Develop partnerships to undertake genetic sampling and analysis with members and relevant genetic researchers / laboratories such as Dr Nancy FitzSimmons (Australia), IFREMER (Indian Ocean), & Dr Peter Dutton (US National Oceanic and Atmospheric Administration–NOAA) to analyse and share data, and to publish and report results.	SPREP / members / NOAA / SPC / Australia	Medium
9.10 Report the results of genetic sampling and identification of major turtle stocks in the region to members.	USP / SPREP / NOAA w / partners	
INDICATORS		
▪ Regional procedures and protocols for genetic sampling developed, distributed and implemented by participating PICTs. ▪ Work towards identifying Pacific stocks of marine turtles progressed and results reported and published. ▪ Map of Pacific stock developed and distributed to members.		

OBJECTIVE (iii) → Identify major foraging grounds in the Pacific Islands region.		
ACTIONS ↓	**LEAD** ↓	**PRIORITY** ↓
9.11 Collate known and published information on foraging grounds in the region.	members / SPREP / partners	Medium
9.12 Distribute collated information on foraging grounds to members.	members / SPREP / partners	Medium
9.13 Identify and map major / critical in-water sites and prioritise foraging habitats for long-term monitoring.	members / SPREP / partners	High
9.14 Undertake long-term foraging surveys at five major sites.	members / SPREP / partners	Medium
9.15 Undertake seagrass mapping and monitoring where possible.	members / SPREP / partners	Medium
9.16 Undertake aerial surveys of foraging grounds (e.g. ultra light) where possible.	members / SPREP / partners	Medium
9.17 Undertake satellite tagging to fill information gaps where it is needed, cost effective and feasible.	SPREP / NOAA / members	Medium
INDICATORS		
▪ Known and published information of marine turtle foraging grounds in the region collated and distributed to members. ▪ Major marine turtle foraging sites identified, mapped and prioritised for monitoring. ▪ Long-term foraging ground surveys initiated at five major sites. ▪ Seagrass mapping and monitoring undertaken in at least five sites across the region. ▪ Results of turtle tracking distributed to PICTs through the SPREP website and the marine turtle network.		

WHALE & DOLPHIN ACTION PLAN 2008–2012

PACIFIC ISLANDS REGION

GOAL: To conserve whales and dolphins and their habitats for the peoples of the Pacific Islands region.

INTRODUCTION

Whales and dolphins are an important component of the marine biological diversity of the Pacific Islands region. Over half the world's known species of whales and dolphins are found in this region, and for some species, such as humpback whales, the region is a vital breeding area. Whales and dolphins are widely regarded as flagship species for Pacific marine ecosystems, and feature prominently in promotional tourism material. Many Pacific Island cultures have legends about whales and dolphins, and the people have traditional uses for them. These species are generally long-lived and have low reproductive rates.

For many species of large whales, commercial whaling during the nineteenth and twentieth centuries, largely by countries from outside the region, has reduced the breeding populations of South Pacific whales to extremely low levels, possibly to local extinction for some species. Recently, many Pacific Island countries and territories have declared whale sanctuaries or marine sanctuaries for marine animals including whales and dolphins.

SPECIES DISTRIBUTION

Based on largely opportunistic and anecdotal records, one report[6] states that at least 30 different whale and dolphin species occur within the Pacific Islands region, although this number is actually more than 40 species when Hawaii, New Zealand and Australia are also considered. The checklist of country-specific whale and dolphin species records, classified according to the "reliability" of the record, for the 22 Pacific Island countries and territories is given in Table 2. The limited research efforts in the region, coupled with the very large expanse of marine area, make it plausible that there may be still unreported species that inhabit these waters.

Current understanding of whale and dolphin diversity and distribution in the Pacific Islands region is considered to be incomplete as there are many locations that have not been surveyed. For example, only five whale and dolphin species have been reported to occur in Tuvalu's waters, however records for additional species have been reported in the Exclusive Economic Zones (EEZs) of adjacent countries, which suggests that these species may also be part of Tuvalu's whale and dolphin fauna. In addition, as capacity and research within the region is strengthened, data and information that is gathered will produce increasingly accurate records for the Pacific Islands region.

Sperm whales are the most widely reported cetacean species in the Pacific Islands region, with all 22 PICTs having records of this species. Rare species for the region include the southern bottlenose whale and the Indo-Pacific humpback dolphin. A relatively high number of records were reported for both Papua New Guinea and Solomon Islands, while very few records were available for the Pitcairn Islands and Wallis and Futuna.

[6] Miller, C. 2007. Current state of knowledge of cetaceans threat, diversity and habitats in the Pacific Islands region. A report by the Whale and Dolphin Conservation Society for the First Meeting of the Signatories to the Memorandum of Understanding for the Conservation of Cetaceans and their Habitats in the Pacific Islands region.

TABLE 2: Checklist of Country / Territory-Specific Whale and Dolphin Species Records in the Pacific Islands Region.

Cetacean Species	American Samoa	Cook Islands	Federated States of Micronesia	Fiji	French Polynesia	Guam	Kiribati	Marshall Islands	Nauru	New Caledonia
Minke whales	1	2		1	U			2		1
Sei whale		U				U				2
"Bryde's-like" whales		U	1	1	U	U		U	2	1
Blue whales		2		U			U	2		1
Fin whale				2	U			2		
Humpback whale	1	1		1	1	2		2		1
Common dolphins		2		U				2		2
Pygmy killer whale					1					1
Short-finned pilot whale	1	1	1	1	1	2	2	2		1
Risso's dolphin		U			1	2				1
Fraser's dolphin		1	1	U	1		1		2	
Irrawaddy / snubfin dolphin										
Orca	2	1	U	U	1	U	2	2		1
Melon-headed whale		1	1		1	U	U	2	2	1
False killer whale	1	U		1	1		U			1
Indo-Pacific humpback dolphin										
Pantropical spotted dolphin	2	1	U	1	1	U	2	2		1
Striped dolphin		U	1			U	U	2		
Spinner dolphin	2	1	1	1	1	2	1	2		1
Rough-toothed dolphin	2			U	1		2	U		1
Bottlenose dolphins	2	U	2	2	1	U	1	2		1
Dwarf / pygmy sperm whale	U			U	1	2				1
Sperm whale	1	1	2	1	1	U	1	U	2	1
Southern bottlenose whale							2			
Blainville's beaked whale		1		2	1		U			1
Cuvier's beaked whale	2	1	U		1	U	U		U	1

1 = Class 1 record = relatively recent field (or specimen record) confirmation of a given species within EEZ

2 = Class 2 record = potentially Class 1 record that is either dated, or may be marginally outside of a given EEZ

U = unconfirmed record that either was not definitely identified, has not been confirmed by field observations, is from an unobserved stranding event, or is an anecdotal report that for various reasons may be difficult to corroborate.

Cetacean Species	Niue	CNMI	Palau	PNG	Pitcairn Islands	Samoa	Solomon Islands	Tokelau	Tonga	Tuvalu	Vanuatu	Wallis and Futuna
Minke whales	1		U		U	U			1			
Sei whale				1								
"Bryde's-like" whales		U	2	U		2	U				U	
Blue whales							2					
Fin whale												
Humpback whale	1	1		U	U	1	U		1		1	1
Common dolphins		U					U					
Pygmy killer whale			U	U					1			
Short-finned pilot whale	2	2	U	1	2	1	1		1		2	
Risso's dolphin		1	U	1		2	1		1			
Fraser's dolphin			U	1		2	2					
Irrawaddy / snubfin dolphin				2			U					
Orca	1	U	2	2		1	1	U	1	2	2	
Melon-headed whale		1	U	1		2	2		1		2	
False killer whale	1	U	U	1		1	2		1			
Indo-Pacific humpback dolphin				2								
Pantropical spotted dolphin			U	1			1		1	U	1	
Striped dolphin		U	2			2	2				U	
Spinner dolphin	1	1	U	1		1	1		1	1	1	
Rough-toothed dolphin		1		U		1	1					
Bottlenose dolphins		U	U	1		1	1		1	2	2	
Dwarf / pygmy sperm whale	2		1		1							
Sperm whale	2	U	1	U	1	1	1	1	2	1	U	
Southern bottlenose whale												
Blainville's beaked whale			U			U						
Cuvier's beaked whale	2	U	1		1	U						

Source: Miller 2007.

SPECIES STATUS

The population status of virtually all species of whales and dolphins in the Pacific Islands region is unknown. The exception to this is for the South Pacific humpback whale and local population for certain species (e.g. spinner dolphins in Moorea, French Polynesia).

The humpback whales are widely distributed and were heavily exploited in the 20th century. The total takes on the humpback whale in the Southern Ocean International Whaling Commission (IWC) Management Areas IV, V and VI were approximately 80,000. Recent work by the South Pacific Whale Research Consortium (SPWRC) has shown that there are likely to be at least three genetically distinct populations of humpback whales in eastern Australia and eastern Polynesia, and two distinct populations in central and western Polynesia. Based on closed population models, Baker et al. (2006)[7], in a paper submitted for consideration by the Inter-Sessional Workshop for the Comprehensive Assessment of Southern Hemisphere Humpback Whales (Hobart, Tasmania, 3–7 April 2006),[12] estimated the regional abundance number of humpback whales in Oceania as 472 for the New Caledonia stock, 2,311 for Tonga and 1,057 for French Polynesia. However, the open-population models yield 15–25% lower estimates. In comparison, the eastern Australia humpback abundance has been estimated to be approximately 8,000, and this population is increasing by about 10% per annum (Paton et al, 2006).[8] This difference in abundance could be because the South Pacific populations have been so depleted or were always smaller and / or because some South Pacific whales have shifted migration routes to Australia.

Several whale and dolphin species are listed on Appendix I[9] of CITES, and the remaining species are listed on Appendix II[10]. The CMS also lists whale and dolphin species needing protection on its Appendices I[11] and II[12]. The IUCN Red List of Threatened Species 2006 lists several whale and dolphin species as endangered and vulnerable with a number of species having deficient data for categorising.

7 Baker, C. Scott, C. Garrigue, R. Constantine, B. Madon, M. Poole, N. Hauser, P. Clapham, M. Donoghue, K. Russell, T. O'Callahan, D. Paton and D. Mattila. 2006. Abundance of humpback whales in Oceania (South Pacific), 1999 to 2004. Submitted for consideration by the Inter-sessional workshop for the Comprehensive assessment of southern hemisphere humpback whales, Hobart, Tasmania 3-7 April 2006.

8 Paton, David A., L. Brooks, D. Burns, T. Franklin, W. Franklin, P. Harrison, and P. Baverstock. 2006. First abundance estimate of east coast Australia humpback whales (Megaptera novaeangliae) utilizing mark-recapture analysis and multi-point sampling. Inter-sessional workshop for the Comprehensive assessment of southern hemisphere humpback whales, Hobart, Tasmania 3-7 April 2006.

9 Appendix I lists species that are the most endangered among CITES-listed animals and plants, which are threatened with extinction. CITES prohibits international trade in specimens of these species, except when the purpose of the import is not commercial (e.g. for scientific research). In these exceptional cases, trade may take place provided it is authorised.

10 Appendix II lists species that are not necessarily now threatened with extinction but that may become so unless trade is closely controlled. International trade in specimens of Appendix II species may be authorised by the granting of an export permit or re-export certificate.

11 Migratory species that have been categorised as being in danger of extinction throughout all or a significant proportion of their range are listed on Appendix I of the Convention. States strive towards strictly protecting these animals, conserving or restoring the habitats in which they live, mitigating obstacles to migration and controlling other factors that might endanger them.

12 Migratory species that have an unfavourable conservation status or would benefit significantly from international co-operation organised by tailored agreements are listed in Appendix II to the Convention. For this reason, the Convention encourages the Range States to conclude global or regional agreements for the conservation and management of individual species or, more often, of a group of species listed on Appendix II

TRADITIONAL KNOWLEDGE AND CUSTOMS

Whales and dolphins are important to the cultures, legends, traditions and heritage of many Pacific Island peoples. In Fiji, sperm whale teeth have particular cultural significance. Whales and dolphins are associated with identity, lifestyle and well-being. Migrations of whales are used as an environmental cue on some islands, and ceremonies and ritual surround cetaceans across the region. In some traditions, they are viewed as incarnations of humans.

INCOME GENERATING OPPORTUNITIES THROUGH ECO-TOURISM

A recent review of the status of marine mammal tourism activities in the Pacific Islands region, commissioned by the International Fund for Animal Welfare (IFAW) in collaboration with SPREP, SPWRC and the South Pacific Tourism Organisation (SPTO), showed that the industry experienced strong annual growth for the period 1998–2005. The study indicates that between 1998 and 2005, both the number of whale watchers and the number of countries offering whale watching activities significantly increased (Table 3). Whale watching is becoming an important component of tourism development in the region with a total estimated direct economic value of USD $7.5 million and USD $21 million in total value in 2005.

TABLE 3: Growth of Whale and Dolphin Watching in the Pacific Islands Region (EcoLarge, 2006[13])

Year	No. whale watchers	Countries with whale watching operations	Average annual growth in whale watchers (1998–2005)	Estimated direct value of whale watching industry (USD)	Estimated total value of industry (USD)
1998	10,308	9			$1,185,000
2005	110,746	14	45%	$7,525,500	$21,012,000

[13]Ecolarge. 2006. Pacific Islands Whale Watch Tourism: 2005. A Region Wide Review of Activity. A report on the research commissioned by International Fund for Animal Welfare, Secretariat of the Pacific Regional Environment Programme, South Pacific Tourism Organisation, and the South Pacific Whale Research Consortium.

Above: dolphins.
Right: humpback whale calf breaching.

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THREATS

Whales and dolphins in the Pacific Islands region face various threats and there are a number of important issues relating to their effective conservation and management.

Fishery interactions

Depredation and incidental by-catch in longline fisheries is categorised as a high threat for small- and medium-toothed whales, and may be a serious concern for small localised populations. Depredation is also recognised as a significant economic threat to longline fishermen due to the loss of catch or bait.

Directed take

Directed take is categorised as a high threat. Scientific whaling on minke, fin, and humpback whales is of specific concern. The take of humpbacks could directly impact the recovery of small, vulnerable humpback populations in the waters of SPREP member countries and territories. An additional issue is the recovery of other large whale species that have been affected by previous unsustainable commercial harvesting.

The drive hunt in the Solomon Islands is categorised as a high threat, as the three species taken may be highly localised, and the impacts to these populations are unknown. Capture of animals for public display has also recently occurred and any resumption of this activity would be of concern.

Climate change

Climate change is potentially a high threat to whales, dolphins and their habitats in the region through the potential disruption of ocean circulation, changes in the amount and distribution of prey, changes in salinity, temperature and acidity, and other parameters. Current climate change models include a wide range of potential scenarios.

Tourism / human interaction

Whale and dolphin watching is an important economic opportunity for many countries and territories in the Pacific Islands. If managed according to responsible wildlife viewing practices, it should pose only a low threat to whale and dolphin populations. However, if not managed properly this form of tourism could pose a medium threat to the fitness of animals, and potentially a high threat for specific, localised populations that may be vulnerable to disturbance in certain areas such as resting bays. Recent studies show that in some circumstances whale and dolphin watching can impact on the individuals and populations being watched.

Habitat degradation

Habitat degradation, which is considered to be a medium threat, includes coastal development, sedimentation of coastal waters, aquaculture, nutrients, and other habitat impacts. The most significant type of habitat degradation could be localised point-source activities.

Pollution

Plastics are categorised as a medium threat to whales and dolphins in the region. Species that consume soft-bodied prey such as squid may be susceptible to plastic ingestion, and this has been shown in necropsy results of stranded animals. Toxic chemicals are considered a largely unknown but low threat, but may be of higher concern in specific areas due to impacts from mining operations, port and urban development, and ship groundings.

Ship strikes, acoustics, disease

Ship strikes, acoustics, and disease are considered largely unknown but low threats to whales and dolphins in the region. Ship strikes may be a potential concern in areas with fast vessels and high concentrations of whales and dolphins.

THEMES AND OBJECTIVES

THEME	OBJECTIVE
▪ **National, Regional and International Collaboration and Cooperation**	Promote and enhance national, regional and international coordination, collaboration and partnership for whale and dolphin conservation in the Pacific Islands region.
▪ **Threat Reduction**	Develop, test and disseminate effective mitigation techniques that reduce depredation and incidental by-catch. Document the impact of illegal, unreported and unregulated fishing for whales and dolphins in the region. Limit direct take to sustain populations. Improve our understanding of the impacts of climate change on whales and dolphins. Minimise impacts of pollution on whales and dolphins. Identify and mitigate any significant impact from marine whale and dolphin-based tourism. Ensure coastal development takes account of potential impacts on whale and dolphin populations. Improve understanding of unknown but potential threats to whales and dolphins, including ship strikes, entanglement, acoustics and disease..
▪ **Ecosystem / Habitat Protection**	Support the designation and management of national whale / marine sanctuaries in the EEZs of SPREP members. Identify key critical habitat, hotspots, and migratory pathways that are candidates for improved conservation.
▪ **Capacity Building**	Increase in-country expertise and capacity.
▪ **Education and Awareness**	Develop communication strategies, training programmes and protocols for key issues within the Whale and Dolphin Action Plan (WDAP). Increase awareness and understanding of whales and dolphins in the region. Promote awareness regarding the value of traditional knowledge and practices in the management of whales and dolphins.
▪ **Cultural Significance and Value**	Document the range of cultural practices, values and knowledge associated with whales and dolphins, and encourage a more cohesive approach in policies and legislation. Preserve and protect the traditional knowledge and values associated with whales and dolphins. Ensure appropriate cultural knowledge, practices, and values inform and underpin management measures.
▪ **Legislation and Policy**	Develop country-level legal, policy and institutional frameworks to support the effective implementation of the WDAP.
▪ **Research and Monitoring**	Improve information received on stranding events in the region. Identify key species and areas for baseline surveys. Identify significance of and priority for toxicological research.
▪ **Whale and Dolphin-based Tourism**	Foster sharing of lessons learned and undertake regular assessment of the industry Ensure best practice management of the whale and dolphin watching industry in the Pacific Islands region. Maximise educational and economic values of whale- and dolphin-based tourism watching.

THEMES, OBJECTIVES AND PRIORITY ACTIONS

THEME 1 • NATIONAL, REGIONAL AND INTERNATIONAL COLLABORATION AND COOPERATION

OBJECTIVE → Promote and enhance national, regional and international coordination, collaboration and partnership for whale and dolphin conservation in the Pacific Islands region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
1.1 Promote understanding by facilitating effective information sharing mechanisms to assist in addressing cross-sectoral issues and migratory species conservation.	SPREP	High
1.2 Encourage and support PICTs in removing internal cross-sectoral barriers in order to effectively implement the WDAP at the local, island, and government levels.	members	High
1.3 Facilitate PICTs' involvement and participation in relevant international meetings and initiatives for whales and dolphins conservation.	SPREP / partners	High
1.4 Promote cooperation and highlight achievements and lessons learned in whale and dolphin conservation at regional and international conferences and fora.	SPREP	High
1.5 Ensure whale and dolphin conservation needs are integrated into the development and implementation of the SPREP Environment Ministers Regional MPA framework.	SPREP	High
1.6 Develop linkages with relevant regional organisations and processes, such as RFMOs (e.g. MOUs, information exchange and cross-sectoral integration).	SPREP / members	Medium
1.7 Develop linkages with relevant private sector organisations to reduce threats to whales and dolphins such as by-catch, depredation and marine debris (such as fishing and tourism industries, NGOs).	members / SPREP / partners	High
1.8 Effect improved integration of whale and dolphin conservation into national, regional and international initiatives including: National Biodiversity Strategic Action Plan (NBSAP), National Sustainable Development Strategies (NSDS); Pacific Islands Regional Oceans Policy, Action Strategy for Nature Conservation, CROP Marine Sector Working Group, RFMOs, NBSAP Working Group).	members / SPREP / partners	High

INDICATORS

- Number of national, regional and international organisations, processes and frameworks incorporating PIR whale and dolphin conservation needs.
- Number of national, regional and international partnerships created to support WDAP implementation.

THEME 2 • THREAT REDUCTION

OBJECTIVE (i) → Fisheries Interaction
Develop, test and disseminate effective mitigation techniques that reduce depredation and incidental by-catch; document the impacts of illegal, unreported and unregulated fishing on whales and dolphins in the Pacific Islands region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
Depredation / fishery interactions		
2.1 Collaborate with regional fisheries management organisations (RFMOs) and share information on fisheries / marine mammal interactions, and successful and unsuccessful tactics for mitigation.	members, SPREP / RFMO / WCPFC / SPC / FFA / FAO / CBD / DWFNs / partners	High
2.2 Encourage distant-water fishing nations (DWFNs) to support the Pacific Islands region in ensuring sustainable and responsible fishing practices and to maintain the health of the ocean and regional economies.	members / RFMOs / WCPFC / SPC / FFA / FAO / DWFNs / SPREP / partners	Medium
2.3 Foster industry / research institutions / governments partnerships to develop and test mitigation techniques to reduce by-catch and depredation.	members / DWFNs / RFMOs	High
2.4 Examine information on illegal, unreported and unregulated fishing (IUU) to better understand potential impacts on marine mammals including by-catch and depredation.	SPREP / SPC / FFA / FAO / research institutions / partners	High
2.5 Collect and disseminate information on the scale of depredation and by-catch from fishing operations in order to better assess level of priority and possible mitigation actions.	FFA / SPC / RFMOs / SPREP / members	High
Fishery Ecological Interactions (low, but regional concern on this issue is high).		
2.6 Support outreach and educational programmes that provide understanding of the scientific principles of the low level of competition between whales / dolphins and fisheries in this region.	partners	Low / High
INDICATORS		
▪ Properly tested mitigation technique. ▪ Acceptance and use of a successful technique by longline fisheries in the region. ▪ System of collecting data from fishing operations on by-catch and depredation developed and used.		

OBJECTIVE (ii) → Limit direct take to sustain populations.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
Direct take: Whaling		
2.7 Support non-lethal research on abundance, population structure, trends, and assessments of impacts, particularly on humpback, minke and fin whales.	SPREP / partners / members	High
Direct take: Drive hunts and live capture		
2.8 Support research on abundance, structure, distribution, trends, and assessments of harvest impacts on the whale and dolphin species targeted.	SPREP / partners / members	High
2.9 Ensure that direct take of whales and dolphins does not affect viability of local populations.	members	High
2.10 Ensure that any live capture activities in the region comply with international regulations and agreements.	members	High

→

INDICATORS		
▪ Non-lethal research carried out on abundance of whale and dolphin species that are targeted in whaling, hunt and live capture. ▪ Sustainable principles applied to any direct take and international regulations / agreements applied to capture activities.		
OBJECTIVE (iii) → Improve our understanding of the impacts of climate change on whales and dolphins.		
ACTIONS ↓	**LEAD** ↓	**PRIORITY** ↓
2.11 Facilitate the collation and dissemination of current knowledge of the impacts of climate change on marine mammals and their habitats.	SPREP, scientific institutions, CBD Secretariat / UNFCCC Secretariat / partners	High
INDICATORS		
▪ Document / presentation on climate change impacts to whales and dolphins provided to SPREP members by 2009.		
OBJECTIVE (iv) → Minimise impacts of pollution on whales and dolphins.		
ACTIONS ↓	**LEAD** ↓	**PRIORITY** ↓
Plastics and marine debris		
2.12 Encourage improved waste management at community and national levels to reduce plastics and other debris in the marine environment.	members	Medium
2.13 Develop and promote the use of guidelines for fishing operations related to discarding of waste.	SPREP / SPC	Medium
2.14 Collect information on the potential impact of plastics and fishing gear on whales and dolphins, including from stranding networks.	members / partners	High
2.15 Request that necropsies, where possible, include examination for plastic ingestion.	members	High
INDICATORS		
▪ Better information on the impacts of plastics and other debris to whales and dolphins. ▪ Guidelines developed for proper waste management at all levels including from fishing boats.		

OBJECTIVE (v) → Identify and mitigate any significant impact from marine whale and dolphin-based tourism.		
ACTIONS ↓	**LEAD** ↓	**PRIORITY** ↓
2.16 Identify potential for significant impact / localised effects from tourism activities on whales and dolphins.	partners / SPREP / members	Medium
2.17 Develop management and mitigation strategies to reduce identified impact.		
2.18 Assess the potential impacts of whale and dolphin watching activities on the animals: ▪ Spinner dolphin watching ▪ Swim-with programmes ▪ Vessel interactions	partners / SPREP / members	High
INDICATORS		
▪ Significant adverse effect from whale and dolphin watching tourism identified and threat mitigated. Lessons learned promoted and widely shared in the region. ▪ Studies on impacts of whale / dolphin watching completed in New Caledonia, Tonga. Studies undertaken in Guam, French Polynesia, Hawaii.		

OBJECTIVE (vi) → Ensure coastal development takes account of potential impacts on whale and dolphin populations.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
2.19 Encourage consultation / consideration of impacts on whales and dolphins in national legislative and environmental impact assessment (EIA) processes.	members	High
2.20 Identify particular localised areas and populations, and develop appropriate monitoring and mitigation of any significant impacts.	members / partners	Medium
2.21 Provide information on potential impacts of coastal development to whales and dolphins to decision makers and public.	members	Medium

INDICATORS

- Consideration of impacts on whales and dolphin incorporated into national legislation and other processes such as EIA and potential impact information made available.
- Monitoring of identified localised populations initiated.

OBJECTIVE (vii) → Improve understanding of unknown but potential threats to whales and dolphins, including ship strikes, entanglement, acoustics and disease.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
2.22 Encourage anecdotal and opportunistic recording and documentation for ship strikes, entanglement and disease.	members	Low but unknown
2.23 Identify any significant source of acoustic noise pollution that could affect whales and dolphins.	members	Low

INDICATORS

- System in place and operational to collect anecdotal opportunistic data and to respond if one of these becomes a significant threat at local, national or regional level.

THEME 3 • ECOSYSTEM / HABITAT PROTECTION[14]

OBJECTIVE → Support the designation and management of national whale / marine sanctuaries in the EEZs of SPREP members; and identify key critical habitat, hotspots, and migratory pathways that are candidates for improved conservation.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
3.1 Support the declaration of EEZ-wide whale sanctuaries by SPREP members and support these sanctuaries in developing and implementing management plans and strategies.	SPREP / partners	High
3.2 Establish a working group on ecosystem / habitat protection that will identify critical habitats, hotspots and migratory pathways and environmental linkages (spatial and temporal).	SPREP / partners / members	Medium
3.3 Evaluate and support marine protected areas and networks where they are a suitable method and benefit to the protection of whales and dolphins and their habitats in the identified areas.	SPREP / partners	High
3.4 Integrate, where relevant and appropriate, whale and dolphin conservation into the development of marine protected areas (MPAs) and marine managed areas (MMAs).	members	High

INDICATORS

- Additional SPREP members designate national EEZ whale sanctuaries.
- Management strategies / plans developed, finalised and implemented for existing sanctuaries.
- Working group identifies potential areas for marine protected area designation and management.

[14] There are two general terms often used in regard to ecosystem protection of whales and dolphins: "sanctuaries" and "marine protected areas". Typically in the Pacific Islands region, and for the use in this Plan, "sanctuaries" refer to EEZ-wide whale sanctuary declarations with a principle objective of prohibiting commercial whaling. "Marine protected areas" may be smaller in scale and often refer to specific critical habitats, hotspots, or pathways.

THEME 4 • CAPACITY BUILDING

OBJECTIVE → Increase in-country expertise and capacity.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
4.1 Identify training needs and support proposal writing to implement WDAP at the country and regional level, using existing processes such as National Capacity Self Assessment (NCSA).	members / SPREP	High
4.2 Develop training packages on common priorities (e.g. stranding, data recording, legislation, communication, etc.) based on regional priorities and convene workshops based on identified needs.	SPREP / partners	High
4.3 Support internship training on whales and dolphins in existing research centres.	partners	High
4.4 Build in-country capacity to prepare relevant regulation, legislation and policy.	members / SPREP	High
4.5 Conduct local and / or regional training workshops on necropsy, including collection and storage of tissues, skeletal remains and analysis.	SPREP / Auckland University	High
4.6 Conduct training and verification of whale and dolphin sightings and reporting, and develop database complementary to that under Marine Turtle Action Plan.	SPREP / partners	Medium
4.7 Conduct at least one specialist regional workshop in abundance estimation techniques (sighting surveys) followed by field training cruise.	SPREP / CMS / WDCS	High
4.8 Develop surveillance and enforcement capacity for implementation of national protection measures including whale and dolphin watching tourism operations.	members	High
4.9 Conduct industry training and certification programs for whale / dolphin watching operators and guides, which should be required to attain a whale & dolphin watching permit / license where applicable.	partners	High

INDICATORS

- Training needs identified and addressed.
- Training packages prepared and made available.
- Increased technical capacity to obtain information and assist in the conservation of whales and dolphins in the region.
- Improved capacity to develop and implement policies and legislation.
- Whale / dolphin operator training and certification programs are implemented in SPREP nations.

THEME 5 • EDUCATION AND AWARENESS

OBJECTIVE (i) → Develop communication strategies, training programmes and protocols for key issues within the Whale and Dolphin Action Plan.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
5.1 Identify key issues for each member and support development of appropriate education strategies and programs (e.g. known threats, species ID, status).	members / partners	High
5.2 Develop appropriate educational and awareness tools for different target audiences at a regional and national level including producing a template to facilitate production in local dialect.	SPREP / members / partners	High
5.3 Capacity building of government agencies and community trainers to facilitate stewardship, and to develop and deliver outreach programmes.	members	Medium

INDICATORS

- Community and school educational programmes implemented.
- Regionally relevant fact sheets to inform governments and industry on key issues are produced (e.g. fisheries interactions, cultural practices, regulations, biology, natural history).
- Training programmes carried out in-country for key government agencies and identified local community stewards.

OBJECTIVE (ii) → Increase awareness and understanding of whales and dolphins in the region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
5.4 Use existing community networks and venues to deliver public presentations.	members	High
5.5 Provide materials and information to community media (TV and radio stations) in-country to inform public.	members / SPREP / partners	High
5.6 Disseminate educational materials targeted at recreational / private boaters to ensure minimum impact.	members / SPREP / partners	Medium

INDICATORS

- Presentations on whales and dolphins carried out in schools, village halls, and during annual festivities.
- Whales and dolphins are profiled through documentaries, interviews and regular spots in local media.
- ID guides, fact sheets and guidelines brochures are distributed to boaters, marinas, yacht clubs, through government agencies and NGOs.

OBJECTIVE (iii) → Promote awareness regarding the value of traditional knowledge and practices in the management of whales and dolphins.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
5.7 Integrate traditional knowledge, stories and customs into education, and develop awareness.	members / SPREP	High
5.8 Encourage the use of informal / traditional methods of education within villages (e.g. using elders as resource people).	members / partners / SPREP	Medium

INDICATORS

- Educational programmes implemented in schools, education centres, and museums.
- Informal / traditional methods of education are employed at community level.

THEME 6 • CULTURAL SIGNIFICANCE AND VALUE

OBJECTIVE (i) → Document the range of cultural practices, values and knowledge associated with whales and dolphins and encourage a more cohesive approach in policies and legislation.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
6.1 Undertake a review of customary practice and knowledge related to the conservation and management of whales and dolphins.	SPREP / partners	High
6.2 Promote the adoption and integration of customary practices related to the conservation and management of whales and dolphins, where appropriate.	members	High
6.3 Review and identify gaps and conflicts in relevant policies and legislation that supports / limits the protection and promotion of traditional resource management (TRM), traditional knowledge (TK), intellectual property rights (IPR), access and benefit sharing (ABS), and customary marine tenure (CMT).	members	High
6.4 Encourage the need to address gaps and conflicts found in the review where required, in consultation with local communities and relevant stakeholders.	members / SPREP	High
6.5 Support and promote the introduction of appropriate formal protection of IPR, TK and ABS at a national, regional and international level.	members / SPREP	High
6.6 Support the documentation of traditional knowledge, practices, heritage and values, using existing networks.	members / SPREP	High

INDICATORS

- TK and other customary practices and values documented and incorporated where relevant.
- Review on gaps carried out and report published and disseminated.
- Artifacts and narratives (oral histories) documented and conserved in local museums.

OBJECTIVE (ii) → Preserve and protect the traditional knowledge and values associated with whales and dolphins.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
6.7 Identify and empower appropriate in-country authorities to hold, maintain and promote traditional knowledge.	members	High
6.8 Establish documentation protocols and agreed partnerships with cultural groups / chiefly bodies and individual knowledge holders regarding appropriate use and dissemination of information.	members	High

INDICATORS

- Each country has identified appropriate authority to house and promote cultural information.
- Ongoing promoting and support for TK, ABS in national, regional, and international fora.

OBJECTIVE (iii) → Ensure appropriate cultural knowledge, practices, and values inform and underpin management measures.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
6.9 Assess the sustainability of cultural practices involving whales and dolphins that may represent a threat to whales and dolphins (e.g. Fijian tabua, Solomon Islands dolphin drive).	members / SPREP	High
6.10 Ensure biological survey designs respect and draw upon traditional knowledge.	members	High
6.11 Ensure national and local policies and management respect and draw upon traditional knowledge.	members	High

INDICATORS
▪ Case studies supported on sustainability of cultural practices in country's interested supporting sustainability assessments. ▪ Relevant whale and dolphin traditional knowledge and cultural values are used and acknowledged in scientific survey design and execution and formulation of national management policies.

THEME 7 • LEGISLATION AND POLICY

OBJECTIVE → Develop country-level legal, policy and an institutional framework to support the effective implementation of the Whale and Dolphin Action Plan.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
7.1 Complete legislative and policy review and disseminate the final report. The review will include: ▪ Identifying legislative inconsistencies and gaps within PICTs as well as USA, United Kingdom, Pitcairn, France, Australia and New Zealand; ▪ Assessing country capacity to implement the WDAP, CMS Cetacean MOU, CITES and CBD where relevant; ▪ Habitat and species protection measures; ▪ Sanctuary declaration; ▪ Regulation of distant water and local fleets, including observer programme coverage to document commercial fishing impact on whales and dolphin.	IFAW / SPREP	High
7.2 Further develop policies, regulations and legislation for the effective conservation management of whales and dolphins, including measures to mitigate threat and ensure habitat protection.	members /SPREP / partners	High
7.3 Identify and respond to country / territory legal and policy capacity needs.	members /SPREP / partners	Medium
7.4 Assess processes and outcomes used for NCSA and other related biodiversity mechanisms, to address legal and policy capacity needs for whale and dolphin conservation.	members	Medium
INDICATORS		
▪ Regional legislative / management review completed and widely disseminated. ▪ Harmonization of in-country / territory policy and legal instruments. ▪ Capacity strengthened to draft, manage and enforce legislation and policy in-country / territory. ▪ Number of NBSAPs or equivalent strategies integrating WDAP actions.		

THEME 8 • RESEARCH AND MONITORING

This Action Plan promotes only non-lethal techniques for research

OBJECTIVE (i) → Improve information received on stranding events in the Pacific Islands region.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
8.1 Develop a web-accessible regional stranding database, with verification process for species identification.	SPREP / Te Papa / members	High
8.2 Collect community records and knowledge on whales and dolphins and incorporate into the regional stranding database.	members	High
8.3 Produce a regional booklet / stranding manual with species identification, forms and instructions in English, Pidgin and French.	SPREP	High
8.4 Encourage an MOU between the University of Auckland and SPREP for processing and storage of tissue samples for genetic work.	SPREP / CMS	High
8.5 Provide basic stranding kits (for genetic samples) to members.	Akld Uni / donors	High
8.6 Assist in funding for experts to attend national workshops in the region.	SPREP	Medium

INDICATORS
▪ Stranding database and network established and operational. ▪ Stranding manual produced in three languages and distributed. ▪ Tissue archive and protocols for deposition and access established. ▪ Kits for genetic sampling distributed and used. ▪ Improved information on stranding events in all PICTs.

OBJECTIVE (ii) → Identify key species and areas for baseline surveys.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
8.7 Establish web-accessible sighting database.	SPREP	Medium
8.8 Improve species inventories for all PICTs, prioritising those recognised as data deficient.	members / partners / SPREP	High
8.9 Conduct dedicated surveys to estimate abundance and trends of whales and dolphins species.	SPWRC / partners / members	High
8.10 Provide adequate species identification and related information resources for all PICTs (e.g. IFAW and SPC identification kit for observer programme).	SPREP / SPC / IFAW / partners	Medium
8.11 Increase use of platforms of opportunity (e.g. fisheries patrols and observers, aerial surveillance, naval and merchant shipping, other marine research programmes) for whale and dolphin sightings.	members / SPREP / partners	Medium
8.12 Increase use of remote sensing devices, especially acoustic.	SPWRC / NOAA / partners	Low

INDICATORS
▪ Online regional sighting database established and operational. ▪ Species inventories for all data deficient SPREP members improved. ▪ Species inventories for at least three SPREP members improved by addition of further species. ▪ Cruises to estimate abundance of whales and dolphins species completed in at least two SPREP members. ▪ Species information and id kit assembled and distributed. ▪ Incorporation of whale and dolphin expertise to conduct sightings and research activities in cruises dedicated to other purposes (e.g. rapid ecological assessments). ▪ Increased reporting level for whales and dolphins sighted from fisheries enforcement patrols, fisheries observers, ferries, other commercial vessels and aerial surveillance flights conducted to combat IUU fishing. ▪ At least one remote sensing device deployed in the region for at least six months.

OBJECTIVE (iii) → Identify significance of and priorities for toxicological research.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
8.13 Investigate need and opportunities for toxicological research.	SPREP	Low
8.14 Identify suitable laboratories for toxicological analysis.	SPREP	Low
8.15 Identify funding sources.	SPREP / partners	Low

INDICATORS
▪ Regional expertise in and laboratories for toxicological analysis identified. ▪ Areas in the region where toxicological analysis would be a high priority identified.

THEME 9 • WHALE AND DOLPHIN-BASED TOURISM

Ensure that the development of whale and dolphin based tourism is sustainable and conducted responsibly throughout the Pacific Islands region.

OBJECTIVE (i) → Foster sharing of lessons learned and undertake regular assessment of the industry.

ACTIONS ↓	LEAD ↓	PRIORITY ↓
9.1 Develop a framework to maintain effort to document industry growth (building on IFAW / SPTO / SPREP / SPWRC work).	partners / SPREP	High
9.2 Promote understanding of the industry, the lessons learned and their implications.	partners / SPREP	High / Medium
9.3 Foster communication between key in-country stakeholders, in particular industry and government, to promote understanding and assist in the management of the industry.	members	High / Medium
9.4 Monitor, document and support PICTs where whale watching activities occur as models in addressing licensing, regulation and management issues, ensuring that industry development draws on lessons learned.	SPREP / partners	High

INDICATORS

- Reporting system developed to gather information on growth of the industry.
- Regional whale watching report updated and disseminated to relevant management bodies, industry, media and community.
- Industry, government and key stakeholders (e.g. NGOs, researchers, community groups) meet in-country as required to discuss issues and actions.
- Key resources and technical support (reports, examples, templates) available from SPREP.

OBJECTIVE (ii) → Ensure best practice management of whale and dolphin based tourism in the Pacific Islands region.

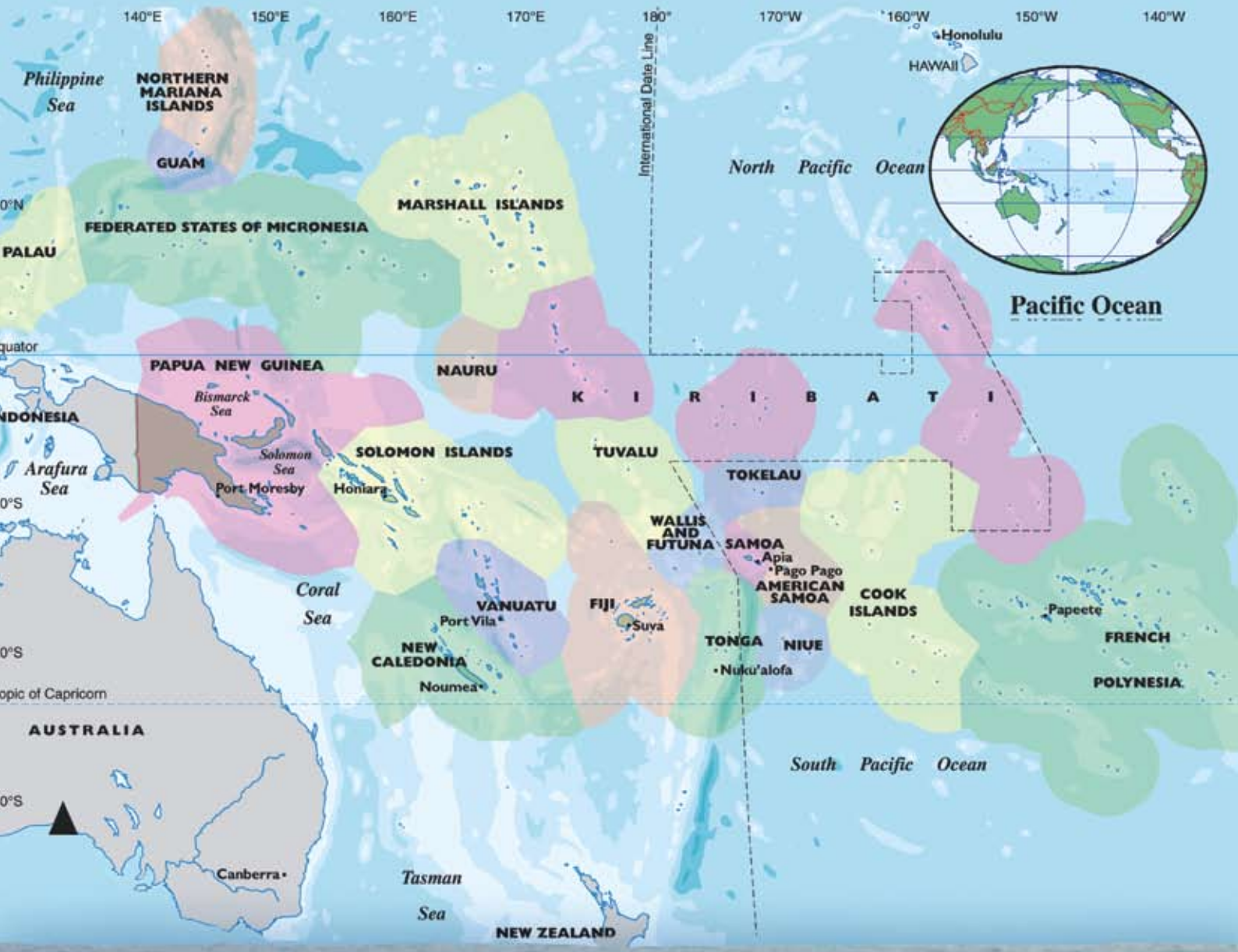
ACTIONS ↓	LEAD ↓	PRIORITY ↓
9.5 Develop region-wide whale and dolphin watching guidelines.	IFAW / SPREP / partners	High
9.6 Hold regional whale and dolphin watching workshop to promote best practice management and endorse regional guidelines.	Opération Cétacés / IFAW / SPREP	High
9.7 Support collaborative and best practice management of whale and dolphin watching activities involving all stakeholders.	members	High
9.8 Promote licensing / permitting of whale and dolphin watching tourism operations as a tool for management.	members	High

INDICATORS

- Workshop held, well attended by SPREP members and industry.
- Regional guidelines developed, accepted, published and used by SPREP members and industry.
- Stakeholders are consulted in the development of management measures.
- Licensing schemes are implemented in SPREP nations where whale- and dolphin-based watching tourism occur.
- Management agencies have on-water presence to monitor and enforce in-country licensing and permitting conditions.
- Whale and dolphin tourism in the region operating according to responsible wildlife viewing practices

→

OBJECTIVE (iii) → Maximise educational and economic values of whale and dolphin based tourism watching.		
ACTIONS ↓	**LEAD** ↓	**PRIORITY** ↓
9.9 Develop programs for whale and dolphin watching operators to collect useful data.	members / SPREP	High
9.10 Support countries to develop an education kit for onboard operations.	SPREP / partners	High
9.11 Promote socioeconomic benefits of whale and dolphin watching to local communities.	members	High / Medium
9.12 Assist countries to explore the potential for whale and dolphin watching through feasibility studies.	partners / SPREP	High / Medium
INDICATORS		
▪ Data sheet developed and disseminated to operators and reported annually to SPWRC. ▪ Educational kits developed and disseminated to SPREP members. ▪ Community outreach programme conducted in-country targeted at local media, villages, and community groups. ▪ Feasibility studies conducted in relevant SPREP members.		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