



TECHNICAL MEETING ON CETACEANS IN THE PACIFIC ISLANDS REGION

SPREP Headquarters, Apia, Samoa,

1-4 August 2006



LIST OF ABBREVIATIONS AND ACRONYMS

CBD	Convention on Biological Diversity
CI	Conservation International
CITES	Convention on the International Trade of Endangered Species of Wild Flora and Fauna
CMS	Convention on the Conservation of Migratory Wild Animals
COP	Conference of Parties
CROP	Council of Regional Organizations in the Pacific
DEH	Department of Environment and Heritage, Australia
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
GEF	Global Environment Fund
HI	Hawaii
ICRW	International Convention for the Regulation of Whaling
IFAW	International Fund for Animal Welfare
IGO	Inter-Governmental Organization
IWC	International Whaling Commission
JARPA	Japanese Whale Research Program under Special Permit in the Antarctic
MoC	Memorandum of Cooperation
MoU	Memorandum of Understanding
MPAs	Marine Protected Areas
MSPF	regional Marine Species Programme Framework
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Self Assessment
NEA	National Environment Agency
NGO	Non-Governmental Organization
NOAA	National Oceanic and Atmospheric Administration (USA)
NSW	New South Whales
NZ	New Zealand
PICTs	Pacific Island Countries and Territories
PIF	Pacific Islands Forum
PIR	Pacific Islands Region
PNG	Papua New Guinea
REA	Regional Environment Agreements?
RFMOs	Regional Fisheries Management Organizations
SAT	Samoan Tala
SMMPL	Some Marine Mammals Protection Legislation
SOPAC	Pacific Islands Applied Geoscience Commission
SPC	Secretariat of the Pacific Community
SPLASH	Structure of Populations, Levels of Abundance, and Status of Humpbacks Project
SPREP	Secretariat of the Pacific Regional Environment Programme
SPTO	South Pacific Tourism Organization
SPWRC	South Pacific Whale Research Consortium
SPWS	South Pacific Whale Sanctuary
SWOT	Strengths, Weaknesses, Opportunities and Threats
TNC	The Nature Conservancy
UNCLOS	United Nations Convention on Law of the Sea
UNEP	United Nations Environment Programme
USA	United States of America
USP	University of the South Pacific
WCPFC	Western and Central Pacific Fisheries Commission
WDAP	Whales and Dolphins Action Plan
WDCS	Whale and Dolphin Conservation Society
WSSD	World Summit on Sustainable Development (WSSD)
WWF	World Wildlife Fund for Nature

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EXECUTIVE SUMMARY

The current regional Marine Species Programme Framework (MSPF) 2003-2007 was endorsed by SPREP members in 2003 and subsequently commended by Forum Leaders in the same year. The MSPF 2003-2007 consists of Action Plans for three groups of marine animals of special interest, whales and dolphins, sea turtles and dugongs.

At the 17th SPREP meeting, members agreed to the review process of the MSPF and its Action Plans and directed SPREP Secretariat to submit a revised MSPF at their next meeting. The approach to the review of the MSPF and Action Plans was to ensure that SPREP Members had updated technical information to inform their deliberation and development of a revised MSPF and Action Plans. SPREP held a technical meeting on Cetaceans on 1-4 August 2006 in Apia, Samoa. The objectives of the meeting were:

- 1). To assess the status of the implementation of the regional WDAP 2003-2007
- 2). To review collected and available information on cetaceans in the Pacific Islands region
- 3). To develop components of a draft revised Whale and Dolphin Action Plan.

The meeting was attended by experts from the region and afar. It provided a forum for information sharing and robust exchanges on key issues and priorities as well as recommended actions with the view to provide relevant advice to SPREP members for the development of the revised Action Plan on Cetaceans. The outcomes of the meeting are summarised below.

Assessment of the implementation of the WDAP 2003-2007

The meeting agreed that the WDAP provided a focus for action at the regional and national level. Whilst significant progress has been achieved in the 3.5 years of the WDAP implementation it has been notably limited by lack of human and financial resources. In the same time it is encouraging to note the following achievements:

- The SPREP/CMS partnership in developing a regional agreement for marine mammal conservation in the region has progressed well with a *CMS MoU on Cetaceans and their habitats in the Pacific Islands Region* signed by 9 SPREP members in 2006
- The SPREP/IFAW MOU has for the first time formally cemented an IGO NGO partnership for marine species conservation in the region.
- Significant new partnerships and programmes by NGOs in the region e.g. IFAW, WWF South Pacific, WDACS which have grown in the region post 2003 and are making a significant contribution to the WDAP's implementation at regional and country level.
- The role the South Pacific Whale Research Consortium (SPWRC) and its members are playing in developing research, providing information and in many cases building significant capacity and long-term research programmes for marine mammals in the region.
- Incorporation by NGOs and Governments of marine mammal issues into ecological assessments eg Solomon Islands TNC REA, NEA/CI Phoenix Islands Conservation Project.

Update on knowledge of cetaceans populations, conservation and management

Cetaceans Population status

Records on cetacean occurrence based on existing and largely limited data and information indicate that a total of 33 species (41 if New Zealand and Australia are also included) are found in the region, with sperm whales being the most widely distributed across the region and PNG and Solomon Islands having the greatest number of species.

A modeling exercise undertaken by Auckland University to estimate population abundance of Humpback whales in Oceania, based on mark-recapture from photo ID, generated and estimate of 3800, with Tonga having the largest population (2,311), followed by French Polynesia (1057) and New Caledonia (472). It should be noted that this work is still an unpublished work in progress, but the meeting agreed that the estimates are probably in the right ballpark. Population estimates for other species are poorly known and mostly based on ad hoc information.

On-going work on movements and genetic analysis of whales and small cetaceans is being conducted adding to the picture. Initiatives such as the Comprehensive assessment of Southern

Hemisphere Humpback Whales (CASH) and the Structure of Populations, Levels of Abundance, and Status of Humpbacks (SPLASH, NOAA) will over time improve knowledge.

Fisheries and cetaceans interaction

Studies of whale entanglements in fishing gear and more generally marine debris, undertaken by NOAA - Hawaii show surprisingly a high rate of encounter. Possible responses include the design of safe fishing gear, establishing rescue networks and closing fisheries in certain areas.

The only published report¹ on depredation in the region estimated that depredation by whales accounts for 0.8% of catch in the region. A report on long line fisheries interactions and cetaceans in Samoa, showed that dolphins occasionally take long line baits and toothed whales take hooked catch. Preliminary results, from catch logs and interviews indicate that 3-6% per sets are affected, representing an estimated loss of income of SAT 3000 per affected set, according to the fishermen interviewed.

An FAO project on ecosystem based management of fisheries in PNG indicated that depredation by cetaceans in particular the Bismarck and Solomon Seas industry of 10% loss of yield in one season and acknowledge the need for further research in this area, including the review and adaptation of log sheet forms and observer protocols to assess the extent of species interaction with tuna fisheries.

Legislation and policy

A review of current national legislation, policies and sanctuaries, undertaken by IFAW, showed that most Pacific Islands countries and territories have in place some form of protection measures. 10 countries and territories have in place national marine mammal protection legislation and 7 have some form of marine mammal protection. All countries are members of FAO, and signatories to UNCLOS, CBD (except US Territories), 12 to CITES (Us and French Territories, Fiji, Palau, PNG, Samoa, Tokelau and Vanuatu) and 3 to the CMS (French Territories, Samoa, Cook Islands).

The review highlighted the need for implementation of current measures, additional legislation to implement CITES/CBD, but also points to the need to consider other instruments such as marine managed areas. Progress on a proposal by Australia and New Zealand to the International Whaling Commission (IWC) for a South Pacific Whale sanctuary endorsed in 2001 by the SPREP members was presented by DEH.

A review of opportunities to progress cetacean conservation under international instruments (eg CBD, CITES, Ramsar, World Heritage, CMS) by WDCS, showed that of the 5 UN biodiversity conventions, the CMS is a most appropriate instrument, given its focus on implementation for migratory species and their habitat conservation. The CBD target to reduce biodiversity loss by 2012, and the CBD indicators for species, ecosystems and habitats were noted as important tools to focus action and measure progress. The streamlining of reporting across conventions was presented as a welcome development to reduce the burden of national reporting.

The potential benefits of the *CMS MoU on Cetaceans and their Habitats in the Pacific Islands Region* was presented as increased international profile, technical information, capacity building and networking opportunities as well as a mechanism for leveraging of resources and streamlining of reporting to conventions. It was proposed that CMS MoU provisions and the CBD indicators and reporting timelines to conventions be incorporated into the revised Action Plan, and that broader partnerships with expertise on ecosystem based approaches be developed.

Cultural significance

Case studies on cultural significance of cetaceans in Tuvalu and Vanuatu presented by IFAW, showed the importance of marine mammals as food source, in ceremonies and a totems. However, traditional associations seem to have been lost in recent times.

¹ Lawson et al 2001. SPC. 14th Standing Committee on Tuna and Billfish Working Paper (6)

Cetacean based tourism

A review of the status of marine mammal tourism activities in the Pacific Islands region, commissioned by IFAW in collaboration with SPREP, SPWRC and the SPTO, showed that the industry is experiencing strong annual growth in particular in French Polynesia and Guam, with well established industries in New Caledonia and Tonga since 1998 and new ventures in PNG, Samoa, Cooks and Solomon Islands.

The review showed that the size of an industry depends on the reliability of sightings and accessibility of cetaceans combined with a sound tourism base. The study indicates that between 1998 and 2005, the number of whales watchers has increased by 100% (estimated at 110 000 in 14 countries in 2005), which represents an estimated direct economic value of \$US 7.5 million and \$US 21 million in total value of the industry. Those figures demonstrate the economic benefits and opportunities associated with cetacean conservation.

With an increase in growth comes clear responsibility to protect cetaceans and have in place appropriate regulations, plans, guidelines and awareness programmes. Cetacean based tourism impacts studies conducted in New Zealand and elsewhere show the need for establishing and disseminating best practices and code of conducts for industry.

A review of impacts of tourism activities undertaken by the Massey University (NZ) showed that there is little known about the impacts of tourism activities such as noise from boats, interaction with swimmers, and that caution should prevail when promoting cetacean based tourism as a sustainable activity. Certification and training programmes for whale watching operations and guides are an important tool to minimize stress on the animals and to develop interpretation activities to promote the conservation of cetaceans. A good example is the Whales Alive Training and Certification Program for whale watching guides.

Toward developing a revised whale and dolphin action plan

The meeting mapped out key issues to be considered in developing the revised plan, including implementation issues and identification of priority areas, based on the review of the existing plan, updated information and new developments such as the CMS MoU on Cetaceans. These discussions were used to develop detailed technical advice for consideration by SPREP member countries and territories.

The meeting highlighted a number of key issues to improve the development and implementation of a revised action plan including:

- Improve knowledge of the status of cetacean populations and their habitats, as well as impacts from human activities to guide decision making (national and regional level);
- Develop strategic priorities and timeframes for regional and national action;
- Foster integration of cetacean conservation in regional and national policies (eg NBSAPs, Fisheries plans and National Sustainable Development Strategies);
- Demonstrate economic benefits of cetacean conservation through economic opportunities (eg tourism) but also from positive impacts of conservation measures (eg habitat protection, mitigation techniques) to generate political support and investment for cetacean conservation;
- Build in country capacity (technical, financial, institutional) to implement and monitor agreed actions and address existing and emerging threats such as climate change and increased direct take;
- Develop monitoring and reporting systems to evaluate the effectiveness of regional and national implementation, and
- Initiate 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.

The meeting highlighted key opportunities to progress cetaceans conservation and enhance the effectiveness of a revised action plan including:

- the CMS MoU on Cetaceans by increasing technical capacity for implementation through partnerships and by leveraging political and financial support in international fora;
- linking cetacean conservation to international and regional initiatives as platforms for integrated policy responses (eg CBD and the CBD Island Biodiversity Programme of Work, the Micronesia Challenge) and information exchange and mitigation strategies with RFMOs (eg the newly established Western and Central Pacific Fisheries Commission) and
- demonstrated benefits from cetacean conservation reflected in the growth of whale and dolphin tourism in the region.

An overview of key recommendations towards the development of the revised Action Plan for cetaceans include:

Proposed format

The Plan should include a clear vision, priority areas/themes with time bound actions at the national, regional and international levels, identification of implementing organisations, inclusion of a monitoring and evaluation framework and a communication strategy.

Proposed themes/areas for consideration

The meeting proposed the following:

1. Threats to cetaceans;
2. Ecosystem/habitat protection, including migratory corridors
3. Research and monitoring, including responses to strandings and entanglements
4. Education and awareness;
5. Information management
6. Capacity building;
7. Sustainable and responsible cetacean-based tourism
8. Regional and international collaboration and cooperation
9. Legislation and policy;
10. Coordination and implementation of the revised action plan

Under the above categories, the meeting proposed a number of actions for consideration. A summary is presented below. Specific actions are detailed in Annex 13.

Theme 1: Threats to cetaceans

Recommended actions:

- Review key fisheries interaction data to develop strategies and plans for mitigation
- Assess the impact of directed takes on PIR cetacean populations
- Develop advice and regulation to minimise the threat of ship strikes in identified critical habitat areas
- Consider shipping routes and develop ambient noise budgets for the PIR
- Develop information on the impact of climate change to cetaceans in the region

Theme 2: Ecosystem/habitat protection, including migratory corridors

Recommended actions:

- Identify critical habitat, oceanographic conditions and migratory pathways in the PIR
- Assess effectiveness of sanctuaries and area based tools to protect cetacean habitats at regional and national levels

Theme 3: Research and monitoring, including responses to strandings and entanglements

Recommended actions:

- Increase research training and develop PIR wide guidelines for data collection
- Conduct key species inventory/baseline surveys

Theme 4: Education and awareness

Recommended actions:

- Develop communications strategies, training programmes and protocols for key issues

- within the WDAP
- Increase information transfers about cetaceans species in the PIR

Theme 5: Information management

Recommended actions:

- Compile key technical (scientific and legislative) information to support the WDAP
- Develop systems for maximising use of existing data and data analysis

Theme 6: Capacity building

Recommended actions:

- Identify training needs at the national level
- Increase training in appropriate research methods and protocols
- Encourage regional and international opportunities for training

Theme 7: Sustainable and responsible cetacean-based tourism

Recommended actions:

- Assess effectiveness of existing guidelines, regulations and licensing schemes.
- Foster training and certification programmes and best practice impact management.
- Engage industry in monitoring and educational activities.
- Foster sharing of lessons learnt and undertake regular review of industry.

Theme 8: Regional and international collaboration and cooperation

Recommended actions:

- Foster interagency collaboration at national level and engagement with private sector.
- Foster NGO partnerships at the national, regional and international levels.
- Foster greater engagement of US and French Territories in the development and implementation of the action plan.

Theme 9: Legislation and policy

Recommended actions:

- Develop industry based (eg tourism/fisheries/transport) guidelines, regulations and actions to reduce threats to cetaceans.
- Integrate international requirements into regional and national systems

Theme 10: Coordination and implementation

Recommended actions:

- Develop an implementation and reporting framework (including standard reporting template, indicators etc).
- Develop and maintain a database of achievements against agreed actions.
- Develop a communication strategy for the life of the plan.
- Undertake economic evaluation of the effectiveness of the plan to promote the value of cetaceans conservation with policy makers and the community.
- Develop a resource strategy to implement the Action Plan in partnership with the CMS secretariat, NGOs and seek partnership with the private sector.
- Facilitate the development of national implementation plans for cetacean conservation.

INTRODUCTION

The current regional Marine Species Programme Framework (MSPF) 2003-2007 was endorsed by SPREP members in 2003 and subsequently commended by Forum Leaders in the same year. The MSPF 2003-2007 consists of Actions Plans for three groups of marine animals of special interest, whales and dolphins, sea turtles and dugongs. The Action Plans encompass priority actions to enable the peoples of the Pacific Islands region to take a primary role in achieving the following vision: *A Pacific Ocean where populations of whales & dolphins, dugongs and marine turtles have recovered to healthy levels of abundance, have recovered their former distribution and continue to meet and sustain the cultural aspirations of Pacific peoples.*

At the 17th SPREP meeting, members agreed to the review process of the MSPF and its Action Plans and directed SPEP Secretariat to submit a revised MSPF at its next meeting. Nine SPREP members signed the *CMS MoU for the Conservation of Cetaceans and their Habitats in the Pacific Islands* at the meeting.

The approach to the review of the MSPF was to ensure that SPREP Members had updated technical information to inform their deliberation and development of a revised MSPF and Action Plans. To that effect, SPREP held a technical meeting on cetaceans on 1-4 August 2006.

The objectives of the meeting were:

- 1). To assess the status of the implementation of the regional WDAP 2003-2007
- 2). To review collected and available information on cetaceans in the Pacific Islands region
- 3). To develop components of a draft revised Whale and Dolphin Action Plan.

Expected outcomes of the meeting were:

- A Summary of the status of the implementation and likely implementation to end 2007 of the regional WDAP 2003-2007.
- Updated technical information on cetaceans in the Pacific Islands region.
- Agreed process, actions and timetable for completing the review and producing a revised Action Plan for submission to and sign off at the 2007 SPREP meeting.
- Agreed preparation and information needs for a wider regional meeting of countries/territories to discuss/finalize the WDAP review.
- List of components of draft revised action plan.

The meeting brought together experts in cetacean conservation from regional and international agencies including NOAA (US), the CMS Scientific Council, the Department of the Environment and Heritage (Australia), the Department of Conservation (New Zealand) the Ministry of Natural Resources, Environment and Meteorology (Samoa), IFAW, WDCS and WWF. A list of participants is attached as Annex 14.

The meeting was organized and facilitated by SPREP. Significant support was provided to the SPREP team by participants, in particular Ms Sue Miller-Taei (IFAW) and Dr Margi Prideaux (WDCS), prior to and during the meeting.

The meeting was organized around three main sessions addressing the key objectives of the meeting and included a combination of presentations and discussion sessions with daily reviews of the day's outcomes. A technical report was prepared by SPREP and a timetable of actions, lead agency and timelines, leading up to endorsement of the revised Action Plan at the 18th SPREP, was developed.

SECTION 1: STATUS OF THE IMPLEMENTATION OF THE REGIONAL WHALE & DOLPHIN ACTION PLAN (WDAP) 2003-2007

1.1 WDAP 2003-2007

The current regional Marine Species Programme Framework (MSPF) 2003-2007 was endorsed by SPREP members in 2003 and subsequently commended by Forum Leaders in the same year. The MSPF was preceded by the regional Marine Mammal Conservation Programme 1993-2003. The MSPF 2003-2007 consists of Action Plans for three groups of marine animals of special interest, whales and dolphins, sea turtles and dugongs. The Action Plans encompass priority actions to enable the peoples of the Pacific Islands region to take a primary role in achieving the following vision:

“A Pacific Ocean where populations of whales & dolphins, dugongs and marine turtles have recovered to healthy levels of abundance, have recovered their former distribution and continue to meet and sustain the cultural aspirations of Pacific peoples”.

The Whale and Dolphin Action Plan (WDAP) 2003-2007 vision recognizes that whales and dolphins are part of Pacific Island peoples' cultural and natural heritage and as such SPREP members' role is to cooperate to:

- foster their recovery from past over-exploitation;
- improve protection and conservation of these species and their habitats, particularly the establishment of sanctuaries through national, regional and international action;
- ensure that Pacific Island people continue to benefit from their long-term survival;
- increase knowledge, awareness and understanding of these species and the role they play in Pacific marine ecosystems.

The goal of the WDAP 2003-2007 is *“to conserve whales and dolphins and their cultural values for the people of the Pacific” and implementation is the collective responsibility of SPREP member states, SPREP, partner non-governmental and intergovernmental organizations, and private sector”.*

The actions for the WDAP are organised under the themes listed below. All of the recommended actions are listed in the matrix on the WDAP Implementation.

- (i) Cultural Significance (incl. whaling heritage)
- (ii) Whale and Dolphin watching tourism
- (iii) Whale Sanctuaries
- (iv) Strandings
- (v) Fisheries Interactions
- (vi) Other Threats
 - Whaling / directed take of small cetaceans
 - Pollution
 - Vessel Collisions
 - Noise Harassment
 - Habitat Degradation
 - Climate Change
 - Population Status and Trends and Research Priorities

1.2 IMPLEMENTATION

Ms Sue Miller-Taei presented the paper summarising the status of the implementation of the WDAP 2003-2007, which is appended as **Annex 1**. An opportunity was also provided for participants to update this information specifically activities involving their agencies/organizations. The result is presented in a matrix form (attached to the paper) where work done/planned in each SPREP member country/territory is listed against these actions.

The overall summary of the implementation of the WDAP is presented below.

Whilst significant progress has been achieved in the 3.5 years of the WDAP implementation, it has been notably limited by lack of human and financial resources.

Nevertheless, it is heartening to note that significant new partnerships and programmes by NGOs in the region eg IFAW, WWF South Pacific, WDACS have developed in the region post 2003 and are making a significant contribution to the WDAP's implementation at regional and national levels. Another important partnership is between SPREP and CMS Secretariats, now formalized under a Memorandum of Cooperation and the development of a regional agreement for cetacean conservation, which has progressed well. The SPREP/IFAW MoU has for the first time formally cemented an IGO - NGO partnership for marine species conservation in the region. The growing role the South Pacific Whale Research Consortium (SPWRC) and its members are playing in developing research, providing information and in many cases building significant capacity and long term research programmes for cetaceans in the region is also acknowledged. The incorporation by NGOs and Governments of marine mammal issues into ecological assessments e.g. Solomon Islands TNC REA, NEA/CI Phoenix Islands Conservation Project is also a significant undertaking.

However, in the same time, new issues of concern have arisen e.g. the plan by Japan to expand its 'scientific whaling' programme to include more minke whales, plus fin and humpback whales, the latter being the foundation of whale watching tourism in the region. A dolphin capture trade for tourism began in the Solomon Islands leading to an international outcry at this practice. Although export is now banned there is still a captive dolphin tourism in the Solomon Islands and in Palau.

1.3 STRENGTHS, WEAKNESSES, GAPS, LESSONS LEARNT

The results of a group session on Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the Whale and Dolphin Action Plan 2003-2007 and its implementation are presented in bullet point format in **Annex 2**.

One of the strengths of the WDAP is that it is a regionally agreed document. It was endorsed by SPREP members in 2003 and was subsequently commended by Forum Leaders in August of the same year. In addition, the WDAP promotes partnership engagement (e.g. with NGO) and is a rallying/focus point for activity and investment. These characteristics have contributed to the substantial amount of work achieved. The WDAP has been a key driver for the development of the MoU for the Conservation of Cetaceans and their Habitats in the Pacific Islands region under the auspices of CMS.

While substantial work has been achieved overall, national implementation has been patchy. This is due to various factors such as the lack of resources, lack of capacity in some countries, and the Action Plan not linking properly to national policies and planning. Other contributing factors include the lack of communication in-country, no ongoing coordination mechanism at SPREP (the position of marine species officer was vacant for some time), as well as the lack of a monitoring, evaluation and reporting framework.

On the structure and content of the WDAP itself, it was felt that it lacks clear priorities/timelines, is too focused on IWC issues, and is not "implementation friendly". While the Action Plan includes objectives and identified threats, these are not followed adequately by actions. In some cases, the actions are not specific enough and capacity sharing is not included.

In terms of opportunities, avenues exist such as the high profile of eco-tourism in the region with increased accessibility of areas. The CMS MoU for the conservation of cetaceans in the region is another opportunity to leverage funding and resources.

Efforts should be directed to enhancing collaborative opportunities and progress conservation initiatives on the ground and promote lessons learnt. Greater emphasis could be given for in-country models as examples.

There needs to be greater awareness of cetacean issues in the region as well as greater international coordination of conservation activities. Given the status of cetacean work in some countries, reinvigorating them would be necessary, with more frequent reporting and celebrating of achievements. The UN will declare 2007 as the Year of the Dolphin, and this presents an opportunity for awareness raising and participation. Opportunities for cetacean conservation can be improved by linking to other issues with momentum such as conservation of biodiversity on the high seas and climate change. Finally, the Australian Centre for Applied Marine Mammal Science and USP present opportunities for information and collaboration.

One of the main threats identified for the effective implementation of the Action Plan is the divergence of political views on cetacean conservation. This could be directly linked to limited public awareness on issues concerning cetaceans and the adverse promotion of fisheries interaction with cetaceans, which are threats in themselves. While there is an increase in conservation measures in some countries, inadequate national management mechanisms to protect cetaceans pose a threat. The proposal to expand lethal research on cetaceans from the region is a real threat, particularly for populations of whale species that are very low in numbers and have not recovered from previous whaling. The lack of long-term data sets and limited capacity in the region also contribute to the issue. Lack of adequate funding, in particular access to sustained funds, has been a hindrance for cetacean work and conservation in the region. This also includes the limited funds available to both SPREP and CMS Secretariat, including the lack of long-term commitment to the Marine Species Officer position at SPREP who is responsible for the development and implementation of the Action Plan.

Annex 3 lists agreed remaining actions for the technical meeting to address under the current WDAP.

SECTION 2: STATUS, CONSERVATION AND MANAGEMENT OF CETACEANS

2.1 CETACEAN POPULATION TRENDS

2.1.1 Cetacean Species Distribution

Dr Cara Miller of WDACS presented a paper on the current reported occurrence and distribution of cetacean species in the Pacific Islands region, the area covered under the MoU for the Conservation of Cetaceans and their Habitat in the Pacific Islands region under the auspices of CMS, but excluding Australia, New Zealand and Hawaii. The information was obtained from a variety of sources including peer-reviewed journals, field reports, museum stranding records, whaling ship reports, internal records, personal unpublished sightings, anecdotal reports and newspaper reports and each source weighted for accuracy in one of three classes, depending on reliability of report and location (within EEZ or possibly in international waters). This work updates the report by Reeves *et al* (1999). The results are summarised in Table 1 and the report summary is appended at **Annex 4**.

In summary:

- A total of 33 (41 including Australia and New Zealand) cetacean species have been reported to occur in the Pacific Islands region (22 countries and territories).
- Sperm whales are the most widely distributed cetacean species, reported in 21 countries and territories included in the study;
- PNG and Solomon Islands have the most number of cetacean species (21) reported, while Pitcairn Islands and Wallis and Futuna have the least (1 species each).

It was noted that existing information clearly indicated incomplete data due mainly to the absence of proper inventory work. For example, only 5 cetacean species have been reported to occur in Tuvalu waters, which is perhaps implausible, given the higher number of species reported in EEZs of adjacent countries, indicating the potential for more species to be present. In addition, the assistance of a cetacean scientist is necessary for accurate identification, due to problems encountered in this area involving a few species.

2.1.2 Stock Populations and Trends of Large Cetaceans

(i) South Pacific

Mr David Paton of DEH briefly reviewed drastic declines in large whales commercially hunted in 19th and 20th Century as summarised below:

Sperm whales: There were two massive commercial hunts (18th/19th and 20th Century). Current population abundance is very uncertain. There were no sightings in two recent surveys of Phoenix Islands, where there were high catches in sail whaling days.

Blue whales: There are two sub-species, blue and pygmy blue, that migrate between tropical breeding and polar feeding grounds. Sightings were reported in Solomon Islands and New Caledonia in recent years.

Sei and Fin whales: Little is known about abundance or trends in the region.

Bryde's and Minke: Widely distributed in various forms, but little is known about abundance or trends in the region.

Humpback: Humpback whales are widely distributed and were heavily exploited in the 20th Century. Over 3,000 Discovery tags were deployed in the region (including Australia), in over-wintering grounds as well as migratory corridors and feeding grounds. Total takes in Areas IV, V and VI were approximately 80,000 (refer to Figure 1 for the areas used). Recent work by the South Pacific Whale Research Consortium (SPWRC) has shown that there are three genetically distinct populations of humpback whales in Eastern Australia, and east Polynesia and two distinct populations in central and west Polynesia.

Recoveries of tags suggest N-S migrations, except for Polynesian whales, with two animals marked in Tonga that were retrieved near Antarctic Peninsula, indicating that Polynesian whales may show greater longitudinal changes in N-S migrations. This has particular implications for impacts of JARPA II on Polynesian humpbacks. There is no evidence of animals moving further north than 12 degrees latitude. Further analysis and validation of the Soviet Discovery marking scheme will assist in developing crude abundance estimate.

SPWRC has also done a great deal of photo-i.d. work on interchange in Oceania, showing a small but significant degree of interchange, both within and between seasons. For both American Samoa and Cook Islands, no resights between years has been observed.

New Zealand whale scientist Dr Bill Dawbin's logbooks on sightings and marking in Fiji in the late 1950s, around Levuka, showed sightings of a total of 1,648 whales over 3 seasons, with a maximum of 258 in one week. In 1956, he was seeing 0.34 whales per hour; but in the same location in 2001, only 0.01 whales per hour were sighted, thus the Fiji humpback whale population is estimated to be around 2-3% of its initial abundance.

A modelling paper presented at the CASH (Comprehensive Assessment of Southern Hemisphere Humpback Whales) workshop (Hobart, Tasmania, 3 – 7 April 2006) on abundance based on mark-recapture from photo-i.d., gave the following population estimates:

- Tonga humpback population – 2,311;
- New Caledonia humpback population – 472;
- French Polynesia humpback population – 1,057.

Participants agreed however, that the total humpback abundance in the region is probably between 3,000 and 4,000 animals, with Tonga having the biggest population. In comparison, the Eastern Australia humpback abundance has been estimated to be approximately 8,000. This could be because the South Pacific populations have been so depleted and/or because many South Pacific whales have shifted migration routes to Australia.

(ii) North Pacific

Dr David Mattila, from NOAA, presented a short paper on the SPLASH (Structure of Populations, Levels of Abundance, and Status of Humpbacks) Project. The SPLASH Project is an international

cooperative effort to understand the population structure of humpback whales across the North Pacific, and to assess the status, trends and potential human impacts to this population. SPLASH brings together national research programs and independent whale researchers from the United States, Canada, Mexico, Russia and Japan. Partial funding for this project is from the U.S. National Marine Fisheries Service with additional funding from other governmental organizations in the U.S., Canada, and Mexico and from private research foundations. In summary:

- The project may provide good examples for Pacific Islands region;
- 3 primary breeding grounds – Japan, Hawaii, Mexico;
- Limited information on feeding grounds for these whales;
- A Steering committee was established made up of NOAA fisheries & sanctuaries, other government departments and stakeholders;
- Objectives include defining migratory routes, pop structure and dynamics;
- New effort in NW Pacific – Russia, Aleutians;
- Photo ID & biopsy – also using photo's to identify human impacts, entanglement/collision;
- 3765 total ID's for the program in 2005;
- Matches from Russia to Ogasawara, HI to BC, Alaska California. Seven animals between Mexico and HI. Six matches from Mexico to Central America. One between HI and Ogasawara
- 15- 20% of animals display some sort of entanglement in HI. 56% Nth Pacific. 56% Gulf of Maine;
- Some outreach /educational materials available may be useful models for PICTs.

2.1.3 Status of small cetaceans

Mr Marc Oremus of the Auckland University presented a report of his research on spinner and rough-toothed dolphins in French Polynesia using photo-identification and genetic analysis. The key findings show the benefits of focal species studies to improve knowledge of local populations and potential threats, and collaboration with other organisations (in this case the SPWRC) to improve efficiency of such studies in the area. In terms of population structure, the study shows:

- Care must be taken with representation of the timescale of research – connectivity speaks to evolutionary time – populations may be isolated or closed demographically independent units;
- Understanding population structures has a direct relationship to management implementation;
- Be conscious of localised migration and critical habitat needs;
- Collection of data is simple and could be done in-situ by local communities;
- Permitting requirements need to be better facilitated by countries.

2.2 THREATS TO CETACEANS IN THE REGION

Dr David Mattila presented a paper on determining threats of entanglement in fishing gear. The presentations key findings are as follows:-

- (i) Scar analysis, even though it is inherently conservative in its estimate, shows that, in some areas and populations the rates of large whale encounters with gear is very high;
- (ii) Observer programmes have a limited value for great whales because impacts occur in-water;
- (iii) Rescue networks can provide valuable information;
- (iv) Entanglement reports often increase as a result of the establishment of Rescue Networks, and their associated outreach;
- (v) Gear type implicated is basically any “stationary” rope and net in the water column;
- (vi) Feeding and play behaviour are both factors;
- (vii) Possible solutions to the entanglement problem include: (a) Close fisheries in areas, (b) design whale safe fishing gear and (c) develop rescue networks);
- (viii) Reports of ship strikes is increasing in Hawai'i.

Recreational set nets and marine debris (discarded gear, ghosts nets) are significant issues for delphinids.

The results of the session on cetacean threats/impacts, identifying those that are known as well as potential ones with recommendations are listed in **Annex 5**.

2.3 FISHERIES INTERACTION WITH CETACEANS

Mr Pouvave Fainuulelei, Samoa Fisheries Division, provided a presentation on behalf of Mr Simon Walsh, NSW Fisheries, on results of a case study on cetacean/long-line interaction in Samoa.

The research aims to identify species involved, determine both spatial and temporal variations and qualify and quantify the scale of the interactions. The methodology includes interviewing fishermen, analysing catch logs, facilitation of an observer programme and undertaking research surveys.

The two key issues involved are that dolphins occasionally take bait from long-lines while small toothed whales (eg short-finned pilot whales, false killer whales) occasionally take hooked catch. The extent of this issue is global, and includes the South Pacific, Australia, Alaska, South Atlantic, Peru, Chile and Indian Ocean.

The Impacts

Fisheries interaction with cetaceans impacts both on the fisherman (fisheries) as well as on the cetaceans.

The impacts on fisheries include:

- Loss of bait and catch for fishermen and their associated communities and exports;
- Damage to fishing gear
- Greater expenses (bait, fuel, food etc)
- Cetaceans frightening target fish species from area;
- Fish are removed from the system, often without incorporation into fishery models because they are not recorded as catch.

Impacts on cetaceans include:

- Injury or mortality through retaliation-shooting, harpooning, use of explosives etc
- Injury or mortality through by-catch - hooking and entanglement
- Disturbance to normal activities
- A learned reliance on artificial food source

Preliminary results

Preliminary results for the different methodologies used are as follows:

Catch logs: approximately 6 per cent of all sets are affected by depredation to some extent. However, the accuracy of the data is dependent on the input by the fishing skippers.

Fisher interviews: a financial loss of SAT 3000 per affected set was estimated from interviews. However, it is noted that while results from fishermen interviews are only anecdotal, they can be useful to identify broad patterns and fisher awareness levels.

Observer program: this is the key to gaining a more reliable and comprehensive set of data on the subject and the Samoan Fisheries and SPC have recently completed training 5 new observers to commence a local programme.

Recommended activities

Based on the need for improved data and effective/continuing research to obtain sufficient data for meaningful analysis, the following actions were recommended for the Samoa cetacean/long-line survey:

- Implement effective observer programme;
- Conduct a cetacean id workshop for fishermen and observers;
- Continue interviews, research trips & catch log data analysis;
- Identify additional funding sources.

2.4 CULTURAL SIGNIFICANCE OF CETACEANS

Ms Olive Andrews (IFAW) presented on preliminary researches conducted on cultural value/significance of cetaceans by Ms Erin Watson in Tuvalu and Mr Francis Hickey (of the Vanuatu Cultural Centre) in Vanuatu. The draft results are summarised below:

Tuvalu: cetaceans are associated with identity, lifestyle and well-being. They are culturally important and marine mammals are no longer hunted and they are only eaten if they are washed ashore. They are viewed as incarnations of humans. There is currently no species list available for Tuvalu and a low level of awareness exists.

Vanuatu: there are diverse cultural values throughout Vanuatu associated with cetaceans, including:

- Migration of humpback whales are used as an environmental cue on some islands;
- Ceremonies and ritual associated with their arrival were found in some cultural areas;
- Research to date indicates cetaceans were not traditionally hunted;
- A history of relationship with dolphins exists.

2.5 CETACEAN CONSERVATION STRATEGIES

2.5.1 South Pacific Whale Sanctuary (SPWS)

Ms Gill Slocum (DEH) presented a paper on the process and status of the South Pacific Whale Sanctuary proposal to the IWC.

Article V(1)(c) of the ICRW allows for "open and closed waters, including the designation of sanctuary areas". Two whale sanctuaries have been declared under this Article, (i) Indian Ocean Whale Sanctuary (declared in 1979) and (ii) Southern Ocean Whale Sanctuary (declared in 1994).

Since 2000 Australia and New Zealand have been pursuing the creation of a SPWS under the IWC, but has not achieved $\frac{3}{4}$ majority required. The proposal of a SPWS was endorsed by SPREP members as per Apia Statement and was also endorsed by Pacific Forum Leaders.

It has been argued that the proposed sanctuary:

- would protect the seriously depleted great whale populations in the South Pacific, and facilitate their recovery;
- contains critical breeding grounds and migratory routes for great whales, and therefore would complement the protection for species that feed in the Southern Ocean Sanctuary;
- has strong support from States and Territories in the South Pacific;
- would recognise the decision of the peoples of the South Pacific to profit only from whales in a sustainable, non-extractive way.

Australia and New Zealand sought the establishment of the SPWS by the IWC between 2000 and 2004. Even though a simple majority was achieved each year, the necessary $\frac{3}{4}$ majority could not be reached.

In 2005, Australia and New Zealand made the decision not to put the proposal to a vote at IWC 57, but to have the newly formed Conservation Committee review the merits of the proposal. In doing so the SPWS proposal has not been "dropped" but that a different approach in seeking to gain the necessary support for the proposal has been sought.

The following observations were made in relation to the SPWS, IWC and conservation of cetaceans in the region:

- a) Recently some SPREP member nations who are also IWC members have voted against the sanctuary, despite the 2001 Apia Statement and Pacific Forum Leaders endorsement;
- b) There is a need for other Pacific Island countries as counterbalancing voice to advocate whale conservation in relation to IWC;
- c) Beyond IWC, a strong Pacific country voice is needed to support cetacean conservation across the region;

- d) The CMS MoU allows for implementation of cetacean conservation measures beyond what is achievable through a SPWS;
- e) Nevertheless, symbolism of creating a SPWS would be strong.
- f) It is necessary to be clear on what we mean by “national sanctuary”.

2.5.2 National legislation, policies and sanctuaries

Ms Olive Andrews (IFAW) presented a preliminary review on cetacean legislation, policies and sanctuaries in the Pacific Islands region. The work includes a review of existing national marine mammal protection measures including sanctuaries, relevant regional/international conventions/agreements and country/territory specific recommendations relating to an improvement of marine mammal conservation. Information for each country/territory is summarised in **Annex 6**. A Pacific contact database and a CD of country/territory relevant legislation is available. The review findings are summarised below:

- (a). National sanctuaries: Based on no-take provisions; cetacean conservation principles. Important not to undo significant progress made in declaring sanctuaries, even where follow up management measures have not been implemented
- (b). National legislation / policy: Variety of measures in place or under development under environment and/or fisheries legislation.
- (c). Regional conventions / agreements including: Those involved include, SPREP, PIF, FFA, SPC, SPTO, SOPAC, IWC, CITES, CMS, CBD, UNCLOS, FAO.

Recommendations for consideration in the review of the WDAP include:

- Developing and implementing management measures to underpin existing legislation requires significant capacity building/support.
- Revoking existing national whaling legislation.
- Technical advice/templates needed to support sanctuary management.
- Marine mammal inclusion onto protected species lists.
- Other mechanisms – eg community led protected areas.
- Lack of data on cetaceans should not be a barrier to precautionary protection measures.

Follow-up work needed for this review on cetacean legislation, policies and sanctuaries in the Pacific Islands region, includes the following:

- Undertaking a more thorough legislative review in relation to country capacity to implement CMS MoU and potential legislative barriers, including legislation to implement CITES/CBD, habitat protection legislation, declaration of EEZs etc. The Review should be extended to cover the US, UK, Pitcairn, France, Australia, NZ and potentially the distant water fishing fleets.
- Refer to Countries and Territories and that the table needs to clearly show the status of declared sanctuaries etc, and that the area covered needs to be clarified.

2.5.3 Ecosystem Approach to Fisheries

Mr. Masanami Izumi, Fishery Officer, FAO Sub-Regional Office for the Pacific Islands, Samoa presented a paper on FAO Activities in the Pacific Region, concentrating on Ecosystem Approach to Fisheries.

The World Summit on Sustainable Development (WSSD), South Africa (2002) specifically asked to develop and facilitate the use of diverse approaches and tools, including the ecosystem approach to fisheries, the establishment of marine protected areas... and the integration of marine and coastal areas into key sectors by 2010.

A FAO/Headquarters-based Project “Capacity Building for an Ecosystem Approach to Fisheries” involves case studies on Ecosystem Approach to Fisheries, including one on the interactions between fisheries and marine mammals in selected countries in the Pacific (PNG). The first Activity completed is the National Workshop on the Ecosystem Approach to Tuna and Shark

Fisheries Management, conducted in cooperation with the National Fisheries Authority, Port Moresby, 13-16 March 2006. The results of issue identification and prioritisation are:

- *Purse Seine Fishery*: by-catch of turtles and dolphins-released alive with assistance of divers.
- *Tuna Longline Fishery*: depredation by cetaceans, particular in the Bismarck and Solomon Seas-Industry assessment of 10 % loss of yield in a season, with reported loss of 100% of a set in one occasion. The workshop recognizes that more research is needed in this area.

The recommended next activities include the review and adaptation of logsheet forms and observer's protocols to assess the extent of species interactions with tuna fisheries, including the assessment of depredation by longline-caught fish by cetaceans.

2.5.4 Relevant conservation conventions for cetaceans

Dr Margi Prideaux (WDCS) presented a paper on "Seeing CMS in Context", and discussed the functional relationships between CBD, CITES and CMS as summarized below. The five UN conventions that deal with biodiversity include, CMS², CITES³, CBD⁴, World Heritage and RAMSAR⁵. Of these five UN Biodiversity Conventions, three are of primary importance to the conservation and protection of cetaceans in the Pacific Islands Region:

- **CBD** provides the global framework for biodiversity conservation and is a framework convention;
- **CITES** regulates international trade in species included in the convention Appendices, and is an implementing convention;
- **CMS** conserves and manages avian, marine and terrestrial, migratory species as well as their habitats throughout their range, and is an implementing convention.

CBD has established a Global Biodiversity Challenge to "**achieve by [2012] a significant reduction of the current rate of [marine] biodiversity loss at the global, regional and national levels as a contribution to poverty alleviation and to the benefit of all life on Earth**".

Parties are being asked to report against specific CBD indicators which includes:

- trends in extent of selected biomes, ecosystems and habitats,
- trends in abundance and distribution of selected species,
- change in status of threatened species,
- coverage of protected areas, and
- connectivity/fragmentation of ecosystems.

Reporting is being facilitated through CITES and CMS

CITES/CBD/CMS

These 3 conventions are working on the harmonization of agendas and delivery against the CBD indicators, recognising the separate roles each plays. They are developing joint work programmes and streamlined reporting processes. Of these three conventions, CMS holds the most comprehensive on-ground benefit for cetacean conservation and habitat protection because CMS:

- has a well established history with cetacean conservation;
- has at least 23 cetacean related resolutions which have been passed since the 1st CMS CoP in 1985;
- has a significant history of field research;
- has 2 existing agreements for cetaceans;
- has further 3 agreements in the pipeline;
- addresses issues such as species status and the urgency of conservation action, necessary habitat protection, the importance of migration, by-catch, climate change, chemical and noise pollution.

² Convention on the Conservation of Migratory Species of Wild Animals

³ Convention on International Trade in Endangered Species of Wild Fauna and Flora

⁴ Convention on Biological Diversity

⁵ Convention on Wetlands

Technical relationships between CITES and CMS

The technical relationship between the two conventions can be seen in the similarity of their Appendices:

Appendices I: The CMS Appendix I deals with migratory species (or population) for which reliable evidence, including the best scientific evidence available, indicates that the species is endangered (a total 13 species or populations to date). The CITES Appendix I deals with species that are threatened with extinction and where a prohibition of commercial international trade in specimens of these species is necessary (a total 21 species to date).

Appendices II: The CMS Appendix II deals with migratory species which have an unfavourable conservation status or would significantly benefit from international agreements for their conservation (a total 39 species to date). The CITES Appendix II deals with species that are not necessarily now threatened with extinction but that may become so unless trade is closely controlled (all cetacean species are listed and 41 of these occur in the PIR).

However the difference between CMS and CITES appendices remains fundamental to each convention's mandate. CMS is mandated to conserve migratory species and their habitats from threats. CITES is mandated to regulate trade as a threat.

CMS MoU for the Conservation of Cetaceans in the Pacific Islands Region

The CMS MoU for the conservation of cetaceans and their habitats in the Pacific Islands Region expresses the desire of the Pacific Islands region to work together, "to foster cooperation, build capacity and ensure coordinated region-wide actions to achieve and maintain a favourable conservation status for all cetaceans and their habitats occurring in the region, and to safeguard the associated cultural values for Pacific Islands peoples".

The MoU provides the following:

- Mechanism through which to formally conserve all cetaceans and fully protect species listed in CMS Appendix I;
- Mechanism that must be acknowledged by the global community;
- Streamlining of international reporting to CBD and CITES through a CMS approach;
- Increasing international awareness and coordination about the issues and threats to cetaceans in the PIR;
- Providing an effective channel for international funding;
- Networking the PIR with other similar cetacean agreement regions, increasing technical information flow and capacity sharing;
- Enhanced platform for PIR issues in international forums through representation of the CMS Secretariat in Bonn.

Recommendations presented for consideration in the review of the WDAP include :

- (i) *Integration of CMS MoU requirements into the revised WDAP*: The CMS MoU Action Plan requirements are integrated into the structure of the updated SPREP Action Plan to provide continuity of work in the PIR. These requirements are:
 - threat reduction;
 - habitat protection, including migratory corridors;
 - research and monitoring;
 - education and public awareness;
 - information exchange;
 - capacity building;
 - responses to strandings and entanglements;
 - sustainable and responsible cetacean-based tourism; and
 - international cooperation.
- (ii) *Integration of CBD indicators into the revised WDAP*: The CBD indicators are also integrated into the structure of the updated SPREP Action Plan to ensure consistency of reporting. These indicators are:
 - trends in extent of selected biomes, ecosystems and habitats;

- trends in abundance and distribution of selected species;
- change in status of threatened species;
- coverage of protected areas; and
- connectivity/fragmentation of ecosystems

(iii) *Additional partners with expertise in broader ecosystem conservation are sought*

(iii) *CMS reporting requirements and international timelines are integrated into the revised WDAP (to ensure maximum benefit from international efforts for the PIR.)*

(iv) *A review is conducted of CITES and CMS listed species that occur in the PIR to establish current gaps in listings (provide consistency for the PIR.)*

2.6 CETACEAN AND ECONOMIC OPPORTUNITIES

2.6.1 Whale and Dolphin Watching

Mr Darren Kindleysides (IFAW) presented findings of the recent study on the review of Pacific whale watching. The purpose was to review the status of marine mammal tourism activities in the Pacific Islands region, assess the economic value and growth of whale and dolphin watching tourism in specific Pacific Islands countries and territories and undertake a preliminary assessment of the potential for further whale and dolphin watching tourism in the Pacific Islands region, including identifying development needs. The findings are summarised below and in [Table 2](#).

- The industry is experiencing strong annual growth (compare annual regional tourism growth of 7.3%, and industry growth in Australia (15%) and NZ (11%);
- Strongest annual growth in **French Polynesia & Guam**. Guam accounts for approximately 75% of the region's industry;
- **New Caledonia** and **Tonga**, well established industries in 1998, continued to experience sustained growth;
- Countries with newly identified whale watching industries include **Papua New Guinea, Samoa, Cooks & Solomon Islands**;
- Average ticket price **USD \$76**;
- Industry composition: Full-time, dedicated whale watching; Seasonal, dedicated whale watching; Opportunistic whale watching; Land-based whale watching;
- Size of whale watching industry proportional to the accessibility and reliability of cetacean sightings combined with a large enough base of tourists in country;
- 8 countries/territories with no cetacean watching industry;
- Limitations to development of an industry - inconsistency of cetacean sightings, lack of information of cetaceans, low numbers of tourists, accessibility difficulties, lack of infrastructure

Table 2: Growth of whale and dolphin watching in the Pacific Islands Region

Pacific Region Findings	Numbers of Whale Watchers	Countries with whale watch operations	Average annual growth in whale watchers (1998 – 2005)	Estimated Direct Value of whale watching industry	Estimated Total Value of the industry
1998	10,308	9			USD 1,185,000
2005	110,746	14	45%	USD 7,525,500	USD 21,012,000

Findings for individual countries/territories are appended as [Annex 7](#).

The following points were recommended for consideration on cetacean watching for the WDAP review:

- With the growth in the industry in the region comes increased responsibility to protect whales;
- Industry needs to be sustainable;
- Recent studies show that in some circumstances whale and dolphin watching can cause impacts upon the individuals and populations being watched;
- But, these studies are limited and there is a lack of information on impacts, especially whales;

- IWC membership in region is increasing. Whale watching does provide an economic argument in support of cetacean conservation initiatives.

The following recommendations were made for consideration in the WDAP review:

- Assessment of effectiveness of existing guidelines, regulations, licensing schemes;
- Capacity building to address implementation and enforcement challenges;
- Region-wide guidelines;
- National guidelines / regulations (production of a template);
- Licensing to manage the number of marine mammal watching vessels;
- Local plans of management in areas of high use or where there are sensitive/endangered populations of marine mammals;
- Improve understanding of cetacean populations - greater certainty to access to viewing opportunities;
- Review the sustainability of specific operations in areas where marine mammal populations may be experiencing significant pressure (eg New Caledonia, French Polynesia);
- Further study to assess impacts of specific activities, eg swim-with.

2.6.2 Managing impacts of tourism

Mr Mark Orams, Massey University at Albany, presented a paper on “Opportunities and threats arising from the growth of cetacean-based tourism in the South Pacific”. He summarized the worldwide growth of cetacean-based tourism which has grown from only 12 countries involved in 1983 to 295 communities in over 65 countries in 1995, 500 communities in 100 countries in 1998, to an industry that is today in excess of 10 million cetacean tourists generating revenues in excess of US\$1 billion. The growth shows that in New Zealand alone, cetacean-based tourism has been spectacular with the number of cetacean tourists doubling since 1998 to 425,000 in 2005 (estimated to be worth NZ\$120m annually). In Australia, there were over 2 million cetacean tourists at over 50 sites in 2003 generating around Aus\$340 million. For the South Pacific islands, the following were noted in terms of cetacean based tourism:

- An estimated 45% growth in whale watcher numbers since 1998
- Almost 110,000 cetacean tourists across 14 nations during 2005
- With exception of Tonga, French Polynesia, Guam and New Caledonia, operations can be described as fledgling.

Opportunities exist for the Pacific Islands as there is considerable demand for high quality cetacean tour experiences. The climate and opportunities available in South Pacific are world class, with a extremely positive image for most potential countries of origin for tourists. The growth potential and economic benefits of cetacean-based tourism have proved an effective argument against the killing of whales.

While the potential and opportunities exist in the Pacific Islands, there is growing concern on the impacts of poorly managed tourism activity based on marine animals. There is a growing concern that the cumulative effect of this activity may threaten the recovery and survival of these endangered species (Forestell and Kaufman 1990, 401). In addition there is little knowledge on the effects of humans interacting with marine mammals in the wild and issues including the impacts of noise produced by vessels, boat handling practices, numbers and proximity of boats and humans, effects of swimmers in the water etc (Constantine, 1999).

Cetacean- based tourism impact studies

Impact studies have shown that there is a growing body of empirical evidence showing that cetacean-based tourism may not always be benign and, potentially, not sustainable. In addition, there is a growing demand from tourists for cetacean-based tour operators to behave ethically and, at a minimum, to minimise impacts. Studies have also shown that cetacean-based tourists are highly discretionary, therefore reputation is critical, and questions are being raised about the ethics and claims of the industry as being a viable and sustainable alternative to whaling. Summaries of cetacean-based tourism impact studies conducted in New Zealand are provided in

Annex 8.

An important issue concerning the industry is stress to the animals, which can be categorized as (i) acute stress, (ii) chronic stress and (iii) psychological/social stress (Sapolsky, 1994). The potential impacts on the animals include, reduced immunity, increased disease, increased mortality, reduced reproductive rates and impaired development.

Other important issues also affecting the industry include the fact that the tourism industry is “fickle” in the region and that infrastructure for tourism is generally poor. Current operations have a growing reputation as being “high impact” and a degree of cynicism exists regarding South Pacific Island nations ability to carefully manage the industry. Given the extra travel time and high cost involved in visiting South Pacific Island nations for cetacean – based tours, there is a high risk of industry collapse (for any number of reasons). This points to the fact that if the industry is to reach its potential (or perhaps even survive) longer term, it is imperative that it “steps up” to best practice.

Conclusion

Recent studies have shown that the growth of cetacean-based tourism has continued over the past decade. It is also a fact that considerable potential exists for further growth in Pacific Island nations and that research into the impacts of tourism on marine mammals has advanced in the past decade. However, questions are now being posed regarding the long-term sustainability of cetacean-based tourism in the region. Issues such as stress and its potential long-term impacts are receiving greater attention and the management of the industry (and its related reputation) will be critical for the long-term future of cetacean-based tourism in the region. Support for research into impacts, and management responses from results of that research are an essential tool in that management process.

Discussion points relevant to Action 4 of the WDAP

Three areas, with priority activities, are considered of high importance for consideration for the WDAP:

- *Research*: priority be given to impact assessments for “swim with” whales in Vava’u; vessel-whales in New Caledonia and dolphin tourism in Guam.
- *Management*: priority for the development of regulation guide for member countries and territories;
- *Training*: priority for training and certification of both operators and guides.

2.6.3 Certification/training programme for whale watching operators and guides

Ms Olive Andrews (IFAW) presented the Whales Alive Whale Training and Certification Program for whale Watching Guides. The program aims to set skill levels of whale watching guides and standards for the quality of information being presented on board whale watching vessels . The main focus of the program is to produce training materials necessary to meet the identified skill requirements of guides for the delivery of a successful whale watch operation, so as to ultimately minimise potential impacts of tourism on whales and maximise the educational value of the experience to tourists. The program consists of:

- *1-Day classroom sessions*. These sessions cover the following topics:
 - Status of whales
 - Management and conservation of cetaceans
 - Natural history and biology of common species
 - Whale research-genetics, acoustics, photo id
 - Whale Watching
 - Whale watching guides and best practise
 - Whale watching – land based, vessel base, swim with programmes
 - Successful delivery of a whale watch program
 - Guiding for a whale watch-whales Alive Marine Guiding
 - Developing an on board interpretive program-Whales Alive Step 5 Program
- *½ day On the Water Sessions*. These cover the following topics:
 - Application of the guidelines

- o Approach distances and angles in practise (BOB)
- o Minimising negative vessel impacts on whales
- o Locating and watching whales effectively
- o Understanding and evaluating whale behaviour in response to vessels
- o Delivering the components of a successful whale watch – application of 5 step program

2.7 INFORMATION/AWARENESS MATERIAL

Annex 9 documents an update of information and awareness material on cetaceans produced by various agencies. A listing of a collection of recent papers on cetaceans by SPWRC is also listed in the Annex.

SECTION 3: TOWARDS A REVISED ACTION PLAN

3.1 WDAP IMPLEMENTATION ISSUES

The mind mapping exercise carried out by the meeting identified the following implementation issues with regard to the implementation of the WDAP. The areas with itemized issues are attached as **Annex 10**.

(i) Communication

The main issues under communication include the need for the WDAP to be in both English and French and linking it to NBSAPs as well as to the work of other relevant IGOs in the region such as FFA, SPC, and Western and Central Pacific Fisheries Commission.

(ii) Coordination

For improved coordination, it was recognised that there is need for the technical meeting participants to stay in touch to coordinate approaches as well as strategies. SPREP plays the key role in this area, with the support of CMS and partner organizations.

(iii) Monitoring, evaluation and reporting

A main concern is overloading SPREP in this area and its role should be refined so that its major role is editorial and coordination. In order to evaluate progress, regular / annual reporting against the action plan by members and partners, using a simple template, would be required. This can be applied to CBD / CMS.

(iv) Information management

It is necessary to find a way of summarising information to monitor advancements of WDAP and strategy for dissemination. Development of a reporting template database of publications etc. allowing for PICTS to comment and make additions is desirable, and working groups or individuals to update the database. Creation of a List server, linked to other networks, is a useful tool. It is also recommended that the SPREP website host PICT content database including legislative information and relevant materials with partner organisation to assist in updating.

(v) Ownership and commitment “political will” – sectoral

In-country NGO's can potentially play the role of facilitation in the implementation of WDAP. Demonstrating benefits as well as using cultural values to underpin management strategies are important aspects.

(vi) Partnerships

A vital component in the implementation of the action plan is building partnerships. These include collaborating with institutions, NGOs, Universities, Private sector and in-country partnerships. CMS integration with both CBD and SIDS would be desirable.

(vii) In country linkages

In-country linkages between Government and NGOs are necessary and the WDAP reporting and monitoring should include all relevant agencies and protocol.

(viii) Capacity

Limited capacity is the region's and in-country's biggest limitation to cetacean conservation. Linking to the USP Faculty of Islands and Oceans and other training mechanisms are critical. There is a need for more country-based programmes to implement the WDAP with regional workshops needing in-country follow up. Participants/professional exchange would be of benefit to the efforts in the region.

(ix) Investment value/demonstrating benefits

In order to profile the regional commitment to the WDAP, it is important to place a monetary value on existing work by various partners and collaborators. Cost benefit analysis and economic evaluation are valuable tools to promote the conservation value of marine mammals and potential benefits specific interventions e.g. of depredation mitigation.

(x) Priority setting/Specificity

While SPREP members prioritize issues and options, the technical group needs to provide options using scientific prioritizing and ranking input.

(xi) Linkages

The WDAP needs to link to NBSAPs, regional mechanisms and agreements including the Pacific Islands Regional Oceans Policy (PIROP) and the Western Central Pacific Fisheries Commission (WCPFC) ecosystem and by-catch working group as well as sectoral planning processes such as tourism and fisheries.

(xii) Lack of data

A fundamental problem exists with the lack of species inventory, key habitats and threats.

(xiii) Gaps and emerging issues

Advances have been made concerning Action 13 of the WDAP related to CMS. However gaps and emerging issues include the need for policy responses concerning JARPA II and the live dolphin export from the region and consideration of national legislation to address those threats. The Micronesia challenge is an opportunity for cetacean conservation to take advantage of the momentum generated by the development of MPA networks in those countries. Given the growth of the whale watching industry, standards are required for its management.

The issue of whales and fisheries need to link to the WCPFC. There is a lack of information and observer coverage concerning by-catch and entanglement and there may be a need for the development of fisheries interaction protocols. Given their importance in conservation efforts, there is a need to extend cultural significance surveys. The trend in Pacific Islands voting in recent IWC meetings on issues involving cetaceans indicates that IWC membership is a real issue impacting adversely on the conservation of cetaceans in the region.

(xiv) Financial resource

Lack of adequate financial resources has been a major drawback in the implementation of the WDAP. There is a range of opportunities e.g. CMS and GEF small grants. However, prioritizing, coordination and presentation are required in order to bring in financial resources. There is industry support due to public concern and effort should be made for private sector involvement. Internships are a good vehicle in attracting financial resources and the USA is a potential source with its growing interest in cetacean work in the region.

(xv) WDAP broader recommendations

The state of knowledge in the PIR on cetacean distribution and threat impact remains low. A process permitting streamlining is highly recommended. It is necessary to ensure that the WDAP highlights the need for a dialogue between conservation managers and the fishing sector (involving industry, government officials, RFMOs, FAO). The fact that the lack of information sometimes disguises the potential of a threat or impact needs to be accommodated, as well as cumulative, disease and sub-lethal impacts. It is necessary to consider strategic relationships with the major industries in the PIR, in particular the tuna sector and associated working groups and scientific surveys

Actions:

Governments and organisations need to provide public consumption documents and lists of electronic materials to SPREP Marine Species Officer.

3.2 KEY COMPONENTS FOR THE REVISED ACTION PLAN

3.2.1 Linkages to CMS Cetacean MoU

It was agreed that it would be difficult for the revised Action Plan to be based on the headings of the CMS MoU for the conservation of cetaceans and their habitats in the Pacific Islands region, e.g. education and public awareness can relate to threat reduction. It was noted though that actions can be cross-referenced in the action plan. It was also noted that a set of issues can be developed and that a set of tools can be developed to address the issues.

The revised action plan needs to have a vision, objectives and a key goal. Part of the objective needs to be that the issues outlined in the MOU are addressed and that there are then other issues that the MOU will also address (e.g. cultural significance).

- Of the MOU subheadings the following are issues/themes:
 - Threats reduction
 - Responses to strandings and entanglements
 - Habitat protection, including migratory corridors
 - Sustainable and responsible cetacean-based tourism
 - Cultural significance (not in the MOU explicitly)
 - Sanctuaries and protected areas (not in the MOU explicitly)
- Of the MOU subheadings the following are implementation /tools/ mechanisms:
 - Information exchange
 - Capacity building
 - Research and monitoring
 - Education and public awareness
 - National, regional and international cooperation
 - Coordination and implementation (not in the MOU explicitly)
 - Investment and resourcing.

Additional information under issues and implementation /tools/ mechanisms are provided in **Annex 11**.

3.2.2 Proposed Format

Dr William Perrin presented two formats used for CMS marine turtles and dugongs. The CMS Action Plan for Aquatic Warbler was also presented. It was agreed that a single species record from a European country was likely to be inappropriate. Some important general points raised in the discussion include the following:

- The new WDAP needs to be done in simple way to facilitate use by countries and territories as well as partners;
- The language (and format) should be conducive to in-country action, and not too scientific;
- It should harmonise with existing national instruments and policies, e.g. NBSAP;
- It should include a monitoring and reporting category for the review process;
- It should have a comparative analysis to other and be comparable to National strategies (i.e., NBSAP structure). For reference a sample NBSAP format is appended as **Annex 12**.

3.2.3 Collaborative Linkages

Dr David Johnston, Cetacean Biologist (Pacific Islands Fisheries Science Center, NOAA) presented on Pacific Islands Fisheries Science Centre. NOAA (USA) recently established the Pacific Islands Fisheries Science Centre Cetacean Research Programme to focus work US research in the region. A workshop was held recently to review the science conducted to date and to identify gaps (report due out soon). The work agreed on and now underway includes:

- Collaborative photo-id catalogue;
- Mark recapture study of false killers whales in Hawaiian EEZ;
- Stock structure of spinner dolphins;
- Cruises and small boats, including surveys in America Samoa. It was noted that over the next couple of years, there will be significant ship time available and they are keen to work collaboratively with other countries
- Passive acoustics
 - Discussion: sonobuoys useful and cost effective way of getting preliminary information in the region of cetacean presence and absence.
 - Using acoustics they are able to get an idea of cetacean presence during fishing operations (as can pick up cetaceans and vessel echo sounders).
- Habitat index and using this as a management tool (i.e. resting habitat for spinner dolphins).
- Stable isotope analysis to determine prey consumption.

The initiative presents an opportunity to work in areas outside US waters, dependent on the issue, particularly on larger scale surveys. Linking those initiatives to work in the region is critical. It was noted that the large vessel is currently used as a training vessel in the US and that it would be useful to tap into this and see what other opportunities there are for training of people in the region. Given the limited resources for cetacean work in the region, this initiative presents a great potential for cooperative survey work in the Pacific Islands region.

3.3 CONCLUSION AND RECOMMENDATIONS

The technical meeting agrees that the Pacific Islands Countries and Territories are stewards of a large part of the world's oceans, containing a rich assemblage of cetacean species. While the status of cetaceans in this region is generally better than in most other parts of the world, there remains a number of critical conservation issues. The technical meeting strongly advised that these issues should be urgently addressed. Detailed advice on recommended actions for the new WDAP is attached as **Annex 13**.

The meeting highlighted a number of key issues to improve the development and implementation of a revised action plan including:

- Improve knowledge of the status of cetacean populations and their habitats, as well as impacts from human activities to guide decision making (national and regional level);
- Develop strategic priorities and timeframes for regional and national action;
- Foster integration of cetacean conservation in regional and national policies (eg NBSAPs, Fisheries plans and National Sustainable Development Strategies);
- Demonstrate economic benefits of cetacean conservation through economic opportunities (eg tourism) but also from positive impacts of conservation measures (eg habitat protection, mitigation techniques) to generate political support and investment for cetacean conservation;
- Build in country capacity (technical, financial, institutional) to implement and monitor agreed actions and address existing and emerging threats such as climate change and increased direct take;
- Develop monitoring and reporting systems to evaluate the effectiveness of regional and national implementation, and
- Initiate 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.

The meeting highlighted key opportunities to progress cetaceans conservation and enhance the effectiveness of a revised action plan including:

- the CMS MoU on Cetaceans by increasing technical capacity for implementation through partnerships and by leveraging political and financial support in international fora;
- linking cetacean conservation to international and regional initiatives as platforms for integrated policy responses (eg CBD and the CBD Island Biodiversity Programme of Work, the

Micronesia Challenge) and information exchange and mitigation strategies with RFMOs (eg the newly established Western and Central Pacific Fisheries Commission) and

- demonstrated benefits from cetacean conservation reflected in the growth of whale and dolphin tourism in the region.

An overview of key recommendations towards the development of the revised Action Plan for cetaceans include:

Proposed format

The Plan should include a clear vision, priority areas/themes with time bound actions at the national, regional and international levels, identification of implementing organisations, inclusion of a monitoring and evaluation framework and a communication strategy.

Proposed themes/areas for consideration

The meeting proposed the following:

1. Threats to cetaceans;
2. Ecosystem/habitat protection, including migratory corridors
3. Research and monitoring, including responses to strandings and entanglements
4. Education and awareness;
5. Information management
6. Capacity building;
7. Sustainable and responsible cetacean-based tourism
8. Regional and international collaboration and cooperation
9. Legislation and policy;
10. Coordination and implementation of the revised action plan

Under the above categories, the meeting proposed a number of actions for consideration. A summary is presented below. Specific actions are detailed in Annex 13.

Theme 1: Threats to cetaceans

Recommended actions:

- Review key fisheries interaction data to develop strategies and plans for mitigation
- Assess the impact of directed takes on PIR cetacean populations
- Develop advice and regulation to minimise the threat of ship strikes in identified critical habitat areas
- Consider shipping routes and develop ambient noise budgets for the PIR
- Develop information on the impact of climate change to cetaceans in the region

Theme 2: Ecosystem/habitat protection, including migratory corridors

Recommended actions:

- Identify critical habitat, oceanographic conditions and migratory pathways in the PIR
- Assess effectiveness of sanctuaries and area based tools to protect cetacean habitats at regional and national levels

Theme 3: Research and monitoring, including responses to strandings and entanglements

Recommended actions:

- Increase research training and develop PIR wide guidelines for data collection
- Conduct key species inventory/baseline surveys

Theme 4: Education and awareness

Recommended actions:

- Develop communications strategies, training programmes and protocols for key issues within the WDAP
- Increase information transfers about cetaceans species in the PIR

Theme 5: Information management

Recommended actions:

- Compile key technical (scientific and legislative) information to support the WDAP
- Develop systems for maximising use of existing data and data analysis

Theme 6: Capacity building

Recommended actions:

- Identify training needs at the national level
- Increase training in appropriate research methods and protocols
- Encourage regional and international opportunities for training

Theme 7: Sustainable and responsible cetacean-based tourism

Recommended actions:

- Assess effectiveness of existing guidelines, regulations and licensing schemes.
- Foster training and certification programmes and best practice impact management.
- Engage industry in monitoring and educational activities.
- Foster sharing of lessons learnt and undertake regular review of industry.

Theme 8: Regional and international collaboration and cooperation

Recommended actions:

- Foster interagency collaboration at national level and engagement with private sector.
- Foster NGO partnerships at the national, regional and international levels.
- Foster greater engagement of US and French Territories in the development and implementation of the action plan.

Theme 9: Legislation and policy

Recommended actions:

- Develop industry based (eg tourism/fisheries/transport) guidelines, regulations and actions to reduce threats to cetaceans.
- Integrate international requirements into regional and national systems

Theme 10: Coordination and implementation

Recommended actions:

- Develop an implementation and reporting framework (including standard reporting template, indicators etc).
- Develop and maintain a database of achievements against agreed actions.
- Develop a communication strategy for the life of the plan.
- Undertake economic evaluation of the effectiveness of the plan to promote the value of cetaceans conservation with policy makers and the community.
- Develop a resource strategy to implement the Action Plan in partnership with the CMS secretariat, NGOs and seek partnership with the private sector.
- Facilitate the development of national implementation plans for cetacean conservation.

NEXT STEPS

Next steps in the lead up to the 18th SPREP meeting were outlined including actions, timelines and responsibilities between SPREP and partners.

TABLES AND ANNEXES