

**MEMORANDUM OF UNDERSTANDING  
FOR THE CONSERVATION OF CETACEANS AND THEIR HABITATS  
IN THE PACIFIC ISLANDS REGION**

Concluded under the auspices of the  
*Convention on the Conservation of Migratory Species of Wild Animals (CMS)*  
in partnership with  
*The Pacific Regional Environment Programme (SPREP)*

Opened for signature at the 17<sup>th</sup> SPREP Meeting

*Noumea, 15 September 2006*



## MEMORANDUM OF UNDERSTANDING FOR THE CONSERVATION OF CETACEANS AND THEIR HABITATS IN THE PACIFIC ISLANDS REGION

Among the States and Territories of the Pacific Islands Region

The undersigned,

*Aware* of international responsibilities to conserve cetacean populations of the Pacific Islands Region, in particular, pursuant to the Convention on Biological Diversity (CBD) for which the Convention on the Conservation of Migratory Species of Wild Animals (CMS) is the CBD lead partner in the global conservation of migratory species over their entire range;

*Recognising* the importance of cetacean conservation at the global level as reflected, *inter alia*, in the United Nations Convention on the Law of the Sea, the International Convention for the Regulation of Whaling, and the Convention on International Trade in Endangered Species;

*Further recognising* instruments, policies and strategies important to the Pacific Islands Region, in particular, the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region and related Protocols, the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, the CBD Island Biodiversity Programme of Work, the Pacific Islands Regional Ocean Policy, and the Action Strategy for Nature Conservation in the Pacific Islands Region;

*Committed* to the key regional role of the Pacific Regional Environment Programme (SPREP) and the important work done at the regional level for cetaceans and, in particular, the SPREP Whale and Dolphin Action Plan (2003-2007);

*Further recognising* that cetaceans, as an integral part of the marine environment that connect ecosystems and cultures, should be conserved for the benefit of present and future generations;

*Conscious* that many cetaceans migrate and disperse over vast distances making their survival dependent on their conservation over a wide area and in a range of marine and coastal habitats;

*Emphasising* that knowledge of the biology, ecology, migrations, population abundance, and conservation status of many cetaceans is deficient and that international cooperation will facilitate research and monitoring of these species in order to develop and implement conservation measures;

*Concerned* that the conservation status of cetacean populations that frequent the waters of the Pacific Islands Region, particularly those that have been severely depleted, can be affected by factors such as directed take and by-catch, degradation and disturbance of their habitats, chemical and noise pollution, decline in food availability, use and abandonment of fishing gear, ship-strikes, climate change, and ozone depletion;

*Aware* that many maritime activities in the Pacific Islands Region, such as fishing and tourism, are socially and economically important and that they should be conducted in an ecologically sustainable manner;

*Acknowledging* the shared responsibility of States, Territories, intergovernmental organisations and the non-governmental sector to achieve and maintain a favourable conservation status for cetaceans and their habitats in the Pacific Islands Region;

*Emphasising* that the particular vulnerability of cetacean populations warrants the implementation of conservation measures where they do not already exist;

*Conscious* that a number of cetacean species are listed in Appendices I and II of CMS and that some of these have been designated for concerted and cooperative action by the CMS Conference of the Parties, and that urgent action should be taken to achieve and maintain a favourable conservation status for these species and their habitats;

*Noting* that CMS calls for international cooperative action to conserve migratory species, and that CMS Article IV encourages CMS Contracting Parties to conclude Agreements, including non-legally binding agreements, in respect of any population of migratory species;

*Recognising* that the scientific bodies of the existing cetacean-based regional Agreements negotiated under CMS auspices, and the CMS Scientific Council, have scientific and technical expertise that can be shared with the Pacific Islands Region to support the implementation of this Memorandum of Understanding;

*Confirming* that the signatories have the primary responsibility to implement this Memorandum of Understanding;

DECIDE to work closely together in the Pacific Islands Region (Annex 1), and 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. To these ends, in the spirit of mutual understanding and cooperation, the signatories hereby record their understanding that their governments will individually or collectively:

1. Take steps to conserve all cetaceans and fully protect species listed in CMS Appendix I that occur in the Pacific Islands Region.
2. Consider, as appropriate, ratifying or acceding to those biodiversity-related international instruments that complement the intent of this Memorandum of Understanding, in particular CMS, so as to enhance the legal protection of cetaceans in the Pacific Islands Region.
3. Review, enact or update, as appropriate, legislation to conserve cetaceans.
4. Implement, subject to the availability of necessary resources, the provisions of the Action Plan attached as Annex 2 to this Memorandum of Understanding as a basis to conserve all populations of cetaceans in the Pacific Islands Region. The Action Plan will address:
  - a) Threat reduction;
  - b) Habitat protection, including migratory corridors;
  - c) Research and monitoring;
  - d) Education and public awareness;
  - e) Information exchange;
  - f) Capacity building;
  - g) Responses to strandings and entanglements;
  - h) Sustainable and responsible cetacean-based tourism; and
  - i) International cooperation.

5. Facilitate the rapid exchange of scientific, technical and legal information necessary to coordinate conservation measures and to cooperate with recognised experts, collaborating organisations and Territories concerned so as to facilitate the work conducted in relation to the Action Plan.
6. Assess the implementation of this Memorandum of Understanding, including the Action Plan, at regular meetings to be attended by representatives of each of the signatories, the Territories concerned, and persons or organisations technically qualified in cetacean conservation.
7. Designate a competent authority to serve as a focal point for communication between the signatories and for implementing activities under this Memorandum of Understanding, and communicate the complete contact details of this authority (and any changes thereto) to the Secretariat.
8. Provide to the Secretariat a regular report on their implementation of this Memorandum of Understanding, the periodicity of which will be determined at the first meeting of the signatories. The Secretariat will transmit to each of the States, Territories concerned and any collaborating organisations all of the reports received, together with an overview report that it will compile on the basis of the information at its disposal.

### **Further Understandings**

9. This Memorandum of Understanding is an agreement under Article IV, paragraph 4, of CMS and is not legally binding.
10. The Annexes are part of this Memorandum of Understanding.
11. Each signatory, as appropriate, will implement the Memorandum of Understanding in the Pacific Islands Region with respect to:
  - (a) its nationals and vessels; and
  - (b) marine areas under its jurisdiction.
12. This Memorandum of Understanding is open for signature by the States and Territories of the Pacific Islands Region and will take effect with four signatures. It will become effective for each subsequent signatory on the date of signature.
13. This Memorandum of Understanding will remain open for signature indefinitely, and will remain in effect indefinitely subject to the right of any signatory to terminate its participation by providing one year's written notice to all other signatories.
14. This Memorandum of Understanding, including its Annexes, may be amended by a consensus of all the signatories.
15. Nothing in this Memorandum of Understanding precludes signatories from implementing stronger measures than those specified in the Action Plan, in accordance with international law.

16. The original texts of this Memorandum of Understanding in the English and French languages will be deposited with the CMS Secretariat, which will act as the depositary. In the event of any discrepancies, the English version will be considered definitive.
17. The CMS Secretariat will act as the secretariat to this Memorandum of Understanding. It may use the services of any reliable organisation to support the coordination of this Memorandum of Understanding. An organization to coordinate the implementation of this Memorandum of Understanding will be determined by consensus of the signatories at their first meeting after consideration of all offers received. The signatories may also consider at their meetings suitable organizations to provide technical advice to support the implementation of this Memorandum of Understanding.

**On behalf of the States and Territories of the Pacific Islands Region:**

*Au nom des Etats et Territoires de la Région des îles du Pacifique:*

Representative of Australia  
*Représentant de l'Australie*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

(Function/*position*)

Representative of the Cook Islands  
*Représentant des îles Cook*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

(Function/*position*)

Representative of the Federated States of Micronesia  
*Représentant des Etats de la Fédération de Micronésie*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

(Function/*position*)

Representative of the Republic of Fiji  
*Représentant de la République de Fidji*

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(Signature)

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(Date)

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(Function/*position*)

Representative of the French Republic  
*Représentant de la République française*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of Kiribati  
*Représentant de Kiribati*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of the Republic of the Marshall Islands  
*Représentant de la République des îles Marshall*

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(Date)

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(Function/position)

Representative of the Republic of Nauru  
*Représentant de la République de Nauru*

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(Date)

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(Function/position)

Representative of New Zealand  
*Représentant de Nouvelle Zélande*

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(Signature)

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(Date)

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(Function/position)

Representative of Niue  
*Représentant de Niue*

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(Signature)

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(Date)

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(Function/*position*)

Representative of the Republic of Palau  
*Représentant de la République de Palau*

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(Signature)

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(Date)

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(Function/*position*)

Representative of Papua New Guinea  
*Représentant de Papouasie Nouvelle-Guinée*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of the Independent State of Samoa  
*Représentant des Etats indépendants de Samoa*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of Solomon Islands  
*Représentant des îles Salomon*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of Tokelau  
*Représentant de Tokelau*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Function/*position*)

Representative of the Kingdom of Tonga  
*Représentant du Royaume de Tonga*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of Tuvalu  
*Représentant de Tuvalu*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of Vanuatu  
*Représentant de Vanuatu*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Function/*position*)

Representative of the United Kingdom of Great Britain and Northern Ireland  
*Représentant du Royaume-Uni de Grande Bretagne et d'Irlande du Nord*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Date)

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(Function/*position*)

Representative of the United States of America  
*Représentant des Etats-Unis d'Amérique*

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(Signature)

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(Name in block letters/*nom en majuscules d'imprimerie*)

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(Function/*position*)

**Collaborating Organisations evidencing their intention to support the implementation of the Memorandum of Understanding:**

*Organisations collaborateurs témoignant leur intention d'appuyer l'application du Mémorandum d'Entente:*

Representative of the Secretariat, Convention on Migratory Species  
*Représentant du Secretariat, Convention sur les espèces migratrices*

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(Signature)

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(Name in block letters/nom en majuscules d'imprimerie)

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(Date)

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(Function/position)

Representative of the Secretariat, Pacific Regional Environment Programme  
*Représentant du Secretariat, Programme régional océanien de l'environnement*

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(Signature)

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(Name in block letters/nom en majuscules d'imprimerie)

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(Date)

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(Function/position)

Representative of the International Fund for Animal Welfare  
*Représentant du Fonds international pour le bien-être des animaux*

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(Signature)

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(Name in block letters/nom en majuscules d'imprimerie)

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(Date)

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(Function/position)

Representative of the Whale and Dolphin Conservation Society  
*Représentant du la Société pour la conservation des baleines et des dauphins*

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(Signature)

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(Name in block letters/nom en majuscules d'imprimerie)

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(Date)

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(Function/position)

Representative of the World Wide Fund for Nature  
*Représentant du Fonds mondial pour la nature*

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(Signature)

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(Name in block letters/nom en majuscules d'imprimerie)

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(Date)

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(Function/position)

For the purposes of this Memorandum of Understanding:

- (a) The Pacific Islands Region means the area between the Tropic of Cancer and 60 degrees South latitude and between 130 degrees East longitude and 120 degrees West longitude.
  
- (b) The States and Territories of the Pacific Islands Region are the following:
  - 1. Australia
  - 2. Cook Islands
  - 3. Federated States of Micronesia
  - 4. Fiji
  - 5. French Polynesia
  - 6. Kiribati
  - 7. Marshall Islands
  - 8. Nauru
  - 9. New Caledonia
  - 10. New Zealand
  - 11. Niue
  - 12. Palau
  - 13. Papua New Guinea
  - 14. Pitcairn Island
  - 15. Samoa
  - 16. Solomon Islands
  - 17. Tokelau
  - 18. Tonga
  - 19. Tuvalu
  - 20. United States of America, including American Samoa, Guam and the Northern Mariana Islands
  - 21. Vanuatu
  - 22. Wallis and Futuna



## WHALE AND DOLPHIN ACTION PLAN 2003-2007

### VISION

Whales and dolphins are part of Pacific Island peoples' cultural and natural heritage and as such our 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 ; and to
- increase knowledge, awareness and understanding of these species and the role they play in Pacific marine ecosystems.

### GOAL

To conserve whales and dolphins and their cultural values for the people of the Pacific.

## 2003-2007 ACTIONS

### **Cultural Significance (including whaling heritage)**

Many Pacific Island cultures have legends, stories and traditional uses of whales and dolphins, indicating an importance of these creatures in the identities of people, their way of life and their heritage in the Pacific Islands region.

Whaling has left a significant mark on the region and many countries have a whaling heritage, even if they were never whaling nations.

There is an important need to document the stories, myths, legends and uses of whales and dolphins, and to conserve these to build awareness, pride and understanding of this component of our heritage.

### **Action 1**

- Support and encourage local networks to research and share custom/cultural information on traditional values, uses and interactions with cetaceans throughout the region, in particular encourage governments to promote community/schools involvement in research on cultural significance of cetaceans. By 2005 at least three in-country projects have been developed, resourced and are underway.

### **Action 2**

- Identify, record and preserve artefacts and their stories, in particular whalers' stories, from whaling history. By end of 2003 museums and other institutions are approached to display artefacts and stories particularly in Fiji, Solomon Islands, Tonga and Vanuatu.

### **Action 3**

- Support the development and distribution of existing education and awareness materials to effectively use the information generated above to build awareness, pride and understanding of this unique part of our heritage. In doing so promote the significance of conservation actions so as to not repeat the mistakes of the past. Education materials developed and distributed by 2005 as part of the in-country projects.

### **Whale and Dolphin watching tourism.**

Whale and dolphin watching tourism has grown significantly in the Pacific Islands region in the past decade. It is important that marine mammal watching tourism should benefit local communities.

The development of whale and dolphin tourism in the Pacific Island region continues to be severely limited by past commercial whaling (including illegal whaling) by non Pacific Island countries. Furthermore some whale watching operations in the region are associated with endangered species and/or parts of their lifecycle vulnerable to disturbance e.g humpback whales.

It is important to continuing to support the sustainable development of whale and dolphin tourism in the region, and the importance of sharing experiences and lessons learnt.

### **Action 4**

- Provide assistance to SPREP members in progressing whale and dolphin watching activities, including documenting lessons learnt and enabling sharing of experiences.

### **Whale Sanctuaries**

SPREP members have produced a proposal for a South Pacific Whale Sanctuary (SPWS) (Apia Statement, April 2001). Later that year at their 32<sup>nd</sup> meeting Pacific Islands Forum Leaders agreed to pursue the objectives of the proposed South Pacific Whale Sanctuary through national, regional and international actions.

### **Action 5**

- Continue information exchange with the IWC and continue to attend the IWC as an observer in support of the SPWS proposal. SPREP Observer (and/or delegation) to attend annual IWC meetings (provided that funding is available).

### **Action 6**

- Encourage IWC member countries to support the proposed South Pacific Whale Sanctuary.

### **Action 7**

- Encourage New Zealand and Australia to continue to promote the SPWS at IWC Annual Meetings on behalf of SPREP member countries.

### **Action 8**

- Encourage France and the U.S.A. to include SPREP territory representatives in their delegations to IWC, to facilitate promotion of the SPWS at IWC Annual Meetings on behalf of SPREP member countries.

### **Action 9**

- Acknowledge and promote efforts of member countries who have declared sanctuaries or are preparing to declare whale sanctuaries and/or related marine protected areas (MPAs).

### **Action 10**

- Encourage and support the development of management plans to foster research, education, awareness, capacity building, monitoring and enforcement for those countries that have declared whale sanctuaries and or/marine protected areas.

### **Action 11**

- Facilitate, encourage and support the provision of technical advice to declare whale sanctuaries and/or marine protected areas for countries that are considering the declaration of such national sanctuaries or MPAs.

### **Action 12**

- Encourage SPREP members north of the equator to consider the declaration of national whale sanctuaries within their Exclusive Economic Zones (EEZs).

### **Action 13**

- Facilitate and encourage discussions and actions on whale sanctuaries in other forums such as the Convention on the Conservation of Migratory Species of Wild Animals (CMS). Convene initial CMS meeting on a proposed agreement for a regional marine mammal sanctuary by March 2003.

### **Strandings**

It was estimated that there are some 1 – 10 single stranding (or mother and calf) stranding per year in most countries plus occasionally one or two mass strandings. Often it is sick animals coming to shore, however, sometimes-healthy animals get confused and become stranded in an embayment.

In NZ and Australia, the public perception is that considerable efforts should be made to save the stranded animals, although it is generally not a biologically significant issue. Often a successful rescue is not possible, especially if the reason they strand is because they are sick.

Rescuing a stranded animal is a difficult task. They “cook” in their own blubber in the sun and you must try to keep them cool – cooling their tail flukes is especially important. In mass strandings it is important to try to release all animals together, not one at a time.

Two key issues need to be addressed – 1. how to rescue a stranded animal and 2. how to take and preserve samples from dead animals.

**Action 14**

- WWF have produced an excellent pamphlet on what to do in the event of a stranding. SPREP to work with WWF to produce an amended version of this document for SPREP member countries and to distribute this. Each country can arrange to have this translated into local languages. WWF-SPP to contact WWF-Indonesia (Wallacea Programme) for reproduction of Strandings pamphlet by 31<sup>st</sup> March 2003.

**Action 15**

- Strandings report card also to be translated and distributed. NZ has provided a standard form.

**Action 16**

- In the case of a death of a stranded animal, countries need to know the appropriate autopsy methods, particularly to take samples and send them to appropriate institutions (eg. Auckland Uni) for genetic analysis. SPREP to produce a standard operating procedure manual for sampling and transporting samples. A draft procedure to be provided to SPREP Secretariat by 31 March 2003.

**Action 17**

- Investigate provision of facilities for autopsy of cetaceans from the Pacific by April 15<sup>th</sup> 2003. Department of Conservation (NZ) will provide advice to SPREP on this issue.

**Action 18**

- IFAW to arrange for regional strandings workshop by end of 2003.

**Fisheries Interactions**

There are three key current issues for whale and dolphin interactions with fisheries operations:

- 1) An argument is used by some whaling interests that large whales eat commercially important fish and that there is a conflict between whales and commercial fisheries that can be resolved by culling populations of large whales.

2) Depredation of commercially caught fish on longlines by some toothed whales takes place in the region.

3) By-catch and entanglement of whales in commercial longlines.

In regard to the ‘**whales eat fish**’ argument and **longline issues** participants noted:

- In the SPREP region, there is no scientific basis for this argument. Large toothed whales usually eat non-commercial prey such as deep-sea squid (of no commercial value).
- In the South Pacific part of this region, baleen whales have not been shown to eat large fish. For Bryde’s whales (the only species of baleen whales that feeds in tropical waters), studies of stomach contents from Japanese “scientific whaling” in the Solomon Islands in the 1970s have shown that 97% of their diet is plankton.
- Baleen is a filtering mechanism and baleen whales have no teeth. They are not fast enough to chase and catch large fish, such as tuna.
- The small toothed whales that are probably involved in depredation of hooked fish on commercial longlines are: killer whales, false killer whales and pilot whales. Additionally, some dolphin species take bait from hooks. This is a significant problem in the region (particularly in Samoa, Fiji, Tonga and PNG).
- In November 2002 SPREP held a workshop on this issue. This workshop produced a detailed Action Plan. One key recommendation is a ‘predator identification workshop’ to improve the quality of the data gathered by fishermen (eg so they can tell the difference between a shark bite and a whale bite on a fish). Another important study will be to identify whether the depredation is carried out by only a few animals and whether they target specific fishing boats. SPREP has set up an internet based “list-server” for people in the region to communicate on this issue. This is open to all interested stakeholders.

### **Action 19**

- Participants endorsed the Action Plan from the SPREP Longline / Cetacean Interactions workshop (November 2002). This also included:
  - SPREP Secretariat to encourage further research into this issue in this region, in particular species involved in depredation, extent of impact, and possible methods for mitigation. The situation in Samoa, Fiji, Tonga and PNG requires priority attention.
  - SPC Secretariat to produce an identification sheet for species of toothed whales that may be involved in depredation of hooked fish on pelagic longlines in this region and dolphins that may remove bait from hooks.
  - Development of an education campaign to teach fishers mitigation methods as they become available as fishermen may be taking this issue into their own hands, e.g shooting whales.
  - SPREP Secretariat to highlight these issues and recommendations to the next meeting of the Marine Sector Working Group of the CROP to ensure coordination with other organizations. An information package to be provided for this purpose by 30 April 2003.

In regard to the issues of **by-catch and entanglement in fisheries** gear (nets, lines etc.) participants noted that this does not appear currently to be a significant issue in this region. Rare examples have been noted, for example an Orca in longline fishing gear in NZ in November 2002, humpbacks in a gillnet in early 1990s and in crayfish rope (2001, Tonga; 2001/2, Kaikoura, NZ), pilot whale in longline gear in Tonga (2002) and New Caledonia (2002). Purse seining in the region is a possible concern but no real data on this is available.

### **Action 20**

- Encourage networking and information exchange on this issue, through the list server established by SPREP following the Longline / Cetaceans Interactions Workshop

### **Other Threats**

Participants noted a range of other threats to whales and dolphins. These included:

- Whaling and directed take of small cetaceans
- Pollution
- Vessel Collisions
- Noise
- Habitat degradation
- Harassment
- Climate change
- Prey depletion by commercial fisheries leading to food chain disruption

Participants discussed and agreed a range of actions outlined below:

### **Whaling / directed take of small cetaceans**

The taking of large whales does not currently occur in the SPREP region, although there is continuing pressure to resume whaling in Tonga. Currently direct takes of dolphins for meat and teeth takes place in the Solomon Islands. In Fiji there is a history of taking dolphins and toothed whales for their teeth, but there have been no recent reports.

In Tonga the current Humpback population is approximately 10% of pre-exploitation days. The pressure to resume whaling has increased in recent years. In its 2002 annual report, the South Pacific Whale Research Consortium reiterated that the impact of any further takes of humpback whales from the Tongan population cannot be reliably assessed with the available data; however, given that the population clearly has not recovered to pre-exploitation levels of abundance, any renewed hunting pressure would be detrimental to the future of this stock. The research data currently available shows links between Tonga and other island groups in Polynesia and possibly Melanesia. Takes from the Tongan humpback population may thus significantly impact other humpback populations in the region.

Participants also noted the potential impacts of scientific whaling. Over 6000 Antarctic minke whales have been taken in the JARPA programme, 1986-2003, and some of these animals will have spent some of their lives in the waters of

Pacific Island nations. Japanese research whaling operations in the vicinity of the Solomon Islands between 1977 and 1979 took 240 Bryde's whales. The impact of these removals on the current population in the area is unknown.

### **Action 21**

- Information exchange – recommend the production of a pamphlet to summarise the available information on humpback whales in Tonga and a public awareness campaign to accompany its distribution, including to government agencies. This to include information on the economic benefits of whale watching in Tonga. SPWRC will produce a draft for such a pamphlet by 31<sup>st</sup> July 2003.

### **Directed take of small Cetaceans**

In a number of areas of the Solomon Islands, locals hunt dolphins and other small cetaceans. The animals are herded into confined bays where they are killed, with the primary objective of obtaining their teeth and meat. Dolphin teeth have long served as currency throughout Malaita and Makira. They are also woven into collars or headbands used in blood bounties. Necklaces of dolphin teeth remain essential to the payment of bride price amongst some Malaitans and Makirans.

Most of the cetaceans taken in the Solomon drive fishery are apparently long-snouted oceanic forms, including spinner, Pantropical spotted, striped, common and rough-toothed dolphins, along with false killer whales. Risso's dolphins were also taken occasionally, but their low numbers of teeth made them of relatively little value to the Malaitans and Makirans. Melon-headed whales are also reported to have been taken in the past but are rarely taken today.

Although the Malaitans were reported in 1996 to no longer hunt cetaceans, reports suggest that this practice has been recently reinstated. The civil unrest has caused significant damage to the economy and infrastructure, and dolphin teeth are again being commercially marketed domestically in a number of islands, including Malaita, Makira, the Lau sub-district on the extreme north and northeast of Malaita, as well as Walande and Kwai to the south of Malaita.

The populations of small cetaceans in the Solomon Islands are currently poorly understood, therefore the impact of any direct take cannot be assessed at this stage.

### **Action 22**

- Government agencies in the Solomon Islands encouraged conducting research on how many animals are taken and which species. Support to be sought for this work.

### **Pollution**

The types of pollution that may impact cetaceans in this region include chemical (heavy metals); sewage (nutrient enrichment, disease; heavy metals and pesticides); plastics (ingestion) and persistent organic pollutants.

Sewage discharge could be a problem as it may cause nutrient enrichment and possible habitat destruction; it may also introduce disease and heavy metals and pesticides. A few cases of impact have been recorded from this region, including disease issues in dolphins adjacent to sewage discharge in Western Australia for example. At this stage it is not considered to be a significant issue for the region but needs to be monitored.

Chemical pollution is not currently considered to be a significant issue in this region, other than Persistent Organic Pollutants. These include pesticides, PCBs and dioxins, mainly produced in the Northern Hemisphere, that are potentially a significant threat to cetaceans. These compounds effect hormonal system and can cause low fertility and birth defects. They are transmitted through atmospheric deposition into the ocean and by run-off from land, particularly agricultural chemicals (e.g. pesticides).

There is also a need to be aware of the pollution potential due to the natural erosion of war ordinance shipwrecks. Normally, this is seen as build-up of heavy metals in molluscs and long-lived animals, including turtles and cetaceans.

The issue of plastics is thought to be a priority pollution threat in this region; the occurrence of plastic bags in the ocean is increasing and it is known that the ingestion of only a few plastic bags could have a lethal impact on juvenile cetaceans.

#### **Action 23**

- Public education/awareness. Develop public awareness and education campaign to dispose of plastics properly;

#### **Action 24**

- Encourage local governments to provide adequate garbage disposal facilities.

#### **Vessel Collisions**

Although there are reports of ferry and yacht collisions with whales, vessel collisions with large whales do not appear to be currently a significant issue. However, with increased whale watching and boating activity in the region and the general increase in speed of large container vessels, this could become a more significant problem in the future. (See also sections on noise and harassment).

#### **Action 25**

- NZ and Australia to provide information, including regulations on this issue to SPREP Secretariat for wider distribution by 15 March 2003.

#### **Noise**

The ocean is essentially an incredibly noisy environment. Noise issues in the region as related to cetaceans were summarised as:

- Seismic testing to search for oil is not a significant issue in this region.

- The US (and possibly French) Navy use high-energy, low frequency sonar, which has been shown to have a significant impact on some whales, especially beaked whales, causing acute trauma to the ear, strandings and death.
- Provisions of NZ Marine Mammals Protection Regulations and Australian regulations recognize the effect of boat noise on cetaceans and recommend a lower speed when a dolphin is bow riding for example. This may be considered in any legislation that is developed for recreation boating.

### **Harassment of Cetaceans**

The SPWRC 2003 report notes that the potential impact on cetaceans of unregulated whale-watching, swim-with-whales programmes and private recreational boaters is an issue of concern in several areas (e.g. Tonga and New Caledonia). To date, however, there have been no published studies of the impact (short- or long-term) of harassment, and whether it affects the only ultimate variable of concern, reproductive success.

#### **Action 26**

- SPREP to encourage development and implementation by member countries of regulations to ensure appropriate behaviour of vessels involved in watching cetaceans.

### **Habitat Degradation**

Not considered to be a significant issue for cetaceans in most parts of the region at present. However potential impacts of large-scale mining and forestry operations in some areas of PNG, New Caledonia (critical habitat for humpback whales), Solomon Islands, and Fiji need to be examined.

Potential impacts of deep-sea mining are unknown, but there is a general increase in this activity in the region, and studies are required to assess these possible impacts.

### **Climate Change**

Possible issue of concern, but at this stage there is no evidence of any direct impacts. However, there may be significant adverse impacts in the future on the availability of the major prey species for baleen whales (Antarctic krill, Oceanic plankton).

### **Population Status and Trends and Research Priorities**

Status and trends of other species of large baleen whales in the region is unknown. Recovery of most large whale species from impacts of former whaling operations is, for the most part, unknown. Humpbacks are recovering in some areas (e.g. East and West Australia) but recovery rates (if any) in French Polynesia, New Caledonia, Tonga, Cooks are currently unknown. Humpbacks remain rare in other areas of former abundance (eg, Samoa, Vanuatu, American Samoa and Fiji).

Best status estimates of Southern Hemisphere populations are based on sightings cruises in Antarctic Ocean:

Blue : <2% of pre-whaling population

Fin : <5% of pre-whaling population

Sei : < 5% of pre-whaling population

Humpback: recovery uncertain, currently under investigation through an integrated research programme – total population of Oceania probably of the order of 2,000 animals.

Minke : unknown, probably abundant, trends unknown, although sightings cruises in Antarctic indicate significant downwards trend in past decade

Bryde's: unknown population size or status

Sperm : unknown, probably depleted and probably recovering

Small cetaceans: no information on status and trends.

Participants noted that there was an existing list of publications covering available information; see Reeves et al 1999, and reports of SPWRC.

**Action 27**

- Use of lethal techniques to address research issues connected with cetaceans is unacceptable and any such programmes involving the killing of cetaceans under the guise of research are not supported in this Action Plan.

**Action 28**

- Recommend initiation of baseline studies as required.

**Action 29**

- Recommend continuation of existing monitoring programmes for humpbacks (SPWRC) and sperm whales (Ocean Alliance), including the involvement of local people wherever possible.

**Action 30**

- Recommend expansion of existing research programmes (wherever possible) to include areas not previously covered (including SPREP region north of Equator).

**Action 31**

- SPWRC Annual Reports to be provided to SPREP Secretariat for distribution to member countries.