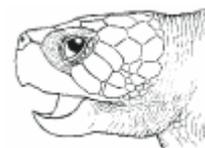


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## Editorial

SPREP's declaration of 2006 as the Year of the Sea Turtle (p. 8) is a welcome and timely reminder of the precarious state of these gentle reptiles. That virtually all of the sea turtles of the Pacific are endangered (p.10) is cause for concern, especially since two major contributors to this situation are over-harvesting of turtle eggs and turtle bycatch from commercial fisheries. This is troubling enough, but researchers have now found that a range of lower species within marine food chains are being targeted by commercial fishers even before top fish are depleted (p.14). This may place entire ecosystems at risk.

All of this emphasises the need to conserve and manage our marine resources rationally and sustainably. Tuna is a major economic resource for many Pacific Island countries and the region's grounds remain the most productive in the world. Keeping this so is now the responsibility of the Western and Central Pacific Fisheries Commission (p.3) and central to their work will be ensuring compliance with fisheries regulations. Monitoring, control and surveillance (MCS) activities will thus be central to the Commission's success (pp.5-7). Generous aid to advisory organisations like the Forum Fisheries Agency (p.12) demonstrates that donor nations are willing to support this effort.

Also new in 2006 is USP's unique Faculty of Islands and Oceans, created to unite all of the academic units related to the natural environments of the Pacific (p.11). This recognizes the close association islanders have with the land and sea and will promote innovative teaching and research to deal with environmental issues. PIMRIS' role in all of this is to improve access to information on the marine environment and the utilization of its resources. A progress report on this mission will be presented to regional leaders at the Heads of Fisheries Meeting in April. Merci,

Chris Nelson, PIMRIS Coordinator

## Contents

New Faces, New Places	2
New Tuna Commission Gains Momentum	3
Fisheries MCS in the Pacific Island Region	5
2006 Year of the Sea Turtle Launched	8
Endangered Sea Turtles of the Pacific	10
Agency News	11
Other News from the Region	13
New FAO Publications	15

*Will his children's children enjoy sea turtles in the future?*



(Photo credit: NOAA Magazine no.170)

## Directory

PIMRIS is a cooperative network of fisheries and marine resources libraries and information centres in the Pacific. Participants include ministerial libraries and the regional agencies listed below. For additional information contact the Coordination Unit or a specific agency.

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## New Faces, New Places

**David Holosivi** became the new Minister of Fisheries and Marine Resources in the Solomon Islands after a cabinet reshuffle in mid-February, replacing **Mathias Taro** who goes to Forestry, Environment and Conservation. **Ethel Sigimanu** became Permanent Secretary in the Department of Fisheries and Marine Resources.

**Patrina Fong** has been appointed Executive Assistant to the Dean, Faculty of Islands and Oceans at the University of the South Pacific. She holds a degree in Business Studies from USP and is currently completing her Masters in Business Administration. Before joining the FIO team Patrina held the position of Marketing Assistant at Carlton



Brewery (Fiji) Ltd.

**Satui Bentin**, Manager of the Information Resource Centre at SPREP and Coordinator of the Pacific Environmental Information Network (PEIN) became Chairperson of the Pacific Islands Regional Group of IAMS LIC in January. **Clare Ame** relinquished this post when she resigned her consultancy at the PNG National Fisheries Authority to take up a position at the Fiji School of Medicine. PIRG members will hold a regional meeting in Noumea coincident with the Heads of Fisheries Meeting in April, organised by SPC Librarian **Rachele Oriente**.

The PIMRIS Coordination Unit acquired two new staff in January. **Frances Chute** [right] joined USP from the Pacific Theological College. Frances has just completed her Diploma in Library Studies and is currently reducing our cataloguing backlog. **Asenaca Valemei** [left] transferred from USP's Main Library to replace Reshni Kumar, who migrated to the USA at the end of 2005. Asenaca has previously worked in Reader Services and the Pacific Collection of USPL. She is presently studying for her Diploma.



## New Tuna Commission Gains Momentum

The Western and Central Pacific Fisheries Commission based in Pohnpei, Federated States of Micronesia, has commenced activities following the appointment of its Executive Director, Mr Andrew Wright, in October last year. It hosted its first major conference in December 2005 and accepted handover of its new headquarters in January. Mr Wright undertook his first official country visit, to Papua New Guinea, in early February.



Mr Wright commenced work at the Tuna Commission in October for an initial period of four years. He brings a long association with Pacific fisheries to the post. Since 1978 he has worked on national level fisheries issues in Papua New Guinea and on regional and international issues – first with the FFA and more recently with SPREP.

On arrival in Pohnpei Mr Wright said that he was looking forward to working with Commission Members to address the numerous challenges facing Pacific regional fisheries at present. “Principal among these are concerns about the level of fishing that regional bigeye and yellowfin tuna stocks are subject to” he said. Mr Wright noted that discussions leading up to the finalisation of the Convention that established the Commission as far back as 1999 had cautioned against increasing yellowfin and bigeye tuna catches. “The means to achieve a reduction in the catch of yellowfin and bigeye that doesn’t unfairly single out any one member of the Commission is perhaps the biggest issue before this year’s Commission meeting” Mr Wright said.

That meeting was held in mid-December. More than 280 people involved in the global and regional tuna industry attended to put in place the first components of a long term process to control fishing effort and catch and regulate regional tuna harvests in the Western and Central Pacific Ocean. The conference was chaired by Mr Glenn Hurry from Australia. [*Mr Hurry is the Acting Executive Manager of the Fisheries and Forestry Division of the Department of Agriculture, Fisheries and Forestry and a Director of the Fisheries Research & Development Corporation (FRDC) – Ed.*]

The meeting focused on controlling further expansion of the catch of bigeye and yellowfin tuna, both of which species received worrying stock status assessments as recently as August. The discussion was robust as the topic -- vital to the health and wellbeing of many Pacific Island economies -- was debated between the historical and extensive fishing interests of the world’s largest tuna fleets, the fishery development aspirations of the small developing countries and territories of the Pacific and the Philippines and Indonesia, in whose waters the majority of the regional tuna harvest is taken.

Mr. Hurry, commenting at the conclusion of the meeting, said that he was pleased with the outcomes and believed that the meeting had laid the foundations for what will become one of the world’s major fisheries commissions. He said that participants shared the view that continued expansion of the regional tuna catch cannot be sustained. “The 2004 tuna catch, just over 2 million tonnes, was the highest on record. Scientists have stated that yellowfin and bigeye tuna stocks cannot sustain this level of fishing and there is a need for a reduction in both effort and catch”. He went on to say “this is a new Commission, however with so much at stake it must quickly begin to work. It will take some time to develop tools to ensure that conservation and management arrangements are adhered to, but these measures must be adhered to if we are sustain the livelihood of the Pacific. This Commission has the best opportunity of all the world’s regional fisheries management organizations to successfully manage its fish stocks. It must not fail.”

The Commission took its first steps along this path with the adoption of resolutions aimed at constraining further increases in catch and effort for North Pacific and South Pacific albacore, bigeye and yellowfin tuna; support to reduce the catch of seabirds and turtles that are taken incidentally during fishing operations; and measures to reduce fishing capacity.

Tools to assist with the enforcement of these decisions include the world's largest satellite-based system for monitoring the operations of fishing vessels and programs for placing observers on fishing vessels operating on the high seas, to complement those programs that members of the Commission support in their national waters.

The Commission also agreed to explore options for temporary closures in western and central Pacific tuna fisheries along similar lines as has been implemented in the Eastern Tropical Pacific under the auspices of the Inter-American Tuna Commission. Members also agreed to develop management plans for the use of fish aggregating devices in an effort to reduce the catch of juvenile bigeye and yellowfin tunas.

In January, another early milestone for the Commission took place when their purpose-built premises were handed over. His Excellency Yang Qiang, Ambassador for the People's Republic of China to the Federated States of Micronesia presented the keys to the new headquarters building to the FSM Secretary for Foreign Affairs, the Hon. Sebastian Anefal, in a ceremony in Kolonia, Pohnpei, on January 26<sup>th</sup>.

Among the 120 people that witnessed the historic occasion were the President of the Federated States of Micronesia, the Hon. Joseph J. Unusual and the Governor of Pohnpei State, the Hon. Johnny P. David, national and state legislators and members of the senate, representatives of the Commission and senior government officials. The building was completed with costs in excess of US\$3,000,000 donated by the People's Republic of China.



The Western and Central Pacific Fisheries Commission's new headquarters in Pohnpei, FSM

In February the Executive Director visited Papua New Guinea on his first official visit to any of the Commission's 30 members. He explained that there were many good reasons for this choice: "Papua New Guinea is now a major player in the regional tuna scene. It has one of the largest marine areas under national jurisdiction, 2.4 million square kilometers; an expanding fleet of approximately 200 tuna fishing vessels with an annual catch that has ranged between 250,000 and 310,000 tonnes over the last few years; and increasing shore-side investment". Mr Wright has a long personal association with PNG, having started his working life at the old Department of Agriculture, Forestry and Fisheries in 1978. He has lived in Papua New Guinea for 15 years, off and on, and his wife is from Kavieng.

Other key staff of the WCPFC, including a science manager, compliance manager and administrators, are expected to be named by April. (WCPFC press releases; *Pacific Magazine*, Jan. 2006)

*Further information on the Commission may be found at its website: <http://www.wcpfc.org/>*

*An interview with Andrew Wright conducted by Pacific Magazine can be read on their website: <http://www.pacificislands.cc/pm12006/pmdefault.php?urlarticleid=0005>*

# Fisheries Monitoring, Control and Surveillance in the Pacific Island Region

*Pio Manoa*

(School of Marine Studies, Faculty of Islands and Oceans, USP)

Spread across thirty million square kilometres of ocean, the Pacific Islands region has, and continues to rely heavily on, regional and bilateral cooperation in monitoring, control and surveillance of marine resource exploitation. The marine environment sustains the Pacific, particularly in terms of creating economic opportunities, and providing livelihoods for local communities. This short article discusses the role and evolution of MCS in the Pacific Islands region over two decades and how it works to discourage overexploitation and enhance fisheries management.

Monitoring, control and surveillance may be defined broadly as a mechanism for the implementation of agreed fisheries laws, policies and plans. In addition to fisheries enforcement, it promotes the implementation of management plans and includes the development of data collection systems, and legal instruments, through participatory processes.

*Monitoring* includes the collection, measurement and analysis of fishing activity which provides essential primary data for decision-making. *Control* sets specific terms and conditions for the harvest of the resource. *Surveillance* involves the regulation and oversight of fishing activity to ensure that national laws, terms and conditions of access and management measures are complied with. (For further information, see Flewelling, et al., 2002).

## The Pacific Islands region fishery

Since the 1950s, industrial fishing vessels from various parts of the world have been fishing in the region. The first documented fishing fleets came from Japan, Taiwan, Korea, Indonesia, Philippines and the United States. Abundant tuna stocks were the main attraction. As time progressed, new entrants arrived, displacing (albeit slightly) the first fleets.

Today the tuna fishery in the region is considered to be in a relatively healthy state except for the status of bigeye and yellowfin tuna stocks. According to the 2005 stock assessment, overfishing is likely occurring for bigeye tuna but the stock is presently not in an overfished state. For yellowfin, the prognosis is similar.

In terms of total catch, the amount of tuna taken from the region is more than the combined catch from the Atlantic Ocean, Indian Ocean and the Eastern Pacific Ocean. 2004 saw a record catch of over 10,000 metric tonnes (mt) above the old record set in 1998 of 2,009,546 mt. The amount of catch has increased significantly as more efficient large-scale vessels are introduced to the fishery.

In light of the vulnerability of bigeye and yellowfin under current fishing pressure, increased numbers and efficiency will have detrimental consequences. It is also important to note the possible impacts of environmental conditions on the fisheries. Coupled with other measures to regulate fishing inputs and outputs, the role of MCS is ever more important.

**Figure 1: Total catches of skipjack, albacore, bigeye and yellowfin tuna in the Western and Central Pacific Ocean from 2000 to 2004**

	2000	2001	2002	2003	2004
Total Catch (mt)	1,897,697	1,779,814	1,964,128	1,973,665*	2,021,773*

\* Provisional figures

(Sources: SPC *Tuna Fishery Yearbook 2003*; Williams & Reid, 2005)

## **A brief history of MCS**

In the region, the Pacific Islands Forum Fisheries Agency (FFA) plays a leading role in the coordination and implementation of MCS activity. Shortly after its establishment in 1979, FFA established a regional register for foreign fishing vessels and agreed to minimum terms and conditions (MTCs) for access for any foreign fishing vessel intending to fish in the waters of its members in the early 1980s. Since its adoption in 1982, the MTCs have been reviewed twice and are part of national licensing conditions and laws.

On the other hand, the regional register is a compliance mechanism that shifts the responsibility for compliance to the flag State or fishing association (Richards, 2003). In 1999, the FFA established the VMS register that lists all vessels that carry automatic location communicators and are able to be tracked by satellite and monitored by FFA members. At its 59<sup>th</sup> meeting, the governing body of the FFA decided to merge the regional register and the VMS register into one and established the FFA Vessel Register, which is available online ([http://www.ffa.int/ffa\\_rreg](http://www.ffa.int/ffa_rreg)).

The total number of fishing vessels on the FFA vessel register in March 2006 stood at 1,021. This figure includes all kinds of fishing vessels, bunker vessels and reefer or transport vessels. Of the total 26% carry the Taiwanese flag, 21% are flagged in Japan, 16% from South Korea, 9% from China, and the remaining 28% are either flagged in Pacific countries or elsewhere.

In addition to the initiatives above, FFA members have concluded regional and sub-regional instruments that support regional cooperation and collaboration in management, access, surveillance and enforcement. Examples of these instruments are the Nauru Agreement, the Niue Treaty, Palau Arrangement and the F.S.M Arrangement. The Niue Treaty is a pertinent example of a regional framework treaty developed to enhance maritime surveillance and enforcement. Sub-regional arrangements can then be made between parties to carry out joint surveillance such as Operation Island Chief conducted in Micronesia by F.S.M, Palau and the Marshall Islands in 2004.

Together with regional and sub-regional instruments and initiatives, other MCS initiatives at the national level are in use. These include the observer programme where trained observers are deployed on fishing vessels, port side boarding and inspection, and the port sampling programme. Some national laws such as the PNG *Fisheries Management Act* 1998 include provisions that enable the prosecution of fishing vessels found fishing illegally in the waters of other States. These provisions are derived from the United States *Lacey Act* and they enabled the successful prosecution in PNG of a fishing vessel that was fishing illegally in the Solomon Islands.

Moreover, sea patrols and aerial surveillance is conducted from time to time with the Australian, New Zealand and French defence authorities. The United States Coast Guard also participates in regional surveillance and enforcement activities. However the majority of FFA members continue to face financial difficulties in trying to maintain and run small naval patrol vessels donated under the Australian Patrol Boat Programme. Kiribati with 3.5 million km<sup>2</sup> of EEZ has three island groups spread apart and only one patrol vessel.

The region continues to utilise a variety of MCS systems in fisheries conservation and management. Given the limited capabilities and resources of each island State and a vast ocean area within their jurisdiction, regional collaboration and partnership is vital. All of the MCS initiatives and tools used by the region will evolve over time and continue to improve with changes in technology, fishing practices and know-how.

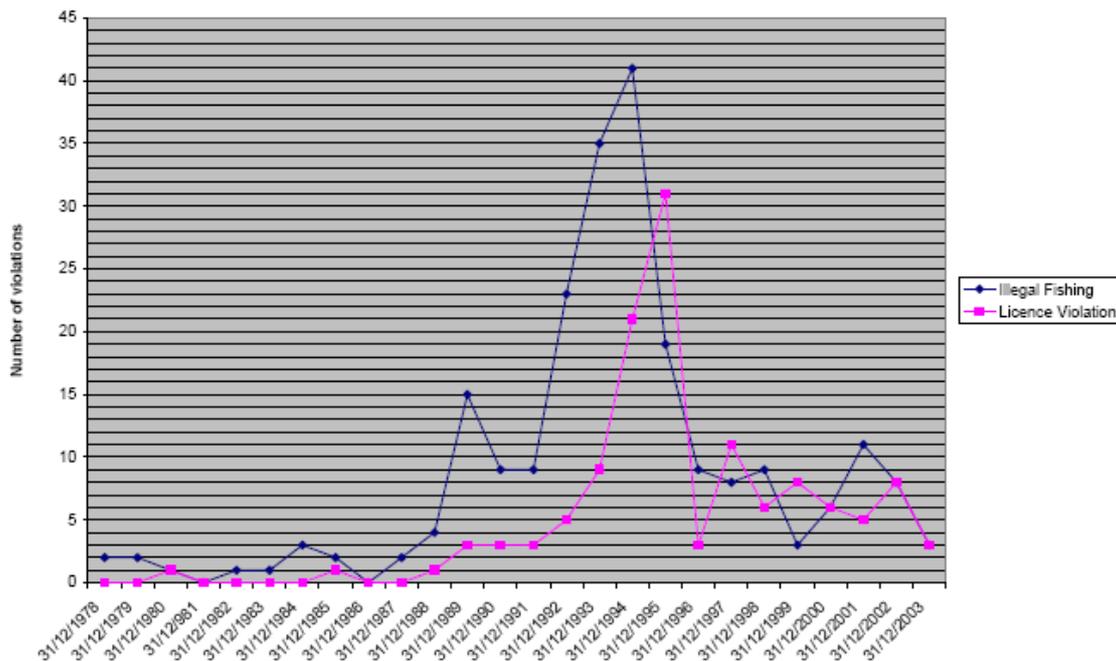
## **Impact of MCS on management**

MCS has a positive impact on fisheries management in the region. Catch data and other information sources have enabled decision-makers to be better informed about status of stocks and practices of licensed fishers. According to the FFA violations and prosecutions database, licence violations and illegal fishing in the region showed a decreasing trend from 1995 to 2003 (see figure 2). However, illegal, unreported and unregulated (IUU) fishing activity continues.

IUU fishers are generally well resourced and are familiar with ways to evade regulation and detection. While it is assumed that they are not authorised to fish, in some cases, illegal fishers are licensed and even have “good standing” on the regional register. For instance, the recent illegal fishing case decided by the High Court of Fiji involved a Belize flagged longliner *Lian Chi Sheng* chartered by a Fiji company, was fitted with an automatic location communicator, and met the terms and conditions of access. In this case, the satellite vessel tracking system managed by FFA played an important role in monitoring the vessel’s movements and intercepting it prior to arrest.

Having said this, there are signs that compliance is improving. The submission of logsheet data by vessels gives an indication of basic compliance. In 2001 logsheets were submitted by 77% of the Fiji fleet and this increased to 90% in 2002, 94% in 2003, and 98% in 2004. This shows a general improvement in the submission of logsheet data but the data itself will need to be verified with observer data (if any), trade information and port sampling. Improved compliance will produce more reliable data and ultimately support better decision-making.

**Figure 2: Reported fisheries violations attributable to illegal fishing and licence violations in the EEZs of FFA members, 1978 – 2003** (Source: Richards, 2003)



## Conclusion

MCS is integral to fisheries decision-making, management, enforcement as well as in the implementation of law, programmes and plans. Since the 1980s, Pacific Island States have utilised a variety of MCS tools to better manage precious marine resources within their jurisdiction. Cooperation and coordination in fisheries management continues to be facilitated effectively by the FFA which plays a pivotal role in the evolution and improvement of MCS. Regardless of improved monitoring, illegal, unreported and unregulated fishing activity by licensed and unlicensed vessels will remain. Thus, the major challenge is to put in place comprehensive measures to deter, reduce and eliminate IUU fishing in order to safeguard the sustainability of resources and the livelihoods of Pacific communities.

## References

- Flewelling, P.; Cullinan, C.; Balton, D.; Sautter, R.P.; Reynolds, J.E. 2002. *Recent trends in monitoring, control and surveillance systems for capture fisheries* (FAO Fisheries Technical Paper, no. 415) Rome: FAO.
- Richards, A. H. 2003. *Fisheries monitoring, control and surveillance in the Western and Central Pacific Ocean region*. (FFA Report, no. 03/05)
- Williams, P. & Reid, C. 2005. Overview of tuna fisheries in the Western and Central Pacific Ocean, including economic conditions – 2004. WCPFC-SC1 GNWP-1. Paper delivered at the 1<sup>st</sup> Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission.

## 2006 Pacific Year of the Sea Turtle Launched

The 2006 Pacific Year of the Sea Turtle (YOST) was launched in Apia, on March 1<sup>st</sup>, with a renewed call to save this marine icon from extinction.

Facilitated by the Secretariat of the Pacific Regional Environment Programme (SPREP), the second 'Year of the Sea Turtle' campaign aims to boost turtle numbers by promoting community conservation of turtle nesting sites, strengthening national legislation and policies to encourage effective management, and fostering partnerships for long-term conservation.

The original YOST campaign, held in 1995, was a general public awareness and educational initiative. The current campaign builds on this foundation with targeted actions for targeted groups that impact on turtle populations. Despite an increase in turtle conservation initiatives in the region, and the world, a renewed effort was seen as necessary given that the sea turtle continues to have a threatened status.



The target audiences for the 2006 campaign are :

*Communities* : since nesting areas, turtle foraging and feeding areas are usually on traditionally owned lands or in areas near or easily accessible by communities, and the fact that some communities continue to harvest turtles for traditional feasts, this group therefore plays an important role in the effort to conserve turtles

*Commercial fishers* : this includes purse-seining, long-lining, and trawling operations. Turtle mortalities from by-catches, boat strikes and pollution from commercial fishing operations are significant but can be reduced or even eliminated

*Legislators and policy makers* : an integral part of the effort for sustainable management of the utilization of turtles is having effective, relevant and practical national legislation and policies

*Partners* : because of the migratory nature of sea turtles, turtle conservation requires the regional effort of a range of states/territories. For long term and effective effort, partnership amongst agencies, organizations and donors working on turtle conservation is required.

SPREP's Acting Director, Vitolio Lui, has urged countries and territories to participate in the latest campaign in an effort to reverse the rapid decline in numbers. "As a shared resource, turtle conservation is a shared responsibility, and SPREP is promoting the need for communities, governments and industry to work together to increase turtle stocks". SPREP believes the critical success factor in this campaign is the participation of their key partners including national governments, intergovernmental organizations, communities, fisheries and tourism authorities, donors, and NGOs.

YOST will involve a series of public events and activities in SPREP's 25 member countries and territories under the banner "Sea Turtles: Protect them, Protect our heritage". This message reflects the key role that turtles play in Pacific culture, heritage and environment. A key component of this campaign is a satellite tracking programme that will monitor the movements of five turtles throughout the region. By attaching a satellite tag to the shells of the turtles, SPREP, with support from the US National Marine Fisheries Service, will access information about the migration routes of the turtles.

This programme will provide valuable information about the movements of turtles, and will also be used in the campaign's education and awareness activities. School children throughout the Pacific will be encouraged to 'Adopt-a-turtle' and track its movements throughout the year as part of their school studies. Not only will this activity increase awareness and understanding about turtles and the marine environment, it will also promote their migratory nature, and the need for regional collaboration and partnerships.

On Saturday 25 February, to mark the regional launch of the campaign, the first turtle was tagged in Apia, Samoa by a team from SPREP, the Ministry of Natural Resources, Environment and Meteorology, Ministry of Agriculture and Fisheries, and US National Marine Fisheries Service.

Six of the world's seven recognized turtle species are found in the Pacific. Considered the world's largest continuous marine habitat on the planet, the Pacific Ocean supports the world's largest remaining populations of green, hawksbill, and loggerhead turtles. An integral part of Pacific culture and tradition for centuries, the numbers of turtles inhabiting the Pacific have seriously dropped in the past 50 years mainly due to over-harvesting, exploitation and marine pollution. With almost all species of turtles considered threatened with extinction, SPREP believes that the Pacific must undertake renewed efforts to promote turtle conservation in the region.

This campaign complements that of IOSEA in the Indian Ocean and South-East Asia. SPREP's member countries and territories will also be coordinating national launches to mark this campaign. For more information please contact:

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Phone: (685) 21929 Fax: (685) 20231



Photo credit: WWF-Canon / Martin Harvey

(Sources: SPREP press release, 1 Mar 2006; SPREP circular 05/98 and the WWF South Pacific website, <http://www.wwfpacific.org/fj/>)

*Further Internet resources on turtles and turtle conservation programmes can be found at:*

Indo-Pacific Sea Turtle Conservation Group	<a href="http://www.aims.gov.au/ipstcg/">http://www.aims.gov.au/ipstcg/</a>
IOSEA Year of the Sea Turtle 2006	<a href="http://www.ioseaturtles.org/yot2006/">http://www.ioseaturtles.org/yot2006/</a>
Marine Turtles [NOAA]	<a href="http://www.nmfs.noaa.gov/pr/species/turtles/">http://www.nmfs.noaa.gov/pr/species/turtles/</a>
Pacific Regional Environment Programme	<a href="http://www.sprep.org/ws/">http://www.sprep.org/ws/</a>
Sea Turtles of the Pacific Tracking Project	<a href="http://www.cccturtle.org/sat14.htm">http://www.cccturtle.org/sat14.htm</a>
Wan Smolbag's Environmental Drama	<a href="http://www.wan-smolbag-theatre.org/environment.html">http://www.wan-smolbag-theatre.org/environment.html</a>

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## Fiji Joins Year of the Turtle Campaign

Efforts to protect one of Fiji's most endangered animals, the green sea turtle, have been boosted following a declaration by a concerned environmental group in Suva. World Wildlife Foundation (WWF) Fiji hopes to highlight the importance of the issue through a variety of posters and key messages on their merchandise.

Working with partners such as the Departments of Environment and Fisheries, WWF expects to create awareness of the regulations that offer sea turtles protection within Fiji's waters. Populations of green sea turtles are estimated to have declined globally by around 60% over the last 50 years. Fiji is an important foraging ground for green turtles hence, the urgent need to conserve them. Although Fiji has a 5 year moratorium that bans the commercial harvest and sale of sea turtles, it is still consumed locally, especially during traditional Fijian ceremonies.

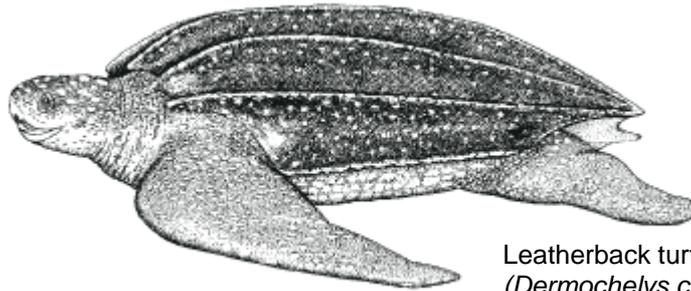
"Turtles are a cultural icon in Fiji. It's a delicacy that is often served at important traditional functions. However, with changing times, turtle meat is now a dish finding its way onto many tables. WWF believes that this is a contributing factor to the severe decline we are seeing in our turtle populations," said Etika Rupeni, WWF Fiji Programme Country Manager.

As part of this effort, WWF Fiji will, over the course of this year, work towards creating awareness on the threats to turtles and on the regulations that offer sea turtles protection within Fiji's waters. They will be working with their partners to agree and undertake actions to protect our ancient mariners.

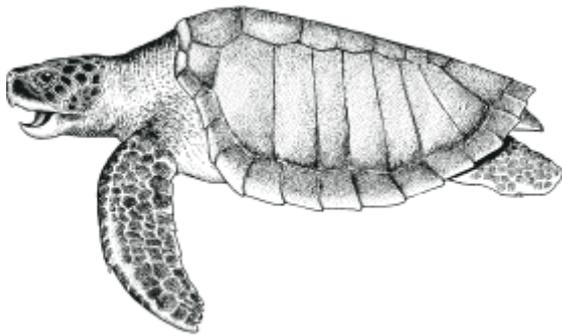
(*The Fiji Times*, Mar. 4, 2006, p. 18)

## Endangered Marine Turtles of the Pacific Islands Region

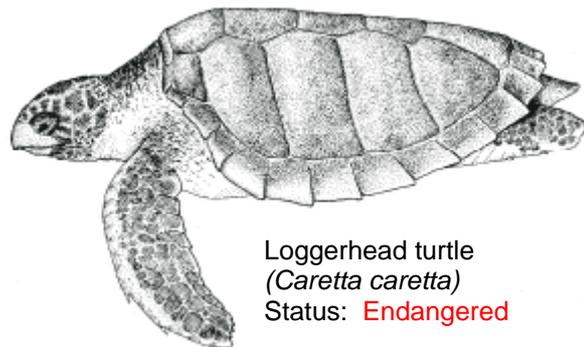
The sea turtles occur in all tropical and warm-temperate oceans. The majority of species inhabit shallow waters along coasts and around islands, but some are highly migratory and are found in the open sea. They are swift swimmers and may attain a speed of about 35 km per hour. Most are predominantly carnivorous, but the green sea turtle becomes vegetarian at the end of the juvenile stage. Nesting occurs on sandy beaches, above the high tide mark, where a clutch of around 100 eggs is buried in the sand and left unattended. Turtles are highly vulnerable to predators, the worst of which is man. All of the species found in Pacific waters are on the IUCN endangered list.



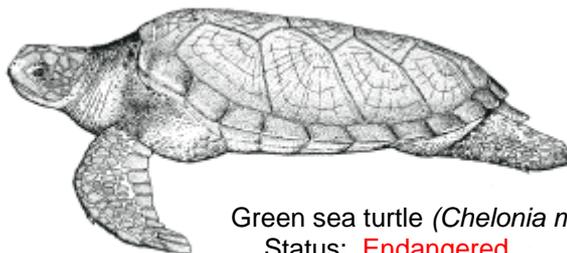
Leatherback turtle  
(*Dermochelys coriacea*)  
Status: **Critically endangered**



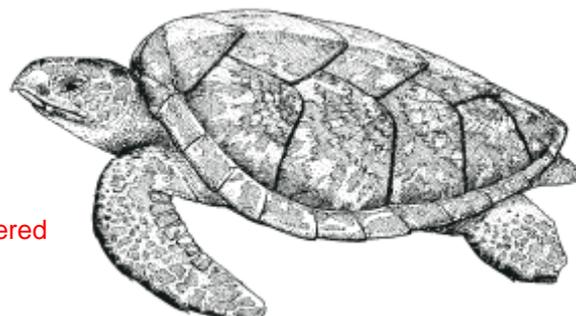
Olive ridley turtle (*Lepidochelys olivacea*)  
Status: **Endangered**



Loggerhead turtle  
(*Caretta caretta*)  
Status: **Endangered**



Green sea turtle (*Chelonia mydas*)  
Status: **Endangered**



Hawksbill sea turtle  
(*Eretmochelys imbricata*)  
Status: **Critically endangered**

(Source: Carpenter, K.E.; Niem, V.H. (eds.) 2001. *FAO species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. Volume 6.* Rome, FAO. pp.3974-3986.)

## Agency News

### **USP Restructure Creates Unique New Faculty**



The University of the South Pacific's new academic structure, which took effect from January 1 this year, has created a world-first Faculty of Islands and Oceans. The Dean of the Faculty, Dr Pa'olelei Luteru aims to ensure that it becomes a centre of excellence regionally and internationally within the next five years.

Vice-Chancellor of the University, Professor Anthony Tarr, stated "The new Faculty of Islands and Oceans responds directly to the recommendations of the Future's Report and places the University in a uniquely strong position to play its role in addressing the special needs of our island nations and our relationship with and our respect for our environment."

The new Faculty is the first of its type in the world, bringing together all of the disciplines directly related to the Pacific environment, including geography and land management, primary production (through agriculture and fisheries) and tourism. It will have a multi-disciplinary and applied focus on sustainable development in the region, to ensure creative innovation for problem-solving, increasing capacity in the physical and social sciences and the integrated management of land, marine and human resources of the small island states of the Pacific Ocean.

The incorporation of the Oceania Centre for Arts and Culture (OCAC) into the Faculty demonstrates recognition by USP of the depth and significance of Pacific Islanders' relationship with their natural environment, as evidenced by historical traditions in the visual and performing arts. Dr Luteru spoke of the way in which dancers at the Oceania Centre for Arts and Culture can portray the effects of climate change or pollution on fragile coral reef environments through their performance art.

Dr Luteru has also established a business arm for the Faculty which is responsible for coordinating the research agenda and its services to the regional community. This consists of three institutes and a centre (see box). As Dean for the next five years, he said this will be a short time to achieve a huge vision. However, he sees no reason why the new Faculty can't be "Number One" in research, staff expertise and programs offered. "The challenge is to build something out of this Faculty which we can all be proud of, something that is relevant and useful for our Pacific Island countries."

#### **Faculty of Islands and Oceans**

- School of Agriculture and Food Technology (Alafua Campus, Samoa)
- School of Marine Studies
- Department of Geography
- Department of Land Management
- Department of Tourism and Hospitality
- Oceania Centre for Arts and Culture

#### **Associated bodies**

- Institute of Applied Science (IAS)
- Institute of Marine Resources (IMR) incl. Atoll Research Unit (Kiribati)
- Institute for Research, Extension & Training in Agriculture (IRETA) (Samoa)
- Pacific Centre for Environment & Sustainable Development (PACE-SD)



In consultation with the Vice-Chancellor, two Associate Deans were recently appointed to assist Dr Luteru: Professor Joeli Veitayaki (Associate Dean, Academic)[*left*] and Professor William Aalbersberg (Associate Dean, Research and Services)[*right*].



*The full text of an interview with Dr Luteru can be read in USP Beat, vol.6, no.1 (27 February), pp.4-5.*

## **Australia Backs Change at the Forum Fisheries Agency**

The Australian Government, through the Australian Agency for International Development (AusAID) has approved funding totalling \$AUD7 million for the next 3 years in a clear endorsement of the Forum Fisheries Agency's (FFA) new Strategic Plan.



Following the recent signing of a three year program funding agreement in Canberra, the FFA Director-General Feleti Teo said, "We could not have delivered more than 26 years of expert fisheries management advice to our member countries in the western and central Pacific without funding support from the Australian Government. The signing of this latest agreement is a recognition of our past successes and a clear endorsement of the strategies that will take us through the decade."

AusAID Assistant Director General Judith Robinson noted "The relationship between AusAID and the FFA is an excellent regional example of collegiate and professional cooperation. The 21% increase in Australia's funding reflects our support for this new strategic approach to tuna management and development issues in our region".

Mr Teo further stated, "2006 will be an important year for the FFA. Our tuna stocks are under increasing pressure and we must act now to develop management arrangements to make sure they are fished in a sustainable way. To ensure this we will be taking on up to 20 new staff to support fisheries management and fisheries development and take new roles in trade, industry and regional planning for fisheries compliance. We will implement major changes to improve the effectiveness of the satellite based fishing vessel tracking system and enter a new phase of cooperation with the new tuna Commission in Pohnpei. Through donor support we are significantly expanding the delivery of advice and services to our members".

"Organisational reform, the development of an ecosystem approach to fisheries management, and supporting our members in their role with the fledgling Western and Central Pacific Fisheries Commission (WCPFC) are just some of the challenges we face this year at the FFA, which will be implemented with the help of this funding."

The FFA's new Strategic Plan was launched at the Pacific Forum Leaders Meeting held in Port Moresby in October 2005 and includes two major program areas: fisheries development and fisheries management. These programs recognise the vision of the FFA's 17 country and territory members to enjoy the highest levels of social and economic benefits for their people through the sustainable



development of fisheries resources. "Our mission here at the FFA is to support members achieve sustainable fisheries and the highest levels of social and economic benefits and this can only be achieved with the support of important donors like Australia" Teo said.

*Judith Robinson (AusAID) and Steve Dunn (FFA) sign the agreement*

Source: FFA press release (<http://www.ffa.int/node/635>)

## Other News from the Region

### **Hawaii / American Samoa:** Listen to what the reefs are saying

Many of the world's protected reefs are in remote locations, making it difficult to keep a close eye on their health. Perhaps the solution is to keep an ear on them. That's what Marc Lammers of the Hawaii Institute of Marine Biology in Kane'ohe has been doing for the past year with his underwater listening devices, which he placed on reefs off O'ahu, Hawaii.

Called Ecological Acoustic Recorders (EARs), the devices have detected the ubiquitous crackling of tiny snapping shrimp, the murmurs from fish and the calls of nearby marine mammals. Shrimp sounds peak at dawn and dusk, and the sounds from domino damselfish peak during their mating season. Lammers has even detected a mysterious fish sound at twilight the maker of which is unknown.

"The sounds of the reef provide indicators of activity," Lammers says. The next step is longer term monitoring of reefs to see if the sounds change when reefs get bleached or are damaged in other ways. Lammers' collaborators at the US National Oceanic and Atmospheric Administration (NOAA), who are charged with monitoring US reefs, are installing five EARs on coral reefs in American Samoa this month. They hope to correlate the sounds with other measurements such as ocean temperatures, which are related to coral bleaching. In addition to listening for biological activity, the recorders can detect passing ships, and this could help to identify illegal fishing on protected reefs.

(Source: *New Scientist*, 25 February 2006, p. 19)

### **Vanuatu:** To negotiate on 200 mile zone

Vanuatu will enter into negotiations with the Solomon Islands, New Caledonia, and Fiji over the country's 200 nautical miles boundary area. The country's boundary overlaps the southern part of Solomon Islands as well as the islands of Mare and Lifou in New Caledonia. Another area that Vanuatu needs to tackle is the claim on the outer limits of the continental shelf, this is outside the 200 nautical mile zone.

The Vanuatu Maritime Zones Act of 1981 outlining the country's archipelagic baseline was outdated when the United Nations Law of the Sea requirements came into force. Vanuatu's Mines Commissioner, Tony Tevi, has said that a committee has been established to redefine Vanuatu's base points in line with the United Nations Law of the Sea. He said that in Torres, for example, three or four base points needed to be identified. Because of the problems of validating base points, there is overlapping in boundaries with neighbouring countries.

He said the work would need assistance of technical people and the involvement of lawyers. The South Pacific Geoscience Commission (SOPAC) is currently assisting countries in validating their base points.

(PACNEWS 3: Wed 21 Dec 2005)

### **French Polynesia:** Coral reef atlas to be available on Internet

Internet users will soon be able to access a coral reef atlas for French Polynesia produced by the Institut de recherche pour le développement (IRD), a work published confidentially for professionals a year ago. The atlas provides maps of four of French Polynesia's five archipelagoes—the Society Islands, which include the most populated Windward and Leeward Islands; the Tuamotu Archipelago; the Gambier Islands and the Austral Is.

The atlas was produced using Landsat high resolution spatial remote sensing. The only missing archipelago is the Marquesas Islands because they do not have any coral reefs that can be mapped by satellite remote sensing, with the exception of the reefs fringing the north side of the island of Nuku Hiva.

The publication provides between one and three cartographic plates per island and a synthesis of the surfaces of each of coral reef category. There are more than 64 categories of different reef formations. The most complex coral reef systems are found in the high islands.

The atlas was originally produced at the request of the French Polynesia Fisheries Department. The main objective was to provide government departments and professionals with a homogeneous and user-friendly geographical database necessary for multiple management activities involving the coral reef-lagoon environment.

(*Sciences au Sud*, Jan/Feb 2006, via *SPC Fisheries News Clippings*, 20 Feb.)

## **Australia:** Pacific powers to fight illegal fishing

Australia and France have signed a joint declaration to co-operate on combating illegal fishing in the Pacific region. The New Zealand government will sign the deal in April. This formalises the cooperative efforts already underway by these countries to help protect the sustainability of the Pacific's valuable fisheries resources.

French Minister for Overseas Territories Francois Baroin met Foreign Minister Alexander Downer and Environment Minister Ian Campbell in Canberra to sign the declaration. The three countries have been holding talks on joint surveillance over the past year, building on an agreement for cooperation on disaster relief in the South Pacific. Mr Baroin said part of France's contribution would involve the use of high-tech satellite technology. Mr Baroin is expected to visit New Zealand in the near future to conclude the signing of the Joint Declaration.

(PNS, via SPC Fisheries News Clippings, 10 Mar.)

## **Japan:** Control over tuna fishing tightened

Japan will tighten control over the fishing of southern bluefin tuna, after an investigation found that the country exceeded its annual quota last year by at least 1,500 tons, an official said in March.

The Fisheries Agency launched an investigation in December after Australia raised suspicion that Japan, which consumes 99% of the world catch of southern bluefin tuna, may have caught more than the 6,065 tons allowed in fiscal 2005. The Australia-based Commission for the Conservation of Southern Bluefin Tuna sets annual fishing quotas for bluefin in an effort to conserve the fish. Japan caught 1,500 tons more than its annual share last year, and the figure is expected to rise.

While fishermen were required to report their catch to the agency, inspections by officials had been sporadic, and they failed to inspect those who claimed they had no catch at all. So fishermen will be required from April onwards, to put a tag on each tuna fish they catch and officials will inspect every fishing boat that returns to any of the designated ports in Japan. Violators, including fishermen as well as buyers and processors of tuna, will face a fine of up to 500,000 yen or up to two years in prison. Southern bluefin tuna can fetch a price twice as much as the more widely consumed bigeye tuna.

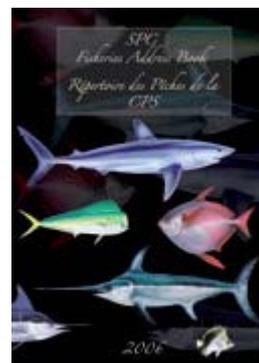
(Hindustan Times, 2 March 2006, via SPC Fisheries News Clippings, 10 Mar.)

## **New Caledonia:** 2006 SPC Fisheries Address Book published

The latest annual *SPC Fisheries Address Book* produced by the Information Section of the SPC Marine Resources Division has been published and distributed widely in the region.

In addition to more than 1,200 addresses of fisheries personnel in government departments, industry, academia, research institutions and non-government organisations in 50 countries, each book also includes information on Exclusive Economic Zone areas and population estimates provided by the SPC Demography Programme. The book in electronic form can be downloaded from the SPC website:

[http://www.spc.int/coastfish/news/Address\\_Book\\_2006.htm](http://www.spc.int/coastfish/news/Address_Book_2006.htm)



## **USA:** We're eating an entire food chain

Biologists have worried that as over-fishing takes its toll and top predators such as cod and tuna disappear, we will have to eat the more numerous beasts lower down the chain. Now Tim Essington and colleagues at the University of Washington, in Seattle, have found that this is already happening.

In 30 of 48 marine ecosystems they looked at around the world, fishing is already targeting species down the food chain and in only 9 was this because the top fish had disappeared. In most cases, people are catching lower-level species even while there are still top fish around. Yet all of more than 200 recent scientific publications surveyed assumed that moving down the food chain happens only after the top fishery collapses.

This is dangerous says Essington, because what is actually happening -- taking everything at once -- poses risks that aren't being recognised. "We are trying to extract conflicting ecosystem services from our oceans," he says.

(New Scientist, 18 Feb., 2006, p.21)

## New FAO Publications

*Model plan for a Pacific Island country : national plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing.* Rome, 2005. 54 pp. ISBN 92-5-105374-X. TC/M/A0126/E

Illegal, unreported and unregulated (IUU) fishing is increasing in world fisheries and is proving to be a major obstacle in the achievement of long term sustainability and enhanced responsibility in fisheries. The model national plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing outlined in this document seeks to facilitate the wider implementation of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) in the Pacific Islands region. Action towards this end is consistent with the large number of calls that have been made in international foray for states, industry and other stakeholders to take steps to implement the IPOA-IUU.

*International mechanisms for the control and responsible use of alien species in aquatic ecosystems : report of an Ad Hoc Expert Consultation 27-30 August 2003, Xishuangbanna, People's Republic of China.* Rome, 2005, 202 pp. ISBN 92-5-105368-5. TC/M/A0113/E

The use of alien species is a proven means to increase production and value from aquatic ecosystems. In the Mekong/Lanchang basin, alien species such as tilapia (*Oreochromis* spp.) play an important role in providing cheap and readily available protein to rural and poor sectors. However, alien species are now recognized as one of the most significant threats to aquatic biodiversity. Several steps are necessary for effective use and control of alien species, but one of the most important was identified to be following codes of practice similar to that developed by the International Council for the Exploration of the Sea.

*Introduction and movement of two penaeid shrimp species in Asia and the Pacific /* Matthew Briggs, Simon Funge-Smith, Rohana P. Subasinghe & Michael Phillips. (FAO Fisheries Technical Paper No. 476) Rome, 2005, 104 pp. ISBN 92-5-105326-6. ISSN 0429-9345. TC/M/A0086/E

This document provides advice on the impacts of the introduction of economically important alien penaeid shrimps to Asia. The review was conducted by FAO, the Network of Aquaculture Centres in Asia-Pacific (NACA), the World Wildlife Fund (WWF) and the World Bank (WB) Consortium Programme on Shrimp Farming and the Environment.

*Report of the FAO/WorldFish Center Workshop on Interdisciplinary Approaches to the Assessment of Small-Scale Fisheries. Rome, 20-22 September 2005* (FAO Fisheries Report No. 787) Rome, 2005, 50 pp. ISBN 92-5-105406-1. ISSN 0429-9337. TR/M/A0216/E

The Workshop was organized jointly by the WorldFish Center and FAO through its FishCode Programme, as a first step in developing a collaborative project towards capacity-building for small-scale fisheries assessment in developing countries. It addressed three main tasks through plenary and working group sessions: preliminary development of a framework for interdisciplinary assessment of small-scale fisheries; identification of appropriate approaches, methods and research needs to help fill small-scale fisheries information gaps; and review of an outline implementation strategy for a collaborative project on small-scale fisheries.

*Increasing the contribution of small-scale fisheries to poverty alleviation and food security* (FAO Technical Guidelines for Responsible Fisheries No. 10) Rome, 2005, 96 pp. ISBN 92-5-105418-5 ISSN 1020-5292. TC/M/A0237/E

Most small-scale fishers are in developing countries and many live in poor communities at risk of food shortages. These guidelines explore ways in which the contribution of small-scale fisheries to poverty alleviation and food security can be enhanced. A vision for the future is presented as a goal towards which the sub-sector can develop. Vital to the realization of this vision is ensuring greater participation by small-scale fishers and their communities in the formulation of policies, the development of related legislation and regulations, and in management decision-making and implementation processes. Discussed also in these guidelines are: the central role of effective fisheries management; the importance of considering cross-sectoral uses of fisheries and related resources; the special role of women in fish marketing, processing and value addition; significant scope for trade; the critical role that adequate financing can have in enabling transitions for effective fisheries management and the role of knowledge in making informed decisions.

## Conference & Workshop Notices

### 2006

- Apr 3-7 5th Heads of Fisheries Meeting, SPC, Noumea, New Caledonia  
[http://lists.spc.int/pipermail/meeting-announcements\\_lists.spc.int/2006-February/000001.html](http://lists.spc.int/pipermail/meeting-announcements_lists.spc.int/2006-February/000001.html)
- Apr 3-8 26th Sea Turtle Symposium, Crete, Greece  
<http://iconferences.seaturtle.org/>
- Apr 19-21 First International Symposium on Mangroves As Fish Habitat, Miami, Florida  
<http://www.rsmas.miami.edu/conference/mangrove-fish-habitat/>
- May 14-19 14th International Conference on Aquatic Invasive Species, Key Biscayne, Florida  
<http://www.icaais.org/>
- May 22-25 Coast to Coast 2006: Australia's biennial national coastal conference, Melbourne  
<http://www.iceaustralia.com/coasttocoast2006/index.html>
- May 25-27 9th World Tuna Trade Conference and Exhibition, Bangkok, Thailand.  
<http://www.infofish.org/tuna2006bangkok/index.html>
- Jun 18-24 1st Asia Pacific Coral Reef Symposium, Shatin, NT, Hong Kong  
<http://www.cuhk.edu.hk/bio/APCRS/index.htm>
- Jun 26-29 International Conference on Coastal Ecosystems: Towards an Integrated Knowledge for an Ecosystem Approach for Fisheries (ICCE 2006), Campeche, Mexico  
<http://etzna.uacam.mx/epomex/icce/icce.html>

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