



Shanghai, China. Photo. - W. Y. Chiau

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Dr. Kow-Lung Chang, Minister
Environmental Protection Administration
Chinese Taipei

Supervisor

Dr. Gwo-Dong Roam, Director General
Office of Science and Technology
Advisors
Environmental Protection Administration
Chinese Taipei

Editor-in-Chief

Dr. Wen-Yan Chiau
CEO, Foundation of Ocean Taiwan
Chinese Taipei

Assistants to the Editor

Shin-yuan Liu
An-Chih Hsiao
Research Assistant
Foundation of Ocean Taiwan
Chinese Taipei

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on the Web site,
For inquiries or subscriptions to the printed
or the CD Version,

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Environmental Protection Administration
Office of Science and Technology
Advisors
41, Sec.1, Chung-Hwa Road, Taipei,
Chinese Taipei
Tel: 886-2-2311-7722 ext. 2203
Fax: 886-2-2311-5486

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Foundation of Ocean Taiwan
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Chinese Taipei
Tel/Fax: +886-2-2469-4636

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Outlook & Expectation Lead Shepherd's Report at the 19th Meeting APEC MRC WG

**Dr. Indroyono Soesilo
Lead Shepherd, MRC WG**

*Honorable Director-General of State
Oceanic Administration (SOA), Mr. Li
Haiqing,
Distinguished delegates and participants
to the 19th Marine Resource
Conservation Working Group,
Ladies and gentlemen,*

Good morning...

Allow me to begin by saying that I
am greatly honored to be standing
before you today as the Lead Shepherd
of the APEC Marine Resource
Conservation Working Group. I still
remember vividly that it was not too long
ago I met some of you at the 2nd AOMM
in Bali. Frankly, it does help me a great
deal in providing the understanding
about our vast marine resources and the
initiatives put forward by APEC member
Economies to protect the resources
from degradation and in some cases,
destruction.

As a new Lead Shepherd of this
Working Group, I am relying very much
on your cooperation to significantly
progress in order to meet our objectives.
Furthermore, I have to mention here that
I am indebted to the previous Lead
Shepherd, Ms. Donna Petrachenko and
the support from her office in Canada in
helping me stepping up to meet this
challenge.

Ladies and Gentlemen,

The 19th Annual Meeting of MRC
Working Group is an important step
because now we are facing various
challenges that require collaborative
effort among nations to overcome,
which I'm convinced, is one of the
strength of this working group.

There are several objectives that I
strongly believe we could accomplish
together, as a group, in the next few
years.

Following the success of the 2nd APEC
Ocean-related Ministerial Meeting last
year, and the subsequent adoption of
the Bali Plan of Action, it is our mandate
to implement this action plan both
individually or collectively. Therefore, a
discussion on how to proceed with this
task is a crucial undertaking.

At this opportunity, I would also like
to give a special attention to improving
better working relation with the Fisheries
Working Group since we are closely
related in implementing the Bali Plan of
Action. Other working group such as
Transportation, Tourism, and Energy
are few example that we also could
expand our collaboration with.
Nevertheless, I also believe that other
institutions and organizations outside
APEC may also have the capacity and
resources to work with our working
group.

The Bali Plan of Action itself reflects
a broad spectrum of activities in Marine
and Fisheries sectors that according to
our ministers should become the guiding
light in achieving a healthy Oceans and
Coasts for the Sustainable Growth and
Prosperity of the Asia-Pacific
Community. I would therefore suggest
that in our discussion later today we
should formulate a strategy on how to
meet this mandate that should be
reflected in our activities within the set
time frame of the BPA.

Furthermore, I understand that
each member economy has different
capability and resources in
implementing the Bali Plan of Action
when combines with the domestic
interests. However, I am convinced that
we should be able to accommodate
these differences by sharing our
experience with other member
economies. This of course would give
an opportunity to include economies that
have not actively participated in our
working group.

At the last MRC Annual Meeting in
Phuket, we adopted the revised
Strategic Framework that shows the
strategic direction of this working group,
thus provides the outcomes which
reflect the priorities set by our leaders.
This framework is still relevant to be
discussed, in particular because there
has been strong movement now in
APEC to reform the way this
organization conducts the activities,
especially in relation to meeting the
objectives of ECOTECH Steering
Committee.

Honorable, distinguished participants, ladies and gentlemen, allow me now to say some words that should become, in my opinion, the outcome of this meeting.

As you may have seen, there are in general 5 parts of the agenda that we need to cover in this 2 and a-half days.

First of all, I hope that we will be able to allocate adequate time to discuss strategy on the implementation of the BPA, which will be implemented collectively as a working group and individually by each economy. Furthermore, I would like to ask delegates to discuss how we could evaluate the BPA implementation using acceptable and objective methods by all member economies. This perhaps could be materialized through a series of workshops every one or two years.

At the discussion on APEC priorities and reform, I want to emphasize that in conjunction of the APEC reform agenda, I would like to see MRC Working Group reflects that idea through a series of recommendations implemented in

project activities. There has been a new paradigm of ECOTECH Steering Committee that we should also take into account when submitting project proposals. This and other reform agenda in APEC will eventually affect our working group especially when dealing with funding allocated for us. I would therefore encourage member economies to have more domestic discussion with your SOM leaders in pursuing MRC agenda when discussed at other APEC meetings.

Another important agenda at this meeting is to discuss the project process agreed by this working group. I was extremely encouraged to see that there have been at least 7 new proposals submitted to my office for consideration by delegates for the 2007 funding cycle. On the other hand, I want to see procedure that is not only objective but must be easy to follow in selecting the proposals. I value the role of Project Team, which includes the Project Evaluation Team, which provides advice and suggestions to the Lead Shepherd in making the final recommendation to the Budget and

Management Committee or BMC for approval. However, we need to make sure that this process is in place to be implemented.

Finally, I would like to invite member delegates to consider the host for our next MRC meeting. Please also note that for next year meeting it is scheduled to be a joint meeting with the Fisheries Working Group.

After all discussions have been done and documents be approved, we must realize that this meeting could only be made possible with a commitment from the host economy, the People's Republic of China to provide us with superb hospitality.

I'm deeply honored to come hear as the new Lead Shepherd, and looking forward to working closely with you in the years to come. I wish we all have a successful and productive meeting.

Thank you



The 19th MRC Meeting in Shanghai. Photo. - W. Y. Chiau

Progress Report on Marine Resource Conservation

Australia

SUMMARY

Australia has made significant progress in a number of areas relevant to marine resource conservation over 2005/06. The most significant include: the release of the world's first integrated network of large scale, deep water marine protected areas off the South-east of the Australian continent; and strengthening of the regional marine planning process by bring the program under federal environmental protection and biodiversity conservation legislation. The remainder of 2006 will see the implementation of the National System for the Prevention and Management of Marine Pests, structural adjustment of fisheries operating in South-eastern Australia and the Great Barrier Reef and continued participation in relevant international and regional forums to pursue sustainable oceans management.

1. Key domestic efforts to advance the implementation of the Bali Plan of Action

The Australian Government is working on a range of initiatives to implement the Bali Plan of Action (BPA). This process involves the identification of short term priorities for immediate domestic action, as well as identifying where Australia's domestic arrangements could be strengthened by further regional action as outlined in the BPA. Australia is also identifying opportunities for reinforcing bilateral arrangements to progress priority issues.

Short Term Priorities

Australia' short term ocean-related priorities include; marine debris, marine invasive species, conservation of marine species, and economic evaluation of the marine sector. Australia will be undertaking the following initiatives in 2006 and 2007 to address short term priority issues.

- **Marine debris**
Australia has submitted a project proposal on "understanding of the economic benefits and costs of controlling marine debris in the APEC Region" to the APEC MRCWG 2007 project cycle. This project will investigate the direct and indirect costs of controlling land and marine sourced debris on



Photo - W.Y. Chiau

different marine sectors and develop an outreach program to encourage APEC economies to adopt incentives and other measures to limit the incidence of marine debris as well as effectively target resources to mitigate impacts.

- **Marine Invasive species (MIS)**
A grant to establish an "International Marine Biosecurity Education Consortium" has been awarded to the Australian Maritime College. This work program will identify marine biosecurity expertise and establish a network of experts. It will also use these experts to develop two education and training modules on standard marine biosecurity topics for delivery to APEC officials.
Australia's domestic arrangements for marine invasive species would also be strengthened by increased adoption of the Ballast Water Convention in other APEC economies.
- **Conservation of marine species**
Investigations into regional actions that could assist the conservation of marine species and migratory marine species, such as turtles, dolphins, beche de mer, dugongs and sharks, will be undertaken.

Strengthening Regional Action

As part of this strategic approach to implementing the BPA, we will be considering initiatives for other issues where regional action could advance our approach to marine conservation. These issues include: sustainable fisheries, IUU fishing, improving regional fisheries management and governance; marine turtle conservation and by catch

mitigation; addressing land-based marine pollution, and improving the earth observation systems and hazard early warning systems.

2. Domestic progress on marine resource conservation issues and contribution to domestic marine policy initiatives

During the past year Australia has undertaken a range of domestic activities aimed at improving marine resource conservation and marine policy initiatives.

National Representative System of Marine Protected Areas

On 14 December 2005, the Australian Government released for public consultation a proposal for a major expansion of the national representative system of Marine Protected Areas (MPAs) in the South-east marine planning region. A network of 14 separate MPAs covering more than 170,000 square kilometres was proposed. The final shape and zoning of the network will be decided in April 2006 before commencement of the formal declaration process.

The South-east MPA network will contain several of the largest deep temperate water MPAs in the world as well as examples of the complex formations of Australia's continental shelf, slope and deep oceans. Seamounts, ancient cinder cones, drowned river valleys and enormous canyons will be key features of the network.

The South-east marine region is one of the most intensively developed marine regions of Australia, containing extensive trawl and other fishing grounds as well as major oil and gas fields. The new MPAs will be a mix of strict (no-take) nature reserves and multiple use areas. Commercial fishers displaced by the MPAs will have the opportunity to participate in a structural adjustment scheme being delivered as part of the Government's overall reform of off-shore fisheries.

Marine Bioregional Planning

Australia's approach to developing and delivering the regional marine planning programme was brought under federal environment legislation in October 2005. Under this new approach, marine bioregional plans will guide relevant decision making by the Minister for the Environment and Heritage and inform sectoral managers and industry about the key conservation issues and priorities in each marine bioregion. Marine bioregional plans will also provide a strategic framework for the Australian Government to inform, coordinate and prioritise its marine programmes.

Sustainable Fisheries

Since the introduction of the *Environment Protection and Biodiversity Conservation Act 1999*, all Commonwealth managed fisheries and State managed fisheries with an export component have been assessed to determine whether their management arrangements are able to ensure ecological sustainability of the fishery. This has involved assessment of approximately 130 fisheries against the *Guidelines for the Ecologically Sustainable Management of Fisheries*.

In 2005/06 the first round of these assessments was completed. This is a significant accomplishment and has resulted in management of Australia's fisheries moving towards more sustainable, ecosystem based practices through a process of continuous improvement. Specifically, the first round of assessments focussed on establishing: a robust management framework including fishery specific objectives; performance measures and performance indicators; regular reporting on the status of fisheries; better consultation with stakeholders; and robust, risk-based compliance and enforcement mechanisms. In addition, in recognition of the lack of basic knowledge of the biology and status of target, byproduct and bycatch species in most fisheries, the first round of assessments concentrated heavily on developing recommendations and conditions to address the need for data collection and validation to better inform management decisions. These included: establishing bycatch monitoring programs and protected species interactions reporting

mechanisms; improving the scale of catch data for target species; implementing catch recording for permitted byproduct species; requiring some form of stock assessment for some fisheries; and gathering information on the impact of fishing operations on the wider ecosystem in which they operate.

With the completion of the first round of fishery assessments, Australia is working to develop a process for reassessment of fisheries that will ensure the move towards ecosystem based management of Australia's fisheries continues.

Marine Species Conservation

Recovery Plans are a legislative requirement for species listed as threatened under federal environment legislation, providing guidance on priority actions necessary to help improve the conservation status of these species. As such, Recovery Plans are in place for a range of listed threatened marine species, such as: the grey nurse shark, great white shark, whale shark, southern elephant seal and sub-antarctic fur seal, 10 species of seabirds, marine turtles, and handfish.

In October 2005 A National Partnership Approach to sustainable harvest of marine turtles and dugongs was endorsed by the Natural Resource Management Ministerial Committee. The National Partnership Approach provides a policy framework for the many activities already underway, or planned to engage indigenous communities in the management of



*A marina in Kaohsiung, Chinese Taipei.
Photo - W. Y. Chiau*

dugong and turtle.

Integrated Coastal Management

All Australian jurisdictions have agreed to the Implementation Plan for a National Cooperative Approach to Integrated Coastal Zone Management, and it has been put to the Natural Resource Management Ministerial Council for endorsement. Jurisdictions are working cooperatively to deliver actions under the Implementation Plan.

Marine Debris

A number of domestic actions are under way to reduce the impacts of marine debris in Australia. Australia is developing a threat abatement plan for the impacts of marine debris on endangered and vulnerable vertebrate marine life. A three year *Ghost Nets Programme*, that is removing marine debris from shorelines in the Gulf of Carpentaria through community clean up activities and generating information on the sources and impacts of foreign ghost nets, is also underway.

Marine Invasive Species

The Australian Government, and the governments of five of Australia's states and the Northern Territory, are scheduled to implement a National System for the Prevention and Management of Marine Pest Incursions late in 2006. Interim arrangements for the National System have been in place since 2001.

The National System will advance Australia's efforts to prevent, manage and control marine pest incursions in a consistent manner. It will include integrated regulation of ships' ballast water from both international and domestic sources, and national protocols for reducing translocation of biofouling pests, as well as emergency responses to incursions and national control plans for the most threatening marine pests. Supporting elements will provide for national monitoring for pest incursions, research and development, and ongoing evaluation and review.

3. International progress on marine resource conservation issues and contribution to international marine-related policy initiatives

During the past year Australia has moved forward on a range of regional and international marine related policy initiatives.

Biodiversity Conservation beyond National Jurisdiction

Australia was an active participant in the United Nations Ad Hoc Open-ended Informal Working Group meeting to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. We strongly encourage APEC economies to contribute to the UN, and other relevant processes that will be working towards addressing these issues, particularly as the Asia-Pacific region has a large component of waters beyond national jurisdiction.

IUU Fishing

The Australian patrol vessel *Oceanic Viking* apprehended the Cambodian flagged fishing vessel the *Taruman* in September 2005 for alleged illegal fishing in Australian waters surrounding Macquarie Island. Charges have been laid against the Master and Fishing Master but are still to be heard by the courts. The 24th annual meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR XXIV) continued to have a strong focus on IUU fishing and a number of Australian proposals were



Swimming in Saba.
Photo - W.Y. Chiau

adopted. The Ministerially-led task force on IUU fishing on the high seas (the High Seas Task Force) held its final meeting on 2-3 March 2006, where all nine practical proposals to combat IUU fishing were agreed. Australia will continue to work in cooperation with other nations to implement these proposals.

In 2005, the Australian Government committed significant additional funding to improving the capacity of those agencies responsible for the surveillance, interception, detention and prosecution of illegal foreign fishers apprehended in Australia's northern waters.

Marine Species Conservation

Some migratory marine species require coordinated international action to ensure their conservation and management. To this end, Australia works through the framework of the United Nations Environment Programme Convention on Migratory Species (CMS) to develop regional and international conservation instruments for species such as marine turtles, dugong, cetaceans and sharks. The Indian Ocean – South East Asian Marine Turtle Memorandum of Understanding (IOSEA MOU) is an example of a successful existing conservation instrument in the region. The development of a similar instrument for dugong throughout its range, as well as one for marine turtles in the Pacific, are important priorities for the Australian Government.

Australia, along with Japan and Wetlands International is leading development of a WSSD Type II Partnership for the conservation and sustainable use of migratory water birds and their habitats in the East Asian-Australasian Flyway. The Partnership, which is due to be launched this year, will provide international leadership and collaboration on conservation activities for migratory water birds, including some species of seabirds, across the flyway.

Marine Invasive Species

Australia welcomed the "Workshop to develop an APEC Wide Strategy on Alien Invasive Species" co hosted by the Peoples Republic of China and the USA held September, 2005, Beijing P.R.

China. This workshop was an opportunity to integrate the extensive work undertaken by the MRCWG on marine invasive species into a broader strategy. Australia encourages APEC economies to take further action to implement the regional management framework for APEC economies for use in the control and prevention of introduced marine pests.

Australia is also actively involved in finalisation of guidelines for the implementation of the International Convention for the Control and Management of Ships' Ballast Water and Sediments.

Marine Debris

Australia participated in the June 2005 meeting of UNICPOLOS in New York where discussions focused on fisheries and their contribution to sustainable development and marine debris. Negotiations at the meeting indicated a strong level of support for work on addressing marine debris concerns as well as broad agreement on measures necessary to tackle derelict fishing gear and related marine debris. Several international arrangements (notably, FAO, IMO and the GPA) also stated that marine debris should be given more prominence within their relevant areas of responsibility.

Marine Data Collection

Australia was an active participant in the Census of Marine Life (COML), an international initiative seeking to assess and explain the diversity, distribution and abundance of marine organisms throughout the world's oceans and to explain how they change over time. COML has a strong role in promoting biodiversity research through engaging in appropriate outreach activities.

The Ocean Biogeographic Information System (OBIS) is the key data delivery mechanism for COML projects. Australia is an active participant in OBIS and launched an Australian OBIS web site in 2005. The Australian Government is encouraging data holders to share their marine species data for the Australian region with the OBIS international data network and to enable users to search for marine data from the international OBIS network users.

Progress Report on Marine Resource Conservation

People's Republic of China

Owing to rapid economic development, China attaches great importance to the rational utilization of ocean resource. For the first time, the ocean has been treated as an independent chapter entitled the rational utilization of ocean resource incorporated into the Outline of China National 11th Five-year Plan for Development. The chapter has outlined the major activities to be planned and implemented during the next 5-year plan. The reinforcement of ocean awareness, safeguarding of marine rights and interests, protection of marine ecosystem, development of marine resource, and the conduct of marine integrated management are the main content. Apart from the above, targeted exploration and exploitation of the resource of EEZ, continental shelf and international deep sea area have also been emphasized.

In addition to the above, the Chinese government has also formulated the Framework of China Marine Economic Development Plan. The framework aims to balance the marine economic development and the protection of marine environment. It has set out not only the marine economic development goal but also the requirement for marine environmental protection. This is in well consistency with the goal of Bali Plan of Action, which seeks to balance conservation and management of marine resource with economic growth. The following is what we have done or what to do in relation with Bali Plan of Action.

I. Encouraging Progress in Ocean Governance.

It has been 15 years since the State Oceanic Administration (SOA) commenced its work in strengthening the sea use management. Due to the hard work and consistent development of new initiatives in field of sea use management, SOA so far has made great progress and accumulated some experience in this regard, especially since the adoption of Law of the People's Republic of China on the Management of Sea Area Use in 2002. Its work in formulation of the corresponding institutional build up, and

the establishment of demonstration site of sea use management, the advancement of development of the regime of sea area use management, as well as the capacity building for local governmental officials and managers is eminent. Three changes have been achieved. The sea area use management has changed from without law back-up to with law support. The 2nd change is from payless for sea use to you have to pay fees for sea use. The 3rd change is from no-order to order in sea use.

According to the Law, people who is going to use the sea shall submit an application to the competent ocean management agency and the approval of the application will be based on the consistency of the proposed sea use with the national and provincial zoning plan. The Law also provides that people who use sea shall pay a certain fee. For the past several years, the Law has been well implemented and the provincial and local governments that carry out the implementation have also reinforced the institutions and their managerial capability has also improved.

II. Implementation of Interim Measures for the Management of Special Marine Reserve

To protect the marine ecosystem, ensuring the sustainable utilization of the marine resources, promoting rapid, healthy and well-coordinated development of marine economy, the State Oceanic Administration promulgated on November 16, 2005 the Interim Measures for the Management of Special Marine Reserve. Its implementation will and has contributed to the adoption of effective protective measures and science-based development mode for those ecosystems with special geographical condition and areas with special needs for development and utilization of marine living and non-living resource. The policy for special marine reserve is that the development and protection are well-balanced and the protection is the priority. Up to now, China has set up 7 special marine reserves.

III. Formulation of National Marine Policy

The marine activities of various sectors in China have developed rapidly for the past two decades and the awareness of integrated ocean and coastal management is rising. Due to the implementation of sea area use management work, the concept of ICM has been accepted by the public.



The Great Wall of China. Photo - W.Y. Chiau

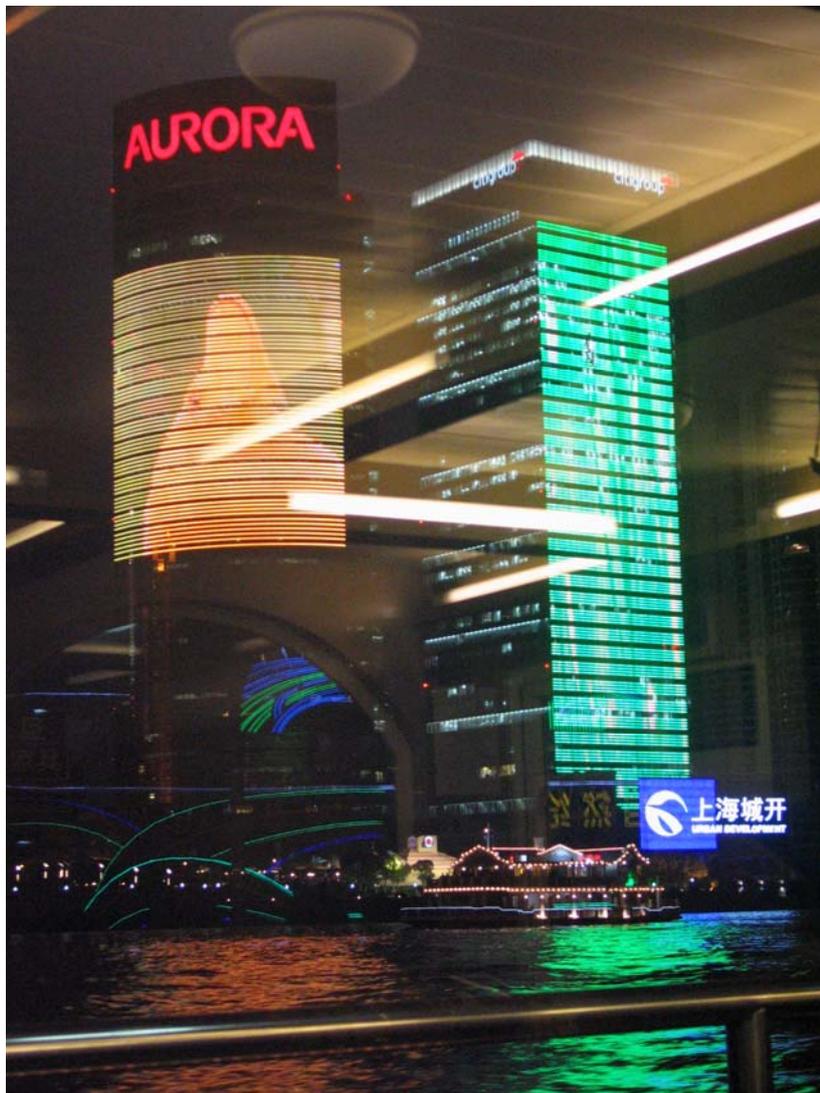
Therefore, based on the past work, the marine competent department is now considering the possibility of drafting a national marine policy. So far, there has not been any one in such name. The formulation of such a policy will greatly enhance the integrated planning process, inter and intra agencies coordination in field of marine management.

IV. Active Participation in the Implementation of GEF-Funded Projects

As stated in our last year statement, China has been involved in implementing two GEF-funded projects, "Reducing Environmental Stress in the Yellow Sea", and "Marine Biodiversity Management in the Coastal Area of China South Sea".

The two projects have their focus on the application and implementation of some widely accepted concepts in real situation, such as the ecosystem-based management approach, sustainable development and etc. Both projects aim

at promoting balanced development of marine resources and protection and reservation of the environment. We really hope that we can share with you the experience and lessons learned after the completion of the projects.



Shanghai at night. Photo - W.Y. Chiau

Progress Report on Marine Resource Conservation

Indonesia

Indonesia views every meeting of the Marine Resource Conservation Working Group (MRCWG) as an opportunity for all participating economies to share experiences and ideas on how marine resource conservation is carried out in order that both ecological and human well beings in every single economy are better off consistently. Advancement of Bali Plan of Action and MRCWG Strategic Framework should, therefore, be understood as fulfilling APEC priorities in this context.

General Policy and Framework

At this level, Indonesia has taken care of conservation, sustainable use, and all related issues as mentioned in both BPA and MRCWG Strategic Framework, through various significant actions. These include formulation and establishment of legislation, institutional framework, programs.

Legislation:

Several legislations have been made available in Indonesia to ensure the sustainability (and optimal use) of marine resources in Indonesia. Among others are:

- Fisheries Management Law No 31/2004
- Conservation of Living Natural Resources and Their Ecosystem Act No 22/1997
- Water Act No. 6/1986

Institution:

To make the above legislation effective, the Indonesian Government has assigned the following national mandates to the Department of Marine Affairs and Fisheries:

- To manage both resource exploitation and conservation in a decentralized manner
- To balance and integrate the objectives of sustainable development

In line with the above ministerial I-level mandate, the government also established more operational institutions which are designed to assume its responsibility on management and conservation programs. These include policy making institutions and research institutions.

- Policy Making Institution:

The most notable policy making institutions are Directorate General of

Marine Coasts and Small Islands and Directorate of Conservation and Marine National Parks, whose tasks include the following:

- Integrated Coastal Management
- Land Based and Marine Pollution Control
- Mitigation of Coastal Hazard
- Spatial Planning for Marine and Coasts
- Conservation of Coastal & Marine Resources and Marine Parks
- Rehabilitation of Coastal Resource Degradation

- Research Institution

Policy making institutions are supported by scientific analyses and data produced by research institutions.

Among notable research institutes are:

- 1) Research Center for Marine Space and Non-Living Resources, whose mandate include studies on marine potentials and spatial zoning.
- 2) Research Center for Marine and Fisheries Socio-Economics, whose mandate include studies on economic valuation and other socio-economic aspects of marine resource use and conservation
- 3) Research Center Marine and Fisheries Products and Biotechnology, whose mandate include the development on the creative and efficient use of marine resources
- 4) State universities, whose mandates
- 5) include the development of basic science on marine use and conservation

Programs:

To accomplish all objectives, the Indonesian government has set up several programs to be sustained by all relevant components, both policy making and research institutions. These programs are set up for both ministry level and lower levels.

- Programs at national (ministry) level:

- Coastal-Marine and fisheries resource development program
- Coastal-marine and fisheries resource conservation program
- Coastal community empowerment and environment management program
- Coastal spatial use program
- Resource management program
- Coastal-marine and fisheries resource information system program

- Lower levels (more operational) programs:

- The determination and establishment of Marine Protected Areas
- Development of ecosystem rehabilitation monitoring system
- Development of mangrove/habitat sites rehabilitation projects
- Rare marine species population enhancement program
- Promotion of marine biota conservation
- Civil awareness program at MPA sites



A sandy beach in Matsu, Chinese Taipei.
Photo - W. Y. Chiau

- Other programs designed to operationalize the ministry level programs

Specific Programs and Achievement

Based on the national framework as mentioned above, achievement have been made. The following are several program and their status of achievement.

Initiatives for Conservation Partnerships

- Multilateral Marine & Coastal Resources Management Program (MCRMP) in 15 provinces and 43 districts/cities (ICM, legal & CB-MPAs)
- Multilateral Coral Reef Rehabilitation and Management Program (COREMAP) Phase II
- Bilateral Aid programs such as CRMP /USAID, INTECOREEF/JICA, CEPI and EMDI/CIDA
- Marine conservation programs carried out by local & international NGOs
- Comprehensive Marine Conservation Strategy for Indonesia
- Initiation of National Committee for Marine Conservation: MPA, Fisheries and Species/Genetic Working Groups
- Nomination for Indonesia's first Marine World Heritage Site
- Participation in International MPA Programs (SSME, ASEAN Heritage, WCPA)

Promotion of decentralized-initiatives for conservation partnerships

- Concept for MPA Network based on



Flowers on the beach. Photo - W. Y. Chiau

integrating conservation functions of World Heritage Sites, Sulu-Sulawesi Marine Ecoregion and 6 National Marine Parks

- First District and City-Level MPAs in Indonesia (creating sub-national MPAs)
- Assessing priority sites for new National or sub-national MPAs (approx 15 identified)
- Revitalized Makassar Coastal Area
- Co-funding of Sea Partnership Program, in which local government institutions, universities & private enterprises form consortiums, share the resources and work among themselves to address local coastal issues, including conservation

Marine Conservation Area Management

The paradigm has shifted from viewing conservation areas as a way to protect biodiversity to treating them as multi purpose areas serving ecological, economic, and socio-cultural functions.

Species Conservation

- Dugong conservation: in cooperation with Indian Ocean and SE Asian Ocean regional forum (Indonesia, Australia, Philippines, Malaysia, Canada, USA)
- Green turtle conservation: carried out through Sulu Sulawesi Marine
- Ecoregion (SSME) cooperation involving Indonesia, Malaysia, Philippines.
- Leatherback turtle conservation: carried out through Bismarck Solomon Marine Ecoregion (BSME) cooperation, involving Indonesia,

Solomon, PNG

- A draft of ministerial decree on Napoleon Protection: Carried out in Sawu Sea, East Nusatenggara

Conservation networking

- Sulu Sulawesi Marine Ecoregion (SSME):
 - Consisting of Indonesia, Malaysia, The Philippines
 - Indonesia is the secretariat for 2006-2007
 - A workshop was held in Balikpapan on 27Feb-1 Mar 2006
- National Committee on Marine Conservation Komnaskolaut)
 - The committee consists of 3 working groups Marine Conservation Zone, Sustainable Fisheries, and Species and Genetics Conservation WGs)

Research activities

- Various research activities have been either planned or completed to support conservation program; among others are research on the 'development of biopharmaceutical products of sponge and soft corals' and 'economic valuation of marine resources'. Such research activities are directed toward the availability of scientific information necessary for advancement of marine resource sustainability, both in the physical and social senses.

Concluding Note:

While reviewing the National Marine Resource Conservation Progress, the Indonesian delegation coincidentally sees the tight relationship between this working group with Fisheries Working Group. Every single development occurring in either side will impact significantly on the other one. Therefore, Indonesia, hereby, would like to take this opportunity to propose that joint annual meetings between Marine Resource Conservation and Fisheries Working Group be considered by APEC economies.

Indonesia looks forward to a productive cooperation with APEC member economies.

Progress Report on Marine Resource Conservation

Japan

In recent years, environmental problems in Japan have shifted, from issues such as industrial pollution during the rapid economic growth era until 1970s, to broader and complicated issues including global-level problems such as loss of biodiversity, global warming and problems closely related to people's daily lives such as waste problems.

Under these circumstances, the Basic Environment Law was enacted in 1993 and various measures have been taken on the basis of the Basic Environment Plan with the aim of building a sustainable society that will reduce its burden to the environment. Furthermore, specific regulations have been enforced to conserve the ocean environment by enacting the Law Relating to the Prevention of Maritime Pollution and the Maritime Disaster and Water Pollution Control Law. Japan also has been actively involved in the discussions at the IMO for developing the guidelines of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004.

Fisheries are the industry using living resources which constitute the ecosystems of the ocean and the inland water. In order to develop fisheries soundly and sustainably and to produce and supply safe marine products, it is very important to maintain the environment and ecosystems under good conditions. The Basic Fishery Law enacted in 2001 prescribes that central government shall take necessary measures such as controlling the water quality, protecting and providing nursery grounds of aquatic animals and plants, and preserving forests, in order to conserve and improve the environment for aquatic animals and plants.

According to such laws and acts, Japan has been taking measures as follows:

1. In order to preserve water quality in public waters, considering the environmental quality standards for the protection of the human health, promoting various measures against water pollution including control of industrial and public effluent and considering environmental management measures so as to meet the

environmental standards for the conservation of aquatic habitats,

2. Conducting investigations into oil, heavy metal, PCB and organic tin compounds in seawater and seabed sediment and into oil ball and marine debris washed ashore,

3. In order to conserve the ocean environment including ecosystems, monitoring the marine environment in our EEZ and other areas for the comprehensive and systematic understanding of water quality, sediment quality and aquatic lives,

4. Conducting nation-wide surveys on the accumulation of dioxin in fish and shellfish, considering measures to reduce dioxin in them; Investigating the conditions of adverse effects caused by exogenous endocrine disrupting chemicals on fish and shellfish,

5. In order to conserve the marine environment, operating close monitoring and strict regulations on the offences related to marine environment by the patrol vessels and airplanes at the sea and coastal areas ; Spreading the idea on the necessity of marine conservation to the public as well as the people engaged in maritime affairs and fisheries,

6. In order to improve water quality and sediment quality at the port area and to create the living areas of many types of creatures, conserving, restoring and creating coastal areas and tidelands,

7. Conducting investigations and developing technology for establishing countermeasures against red tides and inventing methods for forecasting and preventing red tides; In order to cope with poisoning of clams, conducting investigations on its mechanism and developing technologies for effective monitoring,

8. In order to conserve important areas such as seaweed bed and tideland which are suitable for breeding and growing of aquatic animals and plants, designating such areas to be "protected areas" according to the Aquatic Resources Protection Law,

9. In order to maintain and conserve good surroundings of fishery grounds, encouraging the activities for citizens and fishermen to clean up the river, and



Hokkaido, Kushiro Wetland, Japan.
Photo - W.Y. Chiau

supporting the activity for volunteer to research of aquatic lives,

10. In order to promote tree-planting activities by fishermen, promoting and supporting the tree-planting to local communities,

11. Based on the Forest Law, designating the forests which contribute to breeding and growing fish for "forest reserves", and promoting management and conservation and taking relevant measures for them,

12. In order to conserve biological diversity of wild aquatic life, conducting investigations into conservation techniques,

13. Playing a major role in promoting conservation of the world's coral reefs by co-hosting the International Coral Reef Initiative (ICRI) Secretariat with the Republic of Palau since July 2005,

14. Preserving coral reef ecosystem with rich biodiversity in the national parks, promoting restoration of coral reef ecosystem through recovering damaged reefs and implementing outreach and education programs on the importance of conserving coral reefs.

Progress Report on Marine Resource Conservation

Korea

Preservation of Marine environment

Building Management System for Efficient Preservation of Marine Environment.

The Korean government to shift from the traditional passive and post-accident-oriented system to a proactive and preventive marine environment management policy, is implementing the Comprehensive Plan for Preservation of the Marine Environment from 2006 to 2010.

The Plan's stated purpose is "Creating a marine environment that is safe and full of life." Some US\$3.7 billion will be spent on the plan over the five years, on five policy tasks and 83 detailed action plans. The basic implementation strategies to efficiently achieve the goals are as follows:

First, strengthening the management and utilization basis of the scientific information by building and operating a comprehensive system to monitor the marine environment, creating a database for research data of the environment and ecosystem.

Second, securing measures to preserve and improve the marine environment and its ecosystem that fit the characteristics of the individual water zones by designating environment management areas, marine ecosystem preservation areas, and wetland

protection areas.

Third, pursuing the sustainable use and preservation of coastlines through integrated coastal management.

Fourth, implementing across-the-board marine environment management policy to prevent marine pollution by land-based sources and thus improve seawater quality and preserve the ecosystem. The system will strengthen the institutional basis by enacting the Act of Controlling Pollutant Discharges to the Coast from Land-based Sources and operating the marine environment improvement charges.

Fifth, expansion and strengthening of regional and international cooperation with China, Russia, Japan and other regional countries through activities of related organizations including NOWPAP (Northwest Pacific Action Plan) and PEMSEA (Partnerships in Environmental Management for the Seas of East Asia).

In addition, the Ministry provides internet service for the Coastline Management Information System by data basing information on the natural environment, pollution, disaster-status of the coastline, coastline utilization, fishery resources, tourism resources, and high-resolution satellite image data.

Based on the satellite video and the coastal information map, the Ministry will provide web service for the spatial/temporal distribution of coastline disasters and other statistical analysis data. The observation will include changes in the marine environment in time and space for such things as tides, ocean and tidal currents, water temperatures, and waves on a long-term and constant basis so that stakeholders can receive real-time information.

Korea has 5 action agendas for wetlands preservation that involve: building a foundation for coastal wetlands management; enhancing coastal wetlands applicability for sustainable utilization; establishing a basis for conservation of resource diversity in coastal wetlands; strengthening education and public relations on coastal wetlands conservation; and reinforcing inter-Korean and international cooperation concerning this issue.

The Ministry will restructure related laws and institutions such as the Wetlands Conservation Act, which require the creation of substitute wetlands when a business development involves the loss of mudflats, by 2010.



Cheonggyecheon, Seoul, Korea.
Photo - W.Y. Chiau

Progress Report on Marine Resource Conservation

Chinese Taipei

Marine Pollution Control and Prevention

Voluntary Beach Cleanup

In 2005, Chinese Taipei carried out 18 clean-up work projects, covering over 1000 km of coastline. In spring and autumn, two other large-scale cleanups were conducted. A total of 19,000 tons of garbage were removed from beaches. More than 210,000 volunteers and cleanup crewmembers took part in the efforts. At the crowded areas, signs and garbage bins were set up to prevent littering. Volunteer groups were recruited to adopt sections of beaches to maintain cleanliness. Currently, 261 groups with over 92,000 people have adopted sections of beaches.

Emergency Response Training

To strengthen marine oil spill emergency response, reporting, and coordination capabilities, "2005 Nationwide Marine Oil Spill Emergency Response Exercise" was held on 25 August 2005. Sixteen organizations displayed exhibits on marine ecological conservation, marine environmental protection and marine pollution emergency response equipment. Around 150 people were mobilized for the exercise, including personnel from the Coast Guard Administration, China

Petroleum Corp., National Airborne Service.

Corps (NASC) and the county government. During the exercise, NASC directed helicopter operations and other agencies commanded a total of ten ships of various types. The drill presented a real-life scenario on the ocean to hone skills in investigating, skimming and recovering oil pollution.

The Environmental Protection Administration held the "Forum on Risk Management of Maritime Oil Pollution" in May, 2006, inviting Mr. Nishigaki Kenji, the director of the oil pollution emergency response department of the Petroleum Association of Japan (PAJ) to share Japan's experience and help enhance domestic industry's emergency response to maritime oil pollution incidents. Over 80 people from the public and private sectors attended, representing a wide variety of fields including environmental protection, coast guard, ports and harbors, petroleum, power generation, and maritime affairs consultants. It is hoped that by drawing on the Japanese government and industry's experience in establishing a large-scale oil spill response system, Chinese Taipei can review its own response system and establish cooperation between industry and government to further enhance its

emergency response capability and integrate and enhance response resources and efficiency.

Liability Coverage

As of July 1, 2005, owners of vessels over 400 tons or chemical/oil tankers over 150 tons are required to purchase pollution insurance for their vessels. The owners cannot arbitrarily terminate the insurance. With this requirement damage may be compensated should pollution occur.

Marine Conservation

In 2005, Chinese Taipei conducted a survey on fishery resource protection areas. Fourteen areas in Hualian, Taitung, Yilan and Penghu were covered, with a focus on the biological resources. After consultation with local authorities, it was determined that the protection areas would be enlarged. Local capacities to protect biological resources would also be built up.



*Kaohsiung city, the maritime capital of Chinese Taipei.
Photo - W.Y. Chiau*

Land-based Pollution Control

Eco-engineering

The Wuluo River in the south had seriously deteriorated due to the effects of household wastewater and livestock effluent upstream. Over the long term, the water had turned anaerobic and river pollution indicators (RPI) showed serious pollution along the entire river, greatly affecting water quality downstream in the Gaoping River. The Wuluo River Effluent Water Quality Improvement Engineering Plan was carried out on a total of 20 hectares along the Wuluo, with a maximum treatment capacity of 50,000 tons of river water per day. Dual stage ecological engineering methods including natural pile banks, gravel beds, and three free water system (FWS) wetlands were adopted to support a diverse environment and attract various bird species. This project has received the Chinese Institute for Environmental Engineering's 2005 Outstanding Environmental Engineering Award, which was handed over on 18 November 2005.

River Patrol Volunteer

One of the largest river patrol volunteer pledge activities to take place in the north was held on Environment Day, 5 June 2005, in Bali, Taipei County.

The "Local Love for Rivers and Oceans Volunteer Patrol Pledge" activity was participated by 1,300 representatives of river patrols in Chinese Taipei's 25 counties and cities to challenge polluters. It is expected that more citizens would be involved in activities to protect river.

A group of community college students concerned about the water quality of the Tanshui River, the largest river in the north, has teamed up with other nature lovers to hold a series of "Tanshui River Watch" events for four consecutive weekends in April 2005. The event was first held at Banchiao Community College, followed by Sanchong Community College, Wenshan Community College and Nangang Community College. The first event included an introduction on the history and traditions along the Tanshui River, a reading on the history of Dahan River wharfs, and a map of river monitoring stations. The event also showed ways people can protect rivers, the current status and vision of sewer systems, and the sources of pollution along the Dahan River. People were invited to walk along the river access corridor on the bank of the Dahan River to better understand river culture and pollution sources. Group discussions and forums were held concerning the river, and river patrol teams shared their

experiences and their devotion to protecting the Tanshui River.

Eco-tourism Whale Watching

Whale watching has become one of the fastest growing industries in Chinese Taipei. Since the first whale-watching cruise started in Hualien county in 1997, whale-watching activities have spreaded to many port towns along the coast of Ilan to Taitung counties.

The numbers of whale watching boats and tourists continued to increase rapidly until the trend slowed down after 2001. About some 30 whale-watching boats are in operation, serving more than 20,000 tourists per year. Whale watching has important economic and ecological implications for the development of the east coast of Chinese Taipei. With the effort of scholars, regulatory and nongovernmental organizations, an alliance of whale watching was initiated in 2002, and whale-watching award was created based on the spirit of ecotourism. To evaluate and highlight the quality of operators, the whale-watching award was created in 2003 and four awards were issued in the following years.



Yeliu, Taiwan.
Photo - W. Y. Chiau



The National Museum of Marine Biology and
Aquarium in Chinese Taipei.
Photo - W. Y. Chiau



Cobia cultured in Penghu, Chinese Taipei.
Photo - W. Y. Chiau

Progress Report on Marine Resource Conservation

United States of America

The U.S. Indian Ocean Tsunami Warning System (IOTWS) Program developed during 2005 (<http://www.iotws.org/>) contains three themes as part of its strategic approach, one being local preparedness to act on warnings and coastal mitigation measures to reduce potential impacts. The Program will provide technical assistance in coastal zone disaster mitigation, covering a range of topics designed to restore and maintain the environmental and socioeconomic services provided by healthy coastal ecosystems such as coastal forests, mangroves, and coral reefs. The Program will play a leading role in assisting national and local government agencies and non-governmental organizations in planning and implementing coastal zone management measures along vulnerable coastlines in participating countries. Building on guidelines developed by a number of groups for green reconstruction, regional workshops will be conducted with key participants from coastal areas of five Indian Ocean countries. The purpose will be to develop action plans or review implementation status of coastal zone disaster mitigation measures to achieve the program target of 200 km of coastline under improved management.

The U.S. IOTWS Program supported several related workshops and efforts on coastal ecosystems in February 2006. The first was an international workshop organized by UNESCO's Intergovernmental Oceanographic Commission Sub Commission for the Western Pacific (IOC-WESTPAC) in Phuket, Thailand, to discuss lessons from the impacts on and recovery efforts for coastal and marine ecosystems and coastal communities following the 2004 tsunami. Another was the Asian Institute of Technology-hosted "Post-Tsunami Lessons Learned Workshop for Sustainable Coastal Management." The USAID-funded Post-Tsunami Sustainable Coastal Livelihoods Project, in conjunction with the US IOTWS Program, jointly sponsored the workshop to share lessons from the affected post-tsunami countries on how to support sustainable coastal management in the wake of the tsunami disaster. Lastly, disaster management experts from NOAA and the Asian Disaster Preparedness Center, visited several fishing villages in Ranong

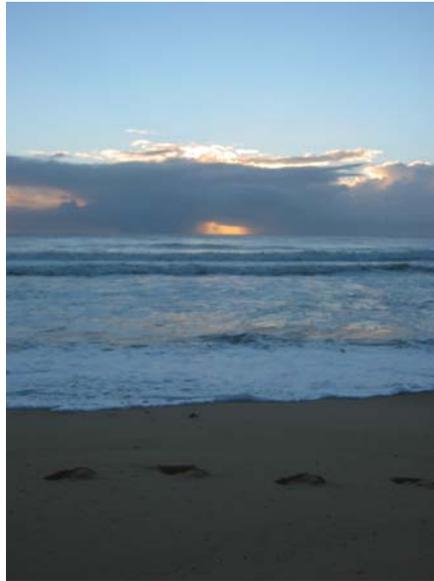


Photo - W.Y. Chiou

Province in Southern Thailand as part of the initial phase of a regional Tsunami Resilient Communities Program.

Hurricane Katrina Monitoring and the Ecosystem Approach

Among the storms that formed in the Atlantic Ocean during the 2005 season, Hurricane Katrina will stand out as the one storm to have had the greatest impact on millions of lives along the U.S. Gulf Coast. Aside from being the major U.S. shipping port vital to transporting the nation's crops and products from the interior, New Orleans and the Gulf Coast are also known for valuable seafood production and the coastal way of life. After the hurricane, the U.S. National Oceanic and Atmospheric Administration (NOAA) conducted environmental impact research as part of a government-wide effort to keep the American people safe and to help stabilize the region's economy in the aftermath of the Gulf hurricanes. NOAA monitored the effects of the event on seafood and coastal water safety. Oceanographers, toxicologists and microbiologists collected water, fish and sediment samples to determine whether Hurricane Katrina resulted in elevated levels of contaminants in the ocean. In the first surveys two weeks after the event, it was

found that there was no elevated exposure to contaminants related to oil.

In March 2006, 13 U.S. federal agencies and five Gulf Coast states unveiled a plan to strengthen environmental protection for the Gulf of Mexico and further the ongoing recovery and rebuilding effort after the devastating effects of the 2005 hurricane season. The state-federal alliance outlined 11 actions to improve and protect water quality, restore coastal wetlands and estuarine ecosystems, reduce pollution and nutrient loading, identify Gulf Coast habitats to support coastal management and expand environmental education. This Gulf of Mexico Alliance is part of a coordinated response to the U.S. Ocean Action Plan that called for the development of regional goals and priorities for safeguarding the nation's oceans through better coordination of federal, state and local management, planning and scientific resources. The NOAA Administrator stated that this partnership allows us to explore better mechanisms for applying a regional ecosystem approach to management and for using integrated coastal and ocean observations for management purposes. (For the Gulf of Mexico Alliance plan and further information, see <http://www.noaanews.noaa.gov/stories2006/s2600.htm>.)

Progress toward a Global Earth Observation System of Systems (GEOSS)

The United States is pleased to be one of the four co-chairs of the Group on Earth Observations (GEO) that is coordinating the development of a Global Earth Observation System of Systems (GEOSS). GEO had several notable accomplishments in the last year, as follows:

- Grew to over 60 member countries and more than 40 participating organizations.
- At Earth Observation Summit III (Brussels), was endorsed by ministers and became an established international group with an administrative secretary headquartered at the WMO.
- Hired a Secretariat Director to oversee administrative aspects.
- Adopted a tsunami communiqué to coordinate efforts to work with the international community in response

- to the tragic December 26, 2004, tsunami in the Indian Ocean Region.
- Adopted a 2006 Work Plan with 96 tasks to carry out its work.
 - Agreed on five committees to coordinate specific tasks -- Capacity Building, Architecture and Data, Science and Technology, User Interface, and the Working Group on Tsunami Activities.

For further information on the global GEO effort, see <http://www.earthobservations.org/index.html> and for U.S. GEO activities, see <http://usgeo.gov/>.

2nd Intergovernmental Review of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (IGR-2)

The United States is undertaking preparations for the 2nd Intergovernmental Review of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) to be held on 16-20 October 2006 in Beijing. The United States has been providing comments on the official IGR-2 documents, and expects to participate in the ministerial segment of the meeting. The United States also will be involved in three partnership sessions listed for partnership day. These will be on the White Water to Blue Water (WW2BW) Caribbean initiative, the NOAA Node for GPA implementation, and a US-led Pacific Islands Partnership. This conference is especially significant to the United States given that the GPA was forged in Washington, D.C. in 1995.

The IGR-2 organizers have formed a High Level Steering Committee to provide strategic policy guidance to the United Nations Environment Programme during the preparations, and a website has been launched at <http://www.gpa.unep.org>.

MARPOL 6 Implementation

The MARPOL Convention, the international agreement that controls the accidental and operational discharges of pollutants from ships, currently includes a framework agreement and six annexes that address particular sources of marine pollution. Annex VI established an international framework to address air pollution from ships.

On April 7, 2006, the U.S. Senate gave advice and consent regarding ratification of MARPOL Annex VI. Ratification of Annex VI, and adoption of implementing legislation is anticipated during the 2006 session of congress. However, the United States has applied Annex VI standards to new diesel engines on U.S.-flag vessels since 2004; and these have assisted reaching our domestic air quality goals. These are standards such as:

- Reducing the emission of nitrogen oxide (NOx) from certain large new marine diesel engines up to 30% from 1990 levels and providing a vehicle for further internationally agreed NOx reductions through a rapid amendment procedure.
- Establishing a global cap of 4.5% on the sulfur oxide (SOx) content of marine fuels.
- Providing for special "SOx Emission Control Areas" (SECA) with more stringent controls on sulfur emissions (reducing the sulfur content to 1.5%) in areas where SOx reductions would be beneficial.
- Prohibiting the deliberate emission of ozone-depleting substances, including halons and chlorofluocarbons and volatile organic compounds from ships.

Coral Reef Bleaching Alert System

A major coral bleaching event occurred in the Caribbean in the summer and fall of 2005 affecting much of the eastern Caribbean from Texas in the north, to Tobago in the south, and Belize in the west. The event was the most intense that has been observed the Caribbean during the 21-year satellite record.

NOAA satellite data are critical to predicting and responding to bleaching events, and are a key component of analysis of the long-term impact of the bleaching. NOAA's Coral Reef Watch Satellite Bleaching Alert monitoring system products proved invaluable to scientists and managers who were able to mobilize resources to assess the extent of the 2005 bleaching event. The system automatically monitors for the thermal stress that gives rise to coral bleaching. When combined with observations in the field, it enables state and local officials and dive operators to

better track bleaching events and use the information to lessen human stress on the reef during this critical time.

In the fall of 2005, surveys showed an average between 42 and 46 percent of all coral were showing signs of bleaching. As soon as January 2006, it was evident that the coral reefs of NOAA's Flower Garden Banks National Marine Sanctuary, located off the Texas-Louisiana coast had begun to recover from the bleaching event. A follow-on survey in January showed that only four and 10 percent of the coral were showing any signs of bleaching. Further research is needed to determine what allowed this location to be so resilient. This would further understanding of why other reefs are not doing as well and what interventions can be undertaken.

In February, 2006 NOAA announced that it would expand regional coverage for the NOAA Coral Reef Watch Satellite Bleaching Alert monitoring system from the existing six Caribbean sites to a total of 24 sites throughout the U.S. and international Caribbean. The expansion responds to the U.S. Ocean Action Plan and was made possible through NOAA, the World Bank, and the Global Environment Facility. Through the same effort, over the next several years, 24 sites around Australia, 24 sites in Southeast Asia and 24 sites in the western Indian Ocean basin will be added. See <http://www.noaanews.noaa.gov/stories2006/s2574.htm> for more information.

Progress Report on Marine Resource Conservation

Vietnam

Development and Conservation Tasks

Vietnam is a coastal nation endowed as a marine biodiversity center of the world with abundance species, diversity of ecosystems and natural sources. However, it is facing with adverse weather conditions, including typhoon, flood and drought,... causing negative impacts not only for human but also losing of infrastructure, transportation, agricultural-forest-fisheries productions and marine resources.

Therefore, there are various emerging issues in relation to the marine resource conservation, such as losses of coastal habitats and marine biodiversity; the degradation of marine ecosystems, over fishing and destructive fishing practices; and increased land based marine pollution... To achieve sustainable development of the country requires various options that should be implemented in a well-matched manner to manage and conserve marine environment and natural resources.

Viet Nam has being implemented a master plan for fisheries development with a view to ensuring both the living standards of the people and the sustainability of the ecosystem. Fisheries are a key industry for economic development, especially for APEC's economies. However, fisheries management and development policies have to be improved to be more environmentally friendly and sustainable ways.

Viet Nam's Ministry of Fisheries has being built of 15 marine protected areas (MPA) to establish a national MPA system by the year of 2013. Viet Nam's targets exploiting of four million tones of aquatic products with valueings at four billion USD from fisheries exportation and generating of involving services for 4.7 million jobs by year of 2010. The ministry's master plan for 2006-2010 and orientation for 2020, approved by the Prime Minister early this year, stated clearly that the sector would aim at turning itself into an important competitive industry offering diverse products of high quality. To reach these targets, the sector must achieve an annual increase of about 10.63% in its export turnover. Rapid and sustainable

development should be based on the rational use of available land, water surface and labor forces. Another factor, which was of no less importance, was the application of high technology in developing of aquaculture and processing of products.

The national poverty reduction has previously been boosted in various ways and gained good results. It has also issued preferential policies, including granting low-interest loans for poor fishing households or enterprises investing in infrastructural development or fisheries services. In its master plan, the ministry encouraged fishermen to operate at the deep seas for bigger catchments, instead of only fishing their nets along the coastline, and to increase aquaculture areas.

By 2010, Viet Nam plans to maintain about 50,000 fishing boats. Those fleets will consist of 6,000 boats with a capacity of bigger horsepower than 75 CV, 14,000 vessels with a capacity between 46-75 CV, and 30,000 boats with capacity smaller than 45 CV. It was projected that the off-shore fishing output by that time will gradually reach about 1.5-1.8 million tons and the volume of aquaculture products will be achieved about 2 million tons.

Regarding to trade and market development, the ministry plans to expand the domestic market by diversifying with products of high quality at reasonable prices. Special attention will be given to the development of domestic markets. A high priority will be maintaining the traditional foreign market while expanding to new ones, particularly those in China, Africa, South America and the Arab world.

To facilitate development of the fisheries industry, the ministry called on local authorities to seek foreign capital investment and advanced technologies, and to expand co-operation with other countries to have more fishermen sent to work abroad. These activities will help Viet Nam to soon catch up other countries in the region, in connection to the fishing industry concerned.

Viet Nam and China have resumed the surveying cooperation in fisheries surveys at the Gulf of Tonkin after

breaking in proceedings nearly 35 years. The first joint fisheries investigation in the common fishing area in the Gulf of Tonkin was carried out at the offshore of Hai Phong City of Viet Nam and Beihai City, Guangxi province of China in the bilateral plan for specific adjustments of fisheries yield exploitation levels of shared fish-stock in future.

The Ministry of Fisheries hosted several workshops in introducing the United Nations Agreement for the Implementation of the Convention Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks as well as the wild marine species conservation and MPA management to ensure long-term sustainability and promote optimum utilization of highly migratory and straddling fish stocks; minimize pollution, waste, discards and by-catches; protect biodiversity in the marine environment and prevent or eliminate overfishing and excess capacity; and collect and share data concerning fisheries activities.

The incidental turtle caught by observer program had been launched and implemented in the waters of several provinces of Viet Nam since 2005 to identify the appropriate measures to protect this species through the fishing gear modification. This activity is a part of the sea turtle conservation project aimed at minimizing marine turtle mortalities from bycatch in fisheries, on which an agreement has recently been signed among the World Conservation Union (IUCN), the World Wildlife Fund (WWF) and the Research Institute for Marine Fisheries (RIMF_MoFI). Additionally, there was a protection project of female turtles and laid eggs in several potential islands as well as studying on their biological characteristics.

In order to better manage and organize an offshore fishing fleet, Vietnamese managers need the studied results focuses on the integration of GPS (Global Positioning System) data into GIS (Geographical Information System) in response to the good management and organization of fishing fleets.

National Regulation and Legitimacy:

Viet Nam laws involve the marine biodiversity and conservation has initially

being approved and innovated, such as:

- Propagation of the Fisheries Law dated at 26th November 2003
- + Decree No 191/2004/ND-CP dated in November 18th 2004 on management of fishery activities of foreign fishing vessel in Vietnam's Seawaters.
- + Decree No 27/2005/ND-CP approved in March 8th 2005 of regulating and guiding the implementation of certain articles in the fisheries law.
- Decision No 156/QD-TTg issued at 23rd June, 2005 on general plan for natural museum beyond 2020 in Viet Nam.
- Decision No 34/QD-TTg enforced at 22nd February 2005 on environmental protection, natural resource exploitation and biodiversity management in Viet Nam.
- Decision No 212/QD-TTg regulated at 26th August 2005 on safety management of genetic modification and cloning source products.
- Decision No 10/QD-TTg enforced at 11th January 2006 on the master plan of fisheries development to 2010 and its vision beyond 2020
- Decision No 47/QD-TTg dated 1st March, 2006 approved the general project on basic investigation and management for natural resources and marine environment to 2010 and beyond 2020.

Key National Efforts Regarding Bali Action Plan:

Following up the APEC great strategies adopted at Indonesia in 2005: "Towards Healthy Oceans and Coasts for the Sustainable Growth and Prosperity of the Asia-Pacific Community", Viet Nam economy is recognizing that healthy oceans and coasts are particularly crucial for food security, poverty alleviation and sustainable and equitable economic growth as well as environmental and resource sustainability through the enhancement of public awareness in terms of responsible fishing and aquaculture practices, including improved management by ruling enforcement, marine environmental monitoring, the use of the best available science and technology, as well as the need for capacity-building and technology transfer as possible. There are, hereby some

advanced implementations had been done and ongoing in Viet Nam:

- Scientific reports regularly submitted to involving organization on progress on the implementation of our actions in order to strengthen the exchange of views and information with other related APEC programs.
- Viet Nam Seawaters observations and data collection has being built to understand the nature and functions and share the necessary information among scientist and managers for the predictions, forecasts, watches and warnings, including reporting on the impacts of fishing and land-based sources of marine pollution as well as the decision-making and domestic legislation.
- The traditional market and new market potential factors has being respected by undertaking research, communication and information exchange on marine activities.
- Some key factors have being applied in defining marine ecosystems and establishing a key set of variables to monitor and to assess changes in those ecosystems.
- The primary prevention in regarding to introduce marine invasive species through imported way for aquaculture, by increasing training and implementing domestic requirements and information exchange.
- The implementation of vulnerable area preservation and conservation at shallow and deep seawaters, such as coral reefs, mangroves, seagrass beds, wetlands and river-mouths that have initiated studied and managed. They play important and valuable roles in the maintenance of marine productivity and biodiversity and the socioeconomic and cultural development of Viet Nam coastal communities.
- The sustainable fisheries and aquaculture management have being continued to ensure the long-term sustainability of those resources, by advocating the application of an aquaculture ecosystem approach, improving knowledge of deep sea fisheries species enhancing monitoring, control and surveillance (MCS) programs to reduce bycatch and mortality of species incidentally caught, including marine turtles, sharks, dugong and other wildlives by mitigating tools.
- It has being done to improve fisheries production and post-harvest practices by harmonizing standards and eco-labelling standard to ensure healthy

and safe seafood products.

- Persist commitments regarding fisheries and fish products in free trade agreements and regional trade agreements in the Asia-Pacific region and related cooperation agreements.
- The preparation of setting up the warning system for natural disaster reduction and Post-Natural Disaster Rehabilitation and Planning at national levels and linked to APEC economies in future as possible.

There are great events coming up as the host, Viet Nam APEC 2006 theme, suggesting: "**Toward a Dynamic Community for Sustainable Development and Prosperity**" for the Asia Pacific Economic Co-operation (APEC) summit and related conferences. Those events are a chance for Vietnam to improve its image and political role in the region and the world, and to expand relations with other countries in economics, trade, science, culture and tourism... in order:

- To preserve the marine biodiversity and friendly environment.
- To develop a mutual benefit and progress relationship with other APEC economies.
- To eliminate hunger and reduce poverty for coastal people.



Vietnam. Photo - W.Y. Chiau



Landmark of Shanghai China.
Photo - W.Y. Chiau

19th APEC Marine Resources Conservation Working Group Meeting Shanghai China 26 – 28 April 2006

Meeting Report

The 19th APEC Marine Resources Conservation Working Group Annual Meeting was held on 26-28 April in Shanghai, Peoples Republic of China. The meeting was attended by 45 participants from 14 economies: namely; Australia, Brunei Darussalam; Canada; People's Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Peru, Republic of Philippines; Thailand; United States of America and Viet Nam. The APEC Secretariat and Dr. Chua Thia-Eng (PEMSEA) also attended.

1. Opening Ceremony

The Government of the People's Republic of China formally welcomed delegates to the 19th APEC MRCWG Annual Meeting.

Mrs. Yue Chen, Dep. Director General, Department of International Cooperation, State Ocean Administration (Peoples Republic of China) gave an opening address stressing the increased attention to marine issues and increased importance for regional cooperation.

Dr Indroyono Soesilo, Lead Shepherd of the APEC MRCWG expressed gratitude and appreciation to the People's Republic of China for hosting the meeting. The Lead Shepherd outlined his intention to help coordinate the MRCWG and Fisheries WG to implement the Bali Plan of Action (BPA).

Dr Yang Huigen, Deputy Director of the Polar Research Institute of China (People's Republic of China) welcomed delegates and outlined the People's Republic of China Antarctic and Arctic research programs.

2. Official Opening of MRCWG 19

Dr. Maitree Duangsawasdi, Director General, Department of Marine and Coastal Resources of Thailand, the

host economy for the 18th annual meeting in 2005, opened the 19th annual meeting of the MRCWG.

3. Election of MRCWG 19 Officers

Dr. Maitree Duangsawasdi then facilitated the election of officers for the meeting. The elected officers were Dr. Indroyono Soesilo, Lead Shepherd – MRCWG as Chair, and Angela Williamson (Australia) as rapporteur.

4. Approval of Agenda

The Lead Shepherd commenced the meeting by seeking and obtaining approval of the meeting agenda. The agenda was adopted.

5. Round Table Introductions

All delegates introduced themselves.

6. APEC Secretariat Report

Mr. Eduardo Menez (APEC Secretariat) tabled three reports:
(1) APEC Secretariat Report on APEC Development
(2) Summary of SOM I; and
(3) Guidelines for Evaluation and Reporting System for APEC projects.

Key developments of relevance include:

- Bogor Goals: A stock take against the Bogor goals was undertaken in 2005. Outcomes indicate that these were being progressed.
- APEC Reform: The former ESC has been restructured and now forms the SOM Steering Committee of ECOTECH (SCE). The new SCE will coordinate ECOTECH. SCE has also initiated a work program to assess work programs of working groups. The MRC TOR have been submitted to the SCE Chair. We expect analysis and discussion at the next SOM.
- Project process: SCE will now rank and approve all working group project proposals ahead of the BMC 2.

- APEC Information Management Portal (AIMP): The APEC Secretariat will be launching a web-based portal this year and invites all working groups to consider using this portal to make discussions and intersessional activities more efficient.
- Evaluation and reporting: A paper has been developed to aid project overseers manage project evaluation and assessment. This will improve reporting to SOM and leaders on how projects have met directives.

7. Lead Shepherd's Report

Dr Indroyono Soesilo, Lead Shepherd, welcomed all delegates. He expressed his gratitude to Ms Donna Petrachenko (former Lead Shepherd) for the smooth transition into his Lead Shepherd duties. Dr Indroyono Soesilo took the opportunity to thank all MRCWG delegates for their support during Ms Petrachenko's time as Lead Shepherd on her behalf. The Lead Shepherd then briefed the MRCWG on how the BPA is a baseline to work together on ocean conservation, ocean development and on ocean issues. He also noted that progress reporting against the BPA would be required prior to the 3rd AOMM. As part of his term as Lead Shepherd, he will give special attention to working with the Fisheries Working Group. Cooperation with other working groups will be enhanced and strengthened and the BPA gives the MRCWG this mandate.

8. Lead Shepherd's Commentary on Expected Achievements for MRCWG19

The Lead Shepherd provided a commentary of what he expected MRCWG 19 to achieve. He emphasized the need to use the Bali Plan of Action and MRCWG Strategic Framework to guide domestic marine conservation and sustainable development efforts, development of APEC project proposals and reporting. The Lead Shepherd

briefed MRCWG that Thailand and Canada have evaluated the 7 project proposals submitted for consideration and noted the new approval process involving the SCE. He noted that next year a joint meeting with the Fisheries Working Group and MRCWG is scheduled and arrangements for hosting need to be resolved. He also expressed his intention to work with other Working Groups including tourism, transport and energy. The Lead Shepherd invited APEC Economies that have not been active in the MRCWG to do so now.

9. Economy Reports

Economies presented a verbal and written report on their domestic progress on marine resource conservation efforts; their contribution to domestic and international marine-related policy initiatives; and on key domestic efforts to advance the implementation of the Bali Plan of Action and MRCWG Strategic Framework.

Australia: Efforts include:

- (1) identification of short term priorities for implementing the BPA
- (2) domestic and international work to address the impacts of marine debris
- (3) development of deepwater offshore MPA network
- (4) changes to regional marine planning

to strengthen process by bringing planning under federal environment legislation

- (5) regional efforts to address marine invasive species.

Brunei Darussalam: Efforts include:

- (1) restoration of fisheries
- (2) development of MPAs
- (3) implementing turtle research – 2006 is the year of the turtle
- (4) undertaking water quality studies near aquaculture operations
- (5) development of national CITES legislation
- (6) red tide programs - including updating the national plan.

Canada: Efforts include:

- (1) implementation of Oceans Action Plan
- (2) hosted an experts workshop on ecologically and biologically significant sensitive areas
- (3) developing a strategy on sensitive areas – including cold water coral reefs
- (4) assessing affects on human activities
- (5) implementation of eco-system based approach in the Arctic.

People's Republic of China: Efforts include:

- (1) Oceans as an independent chapter

in the 11th Chinese National Plan adopted by People's Congress and to be implemented over next 5 yrs

- (2) implementation of interim measures of special marine reserves for ecosystems for special areas (seven special marine reserves have been established)
- (3) Active participation in GEF projects
- (4) considering drafting a national marine policy to enhance integrated process.

Hong Kong, China: Efforts include:

- (1) implementing a Marine Park Program
- (2) conservation of important marine habitats and species, such as the Chinese white dolphin and cora
- (3) pilot schemes on use of reclaimed water for toilet flushing and irrigation; and seawater desalination
- (4) establishing fisheries management measures and a voluntary Accredited Fish Farm Scheme
- (5) artificial reef program
- (6) continue to combat land-based pollution (Harbors Area Treatment Scheme).

Indonesia: Efforts include:

- (1) government established operational guidelines, policy making institutions and research institutions
- (2) implementing integrated coastal management
- (3) undertaking special planning for marine and coasts
- (4) developing marine conservation areas
- (5) rehabilitation of coastal environments
- (6) endangered species conservation
- (7) research activities related to bioprospecting
- (8) finalizing a draft national oceans policy
- (9) finalizing the Coastal Management Act
- (10) conducting coral reef rehabilitation and management .

Republic of Korea: Efforts include:

- (1) strengthening marine management by introducing monitoring systems and integrated coastal management
- (2) implementing across the board protection from land based pollution
- (3) expansion and strengthening of regional cooperation
- (4) fisheries development,
- (5) web services of spatial and temporal mapping for response to give stakeholder real time information
- (6) Capacity building and training.



Dr.T.E. Chua gives his speech at the 19th MRC Meeting.
Photo - W.Y. Chiau

- Peru: Efforts include:
- (1) implementing an integrated marine coastal approach
 - (2) protecting marine resources from land based pollution
 - (3) long term program to analyze ballast water
 - (4) fisheries development
 - (5) addressing IUU fishing
 - (6) aquaculture
 - (7) enforcement of observation system for ENSO event
 - (8) active participation with other regional and international institutions such as CPPS. Peru also reiterated their offer to host the third AOMM.

- Philippines: Efforts include:
- (1) drafting National Plan of Action
 - (2) working with other countries on dugong and sea turtles and other marine mammals
 - (3) managing large marine ecosystems
 - (4) initiating implementation UNCLOS Part IX on enclosed and semi-enclosed seas for regional ocean governance
 - (5) implementing local MPAs
 - (6) transborder marine peace parks development
 - (7) participating in relevant regional and international forums.

- Chinese Taipei: Efforts include:
- (1) oceans policy white paper second edition published this month and serves a general guide for public and government
 - (2) encouraging local participants in voluntary beach cleanups where 19,000 tonnes of garbage was removed
 - (3) whale watching and associated ecotourism operation are a new business in Chinese Taipei and a way for the community to understand marine ecosystems.

- Thailand: Efforts include:
- (1) restoring habitats
 - (2) sustainable management of marine and coastal resources
 - (3) capacity building for local communities to understand how to improve activities and engage in co management to sustain the development of the coastal environment.

- USA: Efforts include:
- (1) Oceans Action Plan and BPA have been guiding US actions
 - (2) Tsunami warning plan proceeding, including technical assistance on

- coastal zone management in Indian Ocean
- (3) Post - Hurricane Katrina activities, including NOAA surveys and a regional plan for the recovery of areas
 - (4) coral bleaching event in Caribbean, including NOAA bleaching alert monitoring system developed and plans to expand this system
 - (5) Co-Chairing Global Earth Observation Program
 - (6) will ratify the MARPOL Annex 6 – air pollution from ships
 - (7) undertaking preparations for the GPA IGR-2.

- Viet Nam: Efforts include:
- (1) master plan with view to improve living standards for people and ecosystems
 - (2) Setting up master plan for MPA network
 - (3) efforts to decrease turtle mortality and bycatch
 - (4) implementation of conservation measures for deep sea features
 - (5) improving the fishery products and post harvest processes
 - (6) establishing an environment monitoring and warning system
 - (7) hosting APEC 2006.

10. Discussion, Reflection and General Response to the Bali Plan of Action (BPA)

Dr Tonny Wagey (Lead Shepherd Office) gave the MRCWG delegates an overview of the 2nd AOMM and outlined

the elements of the BPA. Economies discussed the BPA and agreed on the importance of using the BPA as a guide for upcoming MRCWG work and projects. Specific issues were identified as short-term priorities for implementing the BPA. The Lead Shepherd's summary of these discussions follows:

- The BPA is a positive achievement for MRCWG and Economies are encouraged to use the BPA as a basis for work.
- It would be timely to undertake an inventory of all work done against the BPA and identify gaps and duplication with FWG efforts.
- The MRCWG must identify ways to work more closely with FWG on common priority issues, including: derelict fishing gear, marine invasive species, and aquaculture.
- MRCWG agreed that ocean observation data and models are a priority issue to address when implementing the BPA.
- MRCWG should consider participatory project proposals that ensure stakeholders and economies gain knowledge and training opportunities.

11. N/A



*Dolphin watching is more and more popular in Chinese Taipei.
Photo – Cetacean Association.*

Capacity Building Workshops on Marine Environmental Conservation and Sustainability for Developing Economies of APEC	Republic of Korea	44, 160
Satellite Application in Knowledge-based Economies (SAKE 2007)	Chinese Taipei	49,390
Marine Ecosystem Identification and Mapping in the Asia-Pacific Region	United States of America	19,128
Monitoring of sediments and ballast water of the ships and Initial Risk Assessment by invasive alien species	Peru	57,000
Tsunami Preparedness and Resilience through Research, Extension, Education and Training	Indonesia	30,000
Strengthening the capacity in building effectiveness of marine bio-prospecting information network in Indonesia.	Indonesia	40,000
Economic benefits and costs of controlling marine debris in the APEC region	Australia	42,000

12. SOM-1/2006, SCE-COW Matters, BMC-1/26 Project Priorities

Dr Chua Thia-Eng, Regional Programme Director PEMSEA/IMO gave an insightful and inspiring presentation on the work that PEMSEA is undertaking.

Mr. Eduardo Menez (APEC Secretariat) outlined relevant priorities from recent APEC forums that are of direct relevance to MRCWG. These included:

- TILF funds for 2007 will be significantly lower than previous years.
- Operational account has a net amount of 1.9 million. This is an increase from last year.
- BMC 2 will be held later in the year than usual. This allows BMC to consider comments from SOM II, particularly now that SCE has an evaluation role for all projects.
- The method and scope of SCE to review all working group project proposals is still unclear.
- A new procedure for ranking project proposals was introduced into BMC last year. Projects will be ranked according to whether they address leaders priorities, minister's priorities, and host economy priorities. It is essential that any projects coming through the MRCWG meet these requirements.

13. Discussion on how to meet APEC Secretariat Report, SOM I Matters and BMC I Matters and priorities

The Lead Shepherd asked APEC Economies to attempt to meet the following priorities when developing projects:

- Ministers Statements/BPA
- ECOTECH
- Emergency Preparedness
- Community Development
- Capacity Building

There was general discussion on ways to meet broader APEC directives and also address evaluation criteria. It was agreed that the APEC Secretariat circulate any criteria the SCE develops for assessing working group projects to aid targeted project development.

14. Election of the New Project Evaluation Team and Project Team

The Chair thanked the Evaluation Team (Canada and Thailand) for their work in evaluating the project proposals. Economies discussed the roles of the Project Team and the Evaluation Team and agreed that in light of the additional SCE ranking and approval step and having the agreed BPA to guide work, two teams are no longer necessary. Instead a single team will take the role of evaluating project proposals and ensuring they meet the BPA and MRCWG Strategic Framework to assist the Lead Shepherd. Canada, Peru and Australia and the Lead Shepherd Office will form the new project team.

Outstanding issues that need to be addressed intersessionally include: future steps for lower ranked project proposals; and measures to ensure transparency in the project ranking. The Lead Shepherds Office will determine a process for next steps.

15. New Project Proposals

There are currently 7 project proposals seeking funding from the operational account for the 2007 project cycle. These are:

Chile tabled a project proposal for consideration in the 2007 project cycle. The MRCWG agreed to consider this proposal for the ranking process, however stressed that in the future, economies must meet agreed deadlines and timeframes.

Hong Kong, China tabled a progress report and Chinese Taipei a proposal for self-funded projects.

16. Project Reporting

The People's Republic of China and Chinese Taipei reported on respective MRCWG projects they are overseeing.

17. N/A

18. Plenary Discussion

Economies discussed the frequency of joint meetings with the FWG and options for coordination across other relevant working groups. These options included: annual meetings; annual meeting for an agreed period of time; flexibility for ad-hoc joint meeting depending on the agenda; and dedicated intersessional work in preparation for the joint meeting in 2007.

The MRCWG noted associated issues, including: increased costs of hosting annual joint meetings; and potential efficiencies in costs associated with delegations.

MRCWG agreed to raise this issue as an agenda item for the next joint meeting and encouraged the Lead Shepherd- MRCWG and Lead Shepherd FWG to undertake intersessional work to develop a comprehensive agenda.

19. Other Matters

- Hosting: Australia extended an invitation to MRCWG delegates to attend the 20th MRCWG Annual Meeting in Australia, 2007. Australia will also be hosting the APEC 2007 Year.
- UNICPOLOS: The MRCWG discussed the invitation from the UN for the Lead Shepherd-MRCWG to attend the upcoming UNICPOLOS meeting and represent the MRCWG's interests. The Lead Shepherd's Office requests comments on this matter by 12 May 2006.

20. Adoption of the Report of the meeting Delegates agreed to the adoption of the Report of the Meeting.

- Closing
The Lead Shepherd's Office expressed their thanks for the People's Republic of China for hosting the MRCWG 19 Annual Meeting.



Mt. Fuji, Japan. Photo - W.Y. Chiau



**20TH MARINE RESOURCE CONSERVATION WORKING GROUP
AND
18TH FISHERIES WORKING GROUP
AND
6TH JOINT FISHERIES AND MARINE RESOURCE CONSERVATION WORKING
GROUPS MEETING**

**HYATT REGENCY SANCTUARY COVE
GOLD COAST, QUEENSLAND, AUSTRALIA
23-27th APRIL 2007**

For all APEC matters, queries and registration matters please contact a member of the **Meeting Secretariat**:

Ms Angela Williamson (MRCWG and joint meeting)
Marine Policy Section
Department of Environment and Heritage
Tel: +61 3 6221 5008
Fax: +61 3 6221 5050
Email: angela.williamson@deh.gov.au

Mr Franco Alvarez (FWG and joint meeting)
Governance, Trade and Aquaculture
Department of Agriculture, Fisheries and Forestry
Tel: +61 2 6272 4694
Fax: +61 2 6272 4215
Email: franco.alvarez@daff.gov.au

The Conservation Strategies Of Dongsha (Pratas) Marine Park, Chinese Taipei

Dr. Wen-Yan CHIAU

Professor and Director, Institute of Marine Resource Management,
National Taiwan Ocean University, Keelung City 202, Chinese Taipei

Introduction

The Dongsha (Pratas) Islands are located in a strategically important position along the major sea route connecting the Pacific and Indian Oceans, between 116°40' and 116°55'E longitude, and 20°35' and 20°47'N latitude. As shown in Fig. 1, the group is 140 nautical miles south of Shantou in Guangdong Province, China, 430 nautical miles northwest of Manila, the Philippines, 170 miles southeast of Hong Kong, and 240 nautical miles southwest of Kaohsiung of Taiwan Island.

The Environmental Setting in Dongsha

The Pratas Islands are comprised of Dongsha Island, two coral reefs, the North Vereker Bank, and South Vereker Bank. With a total land area of 1.74 km² and being shaped like a horseshoe, the island of Dongsha extends 2.8 km from east to west, and 0.9 km from north to south. The total length of its coastline is about 8 km. A 0.46-km² shallow lagoon is located on its west coast (Fisheries Department of Kaohsiung City, 1990).

Climate and Water Resources

The Pratas Islands enjoy a subtropical climate, which is influenced by northeast winds during the winter. They experience their warmest weather in June, with an average temperature of 29.5 °C. Temperatures are lowest in December, when the average is 22.2 °C. The rainfall of the island is concentrated in summer, and there is not much rain in winter. Typhoons occur every year, often striking the island and bringing significant amounts of rain, which is helpful for groundwater recharge. Although groundwater is abundant, the quality of most wells is lightly salty. For solving the problem of usable water, a desalination plant has been established on the island. Nevertheless, thousands of bottles of drinking water have to be imported from Chinese Taipei, and those plastic bottles shipped back.

Landscape and Land Use

Dongsha Island is covered by white sands, which are formed of tiny debris from shells and coral reefs. According to the 1994 survey, the most important vegetation on the island consists of coastal thickets composed mainly of *Scarvola sericea* mixed with *Messerschmidia argentea*, *Suriana maritima*, *Morus australis*, *Guettarda speciosa*, *Morinda citrifolia*, and *Pisonia grandis*. A total of 110 species of plants, including 25 cultivated species, have been recorded. Among them, *Cordia subcordata*, *Pisonia grandis*, *Suriana maritima*, *Triumfetta procumbens*, and *Syringodium isoetifolium* have not been recorded in Taiwan island or its adjacent islands (Huang et al., 1994).

Birds

The Dongsha Islands are located in the flyway of migratory birds in the West Pacific. Birds mainly appear in fall and spring. The most recent survey conducted in June 1994 reveals that only some 13 species in 5 families of birds such as Saunders's Gull (*Larus saundersi*), Common Sandpiper (*Tringa hypoleucos*), Wood Sandpiper (*T. glareola*), Ruddy Turnstone (*Arenaria*

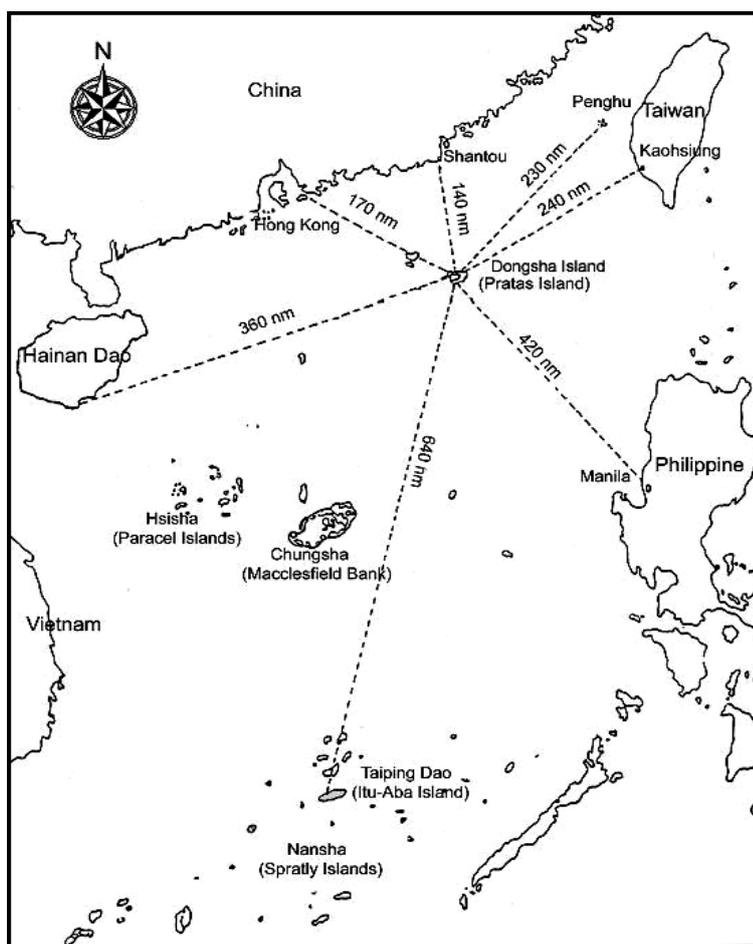


Fig. 1. Location of the Dongsha Islands.

interpres), Little Egret (*Egretta garzetta*), and Cinnamon Bittern (*Ixobrychus cinnamomeus*) were recorded. Among them, some 12 species are water birds. The major habitats for birds are on the shorelines, tide flats within the lagoon, the northern and southern rims of the lagoon, small inland ponds, and forests (Chang et al., 1994).

Coral Reefs

Coral reefs played an important role in the formation of the Dongsha Islands. According to a brief survey in June 1994, a total of 137 species of coral in 43 genera and 20 families was recorded. Coral communities of Dongsha are dominated by scleractinians, among which *Acropora* spp. and *Porites* spp. are most commonly found in the surrounding waters. Alcyonaceans are distributed on the outer edge of the reef flat on the western and northwestern sides of the island. Dongsha was previously known for its beauty and diversity of coral reefs. However, destructive methods of catching fish (e.g., dynamite fishing and cyanide fishing) during the past decades have seriously destroyed the reef ecosystem. Warmer water temperatures possibly resulting from climate change may also be aggravating this situation (Dai et al., 1994).

Fishes and Crabs

As of 1994, some 311 species in 55 families of fishes were recorded by the field survey. With additional species from a literature review, a total of 396 species in 62 families of fishes has been recorded in the Dongsha seas. Among them, there are 30 species of fish never before recorded in Taiwanese waters. Regarding their number of species, Labridae tops the list, followed in order by the Pomacentridae, Gobiidae, and Chaetodontidae. A zoogeographical analysis of all listed fishes reveals that almost all species (94.7%) are widely distributed tropical fishes. According to past catch records, however, small sharks are often attracted to the lagoon. With a significant volume of organic materials and occupation of one-third of the total island area, the shallow lagoon is a good habitat for crabs. (Chen et al., 1994).

In summary, the Dongsha Islands possess numerous natural and cultural resources. More resources could be found through continued survey efforts by both academics and related agencies

Major Concerns for Protecting Dongsha

The establishment of a marine protected area (MPA) can serve many purposes and has been regarded as an effective way to protect the marine environment and biodiversity (Slam, et al., 2000). The Dongsha Islands are ideal for scuba diving, with clean and clear waters in addition to coral reefs. Besides protecting the marine ecosystem, a well-planned MPA can also accommodate ecotourism development. Thus, establishing an MPA in Dongsha for both tourism and conservation has been regarded a necessary measure and was included in the Yangmingshan Declaration of IUCN-WCPA-EA-4 held in Taipei in 2002. Nevertheless, there are several major issues which should be well considered in the planning and management of the future Dongsha MPA.

Severe Damage by Destructive Fishing

The areas around Dongsha provide excellent fishing grounds, and fishermen from Chinese Taipei, China, Hong Kong, and even Vietnam arrive in the region during March and April. They usually operate for several months until the monsoon arrives in the late fall. According to enforcement records of Coast Guard Administration (CGA), unsustainable methods used to catch fish are commonly employed in the region. Dynamite and cyanide fishing have been the most destructive to the fisheries of Dongsha and have severely damaged its coral reefs. Inevitably, this will destroy the habitat, deplete the source of the fisheries, and ultimately hurt the economy which depends on the seas.

Negative Impact of Artificial Structures

A unique land feature in Dongsha was a sandy spit, formerly called a



Dongsha (Pratas) Island, Chinese Taipei.
Photo - W.Y. Chiau

“dragon tail” in Chinese, which formed at the southeast point of the island. For the past 5 years, however, this famous landscape has gradually diminished after the construction of several jetties for the sake of erosion control. Recently, the CGA is planning to build a harbor to meet its patrol demand to protect the whole reef atoll. Nevertheless, the design and location of this harbor has been the focus of concerns and controversy in conserving Dongsha.

Recent Initiatives to Protect Dongsha

Although institutional barriers are often encountered, some new initiatives to protect Dongsha have recently been promoted. For example, the Ministry of Interior of Chinese Taipei is establishing its first maritime national park in Dongsha. A comprehensive park plan has been adopted by the Park Commission in 2005 and is under review by the Executive Yuan. A preparation office of the new national park has also been established recently. In addition, the Kaohsiung City also announced the establishment of the Dongsha International Research Station on November 5, 2004, which will provide facilities and accommodations to international researchers who visit the island.

A recent milestone in marine affairs in Chinese Taipei was the formation of the Council for the Promotion of Marine Affairs (CPMA) of the Executive Yuan (equivalent to the Cabinet). The top-decision-making body on marine affairs was established in January 2004. Currently, some six teams on ocean strategies, maritime security, marine resources, marine culture, ocean

industries, and marine science and technology have been formed. Each team has drawn up its own respective action plan. According to the conclusions of its second meeting on October 12, 2004, the overall Action Plan on Marine Affairs has been adopted and serves as one of the most important documents for the protection of marine resources and the direction of marine affairs. For example, the goal of the task team on marine resources is: "to establish a marine protected area system and to protect diverse marine resources." The responding actions include: (1) to actively promote planning and development of management mechanisms for marine protected areas and establish sitting criteria and a management system; (2) to establish Dongsha as an oceanic national park; and (3) to conduct research on natural and cultural heritage.

Furthermore, the Committee on Sustainable Development of the Executive Yuan promulgated its Action Plan for Sustainable Development. This Action Plan stipulates that the authority must "review the existing management strategies and delineate MPAs in no less than 5% of coastal waters." With inclusion of the delineation of MPAs, the Plan has been deemed one of the most important documents for ocean and coastal management in Chinese Taipei.

Challenges Ahead

The establishment of a marine protected area (MPA) is multipurpose and has been regarded as an effective way to protect both the marine environment and biodiversity. Although Chinese Taipei already has established many protected areas and the national parks. There is still a lack of a national park with unique and abundant marine ecosystem. Dongsha Islands and the coral atoll can accommodate this need. Moreover, in response to the direct and indirect threats encountered in Dongsha, it is recommended that an official national marine park be established for the islands as early as possible. Administrative performance should be enhanced and authority should be clearly assigned in advance. Following that, an integrated management plan for the future Dongsha Marine Park should also be developed.

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Coral reefs. Photo - W.Y. Chiau

Conservation News

Viet Nam Promotes YoT Campaign

Viet Nam celebrated World Environment Day (June 5) in Nha Trang city in the central coastal province of Khanh Hoa on June 4 2006, with focus being placed on the 2006 International Year of Marine Turtles (YoT).

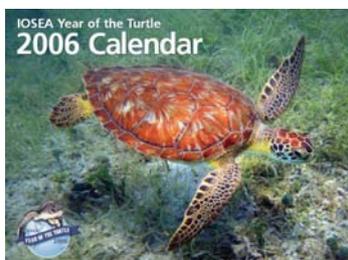
During the ceremony, held by the Ministry of Fisheries, the provincial People's Committee, the World Conservation Union (IUCN), the Nha Trang Bay Reserve Management Board and the Nha Trang Institute of Oceanography, participants stated their commitment to reducing threats to sea turtles, conserving their habitats and strengthening international cooperation in their conservation in Viet Nam.

According to the IUCN, Viet Nam is home to five of the planet's seven species of sea turtles. They are the green, hawksbill, loggerhead, Olive Ridley and leatherback turtles. However, sea pollution, particularly the disappearance of coral reefs and the appearance of garbage and oil spills, are major threats to marine turtles in the country.

The IUCN therefore conducted various activities to raise public awareness about the value and the necessity of conserving marine turtles. These activities included encouraging the community to participate in keeping beaches clean so as to maintain a pure environment for sea turtles.

The 2006 International Year of Marine Turtles was launched by the IOSEA Marine Turtle Memorandum of Understanding, an intergovernmental agreement that aims to protect and conserve marine turtles and their habitats in the Indian Ocean and the South-East Asian region.

More information:
<http://www.vnagency.com.vn>
http://www.vnagency.com.vn/NewsA.asp?LANGUAGE_ID=2&CATEGORY_ID=32&NEWS_ID=201960



Source:
<http://www.ioseaturtles.org/index.php>

Phuket Dive Society Plans Clean Up Events 13 Sep 2006

The Phuket Dive Society of Thailand celebrated the Year of the Turtle on International Cleanup Day on 16 September, 2006. Sea turtles and other Sea Creatures often fall victim to fishing gear and plastic debris, so Phuket Dive Society organized underwater clean up events at Coral and Khai Nok islands and urged volunteer divers to join in. This event was the largest single day volunteer event on behalf of Thai's underwater environment and a fantastic example of how people can work together to take action.

Divers conducted clean ups at Coral island and Kalim beach near Patong. Phuket Dive Society is supported by the Green Fin Project, Phuket Marine and Biological Research Center as part of the Department of Marine and Coastal Resources, who will install mooring buoys at Ko Khai Nok. This will encourage Boat Operators to protect the underwater environment by using moorings instead of anchors.

More information:
<http://www.thaisnews.com>
http://www.thaisnews.com/news_detail.php?newsid=187219

Tuna Conservation to Hit Japan's Sushi-Lovers

A 42-nation meeting in Croatia agreed recently to cut the catch of bluefin tuna in the Mediterranean Sea. Environmentalists had warned that the lucrative Japanese market and a global fad for Japanese food were driving the fish toward extinction.

The International Commission for the Conservation of Atlantic Tunas

reduced the gross catch of bluefin tuna in the Mediterranean from 32,000 tonnes this year to 29,500 tons for 2007, and 25,500 tonnes in 2010.

Japan, which eats one-quarter of the world's tuna, has already accepted a major cut in its unrelated quota for southern bluefin tuna in the Pacific Ocean as punishment for overfishing.

Environmentalists estimate that Japan imports about 25,000 tonnes a year of Mediterranean bluefin tuna, much of it from "fish farms" that can skirt international quotas.

More information:
http://www.taiwannews.com.tw/etn/news_content.php?id=329713&lang=eng_news&cate_img=35.jpg&cate_rss=news_Business

Seahorse Program in Hong Kong

Hong Kong is considered the world's largest entrepôt for dried seahorses and similar products destined for China and other consumers of traditional Chinese medicine (TCM). The Project's Marine Medicinals Conservation Program, operating out of Hong Kong since 1998, in collaboration with World Wide Fund for Nature (WWF) Hong Kong and TRAFFIC East Asia, seeks to ensure that consumption of seahorses and other marine species used in traditional medicine is sustainable. Unsustainable use of plants and animals is a serious threat to wildlife conservation, but most concern has focused on charismatic mammals with virtually no attention paid to the trade in hundreds of marine species. Seahorse Program in Hong Kong is studying the impact of such trade, and developing and promoting remedial conservation measures.

More information:
<http://seahorse.fisheries.ubc.ca/hk-where.html>

