

ASIAN WETLAND SYMPOSIUM ON INTEGRATED BIODIVERSITY CONSERVATION: LINKING FORESTS AND WETLANDS



Kota Kinabalu, Sabah, Malaysia (18-20 July 2011)

Sabah Call for Action



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CHIEF MINISTER OF SABAH



Foreword

The Sabah State Government recognizes that wetlands — a complex ecosystem — are unique and a vital component of the array of biodiversity that the State is known for. Wetlands have many ecological functions including shoreline stabilization, acting as a habitat for fish and wildlife, flood protection and water purification.

It is through the understanding of how crucial wetlands are that common objectives and responsibilities in the management of this ecosystem can be devised. Coordination of efforts by all stakeholder at different levels — regional, national, state, district — is an important prerequisite for the sustainable conservation of wetland resources. Wetland management is not just about protecting or conserving a habitat and living things, but also includes addressing and factoring in activities that occur miles away that can impact wetland areas. This means wetland management must be done in an integrated manner, requiring involvement of all strata of society. It has to consider socio-economic priorities, rights and responsibilities of local communities, and to incorporate innovative technologies and approaches in implementation.

I hope the outcome of the Asian Wetland Symposium in Sabah that has been consolidated into the Sabah Call for Action declaration will be taken up at higher levels for further deliberation. The ten points in the Sabah Call for Action are very relevant and pertinent in today's environmental situation. If these points are implemented, I believe the declaration can contribute significantly to the objectives and targets of organisations responsible for conservation of biodiversity, particularly wetland ecosystems. This will benefit the world community as a whole.

YAB DATUK SERI PANGLIMA MUSA HAJI AMAN



MINISTER OF NATURAL RESOURCES AND ENVIRONMENT MALAYSIA



Foreword

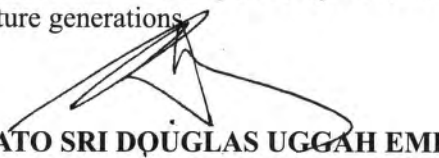
Malaysia as one of the 12 megadiverse country has many flora and fauna, some not to be found any where else on this planet. This rich flora and fauna thrive on many ecosystems and each ecosystem has its own host of species diversity. One of the important and interesting ecosystems which is home to many unique species are wetlands.

Wetlands provide many ecological functions such as water purification, nutrient retention, maintenance of water tables, storm protection, flood mitigation, erosion control, and groundwater recharge. Wetlands also provide for social and cultural wellbeing and if managed and used wisely, they have huge potential for wealth creation as well as creating alternative livelihood for local communities through activities such as ecotourism.

Realising the importance of managing wetlands effectively, Malaysia to date has designated 6 Ramsar sites. These sites are recognized as wetlands of international importance. These sites and other wetland areas have to be managed wisely with the cooperation of all stakeholders including the local communities.

In this regard, the Ministry of Natural Resources and Environment would like to congratulate Sabah for successfully organizing the Asian Wetland Symposium (AWS) last year. This demonstrates the support and commitment of the Sabah Government to conserve and manage wetlands sustainably. The Symposium had successfully gathered more than 300 participants from local and international organizations to discuss on the many facets of wetlands conservation and management. The Symposium adopted this Sabah Call for Action which outlines strategies and mechanisms to further enhance global efforts towards wetlands management, conservation and its wise use.

Lastly, it is my fervent hope that this Sabah Call for Action will be translated into real actions to complement and enhance all our existing efforts in wetlands management. This is important to ensure that these fragile ecosystems are conserved and used wisely for the benefit of current and future generations.


DATO SRI DOUGLAS UGGAH EMBAS



STATE SECRETARY OF SABAH



Foreword

The organising committee recognised the importance of an integrated management in achieving sustainable conservation of biological resources, and subsequently, has initiated the concept of AWS Sabah 2011. The integrated Biodiversity Conservation-Linking Forests and Wetland, a theme that placed emphasis on wetlands aimed to identify practical strategies and mechanisms for enabling integrated biodiversity conservation. With the presence of 324 participants from 24 countries that comprised of researchers, policy makers, community representatives, practitioners, and non-governmental organisations and more importantly, the participation of the heads and representatives of Ramsar Convention, Convention on Biodiversity (CBD), UNESCO and United Nations Forum on Forest (UNFF) made this symposium an appropriate avenue for an effective and meaningful discussion on issues affecting conservation of biodiversity particularly in the wetland areas. The cooperation and understanding of each other's efforts in conservation and protection of biodiversity are very much needed in achieving sustainable development as stated in Aichi Target and Millennium Development Goals (MDGs).

In the symposium we have showcased the success of the Tagal system in Sabah which promote the cooperation amongst the local communities, and with the support of the government agencies as well as the use of traditional or native law, the sustainable conservation of fishes would contribute to the overall objectives of protecting the biodiversity and the river system.

The ten points adopted in the Sabah Call for Action declaration are findings outlined by the participants of this symposium to address challenges in today world of biodiversity conservation. It addressed most of the pertinent issues required for implementation of integrated management. I hope international convention such Ramsar and CBD will take note from the symposium in its next meeting of Conference of the Parties.

SUKARTI BIN WAKIMAN

MESSAGE

Mankind is facing various borderless cross-cutting issues today such as climate change which we have to keep challenging to secure human well-being, particularly for future generations. Conservation issues usually require joint actions by a variety of stakeholders; the Asian Wetland Symposium hosted by the State Government of Sabah (AWS Sabah 2011) offered an outstanding opportunity to facilitate such actions by assembling 324 participants from 24 countries, including non-Asian nations. It showed a firm commitment by the state government to conserve the internationally unique and important biodiversity and natural ecosystems of Sabah.

The theme of the AWS Sabah 2011, "Integrated Biodiversity Conservation: Linking forests and wetlands," was timely and appropriate in the international context, with the expectation that the main outcome of the symposium, the "Sabah Call for Action," will be used by all stakeholders to support the implementation of international initiatives such as the Aichi Biodiversity Targets of the Convention on Biological Diversity (CBD). Of all the presentations in the symposium, I was particularly impressed with the Sabah Session entitled "Wetland Conservation in Sabah - Many Players One Vision" with their key message, "integration for synergy." The presentations clearly illustrated the way conservation actors and activities should be consolidated under a single integrated framework.

The Japan International Cooperation Agency (JICA) has taken part in the conservation activities in Sabah since 2002 under the Bornean Biodiversity & Ecosystems Conservation (BBEC) Programme, a project under the technical cooperation scheme of Japan's Official Development Assistance (ODA). We are deeply honoured to have participated in the AWS Sabah 2011 as a co-organiser. We believe that the AWS is an ideal conservation platform for a variety of stakeholders within and outside the Asia region. I sincerely hope such symposia will be replicated to help implement the international initiatives and achieve the conservation targets adopted by the global community.



Motohiro Hasegawa

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Kota Kinabalu, Sabah, Malaysia
August, 2011

Introduction

Asian Wetland Symposium (AWS)

The Asian Wetland Symposium (AWS) is a series of international symposia aimed at providing a platform for active discussion on issues related to wetland conservation and the wise-use of wetland resources. It is the premier forum for management, research, education and public awareness on wetlands in the Asia region.

Previous symposia have been organised in 4 countries through the leadership of an NGO called the Ramsar Center Japan:

1. Japan (Otsu & Kushiro) in 1992: Towards Wise Use of Most Productive Places, Wetland
2. Malaysia (Penang) in 2001: Bringing Partnerships into Good Wetland Practices
3. India (Bhubaneswar) in 2005: Innovative Approaches to Sustainable Livelihood
4. Vietnam (Hanoi) in 2008: Wetlands - The Heart of Asia

The AWS has brought together thousands of stakeholders and contributed to dialogue on the wise-use of wetland resources, indicating the importance and value of wetlands in Asia. The AWS originally focused on various themes related to wetland conservation and management, with a special focus on education and awareness about the wise-use concept. However, with the increase in general awareness about the important ecosystem services provided by wetlands, and the continuing threats to wetlands across the world, the AWS has shifted its focus to wetland management-related issues including the promotion of best practices in the management of wetlands.

The contribution of the AWS was internationally recognised through Resolution IX.19 adopted at the 9th Meeting of the Conference of the Contracting Parties (COP) of the Ramsar Convention (Kampala, Uganda, 2005), which noted that the AWS "has contributed substantively to enhancing effective regional cooperation and networking in Asia," and that the "COP requests Contracting Parties, in cooperation with the Ramsar Secretariat and international NGOs, to facilitate the support to and participation in the Asian Wetland Symposia by a wide range of stakeholders, including but not limited to local governments, NGOs, private sector, and local communities."

At the AWS in Vietnam in June 2008, the participants adopted the Hanoi Call to Action on Wetlands, which was subsequently delivered to the Ramsar COP 10 held in Changwon, Republic of Korea in November the same year. One of the mandates of the AWS Sabah was to review the progress in terms of delivering the actions identified in the Hanoi Call to Action, and to develop a new declaration to be delivered to the Ramsar COP 11, to be held in Romania in 2012.

Background of the AWS Sabah 2011

The AWS Sabah 2011 was organised as part of the Bornean Biodiversity and Ecosystems Conservation Programme Phase II (BBEC II, 2007-2012), a joint programme between the State Government of Sabah, Federal Government of Malaysia and Government of Japan under Japan's Official Development Assistance (ODA). Japan International Cooperation Agency (JICA) is the implementing agency of ODA projects, and BBEC II is implemented under the grant technical cooperation scheme of JICA.

Under the framework of BBEC II, the largest Ramsar site in Malaysia, the Lower Kinabatangan-Segama Wetlands (78,803 ha), was registered as a Wetland of International Importance at the Ramsar COP 10 in 2008. In 2011, a management plan for the Ramsar site was completed, which adopted the river basin approach to encompass the entire basin catchment of about 2.2 million ha. The State Government of Sabah, by hosting the AWS, aimed to share its knowledge and experiences on the implementation of the Ramsar Convention and other conservation-related conventions and initiatives such as the CBD and UNESCO's Man and the Biosphere (MAB) Programme, with a variety of stakeholders within and outside Malaysia. It also aimed to provide a platform to facilitate dialogue and enhance regional cooperation among Ramsar member countries.

Theme of the AWS Sabah 2011

Integrated Biodiversity Conservation: Linking Forests and Wetlands

Biodiversity and ecosystem conservation has received unprecedented international attention in recent years. The year 2010 was celebrated as the International Year of Biodiversity, and 2011 is celebrated for a number of international occasions:

1. Commencement of the United Nations Decade on Biodiversity (2011-2020)
2. The 40th anniversary of the Ramsar Convention
3. The 40th anniversary of UNESCO's Man and the Biosphere (MAB) Programme
4. United Nations International Year of Forests

The theme of the AWS Sabah 2011 is "Integrated biodiversity conservation: Linking forests and wetlands." Its primary objective was to enhance synergy in the delivery of the targets and goals of the Ramsar Convention, Convention on Biological Diversity (CBD), UNESCO's MAB Programme and United Nations Forum on Forests (UNFF).

The world entered into a new era of biodiversity conservation with the post-2010 conservation target called the "Aichi Biodiversity Targets" for the period 2011-2020, adopted at the 10th Conference of the Parties (COP 10) of the CBD in Nagoya, Japan in 2010. The UNFF, the focal point for the implementation of the International Year of Forests, stresses that forests and sustainable forest management can contribute

significantly to sustainable development, poverty eradication and the achievement of internationally agreed development goals such as the Millennium Development Goals (MDGs). The basic tenet of the Ramsar Convention and the MAB Programme to harmonise people and nature is also expected to contribute to achieving the MDGs and CBD's Aichi Biodiversity Targets.

Target and Objectives

Target

The target of the AWS Sabah was to identify practical strategies and mechanisms for enabling integrated biodiversity conservation with a focus on linking forests and wetlands.

Objectives

The objectives of the AWS Sabah were:

1. To bring together key stakeholders in Asia — forestry, wetland and biodiversity practitioners, policy and decision-makers, and the business sector, among others.
2. To discuss issues related to biodiversity conservation in forest and wetland ecosystems.
3. To promote understanding and awareness of the importance of forest and wetland ecosystems for human well-being.
4. To share knowledge and experiences on practical, integrated approaches for the conservation of forest and wetland ecosystems, e.g. river basin approach, regional cooperation, ecosystem approach, etc.
5. To determine a set of practical actions for integrating biodiversity conservation in forest and wetland ecosystems in the Asia region, in line with global objectives under the CBD, Ramsar Convention, UNESCO's MAB Programme and UNFF.

Results

Asian Wetland Symposium Sabah was held from 18 to 20 July 2011, at the Magellan Sutra Resort, Kota Kinabalu, Sabah, Malaysia. A total of 56 papers and 10 posters were presented, critical issues were discussed in the 7 sessions; as a result, the Sabah Call for Action was adopted as a collective voice of the 324 participants from 24 countries.

In conjunction with the symposium, Tanak Wetlands Camp, children's camp to learn about wetlands, were held with students from Malaysia and Japan. Also, excursions to Kota Kinabalu Wetland Centre and to Klias Peat Swamp Forest were held.

Sabah Call for Action
Integrated Biodiversity Conservation: Linking Forests and Wetlands

Asian Wetland Symposium (AWS Sabah 2011)
Kota Kinabalu, Sabah, Malaysia, 18-20 July 2011

The world entered into a new era of biodiversity conservation with the adoption of the Strategic Plan for Biodiversity 2011-2020 and the "Aichi Biodiversity Targets" at the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD) in Nagoya, Aichi Prefecture, Japan in October 2010. These targets are expected to be achieved during the United Nations Decade on Biodiversity (2011-2020). The United Nations Forum on Forests (UNFF) recognises the significant role that sustainable forest management has in development, poverty reduction and the achievement of international aspirations, such as the United Nations Millennium Development Goals (MDGs). The basic tenet of the Ramsar Convention, the wise use of wetlands and their resources, identifies their importance in supporting human well-being.

Enhancing synergy in the implementation of the CBD, the Ramsar Convention on Wetlands, and other initiatives such as UNESCO's Man and the Biosphere (MAB) Programme and the UNFF's Non-legally Binding Instrument on All Types of Forests is critical to achieving the "Aichi Biodiversity Targets" and the MDGs. Exploring ways to facilitate such synergies was thus a key aim of the AWS Sabah 2011, which coincided with the 40th anniversary of both the Ramsar Convention and UNESCO's MAB Programme, and the United Nations International Year of Forests.

Water, through the natural infrastructure provided by wetlands, is one of the main unifying factors for these international conventions and initiatives. In the face of increasing pressures on water quality and quantity caused by the continued degradation and loss of wetlands and existing and emerging challenges such as climate change, there is a need for better integration of such initiatives at the local, national and regional levels, and to identify innovative approaches for sustainable development, financing, human well-being and biodiversity conservation.

The 324 participants of the AWS Sabah 2011 identified a number of strategies and mechanisms that should be taken into consideration in order to address these challenges, and propose that policy-makers and decision-makers and wetland user groups give priority attention to the following:

1. Promote integrated management systems that incorporate socio-economic priorities, the rights and responsibilities of local communities, and innovative technologies and approaches in the restoration and conservation of forests and wetlands. Encourage the application of land and seascape planning tools such as UNESCO's MAB Programme to integrate human dimensions in the conservation of biodiversity in forests and wetlands.
2. Undertake or update national wetland inventories and conduct research on issues related to forests, and use these to guide landscape planning and decision-making processes related to the utilization of wetland and forest resources.
3. Develop more synergy and coordination in the management of forests and wetlands through greater cooperation at the national level, e.g. between the National Focal Points for the Multilateral Environmental Agreements (MEAs) and UNFF.

4. Mainstream forests and wetlands conservation into national and local planning processes, such as poverty reduction strategies, economic development plans, climate change strategies, and disaster management plans. Give priority to ensuring that revisions of National Biodiversity Strategy and Action Plans (NBSAPs) incorporate the conservation and wise use of wetlands.
5. Promote investments in forest and wetland conservation through funding mechanisms and initiatives such as the regional development banks and the proposed Green Climate Change Fund (GCF) of the United Nations Framework Convention on Climate Change (UNFCCC), and encourage investments in applied research programmes to provide sound scientific information and tools.
6. Enhance partnerships with and investments by the private sector in forest and wetland conservation efforts, including the development of sustainable business strategies.
7. Incorporate the values of forest and wetland ecosystem services and the economic costs associated with forest and wetland degradation and loss in financial, economic and investment planning and policies. Use economic and financial tools, e.g. payments for ecosystem services (PES), biodiversity offsets and environmental-fiscal reforms to provide incentives for the conservation of forests and wetlands.
8. Recognise the natural and cultural capital provided by forests and wetlands to support livelihoods in order to meet the daily needs of local people and rural communities.
9. Strengthen existing Communication, Education, Participation and Awareness (CEPA) programmes to empower specific target groups such as communities, youths, educators, business people, decision-makers and the media to take effective actions for forest and wetland conservation. Recognise the importance and effectiveness of involving the young generation in wetland CEPA activities.
10. Ensure that planning and research processes integrate cultural and heritage values, traditional ecological knowledge (TEK), traditional landscape approaches such as the *Satoyama* Initiative, and local initiatives such as the *Tagal* system in Sabah in the conservation and wise use of forests and wetlands.

The AWS Sabah 2011 was hosted by the State Government of Sabah, in cooperation with the Ministry of Natural Resources and Environment Malaysia, the JICA-Bornean Biodiversity and Ecosystems Conservation (BBEC) Phase II Programme, Universiti Malaysia Sabah, and Ramsar Center Japan.

The participants of this meeting seek the assistance of the Government of Malaysia and the Ramsar Secretariat to convey the "Sabah Call for Action" to the Asia Regional Ramsar Meeting to be held in Jakarta in November 2011, the 11th Meeting of the Conference of the Contracting Parties to the Ramsar Convention on Wetlands to be held in Romania in June 2012, and the 11th Meeting of the Conference of the Parties to the Convention on Biological Diversity to be held in India in October 2012.

END

Session Summary Report

Session 1: Ramsar and CBD

Introduction

Session 1 highlighted the key principles of the Ramsar Convention and the CBD and demonstrated the link between these two important international treaties on wetland conservation. Major issues in their implementation at national and local levels were highlighted through several case studies from different context of governance. Nine papers were presented by authors of different background and experience in which the important points are summarized below.

Main points of the presentations and discussions

Wetlands are an important natural infrastructure that covers a wide range of water related ecosystems, from glacial lakes to rivers, marshes, lakes, oasis and rice paddies, to coastal habitats such as mangroves, coral reefs and seagrass beds. In reality, such different wetlands do not exist in isolation but in many cases, they co-exist with economic development agenda initiated by relevant local authorities. Nonetheless, many stakeholder groups who play a role in the use and management of wetlands especially at the local level, are still not aware of the full range of benefits that wetlands provide and therefore, the important need for the conservation and wise use of wetlands. As a result, the implementation of economic development policy has ignored the importance of wetland conservation to a certain extent.

Many of the environmental (e.g. climate change, biodiversity conservation) and social (e.g. lack of an adequate supply of freshwater water) challenges facing the world today are interconnected and the sustainable management of wetland and water is increasing being seen as being able to contribute towards many addressing many of these challenges. It was also clear that various international initiatives such as the Ramsar Convention, CBD and MAB are reinforcing rather than competing in wetlands conservation efforts. Although each initiative has its own targets and priorities, they share a common vision that is to ensure biodiversity is sustainably managed and developed.

To fully optimize the benefit from such international initiatives, the governance of multi-level conservation policy (international, regional, national and local) would be one of the critical factors that need to be addressed. How policy of wetland conservation is translated into strategic action plans and how such plans are effectively implemented under such influence of different level of governance would therefore determine the success of wetland conservation efforts.

Issues and concerns

- At the government level, Focal Points for the Ramsar, CBD, World Heritage, MAB etc. may often be in different divisions of the same ministry, or even in different ministries. Lack of communication between such the Focal Points will therefore hamper effective

implementation of wetland policies and strategies.

- At the site level, conflicting obligations of different designations (e.g. Ramsar Site, national park, MAB site etc...) negatively affect effectiveness of the implementation of wetland conservation efforts.

Recommendations and conclusions

- Develop a strong coordinated decision making mechanism involving various ministries and organizations for the wise use and conservation of the site by establishing an institution that acts to develop and foster strategic interactions among such organizations and ministries.
- Develop mechanisms to improve cooperation and co-ordination at the site level.
- Identify relevant stakeholders and develop mechanism to encourage cooperation and coordination of their activities.

List of papers

Bridging Climate Change with the Ramsar Convention on Wetlands and the Convention on Biological Diversity

Amado Tolentino (Philippines)

Interfacing the Climate Policy to the Biodiversity Conservation: Wetland Management and the Ecosystem Approach

Tsutomu Furukawa, Hiroji Isozaki (Japan)

Conservation of Globally Significant Biodiversity of an Ecologically Critical Island, Bangladesh - An Example of Effective Community Participation

Tapan Kumal Ghosal (Bangladesh)

Policy Decisions and Their Consequences: The Bundala Wetland Case Study, Sri Lanka

Nishanti Perera, Sarath Kotagama (Sri Lanka)

Impact of Climate Change on the Biodiversity of Chilika Lagoon (Ramsar Site), India

Jnanendra Rath (India)

The International Conventions of Wetlands and Their Roles in Integrating Biodiversity Conservation of Wetlands in Malaysia

Irini Bt Ibrahim, Abdul Haseeb Ansari, Ismah Bt Ismail (Malaysia)

Wise Use of Algae of East Calcutta Wetland (Ramsar Site) as a Candidate for Resource Recovery Systems Leading to the Livelihood of Stakeholders of East Calcutta Wetland

S.Mandal, J. Rath, S. Ray (India)

Vulnerability and Resilience Assessment of Tubbataha Reefs Natural Park, Cagayancillo, Palawan, Philippines

Ma. Theresa R. Aquino, Rowell C. Alarcon, Maria Retchie C. Pagliawan (Philippines)

JICA's Assistance to Strengthen a Coordinated Decision-making Mechanism as an Institutional Framework for Advancing Practical Implementation of the CBD, Ramsar & MAB in Sabah, Malaysia

Motohiro Hasegawa (Japan)

Session 2: Regional Approach to Advance the Implementation of Ramsar and CBD

Introduction

Materials in Session 2 represented nine papers that brought up cases ranging from internationally shared wetlands, long-term ecological study involving many countries, sharing of database, joint surveys, international research and financial assistance in specific regions and site or country specific actions and academic research. Some material even went further to look at wetlands from health and economics points of view. Models for regional approach in conservation were also presented, which could serve as examples for new initiatives. Without doubt, the session demonstrated the need for the wider cooperation to enhance the implementation of the Ramsar and CBD conventions.

Main points of the presentations and discussions

Session 2 identified seven important points to be recorded in this report as follows:

- Inventory and sharing of data will continue to be important especially in between range states that share close proximity of regionally and ecologically similar settings.
- Long-term research and monitoring provide opportunities for examination of trends over time and encouraging better and continuous cooperation between scientists and policy makers.
- Site-specific activities, when properly implemented, will strengthen public awareness through education, training, recreation and, more importantly, ecological services provided by the managed wetlands.
- Research must continue to become the backbone in the management of wetlands.
- The issue of global warming and the rise of sea levels will become very important. Submerged drylands will increase in size and might push further inland opening possibilities for the rise of mosquito-borne diseases e.g. malaria, dengue and chikungunya.
- Indiscriminate use of pesticides will have disastrous backlashes in that it results in more pesticide-resistant strains of pests, declining diversity of non-target species but without any increase (even decreasing yields) of crops.
- Existing platforms that enhance regional cooperation should be used aiming for the conservation of habitats for migratory wildlife.

Issues and concerns

Whilst the main points generally touch several issues, the main concerns have been about threats as follows:

- The rise of sea levels will have major backlashes including the spread of diseases into previously unreported areas. Time is a factor that should allow for the learning process on the possibility of adaptations to such major change.

- Loose control over the use of pesticides in production wetlands will gradually but imminently reduce biodiversity of life forms and increase resistance of pests. Ways to better control pests without detrimental effects on the ecosystem must be developed.

Recommendations and conclusions

It is recommended that for the implementation of the Ramsar and CBD conventions in the wetlands, assistance, research, good practices and information exchange should adopt a regional approach. The Asian Wetland Symposium and similar platforms must be used to enhance this process. This session saw that in several range states, regional approaches have been taking place and have shown encouraging results.

List of papers

Himalayan Wetland Inventory: A tool to Understand Wetland Ecosystem at Basin Level
Bishnu B. Bhandari (Nepal)

North-Central Selangor Coast and Bako-Buntal Bay: Conserving Potential Flyway Sites in Malaysia
Yeap Chin Aik (Malaysia)

Global Warming, Rising Sea Levels and Mosquito Vector Control in Coastal Wetlands of Southeast Asia
Ranjan Ramasamy, Pavillupillai J Jude, Sinnathamby N. Surendran (Brunei)

Third Country Training Programme under Bornean Biodiversity and Ecosystems Conservation Programme Phase II-An Example of Regional Approaches to Advance the Implementation of the Ramsar and CBD
Naoto Sakonju (Japan)

Ramsar Convention, Rice Production and the Need for Wetland Conservation: New Concerns about Pesticides
George Paul Lukacs (Australia)

Conservation and Sustainable Use of Biodiversity in the Mekong-Chao Phraya Region -Basic Study on the Aquatic Fauna and Flora and Conservation Activities by Local Stakeholders-
Yasuhiko Taki, Kenzo Utsugi, Koichi Shibukawa, Makoto Komoda, Yoshihiro Natori (Japan)

Mangroves Restoration in Kaohsiung Jhong-Dou Wetland Park, Taiwan
Jung-Yi Lai, Chung-Twan Kuo, Kenji Horigome, Chen-Meng Kuo, Tsai-Hsun Ho, Tang-Yang Wu (Taiwan)

The Effect of Coastal Erosion on Growth of Mangrove Vegetation at Tg. Piai, Johor, Malaysia
Ahmad Shahrol Nizan Bin Abdul Muthalib, Maryati Mohamed, Alona Linatoc, Hasnizam Bin Hamzah (Malaysia)

Site-specific Education Collaborating with Ecological Research Network in Upo Wetlands: Korean National Long-term Ecological Research
Ji Yoon Kim, Gu-Yeon Kim, Seong-Bo Kim, Ran Young Im, Gea-Jae Joo (South Korea)

Session 3: Forests and Wetlands

Introduction

Session 3 of the Asian Wetland Symposium showcased that wetlands in Asia are dynamic, highly productive and valuable interface between land and water, and the integrity of this precious habitats is very much dependent on surrounding forest quality and land use patterns, and also the impact of socio-economic development in this fragile ecosystem. At present, wetlands are one of the most threatened ecosystems and most of Asian countries share common ecological consequence issues. Presentations from Malaysia, Australia, India, Japan, Philippines and Singapore indicated that restoring and conserving forests and wetlands through an integrated management system with the involvement of local and international participation by incorporating new and relevant research findings and technologies, and adopting socio-economic and political approaches are necessary to ensure cost effective and sustainable development of the ecosystem.

Main points of the presentations and discussions

- Large number of privately owned wetlands in Australia require rehabilitation effort for improvement of the wetland ecosystem function. Two successful case studies with active community participation from Australia, i.e. the removal of water hyacinth and feral pig have been discussed.
- Chilika Lake is a good-practice showcase of Ramsar awarded site in 2002 as a result of adopting several application of Ramsar guidelines, and the use of the Convention's tools and approaches, to address complex issues of lake restoration and catchment management. The local action demonstrates how restoration of the wetland ecosystem with active community participation can have positive impact on the biodiversity and significantly improve the livelihood of the local communities.
- In Sabah, Malaysia, important wetland type is widely recognized but there is still insufficient technology and public infrastructure to realize the full potentials and benefits of conservation and rehabilitation of mangrove ecosystems in the region. The Sabah experience in rehabilitation and conservation of the mangrove ecosystem would be the focus to sustainably manage the resources.
- The majority of people in Bangladesh heavily depended on their wetland for their livelihood, but this high conservation value ecosystem is under threats due to lack of sustainable socio-economic development practices and also the inevitable impact of climate change. Climate change and community-based adaptation approach has been taken into consideration in managing and utilizing of wetlands in Bangladesh.
- The case study progressive approach of fishers-based forest conservation in Saroma Lake, Japan, demonstrates the important relationship between forest enhancement practices and the stable fish production in a local context. This valuable information can be useful in mainstreaming fisheries management into forest conservation.
- A study of the status of the mangroves in Quezon, Palawan was conducted to determine the total area covered with mangroves, species composition and mangal community structure. Furthermore, human impact on mangrove stands in the municipality of Quezon, Palawan was also assessed.

- The scientific information and uncertain historical trends on mangrove ecosystem may contain a potentially huge and unverifiable range of uncertainty that may not be sufficient to support mangrove conservation policy. Examples and causes of these huge uncertainties regarding trends in mangrove area throughout the tropics were discussed, and potential solutions to better increase information reliability were proposed.
- Studies on canopy gap in the natural regeneration of mangrove forests in Moreton Bay, Southeast Queensland, Australia and in Matang mangroves of Perak, Malaysia that focus into gap-phase dynamics were presented.

Issues and concerns

- Wetland rehabilitation is a major environmental issue in most tropical countries.
- The increase in land degradation has brought a decline in productivity, both in Chilika Lake and the drainage basin that adversely affected the livelihood of the surrounding local community.
- The mangrove conservation in Sabah faces a number of issues and challenges; such as uncertainty in the security of the resource (examples; encroachment, illegal harvesting for mangrove barks), competing land-use, and complexity of socio-economic development, resource utilization, funding, and maintaining the health of the mangrove ecosystem.
- Strategy for successful adaptation to address the climate change issues relating to conservation of wetland in Bangladesh.
- The loss of forested area in Saroma Lake basin has impacted fishery resources.
- The understanding of mangrove forest composition and stand quality is still lacking to support the credible mangrove management plan for Palawan, Philippines.
- Methodology, robustness, poor accessibility and traceability, data assumptions and propagation are a problem in development of mangrove conservation policy.
- The understanding on the natural disturbances and canopy gap formation in mangrove is still lacking.

Recommendations and conclusions

- A low-cost management with the involvement of local community is essential for successful wetland restoration and its sustainable management in Australia.
- By instilling stakeholder participation from the beginning, it was a perfect example of mainstreaming the notion of "*ecosystems as legitimate user of water and the strong link between ecosystem and livelihood.*" Wetland management needs adaptive institutions with ability to work at multiple scales and engage with diverse stakeholders.
- The cooperation and co-ordination (integration) of all agencies, civil society and other stakeholders are highly essential for the sustainable-use and conservation of mangrove ecosystem. Furthermore, efficiency and cost effective implementation of mangrove rehabilitation through multi-stakeholders participation require further enhancement in the conservation effort.
- Climate change adaptation in wetland ecosystem should be incorporated into a system of integrated land, water use and socioeconomic of the country. Policies, strategies, and management plans for sustainable use and conservation of wetlands of Bangladesh must be

based on solid knowledge and understanding of their ecological and socioeconomic functions and processes.

- Forest quality enhancement through forest rehabilitation exercise can have positive impact on the fishery and lake ecosystem as a whole. The stakeholders' responsible role and involvement by maintaining the vegetation growth and quality of the lake-basin are crucially important to ensure water retention for sustainable fisheries production and profitable aquaculture practices.
- For effective mangrove management to be implemented in Palawan, Philippines, credible information on composition and quality stand, including human impact on mangrove is highly essential.
- Increase transparency, traceability, collaboration, adaptation and utilization of new technologies are highly essential to bridge the gap.
- The understanding of natural regeneration and the occurrence of canopy gaps are important in order to refine mangrove forests management practices.

List of papers

Rehabilitation of Wetlands through Low-cost Community-based Management: Case Studies from Australia
Damien Burrows (Australia)

The Restoration of the Chilika Lake, a Coastal Wetland in India: The Achievement of Combined Integrated Water Resources Management and Local Governance through Enhanced Community Participation
Ajit Kumar Pattnaik (India)

The Challenges of Mangrove Forest Conservation and Rehabilitation in Sabah, Malaysia
Tangah, J., Kugan, F., Roslan, M. J., Chung, A. Y. C (Malaysia)

Incorporation of Climate Change Adaptation for the Betterment of Wetlands in Bangladesh
Sanowar Hossain, Tapas Ranjan Chakraborty (Bangladesh)

Linking Forests and Fisheries: Fishers-based Forest Conservation in Saroma Lake, Japan
Shimpei Iwasaki (Japan)

Ecological Status of Mangrove Forest for Conservation Planning and Management in Quezon, Palawan, Philippines
Eunice Mora Becira (Philippines)

Uncertainty in 'Evidence-based' Policy- A Strategy to Improve Baselines for Mangrove Conservation
Daniel Friess, Edward L. Webb (Singapore)

Canopy Gaps and the Regeneration of Mangrove Forests
A. Aldrie Amir (Malaysia)

Session 4: Business and Biodiversity for Wetland Conservation

Introduction

Session 4 highlighted the importance of broadening partnerships in securing financial sources for enhancing wetland and biodiversity conservation. A total of seven papers was presented in this session which showcased various innovations and case studies that are taking place in some Asian countries. These innovations can be applied to other wetland areas and be further strengthened through fostering positive dialogues and partnerships among stakeholders, creating an enabling environment by getting the markets and incentives right and also through the sharing of best practice experiences among wetland managers.

Main points of the presentations and discussions

As a biodiversity rich ecosystem, wetland provides food, fodder, habitat, and a safe breeding ground for various aquatic and terrestrial flora and fauna. Such rich ecosystem must be included in protected area network to protect its biodiversity. Wetlands also contribute societal and economic benefits through tourism, agriculture, fisheries and other business activities. As a result, wetlands are facing the anthropogenic pressures that have led to significant environmental degradation, adversely affecting its biodiversity. It is therefore imperative that every effort must be taken to minimize impacts of business activities on wetland ecosystems and striving to preserve biodiversity by incorporating lessons from nature in technological development, nature conservation, and providing products and services that contribute to the environment.

Other examples of business activities that are adversely affecting wetland biodiversity are palm oil plantation expansion, burning and draining of large tracks of peat swamp forest in Borneo. Affluent discharge from palm oil mills is also polluting the rivers. Environmentally friendly methods including for eco-tourisms and palm oil industry should be considered to achieve a win-win situation between the biodiversity and the industry. One such example is the pilot study of a zero discharge from palm oil mill for biodiversity conservation in Kinabatangan, Sabah.

Issues and concerns

Wetland managers have two major challenges: conservation of biodiversity and sustainable use of biodiversity for livelihood. Sometimes these two issues become conflicting due to human interference.

Recommendations

- Minimizing environment impact of business activities on the various ecosystems through nature preservation activities and raising the level of environmental awareness of employees of business entities.

- Habitat restoration is one of the major interventions to create a favourable situation for the biodiversity conservation.
- Consider any environmentally friendly methods for doing business activities in eco-tourisms and palm oil industry.

List of papers

Investing in Wetland Conservation: Economic, Financial and Business Approaches
Lucy Emerton (Sri Lanka)

Management of Wetland Protected Area for Wildlife Conservation in Sabah
Laurentius N. Ambu (Malaysia)

Wise Use of South Kalimantan Wetland: Spatial Delineation and Regional Economy Model Approach
Yus Budiyo (Indonesia)

Ecotourism: Business for Wetland and Biodiversity Conservation
Ana Maria Tolentino (Philippines)

Economic Values of Biodiversity Related with Biodiversity Offsets, REDD+, and PES
Watanabe, M., Arongna, Kitano, R. (Japan)

Sekisui Chemical Co., Ltd, Activities for the Promotion of Consideration of Biodiversity
James McGill (Japan)

Zero Discharge from Palm Oil Mills for the Biodiversity Conservation around the Kinabatangan
Yoshihito Shirai, Mohd Ali Hassan (Malaysia)

Some Approaches on the Conservation and Enhancement of Biodiversity in the Oil Palm Plantations in Sabah
Hoong Hak Wan (Malaysia)

Session 5: CEPA for Wetlands and Biodiversity

Introduction

Session 5 of the Asian Wetland Symposium showcased various tools and strategies for practical environmental awareness-raising, network building and capacity development. Presentations from Malaysia, Japan, India, Korea and China showed that Communication, Education, Participation and Awareness (CEPA) Programmes for biodiversity conservation including wetlands in Asian countries are actively implemented for various stakeholders.

Main points of the presentations and discussions

- The three key aspects that need to be addressed pertaining to effective and efficient ways to communicate the importance of biological diversity to decision-makers and the society are: the audience, the message and the manner in which the message is communicated.
- The importance of citizen volunteer groups is highlighted in the presentation on Wetland Guide Chiba, in which the group guides citizens by providing field trips to raise awareness and support wetland conservation. Other activities include supporting school education, organising seminars and exhibitions, as well as providing training to members.
- As a student volunteer group in nature conservation in Japan, the Field Assistant Network is a group that bridges students and conservation groups. Its strength lies in its young energy for conservation and network-style organisation.
- KODOMO Biodiversity is a series of wetland programmes for children aged 10-18 years old. It provides unique opportunities for children to deepen their understanding to biodiversity, protect living things from extinction and to promote biodiversity conservation.
- The Centre for Environmental Awareness and Education under PALLISHREE, a grassroot level NGO in India, carries out environmental awareness and education among stakeholders around Chilika Lagoon. It focuses on biodiversity conservation and organises various activities such as teachers' workshop, international workshop, publication of newsletter, publication of books, EE and Awareness Kit, Audio visual materials, posters, essay, painting, debate competition, cultural functions, street theatre, nature camps and training of trainers.
- Gyeongsangnam-do province advocating Green City and Capital of Environment, has over 300 wetlands including internationally valuable wetlands such as Upo Wetland and Junam Wetland. Its eco-programmes are related to wetlands e.g. bird watching.
- Various activities are carried out by ATREE's Wetland Conservation Team for the sustainable use of Vembanad Backwaters of Kerala Socio Ecological System. These include interventions to wetland related policies, strengthening the capacities of local communities in governance and wise use of wetlands, raising awareness of the values of biodiversity, ecosystem goods and services, lessons on water for students and Conservation Information System.
- A project initiated in Dashanbao area aims to protect cranes and their wintering habitat, as well as to enhance management of wetlands by demonstrating improvement of livelihood with community involvement. The project involves building methane generating pit, improvement of sanitary and provision of alternative fuel source for farmers. A network on black-necked crane conservation is also established. Studies on cranes population and public awareness activities are also carried out.

Issues and concerns

- Most of the time, audience for education in biodiversity conservation is heterogeneous, and therefore messages must be customised to suit these groups. For people to be interested in biodiversity conservation, they must clearly understand how it will address their basic needs. Emotional message is more effective than factual message. Messenger's credibility is also important.
- Chilika Lagoon which was designated as a Ramsar site in 1991, faces threats such as increasing siltation, decrease salinity, freshwater weed infestation and massive deforestation. One of the approaches taken to manage the challenges is through environmental awareness and education.
- Issues faced in Gyeongsangnam-do province in terms of eco-programmes are lack of direct economic benefits and insufficient overnight programmes.
- One of the differences between eco-tourism in Korea or Japan and South-East Asia is that generally, local communities lack the attachment or feeling of belonging to wetlands.
- Vembanad Backwaters of Kerala faces conservation issues and threats such as physical barriers, pollution from industries, lime shell mining and unregulated tourism. Management issues faced are multiple user groups and multiple agencies with little co-ordination.
- Generally, Communication, Education, Participation and Awareness (CEPA) programmes for biodiversity conservation worldwide face the issue of maintenance and sustainability in the long run.

Recommendations and conclusions

- CEPA Programmes, especially for wetlands, in Asian countries are actively carried out especially at grass root levels.
- Networking is extremely vital for any group such as communities, youths, educators, business people, government bodies, NGOs, etc. The power of networking enables stakeholders to communicate better, share resources and strengthen each other.
- Conveying the right messages to the right audience or target group, and the manner the message is delivered is highly important to ensure effectiveness and efficiency of communication.
- Biodiversity conservation matters especially wetlands should be given a high priority in everyone's agenda, and therefore, sufficient funding should be allocated.
- Credible source of information and data should be well-developed to enable sound decision-making.

List of papers

Communicating the Importance of Biological Diversity: Are We Doing It Right?
BalamuruganGurusamy (Malaysia)

Citizens Guide Citizens in Wetlands-Wetland Guide Chiba
Hitoshi Akutsu, Hiroshi Iizuka, Tomoko Ichikawa, Fumiko Oyama, Wetland Guide Chiba (Japan)

Field Assistant Network -20 Years of Students' Activities Suggest a Unique Model of CEPA

Ai Kamezaki, Akane Mitsuke, Aya Genseki, Hideaki Okada, Hiroyuki Yamashita, Keisuke Hasegawa, Kouichi Shimatani, Marina Fukasawa, Miki Matsushita, Misato Ohara, Natsumi Hyodo, Narumi Sato, Tasuku Sato, Tatsumi Abe, Takamasa Shirai, Tomoya Oshikami, Yuya Obinata (Japan)

KODOMO Biodiversity: Children's Participation in Effective Implementation of the Convention on Biological Diversity

Daisuke Nakamura, Munetsugu Kawashima, Reiko Nakamura, Takayuki Musha, Tomoko Ichikawa (Japan)

Environmental Education through CEAE is a Model to Enhance the Level of Awareness among the Stakeholders of Chilika Lagoon

Durga Prasad Dash (India)

Wetland Awareness and Ecotourism Possibilities Using Wetlands in Geongnam Province (South Korea)

Yuno Do, Hang-Ah Kim, Hyunbin Jo, Maurice Lineman, Gea-Jae Joo (Republic of Korea)

Furthering CEPA: Applying Principles of Deliberative Democratic Practices for the Conservation and Sustainable Management of Heavily Used Vembanad Backwaters of Kerala

Priyadarsanan Dharma Rajan, Siddhartha Krishnan, Kiran, M.C., Jojo, T.D. (India)

Enhancing the Conservation of Black-necked Crane through Community Involvement and Poverty Reduction

Chen Jing, Chen Kelin (China)

Session 6: Cultural Heritage in Forests and Wetlands

Introduction

Session 6 of the Asian Wetland Symposium in Sabah re-emphasized the importance of local communities, their cultural heritage and traditional ecological knowledge to the conservation and wise use of forests and wetlands. The speakers and the discussions during the session pointed out the need for integrated conservation approach on forests and wetlands and in ways that do not separate people from their environments.

Main points of the presentations and discussions

- Values of cultural heritage to the management and wise use of wetlands
- Integrating local and indigenous knowledge for conservation of forests and wetlands
- Examples of biocultural heritage conservation in local areas in Malaysia and Thailand
- On the creation of an inventory on the wetland culture and technologies in Japan
- Use of wetland artifacts as wetland educational tools
- Local ecological knowledge in a large proposed marine park within the Coral Triangle Initiative

Issues and concerns

- Local and indigenous knowledge or also known as traditional ecological knowledge (TEK) is the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings. TEK can make significant contributions to the conservation and the sustainable use of biodiversity, and thus, should be integrated in biodiversity conservation of forests and wetlands.
- There is a correlation between geographic distributions of cultural and biological diversity, globally as well as regionally. Asia and the Pacific is a region where areas of high biodiversity coincide with a higher concentration of distinct cultures. At the same time, Southeast Asia suffers from the highest rate of deforestation in the world, endangering species, landscapes, and knowledge in these areas. It is thus essential that biodiversity conservation efforts are undertaken in an integrated manner, in ways that do not separate people from their environments.
- It is important to conduct research, to document local and indigenous knowledge. Participatory action research (PAR) involves participation of local people in research, from design of the research itself, data collection and analysis, to the practical application of findings. Integrating local and indigenous knowledge through PAR can result in the development of local-level climate change adaptation strategies, which in turn would contribute positively to biodiversity conservation in forests and wetlands. Hence, PAR should be encouraged in research on the cultural heritage in forests and wetlands.
- It is also necessary for the TEK not to be taken out of its context, and to avoid romanticization of indigenous knowledge, as this can mislead and reduce its reliability.

- It is important to encourage collaborative efforts within and between local communities and stakeholders, not only to recognize the value of local and indigenous knowledge, but also to integrate it with scientific knowledge and into conservation strategies. Only through such efforts will be possible to conserve biodiversity in an integrated manner, in ways that benefit forests and wetlands, as well as communities.
- The biocultural view is based on the premise that diversity of life includes the human cultures and languages that have co-evolved with nature over time. This is exemplified by the cultural landscape at the Ulu Papar area in Sabah, Malaysia, where there is an inextricable link between the indigenous Dusun and their natural surroundings. The area is a priority for biocultural conservation in Sabah, and as an important part of the buffer zone of the proposed Crocker Range Biosphere Reserve.
- In the cultural forests within the riverine seasonally inundated forests of the Northeast of Thailand, the use of natural resources within cultural forests are very strict, ethical and economical, for only needed amount under strictly followed agreed rules, ritual traditions and ceremonies. Such community rules, in many cases, are stronger, more compliable and more effectively enforced than national laws.
- Rice fields and many other traditional agricultural landscapes in Peninsular Malaysia, which harbour important biodiversity such as birds, are gradually being encroached by rapid development for other land uses, threatening the biodiversity surrounding them. Therefore, awareness campaign, conservation efforts and strict regulation especially on pesticides use need to be implemented to develop a sustainable ecosystem that is both beneficial to human and wildlife communities in this area.
- There is currently an effort by stakeholders to engage local communities in the gazettelement process, including attempts to document and enhance community management processes within the proposed Tun Mustapha Marine Park in Northern Sabah, Malaysia (within the Coral triangle Initiative), which has more than 100 communities and 80,000 local residents who rely on the marine and coastal habitats for their livelihoods. This is in line with the Hanoi Call to Action, which is to encourage the documentation and use of local and traditional knowledge to enhance the management and protection of wetlands.

Recommendations and conclusions

- Traditional ecological knowledge (TEK) should be integrated in biodiversity conservation of forests and wetlands.
- Conservation efforts on forests and wetlands should be undertaken in an integrated manner, in ways that do not separate people from their environments.
- Participatory action research (PAR), which involves participation of local people in research, from design of the research itself, data collection and analysis, to the practical application of findings, should be encouraged in research on the cultural heritage in forests and wetlands.
- Collaborative conservation efforts between government authorities, the local communities and other stakeholders is important and should be encouraged, to not only recognize the value of local and indigenous knowledge, but also to integrate it with scientific knowledge and into conservation strategies, which will ultimately benefit forests and wetlands, as well as communities.

List of papers

Values of Cultural Heritage to the Management and Wise Use of Wetlands

Bishnu B. Bhandari (Nepal)

Integrating Local and Indigenous Knowledge for Conservation of Forests and Wetlands

Lisa Hiwasaki (Indonesia)

A Biocultural Heritage Conservation in Ulu Papar, Sabah: the Importance of Culture the Crocker Range Biosphere Reserve Nomination

Agnes Lee Agama, Jenny Sanem, Jamili Nais, Gary Martin (Malaysia)

Cultural Heritage in Riverine Seasonally Inundated Forests and Wetland Conservation in Thailand

Sansanee Choowaew (Thailand)

On the Creation of an Inventory on the Wetland Culture and Technologies in Japan

Tatsuichi Tsujii, Motokazu Ando, Yoshihiro Natori, Miki Sasaki, Koichi Sasagawa (Japan)

Birds of Traditional Landscape in Northern Peninsular Malaysia

Nur Munira Azman, Nurul Salmi Abdul Latip, Shahrul Anuar Mohd Sah, Nur Juliani Shafie (Malaysia)

Use of Wetland Artifacts as Wetland Educational Tools in NE Asia

Hogyum Joo, Maurice Lineman, Yuno Do, Ji Yoon Kim, Gea-Jae Joo (Korea)

Local Ecological Knowledge in the Proposed Tun Mustapha Park, a Priority Conservation Area of the Coral Triangle: Sabah, Malaysia

Kenneth Kassem, Rebecca Jumin, Suzianah Ramlee, Sofia Johari, Rejani Kunjappan (Malaysia)

Sabah Session: Wetland Conservation in Sabah - Many Players One Vision

Introduction

Sabah like other places in the world is blessed with various types of wetlands. These wetlands are being used for different purposes and to ensure their continuous wellbeing, and various wetland conservation efforts have been undertaken solely or jointly by the Government of Sabah, International and Local Non Governmental Organisations (NGO), and Local Communities. The Sabah Session shared some of these conservation efforts that are very diverse in terms of stakeholders, wetland types and approaches.

Main points of the presentations and discussions

- The Government of Sabah recognised that the State's natural resources that include wetlands is an important asset to the tourism industry, namely Eco-tourism.
- The "Tagal system" is a unique fish management system that is being practised by the local communities in Sabah. The system had since been recognised as a natural resources conservation system and is now being complimented through joint conservation efforts between the Government and the local communities.
- International NGOs that are involved in natural conservation projects including wetland conservation must be prepared for a long term commitment as experienced by WWF-Malaysia in the Kinabatangan-Corridor of Life (K-Col) project. The project that spanned over a period of twelve years from 1998 to 2010 is yielding results with the increased conservation activities by the wide spectrum of stakeholders within the K-Col.
- The Sabah Wetland Conservation Society (SWCS), a local NGO, that manages the Kota Kinabalu Wetland Centre (KKWC) located within the Kota Kinabalu urban area have successfully run the centre and achieved the society's objectives. The SWCS is now aiming to be self-sustainable financially and is also working towards designating the KKWC as a Ramsar site.
- Conservation and restoration works are being successfully carried out for the Klias Forest Reserves, a peat swamp forest, under the Sabah Forestry Department (SFD) according to a management plan developed through comprehensive study of the hydrological, ecological and social-economy aspect of the wetland.
- The acreage of marine parks in Sabah had increased substantially with the establishment of the Tun Sakaran Marine Park, with an area of 35,000 hectares, in 2004. Another significant increase will be the planned establishment of the one million hectares Tun Mustapha Marine Park. Unlike earlier parks, these marine parks are huge and consist of multiple stakeholders that include local communities that are mostly fishermen. To manage these marine parks, co-management mechanisms are being developed and business integrated financial mechanisms are being looked into by the managing agency, the Sabah Parks.
- The Rainforest Discovery Centre established by the SFD to implement environmental education (EE) has successfully conducted various EE programs for wetlands conservations despite facing challenges such as school children safety policies and financial constraints.

Issues and concerns

- Sustainable eco-tourism depends on the sustainable management of the State's natural resources.
- Increase funding is needed to enhance the "Tagal system."
- Wetland conservation projects may require a long period to yield results.
- Financial stability is essential for Local NGOs to be successful.
- The effective management and restoration of wetlands depend on the comprehensive understanding of the hydrological, ecological and social-economy aspect of a wetland.
- The management of present-day designated conservation areas involve co-management and business integrated financial mechanisms.
- Increase funding and overcoming safety issues of school participants are needed to enhance EE programs for wetlands conservations.

Recommendations and conclusions

- Manage the natural resources in a sustainable manner to sustain eco-tourism.
- Enhance the "Tagal system" with increase funding and adopt the system for the conservation and wise use of forests and wetlands.
- International NGOs should be prepared and plan for long term commitment in wetland conservation projects.
- Local NGOs need to strive to be financially self-sustainable.
- Management and restoration of wetlands should be based on comprehensive understanding of the hydrological, ecological and social-economy aspect of the wetland concerned.
- Co-management and business integrated financial mechanisms need to be developed for present-day designated conservation areas.
- Enhance the EE programs for wetlands conservations with increase funding and overcoming safety issues of school participants.

List of papers

Eco-tourism of Sabah: Video Presentation on Sabah Malaysian Borneo
Allen Chia

The Success of "Sabah Tagal System" (Co-management) in Reviving and Conserving Many of the Depleted Fisheries Resources in Sabah, Malaysia
Jephthrin Zefrinus Wong

WWF-Malaysia's Kinabatangan-Corridor of Life Project
Julia Majail, Rahimatsah Amat

Wetlands Conservation through Education and Restoration
Lee Ka Han, Bobby Alex

Conservation of Peat Swamp Forests in Sabah: the Klias Forest Reserve
Christopher A. Matunjau

Marine Parks of Sabah
FazrullahRizally bin Haji Abdul Razak

Wetland Education and Outreach — The Sabah Forestry Department's Experience
Bernadette D. Joeman, G. Hubert Petol

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4. Ramsar Center Japan (RCJ)

Partners and Supporters

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5. Ministry of the Environment, Japan (MOE)
6. Nippon Keidanren Nature Conservation Fund (KNCF)
7. Sabah Tourism Board
8. Sabah Wetlands Conservation Society
9. Scubazoo

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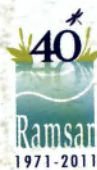
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Annex: Table of Contents of the Information CD (Attached)

1. Ramsar COP 9 Resolution IX.19
2. 2008 Hanoi Call to Action on Wetlands: Heart of Asia
3. Asian Wetland Symposium Sabah 2011 Programmes
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5. List of Participants
6. Aichi Targets
7. Changwon Declaration
8. Satoyama Initiative

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