

*8th ICRI East Asia Regional Workshop
3 – 5 September 2012
Jeju, Korea*

MEETING RECORD

(Last update: 5 October 2012)

Prepared by:

Note-taker: Meena Arivananthan with inputs from Sun Wook Kim.

The 8th ICRI East Asia Regional Workshop was held from 3rd to 5th September 2012, at the Ocean Suites Hotel in Jeju, Korea.

The objectives of the workshop were to:

- i. Review and evaluate the activities undertaken in support of the ICRI East Asia regional MPA network initiative between 2008 and 2012;
- ii. Discuss and determine ways to follow-up the ICRI East Asia Regional Strategy on MPA Networks 2010;
- iii. Discuss and determine the next steps for ICRI East Asia;
- iv. Discuss and determine the way forward of GCRMN East Asia; and
- v. Provide opportunities for networking and mutual collaboration among ICRI member countries, GCRMN Coordinators and other regional participants in East Asia.

The Workshop was co-organized by the Ministry of the Environment, Japan (MoE) and the Korea Institute of Ocean Science & Technology (KIOST), in collaboration with the ICRI Secretariat. It was co-chaired by Mr. Yoshihiro Natori of the Nagao Natural Environment Foundation and Dr. Vo Si Tuan of the Institute of Oceanography, Vietnam. Technical support was provided by the Japan Wildlife Research Center (JWRC).

A total of 31 participants attended the Workshop, of which 25 were international participants and 7 were local participants (**ANNEX 1**).

The agenda for the Workshop is attached as **ANNEX 2**.

All Workshop material (copies of presentations, etc) was made available to participants on a memory stick provided at the close of the Workshop. The PDF of the presentations are to be posted on ICRIforum at: <http://earw.icriforum.org/EastAsiaRW2012-agenda.html>

Day 1 (Monday 3 September 2012)

1. Opening Ceremony

1.1 Opening Remarks

The Workshop was officially opened by Mr. Tadashi Kimura of JWRC. He outlined the background and objectives of the workshop and expressed gratitude to the governments of Japan and Korea for hosting the workshop.

1.2 Welcome Address

Welcome addresses were delivered by the co-organisers of the Workshop:

- Mr. Naoki Amako, Assistant Director, Biodiversity Policy Division, Nature Conservation Bureau, Ministry of the Environment, Japan, expressed his thanks to KIOST for co-hosting the 8th ICRI East Asia Regional Workshop. He stated his interest in the outcomes of this workshop series and looked forward to hearing more about coral reef management.
- Dr. Woong-Seo Kim, Vice President, Korea Institute of Ocean Science & Technology welcomed participants to Jeju and highlighted the various MPAs and reef sites in Jeju. He thanked the Japanese Ministry of the Environment for organizing the workshop which he believed would greatly enable knowledge sharing in the region. He urged participants to network and strengthen their knowledge sharing beyond the workshop.
- Workshop co-chair, Mr. Yoshihiro Natori, who has been a co-chair in this series since 2008, noted that this final workshop is important in that it will be evaluating the past four years and looked forward to it. Fellow co-chair, Dr. Vo Si Tuan expressed his gratitude and appreciated how participants worked closely together in these workshops. He added that there were many achievements and even as the series ends, he looked forward to future collaboration with member countries.

2. Introduction

2.1 Workshop objectives, expected outcomes and procedure

Naoki Amako provided a brief overview of the background, objectives and topics included in the proposed agenda for the workshop.

The initiative on MPA Networks started in 2008, and the Regional Strategy was formulated in 2010. This workshop represents a milestone, whereby activities from 2008 to 2011 will be reviewed and evaluated. Participants will have the opportunity to learn about the Korean MPA management and coral reef activities.

As follow up to the Regional Strategy, it was suggested that there should be a focus on achieving the Aichi Biodiversity Targets. Adopted in CBD COP10 as part of CBD's Strategic Plan, 20 targets were identified to be implemented by either 2015 or 2020. Target 11 which is aimed at protecting at least 17% of terrestrial areas and 10% of marine areas are to be met globally and not necessarily by each Parties.

He also noted the changes within GCRMN on the issue of reporting on the status of coral reefs. Previously coordinated by Clive Wilkinson, who has now retired, GCRMN has a new management team. The new team proposes a new method of collecting data directly from coral reef researchers to formulate their status reports.

2.2 Adoption of the Agenda

There were no questions or suggested amendments; Participants agreed to adopt the proposed agenda (**ANNEX 2**).

2.3 Introduction of ICRI, current secretariat plan of action and the report of ICRI GM 27

On behalf of the current ICRI Secretariat (Australia and Belize), John Baldwin of the Great Barrier Reef Marine Park Authority (GBRMPA), Australia, provided a brief overview of ICRI and its role.

ICRI emerged out of the recognition that coral reefs were facing serious degradation globally. ICRI action is based on four cornerstones:

- Taking an integrated approach to coastal and marine management
- Developing capacity
- Targeting science and monitoring towards management needs
- Review

Being an informal partnership among governments, international organizations, scientific bodies and NGOs, members are able to share the best of collaborative experiences. With the East Asian Regional Workshop series coming to an end, he suggested that the outcomes and experiences of the initiative may be shared at the upcoming ICRI General Meeting.

The current ICRI Secretariat Plan of Action involves organizing the ICRI General Meeting in 2012 and 2013 focusing on community engagement and stewardship; and assessing the effectiveness of management. In addition, ICRI is exploring the use of social media to promote the ICRI message. Facebook and Twitter shall be used as vehicles to generate traffic towards the ICRI website: www.icriforum.org

Mr. Baldwin shared the outcomes from the 27th ICRI General Meeting in Cairns, Australia, which was held back-to-back with the 12th International Coral Reef Symposium. With a total of 50 participants from 24 countries, the meeting included an MPA Management Effectiveness Workshop. The focus was mainly on IUCN's continuous improvement model. They also included other models and case studies from around the world to let participants get familiarized to these models and the management effectiveness process.

He also shared news of their small project grant recipients: Nature Conservation Egypt, Kenya Marine and Fisheries Institute, Aleipata and Safata MPA Trust Society (Samoa) and Kousapni Palikir Community (Micronesia).

3. MPA and Coral Reef Conservation Activities in Korea

3.1 Current status of MPAs in Munseom Island off the South Coast of Jeju Island

Professor Kwang-Sik Choi of the Jeju National University presented an overview of MPAs in the Southern coast of Jeju Island which was designated as a marine protected area since 2002. The climate is temperate but warmer in the winter compared to Seoul, encouraging coral species growth.

The Munseom Island MPA is uninhabited, with high species diversity, including several thousand marine invertebrates, fish and seaweed. Of 97 coral species identified in the Korean waters, 65 species are distributed in Jeju, most are limited and occur in the MPA.

As sea temperatures get warmer, warm water species invade the water. Some areas of Jeju are fully covered by single species. Also, molluscs and other invertebrates are more readily observed e.g., blue-rimmed cuttlefish, probably due to warmer sea temperatures.

Activities in Munseom MPA range from leisure, sports, shallow water fishery, e.g., collection of shellfish by local women divers, as well as tourism. Conservation and management of the MPA is conducted by the Jeju provincial government, Segwipo City, Ministry of Land, Transport and Maritime Affairs (MLTM), and Ministry of Tourism. He noted however that a Visitor Center is much needed for the Munseom Island MPA to help manage tourism.

Discussions focused on several points:

- There was a query about the amount of fishing in the MPA and it was clarified that there was overfishing in the last 10 years, but now there is a quota for fishing with certain % per year and it is managed by 2 different ministries.
- A comment was made about livelihood issues faced by fishermen and macro-algae competing with corals. A group of fishermen in Jeju have shared their concerns about the increasing coral population. Fishermen have approached scientists in Nagasaki with queries on how to destroy corals. However the destruction of coral will not guarantee increase in macro-algae and they have been discouraged from harming the corals.
- On a query about MPA management and planning, it was pointed out that there was no real governing body or restrictions. There is monitoring, however, and government organisations monitor the site four times a year for species using microbiological tests. No law is enforced and management is organized by the MLTM, not the provincial government in Jeju.
- A suggestion was made to document the status of coral invasion at high latitude areas and their impacts on people's lifestyles and their reaction to corals and the various changes.

3.2 Activities for MPA in Korea

Dr. Heung-Sik Park, Director of Korea South Pacific Ocean Research Center, KIOST presented an overview of MPAs in Korea. Their MPA Advisory Council has been functioning since 2007. The monitoring projects include monitoring activities by experts and monitoring by volunteers and local community.

There are 15 MPA sites in Korea and only one is related to coral communities. The Korean government is trying to designate more MPAs. There are a few nominees encompassing several different types of habitats.

Land is managed by the Ministry of Environment while coastal areas and underwater habitats are managed by MLTM. Naturally, MPAs have to connect the land, coastal regions and underwater habitats, but logistically it is hard at the moment. Nevertheless established Korea MPA Center in 2010, n MPA policies may need revision considering the subject of rights between agencies related.

Discussions led to the following points:

- There was a query about whether the large tidal flat on the way from Incheon airport was an MPA. Being close to the city, the tidal flat has faced too much degradation, at least reclaimed up to 70% until now. NGO has been warning that there will be some conserved areas where it prohibits further reclamation and the government is beginning to see its importance.
- When asked how the government of Korea responds to recommendations such as conserving biodiversity in the event of development projects such as the navy base in South Jeju, it was explained that NGOs and scientists hope to talk about alternative strategies for the naval base construction. The government reports that the construction does not affect the coral population. More data is needed to show the effect, and not much can be done without it.

3.3 Community-based management approach in the Muan tidal flat (moved to 4th Sept)

Ms. Jiyoung Jang was supposed to give presentation under this agenda item, but due to delay of the flight, Co-chair decided to move this agenda item to first thing in the morning of Day 2 before Agenda #4

3.4 Discussion

Based on the two presentations, discussions led to the following points:

- It was highlighted that there were similarities between Japan and Korea. There is no such thing as “MPA” in Japan, but there are existing protected areas such as National Parks, Wildlife Protection Areas, etc. These designated areas serve different purposes. As long as these areas can overlap and the different conservation objectives are combined appropriately, the purpose of MPAs can be fulfilled.
- When asked how nominees for MPA were selected, Dr. Park clarified that the MPA Center collates data and provides recommendations for MPA. He added that it takes almost a year to get one MPA selected. Each ministry has its own interest and all stakeholders need to be convinced.
- With the five nominees for MPAs, a query was raised on who would govern them. There are several ministries involved including the Ministry of Fisheries, Ministry of Environment and MLTM. The main governing body is the MLTM, who takes into advisement the interests of the other ministries. Occasionally there is resistance from other ministries and the local government. In terms of regulation, it is mostly ad-hoc, and depends on specific events e.g., when oil spills threaten marine species in tidal flats.
- As an aside, it was noted that with the excitement to meet the Aichi Biodiversity Targets of 10% marine protected sites, the main idea behind it, i.e., to ensure the effectiveness of MPAs, may be overlooked and needs to be upheld.
- When asked about platforms to voice concerns, it was mentioned that there was one organization that provides space to monitor issues, listen to the public and communicate with NGOs.
- A comment was made about MPAs offshore to be more effective in management. With no mechanism to enforce the MPA, and it would be much costly to hire the law enforcers offshore, it may be more difficult to let people follow the recommended management practices.
- A comment was made on the needs of documenting high latitude corals and fishers wanting to destroy corals. This issue is new to ICRI and not widely recognized yet while it is something that this group can initiate and is achievable by voluntary contributions.
- **Action:** It was decided that Allen Chen to lead preparing an article on this topic for participant perusal by the end of this workshop on Day 3.

Poster presentation

An informal poster session was organized, and moderated by Tadashi Kimura. There were 5 posters presented during the coffee break. Each presenter was given five minutes to summarize the highlights of their poster. The presenters and title of their posters are as follows:

- Vibol Ouk: Community-based coral reef conservation in Cambodia
- Karenne Tun: Optimal point transition matrix for benthic coral reef surveys
- Nhung Nguyen: National park Singapore marine biodiversity
- Vo Si Tuan: Sustainable management of coral reefs in Ninh Hai District, Viet Nam
- John Baldwin: Demonstrating actions and advancements of ICRI

Field Trip

Field trip was organized by KIOST. Participants were taken to the Sunrise Peak which is a UNESCO World Natural Heritage Site and the Jeju Folk Village Museum.

Day 2 (Tuesday 4 September 2012)

Co-chair reviewed the proceedings from Day 1 and went on to introduce the main theme of Day 2

3.3 Community-based Management Approach at work in the Muan Tidal Flat

Ms. Jiyoung Jang, principal researcher at the Eco-Horizon Institute provided an overview of the Yellow Sea Ecoregion biodiversity. She highlighted the problems encountered in Korea such as the conflict between coastal conservation and unsustainable development policies, e.g., land reclamation.

In 1997, Korea became a contracting party to the Ramsar Convention and recognized the importance of Korean wet land including tidal flats, which made it easy for the government to consider protection of tidal flats. In MPA management of the Muan tidal flats, it was important to include the local community as they were the primary users of tidal flats. Management has proven successful, since MPA designated ,at least 20 species preserved comparing other area.

Discussion led to several points below:

- The Fisheries Agency in Japan has begun tidal flat conservation, and this would be a good opportunity for sharing and learning between Korea and Japan.
- When asked if there was any system to protect the right of fishers, it was found that only the locals catch fish, so there is no regulation. The locals believe there are plenty of resources in the sea. Collecting data on species catch is important however there is no study as yet. Each fisher catches his/her own yield, and it is not reported.
- While the perception of Koreans to tidal flats has changed, it was not too long ago that tidal flats were ignored and thought to be useless. So often, they were destroyed and reclaimed in the past. Now they see the value in terms of livelihoods, and the future. There is an obvious change in thinking, and now people oppose reclamation projects.
- When asked if there was regulation for octopus management, it was clarified that the local community regulates themselves, and catch was highly dependent on weather. It was noted that fisheries in Korea is not controlled, and anyone can catch and sell fish.
- To a question on the octopus origins, it was found that the mud octopus species is only found in West Korea. There was concern about whether the species risked being over-harvested. It was clarified that at present, fishers self-regulate by fishing in different areas in different seasons; they also select mature octopus for harvesting. A comment was made that an increase in tourism could increase the demand for octopus in the future, leading to the over harvesting of young octopus which would eventually cause a reduction in the octopus population.

4. Review and Evaluation of the 2008 – 2012 activities

4.1 Presentation of the draft report

Kohei Hibino presented highlights of the draft evaluation report on the 2008-2012 activities, including the achievements, lessons and future directions. The report represents a summary of activities from the last four years.

He provided some background information on the birth of the East Asia Regional Workshop series that derived from ICRI's Secretariat Action Plan 2005-2007, to revitalize ICRI's regional focus. Limited regional cooperation also signalled a lack of continuity. Following up after the ICRI General Meeting in 2008 where the concept of organizing a series of regional workshops was accepted, the first regional workshop was conducted in December 2008. A Provisional Plan for 2009-2010 was the outcome of the 2008 workshop.

Participants identified several objectives for their follow up activities:

- The need for a regional mechanism for cooperation and coordination
- Follow up the Provisional Plan 2009 -2010
- Reflect the priority recommendations to regional and national policies

A simple evaluation was made on whether the ICRI East Asia was able to achieve the objectives above.

Based on subjective assessment, a preliminary review during the 2011 workshop revealed approximately 5% completion of action items. He noted that there were several reasons for why some of the activities could not be implemented. The objectives were not clearly defined and there were too many expectations. Too many action items and lack of detailed planning were also considerations. As many of the activities were conducted in parallel, time could not be devoted appropriately.

The other achievements met by the initiative included:

- The promotion of ICRI and its objective in East Asia
- Enhanced regional dialogue and networking
- Strengthening of linkages between GCRMN and ICRI
- Provided learning opportunities

In subsequent discussion, the following points were noted:

- It needed to be stressed that the evaluation was a personal reflection of what the working group achieved on the action plans set forth. And while it provides a rough guideline, it would not be prudent to rely on this completely, and it would have to be used with caution.
- Considering the limitations on time, staff resources and funding constraints, it was suggested that the group view the achievements more generously. It was also noted that the secretariat committed their efforts to completing many of the activities suggested.
- There are pros and cons of deleting the summary table of evaluation with stars and need to consider it carefully.
- The current evaluation only shows what was achieved under this initiative and does not include what the countries have achieved, e.g., this group may not have achieved anything on MPA gap analysis but many of the ASEAN countries have achieved their national MPA gap analysis and regional analysis. So the achievements and efforts at national level should also be reflected.
- How ICRI drives its initiatives and follows up on action items needs to be tempered with available funding. The activities should have reflected this and been revised accordingly.

4.2 Discussion on follow up activities

Kohei Hibino briefly presented the status of the suggested activities in the regional strategy and what was suggested in the 2011 workshop. He emphasized that there are too many activities and that they need to be streamlined to what this group can realistically work on in the next few years. After presenting the status, he then proposed one achievable action that may fulfil some of the suggested activities under each objective. He noted that the Objective 1 which is about the regional mechanism will be presented at the end as it closely relates to other objectives.

4.2.1 Objective 2: Follow up of the Provisional Plan 2009-2010

- i. **Regional MPA database** via ReefBase was developed and updated through two phases, i.e., in 2005-2007 and 2008-2010. It provides various functions including online and

offline data management tools by countries separately, which provides incentives to use the system. The **coral reef habitat mapping** was another project that was completed in 2010 (launched in March 2011) and it covered coral distribution areas in East Asia, Micronesia and Melanesia. The **regional MPA gap analysis** was not completed, although the ASEAN MPA gap analysis was done for both marine and terrestrial areas. With the Coral Triangle Project, ReefBase is still updating the database until the end of the year. Moi Khim Tan who is no longer in the WorldFish Center has graciously offered her time to help countries update their data.

- ii. **MPA management effectiveness** with the focus being on identifying tools that may help countries that do not have systems in place. The working group developed a simple excel MACRO tool for this purpose which is accompanied by a report with recommendations. The group thinks their task is finished but the workshop on MPA management effectiveness (ME) which was one of the action items in the Provisional Plan has not been organized.

Discussions led to several points:

- **Recommendation:** The East Asian countries should develop their own national system of MPA ME by starting using basic indicators. There were already many books and guides on MPA ME, but they are too technical and scientific to be adapted for easy use. This could be accomplished using the developed models, if appropriate, with local adaptation and selecting indicators that work best for their MPA and local conditions. More sophisticated indicators can be developed over time.
- **Follow Up Action:** As a next step, it was suggested that the East Asia region organize a capacity building workshops on MPA database and MPA ME to achieve some of the suggested activities in the Regional Strategy and help countries develop their own systems; or adapt existing findings and tools as necessary.

4.2.2 Objective 3: Reflect priority recommendations to regional and national policies

The result of side event in the IUCN Asia Regional Conservation Forum in 2011 which derived from this regional strategy was reported. It was also announced that another follow-up side event would take place at the upcoming IUCN World Conservation Congress on 10th September. The concept of collecting and publishing the case studies on sustainable marine managed areas in the region was also introduced as suggested from the 2011 workshop and participants were asked to contribute in identifying appropriate case study writers.

Discussions led to the following points:

- Publications on sustainable marine management areas in East Asia should be made accessible and posted on websites.
- IUCN suggested respecting indigenous values of Indigenous and Community Conserved Areas (ICCAs) when considering MPAs.
- **Follow Up Action:** Continue activities as suggested in the Regional Strategy and from the 2011 workshop.

4.2.3 Objective 1: Regional mechanism for cooperation and coordination

The major emphasis of the Regional Strategy was on the needs of a regional mechanism as a platform for regional cooperation and coordination, and it was suggested that this be formed by linking the ICRI East Asia regional workshops, GCRMN regional network and the information sharing network. The regional strategy aimed to improve and maintain the regional mechanism via several action items.

Discussions led to the following points:

- The ICRI regional workshop series and the GCRMN network together should consider using a common information sharing network. It was suggested that the group use the existing GCRMN network, but this network mostly deals with information on coral reef monitoring, and may not be suitable for the group.
- A possible follow up would be a new series of capacity building workshops. However there were questions as to what the focus would be and the funding.
- Japan noted that they are currently asking for budget for the next fiscal year but unsure of the results. If same level of budget is successfully maintained, it would be possible to hold another workshop. The focus could be on MPA ME or other. External funding may be explored to support the workshops in the longer term.
- Coordination within governments requires structure, such as co-hosting of a secretariat that would spread the burden across the region. A rotating mechanism for co-hosting countries who also manage secretariat and funding is suggested. It was recommended that Japan be the lead, but partner with other ICRI member countries (in rotation) i.e., Indonesia, Korea, Philippines, Thailand, Vietnam. The MoE Japan however could not comment on such a recommendation at the moment as the future budget is unforeseeable.
- It was suggested that the next workshop be held in 2013, depending on the availability of the fund, and that it be focusing on how East Asian countries shall sustainably organize the regional workshop series by the country focal points. This workshop and the ME workshop could be held back-to-back as there may be some overlaps on the participants.
- The role of the GCRMN Node is important in this transitional state with one series ending and another beginning.

4.3 Latest progress and next steps on MPA networks toward achieving the Aichi Biodiversity Targets

4.3.1 Latest progress (East Asian countries)

The government representatives from the participating countries were asked to share their latest progress of MPA network development and what their next steps are toward achieving the MPA target in the Aichi Biodiversity Targets particularly the Target 11.

- **Japan** has begun identifying important marine areas since 2011 and will expand MPA areas upon completion.
- **Cambodia** adopted the National Strategic Planning Framework (2009 – 2019) which includes fisheries and conservation.
- **Thailand** has various types of MPA with a total area about 25% of Thailand's EEZ. However, some types of MPA overlapped together. There are many governmental organizations trying to cover many other resources (e.g. sea turtle nesting sites, irrawadi dolphin and dugong habitats, river-mouth and lake systems, seabird santuray, etc.) as new MPA. However, there is a need to improve the existing MPA ME, increase the local networks for management and implement ecological gap analysis.
- **Vietnam** established MPAs with local community support. The next step is to add 2 more to the 16 MPAs. Monitoring and research surveys have shown that there are 7 new species of coral identified.
- **Indonesia** has 3 stakeholders for MPA management: Ministry of Forestry, Ministry of Fisheries and Ministry of Environment (which has the coordinating role). Their problem is in the lack of community involvement which often leads to conflict.

4.3.2 Opportunities and challenges in achieving the 2012 MPA network target

Co-chair stated that Japan and Thailand are seemingly close to meeting the 10% target based on area cover. He asked for feedback from the other countries by sharing their key challenge and plans on how they would meet the target. Below summarizes the comments from participating

countries. For countries and regions where the government is not represented, Co-chair invited comments from participating GCRMN coordinators and other experts. Thus the comments below do not necessarily represent the government views:

Country	What are the key challenges?	What is planned to meet the 2012 MPA target?
Japan	Existing MPAs are managed by various bodies and not necessarily networked	Identification of important marine areas
Thailand	Local community involvement	Consider some other resources related to the sea for protection
Hong Kong	5-6 MPA sites identified but unsure of how to get stakeholders to agree	Monetary compensation is possible, but the government is not interested in putting this into practice
Taiwan	MPA coverage is 45% in Taiwan on paper, but reality is different; MPAs unsuccessful	No solution at present
Korea	Hard to reconcile with local community	KIOST may manage MPAs from 2013
Indonesia	Current MPA does not include community	Integrated policy with government, central and local community over short, medium and long term
Myanmar	Hardly any MPAs designated	Plans to designate 6% as MPAs
Vietnam	Political and financial difficulties; weak enforcement and high pressure on resources	Different approaches such as fishery refugia, biosphere reserve and local community engagement
Singapore	Limited sea area and the conflict with the shipping industry; no MPA as yet but the government is advocating conservation.	Internally there are few protected areas supported by legislation (even if they are not technically MPAs)
Cambodia	Limited budget, lack of cooperation between agencies and the local communities	With strategic plan in place, we meet often to push our action items forward
Philippines	Problems maintaining sustainable use of MPAs	National Biodiversity Sustainable Planning Meeting may solve this

5. Next Steps

5.1 Emerging issues

Co-chair began the session with a request that participants highlight interesting, emerging issues apart from MPA and MPA networks as to identify potential next steps after the MPA network initiative that the regional partners may wish to focus on. In discussion, the following points were made:

- Overfishing is an emerging issue in the region. It was queried if there were any cases of local extinction due to overfishing or any other reason. Were there any kind of biomass and diversity lost? It was pointed out that successful MPA management should include such knowledge.
- Most economically important species are already fully exploited and overfished in the South China Sea. Habitats are important in ensuring sustainable fisheries, i.e., mangroves, sea grass beds, etc. There is a need for development of fisheries refugia where economically important species are safeguarded in various critical phases of their life-cycles. By promoting sustainable use rather than prohibiting fishing, it ensures local community buy-in. The fisheries refugia working group of UNEP identifies the species

and nursing group areas, guided by information obtained from local community knowledge.

- Climate change, if it becomes serious, will affect the marginal coral reef areas, and these become important for conservation. These areas should be considered seriously when designating MPAs.
- These issues can be correlated to Aichi Target 10 on minimizing multiple anthropogenic pressures on coral reefs and vulnerable ecosystems impacted by climate change or ocean acidification by 2015. While the tipping points of ecosystems need to be identified especially with MPA management, the combined effect of climate change, acidification and other pressures makes it difficult to assess, and minimal work has been accomplished here. We need to be pro-active and prepare for the eventuality that something happens. It was also pointed out that meeting the Aichi Target 10 by 2015 appears unattainable at present.
- The coral movement/migration to high latitude areas needs to be managed at a socio-economic and local community level. Local communities may not appreciate the expansion of corals as it competes with economic resources like abalone, etc. There needs to be awareness raising in place so that corals will not be destroyed.
- Before considering climate change, there are bigger issues such as overfishing, pollution and coastal development that impact the coral reef faster. And MPAs could be used to prevent these impacts. There are ways to quantify the damage incurred to show where the degradation comes from, e.g., in Singapore, coral reefs are 100% impacted by coastal development.
- Overfishing and integrated coastal management appear to be the big issues discussed here. ICRI General Meeting can adopt recommendations for promotion and publicity to invite attention to these issues. By compiling the message coming from this meeting in consensus, the voices from East Asian region could be shared with others. ICRI East Asia can disseminate this message as a recommendation. There needs to be more thought on whether to go through ICRI General Meeting or as a standalone.

5.2 ICRI's role and direction in East Asia (Part II)

This session was organized as the follow-up of discussion on ICRI's role and direction in East Asia which took place in the 2011 workshop. Co-chair reiterated ICRI's four cornerstones (i.e., integrated coastal management, capacity building, science and monitoring, and review) and invited comments.

- There was a question about engaging PEMSEA as a potential collaborator for ICRI. Most of the member countries for ICRI are also members of PEMSEA. It was clarified that PEMSEA had been invited in some of the workshops, but their participation was not realized. They appear to have a different role, more towards policy development and networking. At present there is no dialogue between the two.
- Three issues identified by this group (i.e., overfishing, Integrated Coastal Management, and high latitude corals) fit well with ICRI's four cornerstones. ICRI East Asia could tap into these areas for collaboration after the current MPA network initiative.

5.3 Potential collaborative activities

Based on the discussion from the previous sessions, clarification was sought on what technical workshops could be planned among ICRI member countries in East Asia for the coming years. Discussions led to the following points:

- There needs to be clear and defined objectives on what actions and outcomes are sought out.

- For the capacity building workshop, there needs to be a questionnaire in advance to gauge participant needs and the design of the workshop should be based on expectations of the target group.
- The workshop is designed for the managers of the national level MPA, i.e., those on the same level as the participants of the current workshop, but not necessarily the ICRI focal points. The target participants will need to know what MPA ME is and be ready to update or improve their system, or develop a system following the workshop. The long term plan is that eventually each country will have their own MPA ME system.
- The purpose of the capacity building workshop is for each country to understand their situation and see if the methodology is suitable for them. The present guidelines are too complicated and lengthy and are not transferable at national levels. Each country can still modify and adapt the model to suit them. The model which was developed by the working group is for basic use assuming that a country without any system will be able to uptake its use. It is a stimulus for countries to get started. The more developed countries that probably have more sophisticated systems may not find the model too useful.
- The science of ME is changing, and one of the elements of such a workshop would be to get updates on latest developments and new tools of ME. The MPA manager using the system will be able to inform the community and the government on the status of their MPAs, prioritize activities, and do adaptive management of the MPAs
- On the suggestion that the workshop could be timed with the next Asia Pacific Coral Reef Symposium (APCRS) in June 2014 to be more cost-effective, there were several considerations. While there are diplomatic issues, the workshop could be held back-to-back with other events. It was decided however that the issue of timing could be better placed after a draft of the TOR was made.
- **Action:** Naoki Amako, Cristi Nozawa and Kohei Hibino volunteered to draft the TOR for the capacity building workshops on MPA ME and MPA database to be finalized and adopted at the end of this workshop.

The action derived from the Objective 3 of the Regional Strategy to collect and publish case studies on sustainable marine managed areas in the region was further discussed as follows:

- After WCC, the next step should be to collect case studies and highlight other effective area-based conservation measures. If ICRI members are willing to contribute in finding appropriate case study writers, it would help advancing this step. .
- In terms of resources, identifying case writers is the priority rather than obtaining funding to publish a book. CD compilation cost is minimal, so time would be the main resource.
- The main challenge is to find case studies. The importance of highlighting case studies is in the contribution to biodiversity conservation. Case studies are excellent sharing avenues to show area based management success.

The Chair re-capped the discussions and closed the meeting for the day.

Day 3 (Wednesday 5 September 2012)

Co-chair recapped the previous day's activities and urged participants to keep their discussions to the topics in the Agenda.

6. Coral Reef monitoring and GCRMN

6.1 Status and challenges of coral reef monitoring in East Asia

Tadashi Kimura briefly explained about the session and clarified that all national coordinators were asked to use the template for their presentation to focus the topic for later discussion. He

gave updates on which national coordinators would be presenting the status of coral reef monitoring for the day.

China

Tadashi Kimura presented the report on behalf of China, as the national coordinator was unable to attend the meeting due to typhoons. He shared a research report on how coral reef health was being assessed in mainland China and assorted islands using coral reef index. Four integrated indices were developed that are currently being used.

Hong Kong

Ang Put of the Chinese University of Hong Kong presented the status of coral reefs in Hong Kong, which are usually found in the North and East coast.

He reported that there had been no major destructive events, no bleaching etc. However the huge storm from two weeks ago appears to have affected the coast and researchers are now studying the impact on coral reefs.

Predators such as snails (*drupella*) and sea urchins have been known to attack corals in recent years, and this could be related to the weakened health of the reef. Coral juvenile recruitment is low, and in most cases dominated by foulers, maybe because of bad water quality.

As a new activity, they are working on identifying octocorals found in deep waters with the Hong Kong Underwater Association. The aim is to develop an Octocoral ReefCheck.

MPA Management is undertaken by the Agriculture, Fisheries and Conservation Department (AFCD) with enforcement by regular inspection and providing permits to conduct research. Feasibility studies have targeted at least 5 marine parks as future MPA, and these shall be proposed to the government for further action.

Taiwan

Allen Chen presented the status report on coral reefs in Taiwan. Reefs are concentrated on the South coast.

He reported that the ReefCheck team did the monitoring, with the help of volunteers. Monitoring of living coral cover showed moderate coverage (between 25-50%). This is reasonable for Taiwan and minor offshore islands.

A major challenge for them appears to be overfishing which is very high. The low abundance and diversity of reef-associated fish and invertebrates are causes for concern. Species such as butterfly fish, macro invertebrates and giant clams are not seen anymore. Other problems include habitat destruction, and pollution with regards to the health of Taiwanese reefs. He noted that different groups of corals have varying levels of tolerance toward natural disasters.

Their activities lie in promoting MPA establishment with local community involvement. They are also active in advocating public awareness through ReefCheck to encourage volunteers for monitoring activities.

Japan

Coral monitoring is carried out in 24 sites. Coral coverage is quite low in high latitude because coral communities in high latitude are patchy. There have been crown of thorns starfish (COTS) outbreaks since 2004 and a bleaching event in 2007. Their main concerns are COT outbreaks and typhoon. Anthropogenic impacts such as pollution are also big concerns.

Their monitoring program involves the government, prefectural government, ReefCheck, individual research and community based monitoring. The program from the Ministry of the Environment covers all 24 sites and stations. All other programs are local and on a smaller scale.

Korea

Heung-Sik Park reported that there is stony coral distribution in Korea, and out of 104 coral species in Korea, 25 are stony corals. There are a total of 15 sites in Korea harbouring stony corals, and they are found in Jeju, southern and eastern coasts. The Kuroshio Current may be the primary source for juvenile coral recruitment.

He highlighted that improvement of management strategies, expanding of habitat boundaries and developing of better monitoring are their advanced activities.

Cambodia

Ouk Vibol presented the status of coral reefs in his country. He reported that MPAs appear to protect the reef well. Outside of these MPAs, he added the reefs are degrading.

Monitoring is concentrated within the Marine Fisheries Management Areas (MFMA). NGO, Fisheries Administration survey teams and volunteers gather monitoring data and the Fisheries Administration compiles and summarizes the data. Budget and expertise are major constraints in regular reef monitoring, data compiling and data managing.

Indonesia

Cherryta Yunia presented the report with coral cover figures from a total of 153 MPAs covering 15,000 hectares. The institutions involved in the management include the central government, local government and the community.

She added that there were 7 national parks with surveys that show about 10% of the reefs are degraded.

The challenges faced are financial whereby the central government does not support much for monitoring projects. There are lack of budget and personnel issues.

Their new marine information portal is www.konservasilaut.net which holds data and human resource information.

Myanmar

Zau Lunn presented the problems faced in Myanmar. He reported that there were no coral reef monitoring programs in Myanmar to-date.

The Biodiversity and Nature Conservation Association (BANCA), an NGO with more than 300 members is the main advocate. There are 9 MPAs in Myanmar including Lampi, Wunbaik (mangrove), Thamihla Kyun (turtle sanctuary) and Moscos Island (turtle sanctuary).

Coral reefs in Myanmar include numerous diverse species. Unsustainable fishing practices like dynamite fishing and reckless harvesting as well as anthropogenic impacts are huge threats.

Philippines

Tadashi Kimura presented the slide on behalf of Jacob Meimban who was not able to come to the workshop. There are 33 MPAs under the central government and 1620 locally managed MPAs. It was found that 33% MPAs are effectively managed and 47% of the total area is effectively managed. Threats include coastal development, unsustainable fishing practices and pollution. MPA reinforcement and public awareness are activities being undertaken.

Thailand

Thamasak Yeemin gave a presentation on the status of coral reefs in Thailand. Sea surface temperature rising event in 2010 resulted in 70-100% coral bleaching in Thailand. High mortality of coral occurred throughout Thailand, with extreme impact in the north Andaman Sea. He highlighted the assessment projects in 2011-2012 which included monitoring of water quality, socio-economic impacts, etc.

Management activities are well allocated between the Andaman Sea and Gulf of Thailand and involve monitoring, training workshops, public awareness and coral restoration.

Vietnam

Vo Si Tuan presented the status of coral reefs in Vietnam. Monitoring results of 75 reef sites showed 30% are in good, 41% fair, and 25% bad shape. The 2010 bleaching event also affected Vietnamese reefs.

There is no national monitoring program and no funding from the central government. Monitoring programs are implemented by scientific institutes and MPA authorities. Data is compiled by the Institute of Oceanography.

Management activities are under the support of local government and international agencies. A long-term monitoring mechanism is being established by training local staff and volunteers. It also includes the involvement of the local community and private sector.

Singapore

Chou Loke Ming presented the Singapore status report. He noted that the 2010 mass bleaching caused partial to complete bleaching of up to 65% of reef, with 80% recovery after 4 months, and close to 100% recovery after 6 months.

Coral reef areas in Singapore are declining. Land reclamation is a big source for the loss of the reefs with approximately 80% lost.

Long-term monitoring at 5 sites by volunteer groups (ReefCheck) is conducted with extensive development calls for environment assessments and continuous monitoring.

National Parks Board does the monitoring and survey in a collaborative effort with 400 volunteers and overseas experts. There are enhancement and rehabilitation projects such as the coral nursery project, rehabilitation of Singaporean reefs, coral juvenile and giant clams.

6.2 Discussion on coral reef monitoring, information sharing and adaptive management

Based on the presentations on the status and challenges of coral reef monitoring by GCRMN national coordinators, this session sought to discuss what collaborative activities could be done at the regional level. Discussions led to following points:

- Thailand observes the importance of monitoring programs; Department of Marine and Coastal Resources (DMCR) and 9 universities implement the program. Coral reefs are approximately 200 sq km, and this is quite an accurate description of area cover. The DMCR has implemented a long-term monitoring on reef status throughout the country with regular funding. To update the information, surveys of all reef sites have to be repeated in every 3 years (about one-third are surveyed each year). For information sharing, DMCR had developed database of reef status in the last few years, but the system failed. At present DMCR is developing the new database for coral, seagrass and marine endangered species and this will be accessed online in the near future.
- Thailand began to fund coral monitoring in the late 1980s, when sufficient indicators for success were shared, such as the extent of area cover and status (health) , the benefits for management began to show clearly. Singapore also gets funds from the government. It also goes through a proposal process, and indicators for success are highlighted here too.
- For Cambodia, the lack of skills in data compilation and monitoring is pertinent. They need expert training and thus the possibility of combining the next ICRI regional workshop to include a training session for the countries that need help in this area could be considered.

- Lack of skills and knowledge can lead to misleading data, e.g., lack of clarity on difference between research and monitoring. Also research tools differ, providing non-compatible data sets. Capacity building is important in addressing these issues. They need to understand the principles of monitoring/ research data compilation etc.
- The concept of monitoring as a management issue and non-research activity is common, however, monitoring data can be used for research purposes. Monitoring needs quality control, with proper methodology, and data obtained can be used to monitor change in MPAs.
- While it is possible to use monitoring as a permanent management activity in order to improve the chances of being funded by their governments, it was pointed out that the data would also be useful in research. It was stressed that the process of monitoring should be conducted accurately in order to be useful.
- In Singapore, long term monitoring is crucial. Environment Impact Assessment (EIA) needs long term data to see progression. The base line is constantly shifting so long term monitoring is useful. The data is linked to anthropogenic activities or climate change. National Parks Board is the focal point for CBD and also for monitoring. The monitoring data is useful to inform the government of conservation intervention points.
- Volunteers are crucial for monitoring. The coral reef monitoring program relies heavily on volunteer data in Malaysia. It was pointed out that volunteer data should not be disregarded, because with sufficient training, they are also able to compile reliable data sets. Similarly ReefCheck data from 1998 to 2010 show coral coverage and trends and should not be discounted too.
- In Thailand, Phuket Marine Biological Center (PMBC) is the planner of the monitoring program; there are 5 marine centers – 1 in Andaman Sea, 4 in Gulf of Thailand. PMBC also designs the monitoring program for the national park which does not have capacity for monitoring. The national parks involve much with tourism service. There are now efforts to move beyond tourism and consider enforcing as part of the major role.
- The chair (Vo Si Tuan) noted that in Vietnam, there are many data nationally but it is not shared regionally. In our region, we have mechanisms for regional reports every 4 years. But no mechanism to publicize the data for wider use regionally. It was suggested that social media is the primary platform for many people who are able to access all resources online.
- ICRI is currently moving towards social media. Their focus is on using Facebook and Twitter for constantly updating informative and interesting information.
- Many formal publications are not easily accessible online by researchers in the field; it is better for them to be more accessible in terms of sharing information and knowledge. It was noted that as scientists, we have a role in guarding the line between what is reality and sensation, and it is possible to examine information that appears accordingly. Conservation Commons (<http://conservationcommons.net/>) can be used for sharing data and documents.

6.3 Response to new direction of GCRMN

Tadashi Kimura briefly shared the report of the discussion on GCRMN in the 27th ICRI General Meeting. He provided some background on how Clive Wilkinson first began GCRMN, by finding 17 node coordinators globally to compile coral reef data and to publish global status reports in 1998, 2000, 2002, 2004 and 2008. It was a single effort with coordinators. With his retirement, there were suggestions for transition to a new direction. When this was highlighted, a new Science Program was created.

Scientific Program aims to provide quantitative data analysis using the raw data and currently targeting the Caribbean. Subsequent objectives include regional reports for Australia GBR, coral triangle, Southeast Asia, Indian Ocean/ Red Sea, Central Pacific, and ending with a global report in 2016.

He further presented the possible collaboration of East Asia which includes the following:

- National/ regional assessment of data availability

- Initial analysis of existing regional data
- Reflect results to the regional report 2014 (to be presented at the 3rd APCRS)
- Workshop 2014 (to be held at the 3rd APCRS in Taiwan)
- Connectivity: Asia Pacific Coral Reef Society (APCoRS) has set up a website to have online presence.

Based on the above presentation on GCRMN's new direction, discussions raised the following points:

- It was clarified that Clive collated data but did not analyze it. However, with the new GCRMN core team, there would be analysis.
- The flow to develop the regional report looks logical. Despite the issues with the transition, the global coordinator, Andy Hooten, is open to learning, so it was advised that the group open and keep communications with him and share the APCoRS team's plan. Contact with Andy would be plausible once the APCoRS team have decided and agreed on their plans/proposal. A formal proposal will be made to the GCRMN team once all is clear.
- It was further clarified that there are no plans for funding for workshops/reports yet. All work is now voluntary, and meetings will be held concurrent with other events to save costs.
- Clarification was sought on what would be done by the APCoRS team and if it would overlap with the GCRMN core team's activities. It was clarified that countries do not have to provide data to the core team, and yet it was important for the APCoRS team to do more than just compile data, and it was decided that the data needed to be analyzed more deeply. The team has limited available data sets and will look for more data owners and national scientists who can provide it. We will do our own regional analysis and submit a report on that. The format of the report will be finalized later.
- It was emphasized that APCoRS does not plan to compete with the core team, but more to play a complementary role, so that they are able to focus on other regions.
- Clarification was made on comparing data analysis. Standardizing data analysis is the challenge and many regional scientists and Vivian from the core team would be able to assist. It was noted that there should not be many problems at the moment since the national reports would be compiled first and the regional report will be combined based on them. For this report, which we have been doing for years, we should now go beyond and do more analysis.
- A question arose on why the regional report was being planned. As the East Asia GCRMN team is more advanced, the focus should be more long term and sustainable. It was clarified that the regional report was in the planning stages even before the core team came along. In terms of sustainability, because this has worked in voluntary basis, and people are only mobilized during report stages, the relationships and connections made in East Asia are more inclusive and supportive. Personal feedback from Jeremy Jackson revealed that he was impressed with the group's way of working and welcomed the East Asia group's efforts to produce the regional report.

6.4 Update on regional activities

6.4.2 Progress in preparation for APCRS 2014

Dr. Allen Chen from the Biodiversity Research Center, Academia Sinica in Taiwan gave a presentation outlining the 3rd Asia Pacific Coral Reef Symposium scheduled in 2014 to be held in Kenting, Taiwan. Details of the process were drawn out during the ICRS this year. He provided information on the venue, organizing committee, local attractions, nearby hotel accommodation, travel options, as well as a tentative timetable for the planning of the event.

6.4.3 Potential Monitoring Projects

- **Bleaching report in SEA in 2010**

Karenne Tun presented a potential project on coral bleaching. She provided some background information on tracking tools available at global level. At site levels, these tools may not be able to predict accurately. Even a single degree point increase in temperature may cause bleaching. Using data from NOAA, there was no capture of data to show bleaching possibility in Singapore. *In situ* data showed bleaching had occurred in Singapore despite there being no bleaching warning.

The idea is to establish an active monitoring activity by APCoRS to consolidate bleaching information at regional level, set up regional *in situ* Sea Surface Temperature (SST) monitoring data, provide tools, guidelines and establish a one stop resource center on Coral bleaching info in East Asia.

- **Monitoring training in Myanmar**

Zau Lunn presented his proposal for training on monitoring in Myanmar. He noted the need for regular training so that they could build up knowledge of their coral cover data and other useful coral reef information.

A comment was raised on selecting the people for training programs. There were cases of people being trained who then move to other positions or high level people who do not do the actual monitoring but attending the training programs taking advantage of receiving the first contact. It was important to ensure trainees are suitable.

- **ReefCheck Workshop**

Tadashi Kimura shared information about the workshop to be held in Malaysia the next week. Other GCRMN coordinators are also slated to attend.

7 Wrap-up of the workshop

Co-chair presided over the session. Participants reviewed the draft Terms of References and document made during the meeting. These were as follows:

- Terms of reference for the ICRI East Asia working group on migrating hard corals to the high latitude area (Allen Chaolun Chen, Kwang-Sik Choi and Tadashi Kimura)
- Terms of Reference for ICRI East Asia Regional Workshops on capacity building (Naoki Amako, Cristi Nozawa, and Kohei Hibino)
- Regional reporting on coral reef status in East Asia and its contribution to the overall goal of the new GCRMN direction (Tadashi Kimura and Karenne Tun)

All the documents were **AGREED** upon reflecting the comments.

The Chair briefly re-capped the last three days, highlighting the action points and outcomes. He revisited the workshop objectives and expected outcomes to evaluate with the group what had been achieved. The Chair then clarified that the Meeting record and Executive Summary will be circulated together with the revised Evaluation Report, agreed Terms of Reference for the working group on migrating hard corals to the high latitude area, agreed Terms of Reference for the two capacity building workshops, and document on GCRMN to all participants following finalization.

All meeting materials including presentations (in PDF) will be delivered to all participants by USB memory stick after the workshop and made available on ICRIforum.

8. Closing

8.1 Celebration of successful completion of 2008 -2010 ICRI East Asia MPA network initiative

Co-chair applauded the working group participants and their efforts.

8.2 Closing remarks

Co-chair, Yoshihiro Natori thanked the hosts for their hospitality and hard work. He also appreciated the financial support provided by the MoE Japan. He thanked the secretariat and the note takers. In addition, he took the opportunity to appreciate his Co-chair for his shared leadership.

Co-chair Vo Si Tuan thanked participants for their support and cooperation over the last four years.

8.3 Presentation of certificates to participants

Both Co-chairs presented the participants with certificates.

With this, Co-chair Yoshihiro Natori called the meeting to a close.

ANNEX 1

Participants are listed alphabetically by Representation.

	Representation (G: Government, O: Organization)	Name	Surname
O	Akita International University	Kohei	Hibino
O	Biodiversity and Nature Conservation Association	Zau	Lunn
O	Biodiversity Research Center, Academia Sinica	Allen Chaolun	Chen
O	BirdLife International	Cristi	Nozawa
G	Cambodia (Director of Fisheries Conservation Department)	Vibol	Ouk
O	Chinese University of Hong Kong	Put, Jr.	Ang
O	DHI Water & Environment (S) Pte Ltd.	Karenne	Tun
O	Eco-Horizon Institute	Ji-Young	Jang
O	Great Barrier Reef Marine Park Authority	John	Baldwin
G	Indonesia (Ministry of Forestry)	Cherryta	Yunia
O	Institute of Oceanography	Si Tuan	Vo
G	Japan (Ministry of the Environment)	Naoki	Amako
O	Japan Wildlife Research Center	Tadashi	Kimura
O	Japan Wildlife Research Center	Kumiko	Suzuki
O	Japan Wildlife Research Center	Noriko	Kamada
O	Jeju National University	Kwong-Sik	Choi
G	Korea Institute of Ocean Science & Technology	Woong-Seo	Kim
G	Korea Institute of Ocean Science & Technology	Heung Sik	Park
G	Korea Institute of Ocean Science & Technology	Young-Ung	Choi
G	Korea Institute of Ocean Science & Technology	Sun Wook	Kim
G	Korea Institute of Ocean Science & Technology	Chan-Mi	Ahn
G	Korea Institute of Ocean Science & Technology	Hey-Jeong	Shin
O	Nagao Natural Environment Foundation	Yoshihiro	Natori
O	National University of Singapore	Loke Ming	Chou
O	Okinawa Prefecture	Shinichiro	Kakuma
O	Panache Facilitation	Meena	M. Arivananthan
O	Ramkhamhaeng University	Thamasak	Yeemin

G	Singapore (National Parks Board)	Nhung	Nguyen
G	Thailand (Phuket Marine Biological Center)	Niphon	Phongsuwan
G	Vietnam (Ministry of Agriculture and Rural Development)	Giang Thu	Nguyen
O	WWF Japan	Shigeki	Yasumura

ANNEX 2. Final Agenda

Day 1, Monday 3rd September 2012

1. Opening ceremony

1-1. Welcome speeches by co-organizers

- Japan (Naoki Amako, Ministry of the Environment)
- Republic of Korea (Woong-Seo Kim, Vice President, Korea Institute of Ocean Science & Technology)
- Co-chairs (Yoshihiro Natori, Vo Si Tuan)

1-2. Introduction of participants (Co-chair)

2. Introduction

2-1. Workshop objectives, expected outcomes and procedure

2-2. Adoption of agenda

2-3. Introduction of ICRI, current Secretariat Plan of Action and the report of ICRI GM27

[Group photo and coffee break]

3. MPA and coral reef conservation activities in Korea

3-1. Current Status of Marine Protected Area in Munseom Island off the South Coast of Jeju Island

(Kwang-Sik Choi, Professor, Jeju National Univ.)

3-2. Activities for MPA in Korea (Heung-Sik Park, Director of Pacific Ocean Research Center, KIOST)

3-3. Community-Based Management Approach at work in the Muan Tidal Flat (Jiyoung Jang, Principal Researcher, Eco-Horizon Institute)

3-4. Discussion

Poster session

- Community Base Coral Reef Conservation in Cambodia (Ouk Vibol)
- OPTM-The Optimal Point Transition Matrix for Benthic Coral Reef Surveys (Karenne Tun)
- Marine Biodiversity and Creative Conservation in Singapore (Thi Hong Nhung Nguyen)
- UNEP/GEF MSP Project "Sustainable Mangement of Coral Reefs in Ninh Hai District, Ninh Thuan Province, Viet Nam (Vo Si Tuan)
- ICRI Activiteis in the region (John Baldwin)

[Lunch]

Field trip (Hosted by: Korea Institute of Ocean Science & Technology, KIOST)

Seongsan Ilchulbon, Seongeup Folk Village

[Welcome reception]

(Hosted by Korea Institute of Ocean Science & Technology)

Day 2, Tuesday 4th September 2012

Introduction of Day 2

- Recap of Day 1
- Introduction of Day 2

4. Review and evaluation of the 2008-2012 activities

4-1. Presentation of the draft report

- Presentation (Kohei Hibino)
- Discussion

4-2. Discussion on the follow-up activities

- Objective 1. Regional mechanism for cooperation and coordination
- Objective 2. Follow-up of the Provisional Plan 2009-2010
- Objective 3. Reflect priority recommendations to regional and national policies

[Coffee break]

4-3. Latest progress and the next steps on MPA networks toward achieving the Aichi Biodiversity

Targets

- Latest progress (East Asian countries)
- Opportunities and challenges on achieving the 2012 MPA network target
- Ways to achieve the Aichi Biodiversity Targets in relation to MPA networks

[Lunch]

5. Next steps

5-1. Emerging issues

5-2. ICRI's role and direction in East Asia (Part II)

[Coffee break]

5-3. Potential collaborative activities

Wrap up of the day

Day 3, Wednesday 5th September 2012

Introduction of Day 3

- Recap of Day 2
- Introduction of Day 3

6. Coral reef monitoring and GCRMN

6-1. Status and challenges of coral reef monitoring in East Asia

Northeast Asia:

- Hong Kong
- Taiwan
- Japan
- Korea

Southeast Asia:

- Cambodia
- Indonesia
- Myanmar
- Thailand
- Vietnam
- Singapore

6-2. Discussion on coral reef monitoring, information sharing and adaptive management

6-3. Response to new direction of GCRMN

- Report back from the 27th ICRI GM and 12th ICRC (Tadashi Kimura)
- Possible collaboration with the Science Program and the GCRMN Core Team (Tadashi Kimura)

6-4. Update on regional activities

- Process of Regional Report 2014 (Tadashi Kimura)
- Progress in preparation for APCRS 2014 (Allen Chen)

- Potential monitoring project
 - Bleaching report in SE Asia in 2010 (Karenne Tun)
 - Monitoring training in Myanmar (Zau Lunn)
 - Cooperation with the Reef Check Workshop (Tadashi Kimura)

[Lunch]

[Free afternoon]

7. Wrap up of the workshop

- Review of outcomes of the workshop
- Adoption of outcomes

8. Closing

- Celebration of successful completion of 2008-2010 ICRI East Asia MPA network initiative
- Closing remarks (Co-chairs)
- Presentation of certificates to participants

[Farewell reception]

(Hosted by Ministry of the Environment, Japan)