

## **Expert Conference on Development of Island's Sustainable Societies Chair's Summary**

The Expert Conference on Development of Island's Sustainable Societies was jointly held by the Ministry of the Environment of Japan and Okinawa Prefecture on June 29-30, 2014 in Okinawa Prefecture, at the Okinawa Institute of Science and Technology Graduate University (OIST).

The Chair's Summary which was issued at "The International Conference on Climate Change and Coral Reef Conservation," held in Okinawa last year, highlighted the need for a shared recognition of the environmental issues and their countermeasures in island countries as well as the need to further promote environmental collaboration amongst island countries with Okinawa serving as a hub. This year, the Expert Conference was held to build upon discussions at the previous conference and to contribute to the continued development of research through extensive discussions by experts on the common challenges and concrete measures of island countries. The conference also serves to inform the world about the unique approaches to sustainable development in island countries with regards to the introduction of renewable energy and the utilization of rich ecosystems. A wide range of national and international experts (from 10 countries\*) attended the conference.

\*The 10 countries are Fiji, Japan, Malaysia, Micronesia, Palau, Philippines, Samoa, Thailand, Tonga, and Tuvalu

At the beginning of the conference, Mr. Soichiro Seki, Director General, Global Environment Bureau, Ministry of the Environment, Japan proposed establishing a network of island country researchers representing coordinating universities and research institutions in the Asia-Pacific, in particular, OIST, the University of the Ryukyu, and the University of the South Pacific, in order to promote the development of research. The proposal was strongly supported by the universities and Okinawa Prefecture, and was welcomed by many participants.

Participants were grateful for the warm hospitality provided by the Okinawa Prefecture for this occasion. They appreciated the keynote speech by Vice-Chancellor and President of the University of the South Pacific, Prof. Rajesh Chandra. He summarized the unique challenges related to sustainability including sea level rise and stressed the importance of capacity building of human resource and research.

Participants also appreciated the panel discussions held by a wide range of panelists as being extremely informative and exceptional, noting the fact that it covered the responses and measures taken to deal with the interrelated challenges of island regions in multifaceted ways (e.g. preservation of the natural environment, adaptation to the impacts of climate change, disaster prevention, energy, and appropriate waste disposal).

Participants exchanged views in four section meetings and a side event on The UN Decade of Education for Sustainable Development (ESD). Topics of the section meetings were, respectively, Coral Reef Conservation and Regional Sustainable Development, Mitigation Measures on Climate Change in Islands, Appropriate Waste Management (Promotion of 3R), and Adaptation to the Impacts of Climate Change (Ecosystem-based Adaptation and Disaster Risk Reduction).

[Coral Reef Conservation and Regional Sustainable Development]

Upon considering the vital importance of coral reef ecosystems to island economies both in the world and in Okinawa, participants reaffirmed the necessity of various networks in advancing measures to strengthen the resilience of coral reef ecosystems while simultaneously taking into account their intricate connections with terrestrial ecosystems.

Moreover, participants recognized the validity of promoting communication between researchers and the local communities at field sites as well as implementing conservation measures in close communication with those involved in fishing and tourism industries. Participants also recognized that collaboration across local/national governments has the potential to significantly enhance both research outcomes and conservation efforts.

Onna Village Fisheries Cooperative gave a presentation on their practice of sustainable fishery based on the collaboration among stakeholders from various fields who receive benefits from the coral reef ecosystems, and was highly approved. In addition, the research by OIST on larvae of corals and crown-of-thorn starfish being conducted in collaboration with local fishery operators as well as the collaborative approach taken by Zamami and Tokashiki Villages for promoting the newly established National Park and eco-tourism were both regarded as advanced examples of coral reef conservation and regional sustainable development. Furthermore, reports were made on Okinawa Prefecture's new partnership with the Australian Institute of Marine Science

(AIMS) to address the issue of crown-of-thorn starfish, and on the expansion among Southeast Asian countries of a network of environmentally-friendly diving operators for sustainability of coral reefs environment and diving tourism industry established in Thailand, both of which were welcomed by the participants. In addition, participants had high hopes upon hearing Palau International Coral Reef Center's report on its contribution to sustainable economic development through various policies and measures including joint research and regional cooperation for capacity development, as well as reports of their research findings and contributions towards coral reef conservation through collaborative research of Palauan and Japanese experts under Science and Technology Research Partnership for Sustainable Development (SATREPS).

Participants recognized that establishing the networks among various entities for coral reef conservation from the perspective of people, sea, industry and livelihood were absolutely necessary for the regional sustainable development of island societies. To further promote collaboration, participants agreed on the importance and significance of collaborative research and training programs conducted by various institutions as well as to promote sharing of information on coral reef conservation both domestically and internationally.

#### [Mitigation Measures on Climate Change in Islands]

Participants largely agreed on the importance of building autonomous and decentralized low carbon energy systems in islands – solar and wind, biomass, recycling, ocean energy etc. – because they lack in reliable existing energy sources, which also make them suitable candidates to adopt new energy systems. Those systems can reduce the dependence on expensive foreign fossil fuels and can enhance regional economy by reducing expenses to outside of the islands.

The participants shared their experiences in measures to mitigate climate change, including, for example, the offshore floating wind power demonstration project implemented by the Ministry of the Environment of Japan near the Goto Islands in Nagasaki prefecture, the efforts to realize a practical utilization of renewable energies in Okinawa, proposal of an open- energy-system, recent efforts to use low carbon ships among islands, and finally, mitigation and adaptation of climate change in Palau. They also recognized the importance of promoting cooperation among governments, industries, academia and the general public.

At the same time, participants acknowledged that some of the challenges involved in increasing renewable energy are cost reduction and lack of financing mechanisms, grid stabilization, storage of electricity, and enhancement of transportation system. They shared the need for continued research and development and international cooperation. In addition, participants recognized that it is important to diffuse proven renewable energy technologies and decentralized low carbon energy systems to islands and countries that emit a large amount of carbon dioxide.

[Appropriate Waste Management (Promotion of 3R)]

Participants were able to share diverse experiences and challenges that island countries encountered in the course of implementing and promoting 3R (reduce, reuse, recycle) and appropriate waste management, which were presented in this panel discussion by the panelists with different backgrounds, such as experts from international organizations, island countries, private business and academia, thereby gaining a deeper understanding of 3R and appropriate waste management being carried on in the island countries.

Participants were able to share barriers including lack of skilled human resources, difficult and complex land issues, and lack of financial resources. They discussed a wide range of issues facing island countries, such as deposit refund schemes being put into practice in Yap State, the Federated States of Micronesia and Clean School Program in Fiji, the current state of recycling in the Pacific, a volume of waste plastics drifting in the sea and the effects on ecosystem. Consequently, they reaffirmed the importance of comprehending 3R and appropriate waste management from diverse aspects and viewpoints. To cope with these issues, the panelists highlighted the importance of building a framework for motivating people to change their behavior and raising their awareness about the issues, as well as the necessity to share more diverse aspects by building relations with stakeholders from not only island countries but those outside of island countries.

In order to promote effective 3R and appropriate waste management, participants discussed methods to build on and strengthen mutually collaborative relationships, and made suggestions in accordance with the state of efforts currently being made in each of the island countries. They recognized the importance of the promotion of 3R + Return and workshops of experts and working-level stakeholders for open discussion including

Regional 3R Forum in Asia and the Pacific (including follow-up of Hanoi 3R Declaration and Surabaya Declaration), J-PRISM (including establishing a database for local experts to facilitate more active south-south cooperation) and IPLA. They agreed that sustainable island societies require sustainable waste management.

[Adaptation to the Impacts of Climate Change (Ecosystem-based Adaptation and Disaster Risk Reduction)]

At the beginning of Sectional Meeting of “Adaptation to the Impacts of Climate Change,” Mr. Nobuteru Ishihara, Minister of the Environment of Japan highlighted the importance of adaptation measures, inter alia, the effectiveness of ecosystem-based approach integrated into disaster risk reduction in islands. He stressed that he would promote international cooperation in this field by sharing those experiences to Asia-Pacific countries.

The impacts of climate change are becoming obvious in various ways especially in island countries. Natural disasters such as high tide water sea level rise, land slide and flooding are causing serious damage in island countries. Islands are particularly vulnerable to climate change and disasters. In recent years, there have been increased damages due to ecosystem degradation caused by coastal development, over-exploitation and others, in addition to damage from natural disasters.

Hence, actions which utilize ecosystems including coral reefs, mangroves, forests, and others, are now receiving increased attention and have been implemented on the ground from the international community for adapting to changing climate in those countries. At the 38th session of the IPCC held in Yokohama in March 2014, the Fifth Assessment Report on the impacts, adaptation and vulnerability to climate change was approved, and the importance of such ecosystem-based approaches was raised in the report more than ever before. The importance of ecosystem management is incorporated in the "Hyogo Framework for Action (HFA)" which describes the international goal for disaster risk reduction. However, such management action was reported to be least developed among others. In spite of the fact, there were enthusiastic discussions led by Japan on the important role of protected areas with regards to the function of disaster risk reduction at the 1st Asia Parks Congress in 2013. Consequently, the outcomes including a call for the further discussions on the role of protected areas for ecosystem-based adaptation and disaster risk reduction at the 6th World Parks Congress to be held November 2014 were noted. In this regard, the participants in the conference

were encouraged to take the ecosystem-based approach for disaster risk reduction in a wide range of areas including by reflecting it to the 3rd World Conference on Disaster Risk Reduction to be held in Sendai, Japan in March 2015.

The promotion of ecosystem-based adaptation to climate change contributes to risk reduction in natural disasters at the same time. Enhancing functions of ecosystem services can therefore lead to a sustainable society in islands. Those efforts are crucially important for policy development. Various measures tailored to the local situations have been implemented to combat natural disasters in many places. However, it was indicated during this conference that it was important to take account of the local condition in enhancing ecosystem-based approaches for disaster risk reduction. It was also pointed out that promotion of actions to integrate adaptation to climate change, disaster risk reduction, and sustainable development in local and national levels was important. Quantification of costs and effects of ecosystem-based adaptation was also noted as important for policy implementation. Ecosystem-based approaches can also contribute to conservation of ecosystems and adaptation to climate change. In order to promote such an approach in island countries in the Asia-Pacific region, the necessity of the establishment of an international network was highlighted at the conference to share diverse experiences including capacity development as well as advancing academic knowledge.

[The UN Decade of Education for Sustainable Development (ESD)]

As this year marks the final year in “the UN Decade of Education for Sustainable Development (ESD)”, participants have confirmed their recognition on importance of regional advancement in ESD that will be actively promoted beyond 2014, with the mention of Regional Centers of Expertise on ESD, while having a discussion on ESD activities domestically as well as internationally. Furthermore, they have welcomed the related discussions at the UNESCO World Conference on ESD 2014 in Nagoya City and the Stakeholder Meetings in Okayama City, which will be co-organized by UNESCO and the Government of Japan this November.

In the general summary and closing starting at 2pm on June 30, 2014, based on the reports from section meetings, Mr. Soichiro Seki (Director General, Global Environment Bureau, Ministry of the Environment, Japan) as the Chair, pointed out the importance of the collaborative work by Japan and other island countries on the unique

issues faced by island countries, and the importance of adopting comprehensive approaches in light of the fact that the various issues are closely interrelated. It was stressed that there is a need to hold another expert conference among researchers in Asia Pacific next year in Okinawa, in order to promote knowledge sharing and report the progress made on related research. In conclusion, this Chair's Summary was adopted and the conference was adjourned.