



### EAS CONGRESS 2009 HIGHLIGHTS: TUESDAY, 24 NOVEMBER 2009

On Tuesday, participants at the East Asian Seas (EAS) Congress convened in plenary to hear a keynote presentation, followed by thematic workshops on, *inter alia*: coastal and ocean policy and legislation; government and industry partnerships for effective and consistent preparedness response to marine pollution; challenges of climate change at the local level involving integrated coastal management (ICM); the future role of fisheries in an urbanized world; indigenous approaches to habitat protection and restoration; networking of marine protected areas (MPAs); and addressing water crises in rapidly growing cities. In the evening, delegates attended a legislators' dialogue, a youth hour with legislators and a partnership night.



Youth participants pose for a picture with legislators from Cambodia, the Philippines, Republic of Korea and Viet Nam.

### KEYNOTE PRESENTATION



Stephen Adrian Ross, PEMSEA

Stephen Adrian Ross, Chief Technical Officer for PEMSEA, introduced the keynote speaker Emil Salim, University of Indonesia, who made a virtual presentation. Salim expressed disappointment that a binding agreement is not expected from climate change meetings in Copenhagen and elevated the importance of the EAS

Congress in this context. Salim lamented that: sustainable development has not yet been achieved; intellectual property rights impede technology transfer to developing countries; of the 17,500 Indonesian islands, 29 are already feeling the effects of sea-level rise and that 150 more will be affected in the coming years; and ocean acidification will affect fishing, sea quality, the coastal region and marine biodiversity.

Ross thanked Salim for his speech, noting that it touched on two of the Congress's key issues: climate change and partnerships. On climate change he reiterated Salim's call for a reduction of greenhouse gases (GHGs) with capacity building support for developing countries. On partnerships, he reemphasized the need to work together in a fair and equitable manner.

### THEMATIC WORKSHOPS

**COASTAL AND OCEAN GOVERNANCE: Coastal and ocean policy and legislation:** Antonio Oposa, environmental lawyer, Philippines, described a suit initiated in 1999 to force a cleanup of Manila Bay. Eventually in 2008, he said, the Supreme Court ordered 12 government agencies to act, and President Arroyo ordered the cleanup to begin in 2009.

Hiroshi Terashima, Ocean Policy Research Foundation, Japan, described Japan's Basic Act on Ocean Policy, which came into force in July 2007. Hasjim Djalal, Ministry of Maritime Affairs and Fisheries, Indonesia, described Indonesia's experience from the implementation of the Coastal Zone and Small Island Management Act. Huming Yu, China Institute of Maritime Affairs, described the Sea Area Use Management Law of 2001 that covers: management of activities in the Exclusive Economic Zone, a zoning system for coastal areas, and a fishing rights management system. Nigel Goh, National Parks Board, Singapore, described how Singapore developed ICM from 1986 to 2009, through a multi-stakeholder consultative approach towards policy measures.



Hiroshi Terashima, Ocean Policy Research Foundation



Kim Sung Gwi, Korean Maritime Institute, discussed implementation of Ocean Korea 21, the Korean coastal zone management law, based on the Basic law on Marine and Fishery Development enacted in 2002. Nguyen Chu Hoi, Vietnam Administration of Seas and Islands (VASI), discussed the establishment of national policy of Vietnam in 2008 for coastal and ocean development through the VASI. Cheryl Rita Kaur, Maritime Institute of Malaysia, discussed the rationale and proposed components of national ocean policy for Malaysia. She said that the policy adopts a multi-sector approach, not one solely focused on “fish and ships.”

In the afternoon, participants discussed the enabling environment for ICM implementation, with Chua Thia-Eng, PEMSEA, defining ICM as a “process-oriented common framework for sustainable development of coastal areas.” Carlo Custodio, the Department of Environment and Natural Resources (DENR), Philippines, discussed national and local initiatives in promoting and implementing ICM in the Philippines. Yves Henocque, French Research Institute for Exploitation of the Sea, outlined the nested approach in ICM implementation involving scaling up from the community level to the maritime policy level.



Bhichit Rattakul, Asian Disaster Preparedness Center

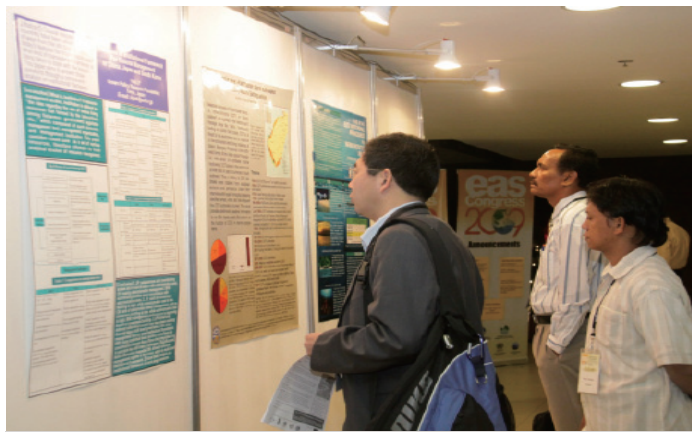
Raphael Lotilla, PEMSEA, illustrated a framework for using ICM planning and management in implementation of relevant international conventions and discussed information management for ICM planning and decision-making. Manabu Tamura,

Ministry of Education, Japan, described Japanese primary education programmes on coasts and oceans.

**NATURAL AND MAN-MADE HAZARD PREVENTION AND MANAGEMENT: Theme keynote:** Bhichit Rattakul, Asian Disaster Preparedness Center, stressed that man-made and climate change related disasters are indistinguishable. He recommended greater focus on disaster risk management and climate change adaptation to effectively address these disasters. He stressed that communities should be trained to manage disasters, and couple traditional knowledge with modern technology for better early warning systems. He informed participants that according to the Fourth Assessment



L-R: Workshop Co-Chairs Patricia Charlebois, International Maritime Organization and Richard Sykes, International Petroleum Industry Environmental Association.



Participants viewing various workshop posters.

Report of the Intergovernmental Panel on Climate Change (IPCC-AR4), developing countries require US\$75-100 billion a year from 2010-2050 for climate change adaptation.

**Government and industry partnerships for effective and consistent preparedness response to marine pollution in East Asia:** Co-Chair Patricia Charlebois, International Maritime Organization (IMO) presented on the implementation of the Oil Pollution Preparedness Response and Cooperation Convention through regional agreements, and emphasized the need to enhance cooperation among governments, industry and other stakeholders.

Co-Chair Richard Sykes, International Petroleum Industry Environmental Conservation Association (IPIECA), gave an update on IPIECA’s Oil Spill Working Group, and said that although all regions require tailored responses to oil spills, good practices can be shared across regions. Jeong-Hwan Oh, Marine Environmental Emergency Preparedness and Response Regional Activity Centre, presented lessons learned and challenges in implementing a regional oil spill contingency plan. Archie Smith, Oil Spill Response, spoke on benefits and challenges of government-industry partnerships in oil spill preparedness, lamenting the rising cost of oil spill clean-ups. Mark Whittington, International Tankers Owners Pollution Federation Limited, and Suh Woo-Rack, Korean Marine Environment Management Cooperation, presented a case study on the 2007 Hebei Spirit accident. Suh listed lessons learned from the chaotic management of the incident.



Pakorn Prasertwong, Thailand Marine Department

In the afternoon session, Pakorn Prasertwong, Thailand Marine Department, presented on partnerships in oil spill preparedness and response in the Gulf of Thailand, and recognized, *inter alia*, the importance of involving local government actors in emergency response. Nguyen Huy Trong, Vietnam, presented on enhancing local capacity in oil spill preparedness and response, and called on the international community to provide technical and financial assistance to enable Vietnam to better deal with oil spills.

Arturo Olavarrio, Philippine Coast Guard, described a coast guard, government and donor-community response to a 2006 oil spill. He further described improvements in national oil spill response measures since the incident. Willem Oosterveen, International Oil Pollution Compensation Fund, gave a detailed presentation on the conventions that govern oil spills. He



Raphael Lotilla, Executive Director of PEMSEA being interviewed by the media.

highlighted the work of his organization in post-spill studies and the role of experts to determine the nature and extent of damage and to calculate reasonable compensation for those affected.

On recommendations for the Ministerial Forum, participants agreed that there is a need to, *inter alia*: improve national oil spill contingency plans; clarify common objectives and the type of assistance needed from industry counterparts; educate the public on the actual risks oil spills pose; acknowledge the role of PEMSEA; and generate political will. They also called on IMO to play a more central role in preparedness and response.

#### Meeting challenges of climate change at the local level through ICM: Chair Gunnar Kullenberg, University of Copenhagen, stressed that adaptation at the local level requires solid data and technology resources.

Herminia Francisco, Economy and Environment Program for South East Asia, presented a project for vulnerability mapping designed to: facilitate public discussion; prioritize areas for action; and inform local adaptation interventions. She said these maps combine spatial information with data on climate hazards, human and ecological sensitivity, socio-economic indicators, technology stocks, and infrastructure.

Tae Yong Jung, Asian Development Bank, reported the economic costs and benefits of climate change in South East Asia, and noted the region's socio-economic and environmental conditions, such as: its high population, 45% of who live on less than US\$2 per day; rapid urbanization; and sizeable agricultural sector. He stressed that enhancing adaptive capacity will be costly in the short term, but pay off in the long run.

Stephen Adrian Ross, PEMSEA, described PEMSEA's 15 years of experience working with ICM. He noted that climate change may reverse economic growth in coastal areas and emphasized the need to finance adaptation through existing mechanisms. Praparsiri Kanchanopas-Barnette, Burapha University, shared experiences from an ICM project, noting the challenges of urbanization and pollution, and current efforts to transform ICM from a project-based initiative to a local government programme. A.A. Gede Alit Sastrawan,

Environmental Management Board, Bali Province, shared challenges and experiences from a project on integrated beach conservation for sustainable tourism development and disaster mitigation, and stressed linkages between human and ecological systems that lead to habitat degradation such as coral reef destruction. Angelica Baylon, Maritime Academy of Asia and the Pacific, Philippines, shared experiences of the Bataan Coastal Care Foundation, reviewing its various efforts to reduce GHG emissions and ecosystem degradation, and said the partnership is a critical tool for climate change adaptation.

In the afternoon, Nguyen Dieu, DENR, Vietnam, reviewed ICM strategies for ameliorating climate change risks, stressing that they must consider poverty reduction. Ouk Navaan, Ministry of Environment, Cambodia, stressed the challenge of low adaptive capacity. Quan Wen, National Marine Environmental Monitoring Center, China, discussed impacts of climate change on coastal biodiversity and ecosystem-based strategies for adaptation.

Subandono Diposaptono, Ministry of Marine Affairs and Fisheries, Indonesia, said mangrove deforestation increases coastal erosion, and underlined associated costs of relocating coastal people and infrastructure loss. Laura David, University of the Philippines, described a project assessing typhoon impacts in the Philippines and different strategies for mitigating risks. Kem Lowry, University of Hawaii, described Hawaii's present and future problems with sea-level rise and policy responses, including zoning and beach nourishment. Rasmus Klockner Larsen, Stockholm Environment Institute, emphasized learning as key to resilience and that informal adaptations are sometimes undermined by formal assistance.

Elvira Sombrito, Philippines Nuclear Research Institute, described isotopic techniques to study sedimentation and freshwater recharge, *inter alia*, to better understand and manage climate change impacts. Flaviana Hilario, Geophysical and Astronomical Services, Philippines, presented data on climate trends and forecasts for the Philippines. John McGregor, Center for Australian Weather and Climate Research, discussed climate forecasts as useful for adaptive planning.

In the ensuing discussion participants considered, *inter alia*, data-collection and research capacity, and integrating climate change concerns into sustainable development programmes.

**HABITAT PROTECTION RESTORATION AND MANAGEMENT: Theme keynote:** Outlining ecosystem destruction caused by anthropogenic forces, Edgardo Gomez,



L-R: Chua Thia-Eng, PEMSEA, in a discussion with participants.





Co-Chairs Rodrigo Fuentes, Executive Director of ASEAN Center for Biodiversity and Theresa Mundita S. Lim, DENR.

University of the Philippines, stressed that adaptation is needed in coastal zones as much of the Asian coastline has undergone habitat degradation. He emphasized that habitat restoration and conservation should be community-based, citing an example of coral reef restoration in Bolinao, Philippines. He noted the role of MPAs in habitat protection, and the implications of the loss of coral reefs for food security. He called for a decrease in population, the reduction of ecological footprints and the reexamination of models to ensure an excess of biocapacity.

**Networking of MPAs:** Co-Chairs Rodrigo Fuentes, ASEAN, and Theresa Mundita S. Lim, DENR, Philippines, introduced the session, with Lim noting that the workshop's objectives include reaching consensus on a strategy for MPA networks in East Asia.

Nicolas Pilcher, Marine Research Foundation, Malaysia, highlighted the need to "insert biology 101" back into MPA networks, emphasizing that detailed knowledge of a species' biology and movements is vital to designing effective and efficient networks for protecting species during different life stages.



Nicolas Pilcher, Marine Research Foundation

Porfirio Alino, Environmental Governance Project 2, Philippines, explained that MPA networks work to accelerate the effectiveness by assessing and finding opportunities for cooperation that enhance ecological, socioeconomic, socio-political and

institutional benefits and reduce threats.

Noting that MPAs present a solution for biodiversity conservation, habitat preservation and community security, Stuart Green, Conservation and Community Investment Forum, Indonesia, emphasized the need for a systematic operational and financing framework to design efficient, effective and equitable MPAs, and noted the need for more business trained managers involved in MPA design.

Participants discussed, *inter alia*: how to set reasonable objectives for MPAs; setting criteria for assessing biophysical benefits and impacts of MPA management; joint information efforts to prevent illegal use of MPAs; and the effectiveness of linking key species for the sake of conservation.

In the afternoon, Nguyen Chu Hoi, ASEAN, reviewed the development of MPA networks in ASEAN countries, noting that only 20-30% of MPAs are effectively managed, although regional networks can help bridge the gap. Anuwat Nateewathana, Ministry of Natural Resources and Environment, Thailand, emphasized the role of protected habitats in the conservation of sea turtles in Thailand. Ahsanal Kasasiah, Ministry of Marine Affairs and Fisheries, Indonesia, noted that 10 million hectares of MPAs are projected to be in place by 2010. Wang Bin, State Oceanic Administration, China, discussed the status and challenges of MPAs in China; noting that no-take marine nature reserves occupy less than 2% of China's coastline, she said current MPAs fall short of incorporating key biodiversity areas.

Cheryl Rita Kaur, Centre for Maritime Security and Environment, Malaysia, highlighted the Turtle Islands Heritage protected areas, a trans-boundary effort with Philippines, as a good example for setting up MPA networks in the region. Chu Manh Trinh, Cham Islands Protected Area Authority, Vietnam, noted the importance



Richard Roque, PICC reading the EAS Congress YMB.

of both a bottom-up approach to managing MPAs and the placement of the authority, ideally within main government, ensuring efficiency and sustainability. Atjima Meepring, Thailand Environment Institute (TEI), discussed how TEI has succeeded in raising public awareness in coastal conservation through community participation.

**Indigenous approaches to habitat protection and restoration:** The workshop's first session was chaired by Osamu Matsuda, Hiroshima University.

Tetsuo Yanagi, Kyushu University, introduced Sato-umi as a new concept for coastal sea management that increases biological productivity and biodiversity. Anne McDonald, United Nations University - Institute of Advanced Studies (UNU-IAS), said that the Millennium Ecosystem Assessment follow-up initiated a sub-global assessment in Japan, focusing on Sato-umi. Masao Ukita, Yamaguchi University, noted that Sato-umi helps reconstruct the social system of the coastal environment. Takuya Yamada, Ministry of Environment, Japan, highlighted the inclusion of Sato-umi in national plans and strategies.

On Ago Bay management initiatives, Miyuki Maegawa, Mie University, stressed the need to decrease organic loads from land and increase biodiversity. Keita Furukawa, National Institute for Land and Infrastructure Management, Japan, noted the inclusion of social science knowledge and ecosystem approaches. Chair Matsuda stressed the role of community-based activities.

The second session on indigenous knowledge and community-based approaches in protecting, restoring and managing key habitats was chaired by Anne McDonald, UNU-IAS.

Somsak Soonthornawaphat, IUCN, noted that knowledge exchange in community-based programmes for coastal management enhances monitoring skills.

Truong Cong Hai, Danang Department of Natural Resource and Environment, Vietnam, presenting on the reforestation of coastal green belts in Danang City and stressed the

importance of public private partnerships. Presenting on community involvement in coral reef restoration projects in Thailand, Thamasak Yeemin, Ramkhamhaeng University, noted that benefits include ecotourism and education.

Illisriyani Ismail, Universiti Putra Malaysia, said artificial reefs in Peninsular Malaysia have net benefits for local fisherman. Ji Young Jang, Eco-Horizon Institute, highlighted stages for implementing community-based management in the Muan Wetland Protection Area, including initiating communications and bridging conservation with local development. Presenting on management failures in a community marine reserve in the Southern Philippines, Asuncion Biña-de Guzman, Mindanao State University, said changes in institutional arrangements led to community disinterest as project ownership had been "lost."

Josephine Savaris, Zoological Society of London, noted challenges in organizing communities for effective mangrove management include sustaining rehabilitation activities and securing land tenure. Elmer Ferrer, University of the Philippines, noted that traditional knowledge holds the environment in high regard and emphasizes communal cooperation.

A panel on interactive efforts in habitat protection, restoration and management within ICM frameworks discussed: artificial reefs; integrated management of watershed and coastal areas; and Sato-umi versus other local practices.

**WATER USE AND SUPPLY MANAGEMENT: Theme keynote:** Torkil Jønych Clausen, Global Water Partnership, presented on the added challenge of climate change to freshwater and coastal zone management. He noted that Asia is the most water-stressed region in the world, emphasizing that global warming will primarily "hit through water," and noted that IPCC hotspots are in freshwater-coast interaction zones. Clausen also reported that studies carried out by Integrated Catchment Assessment and Management Centre have shown lack of coordination between freshwater and coastal management.

**Addressing water crisis in rapidly growing cities:** Sang-Ki Choi, Korea Environment Institute, presented on water security and integrated water resource management in Asia. He noted that at least 16 Asian countries were under water stress due to a rapid increase in energy demand and pollution of water sources. Maria Corazon Ebarvia, PEMSEA presented on an economic valuation of ground water in Manila, advocated for an increase in the price of ground water to reflect its true value, and encouraged use of sanitized water. Jin-Hae Lee, Water and Environment Institute, discussed an



Anne McDonald, UNU-IAS

integrated river management project in Korea that addresses water pollution, flooding and drought. He noted that a national water policy was needed to regulate river and groundwater use. Satoquo Seino, University of Tokyo, noted that the implementation of the concept of environmental water in Japan has enhanced conservation of river ecology and promoted fisheries.

#### **FOOD SECURITY AND LIVELIHOOD**

##### **MANAGEMENT: The future role of fisheries in an**

**urbanized world:** The session was co-chaired by Rogelio Juliano, Coastal Management Centre, and Rafael Guerrero III, National Academy of Science and Technology.

On fish markets and food security in an urbanizing world, Nireka Weeratunge, WorldFish Centre, said that urbanization in East Asian countries is shifting coastal fishers into industrial and service sectors but can decrease their wellbeing and sever cultural ties. On East Asian coastal fisheries, Simon Funge-Smith, Food and Agriculture Organization of the United Nations (FAO), bemoaned government taxes on fishers without concurrent investment, and said aquaculture "is not a panacea." He advocated ecosystem approaches to fishery management. Yasuo Fukuyo, University of Tokyo, said aquaculture monitoring systems are necessary to prevent health risks from bio-contamination.

Meryl Williams, Asian Fisheries Society, presented on a project that aims to replicate the US-based Fishwatch for the Asia Pacific region, with a focus on high value, edible species, and major producing countries. Ross Jeffree, International Atomic Energy Agency, said ocean acidification must be regarded as the most pressing marine issue needing additional economic research.

On the morning presentations, Panelists noted: the strides in seafood monitoring since 2006 in the Philippines; fish market and food security information gaps remain; and youth fisheries education is inadequate and low quality schools should close.

In the afternoon, Satoquo Seino, University of Tokyo, presented a case study in Japan showing how tidal flat mangrove reclamation can reverse biodiversity loss and educate local communities through ICM. Noting that most small-scale fishers know how to hunt as opposed to farm, Nerissa D. Salayo, Aquaculture Department of the Southeast Asia Fisheries Development Council, highlighted the need to integrate local education and traditional values in fisheries management. Funge-Smith presented a regional fisheries livelihood programme in six East Asian countries to provide fishing communities with, *inter alia*, reduced vulnerability and alternative livelihoods.

Two presentations were made on small-scale fisheries initiatives in the Philippines. Geronimo Silvestre, International Center for Living Aquatic Resource Management, advocated strengthening local capacity and institutions, while Len R. Garces, WorldFish Center, recommended expanding partnerships among non-governmental organizations and fishers. Geoffrey Muldoon, WWF, used published indicators to evaluate country compliance with the FAO code of responsible fisheries in Indonesia, Philippines and Malaysia, and stressed that NGOs can assist fisheries compliance by motivating the seafood sector, facilitating private sector engagement and establishing intergovernmental regional platforms.

Two panel discussions underscored: the need to generate policy incentives to manage the sector from the fisher to consumers; and that MPAs show statistically different economic gains where they are used.



## POLLUTION REDUCTION AND WASTE

**MANAGEMENT: Theme keynote:** Magdolna Lovei, World Bank, noted that economic growth is leading to increased urbanization, consumption and waste, and industrial growth, which are all leading to increased pollution. She highlighted the work of the World Bank Investment Fund in reducing pollution in large marine ecosystems, noting this supports the PEMSEA objectives.

**Innovative policies and practices in water supply, sanitation and pollution reduction:** Carmela Centeno, UN Industrial Development Organization (UNIDO), elaborated on cleaner production practices in managing persistent toxic chemicals.

Li Haisheng, GEF/World Bank Cixi Wetland Project, presented on promoting ecological restoration in Cixi, China, and improving the water quality of the coastal area.

Li Jin, Yantai Septic Tank Management Pilot Project, underlined the improved geographic information systems and global positioning systems monitoring for septic tank systems in China. Chaiyakul Arux, Department of Livestock Development, Thailand, presented on biogas electricity generation systems for pig farms. On partnerships that work, Sing Cho, World Bank, reported on inter-district collaboration projects for wastewater treatment plants on the Pearl River delta in China. Hubbert Christopher, Mayor of the Municipality of Puerto Galera, Philippines, spoke on the sewerage and wastewater infrastructure developed to improve tourism in Puerto Galera. Jose Almendras, Manila Water Company, highlighted the improvement of water-related services to the inhabitants of Manila bringing health, economic and quality of life benefits.

Ned Clarence-Smith, UNIDO, chaired the afternoon session. On scientific support for cleaning up rivers and coasts, Qinhua Fang, Xiamen University, called for increased rigor in implementing legislation to better link strategic environmental assessments to ICM. Zhaoyun Chen, Xiamen University, drew attention to a project to calculate the marine environmental carrying capacity and reduce sewage flux in Xiamen Bay.

On new initiatives, challenges and opportunities for pollution reduction, Lorenzo Valenton, DENR-Japan International Cooperation Agency Project, summarized a water quality management areas programme and the pollution load assessment for the Marilao-Meycauayan-Obando river system. Quan Wen, State Oceanic Administration, China, described the integrated river basin and coastal area management project in the Bohai Sea Economic Region in northeast China. Hermono Sigit, Ministry of Environment, Indonesia, detailed the master plan developed to reduce pollution and improve the water quality of the Ciliwang River.

On financing and Investments, Paul Reddel, World Bank, underlined that management contracts and operational efficiency projects had outshone capital intensive projects for public private partnerships in urban water, and stressed the need for tailor-made solutions. Maya Villaluz, World Bank Office, Philippines, discussed gaining access to the Clean Development Mechanism to recover costs for pollution management projects. Stella Salas, DAI-EcoGov, Philippines, spoke on ring-fencing solid waste management utilities to improve cost recovery and sustainability for local governments.

Arunkumar Abraham, DAI-EcoGov, and Kim Jong Deog, Korea Maritime Institute, facilitated a panel on financing options for sustainable water and sanitation. Reddel called

for large-scale roll-out of a “small selection” of water projects. Juergen Lorenz, private sector representative, called for integrated solutions and improving market conditions to increase private sector participation. Tom Mulingbayan, private sector representative, lamented that ownership and accountability issues in projects are the major obstacles to sustained progress and, supported by Joe Taylor, World Bank, underlined the need for passionate champions to carry forward the cause.

Lovei summarized the major recommendations of the day’s workshop, *inter alia*: increasing systematic planning and integration on projects; focusing on a small number of projects to demonstrate impacts; providing incentives for systematic learning; and replicating and scaling-up projects through programmatic financing mechanisms.



A legislators’ dialogue, facilitated by Pia Cayetano, Philippine Senate, with Raphael Lotilla, Executive Director of PEMSEA.



Youth participants in a dialogue with legislators.

## SPECIAL SEMINARS

**LEGISLATORS’ DIALOGUE:** A legislators’ dialogue, facilitated by Pia Cayetano, Philippine Senate, discussed implementing ICM through legislation. Legislators also discussed the impacts of climate change on coastal economies, particularly for sea-level rise. They suggested enlisting local governments in adaptation efforts.

**YOUTH HOUR WITH LEGISLATORS:** The Youth Forum was chaired by Senator Pia Cayetano, who was joined by: Senator Mean Soman, Cambodia, Je Jong-Geel, Korea, and Nguyen Chu Hoi, Vietnam. They answered questions from youth on regional cooperation in ICM, climate change, and youth participation in environmental issues.