



WORKSHOP ON MEETING
HUMAN RESOURCES REQUIREMENTS
IN COASTAL AND OCEAN
GOVERNANCE:
SHORT-TERM TRAINING AND
DEGREE-GRANTING EDUCATION

23 November 2009



ASEAN Foundation

Japan-ASEAN Solidarity Fund

Chair: **Dr. Chua Thia-Eng**
Chair, East Asian Seas Partnership Council
PEMSEA

Co-Chair: **Dr. Gil Jacinto**
PEMSEA and Coastal Management Center

The East Asian Seas Congress 2009

**“Partnerships at Work: Local Implementation
and Good Practices”**

Manila, Philippines

23–27 November 2009



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Workshop on Meeting Human Resources Requirements in Coastal and Ocean Governance: Short-term Training and Degree-granting Education

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Co-Convening Agencies:

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BACKGROUND

In 2006, PEMSEA in collaboration with UNESCO-IOC and the Global Forum for Oceans, Coasts and Small Islands, conducted a survey to assess East Asia's capacity building needs in ocean and coastal governance. The survey was undertaken in support of building strategies to strengthen capacity to implement the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).

The results of the survey and a discussion of problems, as well as future actions, were presented and discussed during the East Asian Seas (EAS) Congress in Haikou City, Hainan Province, PR China in December 2006. The group consisted of 23 discussants from 9 countries in East Asia, Australia and the USA.

The participants reviewed current university programs on marine affairs and integrated coastal management (ICM), short-term specialized training courses related to coastal areas and oceans; identified capacity development gaps that require national and international efforts; and, explored the possibilities of a common postgraduate curriculum for ICM and marine affairs in the region.

In concluding the meeting, the participants agreed on the following:

1. On short-term needs,
 - Developing a network to identify strengths and weaknesses in capacity building in ocean and coastal governance

- On-the-job coaching and training of local governments and ICM practitioners in order to update their skills and knowledge
2. On_long-term needs
- Lack of mid-level coastal managers who can bridge local government knowledge and that of academic institutions
 - Formal training on ICM to strengthen skills and capacity on:
 - Broader environmental and natural resources management concepts;
 - Planning and monitoring;
 - Knowledge of key international legal instruments related to the marine environment;
 - Familiarity with socioeconomic issues; and
 - Communications, negotiations and leadership skills.

The Haikou workshop further recommended for PEMSEA to (a) analyze supply-demand for ICM people/practitioners, specifically the job market for graduates of ICM and Marine Affairs/Policy programs; (b) consider guidelines on competencies needed by ICM managers and institutions; and (c) scale up efforts for degree training by exploring and facilitating consortium agreements.

In response to these recommendations, PEMSEA conducted last August to October 2009, another survey of institutions to address the above concerns.

The results of the survey (**Appendix 1**), the core competencies of ICM graduates, a consideration of syllabus of a core on ICM as well as other core courses and electives under an ICM postgraduate program, and the feasibility of a regional consortium of universities offering ICM postgraduate degrees, were in turn discussed in Xiamen, PR China, in November 2009, which served as a preparatory meeting leading up to the EAS Congress 2009 workshop (**Appendices 2, 3 and 4**).

Workshop on Meeting Human Resources Requirements in Coastal and Ocean Governance: Short-term Training and Degree-granting Education

As a follow-on workshop on the Discussion Group Meeting on Capacity Development on Coastal and Ocean Governance held in 2006 and the Xiamen meeting, this meeting/workshop focused on the recent initiatives undertaken related to capacity development in the region. As per the agenda (**Appendix 5**) the discussions included:

1. Efforts to maximize regional intellectual capital towards coastal and ocean development;
2. Short-term training initiatives and the development of curriculum towards ocean and coastal governance;
3. Contribution of regional and international initiatives in promoting capacity development; and
4. Human resource requirements of the region and available services.

The workshop attempted to answer the following questions and concerns:

- Have we met the demands of training and education in coastal and ocean governance in East Asia?

- Are the current initiatives sufficient enough to address capacity needs?
- What are the current opportunities for short-term training and degree-granting education?
- A “matching exercise” of articulated training needs of the countries in the region vis-à-vis available supply provider
- Way forward: Packaging trainings so that donors can readily come in.

The workshop was able to draw in a wider set of participants representing a bigger set of perspectives in providing capacity building in ocean and coastal governance. The participants came from United Nations agencies, international development initiatives, research institutions, international NGOs, donor (ASEAN) as well as representatives from local and national governments, the academe and learning centers in the ASEAN countries (Cambodia, Indonesia, Malaysia, Philippines, Vietnam) participating in PEMSEA activities particularly from PEMSEA’s Learning Centers and those recommended by national governments who responded to the PEMSEA-initiated “Survey of the Demand and Supply of Human Resources for Integrated Coastal Management (ICM) for the East Asian Seas Region” (**Appendix 6**). A total of 42 participated in the Workshop (eight were supported by the ASEAN Foundation while others were supported by other donors).

The workshop was initially planned to run on two separate days (on the first day of the International Conference to discuss issues relevant to short-term training and on the last day, a discussion on post-graduate ICM training). The decision to merge the two workshops came so as to accommodate changes as well in the schedules of the presenters and experts. This resulted in a tight program for presentations and breakout sessions.

The revised program (Appendix 5) necessitated a plenary where the initiatives on short-term training and degree-granting ICM program were presented before the body simultaneously held breakout sessions to separate the two groups. Another plenary was called to articulate the conclusions and recommendations from the two groups.

Plenary session

Despite the changes in the schedule, the plenary became an avenue to articulate important principles in capacity building, distill important lessons, and be appraised of what’s happening in capacity building in the region. These important lessons include:

- Recent capacity-building initiatives in ocean and coastal governance through short-term training and degree-granting education have increased the cohesion and interfacing of science and policy.
- The region has enough providers of skills and knowledge but they need to be integrated and networked. An effective interaction among them is not only practical but essential.
- ICM has evolved into a management science that needs to be complemented with strategic short-term training strategies and a more formal postgraduate degree program.

The following are the summaries of the presentations during the plenary.

IOI's capacity-building program IOI-OceanLearn

Ms. Masako Otsuka, IOI-Japan

The International Ocean Institute's OceanLearn (OL) is a system-wide programme for the coordination, delivery, quality assurance and development of global partnerships of the IOI's capacity-building activities. OL is a global initiative which focuses on short training courses. It targets students and employees from government (mid-level), the private sector and NGOs. It is run by the IOI's network of Regional Operational Centers.

From among OL's more than 300 participants in the last three years, about 80 from East Asia have completed IOI ocean governance courses. Their course deliveries in 2007-2009 include development, implementation and management of marine protected areas, ocean: governance (policy, law and management); responsible fisheries in the Pacific Islands; regional ocean governance for Mediterranean and Eastern European countries; and marine protected area management training.

A new training for the Coral Triangle Initiative is being planned in partnership with the University of South Pacific, IOI-Pacific Islands and Reef and Rainforest Research Center, Australia. This is a suit of seven short-term training modules which are to be adapted for delivery in East Asia.

The "OL brand" guarantees a network-wide quality standard for all courses. It consists of three components that investigate the quality of the content, the performance and the venues of the courses.

The future plans for OL include: (1) its expansion to include all training offered throughout the IOI global network; (2) development of a multi-mode course delivery; and (3) strengthening the Alumni Network. All these plans necessitate strengthening the partnerships with existing and new partners as well as the application of quality assurance to all OL courses.

Capacity-building activities: Experiences of a global project

Dr. Juergen Weichselgartner, LOICZ

The Land-Ocean Interaction on the Coastal Zone (LOICZ) Project is the core project of the International Geosphere-Biosphere Programme and the International Human Dimensions Programme on Global Environmental Change. Its aim is to provide science that contributes towards understanding the Earth system in order to inform, educate and contribute to the sustainability of the world's coastal zones. It is a collaboration which draws strength from thousands of researchers, a scientific steering committee (SSC) with 18 members; regional nodes in India, Singapore, China and Ghana, and an international project office (IPO) in Germany.

Its flagship capacity-building strategy in long-term degree granting training is the Erasmus Mundus Joint Master Program in Water and Coastal Management. This program is participated in by 48 European and 15 non-European universities. Members of the LOICZ SSC and IPO teach different modules in this program.

Among its innovative short-term training strategies include:

- Lectures, summer schools and edutainment;
- A children's university and school visit designed for primary and high school pupils;
- "Open house" days and internships;
- Teacher training and training of trainers (ToT) to inform teachers and trainers on latest findings, like ToT on governance, teacher seminar on coast and climate, training for policymakers on risk assessment. Practitioners are certified afterwards.
- Other outreach activities, like newly designed logo, website, newsletter, flyers, reports and series (e.g., *Science Communication*, *Deltas at Risk*), software tools (e.g., DIVA), journal articles (e.g., *Estuarine, Coastal and Shelf Science*) and books (*Estuarine Ecohydrology*)

LOICZ undertakes capacity-building activities and networking with target groups which are inside and outside of the traditional scientific realm. As a strategy, LOICZ identifies regional mentors and early stage researchers to receive a special training and supports facilitation of standardized studies for regional and broad-scale comparison.

Through the years LOICZ has made predominantly positive experience in capacity building and recognizes that capacity building requires precious resources, both temporal and financial.

Capacity-building Activities of the ASEAN Foundation

Dr. Filemon Uriarte, Jr., ASEAN Foundation

The ASEAN Foundation was established by the ASEAN leaders in December 1997. The ASEAN Foundation supports the ASEAN community by promoting greater awareness of the ASEAN identity, people to people interaction, and close collaboration among the business sector, civil society, academe and other stakeholders of the ASEAN. Its priority areas are: (1) promoting ASEAN awareness and identity; (2) enhancing interaction among ASEAN stakeholders; (3) building capacity and human resources; and (4) addressing socioeconomic disparities and poverty.

The Foundation has so far supported some 100 projects worth US\$ 18 million. Over 18,000 ASEAN nationals have participated in capacity-building activities funded by the Foundation.

The Foundation has, to date, allotted about US\$ 8.5 million for projects which targeted developing human resources and capacity building. From this amount, about US\$ 3 million have been earmarked for ongoing capacity-building projects; roughly half are spent for scholarship programs. The Foundation's scholarships are coursed through the region's best universities and recently, partnerships with some private corporations have been started.

CAPaBLE Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries: Climate Change

Dr. Laura David, APN

The APN is a network consisting of both policymakers and scientists to enhance research relevance for its stakeholders. Decisionmaking within the APN is always made

after thorough discussions among and with its scientific members. In fact, the APN is unique in that it provides, once a year, a forum for its scientific and decisionmaking members to gather and make collective decisions on APN research and capacity-building activities. Collective decisionmaking is made by all member countries, developed and developing. This unique gathering within the APN family enables and encourages research and capacity building/enhancement projects based on both policy needs and scientific gaps.

APN emphasizes the importance of promoting fundamental coastal research immediately, including observation and monitoring, in order to provide a scientific basis for management purposes. Research is needed in at least three key areas: (1) coastal ecosystems; (2) coastal pollution; and (3) problem solving.

Since 1998 to date, APN project topics have covered a variety of coastal zone issues such as: climate change and variability and sea-level rise; land-ocean interactions; coastal zone processes; and human dimensions of global change as applied to coastal institutions. In 2003, APN launched the Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries (CAPaBLE) Program. The CAPaBLE Programme is a concrete initiative to realize Parts 107 to 114 of the Plan of Implementation for the World Summit on Sustainable Development (WSSD). Of particular relevance is Part 111 of the Johannesburg Plan of Implementation. Phase One activity focused on Climate Change.

APN generates projects by funding a number of proposals geared towards: (1) scientific capacity development for sustainable development; (2) scientific policy interfacing; (3) awareness-raising activities; and (4) dissemination activities.

The APN believes in the value of partnerships and networks and considers working with other organizations involved in global change research, capacity building and policy development as very crucial efforts in fostering global change research in the region.

Management of discharges to the marine environment from nuclear activities in the Asia-Pacific Region – A coordinated regional approach

Mr. Ron Szymczak, RCARO

Asia is the only region in the world where electricity-generating capacity and, specifically, nuclear power is growing significantly. In East and South Asia, there are over 109 nuclear reactors in operation, 18 are under construction and there are plans to build >110 within the next 10 years. The greatest growth in nuclear generation is expected in PR China, South Korea and India. Such conditions and trend lend to an increasing cycling of radionuclides in the atmosphere and the marine environment. It is imperative, thus, to:

- Develop the baseline data on current distributions of radionuclides in marine ecosystems;
- Develop and/or establish facilities and resources;
- Have access to advanced nuclear technologies for marine environment applications; and
- Training in sampling and analysis of marine environmental samples, tracing fate and behavior of contaminant discharges, assessing toxicant impacts on coastal/marine/aquaculture biota, ecological risk analysis and emergency response planning.

Efforts to address these challenges are made through the International Atomic Energy Agency (IAEA)'s Regional Cooperative Agreement among 17 Asia/Pacific countries, constituting over 50 percent of the world's population and governed by IAEA's Technical Cooperation (TC) Programme. The TC Programme in 2007/2008 approved US\$ 2.8 million in projects. Since 1995, some of the major achievements of the marine programme include: a marine radioactivity database; marine radio-analytical techniques in 14 RCA countries; new radioecology facilities in Indonesia, Malaysia, Pakistan and Thailand; novel nuclear technologies for marine environment applications; regional and national training in specific areas; expert assistance in national study programmes; regional communication/network development and data exchange; and quality assured and regionally standardized protocols.

The IAEA/RCA marine programme has so far demonstrated regional sustainability of technical deliverables and networking.

POPs analysis' capacity development and monitoring in 10 Asian countries

Dr. Fukuya Ino and Dr. Evangeline Santiago, UNIDO

Since 1996, the United Nations University (UNU) — in collaboration with Shimadzu Japan and the National Project Coordinators (NPCs) from 11 Asian countries, namely, China, Japan, Indonesia, RO Korea, Malaysia, Singapore, Thailand, Vietnam, Philippines, India and Pakistan — has been active in capacity development for chemical analysis and monitoring of toxic organic compounds. This project's objective is to generate harmonized data on toxic organic compounds which can assist governments to manage pollution. And since 2002, these regional data serve as an input for the baseline data for the assessment of the effectivity of the Stockholm Convention in connection with the organochlorine pesticides (OCPs) in water, sediments and biota; and PCBs in water.

While UNU provides the research grant for sampling analysis to the NPCs of each participating country every year, Shimadzu Japan provides the gas chromatography/mass spectrometer, manual for the analysis and the training in Japan to the representatives of the participating countries every year. Annual international symposia and project meetings are held to report the results of the monitoring project. The data are collected from these reports and stored in LandBase, a UNU database. Examples of project data include: OCPs in sea and river waters and in shrimp muscle in China; OCPs in lake water and sediment and in fish and shrimp muscle in Vietnam; and OCPs in the river water in the Philippines.

Overall PEMSEA Strategy in Capacity Development: Meeting the Training Needs of East Asia

Dr. Chua Thia-Eng, PEMSEA

PEMSEA utilizes a comprehensive framework to sustainable development in the coastal areas (SDCA). In it, capacity building is one of the fundamental governance aspects. PEMSEA utilizes ICM to operationalize this framework. Through the years, aside from regular short-term trainings offered in the region, PEMSEA has contributed in establishing areas of excellence, network of learning centers and universities, standardized monitoring scheme, etc., to provide an avenue in the continual improvement of ICM as management tool, as well as re-tooling managers and mentors, instep with what is happening and in response to challenges in the region.

ICM has evolved into a management science as well as a management system. Operationally and technically, it can now be measured (such as through ISO, etc.) but

politically, it has been instrumental in how local governments have likewise evolved. ICM is both a science and an art, a fact that necessitates a demand for reformed training (short-term, degree granting, and other mechanisms). Questions that can be used to inform future strategies such as the following are very relevant: Do we have enough training courses in this region? Do we have that supply (of mentors, facilities, etc)? How do we reform ICM courses, instep with a requirement, that it should become a professional course? What do we want for the region? Where do we get funding for these new mechanisms? How do we go about the lack in teaching materials? What is the recent profile of our mentors/teachers conducting an ICM course? Likewise, what is the profile of students/trainees of ICM? What entry requirements should be imposed?

Demand and Supply Survey (2009): Ocean and Coastal Governance

Mr. Danilo Bonga, PEMSEA

This presentation provided a quick summary of the results of the supply and demand survey sent to three target groups: (1) national institutions; (2) local governments; and (3) universities. These items were discussed during the Xiamen, pre-Congress meeting. **Appendix 1** elaborates on the results in detail.

Towards a common core courses in an ICM program

Dr. Gil Jacinto, PEMSEA

To provide yet another summary on what transpired during the Xiamen pre-Congress meeting, this presentation discussed developing a post-graduate ICM program focusing on the core competencies of ICM graduates, a consideration of syllabus of a core on ICM as well as other core courses and electives under an ICM postgraduate program, and the feasibility of a regional consortium of universities offering ICM postgraduate degrees. **Appendix 3** elaborates these points in detail.

Upgrading teacher competencies for an ICM program

Dr. Luky Adrianto, Bogor University

The Xiamen workshop, a pre-Congress activity, emphasized the growing demand for ICM as a management tool for governing the coastal region. This was substantiated by the survey results and by other trends that were happening across the region: (1) the number of universities offering ICM/Marine Affairs has increased; and (2) the numbers of donors advocating ICM have likewise increased. The donors, however, brought with them a different “branding” or typologies (like ICZM, CRM, CAM, etc.) which made inroads to integrated management but, admittedly, brought confusion.

This impetus has shown a need for a common ground on the ICM practice and its delivery in the region through a “revitalized” post-graduate ICM program. For example, Indonesia’ graduate school’s ICM/Marine Affairs program is a “sandwich” program which has sent an average of 20-30 students each year to China (Xiamen University), Japan (Ryukus University), Denmark (Aarhus University) and Germany (Bremen University). Afterwards, it is hoped that through a synthesized experiences from different localities, a common program structure could emerge. (Through this, and towards looking forward, the basis for ICM Program certification can be proposed.)

It may be easier to commit to a standardized program but the survey noted the inherent problem of those attempting to create a new program: lack of qualified

instructors/mentors/teachers. These mentors are envisioned to have: (1) knowledge in ICM theory; (2) experience in ICM practice; and (3) should have the passion to teach ICM. Thus, as proposed, the objectives to re-tool and upgrade ICM teachers might include: (1) state-of-the-art ICM in the region; (2) enhance teaching skills through mentoring by experienced practitioners; (3) provide discussions and sharing of experiences; and (4) develop common professional skills in ICM program delivery.

To attain the objectives, several initial efforts are likewise needed: (1) confirming the needs assessment on strengthening competencies of ICM teachers; (2) detailing the upgrading objectives; and (3) detailing the upgrading scheme and mechanisms.

Breakout Session: Group 1 — Short-term Training

The group was composed of representatives from Indonesia, Timor-Leste, Cambodia, Vietnam, Japan, Australia, Philippines and Thailand and from PEMSEA. Each participant was requested to describe any existing short-term training programs in the coastal and marine areas.

The discussion of the group focused on the following issues/concerns/questions:

- Who are the targets of the trainings?
- How do we determine their needs in order to identify their needs?
- Do we have a harmonized or standard of the concept of ICM?
- Do we have a standard training manual to be used as reference?
- Who will deliver the trainings?
- Do we have enough manpower to meet the training needs?
- Are the trainers technically capable to conduct the trainings?
- What would be the best means of conducting the training?
- Are there enough demonstration sites/projects or case studies?

The conclusions of the group are as follows:

- Short-term trainings are necessary to address the needs of countries with national ICM policies to train the local governments and the trainers from universities and training centers in the region.
- The trainings will have to be conducted for at least three levels:
 - Decisionmakers – ICM concepts, and process, policy formulation, decision support requirements
 - Technical staff – ICM concept and process, ICM tools, IEC and benchmarking
 - ICM implementer – ICM concepts, how to implement ICM, needs in effective implementation and monitoring and evaluation.
- The delivery of trainings can be formal and informal using lectures, demonstration site visits and case studies.

The recommendations of the group are as follows:

- Document best practices as case studies.

- Request PEMSEA to take the lead in establishing a network of ICM training centers. Existing training programs of different training centers or institutions must be strengthened based on a harmonized or standard concepts/activities. Listing of existing lecturers or trainers must be compiled in order to maximize their expertise.
- Strengthen existing training institutions and examine possibilities of complementation. Existing training courses available in the different participating countries must be compiled and reviewed in order to determine their strengths and weaknesses so that areas of improvement or complementation can be identified.

Breakout Session: Group 2: ICM Curriculum Development

The discussion of the group focused on the following issues/concerns/questions:

- Which discipline/faculty/college will host the ICM graduate program?
- Are there jobs/is there a demand for ICM graduates?
- Is ICM an academic or “professional”/vocational program?
- Will it be desirable or should we have one core course that is common/similar or sort of “standardized” across East Asia?
- Do we need trainers’ training?

The conclusions of the group are as follows:

- The ICM graduate program’s “homebase” varies given structural differences among universities. There is no prescribed way where the program is lodged. But the ICM program will need catalysts from the universities/colleges/faculties
- There is a perceived high demand from local government units (LGUs) and nongovernmental organizations (NGOs). With awareness building, this perception is actualized. Considering existing policies on ICM, LGUs need to know such vital needs, such that awareness needs to be raised.
- ICM program needs be offered on weekends to ensure working people from LGUs, etc., will have time to attend the courses/classes.
- In the future and to further create a demand, there will be a need to “professionalize” the ICM profession through licensing and certification of practitioners.
- ICM is both an academic or “professional”/vocational program
- Need to “educate” teachers on ICM.
- A syllabus especially for the core course on ICM is needed. A similar initiative for other core courses may also be important and useful.

The recommendations of the group are as follows:

- Compare and eventually adopt a syllabus for ICM core course(s) among universities in the region through an e-group for comment and improvement.
- Develop mechanisms for a training-of-trainers (faculty) program for ICM core courses.
- Complete and update the information on universities offering ICM graduate programs.

APPENDIX 1

DRAFT (for comments and discussion)

SUMMARY OF RESULTS OF THE SURVEYS: Survey of the demand and supply of human resources for integrated coastal management for the East Asian Seas Region

From August to October, 2009, three separate survey forms were sent to three target groups: (1) national institutions, (2) local governments and (3) universities. The surveys have the following objectives:

1. Determine the availability and demand for planning, management and technical capacity that are required for developing, implementing and managing coastal and ocean programs
2. Determine the types and level of supply of management and technical skills and assess the potential for meeting the estimated demand for human resources
3. Determine the investment opportunities for capacity development of concerned local and central government including willingness of educational institutions to invest in the development of postgraduate ICM curriculum and educational network.
4. Determine the employment opportunities for trained coastal management professionals in government or private sector services.

Biased to countries with national ocean policies/ICM law and to areas with PEMSEA ICM sites, these surveys are envisioned to be the first tier to a continuing assessment of demand and supply for human resources for ICM in the region.

Cambodia, for instance, recognizes that the survey forms can be used as a guide to craft their capacity building planning/evaluation documents and processes. Japan, in particular OPRF, will conduct surveys on local governments' views on ICM and universities' curriculums on coastal management this fiscal year (ending next March). Around 60 universities are targeted for the survey. Similar to the PEMSEA surveys on Part II and Part III, OPRF would later submit some parts which are related to the objectives of the PEMSEA surveys.

Profile of Respondents:

<i>Part I National institutions</i> <i>N=10</i> <i>PEMSEA National Focal points</i> <i>With existing national ocean policy/ICM law</i> <i>Respondents mostly hold Director, Chief, Administrator positions or the deputy or assistant administrator positions</i>		
China	Jun Qiu	China Institute of Marine Affairs
Indonesia	Subandono Diposaptono	MOMAF
Japan	Hiroyuki Hattori	MLIT

Philippines	Carlo Custodio	CMMO
	Marizel Calpito	DENR CMMD
	Porfirio Alcachupas	DENR MIMAROPA
	Teresa Salanguit	DENR NCR
	Vilma Limates	DENR Region VI
RO Korea	Sun-Bae Hong	MLTM
Vietnam	Nguyen Chu Hoi	VASI
Part II Local Governments		
N=16		
PEMSEA ICM sites		
Respondents are head of their respective ICM programs		
China	Zhou Lumin	Xiamen
Indonesia	Peni Susanti	Jakarta
	I Gede Putu Wardana	Bali
RO Korea	Seung-Joo Hyun	Incheon2
	In-Joo Jung	Ansan
	Hyun-Jeong Lee	Hwaseong
	Hee-Jeong Yun	Gyeonggi
	Young-Goo Kim	Siheung
	Jung-Sik Park	Incheon1
Philippines	Luis Awitan	Batangas
	Gualberto Galia	Guimaras
	Anabelle Cayaban	Cavite
	Alexander Baluyot	Bataan
	Lludeza Quesada	Samal
Vietnam	Nguyen Dieu	Danang
	Nguyen Van Ngoc	Thua Thien Hue
Part III Universities / Research Institutes		
N=20		
Universities offering Marine Affairs/ICM program or Marine Affairs/ICM-related programs		
Cambodia	Khov Kuong	Royal University of Agriculture
	Seak Sophat	RUPP
China	Jun Qiu	China Institute of Marine Affairs

	Xiongzhi Xue	Xiamen University
	Xu Xiangmin	Ocean University of China
Indonesia	Kusumastanto-Adrianto-	CCRMS-IPB
	Markus Lasut	Sam Ratulangi University
RO Korea	Chan Won-Lee	Kyungnam University
Philippines	Alex Brillantes	UP NCPAG
	Jose Edgardo Gomez	UP SURP
	Angel Alcala	SUAKCREM
	Danilo Largo	USC
	Richard Magsino	De La Salle Lipa.doc
	Rogelio Subade	UPV
Thailand	Suriyan Tunkijjanukij	Kasetsart University
	Usavadee Tuntiwaranurah	Burapha University
Vietnam	Bui Hong Long	Institute of Oceanography
	Tran Dinh Lan	IMER
	Vu Minh Cat	Water Resources University
	Tran Duc Thanh	IMER

I. RESULTS FOR NATIONAL INSTITUTIONS

- A. On national plans to develop sufficient and skilled human resources to fully implement national coastal/marine policy, legislation, strategy or executive orders

Half of the respondents said, yes, that plans are existing to develop human resources and a budget has been allocated for capacity building. An indicative amount was given by one respondent. The others do not have one (or did not answer) citing that either it's not a priority or there is a need to craft a systematic capacity-building program for ocean and coastal governance. National officials have decidedly been given the first opportunities for training, but, they remain untapped given that no comprehensive plan to use this expertise towards ocean and coastal governance had been developed in some countries.

- B. On the trainings, national officials have undergone:

RO Korea and PR China, ticked off the most numbers (about 40 separate trainings) of training attended for ICM/ocean and coastal governance, apparently a reflection of them having enacted their ocean or ICM policies in the early 1990s. Indonesia, Vietnam, Philippines ticked off ca.17- 23 trainings.

National Officials are mostly trained in:

N=10

- Integrated coastal management (7)
- Coastal resource management (7)
- Marine protected area (6)
- Issues in marine affairs (5)
- Community based management (5)
- Coastal tourism (5)
- Public awareness and info dissemination (5)

C. On technical skills needed by national officials to undertake a comprehensive planning and management of the coasts and oceans:

Most needed	Needed	Not needed
Climate change (7) Development planning and management (6) Integrated coastal management (6) Ocean governance (6) Ecosystem-based management (6) Resource valuation (6) Risk assessment (6) Information management (6) ICM tools (6)	Maritime legislation (6) Fishery and aquaculture management (6) Port and marine transport management (6) Communication (6) EEZ management (6)	Fishery and aquaculture management (2) EIA (2) Integrated EIA (2)

Most national officials have trainings in ICM but they ticked off that ICM is still most needed as a reflection of: (1) the important role of ICM in their planning and management activities; (2) a need to update skills needed for an ICM; and (3) a need to have more people with knowledge about ICM, as these countries have initiated efforts to scale up ICM.

In view of recent developments in ocean and coastal governance, skills to address climate change and how to implement an ecosystems-based management are given importance.

Comments about the survey questionnaires

1. "It seems that the question items are not developed considering the policies or systems which each country has constructed, and the differences of scale and structure of governments, level of technical capacity of each country and so on.
2. "It is difficult to [estimate the number of] the human resources for coastal development and management. So, this survey will give a wrong evaluation of country's human resources and it should be difficult to compare the current situation with each other.

II. RESULTS FOR LOCAL GOVERNMENTS

- A. On local government plans to implement national or local coastal marine policy, legislation, strategy or executive orders.

Ten of the sixteen respondents, said yes, there is a local development plan for human resources development, with budget and the specific skills needed. Four respondents have written an indicative amount per year as allocations for capacity buildings. The rest of the respondents noted that no plan exists citing the national mandate to provide one and with appropriate budget included.

- B. On trainings local officials have undergone

Xiamen and Jakarta indicated the most numbers of trainings attended (35 and 39 trainings, respectively), owing to the maturity of ICM in Xiamen and the support of international organizations given to Indonesia, particularly to Jakarta, through the years. The PEMSEA ICM sites (Batangas, Cavite, Bali, Danang) each indicated trainings in the range of 12-15. TT Hue in Vietnam indicated 16 training reflecting the support they got from international organizations, particularly the GTZ project.

Local officials are trained mostly in: N=16

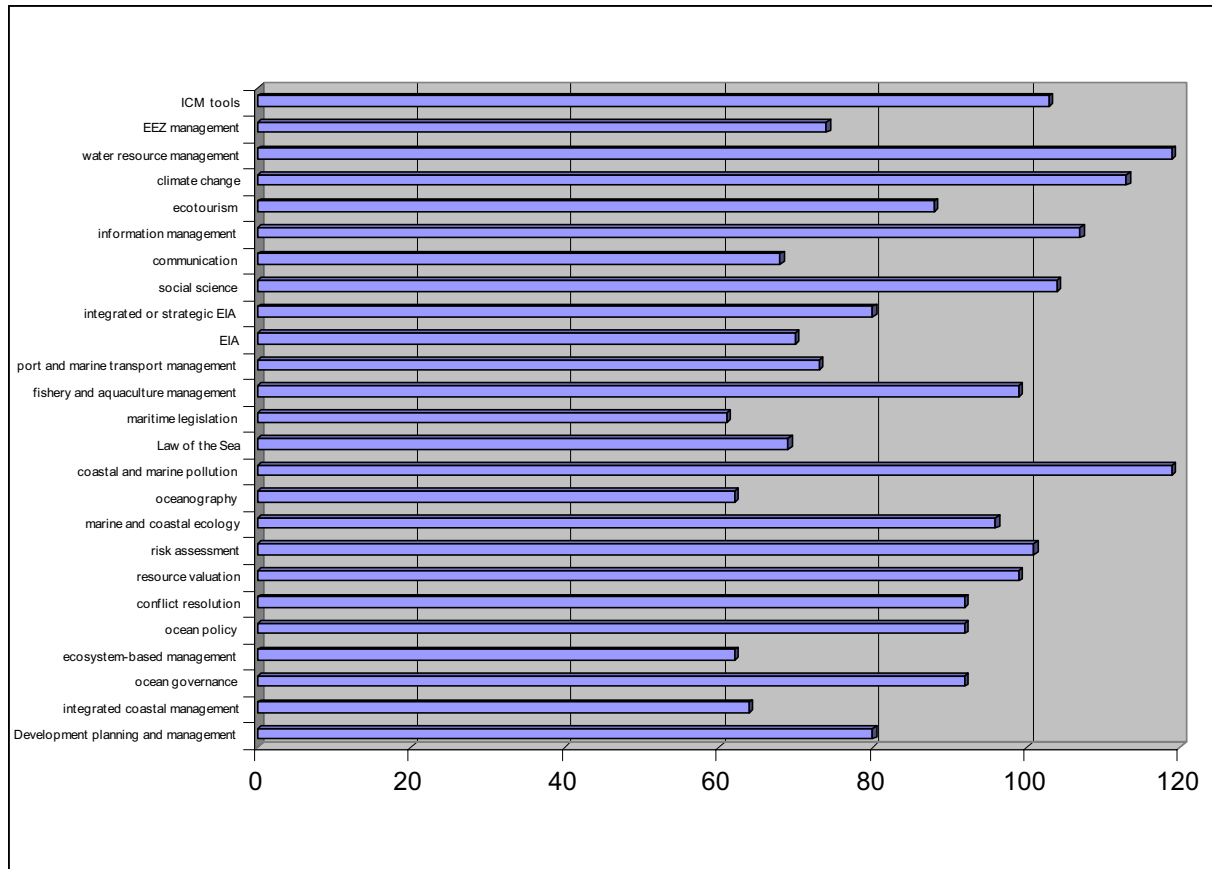
Integrated information management system (10)
Pollution control and waste management (8)
Planning and development (7)
Issues in marine affairs (7)
Ocean and coastal law policy (7)
Integrated coastal management (7)
Marine protected area (7)
Environmental impact assessment (7)
Development planning and management (6)
Coastal and in-land capture fisheries (6)
Coastal tourism (6)
Environmental monitoring (6)
Coastal zoning (6)

- C. On the technical skills needed in comprehensive planning and management in a province/state/prefecture/regency/municipality/district/administrative unit.

The most needed technical skills center on development planning, ICM, and ICM tools, owing to buy-in of local governments in the importance of ICM. Most local governments also recognize the pressing problem of water use and supply, hence their clamor for trainings in water resource management – an observation which is not apparent from the national government responses. As most of these sites are tourist attractions (or have potentials to become one), they wanted skills for ecotourism.

<i>Most needed</i>	<i>Needed</i>	<i>Not needed</i>
Development planning and management (11) integrated coastal management (11) water resource management (11) ICM tools (11) coastal and marine pollution (10) information management (9) Ecotourism (9) climate change (9) ocean governance (8) ecosystem-based management (8) resource valuation (8) Communication (7) EIA (7) fishery and aquaculture management (7) conflict resolution (6)	marine and coastal ecology (11) Law of the Sea (11) maritime legislation (10) risk assessment (10) port and marine transport management (10) ocean policy (9) Oceanography (9) fishery and aquaculture management (9) integrated or strategic EIA (9) social science (8) EEZ management (8) resource valuation (7) ecosystem-based management (7) conflict resolution (7) Communication (7) EIA (7) climate change (7) information management (6)	Oceanography (4) EEZ management (4) Conflict resolution (3) Ocean policy (2) Maritime legislation (2) Social science (2) EIA (2)

Estimated number of local experts needed with particular managerial and technical skills in ocean and coastal governance,



D. On the estimated number of experts needed with particular managerial and technical skills

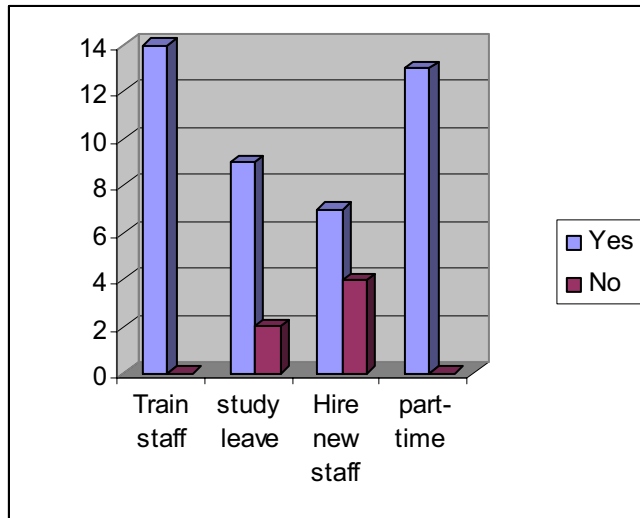
The estimated numbers of experts needed across the local areas in the region were aggregated, and they cluster around those that should have skills and knowledge in ICM tools, water resource management, climate change, information management, social science, coastal and marine pollution, integrated EIA and risk management.

Local governments also indicated they need more experts in: ecotourism, fishery and aquaculture management, marine coastal ecology, resource valuation, conflict resolution, oceanography and ocean governance.

E. On training opportunities to become coastal managers, coastal planners and ICM officers.

There is an overwhelming response to have existing local government staff to be trained either to become a coastal manager, coastal planner, or an ICM officer, each needed to compose an ICM team. But to let go of a staff to undertake a study leave of 1-2 years to earn a degree do not sit well with some areas. They are more open to an option wherein an exiting staff will pursue an ICM degree on a part-time basis. When asked about

hiring a new staff with the above capability, the responses tended to be split in half, perhaps an indication of problems in allocating a budget for new hires.



III. RESULTS FOR UNIVERSITIES

A. On courses for the Marine Affairs, Integrated Coastal Management or Environmental Management degree programs.

The table below shows the courses (culled from those with the highest aggregated responses) and whether they are offered as a core/required, major, or an elective in a Marine Affairs, ICM or Environmental Management Degree programs.

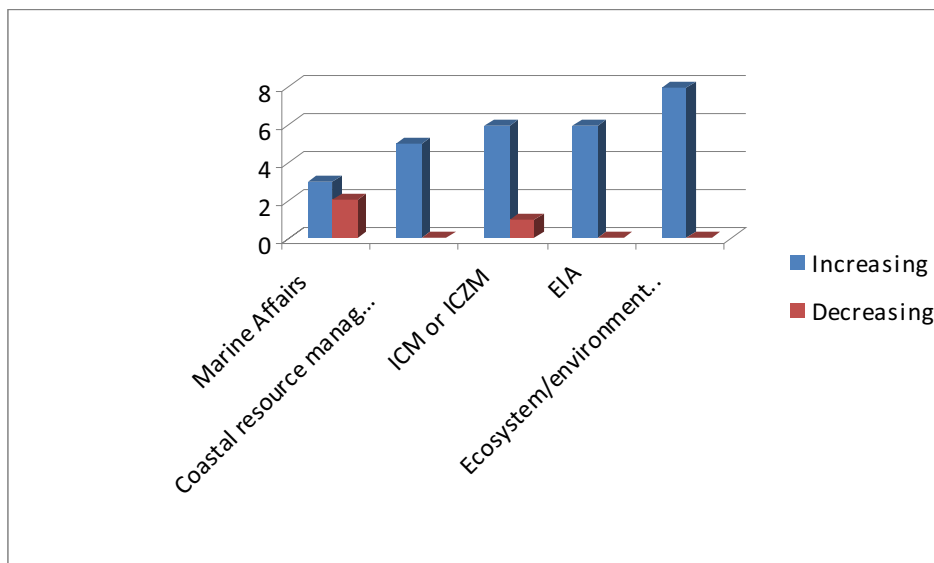
Core	Major	Elective
integrated coastal management (8) marine and coastal ecology (8) Development planning and management (7) marine affairs (6) oceanography (6)	oceanography (7) coastal and marine pollution (6) Law of the Sea (6)	information management (8) EEZ management (8) port and marine transport management (7) EIA (7) communication (7) coastal engineering (7) ecotourism (7) GIS (7) water resource management (6) consensus building (6) fishery and aquaculture management (6)

B. On the status of enrollment on particular courses

The responses show that there is an increasing trend in the number of enrollees for the following courses:

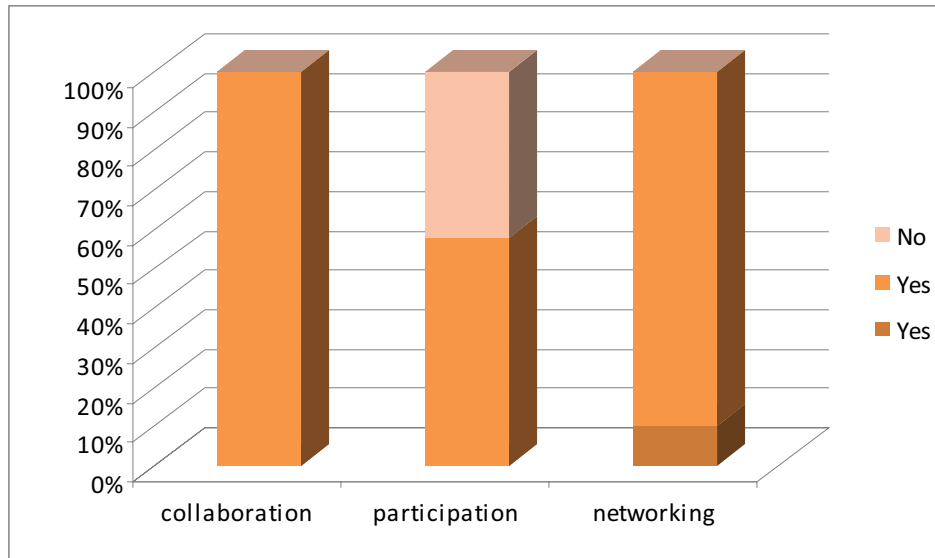
N=16

Course	Increasing	Decreasing
Marine Affairs	3	2
Coastal resource management	5	0
ICM or ICZM	6	1
EIA	6	0
Ecosystem/environmental management	8	0



C. On the interests of the universities to pursue a common masteral degree program in ICM and the creation of a network of universities.

All of the respondents are interested in collaborating with other institutions to pursue a long-term postgraduate degree program in ICM. While they are willing to collaborate, 40 percent of the respondents said that their ability to send participants in a regional working group may need to be supported by external funds. The 60 percent are more than willing to participate at their own cost. And that while all of them are interested to become a part of a network of institutions to upgrade current postgraduate program, two universities, clarified that should this entail foreign travel, they too will need external travel support.



D. On challenges academic institutions face with respect to delivering capacity development programs for ICM

The challenges listed include:

1. budget, financial sustainability;
2. lack of skilled staff/experts with in-depth knowledge;
3. lack of facilities/training materials/books/ training materials that need to be translated
4. lack of incentives for lecturers;
5. lack of national policy and legislative framework;
6. lack of interest from community and coastal officers for the program; and
7. target clientele limitations, mostly are employed who cannot undergo a longer training, and those cannot afford the cost of going to a program.

C2 (RUPP)

- Budget;
- skilled staff; and
- lack of collaboration with technical institutions.

C3 (RUA)

- Lack of facilities and budget to support the effective teaching method; and
- Lack of incentive for lecturer.

C5 (Ocean University of China)

- lack of the national policy and legislative framework on ICM

C6 (Xiamen University)

- In order to address the needs for Domestic ICM Trainings, a lot of efforts is required on the translation of training courses into Chinese and incorporation of some local cases studies.

- How to make known our capacity development programs to more potential interested institutions or governments and secure financial sustainability is a key and difficult issue to face.

C7 (Burapha University)

- Wholistic, e.g., social and scientific, knowledge is strongly required for ICM while most experts are interested in their own disciplines.

C8 (Kasetsart)

- One of the challenges is about available budget to conduct the training on ICM by our organization. Normally, our faculty members are invited for the training relevant to the ICM organized by other institutions, e.g., Walailak University (ICZM).

C9 (Sam Ratulangi)

- link and match to the community demands;
- improving community interest to the programs

C10 (Bogor University)

C11 (Water Resources University): -

- ICM is not much paid much attention by coastal local authority (province, district and commune), staff having knowledge in the field of CZM is very difficult to work there
- ICM is started in Vietnam, so experience in this field is not much for Vietnam in general.

C14 (UPV)

- continuity of the activity/program (continuous upgrading of both the trainers and trainees), target audience/ clientele are also employed and hence we cannot have long training. We usually can only have 2-3 days trainings

C15 (Silliman University)

- Convincing, influencing local government officials of coastal municipalities to adopt and faithfully, seriously implementing ICRM programs.

C16 (University of San Carlos)

- We have few people with expertise on ICM and those with expertise are mainly involved in administration and teaching, or have left the university for overseas job.

C17 (SURP)

- UP-SURP does not have enough experts on ICM — at least those who can relate solid theory and best practices to realities on the ground; we have only two professors with substantial experience on doing coastal planning and development studies
- There is difficulty in assembling enough trainees for a batch who can afford our training, or have time for it — our break even cost is 30 trainees at around PhP 12,000 minimum — more than poor LGUs are usually willing to spend for.

C18 (De La Salle Lipa)

- A specific pedagogy for ICM is needed to enhance capacity building activities in the region. The university may also benefit if an ICM postgraduate degree program will be offered in collaboration with other academic and research institutions in the region.

C19 (UP-NCPAG)

- Lack of in-depth training on ICM;
- Lack of books and training materials; and
- Lack of research funds.

APPENDIX 2

PROVISIONAL AGENDA

Workshop: Development of the ICM Postgraduate Curriculum 9 November 2009

Chair: Dr. Chua Thia-Eng
Co-Chair: Dr. Gil S. Jacinto

Place: Xiamen, China

Participants:
Prof. Zhang Luoping
Prof. Xue Xiongzhi
Prof. Huasheng Hong
Dr. Chua Thia-Eng
Dr. Gil S. Jacinto
Dr. Gunnar Kullenberg
Prof. Osamu Matsuda
Dr. Luky Adrianto
Dr. Chou Loke Ming
Mr. Danilo A. Bonga

Objectives:

1. Present the results of the demand and supply survey
2. Discuss a proposed ICM postgraduate curriculum for possible adoption by universities in East Asia

Day 1	Arrival of participants
PM	Get together (dinner)
Day 2	
9:00 – 9:15	Welcome and introductions (PEMSEA and representative from COMI)
9:15 – 9:30	Overview of the demand and supply survey (Mr. Bonga)
9:30 – 10:15	Presentation of a conceptual ICM program and a proposed ICM curriculum (Dr. Jacinto)
10:15 – 10:30	Tea break
10:30 – 12:30	Group discussion <ul style="list-style-type: none">- Validation of demand and supply survey results- Feasibility of a common ICM postgraduate curriculum in light of diverse requirements and modes of completion of graduate programs in the EAS region (e.g., degree by coursework; degree by research; and degree by coursework and research)- Target clientele (students); Minimum skills/competencies of ICM graduates
12:30 – 14:00	Lunch

14:00 – 16:00	<p>Group discussion</p> <ul style="list-style-type: none"> - Master's Program * Core course(s): ICM 201 (key topics, case studies, etc.); - Electives * Practicum and/or thesis requirements * Entrance and completion requirements <ul style="list-style-type: none"> - A Diploma Program? * Courses * Practicum or Research Project <ul style="list-style-type: none"> - Feasibility of a postgraduate program through a consortium of Universities (advantages/disadvantages, administrative arrangements, costs associated with exchange agreements, credits for courses taken among consortium members) <ul style="list-style-type: none"> - Development of a project proposal for the establishment of a consortium of universities to support human resource requirements in integrated coastal management
16:00 – 17:00	Tea break
17:00 – 17:30	Revisiting the proposed ICM curriculum (Dr. Jacinto)
17:30 – 18:00	Follow-up Actions/ Summary and closing (Dr. Chua)
Day 3	<i>Departure of participants</i>

APPENDIX 3

Development of the ICM Postgraduate Curriculum for the EAS Region Draft Discussion Paper Xiamen University, 9 November 2009

Introduction

Several years ago, PEMSEA in collaboration with UNESCO-IOC and the Global Forum for Oceans, Coasts and Small Islands, conducted a survey to assess East Asia's capacity building needs in ocean and coastal governance. The survey was undertaken in support of building strategies to strengthen capacity to implement the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).

The results of the survey and a discussion of problems, as well as future actions, were presented and discussed during the East Asian Seas (EAS) Congress in Haikou City, Hainan Province, PR China, in December 2006. The group consisted of 23 discussants from 9 countries in East Asia, Australia and the USA.

The participants reviewed current university programs on marine affairs and integrated coastal management (ICM), short-term specialized training courses related to coastal areas and oceans; identified capacity development gaps that require national and international efforts; and, explored the possibilities of a common postgraduate curriculum for ICM and marine affairs in the region.

The previous EAS survey pointed to the initiation of programs in ICM and marine affairs in the region, particularly in the Philippines, Indonesia, Thailand, and, more recently, PR China. The major problems and constraints encountered with the implementation of existing programs included: (a) decreasing enrolment; (b) lack of qualified mentors; and (c) lack of job opportunities for graduates. On the last point, it was suggested that there be action to determine if there is, indeed, a market for graduates of ICM/Marine Affairs programs in the region. There was a perception that "jobs are not available, and while there may be an increase in the number of graduates with an orientation towards marine affairs and/or coastal management, these individuals pursue careers different from what they were trained for." Moreover, the participants at the Haikou workshop "agreed" that a complete or a "model" ICM/Marine Affairs program "may be very difficult or is nearly impossible to create... as it is very difficult to design one academic program that incorporates everything." Most were keen "to encourage complexity and a diversity of program offerings."

Thus, with respect to the formal training on ICM, the Haikou workshop recommended for PEMSEA to (a) analyze supply-demand for ICM people/practitioners, specifically the job market for graduates of ICM and marine affairs/policy programs; (b) consider guidelines on competencies needed by ICM managers and institutions; and (c) scale up efforts for degree training by exploring and facilitating consortium agreements.

In response to these recommendations, PEMSEA conducted, this year, another survey of institutions in the region to explore the ICM and Marine Affairs programs being offered but

also as a proxy to determine the demand for ICM graduates. After all, universities would generally be able to offer new or retain old programs only if these are justified by projected or existing demand for graduates in the academic program. In addition, any move to explore or facilitate consortium agreements in the region would require a "rationalization" of course offerings as well as agreement on acquired competencies of ICM graduates.

The results of this survey, the core competencies of ICM graduates, a consideration of the syllabus of a core course on ICM as well as other core courses and electives under an ICM postgraduate program, and the feasibility of a regional consortium of universities offering ICM postgraduate degrees, are the main items to be discussed at the Xiamen workshop.

Core Competencies of ICM Graduates

What core competencies are expected of an ICM graduate? At the risk of describing a never-to-be-found ideal ICM practitioner, below are attributes that may be expected of an ICM practitioner:

- possess leadership, analytical, planning, entrepreneurial, communication, and management abilities;
- acquainted with the key concepts found in each of the disciplines most important to ICM planning process and tools;
- conversant with natural resources and the environment and how these are to be monitored and evaluated;
- exposed to the fundamentals of environmental economics and the economics of natural resources management;
- familiar with the intricacies and nuances of social structures;
- knowledgeable about the role of law in coastal management, the specifics of most of the key coastal and ocean laws; and,
- well-informed of international ocean law and how it operates, as well as knowledgeable about the different institutional forms that ICM can take in different countries.

Thus, if ICM students enter the postgraduate program as biologists, their familiarity with the social sciences (political science, economics, etc.) must be augmented. If they enter the program as social scientists, on the other hand, the natural resources and environment components must be added. The ICM graduate should know enough about all of the principal disciplines involved in coastal management to oversee the work of specialized staff and contract for additional expertise when this is required for his/her program.

Feasibility of a common ICM postgraduate program in the EAS region

At previous forums, there has been discussion on whether or not it would be possible to develop a common (standard?) ICM postgraduate program, a "one-size-fits-all" curriculum that can be adopted by universities in the region. The rationale for this is that ICM graduates should have knowledge and skills (i.e., core competencies) that are comparable, regardless of their home institutions. This situation is similar to the "programs and standards" implemented by higher education bodies in various countries in the region that stipulate for universities a common (often minimum) number of courses and academic units to be taken by students before they obtain their degrees. Thus, degree offerings in engineering or the

natural sciences, for example, will require students to have obtained several core courses supplemented by electives and cognates. The same happens for students taking professional degrees (e.g., management, law, accountancy, etc.).

However, across the region, there exists various modes by which universities offer academic programs and the requirements to be met before degrees are conferred. These differences are even more apparent in postgraduate programs in general, and coastal management and marine affairs, in particular. One major difference is the mode of acquiring a postgraduate degree, namely, through: (a) research; (b) coursework; and (c) a combination of coursework and research. Even the postgraduate degrees offered vary, with universities offering a postgraduate Diploma, a Master's degree, a Master of Arts degree, and a Master of Science degree. The corresponding requirements for each mode also affect the length of time needed by students to earn their degree. Completion of requirements can range from a year to 3 years or more, often depending on the time needed to complete the research.

Given the variations indicated above, and the apparent inclination of academics from various universities in the region to "to encourage complexity and a diversity of program offerings" in ICM, as expressed in the Haikou workshop in 2006, what may be the options to "harmonize" ICM postgraduate degree offerings? Moreover, in a scenario of a regional consortium of universities offering ICM postgraduate training, should there be minimum content of core courses, assuming that the complementation (and cross-enrolment) can be in the cognate courses and special studies?

An ICM Curriculum

A Core Course in ICM

The attached document provides a draft core course in ICM, tentatively titled – Principles and Practice of Integrated Coastal Management. The scope and duration will obviously vary depending on the type of the postgraduate degree program being offered. However, what may be more important to discuss is the course content and, to some extent, mode of delivery (e.g., lectures, group study, field exercise) of the topics/learning modules.

Other Core Courses

In addition to the introductory course of ICM, students may also be required to take the following courses:

- Theory and Practice of Planning as applied to Coastal Ecosystems
- Structure and Function of Coastal Ecosystems
- Coastal (and Ocean) Governance
- ICM Tools and Methodologies

Electives/Cognates

To supplement the core courses, the following cognates may also be taken:

- Environmental Economics and Resource Valuation
- Project Management
- Case Studies/Special Problem(s)
- Thesis

Core Course Title: Principles and Practice of Integrated Coastal Management

Semester Credits: 3

Aims:

Understand the objectives, concepts, principles, framework, and practice of ICM vis-à-vis sustainable use of coastal ecosystems and resources; assess the usefulness or relevance of various tools, approaches and methodologies in a specific ICM context; and appreciate the design or implementation an ICM project addressing area- or issue-specific concerns using various tools and methodologies.

Outline of Syllabus

Lecture 1. Introduction: Outline of course; Challenges to sustainable coastal development; Introduction to ICM as tool for coastal planning.

Lecture 2. Coastal function: The role that the coastal zone plays in the landscape of coastal areas and the goods and services provided to mankind.

Lectures 3-5. ICM principles and practices: This section will illustrate the application of ICM principles and practices. A major theme will be the interdisciplinary nature of the ICM process and a series of lectures will deal specifically with the following topics: (1) The ICM development process: demonstration, consolidation, replication, extension, (2) Institutional arrangements for ICM, (3) Elements of good practice.

Lecture 6-8. ICM framework, processes and tools. These lectures will introduce a framework for implementing the ICM process and a series of supporting tools that provide capability to assess and evaluate management options; ICM development and implementation cycle (preparing, initiating, developing, adopting, implementing, refining and consolidating); Applying elements of integrated policymaking and management conceptual framework.

Lecture 9-11. ICM tools – This section will provide an overview of the tools needed for ICM.
Part 1. Coastal profiling (including remote sensing and GIS); Rapid appraisal approaches; Risk assessment and risk management; Integrated Information Management System (IIMS); Public Education; Communication Plan; Sea use zoning;
Part 2. Integrated Environmental Impact Assessment; Ecological Carrying Capacity; State of the Coast baseline and monitoring; Economic Valuation;
Part 3. Sustainable financing; Public-Private partnerships in environmental investments; Market-based instruments; Institutional Arrangements; Implementation of local, national, and international conventions.

Lecture 12. Socio-cultural aspects of coastal management. This lecture will deal with the need to promote stakeholder involvement in the ICM process.

Lectures 13-15. Dynamics of ICM. This section, making use of case studies, will examine coastal management in practice, including: (1) Participatory Resource and

Environmental Assessment, (2) Assessing the success of ICM initiatives, (3) The Xiamen Story: environmental 'tipping points' and benign cycles to excellence, (4) The Batangas Bay region: Modeling Partnerships in ICM, (5) Apo Island, (6) Bali – Ecotourism and ICM.

Lecture 16. ICM Indicators. Challenges/Problems; ICM Dynamics indicator framework; Performance indicators; Indicators-led data management, ICM Certification and Recognition.

Group Work - Practicals

Practical 1. A group exercise to explore the origins of different perceptions of coastal issues.

Practical 2. Students will examine the (IDENTIFY SITE MANAGEMENT PLAN). Suggest a site management plan to critically assess the requirements of the ICM process and planning needs.

Practical 3. Project management. Students will work in groups to design a project framework for an ICM programme.

Practical 4. Social dimensions to coastal management. Students will explore: (1) Socio-cultural issues in coastal management; (2) Stakeholder identification and analysis; and (3) Public participation - involving people in the ICM process. The workshops will be based on a series of case study materials concerning the public participation in the ICM process. Students will critically evaluate the effectiveness of different techniques for identifying socio-cultural issues, stimulating public participation and participatory planning and community-based management.

Practical 5-6. Integrated coastal management in practice. These practicals will provide an opportunity for students to work in groups to outline a management plan for the (IDENTITY POTENTIAL SITE)

Fieldwork.

Managing the (IDENTIFY POTENTIAL SITE): This section will provide students with the opportunity to observe the practice the ICM process followed by a field-based case study on the xxx demonstration site where students will meet with stakeholders to identify management issues and formulate solutions that will form the basis for the production of an outline ICM plan.

Intended knowledge outcomes:

Intended skills outcomes:

Teaching and learning methods:

Method	Number	Length	Student hours	Academic staff contact hours
Lectures	16	2	32	32
Practicals:	6	2	12	12
Fieldwork	1	8	16	16
Total hours:				60

APPENDIX 4

Highlights of the Discussions from the Workshop on the Development of the ICM Postgraduate Curriculum 9 November 2009, Xiamen, China

Background

In 2006, PEMSEA in collaboration with UNESCO-IOC and the Global Forum for Oceans, Coasts and Small Islands, conducted a survey to assess East Asia's capacity building needs in ocean and coastal governance.

The results of the survey and a discussion of problems, as well as future actions, were presented and discussed during the East Asian Seas (EAS) Congress in Haikou City, Hainan Province, PR China in December 2006.

The Haikou workshop recommended for PEMSEA to: (a) analyze supply-demand for ICM people/practitioners, specifically the job market for graduates of ICM and Marine Affairs/Policy programs; (b) consider guidelines on competencies needed by ICM managers and institutions; and (c) scale up efforts for degree training by exploring and facilitating consortium agreements.

In response to these recommendations, PEMSEA conducted last August to October 2009, another survey of institutions to address the above concerns.

The results of the survey, the core competencies of ICM graduates, a consideration of syllabus of a core on ICM as well as other core courses and electives under an ICM postgraduate program, and the feasibility of a regional consortium of universities offering ICM postgraduate degrees, are the main items discussed at the Xiamen workshop.

Validation of the demand and supply survey

The surveys had 20 universities/research institutions across the region as respondents for the supply side, but are biased to countries with national ocean policies or ICM laws and to areas with PEMSEA ICM sites as respondents for the demand side. These surveys are envisioned to be the first tier to a continuing assessment of the demand and supply for human resources for ICM in the region.

The demand for ICM practitioners has increased through the years. Several factors have driven this demand:

- a. The numbers of ocean and ICM or ICM-related policies have increased. 15-20 years ago there was a dearth or no ICM/ocean legislation.
- b. Local government experiences in problems such as marine pollution, use conflicts, and recently, by the increase in flooding, typhoon, and disasters, point to an increasing buy-in to address these problems in an integrated manner.

- c. The numbers of donors advocating an ICM have increased. The donors go to local areas (with a particular unique, specific local concerns) bringing with them a different “branding” or typologies (like ICZM, CRM, CAM, etc.) which made inroads to integrated management but, admittedly, brought confusion.
- d. The number of universities offering ICM/Marine Affairs has also increased. It appears that a bandwagon has ensued in response to, likewise, an increase in funding/scholarships that have become available for these types of programs. But it was clear that there is a need to streamline the ICM curriculum

The survey results were found to be useful and constructive, as it points to where manpower development needs is going and/or shows where national or local government capacity-building strategies should go. In particular, the responses of the local governments narrowed down their specific needs to strategic development planning and integrated coastal management (and its tools).

The results show that there is commonality in most needed skills in the region, thus showing basis for common understanding and a basis to which to focus the initiatives on.

The trend show an increasing emphasis on climate change (highly a correlation to money that has been poured to this issue); ecosystem-based management (as it is increasingly being advocated in the international forums); and water use and supply management (particularly in local areas/coastal cities where water is scarce).

The survey however shows that universities are very cautious in responding to emerging needs.

Next steps

The survey has to be extended to other local governments particularly those without ICM programs. There is a compelling need to pursue a standard questionnaire and to administer it, face-to-face to clearly capture the nuances, particularly of local needs.

The demand and supply nexus is overly emphasized. But the question on where the resources will come from needs to be asked. The next survey need to include donor agencies and ask institutional resource questions, like: (1) What are the capabilities of institutions delivering the demand? (2) Who is going to teach? and (3) what are teachers’ competencies?

Core competencies of an ICM Graduate

An ICM practitioner is likened to a conductor of an orchestra. Among other attributes, he/she must possess leadership, analytical, planning, entrepreneurial, communication and management abilities.

Obviously an ICM learning program cannot develop these skills in the duration of the program. The turning into a coastal manager is a long-term process; as skills need a lot of time to develop and mature. Skills are not fully developed as one gets out of the university. Students/graduates need to be shown where to get knowledge. It’s impossible to know everything because the knowledge base is so huge.

There is an issue of allowing staff to take a 1-year leave of absence to pursue a degree, but this should be addressed by targeting mid-professionals, who should be invested into and groomed to take on ICM programs in the future. The directors/chiefs can take a different training, such as leadership training.

Core courses for an ICM program

It was reiterated that a common ICM postgraduate program is very difficult to accomplish. What is feasible is an agreement on core courses.

Given that different modes and designs to an ICM program exist in the region, the objective to zero-in in on core courses is to improve and strengthen the existing curriculum.

For example, Indonesia sends 20-30 students each year to Xiamen, Okinawa and Bremen to pursue ICM/Marine Affairs programs. Afterwards, it is hoped that through a synthesized experiences from different localities, a common program structure could emerge. (Through this, and towards looking forward, the basis for ICM Program certification can be proposed.)

Today what limits the strengthening of an ICM program in Indonesia is that ICM is considered an academic degree. And based on a national law, an ICM program should have 55% courses in theory and 45% of its courses in practice (whereas a professional degree has 60% courses in practice and 40% courses in theory). Thus there is a clamor that the case for an ICM Program in Indonesia should change to differentiate it from an environmental program.

Xiamen University in China posited a need to have additional perspectives in such courses like climate change (to be in tune with the recent international agenda) and skills needed in zoning, planning, GIS, monitoring and communication.

Other programs in Marine Affairs/Coastal Management in the region are developed as interdisciplinary program. In such a manner, an economics course is delivered by faculties from the economics school; marine policy course from faculties of law schools; etc. There has thus a tendency in universities to mix courses and “dip” into other faculties (to create an interdisciplinary program) and call it ICM. But this strategy has created a problem when students cannot get a job when they have finished their degrees. To counter this issue, NUS has created an Executive committee that will see through the integration interdisciplinary courses and faculties. This is a mechanism that allows courses to evolve and at the same time use effectively the existing faculties who are streamlined or agree on multidisciplinary nature of a postgraduate degree.

The meeting agreed to have the following as core courses for an ICM program:

- Principles and practice of integrated coastal management
- Theory and practice of planning as applied to coastal ecosystems
- Structure and function of coastal ecosystems
- Coastal (and Ocean) Governance

Next steps:

In response to create a common approach to an ICM curriculum and to meet the identified need for a common knowledge and skills/benchmark/base for ICM implementation in response to national ocean policies:

- target mid-management of national and local levels
- preparation of an ICM benchmark/core course delivering the basic knowledge for leading ICM implementation can be achieved which provides for a common base of understanding of integrated management; of length of up to one year; with elements of common skills and practical experience development/requirements which may form certification depending upon national approaches
- the whole basic curriculum would be 4 core courses to meet the needs of universities in the SEA region for a long-term perspective in order to undertake partnerships in the form of consortium.

Creation of a consortium of universities

What is apparent is that a creation of a consortium may at this time a premature initiative as it entails strict regulations and accountabilities in a regional horizon which have different capacities and maturities. Creating a consortium may a long-term plan. But what is needed today is a creation of a network of universities that will be helped in strengthening an ICM program. And to encourage a bigger group of universities who are running ICM programs which will agree on a network. Through this, a harmonized ICM program can be developed

Training of Trainers

The survey noted the inherent problem of those attempting to create a new program: lack of qualified instructors/mentors/teachers.

A consensus emerged that teachers for an ICM program must know both theory and practice; and with both knowledge and passion. The first strategy thus, is to train the teachers/trainers. Given the confusion in literature, a package of lectures, in consultation with those with practical experience should be started; there should be agreement on the content and delivery. A possibility of non-academician to teach, as co-mentors, should be pursued. The quality of instructors should be ensured that would eventually a way in the certification of trainers.

Next step.

PEMSEA to the the lead in the creation of a network of universities and in the conduct of a TOT.

APPENDIX 5

Workshop on Meeting Human Resources Requirements in Coastal and Ocean Governance: Short-term Training and Degree-granting Education

Date: 23 November 2009

Time: 1400 – 1900H

Venue: Meeting Room 14

Co-convenor: ASEAN Foundation

Chair: Dr. Chua Thia-Eng

Co-chair: Dr. Gil Jacinto

A follow-on workshop on the Discussion Group Meeting on Capacity Development on Coastal and Ocean Governance held in 2006. This meeting/workshop will focus on the recent initiatives undertaken related to capacity development in the region. Discussions will include:

- 1.. efforts to maximize regional intellectual capital towards coastal and ocean development;
2. short-term training initiatives and the development of curriculum towards ocean and coastal governance;
3. contribution of regional and international initiatives in promoting capacity development;
4. human resource requirements of the region and available services

The workshop then hopes to answer the following questions:

- Have we met the demands of training and education in coastal and ocean governance in East Asia?
- Are the current initiatives sufficient enough to address capacity needs?
- What are the current opportunities for short-term training and degree-granting education?
- A “matching exercise” of articulated training needs of the countries in the region vis-à-vis available supply provider
- Way forward: Packaging trainings so that donors can readily come in

TIME	ACTIVITY/ PRESENTATION
1400 - 1405	Introduction of the Workshop Chair
Part 1: Capacity building experiences around the world	
1405 – 1420	<ul style="list-style-type: none"> • IOI-Japan (Ms. Masako Otsuka: IOI's capacity building program IOI-<i>OceanLearn</i>)
1420 – 1435	<ul style="list-style-type: none"> • LOICZ (Dr. Juergen Weichselgartner: Capacity building activities: Experiences of a global project)
1435 – 1450	<ul style="list-style-type: none"> • ASEAN Foundation (Dr. Filemon Uriarte, Jr.: Capacity building activities of the ASEAN Foundation)
Part 2: Capacity building in particular sector and issue	
1450 – 1505	<ul style="list-style-type: none"> • APN (Dr. Laura David: CAPaBLE Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries: Climate Change)
1505 – 1520	<ul style="list-style-type: none"> • RCARO (Mr. Ron Szymczak: Management of discharges to the marine environment from nuclear activities in the Asia-Pacific region – a coordinated regional approach)
1520 - 1535	<ul style="list-style-type: none"> • UNIDO (Dr. Fukuya Ino and Dr. Evangeline Santiago: POPs analysis capacity development and monitoring in 10 Asian countries)
Part 3: PEMSEA strategies in building capacities in East Asia	
1535 – 1550	<ul style="list-style-type: none"> • PEMSEA (Chua Thia-Eng: Overall PEMSEA strategy in capacity development: Meeting the training needs of East Asia)
1550 - 1605	<ul style="list-style-type: none"> • PEMSEA (Mr. Danilo Bonga: Demand and Supply Survey (2009): Ocean and Coastal Governance)
1605 - 1630	<i>Tea Break</i>
Part 4: ICM Curriculum development in the East Asia	
1630 – 1645	<ul style="list-style-type: none"> • PEMSEA (Dr. Gil Jacinto: Towards a common core courses in an ICM program)
1645 – 1700	<ul style="list-style-type: none"> • Bogor University (Dr. Luky Adrianto: Upgrading teacher competencies for an ICM program)
Part 5: Break-out session	
1700 – 1800	<ul style="list-style-type: none"> • Group 1: Short-term training Facilitator: Mr. Robert Jara, PEMSEA • Group 2: ICM curriculum development Facilitator: Dr. Gil Jacinto, PEMSEA
Part 6: Plenary session	
1800 – 1815	<ul style="list-style-type: none"> • Group 1: Report
1815 - 1830	<ul style="list-style-type: none"> • Group 2: Report
1830 - 1845	<i>Workshop synthesis/next steps by the Workshop Chair</i>
1845 - 1900	<i>Chair/Co-chair wrap up</i>

APPENDIX 6

Participants

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