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Capacity Building in the Asia-Pacific Region: The Young LOICZ Forum

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ABSTRACT: In order to build strategic capacities for sustainable coastal zone management and effective responses to global environmental change in the Asia-Pacific region, the Land-Ocean Interactions in the Coastal Zone project (LOICZ) organized an interdisciplinary capacity building programme for early-career scientists and young coastal managers: the Young LOICZ Forum *Capacities for Global Change Mitigation in Asia-Pacific Coastal Zones*. During the week, senior scholars and young scientists and coastal managers from 21 countries met for structured training on scientific techniques and soft skills. Emphasis was placed on common learning in multi-cultural settings to provide social learning opportunities through peer interaction, as well as on joint social activities to create sustainable working relationships and individual friendships. The design and organization of such an event requires temporal, spatial, human, and financial resources, but is a valuable investment in developing future capacities.

KEYWORDS: *capacity building, land-ocean interactions, global environmental change, science-policy-practice interface, Asia-Pacific, youth forum*

Introduction

Having the capacity to conduct high quality research that provides scientific support for decision makers and decision-making processes is vital for least-developed and developing countries in the Asia-Pacific region and crucial to improve the scientific and technical capabilities of these nations. There are still considerable gaps in the knowledge base at the regional level owing to the lack of capacity among regional stakeholders in accessing, interpreting and producing regionally relevant information.

Particularly in the Asia-Pacific region, societies require knowledge and practices that will allow them to simultaneously reduce vulnerabilities and risks from global environmental change (GEC) while also meeting socio-economic development needs.

Emerging literature specifically points to barriers at the science-policy-practice interface that inhibit efficient co-production of knowledge, hinder transfer into action, and aggravate implementation of policy measures that are win-win situations for different societal actors (Weichselgartner & Kasperson, 2010; Naustdalslid, 2011).

Thus, it is critical to systematically organize and prioritize knowledge and explore efficient ways to turn knowledge effectively into sustainable actions (Weichselgartner & Marandino, 2012). In addition, young scientists and future decision makers in policy and practice increasingly require a solid background in GEC processes and highly developed soft skills. However, these are rarely included in the academic curricula and most research institutes are limited in their delivery of the type of interdisciplinary knowledge needed to address the challenges of GEC. Various authors just examined the necessary changes in education and capacity building to effectively respond to actual environmental and social challenges (O'Brien et al., 2013). They confirm that such changes will require more than adjustments in current educational systems, research funding strategies, and interdisciplinary collaborations, but transdisciplinary approaches to research and education, as well as the development of new capabilities, including humility and openness toward other systems of thought and sources of knowledge.

In acknowledging the need for transforming education and capacity building in response to GEC, the Land-Ocean Interactions in the Coastal Zone project (LOICZ) decided to target capacity building with regard to necessary tools and skills to better understand GEC processes, dynamics, and impacts, as well as to test new designs and innovative modes of promoting transdisciplinary social learning with practical, "real-world" problems. The project's Open Science Conference (OSC) in September 2011 in Yantai, China, provided an excellent opportunity and venue to build strategic capacities for sustainable coastal zone management and effective responses to global environmental change in the Asia-Pacific region. In collaboration with the Yantai Institute of Coastal Zone Research (YIC), a special format was designed to offer early-career scientists and young coastal managers an advanced training programme in a cross-disciplinary and multicultural learning environment: the Young LOICZ Forum (YLF) *Capacities for Global Change*

HIGHLIGHTS

- » Meeting the challenge of translating GEC knowledge into effective actions.
- » Bridging gaps between young scientists, policy makers and practitioners using a joint training programme.
- » Designing and organization of an interdisciplinary training programme requires temporal, spatial, human and financial resources.
- » Designing specific youth-related activities that are capable of providing both practical knowledge and soft skills necessary to address GEC processes, impacts, and mitigation and adaptation efforts is vital.

Mitigation in Asia-Pacific Coastal Zones. The following paragraphs briefly describe some of the challenges associated with scheduling such an event.

Methodology

When designing the YLF, the organizers took into account the experience of past capacity building activities and results from international studies, clearly demonstrating the importance of teaching and learning environments. Thus, the aim was to create an occasion for combining understanding from multiple sources and providing mechanisms for linking solutions proposed by research with articulated needs of policy makers and practitioners in order to produce more timely and context-appropriate solutions. After formulating the objectives, the format was selected and implementation methods were determined accordingly.

The format and thematic composition took into account that young scientists and managers, particularly in developing countries, lack opportunities to access research networks and obtain supervision from international experts. Important planning tasks are the specification of the audience, selection of the forum venue and setting, and the design of a balanced programme of lectures, interactive training, practical exercises, social activities, field trips, and selected OSC sessions (Figure 1). Emphasis was placed on (i) obtaining a balanced mix of excellent academic candidates and young decision makers, (ii) providing solid

scientific training and applicable techniques, (iii) advancing soft and communicative skills, (iv) common learning in multicultural settings to provide social learning opportunities through peer interaction, as well as (v) joint social activities to build a network of creative sustainable working relationships and individual friendships. A range of diverse activities were initiated (Table 1) with the intention to rearrange the hierarchy of social relations and to promote a wide range of soft skills.

One key feature was the designation of so-called “YLF mentors.” Based on the scope of research and geography, each junior participant was appointed an appropriate senior scientist to facilitate the exchange of ideas and scientific networking. An

organized field trip along the Shandong coast provided the opportunity to interact with mentors for an entire day. Likewise, visits to the Rongcheng Ocean and Fisheries Bureau and a local fishing village offered the chance for cultural exchange and the time to discuss issues of interest with representatives of the coastal community. Although it is often difficult to obtain funding, social components — such as an initial icebreaker to engage in early conversation with peers and trainers, field visits, culinary occasions, a badminton and bowling tournament — were intentionally included in order to reduce power structures and to reshuffle social hierarchies and the participants’ portfolio of different types of abilities and qualities. Moreover, these activities were valuable

Table 1. Selected activities of the YLF 2011

Training Seminars	
» Proposal Development Training Workshop (A. Takemoto)	» Risk and Vulnerability: From Theory to Capturing Key Factors through Questionnaires (F. Renaud)
» Why not Become an Influential Scientist? Scientific Writing and Publishing (J. Weichselgartner)	» How to do Integrative Science? Addressing Environmental Challenges (A. Ignaciuk)
» Integrated Coastal Management: Learning from Practice (R. Ramesh)	» Economic Valuation of Coastal Ecosystems: A Fad or Reality? (J. Roy)
» Coastal Challenges: Monitoring Human Impacts on Coastal Zones (F. Colijn)	» Indicating Adaptive Capacity in Urban Risk Management Systems (M. Pelling)
Social Activities	
» Icebreaker and YLF Inception Dinner	» Welcome Reception OSC
» Badminton and Bowling Tournament	» OSC Dinner and YLF Award Ceremony
» Field Trips and Institutional Visits	
Scientific Sessions	
» Linking Regional Dynamics in Coastal and Marine Social-Ecological Systems to Global Sustainability	» Planning and Governance in Coastal and Marine Areas
» Arctic Coastal Processes, Peoples and Societies	» Megacities and Resilience in the Coastal Zone
» Changing Land Use in the Coast: Present and Future	» Coastal Hazards, Vulnerability, and Adaptation
» Small Island Developing States	» Bridging the Science-Policy Gap
» Ecosystem Goods and Services and Environmental Economics	» Plant Biodiversity in Coastal Zone Area and Intensive Utilization
» Coastal and Marine Sectors: Managing Change	» Case Studies of Long Term Change or Stability in Coastal Ecosystems
» Nutrient Accounting in Coastal Waters and Watersheds	» Coastal Eco-Environments from a Microbial Perspective
» Catchment-Estuary: Nature and Human Interaction	» The Application of Remote Sensing and GIS in Coastal Zones
» Observation, Monitoring and Modelling	» The Application of Isotope to Track Pollution Source from Land to Ocean
» Estuarine and Coastal Ecohydrology	» Climate Extremes and Carbon Biogeochemistry in Large-River Delta-Front Estuaries
» Coastal Biogeochemical Cycles and Climate Change	» Estuaries and Coastal Seas: Interactions, Fronts and Climate
» Eutrophication, Hypoxia and Algal Bloom	



Figure 1. The design and organization of an interdisciplinary training programme requires temporal, spatial, and financial resources: The YLF organizers inspecting the location (photo: J. Weichselgartner)



Figure 2. Sharing different local knowledge: YLF participants discussing global environmental change aspects in group work (photo: J. Weichselgartner)

occasions to reinforce the YLF objectives and ensure that participants enjoyed their training week.

Results and Discussion

The YLF brought together senior scholars and 25 young coastal scientists and managers from 21 countries and proved to be a successful capacity building activity in many aspects. During the week, the participants had the opportunity to study scientific techniques and tools and establish links and networks for their future research, to share interdisciplinary knowledge from different parts of the world, and to develop a set of skills vital for their future career (Figure 2).

Complementing the OSC, the composition and format of YLF strengthened interactions among scientists, policy makers, and practitioners, as well as supported regional cooperation in GEC research on

issues particularly relevant to the region. The trainees took the opportunity to learn from their trainers, mentors and colleagues, and by exchanging local experiences in a multicultural learning environment they added value to their own future work. Clearly targeted training seminars on scientific skills supported improving the scientific and technical capabilities of the next generation of coastal scientists and decision makers. The Proposal Development Training Workshop provided by APN was an important component of the YLF with regard to sharing knowledge on proposal development, submission and selection process.

Another milestone was the YLF award ceremony during the OSC dinner, in which four excellent young coastal scientists and managers were honoured for their outstanding performance and contribution (Figure 3). Appropriately, the exclusive



Figure 3. Multi-disciplinary and international: the YLF award winners, from left to right, Pronab Kumar Halder (Centre for Global Change, Dhaka, Bangladesh), Guangzhe Jin (Hiroshima University, Japan), Christine Omuombo (University of Nairobi, Kenya), and Elizabeth Shadwick (CSIRO, Australia) (photo: J. Weichselgartner)

Figure 4. 25 participants, 15 trainers, 21 nationalities at YLF in Yantai, China: Participants with some of their mentors (photo: J. Weichselgartner)



prizes themselves were capacity building investments, for example, attendance to the “Planet under Pressure” Conference 2012 in London. However, the most important capacity development outputs are often the least tangible: the opportunity to expose own research and experiences to international peers and the networking effects that an event such as the YLF creates and fosters. For that reason, a Young LOICZ Alumni Facebook network was launched to maintain programmatic and substantive ties among participants, with the project, and between participating institutions. It also provides the possibility to follow-up with specific surveys and monitoring the significance of the YLF and the career development of trainees.

Conclusions

The YLF went beyond traditional training of scientific skills and provided a unique learning opportunity for acquiring transferable scientific tools and soft skills, as well as to engage and cooperate with relevant networks and organizations. With training seminars, social activities, and scientific sessions, the youth forum together with a scientific congress was an ideal format for participants, both early-career and senior scholars, to discuss global change issues and strengthen regional collaboration (Figure 4). Although it is vital to design specific youth-related activities that are capable of providing both practical knowledge and soft

“The diverse backgrounds of the participants in the YLF provided insights on some of the key challenges that may be unique to each country, region, research themes and profession. Although interaction among the participants was during a short period of time, this forum provided an avenue for networking on similar research themes that assists the career advancement and professional development of the participants. One of the most important training on soft skills focused on writing research proposals targeted at funding bodies. In this activity, participants were able to formulate research themes, objectives, and strategies that were later peer-reviewed by them. This exposure to critical research thought processes and feedback from their peers and senior scientists in the review process equipped the participants with the necessary skills and confidence for future successful proposal delivery. As a follow-up activity, the participants were exposed to soft skills on academic writing and publishing, which is crucial for having impact on research, science, policy and practice. The interaction between the young scientists and their mentors was a unique opportunity to discuss, elucidate and clarify priority and emerging issues that shape the science-policy interface in the context of global environmental change issues that are taking centre stage in their areas of interest.

— Christine Omuombo, YLF participant

skills necessary, one should bear in mind that the design and organization of an interdisciplinary training programme requires temporal, spatial, and financial resources. Building the capacity to cope with, adapt to, and actively influence GEC processes requires polycentric efforts that facilitate transformative learning, improve “key competencies,” and generate “responsible thinkers.”

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PROJECT TITLE

Young LOICZ Forum 2011:
Capacity Building in the Asia-
Pacific Region

COUNTRIES INVOLVED

China, Australia, India, Japan, New Zealand, Philippines, Singapore, USA, Viet Nam

PROJECT DURATION

1 year

APN FUNDING

US\$ 30,000

PROJECT LEADERS

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