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Report on APEC Advanced Training on Marine Spatial Planning for the Pacific Rim

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Background and Objectives

APEC Advanced Training on Marine Spatial Planning for the Pacific Rim — A Learning Forum for the APEC Economies on the Innovations and Explorations of MSP was held in Xiamen, China during September 11 to 16, 2013 (see annex 1 for training agenda). This training program had more than 40 participants from 11 APEC member economies, including Australia; Chile; People's Republic of China; Indonesia; Republic of Korea; Malaysia; The Republic of the Philippines; Chinese Taipei; Thailand; and United States. There were also participants from two non-APEC economies, i.e. Germany and Madagascar (see annex 2 for list of trainers and participants).

The declining health of marine ecosystems around the world is evidence that current piecemeal governance is inadequate to successfully support healthy coastal and ocean ecosystems and sustain human uses of the ocean. One proposed solution is ecosystem-based marine spatial planning (MSP), which is a process that informs the spatial and temporal distribution of human activities in the ocean and coastal areas so that existing and emerging uses can be maintained, use conflicts reduced, and ecosystem health and services protected and sustained for future generations. MSP is a flexible and adaptive approach that can incorporate the basic principles of climate change adaptation, food security, blue economy, ecosystem-based management.

We are now at a stage where ecosystem-based management, its place-based character, and the important role of marine spatial management to help implement it, has become generally accepted in APEC region. What is missing, however, is a clear demonstration of how it can be implemented and best practice sharing, especially for developing economies. The "Advanced Training on Marine Spatial Planning for the Pacific Rim" that was based on the basic MSP process training held in September, 2012 by APEC Marine Sustainable Development Center, focused on the sharing of spatial and temporal planning experiences, knowledge, and skills among participants, and helped to implement MSP at the field level. Therefore, it is far-reaching to carry out this project to promote ecosystem-based management in the coastal area to enhance capacity building of Integrated Coastal Management (ICM), adapt to climate change, strengthen food security, and promote the blue economy in the APEC region, especially for the developing economies which highly welcomed such training and showed desire to engage in MSP during the previous MSP training in 2012.

The objectives of this advanced training seek to:

- Enhance the capacity building of the development, implementation of MSP for the Asia Pacific region by sharing experiences and best practices of MSP.
- Understand the marine spatial planning process design & influence on successful implementation, including the question of scale and scope, the top-down & bottom-up approaches etc.

- Get familiar with reconciling the seeming contradiction of multi-stakeholder, multi-objective planning processes through integrating socioeconomic and ecosystem services & trade-offs assessment.
- Discuss the new ideas and technology advance of MSP and disseminate the outputs and outcomes of the self-funded project on "APEC MSP Training Workshop" in 2012.

Welcome addresses

Mr. Liang Fengkui, Vice Director General of International Cooperation Department, State Oceanic Administration (SOA), P. R. China, welcomed the participants on behalf of SOA.

"Distinguished guests, dear participants:

Good morning.2013 APEC Advanced Training on Marine Spatial Planning for the Pacific Rim opens today, a nice early autumn day, in the beautiful coastal city of Xiamen. First, please allow me, on behalf of the Department of International Cooperation of State Oceanic Administration of China, to extend our warmest welcome to all of you who are present at this opening ceremony.

Asia-Pacific region is among the most economically active regions in the world, and ocean economy has become a new stimulus for the economic development in this region. However, the fast economic development and ongoing intense use of technology in exploitation of marine resources also bring about challenges like marine environment problems, climate change, and marine disasters which make considerable impact upon healthy development of the human society. Nevertheless, marine spatial planning offers an ecosystem-based management tool that rationalizes various uses of the sea, which can effectively reduce the conflicts between human activities and marine environment protection. Therefore, it is of high significance to share experiences on marine spatial planning internationally, especially in Asia-Pacific region. Such experience sharing will also positively promote the ecosystem-based integrated coastal and ocean management.

Marine spatial planning is an ecosystem-based, integrated and adaptive process. It analyses and allocates marine spatial resources in a three-dimensional way, to achieve ecological, social and economic objectives, reduce conflicts among various uses and the environmental impacts, and facilitate the protection and use of marine ecosystems. On the basis of the 2012 APEC Marine Spatial Planning Training, this year's training will further probe into the question of scale and scope in the MSP process, the stakeholders involvement, conflict solution, trade-offs and alternatives in the MSP process and best practices sharing.

I believe that through this training program, you will not only share and learn experiences and innovative ideas on marine spatial planning in APEC, but also develop good friendship, so as to further promote marine cooperation in APEC and contribute to the development of APEC ocean programs.

This training program is organized under the resolution passed at the first APEC Ocean and Fisheries Working Group meeting in 2012. It is an APEC-funded project. The US National Oceanic and Atmospheric Administration (NOAA) provides great support in trainer and training materials inputs. For this, we wish to express our special thanks. This project has invited a number of experts from Australia; China;

United States; and Germany to be trainers, and trainees from 9 APEC Member Economies plus Madagascar. It has received guidance and support from the Department of International Economy of Ministry of Foreign Affairs, the Department of International Cooperation and Department of Sea Area Management of State Oceanic Administration. The Third Institute of Oceanography of State Oceanic Administration has provided valuable personnel, financial and technical support for the successful organization of this project. Here I wish to express the most heartfelt thanks to all the trainers, trainees and hard-working staff who make this project possible.

Ladies and gentlemen, the Mid-autumn Festival, a traditional Chinese festival, is drawing near. In China, this festival connotes family reunion and happiness. I would like to take this opportunity to wish this training program great success, and wish you all good health and happiness during your stay here in Xiamen. Thank you."

Mr. Chen Yurong, Vice Director General of the Third Institute of Oceanography (TIO), State Oceanic Administration, P. R. China, next welcomed the participants on behalf of TIO.

"Distinguished guests, dear participants,

Good morning. First of all, on behalf of the training organizer – APEC Marine Sustainable Development Center, and its support institution -- the Third Institute of Oceanography of State Oceanic Administration of China, I would like to extend our warmest welcome and greetings to all of you who come to this opening ceremony.

Last September, we successfully held the 2012 APEC Marine Spatial Planning Training in Xiamen. Over 30 participants from 8 APEC economies and 2 non-APEC economies came to discuss and share the development, implementation, and monitoring and evaluation of marine spatial planning, as well as new progresses in this field in their economies. This year, jointly supported by SOA and NOAA, we organize this Advanced Training on Marine Spatial Planning for the Pacific Rim, with the objectives to further probe into the influence of scale and scope over MSP process, the stakeholders engagement, conflict resolution concerning use of the sea, and trade-offs and alternatives in MSP process, as well as best practice sharing. As one of the major events organized by the APEC Marine Center, this APEC-funded project receives a number of marine spatial planners and experts from 11 APEC economies and 2 non-APEC economy for the training. And the trainers from Australia; China; United States; and Germany will share their extensive and up-to-date knowledge, as well as their rich experience of marine spatial planning among the participants. I believe this 6-day training program will contribute considerably to the experience sharing of marine spatial planning and management in APEC, so as to improve the capacity building of ocean management in APEC.

As the organizer of this training program, APEC Marine Center hopes all of you make full use of this platform for international cooperation to share experiences of coastal and marine management, and contribute to promoting regional marine cooperation and marine sustainable development.

Finally, we wish to express our most sincere thanks to APEC Secretariat, Ministry of Foreign Affairs of China, and SOA and NOAA for their great support. Special thanks go to all those who have actively taken part in this training programs. The Mid-autumn Festival is just a week away. This is one of most important Chinese

traditional festivals for family reunion. Here, I would also like to take this opportunity to wish you all happy and healthy stay in the beautiful coastal city of Xiamen.

Now, I declare the 2013 APEC Advanced Training on Marine Spatial Planning for the Pacific Rim open."

Workshop summary

Dr. Anne Walton, from NOAA presented the *Marine Spatial Planning at the Watershed Scale in Hawaii, Au'Au Channel Project*, which emphasizes marine spatial planning process drivers, program partnerships, structure of planning process, and indicator of change. The three communities involved in the project are West Maui, Lana'i and Moloka'i working with the facilitating partners including NOAA, State Department of Land and Natural Resources, WESTPAC, Hawaii Fish Trust, Ecotrust and Center for Ocean Solutions. Demand for space include sport fishing, whale watching, subsistence fishing, kayaking, scuba diving, sailing, commercial fishing, coral harvesting, research, coastal development, national marine sanctuary and pending energy development. The drivers include:

- Realization there is an increase in use in and around the biologically rich Au'au Channel;
- New legislated structure for watershed-based model -- auhupua'a -- has yet to be exercised so need to build replicable model;
- Communities' desire to build an ecosystem-based planning model using both western science-based management and traditional Hawaiian management practices; and
- Communities' desire to self-directed and self-sustaining management of coastal and marine resources.

The planning process involves 8 steps:

- Step 1: Understanding linkages between watersheds and Au'au;
- Step 2: Building capacity, leadership and engagement;
- Step 3: Building and committing to a value-based vision for the future;
- Step 4: Increasing place-based knowledge;
- Step 5: Conflict and compatibility analysis
- Step 6: Developing an integrated plan for moving forward
- Step 7: Ensuring effective outcome-based implementation; and
- Step 8: Ocean tipping points: ensuring a future based on choice.

Dr. Joanne Wilsonfrom Sea Solutions, Australia made three presentations.

In the presentation*Marine Spatial Planning as a Management Tool in the Bird's Head Seascape, Indonesia*, Dr. Wilson discussed MSP, MPA and EBM. According to Dr. Wilson, MSP is allocation of marine areas for particular uses e.g. conservation, ports, shipping, oil and gas, fishing grounds, aquaculture, tourism etc.; MPAs are multiple use or fully protected areas with goal of conservation and sustainable use;and EBM is ecosystem based management that takes into account all elements – ecology, physical environment, social and economic conditions and governance. Specifically in Indonesia, MSP refers to District, Provincial and National Spatial plans (not all have a marine component); Spatial plans under Coasts and Small Islands Directorate, Ministry of Marine Affairs and Fisheries which include marine areas; BHS – multiple districts and 2 provinces; Role for traditional law in decision making; and MPA

network major feature of MSP. Dr. Wilson discussed Scaling up and Scaling down and pointed out that Many small uncoordinated plans don't achieve regional or national goals, But Regional plans may not align with local needs or situation, So Regional plans need to be flexible and take advantage of local 'opportunities', And Local plans need to acknowledge regional goals. For Bird's Head MPA Network, MPA and EBM studies include Collaborative studies among TNC, WWF, CI, local NGOs, local government agencies, national and international universities, Biodiversity surveys and reef monitoring, Resource use studies – fishing, aquaculture, tourism, shipping etc.; Socio-economic surveys and Governance, tenure and co-management. Dr. Wilson specially elaborated on the Scaling down (MPA Implementation) in 3 points, i.e. Governance, Managing fishing spawning aggregations and Protecting large migratory species. For achieving MSP in Bird's Head Sea Scape, the following points were made:

- MPAs used as a platform for conservation and management across seascape – fisheries management, spatial planning, policy
- Working together (Intn NGOs, local NGOs, govt, universities) we expanded our reach and resources
- Build trust and strengthened local partners and stakeholders
- Understand decision making processes - respond to opportunities when spatial plans developed or revised
- Provided recommendations to government .

In the presentation*Designing Resilient Networks of Marine Protected Areas to Achieve Fisheries, Biodiversity and Climate Change Objectives in Tropical Marine Ecosystems*,Dr. Wilson pointed out that MPAs can achieve multiple objectives, including protecting biodiversity, climate change adaptation and fisheries management. Dr. introduced new and exciting science and approaches on the minimum area that each species needs to eat, live and reproduce, on larval dispersal, on individual size that matters and on vulnerability and recovery times. According to Dr. Wilson, MPA network refers to large ecological networks that include no-take areas (NTAs) that bring about multiple benefits. Dr. Wilson focused on 15 biophysical design principles, including:

- Represent all habitats in NTAs (% varies depending on situation)
- Spread the risk: include at least 3 widely separated replicates of each habitat type in NTAs
- Ensure NTAs include: critical areas for fisheries management (spawning, nursery habitats) and special & unique areas for biodiversity protection.
- Ensure NTAs include: resilient areas for climate change adaptation
- Set size of no-take areas according to adult and juvenile movement
- Consider key species and how far they move
- Set spacing of no-take areas according to larval dispersal distance
- If don't have a connectivity model, separate NTAs by 1 to 20 kms (mode ~1-10km)
- Consider connectivity among habitats
- Duration of NTAs: long-term (>20-40 yrs), preferably permanent and additional shorter-term protection
- Create large multiple use areas that include but not limited to no-take areas

(NTAs)

- Prohibit destructive activities and minimize local threats

In the presentation *Art and Science of Multi-objective Planning and the Role of Marxan*, Dr. Wilson presented the Marxan which is a conservation planning software for GIS based *design of new protected area systems, reporting on the performance of existing reserve systems, developing multiple-use zoning plans for natural resource management, d*eveloped by University of Queensland, freely available via their website at http://www.uq.edu.au/marxan/, and case studies and technical support available.How does Marxan work? Area is divided into pixels called planning units. GIS layers of ecological and socio-economic data summarised into conservation values (more features = higher value) and 'costs'(existing or planned uses e.g. fishing grounds or ports not consistent with conservation).You define representation goals for protection of each conservation feature eg coral reefs (20%), dugong habitat (80%). You finds areas to protect which meet goals but minimize 'cost'.And things to remember about Marxaninclude Decision support not decision maker,Garbage in = garbage out, Program is hungry for data, Data consistency and scale are important, Output is area protected / not protected, andMUST be combined with stakeholder input.

Then Dr. Wilson presented how her team designed a network of MPAs in the Lesser SundaEcoregion with the objective to design a resilient network of MPAs to protect marine biodiversity and support sustainable use of shallow coastal waters.Important steps in designing the network include:

1. Developed resilient design criteria for MPA network and agreed on process with stakeholders
2. Data: biological, oceanography, socio-economic (some from community mapping with stakeholders)
3. Identify existing/proposed MPAs
4. Create GIS data layers
5. Identify where gaps could be filled in protected area network using decision support tool (MARXAN) + stakeholder and expert consultation
6. Draft MPA network
7. Check against design criteria
8. Check with government agencies, stakeholders
9. Final MPA network

Role of Marxan in the final plan include that Final plan is a product of data, analysis and stakeholder input; After initial stages, Marxan used as calculator; Challenges in using Marxanare technical, logical, interpretation of outputs; Socio-economic data is usually limited and sometimes non-spatial.

Finnaly , Dr. Wilson elaborated on the Art and Science of Marxan:

- Can be a useful tool BUT
- Important to understand how Marxan 'thinks' and how to interpret results–
- Lots of non-spatial factors to consider in conservation planning
- Stakeholder input at all stages critically important
- Marxan can help but does not make decisions for you.

Dr.Meg Caldwell, Center for Ocean Solutions, Stanford University, USA made four presentations.

In the presentation*Unification of Public and Private Partnerships at the State Scale in California, USA*, Dr. Caldwell presented in three parts: California Marine Life Protection Act (MLPA) Initiative Brief Background, MLPA Public-Private Partnership: An In-Depth Look & Design Principles and Lessons Learned. The MLPA mandate to establish statewide MPA network for improved ecosystem protection in CA. and Parallel MPA and EBM Goals are to Enhance & protect ecosystem integrity, Value multiple services, Identify and reduce cumulative impacts, Ensure sustainable uses and communities, and Foster community-based management. Partnerships signatories of the MLPA Initiative MOU involve resources legacy fund foundation, natural resources agency and department of fish and game. Partnership design principles include: Time, funding, State and regional perspectives, Accessible information and science, Professionally supported stakeholder process, Alternatives rather one than consensus option, and Adaptive, open process. The partnership MOU's objectives:

- Transparent, science-based process
- Opportunities for stakeholder involvement
- Clear roles and responsibilities of parties
- Process for delivering MPA network recommendations to F&G Comm
- Development of information for process
- Support for F&G Comm
- Integration of Dept of Fish & Game into MLPA process
- Timely implementation of Central Coast Pilot

The public-private partnership's advantages include stable funding, technical capacity, distribute workload, meet deadlines, and foster public-private interaction. Lessons learned from the partnership are that government brings public trust responsibility, legal authority and expertise, and private sector brings expanded resources, flexibility, responsiveness and expertise. In the end, Dr. Caldwell presented how to build credibility for public and private partnership, which shall Use transparent process design, Openly engage stakeholders, and Use procedural safeguards to insulate public decision making from private funder influences

In the presentation*Engaging Multi-jurisdictional Stakeholders: The Need for Cross Sectorial Decision-making Mechanisms*, Dr. presented in 3 parts: Overexploitation intensifies conflicts; Existing governance and regulatory frameworks are ill-equipped to address use-use & use-ecosystem conflicts; and US & CA Examples of cross-sectoral approaches for government (agencies as stakeholders & problem solvers). U.S. West Coast top biophysical threats include pollution, habitat destruction, overfishing and climate change. To address these problems, California adopted new law to foster government coordination, and California Ocean Protection Council was established 2004 through the California Ocean Protection Act (2004). The Council coordinates Ocean Renewable Energy Pilot Project Permitting &Siting, outputs including the California Marine Renewable Energy Working Group, California Permitting Guidance for Ocean Renewable Energy Test and Pilot Projects (2011), Ocean Renewable Energy Resolution, and Memorandum of Understanding between California agencies and the Federal Energy Regulatory Commission (2010).

The U.S. President issued a Memorandum (2009), then a Presidential Order (2010) to promote healthy ecosystems, agency coordination, conflict reduction, andproactive planning. U.S. Department of Interior also launches “Smart from the Start” for offshore renewable energy permitting & siting (2010).

Some Insights from CA and US Government Coordination Examples:

•Government Agencies do not automatically coordinate…they need to be motivated (why) and usually forced (when)

•Government coordination takes time and requires a thoughtful, facilitated process.

•Strong political will, gently applied, can “move mountains.”

•Private sector stakeholders and other experts can and should help government stakeholders understand (1) the problem they are trying to fix; and (2) the pros and cons of alternative pathways for coordination.

In the presentation*Designing a Large Scale Network of MPAs Using an Incremental Sub-regional Approach for the State of California*, Dr. Caldwell presented in 3 parts: Basis and approach to science-based MSP process (CA MLPA example); MLPA EBM goals → objectives → science-based “rules of thumb”; Generalizing the MLPA example. MLPA is to “To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.”AndMaster Plan for Marine Protected Areas “shall be based on the best readily available science.”

Some Best Practices for Science-based MSP Processes:

• Communicate scientific concepts and information in practical and concrete terms

• Tailor information to decision maker’s needs and questions

• Emphasize explaining relevant information, as well as its value to decision makers

MLPA is about ecosystems, and it has 6 goals:

1. To protect the natural diversity and function of marine ecosystems.

2. To help sustain and restore marine life populations.

3. To improve recreational, educational, and study opportunities in areas with minimal human disturbance.

4. To protect representative and unique marine life habitats.

5. Clear objectives, effective management, adequate enforcement.

6. To ensure that the state's MPAs are designed and managed as a network.

The incremental approach is about that central coast learns by doing to develop science-based rules of thumb to apply to additional planning regions, then science advisory team handles and BRTF reviews new incredible information, which will go into a process to petition to adjust guidelines for using rules of thumb. There are 3 objectives, Protect key habitats, Protect populations and Ensure connectivity.

Science-based rules of thumb in summary:

• Size: minimum area of 9 sq. miles preferred area of 18-36 sq. miles

• Spacing: no more than 30-60 miles apart

• Habitat Coverage: all key habitats should be protected

• Replication: at least 3-5 replicates of each habitat type in each region.

Science-based Rules of thumb can take many forms, but should always be:

•Credible – supported by scientific community
•Relevant – directly address policy goals/ needs
•Synthetic – incorporate and synthesize multiple sources of scientific information
•Understandable - linked to common-sense and tangible examples
•Timely – use best available science

In the presentation *Marine Spatial Planning Tools Inventory: Finding the Right Fit*, Dr. Caldwell discussed on the decision support tools which are usually interactive software designed to facilitate, support, and inform decision-making by helping users to Compile useful information; Visualize information; Characterize problems and solutions; and Understand tradeoffs and alternatives. There are many processes and many tools, including Marxan, Atlantis, MarineMap, MIDAS and Marine Planning Toolbar. Their range of uses cover mapping, zoning, climate change adaptation, ecosystem service evaluation, cumulative impacts, and trade-offs. Dr. Caldwell also discussed on the range of user expertise as to which software is good for what level users. Dr. Caldwell also presented some matrixes in process steps and, taking the Proposed hydrokinetic project – Greenwave as an example, made a demonstration of decision making which considered habitat diversity layers, vulnerable habitat incompatible with hydrokinetic siting, possible relocation of proposed site – off shore and nearshore alternatives, vulnerable habitat incompatibility – offshore and nearshore alternatives, overlap of human uses and management areas. Dr. Caldwell also gave the decision guide on line in the last slide.

In the presentation *Are New Governance, Regulatory or Management Tools Necessary to Implement the Plan and Achieve Results? The California Experience*, also entitled *After the Planning Party's Over, How do you Implement? The California Experience Implementing MLPA*,Dr. Caldwell discussed and emphasized on two points: Develop an effective monitoring and evaluation program – engage stakeholders, and Adjust spatial planning for other users where and when you can. Under the MLPA monitoring should evaluate the MPA network's performance relative to MLPA goals and objective, facilitate adaptive management (active learning) and improve understanding of marine systems. Providing useful information to inform decisions means making monitoring adaptive which can be represented in a cycle (Plan monitoring, Implement data collection, Analyze data, Report results, Adapt monitoring). An ecosystem monitoring framework assesses ecosystem condition and trends (ecosystem feature assessment -- "vital signs", key attributes and indicators) and evaluates MPA design and management decisions (allowed uses, placement, size & shape, spacing and habitat representation in the long and short term). There shall be consultative processes and stakeholder involvement. Dr. Caldwell also gave a table showing the monitoring cost. Dr. gave an example – San Francisco Bay Port Access Route Study (PARS) 2009-2013 which, driven by maritime safety and navigation, analyzed the original shipping lanes, trade-offs and compatibility (ship density and whales) and then proposed new shipping lanes.

In wrap-up, MSP implementation takeaways:

- Stakeholder engagement is key

• Well-planned monitoring & evaluation can tell you whether you are achieving your goals & objectives, can inform adaptive management, and can help solidify stakeholder support and commitment of resources
• DSTs can help during implementation moving forward to visualize tradeoffs, understand industry needs and choices (PARS Study)
• MSP can occur in phases over time.

Dr.Jochen Lamp, WWF Baltic Sea Office, Stralsund, Germany, made three presentations.

In the presentation *Multilateral Cooperation for MSP in the Baltic Sea*, Dr. Lamp discussed the following topics:

•The Baltic Sea Ecosystem and major challenges
•The marine ecosystem as basis for resilience
•Increasing sea uses driving the demand for MSP
•Planning culture and Identity in the Baltic Sea
•Short history of the MSP process in the Baltic
•Processes within the Baltic stimulate EU-process
•Overarching processes EU-Baltic
•Diversity within the Baltic Region
•The EU Directive on MSP and ICM
•Conclusions for other Sea areas

The Baltic Sea are facing challenges, including Commercial Fishing, Shipping, Physical Exploitations, Oil and Gas Extraction, Tourism and Recreation, Dredging, Pipelines and Cables, Marine Protected Areas, Aquaculture, Agricultural Runoff (Nitrogen, Phosphorous), Ports, Wind Energy, and Industrial Pollution, and particularly the challenge of governance fragmentation (sectoral and vertical) which is even worse between countries. Dr. Lamp recalled that traditions had enhanced cooperation, as well as a short history of MSP in the Baltic. EU Directive on MSP and ICM include EU maritime Policy (shipping, industry), EU Maritime Strategy Framework Directive (Good Environmental Status), Roadmap on MSP (from 2010), MSP Principles, Commission proposes Directive 2012, Blue Growth strategy (2012), Sept 2013: Negotiations between Parliament, Member States and Commission. The Directive contains Minimal Standards for all EU-seas, Focuses on sustainable Growth/development, but also stresses Ecosystem based approach, Includes open sea as well as coastal zone, Also covers fisheries sector, Gives member states room for legal adaptation, and Sets deadlines for reporting. The EU Directive need to work across borders (Cross-border cooperation imperative), expanding maritime jurisdictions, taking new maritime economic opportunities and environmental responsibilities. EU projects helped shaping the approach, stimulating mapping of uses, developing tools, doing pilot Marine spatial plans, testing stakeholder involvement, fostering partnerships across sectors, countries and sea basins, and developing promotion and dissemination. Dr. Lamp gave an example – BALTSEAPLAN, Pilot Projects in the Southern Baltic Sea, of which key principles are Connectivity thinking, Pan-Baltic thinking, and spatial efficiency. Dr. Lamp also gave lessons /unsolved issues:

• Crosssectoral networks are crucial

- A governance approach has still to be found
- Joint mapping standards help
- EU process drives reluctant countries
- Capacity building is key
- Stakeholder need attention

In the presentation *MSP involving industry stakeholders in MSP processes: Who should sit at the table*, Dr. Lamp discussed Who is a stakeholder, Some legal aspects, Formal and informal approaches, 5 steps of stakeholder Management in MSP Processes, Stakeholder management approaches, Stakeholder Analysis techniques, Communication examples and Lessons.

Stakeholders are those individuals, groups/organisations that Are or will be affected by MSP decisions, Are dependent on ressources in the management area, Have or make legal claims or obligations in the area, Have special seasonal or geographic interest, and Have a special interest in the management of the area. In many countries also in MSP there are requirements either from national legislation to do stakeholder participation or from International legislation: for trans-boundary Environmental impacts: Espoo convention, and in Europe: Aarhus Convention that regulates public access to Information and public participation in decision making in Environmental matters. Formal approaches are laid down in the law and demand certain procedures with formal timelines and fixed rules depending on the country. It involves all sectoral authorities, Holders of public interest, Some NGOs and Some umbrella organizations.Informal approaches are procedures that are not specified by law, but used in an ad-hoc and adaptive way related to the issues and stakeholders. They provide room for mutual learning and widening knowledge, enable common understanding of challenges and opportunities of an MSP plan, allow for testing the grounds, and create trust among authorities, planners and stakeholders.

The 5 steps of stakeholder Management in MSP Processes:

- Step 1: Agreement on the stakeholder management approach (what do we want?)
- Step 2: Identification of potential stakeholders (Who should be informed?)
- Step 3: Running a stakeholder typology (How to learn more about the stakeholders?)
- Step 4: Find the right timing and techniques for interaction (how to interact and when?)
- Step 5: Evaluation of the process/activities (How did it work?)

Dr. Lamp presented an example stakeholder list and two stakeholder analysis matrixes. Stakeholder management approaches involve information (fact sheet, websites, brochures, exhibitions etc.), consultation (public hearing, surveys, interviews, etc.) and involvement (scenario workshop, site visits, excursions, etc.).

In the end, some lessons: Stakeholder involvement has

- Created interest and ownership
- They have shown readiness to be involved
- Involving a wide range of stakeholders was positive
- Stakeholder analysis: no one fits all
- Stakeholder involvement is also a capacity building excercise for stakeholders (and planners).

•Stakeholders should be encouraged to formulate longer term visions

And some recommendations:

•Plan enough capacity to run a true stakeholder process
•At least one team member should be in charge during whole process
•This person needs the social skills and should know the challenges
•Cost should be part of the standard budget
•Starter-Kit can help getting them in
•Communicate clearly expectations
•Draft timeline and stick to it
•Take good care of venues – should be easy to reach by all groups

In the presentation *Examples of involving stakeholders in MSP Processes*, Dr. Lamp discussed When is the right moment for involvement, Formal process integration (Germany), Informal case studies (Balt Sea Plan), GBRMP Zoning, Greifswald Lagoon (Germany), some Communication examples and some Lessons.
Steps in stakeholder involvement (good moments to involve stakeholders):

• Identify relevant stakeholders (stakeholder mapping);
• Define who should be involved and when, and inform them about planned MSP process and detailed schedule;
• Obtain information from various stakeholders;
• First stakeholder meeting: a professionally moderated workshop to discuss the different possible futures for the area;
• Second stakeholder meeting: Discuss possible measure for each zone in small thematic groups;
• Public hearing: Present the draft MSP and SEA report to the authorities in charge of the MSP implementation;
• Carry out evaluation during stakeholder process.

Dr. Lamp also gave the timeline of stakeholder involvement and their roles and contributions in the Latvian Case whichresulted in 245 individuals taking part in the process (some during whole process), Objectives jointly agreed and Roadmarks set for spatial allocation. In elaborating formal participation, Dr. Lamp used the case of windpark applications, which involved multinational pipeline and MSP processes on federal (EEZ) and state (12 nm) level:

•Presentation of concept, scoping consultation
•Scoping meeting: input to research framework and programme
•Written submissions
•Public hearing
•Minutes and justifying decision, why not taken into account
•Submissions and planning documents online available

In the end, some recommendations:

•Good knowledge about the stakeholders is needed to adapt to the communication needs
•Ways must be found to involve missing groups
•Separate thematic meetings for selected groups before joint meetings with all groups
•Transnational consultations can be difficult

•Joint process creates common language and understanding across sectors and borders.

•Also joint planning tools can overcome Think-Boundaries

•On planners side a comon ownership is created

•In some of the pilot projects the stakeholder composition now steers the official process

Prof.Zhou Qiulin, Third Institute of Oceanography, SOA, China, presented the *China Model of Top-down and Bottom-up Approaches: The China Approach to Large-scale Marine Spatial Planning*, in which he discussed

- Administration heritage and regional economic development tool
- Development of MSP in the world
- Evolution of MSP in China
- Evolution of MSP categories in China
- Key finding from China's MSP

China implemented administration zones since the Qin dynasty more than 2000 years ago, and has used it a regional economic development tool. Professor Zhou discussed some milestones of MSP development in the world. In 1975, the GBRMP was established as a statutory agency and initiated a comprehensive and systematic process to develop zoning plans, which were revised during the 1980s and early 1990s. In 2006, UNESCO launched MSP project to implement ecosystem-based, sea use management. Professor Zhou also give a number of examples on this topic, such as characteristics of MSP in different countries and important projects and publications. Then Professor Zhou focused on the evolution of MSP in China. Following National Natural Science Development Plan, National Comprehensive Coastal Zone and Intertidal Mudflat Survey was carried out in 1979-1988. In 1989-1993, SOA and 11 coastal provinces developed out Marine Functional Zoning Scheme (MFZS) covering 3663 zones in small scales of 1:50 000, 1:100 000，1:200 000 in general areas and 1:25 000 in key areas.Marine economy was 6.4 billionin 1979 and 365.1 billion in 1999, an increase of 56.3 times, with an annual increase of 22%. Contribution to national GDP increased from 0.5% to 21.46%. Technical Guide for Development of Marine Functional Zoning was published in 1997. China began to launch of large scale MSP. Revision of Marine Environmental Protection Law was in 1999. Adoption of Sea Area Use Management Law was in 2001. In 2002, State Council approved National Marine Functional Zoning Scheme. Since 2004, MFZSs of the coastal provinces were approved successively. They all stand effective to 2010. In 2008, SOA formed a national expert group of MFZS consisting of 28 experts. Since 2009, SOA and other agencies and local governments launched the thirds version of MFZS. On 3 March 2012, State Council approved the National Marine Functional Zoning Scheme (2011-2020). Professor Zhou also presented the evolution of MFZ categories.

Basic principles for MFZS in 2012:

- To take natural attributes as the basis
- To take scientific development as the orientation
- To protect fishery resources as the priority.
- To take environmental protection as the pretext

• To take coordinated land-sea planning as the criteria.
• To take national safety as the key

Six objectives to reach by 2020:

• To give a large role of sea area management in macroscopic control.
• To improve marine environmental quality and enlarge the size of MPAs.
• To maintain fishery sea stable. To strengthen conservation of aquatic living resources.
• Rational control the scale of land reclamation.
• To reserve back-up sea area.

Conclusion:

1. Marine spatial planning in China is an administration heritage and as well a regional economic development tool;

2. China goes along with the world in the practice of MSP, learning and making contribution to the world;

3. MSP in China started from finding from scientific survey and aims to solve various issues emerging in the adoption of open door and economy-centered policy. It was a down-up issue-identification process;

4. Issue at the bottom and solution from the top and legal mandate and management system should be improved;

5. The Place-based concept of MSP has rendered SOA a powerful tool for integrated coastal and ocean management;

6. China's MSP has gown through a progressive evolution as indicated by the change of following categories ,which is a mirror of the social ,economic and environmental changes in China;

7. MSP categories have changed from general to practical, from multi-layers to double layers, from looser to stricter and from facusing on traditional economic activities to noticing emerging economic activities;

8. National wide MSP scheme and different levels with strong Legal backup and good public revenue.

Dr. Shawn Margles,TNC, made two presentations.

In the presentation *An Approach to Community Based MSP in the Caribbean*, Dr. Margles discussed What is governance and how does it affect scale, Where are we talking about, A dramatization of real life events, Summary of the issues, Charting a course & addressing the challenges, Outcomes, Strengths of the bottom up approach, and Drawbacks. As Dr. Margles pointed out, good governance shall be inclusive, appropriate, transparent, comprehensive, participatory, equitable and accessible. Dr. Margles used the Grenadine Bank as an example, where fishing, marine based tourism and transportation are primary marine uses, and mangroves, coral reefs, seagrasses and beaches primary coastal and marine habitats. Dr. Margles presented a dramatization based on real life events about management of marine resources, and pointed out that Building capacity of civil society to govern requires 1.Community Leadership; and 2.Access to relevant data, information, and capacities.

Summary of Steps:

• 1 year – 18 months for preliminary appraisal;
• Visited every in habited island;

• Categorized primary and secondary stakeholders;
• Created 1 and 2-way communication mechanisms for every stage;
• 3 years for participatory mapping.

Outcomes:

• GIS Layers for local names of coastal features,space-use patterns, marine resources, and issues or threat;
• Provides an accessible resource; and increases understanding of the importance of the marine environment to the people of the Grenadines

Strengths of this Approach:

• Engaged civil society in planning by going to them in their spaces;
• Most comprehensive spatial database for the Grenadine bank (is being used by planning and other agencies);
• Built transparency into the planning process which built trust from stakeholder groups;
• Built consensus for a multiple use plan;
• Generated a better understanding of conflicts between user groups;
• Products are being used by user groups, both governments, NGO's and other infinitives (i.e. heritage sites)

In presentation *Realizing Direct & indirect Benefits From Marine Spatial Planning. . . are we there*, Dr. Margles started by managing expectations. First she told an imaginary story that it would not be easy to build a boat that meet all the three criteria expected – fast, comfortable and economical. The moral of the story is that One boat cannot necessarily meet all expectations. The same case is that One site cannot necessarily meet all marine spatial planning objectives. Then Dr. Margles discussed 4 Case Studies, each representing a different scale and scope of MSP process: (1)Lemmens Inlet, Vancouver Island, Canada; (2) Massachusetts, United States; (3) Integrated Maritime Policy for the European Union; and (4) St. Kitts & Nevis, the Caribbean.

In Lemmens Inlet, proactive driver for MSP are: (1) Long history of stewardship by First Nations, and extractive activities such as fishing, harvesting seafood, and logging; and (2) Residents had an interest in balancing human uses such as seafood harvest (economic), float homes with no sewage treatment (cultural, economic), recreational activities (economic), with conservation of the natural resources (environmental). Analysis indicated zoning Lemmens Inlet as an ecologically significant area (conservation scenario) accommodates multiple objectives. And results show: 57% gain in the extant of kayaking routes (economic); 18% increase in value of the 2011 shellfish harvest from small increase in oyster leases (economic & environmental); loss of four float homes (economic & cultural); 75% decrease in habitat risk (environmental); 32% increase in relative water quality (environmental).

In Massachusetts, the renewable energy debate pushed Massachusetts into passing the first U.S. law requiring MSP in 2008, the driver being potential conflicts among offshore wind energy, commercial fishing, and whale watching sectors. Here the ecosystem service tradeoff analysis model was used, which Sought to capture the main drivers of, and tradeoffs among, offshore energy and key ecosystem services that impact Massachusetts Bay; Sought to identify highest value locations with the lowest intersectoral conflicts; Was used to demonstrate the feasibility and

utility of MSP; showed the value added from using MSP over conventional single-sector management , which focuses on maximizing sectoral values; Generated alternative wind farm development scenarios driven by single vs multi-sector management decisions; Calculated the resulting value of energy and other sectors with which there are spatial conflicts; Compared sector values arising from alternative development scenarios to show tradeoffs among sectors quantified; and Quantified the potential value added to sectors by using MSP over a single sector approach.

Plotted sectors values against each other in relation to potential management:

• Tradeoff most severe for flounder fishery which directly competes with energy sector for soft bottom habitat

• Loss in percentage value to lobster fishery is less severe due to lack of competition for rocky habitat

• Loss in percentage value to whale watching sector is similarly less severe – boats and whales are only displaced during turbine construction

Optimized scenario development by simultaneously considering all sectors in massachusetts bay:

• First, considered a 3-way tradeoff in value among energy, whale watching and lobster sector;

• Then, extended tradeoff analysis to all 4 sectors

Analysis indicates (based on assessing trade-offs) using MSP over conventional planning could:

• prevent > $1 million dollars in losses to the incumbent fishery and whale watching sectors;

• generate > $10 billion in extra value to the energy sector;

• the value of MSP increased with the greater number of sectors considered and the larger the area under management.

For Integrated Maritime Policy for the European Union, European Commission created a roadmap on MSP as part of a larger policy objective for the European Union. It was found that if the MSP process is managed properly the effects are fourfold in Enhanced coordination and simplified decision processes, Enhanced legal certainty for all stakeholders in the maritime arena, Enhanced cross-boarder cooperation, and Enhanced coherence with other planning systems.

Three main economic effects of MSP are also identified:

1. Coordination efficiency for governments – due to improved and integrated decision making

2. Reduced transaction costs – including search, legal, administrative and opportunity costs

3. Enhanced certainty – results in an improved investment climate

Economic effects of MSP should be considered as benefits:

• for 3 scenarios, a reduction of 1% in transaction costs led to significant economic effects from 170 million EU to 1.3 billion EU in 2020;

• accelerating investments in wind farm and aquaculture activity by 1,2 or 3 years is likely to generate between 60-600 million EU in 2020;

by 2030 the effects of MSP

• range from more than 400 million to 1.8 billion EU due to the reduction of transaction costs;

• range from 155 million to 1.6 billion EU due to acceleration of activities (e.g., wind energy and aquaculture).

In St. Kitts & Nevis, benefits of the process enabled a Federation wide marine managed area to be considered by parliament, which lays the foundation for and enables improved fisheries management. And additionally, it allowed for broader support to establish a MPA along the peninsula. Social, economic and environmental benefits realized through trade-offs. MSP creates certainty, predictability and efficiencies attracting investment and economic growth.

Dr. A Dong, Deputy Director-General, East China Sea Branch, SOA, China, presented *Marine Functional Zoning – Basic Theories, Legal System and Supporting Measures* in 4 parts: (1) Status of Marine Functional Zoning in Planning System; (2) Basic Theories for Marine Functional Zoning; (3)Legal System for Marine Functional Zoning; and (4) Supporting measures for Marine Functional Zoning.

China's national planning system consists of National Economy and Social Development Planning (different administrative levels), Territory Spatial Planning (Land, Ocean and Cities and Towns), and Environmental Protection Planning (Land, Ocean and Islands). Status of Marine Functional Zoning in National Planning System featuresIntegrity, Fundamentality, and Binding Force. In China, there are three levels of MFZ: national, provincial and city/county. Dr. A Dong presented basic theories of MFZ, including Theories for scientific assessment of the sea (original status), Determination of marine development and protection objectives (how should do), and Theories on ensuring implementation of MFZ (how to realize). Laws and Regulations Concerning MFZ include the Sea Area Use Administration Law, the Law of Marine Environmental Protection (Revision), the Sea Island Protection Law, the Law on Port, and the Administrative Regulations on Prevention and Treatment of Marine Environment Pollution and Damage Caused by Oceanographic Engineering Projects, as well as theOfficial Reply of the State Council on the National Marine Functional zoning from 2011 to 2020, the Approval Method for Provincial Marine Functional Zoning, the Administrative Regulations on Sea Area Use for Coastal Provinces, Autonomous Regions and Municipalities, and the Marine Environmental Protection Regulations for Coastal Provinces, Autonomous Regions and Municipalities.

Five basic principles of Marine Functional Zoning:

1.Scientifically defining the functions of the sea areas in light of such natural attributes as their geographical location, natural resources and natural environment;

2.Making overall arrangements for the use of sea areas among various related sectors according to the needs of economic and social development;

3.Protecting and improving the ecological environment, ensuring the sustainable utilization of the sea areas and promoting the development of the marine economy;

4.Ensuring the maritime traffic safety; and

5.Safeguarding the security of national defense and guaranteeing the needs in the military use of the sea areas.

Basic Systems of Sea Area Use Management includeSea Area Ownership Administration System, System of Compensation for Use of Sea Areas, System of

Control of Sea Reclamation Plan, Sea Area Dynamic Surveillance and Inspection Management System, Sea Area Use Demonstration Aptitude System.

Supporting measure for Implementation of Marine Functional Zoning:

- Operating integrity, basic of zoning and constraint function zoning
- Comprehensively improve the management level of sea area use
- Strengthen the management of reclamation and sea enclosing management
- Strengthening marine environmental protection and ecological construction
- Strengthen infrastructure of zoning implement
- Established to cover all sea area under the regulation of the dynamic supervision system

Dr. Charles Steinback, Director of Marine Planning, Ecotrust, made two presentations.

In presentation *MSP Design in Consideration of Traditional Use Patterns and Meeting the Needs of Indigenous People of the NW Coast of North America*, Dr. Steinback discussed the National Ocean Policy Coordination mechanism, within which the Governance Coordinating Committee has three tribal official seats, and the National Ocean Council has nine Regional Planning Bodies each having a Federal, Tribal and State Co-lead, as well as individual Federal, Tribal and State RPB members. Tribal marine planning is an EXERCISE OF INHERENT TRIBAL SOVEREIGNTY. A most basic principle of federal Indian law is that federally recognized tribes have sovereign powers that are 'inherent,' meaning that tribes were self-governing nations long before Europeans arrived on this continent. Tribes retain those powers of self-government except as limited by being within the boundary of the United States and as expressly limited by Congress. Dr. Steinback argued that we need MSP "champions" on the West Coast (regionally); that Federal process (NOP) mandates tribal participation (co-leads); that Tribes lack the capacity to effectively engage in MSP, yet opportunity to exercise inherent tribal sovereignty; and that Federal (and state) MSP process needs tribal data. Marine Planning Tribal Partnership's overarching goal is for tribes to develop individual marine plans for their ancestral territories. These plans can then be used to inform the larger federal process and can also be used by tribes engaged in state planning processes. Tribes are ready to begin individual marine planning as a means of readying themselves to become the managers of their traditional marine resources. Tribal marine plans would be based on an individual tribe's vision for uses of marine resources in their traditional territories. First steps involve establishing the partnership, and developing a learning and sharing network.

A Coordinated Approach will give a set of joint recommendations on tribal roles in regional ocean governance that would give the state and federal agencies a clearer picture about how tribes see themselves in larger ocean planning processes; will jointly develop a marine planning template that could be customized to meet the needs of each individual tribe; and will develop Data standards that facilitate coordination between tribes related to: collection, use, security and storage of essential data and information necessary for marine planning. The development of the data standard framework is being led by one of the participating tribes, with the purpose to develop a tribally driven geospatial framework that will ensure

confidentiality of sensitive information, as well as efficiency, standardization, and interoperability with tribal, regional and national data tools.

In summary,

- Tribes wish to maintain the ability to continue to practice these marine subsistence, ceremonial, and customary uses.
- Tribal marine planning and engagement in regional ocean planning is essential to future tribal management and exercise of inherent tribal sovereignty.
- Bottom up, tribally driven - provided they have access to resources to build their capacity to engage effectively.

In presentation *Developing Stakeholder-based Decision Support Tools for MSP*, Dr. Steinback introduced the Mid-Atlantic Regional Council on the Ocean (MARCO) which has New York, New Jersey, Delaware, Maryland, and Virginia in collaboration for managing ocean resources to improve their health and ensure the waters off the Mid-Atlantic continue to contribute to the region's quality of life and economic vitality. The Council's priorities include Smart development of renewable offshore energy; Identification and protection of critical offshore habitats; Preparation of coastal communities for climate change impacts; Improvement of the region's water quality to sustain ocean health; and Capacity for regional ocean planning. Working closely with MARCO, the Project Team will Engage ocean users in compiling and vetting ocean use data; Integrate stakeholder data; Equip stakeholders to use data and tools; Enhance the Portal to support priorities in the Mid-Atlantic; Assure that the Portal is readily available and easily accessible; and Maintain and update data and tools.

Stakeholder Engagement Objectives:

- Review existing data to ensure accuracy and relevance
- Understand stakeholder needs and priorities
- Fill data gaps with local and scientific knowledge
- Learn how to use the Marine Planner and improve its usability and features

Dr. Yu Xingguang, Director-General, Third Institute of Oceanography, SOA, China, presented *Island Development Process: Issues of Resources and Environmental Protection* in three parts: Status of sea island development, utilization, protection and planning; Problems in the Process of Sea Islands Development; and Island resources and environmental protection: measures and suggestions. China has more than 7300 islands greater than 500 ㎡, the total island area is nearly 80,000 ㎡, the total length of islands coastline is more than 14,000 km. Island (number) Distribution: 4% in Bohai Sea, 5% Yellow Sea, 66% in East China Sea, 25% in South China Sea. China's islands feature small population, high concentration; and small economy with single structure. Island protection work started late, but has developed rapidly, has carry out a comprehensive improvement and ecological restoration work for ecologically severely damaged islands, and established a number of islands and island nature reserves and protected areas. The country has developed over 1900 uninhabited islands, with 1020 islands for special-purpose, 365 islands for public service, 73 Island for tourism and entertainment, 340 Islands for agriculture, forestry, animal husbandry and fishery, 49 islands for industry, warehousing and

transportation, other 80+ islands for renewable energy, urban construction and other usage. So far, the country has awarded 12 certificates of the right to use uninhabited islands. Since 2008, the state launched the preparation of provincial planning in four pilot provinces, namely Zhejiang, Fujian, Guangdong and Guangxi. In 2012, the provincial island conservation planning work has been in full swing, plans of the 11 coastal provinces have been completed. The implementation of the above plan for the promotion of the rational use of island resources will have a significant effect.

As the island's resources and the environment has certain uniqueness. Additionally, lack in understanding, scientific and technological support capabilities, and management deficiencies, resulted in a lack of comprehensive consideration of the resources and environment on sea islands and some (series of) problems such as severe ecological damage, development disorder, and low (social and economic) development level.

Island resources and environmental protection: measures and suggestions:

- Scientific planning, conservation first
- Integration and coordination, management according to types
- Emphasizing on regulation, mechanism building
- Sci& tech support, development through innovation
- Advancement in all aspects, with focus
- Strengthening restoration and eco-conservation

Priority considerations expressed by the participants during the training

There were extensive discussions after each presentation. Training course also arranged open panel discussion session. According to the questions that the participants raised, it can be found that they were interested in MSP Categories, purposes of reserve areas in the zoning process, ecological compensation, MSP enforcement, specific management of the functional zones, stakeholder involvement, sea area use fee management, reclamation of land from the sea, climate change adaptation, habitat mapping, legal aspects of environmental protection (penalty etc.), process of conferring certificate for island development, coastal protection against erosion, fresh water supply and sewage treatment on islands, and software usage (MARXAN), among other interesting questions.

The training also collected training priorities that APEC economies might particularly interested in which may include: Policy development for MSP, Stakeholder engagement, Tools training (MARXAN etc.), Training for MSP trainers, Training for local government officials, Assigning conservation area in MSP, Ecosystem-based management, etc.

Acknowledgement

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perience for this learning forum. Special thanks go to Dr. Anne Walton and Dr. Sarah Fangman from NOAA who provided great help in organizing other facilitators and we re acting as the moderators for the whole training process, especially for the discussi on sessions. Finally, We wish to thank all the participants for their informative input t o this learning forum.

Annex 1 Workshop Schedule

WORKSHOP SCHEDULE

OVERVIEW OF THE PROCESS Wednesday, 11 September 2013 (DAY 1)	
8:30-9:00	OPENING SESSION: Welcoming Ceremony
9:00-9:45	INTRODUCTIONS & FORUM OVERVIEW:
9:45-10:45	POSTER SESSION: Four 10-minute poster sessions by pre-selected participants
Tea Break & Poster Session Gallery Walk	
11:00-11:30	INTERACTIVE EXERCISE SESSION: The Domestic Spatial Allocation Dilemma: Downsizing in a Modern World
11:30-12:00	PRESENTATION 1.1: Using Marine Spatial Planning as a Management Process Model for Bird's Head Seascape
12:00-12:30	PRESENTATION 1.2: The Unification of Public and Private Partnerships at the State Scale in California, USA
Lunch	
1:30-2:00	PRESENTATION 1.3: National Scale Planning Broken Down into Manageable Pieces in Great Britain
2:00-2:30	PRESENTATION 1.4: Multi-lateral Collaboration in the Baltic Sea, Northern Europe
2:30-3:10	OPEN PARTICIPATION PANEL DISCUSSION: Scale, Scope and Complexity of Single to Multiple Legal Systems, and Jurisdictional Authorities - How Do These Factors Drive MSP Process Outcomes?

3:30-5:00	INTERACTIVE BREAKOUT SESSIONS: Theme 1: Identifying and assembling the enabling environment (key factors) for launching a successful MSP process Theme 2: Framing the MSP process: linking goals, objectives and principles to the MSP process drivers and how this affects process outcomes
5:00-5:20	PLENARY REPORT OUTS FROM BREAKOUT SESSIONS
5:20-5:30	VIDEO: Become a maritime specialist in 10 minutes (WWF)
-	HOMEWORK: Maintaining the Log Book
DESIGNING MSP PROCESSES FOR SUCCESSFUL IMPLEMENTATION **Thursday, 12 September 2013 (DAY 2)**	
9:00-9:15	OPEN OCEAN SESSION
9:15-9:45	PRESENTATION 2.1: From bottom up to top-down approach-China Model for large-scale Marine Spatial Planning
9:45-10:15	PRESENTATION 2.2: Approaches to Community-based Marine Spatial Planning Processes in the Caribbean
10:15-10:45	PRESENTATION 2.3: Basic Theories, Legal System and Supporting Measures of Marine Functional Zoning in China
Tea Break	
11:00-11:30	OPEN PARTICIPATION PANEL DISCUSSION: The Value and the Challenges of Top-Down versus Bottom-up MSP Models
11:30-12:10	INTERACTIVE BREAKOUT SESSIONS: Theme 1: Challenges of multi-stakeholder engagement in a top-down process Theme 2: Challenges of government buy-in for a bottom-up process
11:45-12:00	Presentation 2.2: Working with Stakeholders
12:10-12:30	PLENARY REPORTS FROM BREAKOUT SESSIONS
Lunch	
1:15-1:45	STAKEHOLDER ENGAGEMENT GAME (types and levels of agreement)
1:45-2:15	PRESENTATION 2.1: Engaging Multi-jurisdictional Stakeholders: The Need for Cross Sectorial Decision-making Mechanisms

2:15-2:45	PRESENTATION 2.2: Involving industry on the MSP Process: The Selection Process for Who Should Sit at the Table
Tea Break	
3:15-4:30	INTERACTIVE BREAKOUT SESSIONS: Theme 1: Addressing Government-Stakeholder Resistance to MSP\Theme 2: Addressing User Group-Stakeholder Resistance to MSP: Theme 3: Involving Stakeholders: Developing Criteria for Including Some and Excluding Others Theme 4: Driving the Process: How to Get Stakeholders to Own the Process
4:30-5:15	PLENARY REPORTS FROM BREAKOUT SESSIONS
-	HOMEWORK: Maintaining the Log Book
FIELD TRIP Friday, 13 September 2013 (DAY 3)	
8:30-6:00	Field trip to Zhao'an County
SHARING BEST PRACTICES Saturday, 14 September 2013 (DAY 4)	
9:00-9:15	OPEN OCEAN SESSION
9:15-9:45	PRESENTATION 3.1: Designing a Large Scale Network of MPAs Using an Incremental Sub-regional Approach for the State of California
9:45-10:15	PRESENTATION 3.2: MSP Design in Consideration of Traditional Use Patterns and Meeting the Needs of Indigenous People of the Northwest Coast of North America
10:15-10:45	PRESENTATION 3.3: Science-based Spatial Allocation Designs to Achieve Fisheries, Food Security and Climate Change Resilience Objectives: Experience from the Coral Triangle
10:45-11:15	PRESENTATION 3.4: Several Issues on Protection of Resources and Ecosystems in the Process of Island Spatial Planning
11:15-12:15	INTERACTIVE EXERCISE SESSION:Comparative Analysis Between Outcome Driven Processes and Open Ended Processes: Are all things equal when it comes to buy-in and implementation?

12:00-12:30	REPORT OUT IN PLENARY
Lunch	
1:30-3:00	INTERACTIVE EXERCISE SESSION: Applying Conservation Principles to the Design of Zones
Tea Break	
3:30-5:00	INTERACTIVE EXERCISE SESSION: Applying Socioeconomic & Cultural Principles to the Design of Zones
-	HOMEWORK: Maintaining the Log Book
Trade-offs, Alternatives and Scenario Development **Sunday, 15 September 2013 (DAY 5)**	
9:00-9:15	OPEN OCEAN SESSION
9:15-9:45	PRESENTATION 4.1: Marine Spatial Planning Tools Inventory: Finding the Right Fit to Ensure Added Value to the Process
9:45-10:15	PRESENTATION 4.2: Developing Stakeholder-based Decision Making Tools for a Diversity of MSP Settings
Tea Break	
10:30-11:00	PRESENTATION 4.3: The Art and Science of Scenario Development for Multi-objective Planning Processes: The Use of Marxan for Spatial Planning in Indonesia
11:00-11:30	PRESENTATION 4.4: PISCES: Integrating Socioeconomic and Ecosystem Services Assessment Data into MSP and Use of Data in Private Sector Processes
11:30-12:15	OPEN PARTICIPATION PANEL DISCUSSION: The Role of Tools in MSP: Who or What is Actually Driving Decision Making and Stakeholder Agreements?
Lunch	
1:30-2:45	INTERACTIVE TOOL SESSION PART 1: From Low Tech to High Tech Tools to Assist in the Decision-making Process: Theme 1: The Trade Off Game (Seaweb) Theme 2: GIS-based Interactive Decision Making Tool (Ecotrust)
Tea Break	

3:15-4:30	INTERACTIVE TOOL SESSION PART 2: From Low Tech to High Tech Tools to Assist in the Decision-making Process
4:30-5:30	VIDEO: Ocean Frontier: The Dawn of a New Era in Ocean Stewardship
-	HOMEWORK: Maintaining the Log Book
Getting to Successful Implementation	
Monday, 16 September 2013 (DAY 6)	
9:00-9:15	OPEN OCEAN SESSION
9:15-9:45	PRESENTATION 5.1: Are New Governance, Regulatory or Management Tools Necessary to Implement the Plan and Achieve Results: The California Experience
9:45-10:15	PRESENTATION 5.2: The Role of Stakeholders in Implementing the Plan: The Baltic Sea Experience
Tea Break	
10:30-11:00	PRESENTATION 5.3: How MSP Reduced User Conflicts, Affected Industry and Contributed to Conservation - Too soon to see results?
11:00-11:30	PRESENTATION 5.4: When do we expect to see direct benefits from MSP?
11:30-12:15	OPEN PARTICIPATION PANEL DISCUSSION: Establishing Ownership of the Marine Spatial Plan and Responsibility for Implementation
Lunch	
1:15-2:15	INTERACTIVE EXERCISE: Building a Road Map for Moving Forward With MSP and Anticipating Potential Obstacles Participants Prepare Questions for Next Exercise Based on Some of the Challenges They Anticipate From Implementing Their Road Map
2:15-3:30	MARGOLIS WHEEL: Opportunity to Ask the Experts
Tea Break	
4:00-4:30	WRAP-UP & COURSE EVALUATION
-	HOMEWORK: Maintaining the Log Book

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