



XVII

Annual Consultative Meeting on Large Marine Ecosystems and Coastal Partners

Summary report

Final, January 2016

29 September – 2 October 2015

Paris, France

Contents

1. Objectives of the meeting	3
1a. Agenda.....	4
2. Summary of sessions (1-10)	5
SESSION 1: WELCOME	5
SESSION 2: GOVERNANCE	6
SESSION 3: REGIONAL CAUCUSES AND WORKING GROUPS	10
SESSION 3a: REGIONAL CAUCUSES AFRICA.....	10
SESSION 3b: REGIONAL CAUCUSES ASIA	11
SESSION 3c: REGIONAL CAUCUSES LATIN AMERICA AND CARIBBEAN	12
SESSION 4: REGIONAL NETWORKS.....	13
SESSION 5: DATA AND INFORMATION NEEDS	14
SESSION 6: BLUE GROWTH AND SOCIO-ECONOMIC ASPECTS.....	16
SESSION 7: CLIMATE CHANGE AND VARIABILITY IN LMEs	20
SESSION 8: EMERGING ISSUES	22
SESSION 9A: CAPACITY DEVELOPMENT	26
SESSION 9B: COMMUNICATION	29
SESSION 10: CONCLUSIONS AND NEXT STEPS.....	33
3. Annexes	34
Annotated agenda.....	34
List of participants	47



1. Objectives of the meeting

The primary objective of the 2015 meeting was to consolidate and operationalize the LME Partnership in accordance with the objectives of the recently approved GEF LME: LEARN project and engaging marine and coastal project leaders in meeting those objectives. Similarly to the previous session, the **17th LME Meeting** was structured according to four building blocks as follows:

1. Building Global and regional **networks** of partners to enhance ecosystem-based management and to provide support for the GEF-IW LME/ICM/MSP/MPA projects;
2. Mobilizing **knowledge**, capturing best LME governance practices, and developing new tools to enhance the management effectiveness of LME, ICM, and MPAs;
3. Strengthening capacity and partnership building through **twinning**, learning exchanges, and training among LMEs and similar initiatives, and;
4. Providing **communication**, dissemination and outreach of GEF LME/ICM/MSP/MPA project achievements and lessons learned.



1a. Agenda

Monday 28 SEP 2015	The ICES Working group on Large Marine Ecosystem Programme Best Practices will meet in Paris (UNESCO HQ) on 28-30 September 2015 in parallel to the 17th LME. http://www.ices.dk/community/groups/Pages/WGLMEBP.aspx				14 00	ICES WGLMEBP Hein Rune Skjoldal(*) Rudolf Hermes (*)	16 15	ICES WGLMEBP Hein Rune Skjoldal(*) Rudolf Hermes (*)
	Tuesday 29 SEP 2015	09 00	ICES WGLMEBP Hein Rune Skjoldal(*) Rudolf Hermes (*)	14 30	Welcome Session IOC, UNDP, GEF, NOAA, ICES, IUCN	15 00	LME Governance – Links to ICM and MPA efforts Becky Shuford, NOAA*	18 00
Wednesday 30 SEP 2015	09 00	Regional LME Caucus Africa, Asia, Latin America/Caribbean. ICES WGLMEBP	11 15	Regional LME Caucus Continuation ICES WGLMEBP	14 30	Regional LME Caucus Continuation	17 00	LME Global and Regional networks Kenneth Sherman, NOAA*
	Thursday 01 OCT 2015	09 00	LME Data and Information needs Julian Barbière, IOC*	11 15	Socio-economic aspects of LMEs Andrew Hudson, UNDP*	13 00	Side event: Google LME Layer James Oliver, IUCN*	14 30
Friday 02 OCT 2015	16 15	Emerging issues in ocean health Leah Karrer, GEF*	18 00	Side event: TWAP – Users’ feedback session Sherry Heileman, IOC*	Information 17th LME PARIS 2015 	(*) Chairperson More information & Logistics: www.ioc-unesco.org/17thLME Other announcements: Registration starts on Tuesday 29 September at 14.00h Room XII at UNESCO HQ		
	09 00	LME:Learn & Capacity development Wojciech Wawrzinski, ICES*	11 15	LME:Learn & Stakeholders and communication Mish Hamid, IW:Learn*				

2. Summary of sessions (1-10)

SESSION 1: WELCOME

The institutional representatives of the LME partnership opened the meeting, Mr. Vladimir Ryabinin, Executive Secretary of IOC-UNESCO together with Mr. Julian Barbière, Head of the Marine Policy and Regional Coordination Section of IOC-UNESCO, Mr. Andrew Hudson, Head of the Water and Ocean Governance Programme of UNDP New York, Mr. Christian Severin, Environmental specialist in charge for the International Waters focal area of the GEF Secretariat, Dr. Ned Cyr, Director for the Office of Science and Technology NOAA Fisheries, Mr. Adi Kellerman, Head of the Science Programme of ICES and Mr. James Oliver, Programme Operations Officer of the IUCN Global Marine and Polar Programme.

After welcoming the participants, all institutional representatives thanked the 17th LME Planning Committee for the organisation of this meeting with a promising and intensive agenda, and all of them agreed on the excellent opportunity to meet in Paris for the 17th consecutive year in the context of the large marine ecosystem community of practice, this time with the incentive of the recently approved LME:Learn project towards the operationalization of the LME partnership.



SESSION 2: GOVERNANCE

Session 2a: Building long-term governance and sustainability in LMEs and Session 2b. Examples of use of MPAs, ICM, MSP as tools and approaches for governance in LMEs

Chair:	Rebecca Shuford, NOAA
Rapporteur:	Mish Hamid, UNDP
Speakers – Session 2a	
Objectives and expected outcomes of the session	Rebecca Shuford, NOAA
Governance considerations in LMEs	Robin Mahon, CERMES
The Barcelona Convention and the MedPartnership in the Mediterranean LME	Lorenzo Galbiati, MedPartnership
Factors contributing to long-term ocean governance in the BCLME Region	Hashali Hamukuaya, Benguela Current Commission
The Western Tropical Pacific Warm Pool LME- Status, Benefits and Challenges in the context of the Future of Fisheries	Hugh Walton, FFA
Speakers – Session 2b	
MPAs as a valuable tool for governance in LMEs: Global status and trends in MPA Application and the promise of Sydney	James Oliver, IUCN
Experiences in scaling up ICM for sustainable development of the seas of East Asia	Adrian Ross, PEMSEA
Enabling sustainable development and management of ecosystems	Marc Wilson, SOPAC
CLME+ and the Caribbean Challenge Initiative	Patrick Debels, Caribbean LME
Legal reforms relating ICAM/MSP within LMEs	Michael Akester, Humboldt Current LME

The LME Governance session sought to provide 1) perspectives on overarching governance structures as well as 2) share some select examples of mechanisms and tools (i.e. MPA, ICM, MSP) being applied in LME regions to facilitate effective governance of shared marine and coastal resources. This session did not seek to arrive at prescriptive solutions or advocate a one-size fits all approach. Rather it seeks to inform and initiate an open and ongoing dialog on how to address the need for appropriate and relevant governance structures and mechanisms throughout LME (and related project) planning and implementation.

Main points given by the speakers

The LME: LEARN program can support capacity-strengthening on governance via peer-reviewed journal articles as an expanded LME handbook on governance, regional training and twinning activities. The term “good governance”, is the extent to which arrangements and processes in place are structured to reflect internationally accepted principles and practices.

On the other hand, “effective practices” characterize the functional extent to which governance has achieved the substantive outcomes that is set out to attain.

LMEs are defined ecologically as management units and governance arrangements. Although both do not always match, preliminary results from the LME Transboundary Water Assessment Programme has shown that this fit is poor. One way to address this is to **consider LMEs as an operational scale unit that lies between regional and national levels** and to focus attention on how to address LME concerns within regional ocean governance arrangements. There has been a tendency to promote the view that LME specific commissions, with management authority, are the most appropriate approach to LME governance. However, other approaches maybe appropriate, including a **decentralized, network governance approach** that facilitates governance nesting at sub-LME levels.

One may consider a **step-wise approach of strengthening governance by:**

- Adopting targets under a UNEP RS convention;
- Adding protocol or legally binding component to existing convention;
- Using existing fragmented institutions in hope that EBM will be adopted;
- Establishing new legally binding agreement to overcome fragmentation;
- New legally binding intergovernmental institution/commission with targets/deadlines.

Key success elements in the establishment of the first transboundary LME commission included inter alia, **a shared vision, ownership** by member states, **multi-sectoral collaboration, private public** sector engagement and strong **member state commitment** to available resources and strong support by partners.

MPAs may not be the most effective tool because coverage is far from uniform and mostly in remote areas. In order to be efficient mechanisms, they need to be at the right locations, scale and conditions. Protected areas actually cover 3.41% of the oceans, as of 2014. The target is to protect at least 10% of MA by 2020.



LMEs and MPAs have shown overlapping priorities in terms of: preserving biodiversity & ecosystem services; protecting spawning grounds & nurseries; reducing poverty & improve livelihoods; monitoring & evaluation; and habitat restoration.

One presentation for example, described an initiative of countries to reassemble their efforts into a regional strategy via sustained trust building processes, which consists in the centralization of various services provided as: a **network of local governments** throughout the region, **regional centers of excellence**, sustainable business network and public-private partnerships, **investment services for blue economy**, **advisory project services** providing strategic planning, a **comprehensive set of knowledge products and capacity development** programs, and **certification systems**.

Another project stressed the need to **deliver promptly** and to **deliver locally**, in order to demonstrate the call for regional improved governance. The overall modus centered on the **Community to Cabinet approach**, with local and national committees inter-linking with the regional level, underpinned by horizontal and vertical linkage.

An additional project was successful due to **strong political and private sector buy-in**, with endorsement at the highest levels and reliance on **open information exchange**. The dialogue was facilitated then between private and public sector sharing the latest science and spurring innovative action.

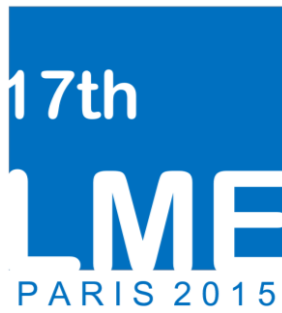
Finally, another project noted that **improving ecosystem valuation contributes to the demonstration information gaps** and helps provide information to reveal the responsibilities.

Summary of the plenary discussion

Because single approach is unsuitable in the case of LMEs, it was suggested that perhaps beginning **with voluntary, non-binding approaches** would be more effective, and further evolve toward legally binding structures such as a commission for example. Likewise, attention should be focused on softer and more diverse options to potentially lead to stronger solutions when needed. However, soft options have already been documented in the literature and have shown their application on ocean systems, from networking to memorandum of understandings. In addition, **the case of Regional Seas and LMEs** need to be addressed in their differences.

Where Regional Seas belong to geopolitical contexts, LMEs comprise ecosystems beyond EEZs. Regional Seas could be extended to provide a legal basis for the LMEs including an expansion to the high sea. Or oppositely, LMEs could build their own legal and overarching agreement.

A multitude of new **treaties increases the demand on existing institutional and human capacity**, which itself differs greatly between nations. Moreover, the regional governance level is also more subject to be affected by the national level governance. In this case, the solution resides in the direct



and cooperative involvement of the countries concerned. To begin with, regional conventions can provide support, although further mechanisms may need to be established at the national level. Ministries involved, often environmental, are generally not the most influential in establishing long term mechanisms. A shift from regional bodies can contribute to improve leverage on a **national/local scale**.

Main recommendations and follow-up actions

An analysis of the best practices along with consideration for new practices that have not been yet applied should be used by the LME community in order to develop criteria to assess the achievement of **(1) good governance and (2) effective governance**. Many MPAs are located in remote areas and therefore have no impact on management and/or results regarding sustainable use and ecosystem services. Nevertheless, while these MPAs help achieve the Aichi goals, they should also fulfil tangible management objectives such as the ones identified by the 2014 World Parks Congress. LME projects are in great position to help, in this sense, to attain these objectives and goals. The LME community could then consider a cost-benefit analysis of various governance approaches and tools (e.g. MPAs, ICM) versus maintaining the status quo.



SESSION 3: REGIONAL CAUCUSES AND WORKING GROUPS

The caucuses provide an important opportunity for colleagues working in each region to come together to discuss critical issues in a smaller setting than the larger meeting. The focus of these caucuses was to share and to discuss innovative approaches, best practices and lessons learned that may be of interest to other colleagues. It was also a chance to discuss challenges and problems to solicit ideas from peers. While sharing experiences, participants were encouraged to consider the applications to their own projects and how they might modify plans moving forward.

Project managers as well as other colleagues experienced or interested in the region were encouraged to actively participate by sharing their experiences. While there was a few project presentations, the focus was emphasized on sharing experiences informally throughout the day. For each Regional Caucus, the discussions focused around 3 questions:

- 1) What are projects' best practices, innovative approaches and challenges related to the LME meeting topics (blue growth and socioeconomics, climate change/ocean acidification, data and information management, IUU fishing, marine debris, ties to MPAs & ABNJ)? What are key lessons learned to share with other regions?
- 2) What challenges and opportunities are projects facing, particularly related to ensuring sustainable governance? What are viable solutions?
- 3) What are priority capacity needs and knowledge needs for projects and the region as a whole?

The insights from discussing the second and third questions were presented at the end of the day during a plenary session on Global and Regional Networks. The insights from the discussion of the first question were shared during the relevant plenaries throughout the rest of the meeting by the relevant project. For example, an innovative approach to climate change vulnerability assessments in YSLME was shared during the Climate Change session.

SESSION 3a: REGIONAL CAUCUSES AFRICA

Co-chairs: Hashali Hamukuaya and David Vousden

This session was held to provide the baseline for adaptive management for the Regional Caucuses Africa by identifying centres of excellence for capacity development in EBM and help to build a network of partnerships for CB&T. It was further held to start the TDA process with national MEDAs to strengthen country ownership and national expertise.

As previously discussed, LMEs need to develop effective science to governance mechanisms in order to deliver options for decision making. It was shown that negotiations with industries have identified strong interest for collaboration and that the project LME: LEARN should support the LME caucus through the BCC (chair) and assist in the identification of financial support. It should also assist in the coordination, interaction and networking between centres of excellence as well as identifying individual skills available, on both regional and global levels.

SESSION 3b: REGIONAL CAUCUSES ASIA

Co-chairs: José Padilla and Rudolf Hermes

The need for improving governance and stakeholder consultation calls for all levels of communication, up (cabinets) and down (communities). Capacity development, such as IWRM post-graduate training programme, have been promoted to generate buy-in as in the case of the Pacific IWRM project. The importance of thorough stakeholder analysis during inception needs to be prioritized as well as inter-ministerial committees, based on local structure and comprehensive MoAs. Main policies have to be linked to action and science- or knowledge-based, management needs to be further improved and supported by assessments, reviews and advisories.

After a round of self-introductions, the session started with presentations from each represented Project (PEMSEA, YSLME, Pacific OFMP II, BOBLME, Pacific IWRM and PERSGA) and LME Partners (UNESCO IOC WESTPAC and Conservation International). These presentations generated discussions on Blue Economy, investing for conservation and impact, long-term changes of an LME in a changing climate, marine debris, fisheries management and IUU, inter-country collaboration, generating country engagement, results reporting, importance of strong project host institutions, knowledge management and linking policy to action. With regard to Sustainable Governance, there was a range of different approaches; YSLME is working towards the establishment of a Commission, while the other projects are either institutionalized within their host institutions or aim for “softer” options (e.g. a consortium approach, coordinating committee or MoU).

All projects have extensive experience in capacity development (CD) and knowledge management (KM). They have identified a strategic approach to CD for key areas (e.g. EAFM, ICM, science communication), and also promoted training in collaboration with partner institutions; such as universities; offer regular training courses on local, national, and regional levels. All projects consider their respective websites as important tool in KM, have produced a range of reviews, studies, assessments and various other reports (with regular reporting as a key focus area), or are in the process of developing a Knowledge Bank as regional platform (PEMSEA).



LME: Learn is considered as an important future project partner, and is expected to provide a coordination role (e.g. for the use of indicators and CD), and also to lead the production of “knowledge synthesis” documents. Finally, the distributed project inventory was examined, and the addition of some national (Ridge to Reef) projects, as well of complementary global projects was suggested (e.g. Dugong/seagrass).

SESSION 3c: REGIONAL CAUCUSES LATIN AMERICA AND CARIBBEAN

Co-chairs: Michael Akester, Patrick Debels and Porfirio Álvarez

It was discussed that governance analyses are complex and difficult to undertake, but remain an important point to expand as it represents the foundation to the SAP implementation (i.e. Policy cycle, data collection & analysis and science to policy). Deep Water Horizon disaster brought scope for improved strategy development USA-Mexico [+ Cuba] LME project. The reporting can represent the ‘glue’ to bring information together for instance. It is mandatory to involve regional governance bodies to ensure LME cohesion e.g. CLME & GoMLME. Some conventions such as the Cartagena convention, don’t include certain countries, here it excludes Brazil. Hence there is a need to create links like the IUU pictograms awareness raising documents for example. They shall be used in all LMEs – fund saving opportunities and the use of the indicators to the new Sustainable Development Goals (SDGs) to be linked to result notes. Thus, Action Plans are needed to insure that LME & IW: LEARN communications strategies are further linked to existing LME Communications strategies.

SESSION 4: REGIONAL NETWORKS

Chair:	Kenneth Sherman, NOAA
Rapporteur:	Alejandro Iglesias-Campos, IOC-UNESCO
Speakers – Session 4	
Objectives and expected outcomes of the session	Kenneth Sherman, NOAA
Regional caucuses' reporting: AFRICA	Hashali Hamukuaya / David Vousden
Regional caucuses' reporting: ASIA	José Padilla / Rudolf Hermes
Regional caucuses' reporting: LATIN AMERICA & CARIBBEAN	Michael Akester/Patrick Debels/Porfirio Álvarez
Reporting of the ICES WGLMEBP	Hein Rune Skjoldal / Rudolf Hermes
Analysis of Regional Ocean Governance	Juliette Rochette, IDDR

In addition to the summary of results from the different regional caucuses and working groups, the session dedicated to regional network opened a fruitful discussion on the aspects related to regional ocean governance.

Dr. Julien Rochette was invited to present the results of the paper on the review of regional oceans governance mechanism leading to a discussion on the need to improve the main existing regional mechanisms and the efficiency of interaction amongst them.

European regional seas appear to be the most effective in terms of work production and coordination with other institutions, including the European Commission and its member states, the opposite than in western Africa where the regional conventions have not any operative communication.

The participants replied to the presentation with personal and institutional experiences covering the majority of thematic aspects, from pollutants to fisheries, from climate to governance. All of them contributed to the discussion agreeing on the need to define effective arrangement to strength the governance in the regional seas together with the countries, but also on the imperative need to identify and compare the different governance structures currently in place.

SESSION 5: DATA AND INFORMATION NEEDS

Chair:	Julian Barbière, IOC-UNESCO
Rapporteur:	Sherry Heileman, IOC-UNESCO Consultant
Speakers – Session 5	
Objectives and expected outcomes of the session	Julian Barbière, IOC-UNESCO
Transboundary Waters Assessment Programme: Global comparative assessment of LMEs	Sherry Heileman / Liana McManus IOC-UNESCO Consultants
Institutionalization of transboundary indicators	Patrick Debels, CLME
International collaboration in oceanographic data and information exchange: IODE	Peter Pissierssens, IOC-UNESCO
Examples of EBM indicators approach in the Southeast Pacific	Fernando Félix, CPPS
EAF-Nansen and Blue Bridge Projects	Gabriella Bianchi, FAO

This session was dedicated to the conceptualization of data, as well as to show examples on the importance of data, information (indicators) and decision support tools to support ecosystem-based management within the LMEs as integrated coastal area management, marine protected areas and marine spatial planning.

A summary of the five presentations of this session is included below:

1. TWAP LMEs assessment

- The global comparative nature of the assessment required the use of global data sets, but this masked sub-LME variability (as shown by the Bay of Bengal Level 2 nutrients assessment). Future LME assessments should consider the sub-LME scale.
- The potential use of TWAP methodology and results by other bodies such as Regional Seas needs to be set, and the development process needs to feed into other indicators, e.g. UN process to define global indicators for the SDG.

2. Institutionalization of transboundary indicators

- There are many sources of data and initiatives on developing indicators. However, there is uncertainty in the extent to which they are complementary or overlapping among them. There is therefore a need to better coordinate these initiatives and build on existing ones.
- LME: LEARN can help to facilitate coordination across organizations and indicator processes.
- The 5 module approach can be institutionalized and indicators integrated in the TDA/SAP process by having different partners contributing to the indicators in accordance with their

respective mandates and through their work programs. Countries can also contribute to the improvement of the data.

3. International collaboration in oceanographic data and information exchange: IODE

- The volume of data has exponentially increased and their access is now facilitated. Nevertheless, some datasets remain poorly documented. A standard metadata scheme is needed with a data center that should apply appropriate standards to improve credibility and trust among efforts.
- Timely, free and unrestricted international exchange of oceanographic data is essential. A policy for increased access to data is essential.

4. Examples of EBM indicators approach in the Southeast Pacific.

- Institutional arrangements for indicators should be placed at the national level, and indicators should respond to national needs for decision making.
- There is a need to agree on standards for data and formats, mechanism for updating indicators.

5. EAF-Nansen and Blue Bridge projects

- Present drivers of change including climate change are to be addressed in the EAF Nansen program. Science, management, policy as well as capacity development are to be addressed in collaboration with relevant partners.

The discussion was fruitful in terms of identifying gaps and the interaction of participants with different backgrounds and interests, a summary of the main messages is listed below:

- **The Importance of communicating science was brought to the surface.**
- **Traditional knowledge is important and should be integrated with science for assessments (two examples given in Colombia and the Humboldt Current LME).**
- The data collected through public funds (or by foreign entities within a country) is often not available. This needs to be addressed.
- Arabian Sea TWAP assessment results: HDI appears low. HDI by countries was taken from the UNDP 2014 report and up scaled to the LME level.

SESSION 6: BLUE GROWTH AND SOCIO-ECONOMIC ASPECTS

Chair:	Andrew Hudson, UNDP
Rapporteur:	Akiko Yamamoto, UNDP
Speakers – Session 6	
Objectives and expected outcomes of the session	Andrew Hudson, UNDP
Moving towards a Blue Economy – the Seychelles experience	Didier Dogley, Minister of Environment, Energy and Climate Change of Seychelles
Restoring the world's LMEs: A vehicle for job creation	Andrew Hudson, UNDP
Economic valuation of ecosystem services in LMEs, purpose, methods and the GCLME experience applying the benefit transfer approach	Christian Susan, UNIDO
Valuation of marine ecosystem goods and services in the Caribbean Sea/N Brazil Shelf LME	Patrick Debels, Caribbean LME
Recent progress in fisheries certification in the Humboldt Current LME	Michael Akester, Humboldt Current LME

This session reviewed LME practitioners experience with socio-economic elements of LME assessment, management and governance, the speakers explored experiences including ecosystem valuation, blue economy, fisheries certification and the linkages between sustaining LMEs and employment.

The experience of Seychelles was presented by the Minister of Environment, Mr. Didier Dogley. The idea for Blue Economy (BE) is to get more traction from Rio+20, but there were no agreed international definition on the matter. Their approach to BE is to build on existing sectors and consider new ones within the Seychelles' comparative advantage. They have strong ocean based sectors such as fisheries (commercial and small-scale), tourism, transport, etc. Seychelles are developing and investing in debt swap with the Paris Club, creating a trust fund with the debt relief for example. This will support the realization of MSP of the entire EEZ and 30% MPA coverage of EEZ. BE Road map was further developed with support from the Commonwealth Secretariat. Seychelles and IOC will co-chair the BE Summit held during the sustainable week in Abu Dhabi. They will focus on exploring future opportunities for economic diversification and sustainable growth in the following three key sectors:

- Mariculture (shrimps, sea urchin, ornamental fish, etc.)
- Blue Biotechnology (developing the industry)
- Marine Renewable Energy (reducing fossil fuel dependency, explore potentials for OTEC, wind, wave, solar, etc.)



In addition, some institutional changes will be made to support BE endorsement. To promote BE investments, a BE Department will be created in the Ministry of Finance. To additionally endorse BE Science, a BE Institute will be created at the University of Seychelles.

Exploring the question of how a comprehensive global effort to protect and restore the world's LMEs could be a vehicle for job creation, evidence suggests that achievement of a Sustainable Blue Economy can not only protect and restore marine ecosystems but also result in more and better jobs that can contribute to poverty reduction and inclusive development.

The 5 key ocean threats the presentation focused on were:

- 1) Invasive Aquatic Species,**
- 2) Nutrient over-enrichment/hypoxia,**
- 3) Overfishing,**
- 4) Plastic pollution,**
- 5) Ocean acidification**

By analysing market/policy failures causing environmental externalities, resulting in the above ocean threats listed, we can already identify tangible policy or market solutions. In many if not all cases, implementation of these solutions will lead to the creation of 'good' or 'green' jobs. This has been demonstrated through the Globallast programme for example. The global Ballast Water Convention has created a massive – up to \$80 billion - new ballast water treatment industry, created new jobs and catalysed private sector investments into the reduction/prevention of IAS stress to the ocean health. More broadly speaking, SAP implementation will create tremendous job opportunities related to addressing the other major threats to ocean health.

The purposes, methods and the GCLME experience apply the benefit transfer approach to the Ecosystem Valuation (EV) of Ecosystem services in LMEs. Among a number of approaches and methods to conduct economic valuation on ecosystem services, the benefit transfer method is the most economic and viable approach which can provide the first approximation across all LME (and more broadly all GEF IW) portfolio.

Benefit Transfer method is less costly and less time consuming thus, easily and quickly applicable for making gross estimates, but its accuracy is limited and subject to availability of good valuation studies. It has been applied to GCLME to obtain a first approximation.

The GEF IW:LEARN 4 project will include efforts to further strengthen and apply EV in GEF LME portfolio. It will aim to systematically integrate the Benefit Transfer method into the TDA/SAP approach and promote and facilitate the use of EV for advocacy, policy dialogue and decision making.

From the Caribbean perspective, the valuation of marine ecosystem goods and services in the CLME+ and the valuation studies increased awareness about economic importance of marine ecosystems. However, to date, very few valuation studies have directly influenced policy, legislation or investment. How can we change this and increase their impacts on decision making? For valuation results to be successfully used to influence policy/investment decisions, the valuation must be done



at the appropriate scale. The scale fits the policy decisions that the valuation aims to influence. Key lessons learned from past cases where valuation results have influenced policy/investment decisions in the past are:

- We should obtain better understanding of (other) key conditions for valuation influence on decision-making
- It is important to embed the ecosystem valuation into the use of governance effectiveness assessment framework.
- Most of valuation work done in/for CLME+ is focused on coral reef ecosystem. How can we include broader ecosystem services/values in the valuation studies in the future?

In the Southeast Pacific, recent progress in fisheries certification has been achieved in the HCLME, promoting sustainable fisheries through certification systems, in partnership with MSC (Peru and Chile chose MSC as a partner). Governments' roles and responsibilities and their capacity to fulfill them matter significantly for the successful implementation of sustainable fisheries through certification. Governments can actually benefit from the certification regardless of the idea that private sectors and fisheries are the only beneficiaries.

Open Discussions/Questions/comments

The discussion session identified key points:

On Certification:

The extent of (pre-) assessment required during the certification process largely depends on the evaluators. The main deterrence to move towards the certification is the recurring audit costs, which can be around 15-25%, up to \$200k for full assessment costs, and would add up over the years (plus the 0.5% royalty). Some fisheries gain significant value addition through the certification (e.g. 30-50% value addition recorded in shrimp fisheries in Pacific), which is significant enough to offset the (initial and recurring) costs associated with the certification. Beyond costs, some governments are willing to promote the certification. E.g. Chilean Government invested \$200,000, required to complete assessment for their efforts towards sustainable fisheries to be recognized.

Chair and Rapporteur's note: Globally about 10% of fisheries are certified; however, only around 0.7% of that 10% is in the developing world. Certified fisheries result in value addition as well as job creation (e.g. South Africa deep sea hake fisheries have created 100,000 additional jobs through the certification process). GEF's targeted intervention to promote sustainable fisheries through certification in developing countries is not only justified but also highly encouraged.



On Job Creation:

What is the role of private sectors? How can we create these jobs? The private sectors have to be involved in the creation of employments. The task does not solely belong to governments themselves. For example, 10% of the world economy is generated from tourism. So how can this industry be involved in the job creation sector knowing that 80% of this share is from coastal-based areas. The need to get the relevant industries and private sectors involved urges. A question is lifted on the potential role World Ocean Council could play in this statement.

The Chair proposed that the “Blue Economy and Business” should be one of the themes for the next LME meeting.

On Economic Valuation (EV):

Considering that many LMEs are moving into the SAP implementation phase now is the right time to integrate EV into the TDA-SAP process systematically, and ensure that EV links science into policy decisions. There is a lot of literature published on EV and many good examples such as the ones from Philippines. EV is a tool to help the efforts to link science and Ecosystem-based Approach to policy decision making. EV helps us translate the scientific knowledge and ecosystem values that we know now into the language easily understood by policy makers. Resources (time and \$) required to do robust EV are significant. Integrating this properly in the TDA-SAP approach will require significant resources allocation and proper planning. Data collection phase of TDA development should include data requirements to process to EV. The current major constraint/limitation of EV exercise at CCLME is the recurrent lack of data.

BCLME processed to EV after the TDA was completed. And hence, EV delivered useful data and helped BCC deliver some valuable messages to policy makers. (Rapporteur’s note: EV conducted for BCLME was preliminary and never finalized due to the lack of data (or due to rather uneven data availability from different sectors). BCLME III will support the efforts to produce enhanced EV exercise in order to allow for a more comprehensive picture of the benefits of BCLME). Part of the cost required by EV could be taken by private sector and thus engaging them in the EV exercise, or integrating the EV exercise into their operations.

The latest TDA-SAP manual includes EV but we should be more rigorous in systematically conducting EV in all TDA-SAP processes. EV will lead to Cost Benefit Analysis and the results can/should be also used/considered during the MSP exercise at the national level. We need to support countries to mainstream EV into their policy dialogue and decision making, together with other tools such as MSP, etc.

SESSION 7: CLIMATE CHANGE AND VARIABILITY IN LMEs

Chair:	Ned Cyr, NOAA
Rapporteur:	Rebecca Shuford, NOAA
Speakers – Session 7	
Objectives and expected outcomes of the session	Ned Cyr, NOAA
Ocean acidification – Connecting scientists to transfer knowledge at local, regional, global levels	Kirsten Isensee, IOC-UNESCO
Regional Climate Change Adaptation Framework for the Mediterranean Sea	Lorenzo Galbiati, MedPartnership
Climate change and the living marine resources of the Canary Current LME	Birane Sambe, Canary Current LME
How the BOBLME SAP responds to climate change effects in the Bay of Bengal	Rudy Hermes, Bay of Bengal LME
Climate Change in the Gulf of Mexico LME	Porfirio Álvarez, Gulf of Mexico LME

Climate change is occurring at the present time and has effects on LMEs, their living marine resources, and the human populations relying on them. At the same time, global climate models are being effectively downscaled and coupled to regional ecosystem models, allowing improved LME-scale forecasts of climate change and its impacts. The GEF-funded LME projects should account for the effects of climate change in their SAPs and other planning processes.

Presentations addressed multiple aspects of global and LME-scale climate change, including project responses. Kirsten Isensee (IOC-UNESCO; Ocean Science Section) described the threat of ocean acidification and its effects on marine calcifying organisms and ecosystems. She highlighted the significant knowledge gap that needs to be filled through improved ocean acidification observing systems and the potential of the Global Ocean Acidification Observing Network to help fill those breaches.

Christine Haffner-Sifakis and Lorenzo Galbiati (UNEP/ MAP) described their ClimVar and ICZM projects, and the Regional Climate Change Adaptation Framework in the Mediterranean LME. The climate of the Mediterranean is changing rapidly, with additional environmental stress driven by recent population growth. The countries of the MedPartnership developed a climate framework to help strengthen knowledge on regional variability and to build partnerships and capacity to address climate change and related vulnerability issues. The Mediterranean LME is unique in the sense that the Mediterranean Action Plan and the Barcelona Convention provide a coherent legal institutional and programmatic framework for cooperation on climate change, a context that is lacking for many of the other GEF-funded LME programs.



Birane Sambe (FAO/ Canary Current LME), Rudi Hermes (FAO/Bay of Bengal LME) and Porfirio Alvarez (Consortium of Marine Research Institutions of the Gulf of Mexico and the Caribbean) discussed climate projections, impacts and planning efforts in their respective regions. Although the specific effects vary regionally, all are characterized by vulnerable human populations that are threatened by climate impacts including shifting fish populations, increasing storm intensity and sea level rise. Each of the projects has included consideration of climate change in its planning processes.

The discussion session identified a number of existing needs, including improved regional capacity in monitoring, research, and analysis to improve knowledge of climate effects and design adaptation responses. It was also noted that there should be a two-way exchange of information and data between LME projects and the global climate science community. Not only are LME projects recipients and users of globally available data, but LME projects have an opportunity to provide information from their projects to the broader community addressing climate change and vulnerability. For example: LME projects can participate in the Global OA Network, including providing complementary coastal and ship-based time series of carbonate chemistry; partnerships in global climate buoy arrays can be established or strengthened (e.g. PIRATA in Atlantic, TAO in Pacific, RAMA in Indian Ocean); LMEs can benefit from these FAO NANSEN cruises, but also provide guidance and input for priority science and data collection targets. It was also noted that climate variability is a major driver in eastern boundary current upwelling systems like the Humboldt Current, Canary Current and Benguela Current, and that additional research is needed to discriminate climate effects from other drivers.

Finally, a more formal partnership and engagement with GOOS should be re-established including LME data being provided to GOOS data streams and GOOS requirements being incorporated within LME projects.

SESSION 8: EMERGING ISSUES

Chair:	Leah Karrer, GEF
Rapporteur:	Michael Akester, Humboldt Current LME
Speakers – Session 8	
Objectives and expected outcomes of the session	Leah Karrer, GEF
Addressing the marine litter challenge through the Global Partnership on Marine Litter	Heidi Savelli, UNEP
The challenges of addressing marine debris in the Humboldt Current LME	Michael Akester, Humboldt Current LME
Key international approaches to combatting illegal, unreported and unregulated (IUU) fishing	Mathew Camilleri, FAO
IUU Fishing: the challenges and solutions in the eastern tropical Pacific Seascape	Marco Quesada, Eastern Tropical Pacific Seascape
Problems and some proposals of sub-regional measures to combat IUU fishing in the Canary Current LME	Birane Sambe, Canary Current LME

The discussion on marine debris by Heidi Savelli engaged with the concept of global partnership on marine litter and that the source of litter is poorly controlled (see statistics in presentation on LME-17 website). Plastic based waste dominates marine litter and doesn't biodegrade easily smaller particles food chain human health problem. It was brought to the surface that microplastics increase in quantity and they originate partially from fibres derived from clothes washing i.e. domestic waste water. The prevention is the key. It was also discussed to use market-based incentives to recover plastic by giving it a value.

Several protocols exist (see list on LME-17 website) which includes Global Program of Action & Global Partnership on Marine Litter.

United Nations Environment Assembly (UNEA) Resolution – study requested from UNEP May 2016

- See: www.unep.org/unea/download.asp?ID=5171

Actions plans Regional & National OSPAR, HELCOM ++

Demo projects on community awareness that worked with NGOs for a Smartphone App developed to show where plastics are included.

- See: <http://www.fauna-flora.org/news/new-smartphone-app-will-help-consumers-beat-the-microbead/>

Capacity building CPPS

- See: http://cpps.dyndns.info/cpps-docs-web/circulares/2015/023.Circular%20023-2015_Solicitud%20PNUMA%20paises%20region%20CPPS.pdf

Promote actions & action plans, promote PPPs

Massive Open Online Course

- See: <http://www.unep.org/gpa/gpml/MOOC.asp>

Michael Akester further developed on the challenges regarding marine debris in the HCLME area. He defines Marine debris as “any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment”

- See: <http://oceanservice.noaa.gov/facts/marinedebris.html>

There are many marine debris divergent from their (1) Origin - Land based & marine based activities (latter shipping, oil & gas exploration, fishing); (2) Localization - Floating Marine Debris (FMD), Seafloor Marine Debris (SMD) and Beached Marine Debris (BMD); (3) Composition - plastics, wood, glass, metal, fabrics, fiberglass (largest amount).

Micro-plastic particles are particles smaller than 5mm in size originating from 4 processes:

1. Breakdown of larger plastic fragments with or without UV radiation, mechanical forces in the seas (e.g. wave action, on high energy shorelines), or through biological activity (e.g. boring, shredding and grinding by marine organisms);
2. Direct release of micro particles (e.g. scrubs and abrasives in household and personal care products, shot-blasting ship hulls and industrial cleaning products respectively, grinding or milling waste) into waterways and via urban wastewater treatment;
3. Accidental loss of industrial raw materials (e.g. prefabricated plastics in the form of pellets or powders used to make plastic articles), during transport or trans- shipment, at sea or into surface waterways;
4. Discharge of macerated wastes, e.g. sewage sludge
 - See: Life Out Of Plastic – LOOP - <https://www.seed.uno/awards/all/2013/800-loop.html>
 - See: Amig@s-Del-Mar Vida Instituto para la protección del medio ambiente
 - See: <https://www.facebook.com/Vida.Institutparalaprotecciondelmedioambiente?fref=ts>
 - See: ECOPLAYAS - <https://www.facebook.com/ecoplayas.peru?fref=ts>
 - See: <http://ecoplayasperu.wix.com/rediberoamericana>

On the issue of marine waste, discussions focused on YSLME situation. It was noted that wastes from China, Korea and Japan move to the central Pacific area. Because of this statement, 8 million USD were allocated to investigate toxic pollutants. Andy Hudson pinpoints that it is a good opportunity for GEF to assist. There is a need to assess plastic contamination in watersheds and with the use of scientific data to inform policy. ICES UK points out the transboundary issue hence the outsized character of the management challenge. The source can echo its impact from a long distance.

Furthermore, statistics are still inconsistent to actually identify the proper impacts nor the level of contamination. Most information to date show 'best estimates' results.

- PPPs

Chris Severin noted that GEF welcomed co-funding to promote action. Leah Kerrer continued TDA-SAP co-funding needs to be actively sought.

Management further needs MED Partnership Barcelona convention landscape protocol and a Sustainable Consumption and Production approach.

- See:

<https://www.thegef.org/gef/sites/thegef.org/files/publication/STAP%20MarineDebris%20-%20website.pdf>

Matthew Camilleri focused on the topic of International approaches to combating IUU fishing, the impacts (CCRF), the objectives, the Policy Management plans, the implementation of regulation and the MCS Review Data collection. He asks how to address Good Governance.

The qualification for I, U, and U illustrates they are all interrelated. But their quantification, the scale of which they are actually occurring was stated in a published article by Agnew *et al.* (2009) : "We don't know the scale, between 11-26 million mt 10-23 billion USD".

One way to estimate and look at trends of IUU is via the FAO toolbox. Hence, 196 countries have adopted standards, and 6 binding instruments and non-binding guidelines are used directly and indirectly to estimate IUU.

The EU checks on member states and products coming into the territory as well as the utilization of a list of authorized vessels Global Record. The IPOA-IUU toolbox is exploited within CCRF Port State and measures such as Flag States, Coastal States are also reported to be used.

Port State Agreement will be binding (IUU fishers will evade rules as they are criminals –however they have to come into port). A PSA checklist is needed at port level with the inclusion of most ports in compliance to better control IUU. 23 parties have signed and 13 have ratified. Policies need to be improved and developed with a good legal framework and funds. The RFMOs was pointed to contribute to help implementation.

- The Flag State responsibilities - guidelines.
- MCS IPOA-IUU has two main groups: National (list)/Regional/Global VMS, Vessel Record.
- Challenges: political, legal, institutional, educational and operational.
- Conservation International

Marco Quesada discussed challenges and solutions in the Eastern Tropical Pacific Seascape region. is represented by the Industrial and Artisanal scale in Costa Rica, Panama, Colombia and Ecuador. The complex biodiversity in this region is engendered by the many seamounts and coastal upwelling. The

region also has many illegal multidimensional aspects to consider such as fishing, human and drug trafficking etc.

On a small-scale, fishers represent a nominal economic input to the illegal trade. Thus, on a large-scale, a greater economic input has been reported (e.g. the 700,000 USD fine case – Thunder- captain escapes).

- See: <http://www.seashepherd.org/news-and-media/2015/04/06/poaching-vessel-thunder-sinks-in-suspicious-circumstances-1681> & Session 8: Emerging issues in ocean health

Expected outcomes are to link to LME LEARN, the need for a holistic approach, the increased awareness of the problem, a better waste management, sustainability approach and the catapult & Pew production.

Illegal, Unreported and Unregulated (IUU) fishing is over present in the region, even within MPAs. 940 miles of illegal longlines are known to be deployed for illegal fishing activities within MPAs. On the other hand, Galapagos has good monitoring of vessels and radars in Cocos Islands are effective.

- See: <http://oceans5.org/project/constraining-illegal-fishing/>

Many illegal fishers simply avoid regulations, such as the shark poaching example.

- See: <http://news.mongabay.com/2013/11/fishermen-get-crafty-to-circumvent-shark-fin-ban/>

The solution is to develop a way to find common interest between the actors and implement a broad security objective VMS use in court.

Birane Sambe discussed the problems and solutions in the CCLME about the serious issues of both artisanal and industrial fishing. MCS systems are in place since 1993, with the Convention on Sub-regional Cooperation SRF Commission. Member state that detects an IUU vessel has to notify the Flag State and criminalize violations. The priority steps are to support, to register, to strengthen information exchange, to have a air-sea fisheries surveillance system, and include MCS info in the curricula.

Hugh Walton added on quantify IUU (report due soon) data streaming. New technology (electronic reporting & monitoring), enumerators tracking device GPS. IUU audits country yellow-carded (very useful) e.g. Papua New Guinea (yellow card to be uplifted). Human resources to meet requirements.

- See: <https://www.wcpfc.int/node/21026>

Matthew Camilleri replied that technology is a useful MCS tool only if the legislation is in place and workable. He then refers to the Yellow Red card system and that some countries want to be yellow-carded to get inspectors. On the regional level, flag states have the responsibility to monitor their flagged vessels within EEZ and ABNJ and other EEZs. Countries often let IUU vessels into Ports worldwide. There is a need to combine both. RFMOs for example, have put into place binding regulations and have placed good MCS. Their inspectors are allowed board vessels.

SESSION 9A: CAPACITY DEVELOPMENT

Chair:	Wojciech Wawrzyński, ICES
Rapporteur:	Peter Pissierssens, IOC-UNESCO
Speakers – Session 9a	
Objectives and expected outcomes of the session	Wojciech Wawrzyński, ICES
ICES training actions and the LME-Learn twinning plans	Wojciech Wawrzyński, ICES
IOC training actions in the LME:Learn context including the OceanTeacher Global Academy	Peter Pissierssens, IOC-UNESCO/IODE Lucy Scott, Agulhas-Somali LME, OTGA SG
MOOC	Kenneth Sherman, NOAA
IW:Learn past and future plans	Mish Hamid, IW:Learn
Online tools/the learning portal of the Globallast programme	Antoine Blonce, IMO

This session discussed recent achievements and future plans in the field of LME capacity development, and also identified cooperation opportunities for capacity development between partners and their projects.

ICES has conducted 46 training courses between 2009-2015, involving 500 students. The majority were EU students, but also students from other areas participated (total 30 countries).

IOC-UNESCO adopted the IOC Capacity Development Strategy for 2015-2021 during the IOC's 28th Assembly (June 2015). IOC's activities in capacity development contribute to the 5 IOC core functions. IOC delivers Capacity Development through its global programmes and through its 3 regional sub-commissions. In addition, it works with partner organizations.

The IOC CD strategy vision states that through international cooperation IOC assists its Member States to collectively achieve the IOC's high-level objectives (HLOs), with particular attention to ensuring that all Member States have the capacity to meet them. The strategy identifies 6 outputs: (1) Human resources developed; (2) Access to physical infrastructure established or improved; (3) Global, regional and sub-regional mechanisms strengthened; (4) Development of ocean research policies in support of sustainable development objectives promoted; Visibility and awareness increased; (5) Sustained (long-term) resource mobilization reinforced. The identified outputs will be achieved through a number of targeted activities and related actions made possible by inputs such as funding, human resources and institutional resources

Within the framework of the IOC's International Oceanographic Data and Information Exchange programme (IODE), the Ocean Teacher Global Academy (OTGA) project has been established. IOC-



IODE has a long history of providing technical training since the 1980s and established, in 2005, the IOC project office for IODE, Oostende as a global training centre. The OTGA offers classroom training, online tutoring/materials and online self-learning. Lectures are recorded on video and placed online (>120 videos) with over 40 courses available now. Lessons learnt through the Oostende training centre have led to the establishment of Ocean Teacher Global Academy regional training centres that offer courses in regionally relevant languages, the sharing of content across regions and the use of a common training material online platform. 10 such centres are being established in Latin America, North America/Caribbean, Europe, Africa, Asia and Western Pacific.

With regards to the IW:Learn project, the main objective is “To strengthen knowledge management capacity and promote scaled-up learning of disseminated experiences, tools and methodologies for transboundary waters management—across and beyond the GEF IW portfolio, together with a global network of partners—in order to improve the effectiveness of GEF IW and partner projects to deliver tangible results and scaled-up investments”. A global partnership aims at including other learning projects, strengthening partnerships with the private sector, gender mainstreaming and so on. There is also an interest to develop interactive online courses. LME:Learn will have 4 components (regional networks, synthesis knowledge to policy making, training & twinning, outreach).

Finally, *Building Partnerships to Assist Developing Countries to Reduce the Transfer of Harmful Aquatic Organisms in Ships’ Ballast Water*, simply referred to as GloBallast Partnerships (GBP), was initiated in late 2007 by the IMO and is intended to build on the progress made in the original project. It is focussed on national policy, legal and institutional reforms in targeted developing countries with an emphasis on integrated management.

The GloBallast latest developments where shown as listed below:

- GloBallast online tools
- Learning portal and publications
- Clear target audience
- Courses are online but can also be downloaded
- GloBallast project is ending in 2016
- See: <http://globallast.imo.org>

During the discussions, the participants agreed that there is a need to organize a training analysis. Partner organizations then reported on their way of evaluating the performance of their training activities. ICES reported that a survey was implemented at the end of each course. IOC/IODE reported that they organized a survey at the end of each course but they had also carried out a historical survey of all its students to assess the long-term impact of training on the students’ career. 95% of the students had considered the training as very useful to their career. IMO reported that they used the Moodle training platform’s internal survey tool.



Concern was raised that within many public services, employment and career progress is linked to formal qualification. Courses we run are often not accredited and this remains a problem. This led to partner organizations reporting briefly on certificates issued by courses. ICES reported that they issue a “certificate”. IOC/IODE reported that for most courses they issue a “certificate of completion” but they also organize a course that is accredited by a University in Belgium. IW learn reported that they currently do not offer accredited courses but that this is planned through linkages with Universities. The meeting identified a clear need for “quality certificates” as well as regular assessment of the impact of training provided.

The meeting then briefly discussed how courses are advertised and promoted. In this regard ICES reported that it is moving towards e-learning with online advertising of courses. It also applies fees for courses. IOC reported that it does not charge fees and mostly provided full financial support to participants. Courses are advertised through official IOC focal points (Circular Letters) as well as through e-mailing lists. LME:Learn reported that they work through their partners (GEF agencies). In terms of priority subjects IOC’s 2014 survey on training needs had reported ecosystem based management & governance, integrated ecosystem assessment, quantitative skills, fisheries, technical skills but it was noted that these priorities might require updating.

SESSION 9B: COMMUNICATION

Chair:	Mish Hamid, IW:Learn
Rapporteur:	David Vousden, Agulhas-Somali LME
Speakers – Session 9b	
Objectives and expected outcomes of the session	Mish Hamid, IW:Learn
Private/Public partnerships	David Vousden, Agulhas-Somali LME
Planned regional and global conferences	Kenneth Sherman, NOAA
Best practices in development of knowledge products	Marc Wilson, Pacific IWRM
Knowledge management to foster replication	Adrian Ross, PEMSEA

The LME:LEARN project will generate harmonized knowledge products, drawing on existing science, by harvesting and codifying experiences and best practices from the existing GEF LME/ICM/MPA projects, project stakeholders and learning partners including other non-GEF marine and coastal initiatives to include tools to address climate variability and change, MPAs and ICM. This session demonstrated and highlighted existing good practice on the development of knowledge products and strategic communications within the LME-ICM-MPA portfolio, highlighting possible means the LME:LEARN project will replicate.

Dr.Sherman reported on the **results of regional LME activities during 2014 and 2015** that included participation of several hundred coastal ocean resource assessment and management professionals organized in LME assessment and management practice. In October 2014, 150 participants attended the 3rd Annual Conference on LMEs in Swakopmund, Namibia. The Conference was supported by Germany and Norway and hosted by the Benguela Current Commission. The case study presentations were framed around the five LME modules - productivity, fish & fisheries, pollution & ecosystem health, socioeconomics, and governance, and two groups of panelists addressed LMEs best practice for ecosystem based management (EBM) and best practice in training, education, and capacity building. The Conference conveners, K. Sherman & H. Hamukuaya, are guest editors of a theme issue of the Elsevier Science journal, Environmental Development, to be published in January 2016, as volume 17 of the journal. Several of the 30 papers have been selected for highlighting by Elsevier Science.

In September 2015, a Latin American and Caribbean LME Symposium was held in Cancun, Mexico under the sponsorship of the Mexican National Polytechnic Institution in collaboration with the Consortium of Institutions investigating the Gulf of Mexico and Caribbean. Dr. Patricia Muñoz Sevilla and Dr. Porfirio Alvarez of Mexico, and Dr. Sherman of NOAA served as Symposium co-conveners in collaboration with representatives of the University of Tabasco and IOC-UNESCO. Case studies of **changing conditions of LMEs under the influence of natural and climate stressors were presented** in relation to one or more of the five LME assessment modules for the Gulf of Mexico, Caribbean Sea, North Brazil Shelf, East Brazil Shelf, South Brazil Shelf, Humboldt Current, Pacific Central American Coastal, and Gulf of California LMEs. Several papers from the Symposium will be peer reviewed and



published in a theme volume of Elsevier's Environmental Development journal in 2016. The theme issue will include an invited paper on the Patagonian Shelf LME thereby representing all of the LAC in a single megaregional volume on LMEs. Following the **LME megaregional approach**, a workshop by the Russian Academy of Science scheduled for 28 and 29 October was convened in Rostov on the Don, Russia with over 200 participants attending. Arrangements are evolving with Elsevier Science for published peer review results presented on changing conditions of Arctic and temperate semi enclosed LMEs under the influence of climate change. Arrangements are underway to convene a Symposium on the LMEs of South Asia in Chennai, India with the Anna University and municipality of Chennai as cosponsors.

Participation at the 2014-2015 LME Conference, Symposium, and Workshop events has been excellent, with hundreds of participants showing interest and support for improving the condition and sustaining the goods and services of the world's LMEs at the megaregional scale. **Publication of the results in a peer reviewed scientific journal brings the positive results of GEF supported projects to a wider global audience** of natural and social scientists interested in world ocean issues. **Awareness of positive results of the GEF supported LME projects is growing rapidly.** Since the publication of 14 LME volumes by AAAS, Blackwell Science, and Elsevier Science from 1986 to 2006, an additional four volumes of LME studies have been published by IUCN, UNDP, and the GEF. Articles appearing in the marine science journals on comparative LME studies are growing steadily.

A list of the over 500 authors and chapter titles in the 18 published LME volumes, and the titles of 375 journal papers along with abstracts of the papers will soon be available for downloading by IW-LEARN.

A wider number of professionals will be reached through the **Massive Open Online Curriculum (MOOC) on the Assessment and Management of Large Marine Ecosystems** to be included in the graduate studies curriculum of the University of Cape Town and other universities in Mexico, Russia, and Asia in the coming months as part of the GEF supported IW-LEARN LME best practice project.

The **prospects for advancing the LME modular approach to ecosystem based assessment and management are quite good.** During the GEF sixth replenishment period (2014-2018), a sum of \$2,86 billion has been identified as supporting projects to advance EBM practice in LMEs of Africa, Asia, Latin America, the Pacific, Arctic, and eastern Europe. A list of these projects can be downloaded from IW-LEARN.

With regard to communication with the private sector, David Vousden noted that the the SAPPHIRE (Agulhas-Somali) Project has an explicit Component in the project to negotiate and adopt Public-Private Sector Partnerships (PPP) working within the SAP implementation project management arrangements. One example of this will be a pilot of the World Ocean Council's 'Smart Ocean – Smart Industry initiative' within the LMEs, contributing to research and monitoring. The goal is to **convince the Private Sector into supporting SAP implementation, adopting and mainstreaming the LME Approach into its everyday management practices and business activities.** He noted that the project can provide the 'Weight-of-Evidence' and predictive modeling to the private sector, which valuable to their long-term is planning for tourism, reviewing shipping routes, fish-stock migrations, etc. Through this quid pro quo process, **industry becomes directly engaged into the monitoring and data collection process** (can self-audit the data for reliability of conclusions) and is 'on-the-team' in the



event of regulatory procedures being proposed. In short, industry **becomes a part of the management process**. It **places industry (shipping, oil, gas, fishing, etc.) in a proactive role** rather than a reactive one. It helps to develop processes and technology needs (best practices and equipment standards) through a **direct relationship between industry, scientists and managers and justify these needs to senior managers and CEOs in industry** (telling a story and selling it!)

With regard to communicating via knowledge products, Marc recommended a **formal process of recording lessons learned through quarterly reporting** under set categories. The benefits of this is that project managers report regularly through the life of the project rather than a meeting called at the end of the project to develop a list of lessons learned. These lessons were codified in national replication and upscaling plans supported by a project developed toolkit (which provided a template).

His project deliberately shied away from the glossy brochures and posters. **At a local level “seeing is believing”** that is; demonstrating results and that allow communities to **identify tangible benefits to their day to day lives has greatest impact**. At the national level **demonstrating local level need and support for policy** as well as linking to greater national good both from a domestic and regional viewpoint has most impact. This works best if you can get a policymaker to **promote a cause as their own cause**. There is a need for a subtle and not so subtle blend of tools, both **push and pull**, to create an enabling environment for willing engagement.

The **use of a consistent narrative** provides a very powerful underlying framework for action at both local and national levels and the project develop these at a national level through the **production of videos that contained this narrative and ensured that key players were part of the videos**.

PEMSEA is running now a project to enhance the capacity and performance of investments in sustainable development of LMEs and coasts in the East Asian Seas Region through knowledge management and experience sharing, portfolio learning and networking. The project targets, local chief executives, policymakers, planners and decision makers at the local and national levels, ICM managers and implementers, investors; and other stakeholders. The project communicates to stakeholders with the following tool:

- ICM e-LIBRARY KNOWLEDGE SHARING PORTAL composed of the: e-Portal (“Seas of East Asia (SEA) Knowledge Bank”); **the e-library and the online directory** (experts, institutions, investing firms, financing organizations, national and local government implementing ICM)
- INNOVATIVE TOOLS AND GOOD PRACTICES from various projects and initiatives including the web-based State of the Coast reporting system; and the collaborative planning workshops, and consultations; this **translates science and technical information for different audiences**
- COMMUNITIES OF PRACTICE AND SUPPORT SERVICES: networks and communities of practice; on-line experience-sharing seminars and training workshops; financing and investment support service; and the investment project proposals preparation
- Pilot initially targeting potential investments emerging from World Bank projects; eventually will include enterprises emerging directly from local and national governments, private





entrepreneurs, development agencies, etc. from across East Asia. Platform will **focus heavily on helping projects become more investment-ready**

The system contains 39 core indicators covering governance, management socio-economic, ecological conditions and trends, sustainable financing based on international, regional and national instruments, objectives and indicators. It is geared to providing local governments a report card on their progress towards sustainable development of coastal and marine areas. The **format is highly visual**...providing mayors and governors with a quick overview of how they are doing...where improvements are needed...also good tool for informing the public. It is integrated into planning process...improved governance, monitoring and reporting. There is uptake by now more 30 local governments.

Julian Barbière discussed communicating with stakeholders via participation in global dialogue processes as a way to communicate results and build partnerships. He mentioned several engagement opportunities for the LME:LEARN project to support GEF IW project and partner participation. These included:

- Reaching out to the Marine and Biodiversity Community
- EPSAS
- IPPS
- UNEP meeting on regional Seas
- Global Programme of Action
- FAO Processes
- Global Ocean Observing System
- SPG conference
- Thematic events, such as the Global Ocean Forum
- Engagement private sector

As a summary of the session, the GEF asked if SAPPHIRE could bring companies to the IW Conference, to which David responded affirmatively. In a brief back and forth, David and Marc discussed the concept of **community-based twinning**, i.e. providing resources for communities to engage with another directly. This approach works well.

On the main recommendations and follow up actions it was noted that project staff are always time constrained and constantly prioritizing their time to implement their projects. They are constantly asked to feed information to their host agencies the IAs and stakeholders etc. So what makes LME and or IW Learn special? **Now if projects were specifically resourced to provide information** then additional resources can be targeted at this. Projects would gain additional resources to produce material that would be useful to both the project as well as to the learning projects.



SESSION 10: CONCLUSIONS AND NEXT STEPS

The final session was co-shared by Mr. Julian Barbière on behalf of IOC-UNESCO, Mr. Andrew Hudson and Mr. Vladimir Mamaev on behalf of UNDP, Mr. Christian Severin and Ms. Leah Karrer on behalf of the GEF Secretariat.

All the speakers thanked all the participants for their active involvement during the days of the meeting and also the IOC Secretariat for hosting and coordinating the organisation of the 17th LME Meeting.



3. Annexes

Annotated agenda

Tuesday 29 September 2015			
Session	<u>1-Introductory session</u>		
Chair	Julian Barbière, IOC-UNESCO		
Time	Title	Name	
14.00 14.30	Registration		
14.30 15.00	Welcome	<ul style="list-style-type: none">- Vladimir Ryabinin/Julian Barbière, IOC-UNESCO- Andrew Hudson/Vladimir Mamaev, UNDP- Christian H. Severin / Leah Karrer, GEF- Ned Cyr /Kenneth Sherman, NOAA- Wojciech Wawrzyński/Adi Kellerman, ICES- James Oliver, IUCN	
Session	<u>2-Governance in LMEs</u> <u>2a. Building long-term governance and sustainability</u>		
Chair	Becky Shuford, NOAA		
Time	Title	Name	Objectives of the session
15.00 15.15	Objectives and expected outcomes of the session	Rebecca Shuford, NOAA	The LME Governance session seeks to provide 1) perspectives on overarching governance structures as well as 2) share some select examples of mechanisms and tools (i.e. MPA, ICM, MSP) being applied in LME regions to facilitate
15.15 15.30	Governance considerations in LMEs	Robin Mahon, CERMES	
15.30 15.40	The Barcelona Convention and the MedPartnership in the Mediterranean LME	Lorenzo Galbiati, Med Partnership	

15.40 15.50	Factors contributing to long-term ocean governance in the BCLME region	Hashali Hamukuaya, Benguela Current LME	effective governance of shared marine and coastal resources. This session does not seek to arrive at prescriptive solutions or advocate a one-size fit all approach. Rather it seeks to inform and initiate an open and ongoing dialog on how to address the need for appropriate and relevant governance structures and mechanisms throughout LME (and related project) planning and implementation.
15.50 16.00	The Western Tropical Pacific Warm Pool LME – Status, Benefits and Challenges in the context of the Future of Fisheries	Hugh Walton, FFA	
16.00 16.15	Summary LME:Learn on this topic	Open discussion	
Video on the Pacific IWRM Project (13 minutes)			
Coffee break 20 minutes			
Session	2-Governance in LMEs (Continuation) 2b. Examples of use of MPAs, ICM, MSP as tools and approaches for governance in LMEs		
Time	Title	Name	
16.45 17.00	MPAs as a valuable tool for governance in LMEs: Global status and trends in MPA application and the Promise of Sydney	James Oliver, IUCN	
17.00 17.10	Experiences in Scaling up ICM for Sustainable Development of the Seas of East Asia.	Adrian Ross, PEMSEA	
17.10 17.20	Enabling Sustainable Development and Management of Ecosystems	Marc Wilson, SOPAC	
17.20	CLME+ and the Caribbean	Patrick Debels,	

17.30	Challenge Initiative	Caribbean LME	
17.30 17.40	Legal reforms relating ICAM/MSP within LMEs	Michael Akester, Humboldt Current LME	
17.40 18.00	Summary LME:Learn on this topic	Open discussion	
Session	<u>3a-Regional Caucus purpose</u>		
Chair	Leah Karrer		
Expected Outcomes	<p>Regional caucuses will meet on Wednesday 30 Sept (9.00 -16.00). The Caucuses provide an important opportunity for colleagues working in each region to come together to discuss critical issues in a smaller setting than the larger meeting. The focus is on sharing and discussing innovative approaches, best practices and lessons learned that may be of interest to other colleagues. It is also a chance to discuss challenges and problems to solicit ideas from peers. While sharing experiences, participants are encouraged to consider the applications to their own projects and how they might modify plans moving forward.</p> <p>Project managers as well as other colleagues experienced or interested in the region are encouraged to actively participate by sharing their experiences. While there will be a few project presentations, the focus is on sharing experiences informally throughout the day. For each Regional Caucus, the discussions will focus around 3 questions:</p> <ol style="list-style-type: none"> 1. What are projects' best practices, innovative approaches and challenges related to the <u>LME meeting topics</u> (blue growth and socioeconomics, climate change/ocean acidification, data and information management, IUU fishing, marine debris, ties to MPAs & ABNJ)? What are key lessons learned to share with other regions? 2. What <u>challenges and opportunities</u> are projects facing, particularly related to ensuring <u>sustainable governance</u>? What are viable solutions? 3. What are priority <u>capacity needs and knowledge needs</u> for projects and the region as a whole? <p>The insights from discussing the second and third questions will be presented at the end of the day during the plenary session on Global and Regional Networks</p>		

	(Wednesday 30 16.00-18.00). The insights from the discussion of the first question will be shared during the relevant plenaries throughout the rest of the meeting by the relevant project. For example, an innovative approach to climate change vulnerability assessments in YSLME would be shared during the Climate Change session.		
Time	Title	Name	
18.00 18.30	Objectives and expected outcomes of the session.	Leah Karrer, GEF	
End of the session 18.30h			
Cocktail / Reception at 19.00h			
Wednesday 30 September 2015			
Session	<u>3b-Regional Caucuses and Working groups</u>		
Chair & Rapporteur	Africa (Co- chairs : Hashali Hamukuaya/ David Vousden); Asia (Co-chairs : José Padilla/Rudolf Hermes) Caribbean and Latin America (Co-Chairs : Michael Akester/Patrick Debels/ Porfirio Álvarez)		
Duration	From 9.00 to 16.00 Morning coffee break from 10.45 to 11.15 Lunch time: from 13.00 to 14.00 / Afternoon coffee break from 15.30 to 16.00		
Objectives & expected outcomes	<p>Following is a general agenda for the Regional Caucuses, which will be tailored by the Co-Chairs.</p> <p>[[PART 1: LME Meeting Topics - Before Coffee Break]</p> <p>As the foundation for discussion, each project will give a ~10min presentation on their best practices, innovative approaches and challenges related to the LME meeting topics (blue growth and socioeconomics, climate change/ocean acidification, data and information management, IUU fishing, marine debris, ties to MPAs & ABNJ). Presenters are asked to focus on the most relevant topics for their project and to focus on experiences and lessons learned that may be useful</p>		

to other projects. Colleagues not tied to a particular project are encouraged to share their experiences throughout the discussions. The Co-Chairs will encourage discussion around: lessons learnt applicability of experiences to other projects and, how to address challenges. By the conclusion, the participants will have determined which experiences to highlight during the rest of the relevant plenaries.

[PART 2: Challenges & Opportunities, particularly related to Sustainable Governance – After Coffee Break]

For the second part the projects will provide short presentations or statements regarding the challenges and opportunities they are facing, particularly related to ensuring governance sustainability. They will discuss where they are in the LME process (TDA, SAP, Convention, Commission or other steps). They are encouraged to discuss what has worked and what has not worked with emphasis on experiences that may be useful to other projects. The Co-Chairs will facilitate a discussion around lessons learned and how to overcome challenges noting key points to share in the Global and Regional Networks Plenary session, which follows the Caucuses.

[PART 3: Capacity and Knowledge Needs– After Lunch]

Many of the points related to capacity and knowledge needs may already be evident at this point in which case projects can build on those discussions. Each project may highlight their best practices/experiences and needs related to training, capacity building, info management and delivery of knowledge to management and policy levels. The Co-Chairs will facilitate a discussion around priority needs for projects and the region in general noting key points to share in the Global and Regional Networks Plenary session, which follows the Caucuses.

Regional Caucus	Room Tentative	Chairperson 1	Chairperson 2	Comments
Africa	Salle XII	Hashali Hamukuaya	David Vousden	
Asia	Salle VIII bis	José Padilla	Rudolf Hermes	
Latin America	Salle VIII	Michael Akester	Patrick Debels /	

and Caribbean			Porfirio Álvarez	
Session	<u>4-Global and regional networks – Regional Caucuses reporting and general discussion</u>			
Chair	Kenneth Sherman, NOAA			
Rapporteur	Alejandro Iglesias-Campos			
Time	Title	Name	Objectives of this session	
16.00 16.05	Objectives and expected outcomes of the session	Ken Sherman, NOAA	Regional caucuses and working groups to report on their respective sessions	
16.05 17.50	Regional caucuses' reporting	Chairperson of each caucus Africa (Co-chairs : Hashali Hamukuaya/ David Vousden) Asia (Co-chairs : José Padilla/Rudolf Hermes) Caribbean and Latin America (Co-Chairs : Michael Akester/Patrick Debels/ Porfirio Alvarez)		
17.50 17.05	Reporting of the ICES WGLMEBP	Hein Rune Skjoldal and Rudolf Hermes, Chairs of the ICES WGLMEBP		

17.05	Analysis of Regional Ocean Governance	Julien Rochette, IDDRI	
17.20			
17.20	Summary LME:Learn on this topic	Open discussion	
18.00			
End of the day, 18.00h			
Thursday 1 October 2015			
Session	5-Meeting LME Data and Information Needs		
Chair	Julian Barbière, IOC-UNESCO		
Time	Title	Name	Objectives of this session
09.00	Objectives and expected outcomes of the session	Julian Barbière, IOC-UNESCO	This session will discuss a general conceptualization of data, as well as additional examples on the importance of data, information (indicators) and decision support tools to support ecosystem-based management within the LMEs (integrated coastal management, marine protected areas and marine spatial planning).
09.05			
09.05	Transboundary Waters Assessment Programme: Global comparative assessment of LMEs	Sherry Heileman, Liana McManus, IOC-UNESCO / Consultants	
09.20			
09.20	Institutionalization of transboundary indicators	Patrick Debels, CLME	
09.35			
09.35	International collaboration in oceanographic data and information exchange: IODE	Peter Pissierssens, IOC-UNESCO/IODE	
09.50			
10.00	Examples of EBM indicators approach in the Southeast Pacific.	Fernando Félix, CPPS	
10.10			
10.10	EAF-Nansen and Blue Bridge projects	Gabriella Bianchi, FAO	
10.20			

10.10 10.45	Summary LME: Learn on this topic	Open discussion	
<i>Coffee break</i>			
Session	<u>6-Blue growth and socio-economics aspects</u>		
Chair	Andrew Hudson, UNDP		
Time	Title	Name	Objectives of this session
11.15 11.20	Objectives and expected outcomes of the session	Andrew Hudson, UNDP	Despite a range of studies, methodologies and demonstrations, tangible evidence for translation of the LME Socioeconomics module into practical LME management and governance remains limited. This session will review LME practitioners' experience with socioeconomic elements of LME assessment, management and governance. Speakers will explore experience with a range of topics including ecosystem valuation, blue economy, fisheries certification and the linkages between sustaining LMEs and employment. Each speaker will share approaches/methodologies, results, challenges and lessons learnt.
11.20 11.40	Moving towards a Blue Economy – the Seychelles Experience	Didier Dogley, Minister of Environment, Energy and Climate Change of Seychelles	
11.40 11.50	Restoring the world's LMEs: A vehicle for job creation?	Andrew Hudson, UNDP Water & Ocean Programme	
11.50 12.00	Economic valuation of ecosystem services in LMEs, purpose, methods and the GCLME experience applying the benefit transfer approach.	Christian Susan, UNIDO	
12.00 12.10	Valuation of marine ecosystem goods and services in the Caribbean Sea/N. Brazil Shelf LME	Patrick Debels, Caribbean LME	
12.10 12.20	Recent progress in fisheries certification in the Humboldt Current LME	Michael Akester, Humboldt Current LME	

12.20	Summary LME:Learn on this topic	Open discussion	
13.00			
Lunch			
Session	7-Integrating Climate Change and variability in LMEs		
Chair	Ned Cyr, NOAA		
Rapporteur	Becky Shuford, NOAA		
Time	Title	Name	Objectives of this session
14.30	Objectives and expected outcomes of the session	Ned Cyr, NOAA	As global climate models continue to be downscaled and coupled to high-resolution regional ecosystem models, comprehensive projections of climate effects are marine ecosystems are emerging. LME regional projects should account for these projections and develop comprehensive approaches to mitigation and adaptation. This session will present recent assessments of the effects of climate change on regional marine ecosystems, and explore the extent to which LME regional projects are working to address the effects of climate change on their living marine resources, coastal communities and marine
14.40			
14.40	Ocean Acidification - Connecting scientists to transfer knowledge at local, regional, global levels	Kirsten Isensee, IOC-UNESCO	
14.50			
14.50	Regional Climate Change Adaptation Framework for the Mediterranean Sea	Lorenzo Galbiati, Med Partnership	
15.00			
15.00	Climate change and the living marine resources of the CCLME	Birane Sambe, Canary Current LME	
15.10			
15.10	How the BOBLME SAP responds to Climate Change effects in the Bay of Bengal	Rudy Hermes Bay of Bengal LMEs	
15.20			
15.20	Climate Change in the Gulf of Mexico LME		
15.30			

			based economies.
15.30 16.15	Summary LME:Learn on this topic	Open discussion	
Coffee break			
Session	<u>8-Emerging issues in ocean health</u>		
Chair	Leah Karrer, GEF Secretariat		
Time	Title	Name	Objectives of this session
16.45 16.50	Objectives and expected outcomes of the session	Leah Karrer, GEF	This session is designed to address two topics of growing concern among LMEs: marine debris and illegal unreported and unregulated (IUU) fishing. Marine debris is a growing, complex issue identified as a priority concern in most LME TDAs and SAPs. While often a problem of “out of site, out of mind”, solutions are tied to the marine debris life cycle: reducing plastic production, improving waste collection and management and coastal clean-ups. As the GEF is considering engaging in this topic, this session provides an opportunity to learn how regions have been addressing this issue through non-GEF mechanisms, including achievements, challenges and lessons learned. Illegal, unreported and unregulated fishing is another major issue facing LMEs around the world. Given the transboundary nature of LMEs, projects are in a unique position to address IUU across countries. This
16.50 17.00	Addressing the marine litter challenge through the Global Partnership on Marine Litter	Heidi Savelli, UNEP	
17.00 17.05	The challenges of addressing marine debris in the Humboldt Current LME	Michael Akester, Humboldt Current LME	
17.05 17.15	Open discussion on Marine Debris		
17.15 – 17.25	Key international approaches to combatting illegal, unreported and unregulated (IUU) fishing	Mathew Camilleri, FAO	
17.25 17.30	IUU Fishing: the challenges and solutions in the Eastern Tropical Pacific Seascape	Marco Quesada, Eastern Tropical Pacific Seascape	

17.30 17.35	Problems and some proposals of sub-regional measures to combat IUU fishing in the Canary Current LME	Birane Sambe, Canary Current LME	session will explore the various aspects related to monitoring, compliance and surveillance, policy agendas, food security issues and market incentives. Discussions related to both topics will explore innovative efforts, barriers and challenges drawing on project experiences.
1740-1800	Summary LME:Learn on this topic	Open discussion on IUU Fishing	

End of the day

Friday 2 October 2015

Session	<u>9a-LME:Learn moving forward: Focus on capacity development</u>		
Chair	Wojciech Wawrzyński, ICES		
Time	Title	Name	Objectives of this session
09.00 09.10	Objectives and expected outcomes of the session	Wojciech Wawrzyński, ICES	This session will inform the participants about recent achievements and future plans in the field of LME capacity development, and also identify opportunities for capacity building cooperation between projects;
09.10 09.20	ICES training actions and the LME-LEARN twinning plans	Wojciech Wawrzyński , ICES	
09.20 09.30	IOC training actions in the LME:Learn context including OceanTeacher Global Academy	Peter Pissierssens, IOC/IODE Lucy Scott, Agulhas-Somali LME, OTGA SG	
09.30 09.40	MOOC	Kenneth Sherman, NOAA	
09.40 09.50	IW:Learn past and future plans	Mish Hamid, IW:Learn	

09.50 10.00	Online tools/the learning portal of the Globallast programme	Antoine Blonce, IMO	
10.00 10.45	Summary LME:Learn on this topic	Open discussion	
Coffee break			
Session	9b-LME:Learn moving forward: Focus on LME Stakeholders / Communicating LME results		
Chair	Mish Hamid, IW:Learn		
Time	Title	Name	Objectives of this session
11.15 11.20	Objectives and expected outcomes of the session	Mish Hamid, IW:Learn	The LME:Learn project will generate harmonized knowledge products, drawing on existing science, by harvesting and codifying experiences and best practices from the existing GEF LME/ICM/MPA projects, project stakeholders and learning partners including other non-GEF marine and coastal initiatives to include tools to address climate variability and change, MPAs and ICM. This session will demonstrate and highlight existing good practice on the development of knowledge products and strategic communications within the LME-ICM-MPA portfolio, highlighting possible means the
11.20 11.35	Private / Public partnerships	David Vousden, Agulhas-Somali LME	
11.35 11.50	Planned regional and global conferences	Kenneth Sherman, NOAA Julian Barbieri, IOC-UNESCO	
11.50 12.05	Best practices in development of knowledge products	Marc Wilson, Pacific IWRM	
12.05 12.20	Knowledge management to foster replication	Adrian Ross, PEMSEA	
12.20 12.45	Summary LME:Learn on this topic	Open discussion	

			LME:Learn project will replicate.
Session	<u>10-Conclusions and next steps</u>		
Chairs	Julian Barbière, IOC-UNESCO / Vladimir Mamaev, UNDP / Leah Karrer, GEF		
Time	Title	Name	
12.45	Conclusions, results of the survey and next steps	Julian Barbière, IOC-UNESCO	
13.00		Andrew Hudson / Vladimir Mamaev, UNDP	
		Christian H. Severin / Leah Karrer, GEF	
13.00	Final comments		
13.30			
End of the 17 th LME Meeting			

List of participants

No.	NAME	INSTITUTION	LME
1	Adrian ROSS	PEMSEA	PEMSEA
2	Akiko YAMAMOTO	UNDP	
3	Albert FISCHER	IOC-UNESCO	
4	Alberto PACHECO	UNEP	
5	Alejandro IGLESIAS CAMPOS	IOC-UNESCO	
6	Andrew HUDSON	UNDP	
7	Andrew HUME	WWF	
8	Antoine BLONCE	GloBallast	GLOBALLAST
9	Biliana CICIN-SAIN	University of Delaware	
10	Birane, SAMBE	FAO CCLME Project	Canary Current
11	Bruce DUNN	Coral Triangle Project	CTI Project
12	Carl Gustaf Lundin	IUCN	
13	Cesar TORO	IOC / IOCARIBE	Caribbean
14	Bonnie PONWITH	NOAA	
15	Cesar CHAVEZ ORTIZ	SEMARNAT	Gulf of Mexico
16	Chris O'BRIEN	Bay of Bengal LME	Bay of Bengal
17	Christan SUSAN	UNIDO	
18	Christopher PATERSON	SOPAC	IWRM Project
19	David AUBREY	Woods Hole Group Middle East	
20	David VOUSDEN	ASCLME	SAPPHIRE
21	Demba KANE	West Africa Regional Fisheries	WARF
22	Diego FLORES	Ministry of Environment, Chile	Humboldt Current
23	Dixon Waruinge	UNEP	
24	Fernando FELIX	CPPS	Southeast Pacific
25	Fredrik Haag	IMO	
26	Gennady MATISHOV	Russian Academy of Sciences	
27	Glen WRIGHT	IDDRI	
28	Hashali HAMUKUAYA	Benguela LME	Benguela Current
29	Hein Rune SKJOLDAL	Norwegian Institute for Marine Research	
30	Ina BINARI PRANOTO	World Bank	
31	Jacqueline UKU	Kenya Marine and Fisheries Research Institute (KMFR)	

32	Jacques Abe	UNIDO	Guinea Current
33	James OLIVER	IUCN	
34	Jeff ADKINS	NOAA/ENOW	
35	José PADILLA	UNDP	
36	Julian BARBIÈRE	IOC-UNESCO	
37	Julien ROCHETTE	IDDRI	
38	Kadji OKOU	ICES	
39	Keith LAWRENCE	Conservation International	
40	Kenneth SHERMAN	NOAA	
41	Kwame KORENTENG	EAF-Nanson Project	EAF-Nanson Project
42	Lauren SPURRIER	WWF	
43	Le Van Lich	Vietnam Coastal Cities Project	PEMSEA
44	Leah KARRER	GEF Secretariat	
45	Liana McManus	UNEP	
46	Lorenzo GALBIATI	UNEP/MAP	Med Partnership
47	Marc TACONET	FAO	
48	Marc WILSON	SOPAC	IWRM Project
49	Marina ROSALES	Ministry of Environment, Peru	Humboldt Current
50	Marko Prem	UNEP-MAP Priority Actions Programme Regional Activity Centre	Med Partnership
51	Matthew Lagod	UNESCO - IHP	
52	Melanie King	CCRES	CCRES Project
53	Merete TANDSTAD	FAO	
54	Michael "Mick" O'TOOLE	Irish Marine Institute	
55	Michael AKESTER	Humboldt Current LME Project	Humboldt Current
56	Mika ODIDO	IOC / IOCAFRICA	
57	Milton HAUGHTON	Caribbean Regional Fisheries Mechanism (CRFM)	Caribbean
58	Mish HAMID	IW:LEARN	
59	Mohamad Badran	PERSGA	PERSGA
60	Monica GÓMEZ	University of La República, Uruguay	FREEPLATA
61	Ned CYR	NOAA	
62	Nelson Andrade Colmenares	UNEP	
63	Nico Willemse	UNDP	
64	Patrick DEBELS	Caribbean LME + Project	Caribbean
65	Paul HOLTHUS	World Ocean Council	
66	Peter EDWARDS	NOAA/SOCMON	
67	Peter F. Sale	UNU	

68	Peter Kershaw	GESAMP	
69	Peter PISSIERSENS	IOC-UNESCO / IODE	
70	Porfirio ALVAREZ-TORRES	Gulf of Mexico LME	Gulf of Mexico
71	Quisheng TANG	Yellow Sea Fisheries Research Institute	Yellow Sea
72	Raphael P.M. Lotilla	PEMSEA Project	PEMSEA
73	Rebecca SHUFORD	NOAA	
74	Robin MAHON	CERMES	
75	Romy TROMO	Sulu Celebes LME - Project	Sulu Celebes
76	Rondolph Payet	South West Indian Ocean Fisheries Project	South West Indian Ocean
77	Rudolf HERMES	BOB LME Secretariat	Bay of Bengal
78	Samuel KAME-DOMGUIA	African Union	
79	Sherry HEILEMAN	IOC-UNESCO / TWAP Coordinator	
80	Stephen Maxwell Donkor	UNIDO	
81	Steve Lutz	GRID Arendal	Blue Forest
82	Suh-Young Chung	Division of International Studies - Korea	Yellow Sea
83	Sungskwon Soh	WCPFC	WCPFC
84	Zukile HUTU	Benguela Current Commission	Benguela Current
85	Vladimir MAMAEV	UNDP	
86	Vladimir RYABININ	IOC	
87	Vo Si Tuan	Vietnam Coral Reef Project	Vietnam Coral Reef
88	Werner EKAU	International Ocean Institute - Germany	
89	Wojciech WAWRZYNSKI	ICES	
90	Hans VERHEYE	Department of Environmental Affairs - South Africa	Aghulas Somali
91	Itahisa DENIZ-GONZALEZ	IOC - Canary Current LME Project	Canary Current
92	Lidvard GRØNNEVET	CDCF / Norway	
93	Paula Cristina SIERRA-CORREA	INVEMAR Colombia	Caribbean
94	Hugh WALTON	Pacific Fisheries Project	R2R Project
95	Kirsten ISENSEE	IOC	
96	Francisco ARIAS ISAZA	INVEMAR Colombia	Caribbean
97	Mariano VALVERDE	SERNANP Perú	Humboldt Current
98	Adi KELLERMAN	ICES	
99	Lucy SCOTT	ASCLME	SAPPHIRE
100	Norma Patricia MUÑOZ SEVILLA	IPN Mexico	Gulf of Mexico

101	Emma KELLY	NOAA	
102	Roman MIKHALYUK	Russian Academy of Sciences	
103	Heidi SAVELLI	UNEP	
104	Zura NUKUSHEVA	UNEP	
105	Justin AHAHANZO	IOC	
106	Emily PIDGEON	Conservation International	
107	Marco QUESADA	Conservation International	Pacific
108	Wenxi ZHU	IOC-WESTPAC	
109	Joana AKROFI	UNEP	
110	Didier DOGLEY	Minister Environment Seychelles	SAPPHIRE
111	Virginie TILOT	French National Natural Museum	
112	Jae RYOUNG	KIOST - Korea	Yellow Sea
113	Christine SANTORA	Stony Brook University	
114	José TROYA	UNDP	
115	Charles EHLER	IOC	
116	Andrea BELGRANO	Swedish Institute for the Marine Environment	
117	Gabriela BIANCHI	FAO	
118	Gro van der Meeren	Institute Marine Research Norway	
119	Sofia GUDMUNDSDOTTIR	PAME Secretariat Iceland	
120	Evangelina DRAKOU	University of Bretagne	
121	Seonghwan PAE	IOC-OSS	
122	Henrik ENEVOLDSEN	IOC-HAB	
123	Floriana MISCEO	IUCN	
124	Andy JEFFREY	IUCN	

Not all listed participants joined the meeting.