INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

INFORMATION DOCUMENT

STRENGTHENING GLOBAL GOVERNANCE OF LARGE MARINE ECOSYSTEMS AND THEIR COASTS IN THE CONTEXT OF IOC ACTIVITIES

Summary
Since 1997, IOC has promoted the Large Marine Ecosystem (LME) approach from a scientific point of view in regions by contributing to the formulation and implementation of Global Environment Facility (GEF) LME projects. The Global Environment Facility has provided support (US$285 million, leveraging US$1.14 billion in financing from other partners) to 124 recipient countries to work together within 23 of the world’s 66 LMEs.

The GEF LME:LEARN (Large Marine Ecosystems Learning Exchange and Resource Network) is a project financed by GEF, implemented by the United Nations Development Programme (UNDP) and executed by UNESCO/IoC, aiming to improve global ecosystem-based governance of LMEs and their coasts by generating knowledge, building capacity, harnessing public and private partners, and supporting south-to-south learning and north-to-south learning. The hitherto implementation of the project has contributed, inter alia, to the High Level Objective 1 (Healthy Ocean Ecosystems and Sustained Ecosystem Services, of the IOC Medium-Term Strategy for 2014–2021) by building local and regional capacities, in terms of knowledge and tools, for implementing ecosystem-based approaches in the marine environment.

The future integrated IW: LEARN project will incorporate an LME component, hence it will continue the activities started as LME:LEARN. It will be implemented through a number of cross-cutting activities that will be spread across the entire component.

Purpose of the document: The document summarises the outcomes of the Global LME:LEARN project, ended in March 2020, and how it has contributed to the IOC’s own objectives. It outlines the LME component, which will incorporate in the future cycle of IW:LEARN project, its main lines of activity as well as expected role of IOC in its implementation.
Introduction

The 66 Large Marine Ecosystems (LME) of the world are the most productive regions but also those that are also under the greatest pressure. The cumulative catches within the world’s LMEs alone have declined by 13% (10.6 million metric tons) since passing a cumulative maximum in 1994. The LMEs and their contributing freshwater basins are transboundary by virtue of interconnected currents and movement and migration of living resources. The root causes of the overutilization and degradation of LMEs stems from failures in governance of the relevant sectors (fisheries, tourism, shipping, agriculture, etc.), including inadequate policies and legislation, poor enforcement, weak institutions, and insufficient participation of civil society in the management of both marine and freshwater systems. Prompt and large-scale action is needed to achieve integrated adaptive ecosystem-based management and governance of transboundary resources, to overcome the downward trend of losses of goods and services, and to mitigate the degradation of the LMEs in the face of the accelerating effects of climate change.

Since the early nineties, together with USA’s National Oceanic and Atmospheric Administration (NOAA), the International Union for Conservation of Nature (IUCN), United Nations Development Programme (UNDP), and others, IOC has promoted the LME approach both from a conceptual and scientific point of view, as well as on the ground by contributing to the formulation and implementation of Global Environment Facility’s (GEF) LME projects in various regions, resulting in the development of a wide network of practitioners.

Over the past 20 years, the Global Environment Facility has provided support, through GEF International Waters programme (GEF-IW), to assist at least 124 recipient countries to work together within 23 of the world’s 66 LMEs (including two LME equivalents, the Pacific Warm-water Pool and the Caspian Sea). The GEF support in the LME projects (US$285 million, leveraging US$1.14 billion in financing from other partners) enables countries to collectively identify the root causes of the priority issues affecting their shared LME through a Transboundary Diagnostic Analysis (TDA), and to develop joint actions to address the root causes through Strategic Action Programme (SAP) to aid the recovery of ecosystem goods and services.

The LME TDA/SAP process incorporates a five-module indicator approach that includes: (i) productivity; (ii) fish and fisheries; (iii) pollution and ecosystem health; (iv) socioeconomics; and (v) governance. The first three modules provide the scientific foundation for the development of management policies that include both socioeconomic benefits and a mutually agreeable governance regime. The LME projects have helped the countries to establish multi-national ecosystem-based assessment and management practices to reduce coastal pollution, restore damaged habitats, recover depleted fisheries, protect biodiversity and adapt to climate change. Other complementary GEF-IW best practice projects have demonstrated the application of Integrated Coastal Zone Management (ICZM) principles (e.g. the Partnerships in Environmental Management for the Seas of East Asia—PEMSEA), or Marine Spatial Planning (e.g. Implementation of the Ecosystem Approach in The Adriatic Sea Through Marine Spatial Planning) at sub-regional and/or national scales.

Rationale for the GEF LME:LEARN project

The new challenges of climate variability and change, alongside the other existing drivers that cause depletion and degradation within the LMEs, increase the urgency and the need to scale up these efforts. There has been a need to support adaptive ecosystem-management and governance that is informed by and evolves through ongoing learning processes, to help increase the resilience and well-being of societies dependent on marine goods and services in regions encompassing specific LME.

The GEF-5 strategy recognized the above fact and the need to provide nations with additional support to specifically address the challenges of climate variability and change (sea-level rise, ocean warming, ocean acidification, shifts in productivity and fish stocks, and the loss of “blue forests” and
ecosystem resilience). The GEF-7 strategy reaffirmed that IW:LEARN, which incorporates the LME:LEARN, is the GEF funded cross-agency and multi-actor platform of knowledge exchange and capacity building that supports facilitating partnerships between a range of actors to stimulate conversation and capacity between, and beyond, GEF funded activities. The GEF further recognized the need to help States to address these challenges through cross-sectoral governance reforms at the local, national and regional levels, by integrating ecosystem-based approaches at the immediate coastal interface through improved Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM) practices within LMEs and across transboundary water systems. MSP and ICZM practices require examining trade-offs of policy decisions in terms of ecosystem health as well as ecosystem services and human well-being.

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The LME:LEARN (Large Marine Ecosystems Learning Exchange and Resource Network) is a project devised by GEF aiming to improve global ecosystem-based governance of LMEs and their coasts by generating knowledge, building capacity, harnessing public and private partners, and supporting south-to-south learning and north-to-south learning.

Project objectives and structure

A key element of the project is mainstreaming cooperation between LME, Marine Protected Areas (MPA), MSP and ICZM projects marine regions, as well as supporting the coordination among major regional organizations to achieve efficient Regional Ocean Governance. The ultimate objective of the project is to establish a dynamic global support network for the GEF and non-GEF LME, MPA, MSP and ICZM projects needed by practitioners to increase the capacity of nations to realize adaptive ecosystem-based management and ocean governance.

The Project has been prepared under the leadership of UNDP/GEF with technical input and support from IOC, and is being executed by IOC. The implementation of the project started in 2016 and will be completed in March 2020. For the execution of the project a separate Project Coordination Unit (PCU) has been established at IOC. The PCU jointly implements two projects: IW:LEARN and LME:LEARN.

The project is organized around four components:

a. Global and regional network of partners to enhance ecosystem-based management and to provide support for the GEF-LME/ICZM projects to address MPA and MSP needs and incorporate climate variability and change.

b. Synthesis and incorporation of knowledge into policy-making, capture of best LME governance practices, and development of new methods and tools to enhance the management effectiveness of LMEs and to incorporate ICM (Integrated Coastal Management), MPAs, MSP and climate variability and change within the five LME modules.

c. Capacity and partnership building through twinning and learning exchanges, workshops and training among LMEs and similar initiatives.

d. Communication, dissemination and outreach of GEF–LME/ICZM/MPA/MSP project achievements and lessons learned.

GEF has earmarked a grant of US$ 2,500,000 for the implementation of this full-size project lasting four years. In order to comply with GEF requirements (ratio of GEF grant vs co-financing is 1:5), co-financing of more than US$ 13 million has been secured.

Project outcomes and results

Global and regional network of partners has been established. Progress towards fully integrated ‘ridge to reef’ ecosystem-based management of freshwater and marine transboundary water systems, based on good governance practices, through increased generation of knowledge and
enhanced coordination between GEF-IW surface, ground water and LME, MPA, MSP and ICZM projects has been achieved. At the global level, regular LME annual consultation meetings are held and they provide an opportunity to GEF and non-GEF LME, ICZM, MPA and MSP projects to exchange experience and improve their capacity to manage complex planning interventions. In addition, three regional networks (Latin America and the Caribbean, Africa and Western Asia, and the Pacific) are regularly meeting with the objective of enhancing ecosystem-based management at lower spatial levels. More direct interactions between projects along the South-South "axis" has been achieved through Inter-project Collaboration Opportunities (IOC) and twinning grants.

Accumulated knowledge in respective technical areas, identified at the outset of the project, has been incorporated in seven toolkits that are covering wide array of issues important for LME, MPA, MSP and ICZM. The toolkits are uploaded on the platform. Particularly important feature of the toolkits’ platform is its integrated nature, which allows easy interactivity between the toolkits giving the user the opportunity to relatively easily encompass the complex nature of ocean governance. Significant progress has been achieved towards developing a set of indicators to monitor the status of LMEs, and in particular with regards to tracking the progress towards achieving the SDG 14 targets.

Following the development of the toolkits, the capacity development activities got a major push and respective activities have been significantly accelerated. The training strategy has been developed and is being implemented through a series of training courses. Following the strategic directions, the training modules were prepared using the principles of blended learning, i.e. the combination of online and face-to-face training combined with the Regional Networks meetings. During each meeting, 2 trainings were carried out. The objective of having six face-to-face training sessions has been reached.

The LME:LEARN web portal, now integrated as marine portal within the IW:LEARN website, has been regularly updated and the information contained therein revised. The LME hub is a section of the LME:LEARN portal aimed at general public. It is expected that the marine hub will be used by a large number of visitors. The hub has two levels: for the general public, with plenty of attractive features, and a "scholar" section for practitioners. The PCU has directly assisted a number of LME projects to improve their communications capacity in preparing news items, revising and updating the information contained at their web portals To conclude, the overall visibility of the LME:LEARN as well as of LMEs in general has been significantly improved.

**Contribution to IOC’s programmatic objectives**

The implementation of the GEF LME:LEARN Project has contributed directly to the High Level Objective 1 (Healthy Ocean Ecosystems and Sustained Ecosystem Services, of the IOC Medium-Term Strategy for 2014–2021) by building local and regional capacities, in terms of knowledge and tools, for implementing ecosystem based approaches in the marine environment. The project also responded to the priority areas contained in the ICAM strategy endorsed by the IOC Assembly at its 29th session (21–29 June 2017, Paris, France), particularly Strategic Objective 1: Building collective capacities to respond to emerging ocean issues through ecosystem and area-based management tools such as Integrated Coastal Area Management, Marine Spatial Planning and Sustainable Blue Economy initiatives, including transboundary and large-marine ecosystem approaches for the sustainable use of marine resources and with a view to achieve a healthy and a productive ocean.

**Future outlook**

Next phase of the project is being developed now. The recently held IW/LME:LEARN Steering Committee (6–8 May 2019, Geneva) decided that in the next phase there will be only one integrated project, the IW:LEARN, with the clearly defined LME component embedded within it. Activities, directly related to LMEs will be the following:

- Marine Spatial Planning to facilitate implementation of Strategic Action Programmes;
- Strengthening Blue Economy opportunities;
- Support to collaboration among LMEs, Regional Seas conventions and Regional Fisheries Management Organizations (RFMOs); and
- Improved management of LME’s through external partnerships via an Extended Marine Community of Practice.

Furthermore, the IW:LEARN will continue to support global dialogue and partnership building on international waters’ related matters, primarily through annual LME consultation meetings, which have now entered into the third decade of non-interrupted annual gatherings. The IOC will continue to act as technical secretariat of the LME Projects’ Community, be a technical advisor to projects and continue being the convener of the annual LME meetings.

**Strengthening engagement of IOC Programmes in supporting LME activities**

The future IW:LEARN’s LME component will be implemented through a number of cross-cutting activities that will be spread across the entire component. These planned activities bear relevance to a number of IOC programmes, namely:

- **Regional networking**: The current project has managed to build three regional networks of partners that have worked to provide consistent management support to GEF and non-GEF LME/ICM/MPA/MSP projects in respective regions. A significant result has been achieved in bringing the private sector closer to responding to the needs of the LME communities. Regional networking will continue in the next phase and the IOC sub-commissions (namely IOCARIBE, IOCAFRICA, and WESTPAC) should continue to play a facilitating role in maintaining these regional networks active and particularly leading on the key ocean science applications that can inform the implementation of GEF and non-GEF regional projects. The work initiated in the current phase of project to increase cooperation amongst regional bodies will be continued. Regional Fisheries Organizations, Regional Sea Conventions, LMEs and IOC Regional Subsidiary Bodies will further provide science and technical cooperation in support of ecosystem-based management and implementation of the 2030 Agenda.

- **Harmonizing data and information processes in LME**: the current project’s Data and Information Management Group is working towards the adoption of a set of common indicators to monitor the change in LMEs as well as their contribution towards achievement of the SDG 14 targets, to be accessible through a common platform (LME hub). GOOS and IODE should play a leading role in assisting LMEs in building these indicators, providing guidance on existing data sets, tools for data and information management that could support this long-term efforts of the LME community. The work of IOC custodian agency for SDG 14 targets (14.3, 14.a ) could also be relevant. The LME Hub portal developed during the current phase of the project will need to be sustained and will require institutional support.

- **Identifying emerging science issues in LMEs**: LME management structures need state-of-the-art guidance on emerging scientific issues such as science approaches to cumulative ocean stressors, ocean acidification, Blue Carbon, de-oxygenation, and harmful algal blooms. IOC through its Ocean Science Section (OSS) programmes is leading on many of these issues. The annual LME consultative meeting have proven to be a successful platform for divulging relevant information on these issues. The LMEs have already benefitted from the OSS’s work on the above issues.

- **Building on IOC’s work related to Marine Spatial Planning**: Several LME projects are now considering MSP as tool to operationalise LME regional strategic actions plans. Several LME projects in Latin America, Africa and South East Asia have received training in MSP, and are engaging in the MSP Forum and MSPGlobal Project funded by the European
Commission through IOC. In the next phase of the project, IOC will expend its work on MSP in support of the LME approach.

- **Capacity development**: Training of LME/ICM/MPA/MSP practitioners in new techniques and approaches for ecosystem-based management will be the continuation of similar activity in the present project. It should also build on existing and future IOC capacity development infrastructure (e.g. next phase of Ocean Teacher Academy, Clearing House Mechanism for TMT/CD, etc.)

- **Active engagement of LME community in the UN Decade of Ocean Science for Sustainable Development**: starting with the active participation of LME project in the Decade preparatory process and regional consultation workshops. The project will contribute to the preparatory activities for the implementation of the UN Decade of Ocean Science for Sustainable Development by focusing on the needs for more science in ocean governance implemented in the LMEs, and the development of science-based application in support of ecosystem-based management.