Developing National and Local Capacity to Achieve the Aichi Biodiversity Targets and Enhance Marine and Coastal Governance

based on lectures delivered by Dr. Chua Thia-Eng

Convention on Biological Diversity

SUSTAINABLE OCEAN INITIATIVE

The Secretariat of the Convention on Biological Diversity wishes to thank Dr. Chua Thia-Eng, Chair-Emeritus, Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), for providing the substantive content for this module. The Secretariat also wishes to thank the Ministry of Oceans and Fisheries of the Government of the Republic of Korea for its financial support for the production of this module and Mr. Thomas Lundy for his work in translating the substantive content into this module format.

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Introduction

Welcome to the Sustainable Ocean Initiative (SOI) training guide on Developing National and Local Capacity to Achieve the Aichi Biodiversity Targets (ABT) and Enhance Marine and Coastal Governance. This training guide was prepared by the Secretariat of the Convention on Biological Diversity on the basis of lectures delivered by Dr. Chua Thia-Eng, Chair-Emeritus, Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) during training activities under the Sustainable Ocean Initiative.

This guide aims to provide an overview of enhancing national and local capacity with the aim of achieving the Aichi Targets, specifically in marine and coastal areas and on enhancing marine and coastal governance.

Readers can use this guide as a reference when planning, preparing, or practicing the development of national and local capacity, or to use it as a base for the creation of their own training sessions or workshops.

History of the Partnerships in Environmental Management for the Seas of East Asia

Before continuing with this training guide, it is important to get some background information on the history of the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA).

History of PEMSEA

1. 1993

GEF and the UNDP endorsed a regional project to address marine pollution in the Seas of East Asia. The Project was implemented by the International Maritime Organization (IMO).

2. 1994

One of the project's components was to set up two demonstration sites at Xiamen (China) and Batangas Bay (Philippines) to develop and verify the validity of Integrated Coastal Management (ICM) as a viable and effective operational methodology for addressing marine pollution challenges. The project was implemented in 1994 and had achieved significant results.

3. 1999

This led to the expansion of the regional project in 1999, now known as PEMSEA, to duplicate ICM practices in six other countries, i.e. Cambodia (Sihanoukville), DPR Korea (Nampo), Indonesia (Boli), Malaysia (Klang), Thailand (Chunburi) and Vietnam (Danang), in addition to continuation of ICM programs in Xiamen and Batangas.

4. 1999-2007

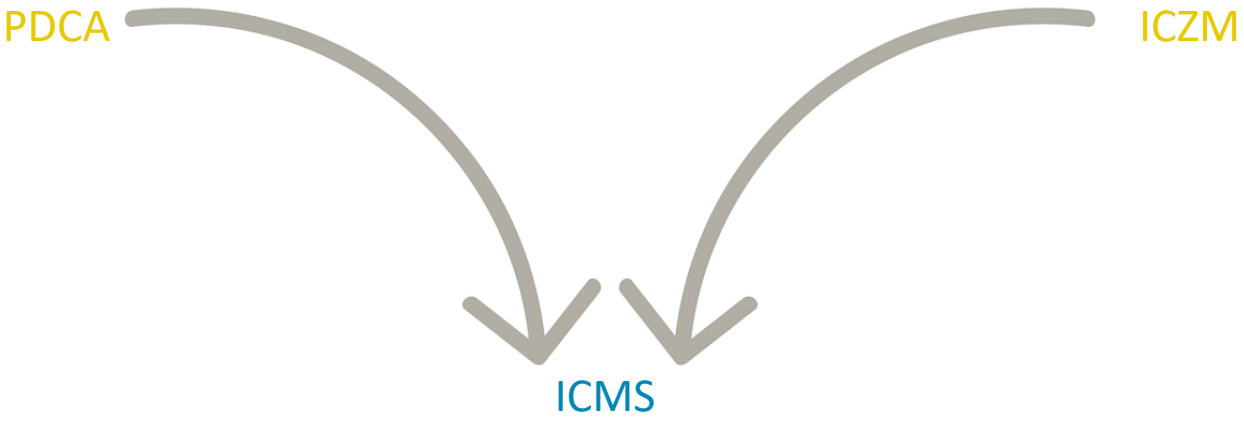
The second phase of the GEF project (1999-2007) also included the development of a regional Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) and the establishment of a regional mechanism, the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) to expand and scale up ICM practices through the implementation of the SDS-SEA during its third phase (2007-2017).

5. 2007-2017

Over this period the ICM operational methodology was further developed by PEMSEA into an Integrated Coastal Management System (ICMS) which is an environmental management system, the implementation of which shall led to achieving the Sustainable Development Goals especially SDG14 and the Aichi Biodiversity Targets.

The Integrated Coastal Management System

One of the key focus of the work of PEMSEA is the ICM system (ICMS), a working methodology evolved essentially from the concepts of PDCA (Plan, Develop, Check and Act) and ICZM (Integrated Coastal Zone Management).



ICMS is driven by the key elements and dynamics of the five components of ICM:

1. Governance (policy, legislation, strategies, plans, financing, communicating, and capacity)
2. Management (disaster/climate change, habitats/biodiversity, fresh water supply and resources, exploitation/livelihoods, water quality)
3. Stakeholder partnerships (community, private sector)
4. Planning and implementation cycle (ICM cycle)
5. Monitoring and reporting (evaluation, certification)

Key dynamics include:

- Process
- Framework
- Platform
- Mechanism
- Coordination
- Integration
- Awareness
- Other factors that drive political and social acceptance and policy-science interface

What are the Aichi Biodiversity Targets?

The Aichi Biodiversity Targets were adopted by the CBD Conference of the Parties in 2010 as part of the Strategic Plan for Biodiversity 2011-2020. More information at: https://www.cbd.int/sp/targets.

By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

Achi Biodiversity Targets: Strategic Goals

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

- Strategic Goal A includes Aichi Targets 1-4.

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

- Strategic Goal B includes Aichi Targets 5-10

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

- Strategic Goal C includes Aichi Targets 11-13

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

- Strategic Goal D includes Aichi Targets 14-16

Strategic Goal E: Enhance implementation through participatory planning, knowledge management & capacity building

- Strategic Goal E includes Aichi Targets 17-20

Achieving the Aichi Biodiversity Targets

What actions can be done to achieve the Aichi Targets? Here are some considerations:

A large part of planet's biological diversity is found in the aquatic ecosystems especially the ocean (>50%), thus more efforts should be on the conservation of marine biodiversity.

A large part of the national GDP of coastal nations come from coastal regions (some between 60-100%) with complex socioeconomic and environmental consequences and pose major challenges to achieving ABT, hence more investments are needed to ensure economic and environmental sustainability.

The ABTs are very ambitious and many of the obstacles confronted are yet to be overcome.

Currently, much attention is being given to biodiversity conservation at both global and national level, but ground level operations have not met expectations.

Achieving the ABTs requires both national and local government involvement, as well as community participation over a long and sustained period. It should cover sub-national, national, sub regional and regional levels.

A holistic, strategic and integrative planning and management approach will be necessary to address management challenges and to achieve biodiversity conservation.

Interagency and multi-sector collaboration and coordination is key to achieving set targets.

Integrated coastal management (ICM) as well as Integrated Water Resource Management (IWRM) can provide adequate governance and management framework and operational procedures at the local level.

Scaling up of successful ICM or IWRM practices enlarges geographical and functional coverage from community-based ecosystem management to trans-boundary large marine ecosystem management.

Obstacles preventing us from achieving the ABTs remain to be:

- Lack of political will at national and local level
- Inadequate institutional coordination and functional integration
- Lack or inadequate stakeholders' awareness, support and participation
- Lack appropriate human capacity (management/ governance) and
- Insufficient financial resources (especially at local level)
- Prevailing of "wicket" problems (such as change of government, leadership, etc.)

The Role of the Community

The role of local communities in achieving the Aichi Targets cannot be underestimated. Here are 5 ways in which local communities play a vital role:

Awareness

Community awareness, participation and indigenous knowledge are critical to sustainable management of ecosystems.

Networks

Community networks, such as a network of MPAs, enhance achievement of biodiversity targets.

Expert Advice

Expert advice to community initiatives is most necessary to enhance effective management measures.

Involvement

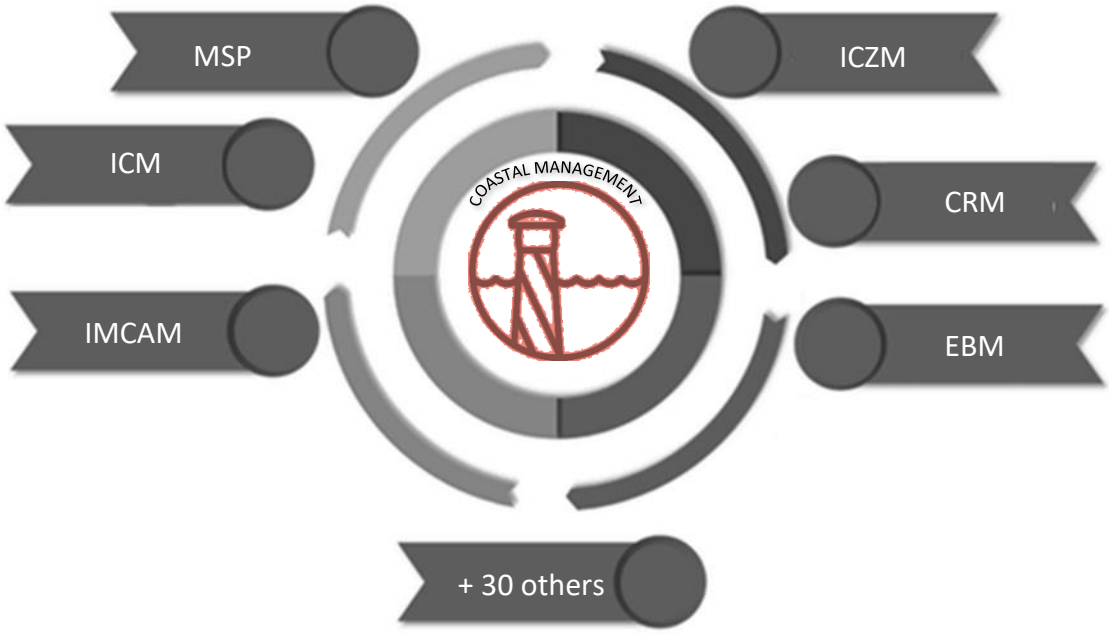
Community involvement creates ownership of common resources.

Community Leaders

Donor and other external support can be more effectively utilized for building the capacity of community leaders and coastal practitioners.

Operational Methodology

There are many potential approaches to marine and coastal management. The image below lists some of the most common approaches:

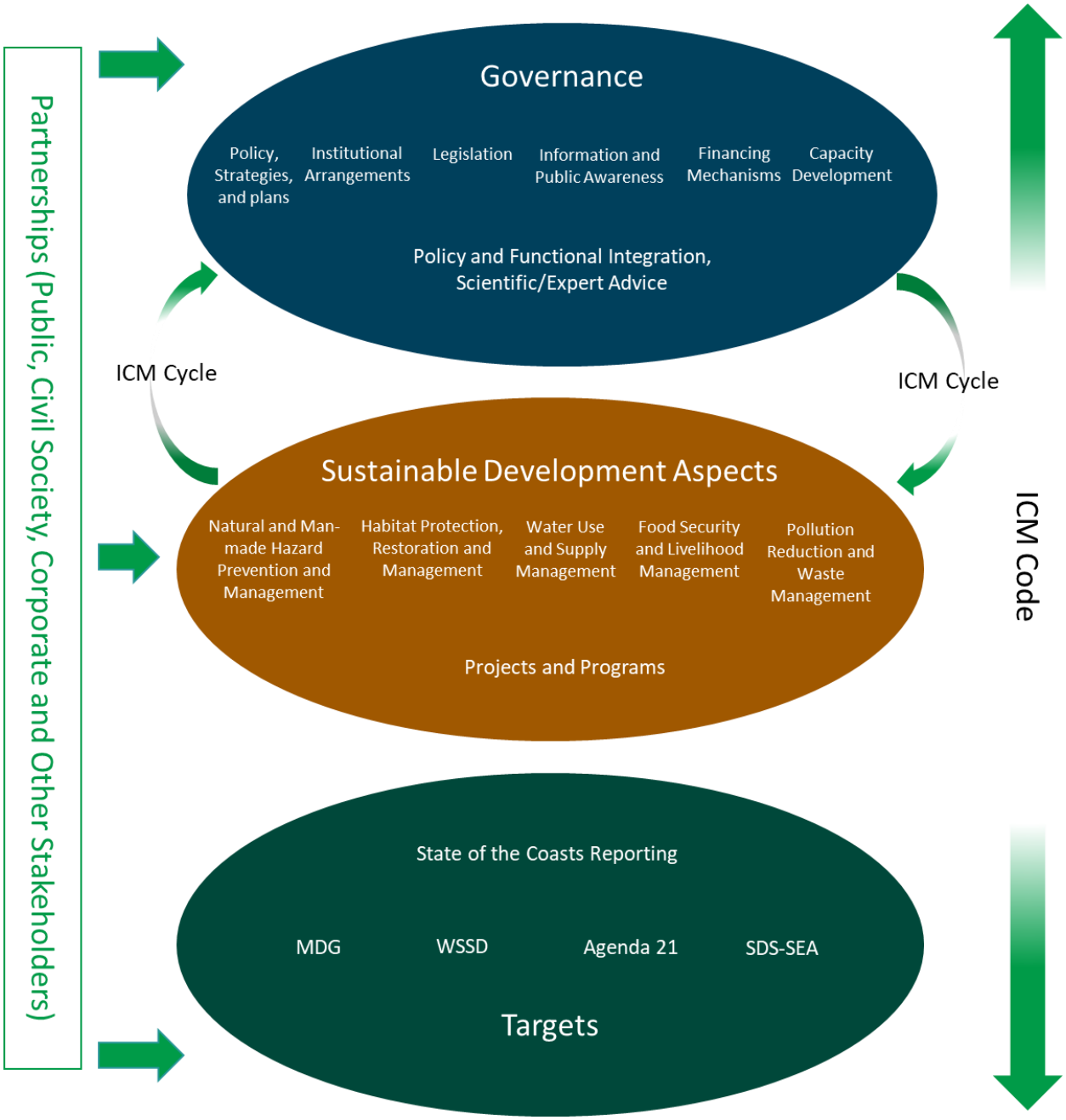


Acronyms: Marine Spatial Planning (MSP), Integrated Coastal Management (ICM), Integrated Marine and Coastal Area Management (IMCAM), Integrated Coastal Zone Management (ICZM), Coastal Research and Management (CRM), Eco-system Based Management (EBM).

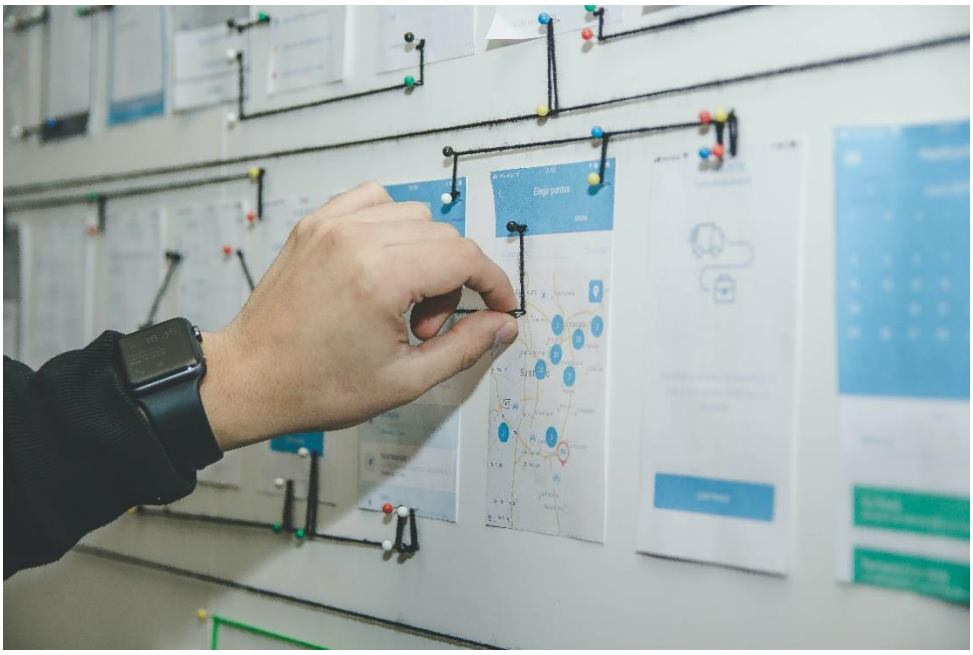
Integrated Coastal Management Systems (ICMS) is recommended here as a tested operational methodology for achieving the Aichi Targets at the local level.

Capacity Needs and Development

So, how can the national and local capacity of a nation be developed to overcome the challenges associated with achieving the ABT for coastal areas? One answer is to implement ICM programs through the application of the integrated coastal management system (ICMS). The structure of ICMS covers the essential elements of governance; addresses sustainable development concerns; builds stakeholder's partnerships; ensures resilience and sustainability; and complies to standards of practice.



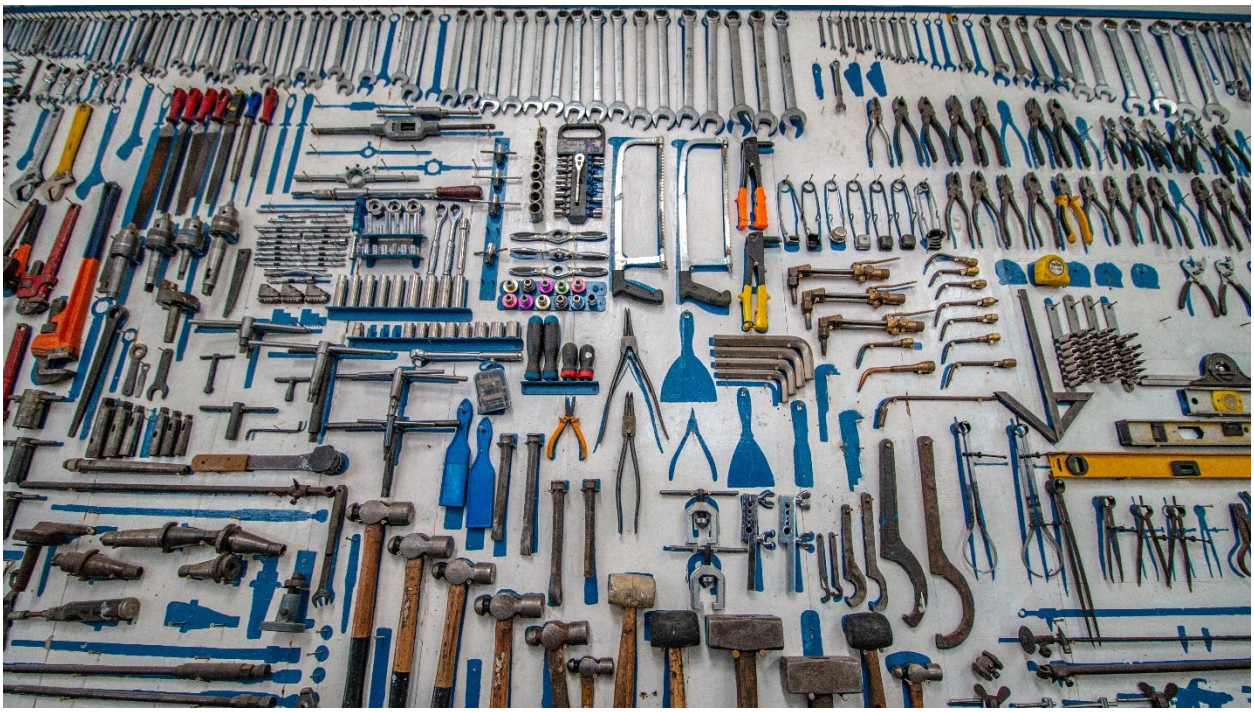
Governance and Management Capability



ICMS strengthens governance and management capacity through on-the-job involvement and participation of concerned leaders and officials of government and scientific institutions in achieving appropriate policy and functional integration and policy-science interface. Here's how:

- Engages policy makers, reduces policy and legislative conflicts, promotes enforcement
- Implements conventions and protocols
- Facilitates cross-sector planning and management
- Promotes sustainable financing
- Uses integrated management
- Creates informed public and stakeholder participation
- Increases capacity of all stakeholders involved: policymakers, agencies, private sectors, etc.
- Monitors and evaluates
- Many more!

Application of Tools and Technical Skills

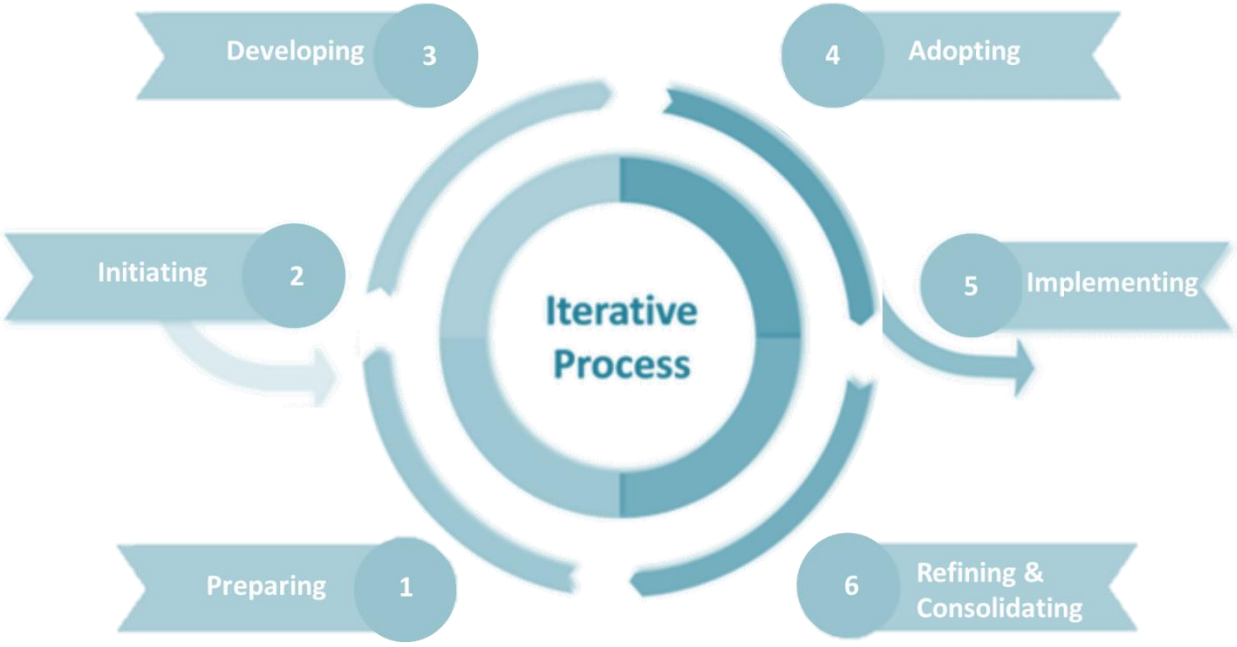


ICMS also builds interdisciplinary capacity through the use of various tools and technical skills such as:

- Policy and legislature development
- Rapid appraisal
- Risk assessments
- Consensus building
- Information integration, use and management
- Resource assessments and valuation
- Pollution abatement
- Water resource management
- Monitoring, evaluation and reporting
- Other tools (Remote sensing, GIS, modelling, Expert system, ecosystem valuation, etc.)

ICM Cycle

The ICM Cycle is a tested process for consolidating stakeholders' commitments and cooperation, strengthening political and social acceptance, as well as facilitating policy-science interface in the development and implementation of ICM programs.



The above image shows the ICM cycle, and the 6 steps in this iterative process. Below is a summary of the components/outcomes of each step:

1. Preparing

- Project management mechanism
- Work plan and budget
- Human and financial resource arrangements
- Stakeholder identification and preliminary consultation
- Training of core project staff
- Project monitoring program
- Assessment of the requirement for conducting a State of the Coast Report

2. Initiating

- Environmental and coastal profiling
- Issues identification and prioritization
  - Biodiversity/habitat protection
  - Land- and sea-based pollution/waste
  - Climate change/hazard
  - Fisheries
  - Fresh water supply
- Initial risk assessment
- Integrated information management system
- Public awareness
- Stakeholder consensus building and communication plan preparation

3. Developing

- Refined risk assessment
- Coastal Strategy and Implementation Plan
- Issue-specific and area-specific action
  - Natural and manmade hazard prevention and management
  - Habitat protection, restoration and management
  - Food security and livelihood management
  - Pollution reduction and waste management
- Financing/Investment plan
- Environmental monitoring plan
- Stakeholder participation/communication plan

4. Adopting

- Organizational and legal mechanisms
- Coastal policy, strategy and 3-5-year action plans
- Funding mechanisms

5. Implementing

- Coordinating and program management mechanisms
- Environmental monitoring program
- 3-5-year action plans

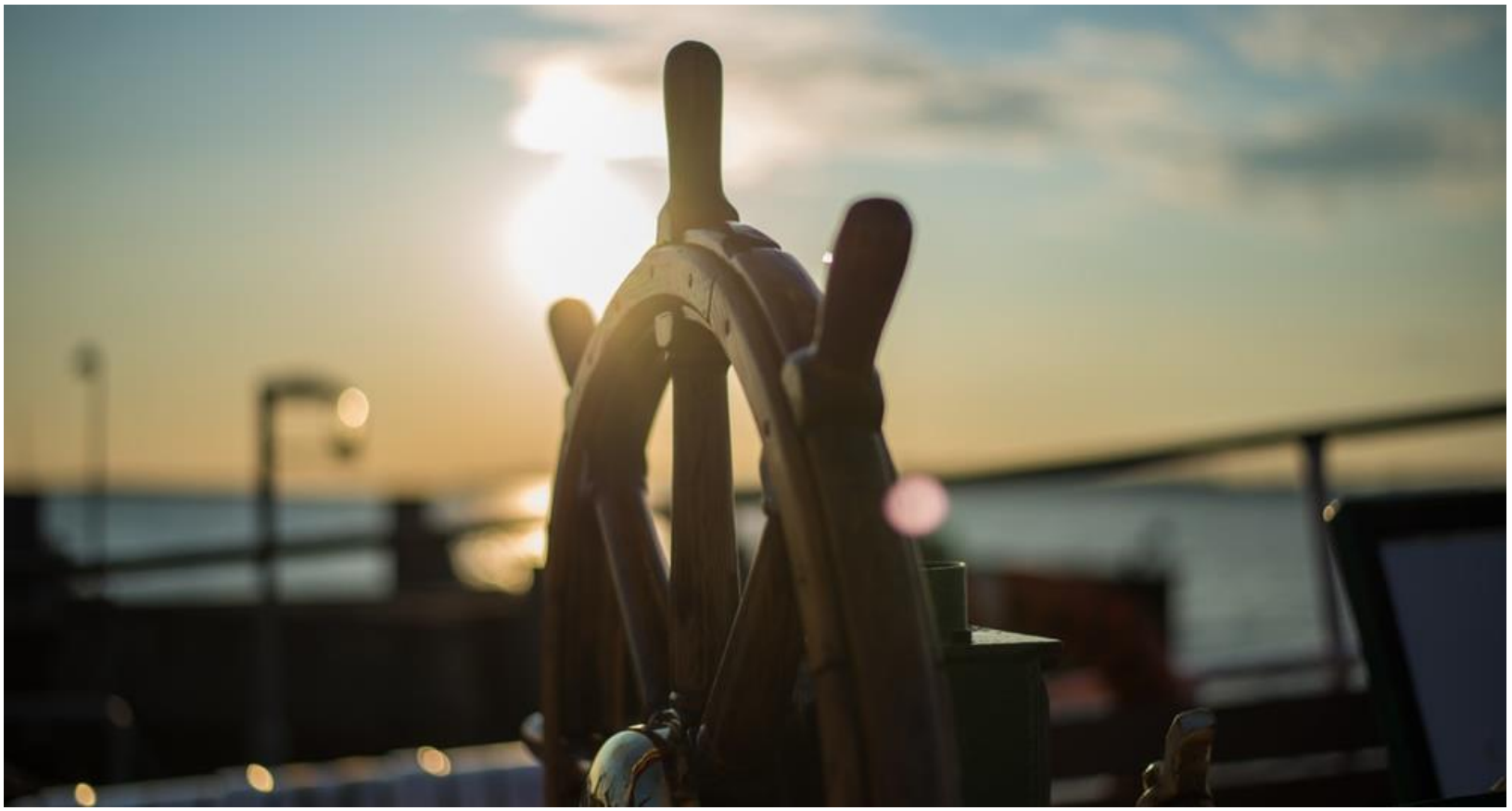
6. Refining and Consolidating

- Review institutional setup
- Program monitoring and evaluation
- Revision of strategies and action plans
- Scaling up strategy
- Planning for next program cycle
  - Updating SOC
  - Targeting ICM Recognition/Certification

Capacity Needs for Coastal and Ocean Governance

To successfully implement ICM, the capacity needs for coastal and ocean governance must be met. There are 6 distinct needs that must be considered:

A	B	C	D	E	F
Local (national) capacity to plan and manage rivers, coasts, islands and seas	Capacity disparity (technical, managerial, financial)	Challenge of environmental changes	Land-Sea interface	Challenges in rivers, islands, coasts, and coastal seas	Urgency and opportunity



Skills and Critical Mass

Skills and a critical mass are needed to succeed in ICM program implementation. What exactly is needed?

- The ability to plan and manage rivers to coastal seas.
- The ability to apply tools and methodologies.
- The ability to strengthen cooperation and collaboration between coastal managers and technical experts.
- Critical mass must be achieved.
- Networks must be created.

Management Capacity

Remember, the ICM system also includes building of management capacity as part of its normal operational practices. Management skills include:

- Understanding policy and legislative requirements
- Knowledge of conventions and protocols
- Cross-sector management
- MPA management/conservation
- Resource planning and management
- Crisis management
- Livelihood development
- Pollution abatement
- Habitat restoration
- Water resource management
- Communication and stakeholder participation
- Monitoring and Evaluating
- Many more!

Technical Capacity

Similarly, the ICM system includes building technical capacity as part of its normal operational practices. Technical skills include all technical aspects of the ICMS especially relating to planning and management, such as:

- Geographical Information System (GIS)
- Remote Sensing
- Spatial planning/Functional zoning
- Strategies and plan development
- Rapid Environmental Assessment
- Risk Assessment
- Consensus Building
- Integrated Information System
- Resource Assessment
- Pollution Assessment
- Habitat improvement
- Water analysis
- And many others

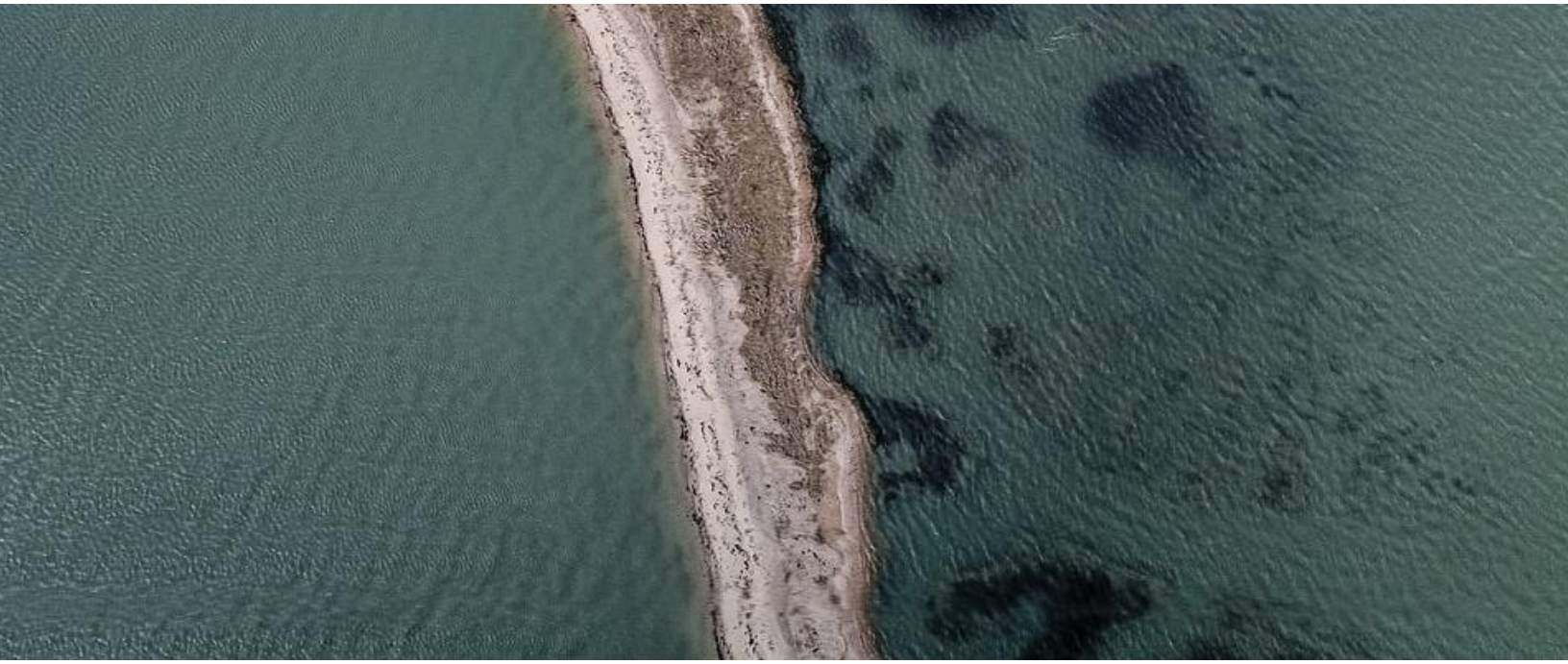
Capacity Development: A Total Approach to Capacity Building

A holistic approach is needed to facilitate capacity development at all levels.

Horizontal and Vertical Learning

This means learning from each other – individuals, sectors, institutions, organizations, and other discipline. Use techniques such as:

- The ICM approach (horizontal and vertical learning)
- Short-term training (training courses, workshops)
- On-the-job training, including internships
- Long-term training (specialized degree training)



Key Messages

Here are some key messages to take away from this guide:

- Continuous implementation of ICM programs strengthens both management as well as technical skills at sub-national (local) and national level:
    - National policy in coastal and marine governance developed and verified (national ocean policy, strategies and legislation)
    - Local government capacity to address management complexities strengthened with the development of coastal management expertise at the local level.
    - Sustainable development concerns, including biodiversity, can be more effectively addressed with increase capacity in coastal governance and management.
- Capacity development should be considered in the initial phase of ICM initiatives and should form an essential part of the ICMS

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Convention on Biological Diversity (CBD)

Opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entering into force in December 1993, the Convention on Biological Diversity is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 196 Parties, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services, including threats from climate change, through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit Sharing are supplementary agreements to the Convention. The Cartagena Protocol, which entered into force on 11 September 2003, seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. To date, 172 Parties have ratified the Cartagena Protocol. The Nagoya Protocol aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies. It entered into force on 12 October 2014 and to date has been ratified by 124 Parties.

Convention on
Biological Diversity