Slide 1

ICM: concept, method and application for achieving sustainable coastal development
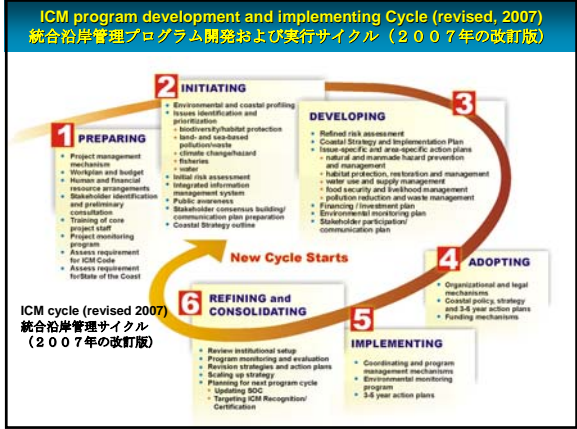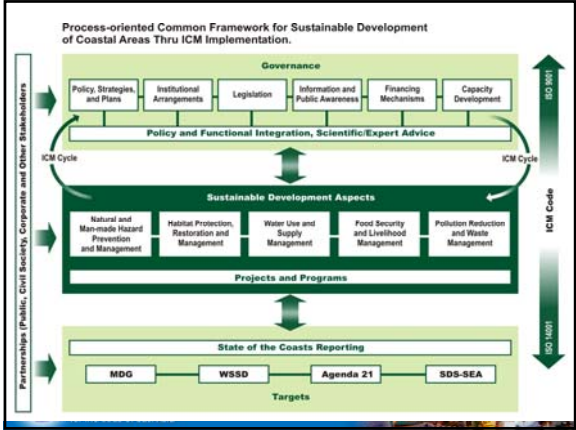**統合沿岸管理－沿岸の持続可能な開発を達成するための概念・手法及び応用**

Lecture series (2008, Japan)

1. ICM: Relevance, concept and sustainable coastal development framework (SCDF) (June 19).
統合沿岸管理: 関連性・概念および沿岸の持続可能な開発枠組み（６月１９日）

2. The ICM cycle, ICM code and State of Coasts Reporting (June 26)
統合沿岸管理サイクル・統合沿岸管理コードおよび沿岸状態の報告（６月２６日）

3. ICM: Information gathering, analysis and use (July 3)
統合沿岸管理：情報収集・分析および利用（７月３日）

4. ICM application, case studies and scaling up (July 10).
統合沿岸管理応用および拡大（７月１０日）

Partnerships in Environmental Management for the Seas of East Asia

Slide 2

The ICM Cycle, ICM Code and State of Coasts Reporting
統合沿岸管理サイクル・統合沿岸管理コードおよび沿岸状態の報告

Dr. Chua Thia-Eng
チュア・ティア・エング
Visiting Fellow
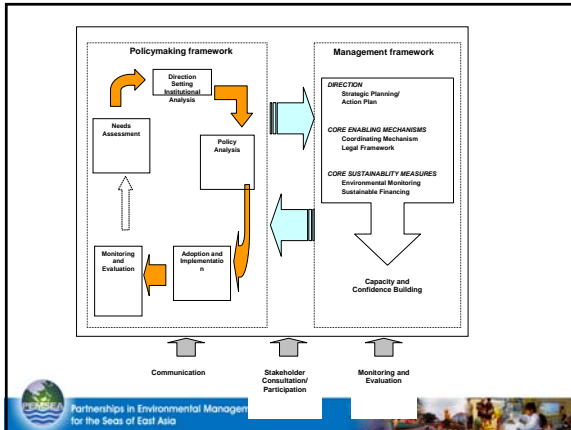客員研究員
Ocean Policy Research Foundation, Japan
海洋政策研究所

Partnerships in Environmental Management for the Seas of East Asia

Slide 3

Contents（内容）

- ICM planning and implementing processes in the context of SCDF

- ICM code: development and application

- State of the Coasts Reporting: monitoring coastal development in meeting national and international targets

Partnerships in Environmental Management for the Seas of East Asia

Slide 4

Process-oriented Common Framework for Sustainable Development of Coastal Areas Thru ICM Implementation.

Partnerships (Public, Civil Society, Corporate and Other Stakeholders)

Governance
Policy, Strategies, and Plans | Institutional Arrangements | Legislation | Information and Public Awareness | Financing Mechanisms | Capacity Development

Policy and Functional Integration, Scientific/Expert Advice

ICM Cycle

Sustainable Development Aspects
Natural and Man-made Hazard Prevention and Management | Habitat Protection, Restoration and Management | Water Use and Supply Management | Food Security and Livelihood Management | Pollution Reduction and Waste Management

Projects and Programs

State of the Coasts Reporting
MDG | WSSD | Agenda 21 | SDS-SEA

Targets

ISO 9001 | ICM Code | ISO 14001

Slide 5

ICM program development and implementing Cycle (revised, 2007)
統合沿岸管理プログラム開発および実行サイクル（２００７年の改訂版）

2 INITIATING
- Environmental and coastal profiling
- Issues identification and prioritization
  - biodiversity/habitat protection
  - land- and sea-based pollution/waste
  - climate change/hazard
  - fisheries
  - water
- Initial risk assessment
- Integrated information system
- Public awareness
- Stakeholder consensus building/ communication plan preparation
- Coastal Strategy outline

1 PREPARING
- Project management mechanism
- Workplan and budget
- Human and financial resource arrangements
- Stakeholder identification and preliminary consultation
- Training of core project staff
- Project monitoring program
- Assess requirement for ICM Code
- Assess requirement for State of the Coast

3 DEVELOPING
- Refined risk assessment
- Coastal Strategy and Implementation Plan
- Issue-specific and area-specific action plans
  - natural and manmade hazard prevention and management
  - habitat protection, restoration and management
  - water use and supply management
  - pollution reduction and waste management
- Environmental monitoring plan
- Stakeholder participation/ communication plan

4 ADOPTING
- Organizational and legal mechanisms
- Coastal policy, strategy and 3-6 year action plans
- Funding mechanisms

5 IMPLEMENTING
- Coordinating and program management mechanisms
- Environmental monitoring program
- 3-6 year action plans

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

New Cycle Starts

ICM cycle (revised 2007)
統合沿岸管理サイクル
（２００７年の改訂版）

Slide 6

Integrated policymaking and management framework—General objectives
統合政策決定および管理枠組み：一般的目的

1. To create a new direction---coastal strategy and action plans with long term timeframe and direction

2. To create core enabling mechanisms---(a) institutional arrangements for interagency and inter-sector cooperation and stakeholder consultation; (b) improved legislation and enforcement mechanism; © zoning schemes, (d) expert advice mechanism

3. To create core sustainability measures---sustainable financing mechanism, monitoring and assessing environmental changes through state of coasts reporting
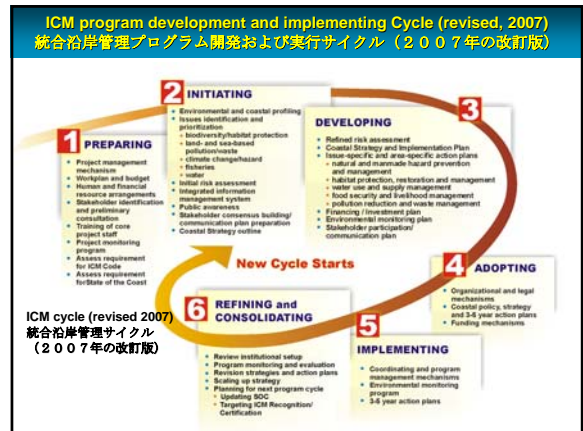
Partnerships in Environmental Management for the Seas of East Asia

The Integrated Policy and Management Framework - Specific roles
統合政策決定および管理枠組み：特別な役割

- Strengthen decision makings on coastal resource allocation and management;

- Set a system to balance conservation and development;

- Set a system for periodic monitoring and measurement (feedback mechanism) for positive validation (successful strategies) and to alert managers to emerging problems (early warning signs of ecological disasters);

- Strengthen preparation for emergencies (tsunamis, flooding, typhoons, earthquakes);

- Disseminate information, advocacy, awareness and

- Promote stakeholders participation.

Process: ICM cycle
プロセス：統合沿岸管理サイクル

- ICM process enables the effective use of the key elements of policymaking and management framework to strengthen decision makings

- ICM process operationalizes the integrated policy and management framework

- ICM process renews political commitments, transforms institutional arrangements and establishes sustainability mechanisms.

ICM program development and implementing Cycle (revised, 2007)
統合沿岸管理プログラム開発および実行サイクル（２００７年の改訂版）

Site Selection
立地選定

Project initiated from external source

Horizontal scoping of proposed site
~socioeconomic, political, cultural, and ecological characteristics
~identification and prioritization of environmental/ natural resource use conflicts: institutional, multiple use, legal, social, environmental
~identification of constraints: political, financial, conceptual, capacity;
~identification of champions/ opposition: local leaders, academe, private sector;
~local visions

Rapid Appraisal techniques

Site Selection (2)
立地選定

Decision Points--Analysis
- Level of political and government support
- Stakeholder's vision, interests and participation
- Types and level of problems and their possible solution
- Opportunities
~political and financial
~strong local leadership
~stakeholders support and partnership
~capacity
~desire for change
~possible results/ outcome within timeframe
- Constraints
~types and level of resistance;
~inadequate finance and human resource
- Manageability –issues, area, available resources

Ocean Policy Research Foundation

Process: ICM cycle
プロセス：統合沿岸管理サイクル

Stage 1: Preparing（準備）

a good start is half done

- Review report on site selection
- Management boundary
- Operational arrangement
  - selection of focal agency –entry point
  - work plan and budget
  - set targets and monitoring mechanism
  - (state of coasts reporting)
- Preparing (training) project staff and create ownership
- Preparing the stakeholders
  - public awareness
  - engage concerned agencies and stakeholders
  - cultivate champions
  - cultivate political support and use political opportunity

Partnerships in Environmental Management for the Seas of East Asia

Process: ICM cycle
プロセス：統合沿岸管理サイクル

Stage 2: Initiating（開始）

- Environmental/ Coastal profiling (state of coasts)
- Problems identification and prioritization
- Coastal strategy (within SCDF)
- Integrated Information Management System (database)
- Initial risk assessment
- Stakeholders consensus building
- Create common vision.

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Process: ICM cycle
プロセス：統合沿岸管理サイクル

Stage 3: Developing（開発）

- Policy and institutional arrangements
- Refined risk assessment
- Coastal strategy implementation plan (CSIP) [5 years within SCDF
- Integrated Information Management System (database)
- Issue- and area-specific action plans (within SCDF)
- Communication plan implementation
- Sustainable financing mechanism/ investment options.

Partnerships in Environmental Management for the Seas of East Asia

Process: ICM cycle
プロセス：統合沿岸管理サイクル

Stage 4: Adopting（採用）

Create Conducive Political Environment: political support and public pressures

- Organizational and legal arrangements
- Coastal policy, strategy and 3-5 years action plans
- Funding mechanism

Partnerships in Environmental Management for the Seas of East Asia

Process: ICM cycle
プロセス：統合沿岸管理サイクル

Stage 5: Implementing（実行）

- Coordinating and program management mechanism
- Environmental and program monitoring
- Implementing 3-5 year action plan
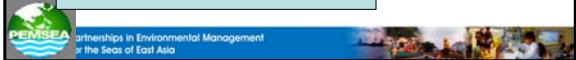- SOC Reporting
- IIMS database upgrading

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Process: ICM cycle
プロセス：統合沿岸管理サイクル

Stage 6: Refining（改良）

Monitoring and evaluation is a continuous process

- Review institutional setup
- Program monitoring and evaluation
- Revision of strategies and action plans
- Scaling up strategies
- Planning for next program cycle
  - updating SOC
  - Targeting ICM certification/ recognition

Next cycle begins from stage 3

Partnerships in Environmental Management for the Seas of East Asia

Slide 1

ICM program development and implementing Cycle (revised, 2007)
統合沿岸管理プログラム開発および実行サイクル（２００７年の改訂版）

ICM cycle (revised 2007)
統合沿岸管理サイクル
（2007年の改訂版）

Slide 2

Process: ICM cycle
プロセス：統合沿岸管理サイクル

Duration : How long does ICM cycle take?

- 3-5 years (best)
- 6-8 years (normal)
- 10-15 years (too long)

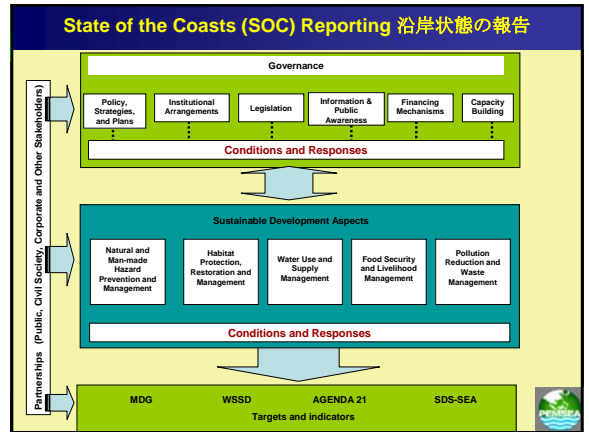- Cycle duration will be shortened with experience and capacity

Slide 3

Guiding Principles（指針）

Fundamental Sustainable Development Principles:
- Ecosystem Management
- Adaptive Management
- Integration and interrelationship
- inter and intra-generational

Millennium Development Goals

Most relevance goals include
- Poverty eradication
- Environmental sustainability

Slide 4

State of the Coasts (SOC) Reporting 沿岸状態の報告

Slide 5

State of the Coasts (SOC) Reporting 沿岸状態の報告

Why SOC ?

Current state of environment reports
  a) focus on trends and environmental damages
  b) little on actions (especially on governance) and outcomes
  c) poor coverage of coasts/ marine environment;
  d) tend to be limited in scope;

SOC reporting to provide
  a) comprehensive report on the process and
     outcomes of management efforts;
  b) objectives and targets-oriented activities mainstreamed under
     national and international objectives and targets (MDG, WSSD,
     agenda 21).

Slide 6

State of the Coasts (SOC) Reporting 沿岸状態の報告

Information relevance to the MDG

1. Eradication of poverty and hunger

2. Achieve universal primary education

3. Reduce child mortality

4. Improve maternal health

5. Ensure environmental sustainability

6. Combat HIV/ AIDS

7. Develop global partnership for development

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Information relevance to the MDG

5. Ensure environmental sustainability

a) Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources;

b) Reduce biodiversity loss, achieving by 2010 a significant reduction in the rate of loss

c) Reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation

d) Achieve significant improvement in lives at least 100 million slum dwellers by 2020

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part I: General demographic, socioeconomic information
（地理、社会経済的情報）

Part II: Summary of Target and Responses
（目標・対応の概要）

Part III: Detail information on Targets and Responses
（目標・対応の詳細情報）

Indicators: MDG, WSSD, SDS and other sustainable development indicators.

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part I: General demographic and socioeconomic Information
（地理、社会経済的情報）

Area
land, water, watershed, coastline, territorial seas, EEZ, continental shelf, coastal waters, oceanic waters, major rivers, catchment basins; number and size of islands

Management area
Province/ prefectures, cities, county, districts and other administrative units
population(total, coastal, growth rate, density, age and gender profile, ethnic profile, religions)
Productivity (GDP, GDP per capita; labour force, unemployment rate; Poverty incidence and distribution

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part I: General demographic and socioeconomic Information
（地理、社会経済的情報）

Contribution of economic sectors to GDP and employment
Agriculture(forestry, fisheries, aquaculture, etc), ports and harbors, shipping, industries (mining, manufacturing, construction, food processing, tourism), service (trades and finance), etc.

Types and number of major industries
Small, medium and large

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part II: Summary of Targets and Responses
（目標・対応の概要）

Target users: policymakers

Summary: a) relevance to national and international development objectives e.g. MDG, WSSD
b) progress
c) trends
d) benefits/losses

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part III: Detail indicators on Targets and Responses
（目標・対応の詳細情報）

• Using essential elements of SCD framework (governance and strategic action programs)

• Based on set priorities, targets and timeframe

• Contingent upon availability of funds

• A continuous process: incremental and enriching with times

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State of the Coasts (SOC) Reporting 沿岸状態の報告

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part III: Detail indicators on Targets and Responses
（目標・対応の詳細情報）

Examples: Governance
- Coastal and ocean policy at national and local level;
- Percentage of coastline/ areas under ICM regime;
- Common vision for coastal management strategy and plans;
- Establishment of interagency, multi-sector coordinating/ consulting body;
- Coastal legislations to improve management;
- Coastal zoning schemes;
- Compliance monitoring programs;
- Public education and awareness programs;
- Stakeholder participation and consultation mechanism;
- Capacity development scheme;
- Sustainable financing arrangements;
- Reduction of poverty and malnutrition in coastal communities;
- Sustainable livelihoods for marginal coastal communities

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State of the Coasts (SOC) Reporting 沿岸状態の報告

Part III: Detail indicators on Targets and Responses
（目標・対応の詳細情報）

Examples: Strategic Action Programs

- Level of preparedness during disaster incidences and degree of vulnerability;
- Area of habitat protected, restored or species conserved;
- Percentage of population with clean drinking water and sanitation services;
- Incidences/ deaths due to water-borne diseases;
- Improved rate of collection and disposal of solid waste;
- Sustainable fish catch and local fish supply;
- Improved air and water quality

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ICM Code 統合沿岸管理コード

What is ICM Code ?

• A standard of practice for ICM implementation

• Provide a systematic approach of ICM based on international standards for environmental management (14001:2004) and quality management (9001:2000) at local government level

• Serve as practical tool to validate daily operations of the participating local government unit conforming to good management practices

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ICM Code 統合沿岸管理コード

Overall Objective （主要目的）

To develop and implement Integrated Coastal Management System (ICMS) at the local government level by ensuring continual improvement of coastal and marine management for attaining sustainable development goals and objectives

PEMSEA Partnerships in Environmental Management for the Seas of East Asia

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ICM Code 統合沿岸管理コード

Specific Objective （特定目的）

1. Adopt a holistic management framework

2. Continuously improve the environmental quality(terrestrial, coastal and marine environment) as well as quality of life;

3. Promote rational use of natural resource and economic development without compromising functional integrity of the ecosystems

4. Ensure compliance with mandatory national and sub-national rules, regulations and standards; applicable international conventions and codes

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ICM Code 統合沿岸管理コード

Features（特性）

1. Application is voluntary

2. Confined to local government units

3. Cover areas and activities and management process within the scope of ICM implementation;

4. Structure of ICM code consists of
   a) ICM core requirements
   b) Guidelines for the levels of recognition of the ICM
   c) Guidelines for the ICM implementation cycle
   d) Guidelines for the ICM code relationship with other international standards

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ICM Code 統合沿岸管理コード

Features （特性）

5. ICM Recognition and Certification process

a) The ICM program can be assessed using the criteria for three level of recognition, *Transition*, *Transformation* and *Sustainability* and audited in accordance to ISO requirements
b) The purpose is to recognize the commitment of the local government to protect the environment and to fulfil the requirements of its stakeholders so as to increase citizens' confidence in their government and to maintain a sustainable community.
c) Recognition also demonstrated local government's capacity to achieve higher level of performance
d) Local government can secure ISO 9001 and ISO 14001 certification for its ICM program

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ICM Code 統合沿岸管理コード

1. ICM code is the world first attempt by PEMSEA following the completion of the ICMS whose framework and process conform with ISO environmental and quality management

2. Being further tested and verified although 3 districts in Xiamen has been ISO 14001 certified

3. If successfully implemented will have long term significant contribution to sustainable development

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ICM Certification 統合沿岸管理の証明

Gulangyi (Xiamen): ISO14001 compliance

Integrated Coastal Management System (ICMS) 統合沿岸管理システム

"Goals continue to change and evolve and Today's excellence may well be tomorrow's Mediocrity…the search for excellence—for Those who truly seek it—will then be a ceaseless task"

From: In Search for Excellence, RAP, 2005

Integrated Coastal Management System (ICMS) 統合沿岸管理システム

The four pillars of ICM system are :

1) The SCDF --- provides an overarching framework intended to strength coastal governance and for achieving economic and environmental sustainability;

2) The ICM cycle --- stepwise approach in planning and managing the coastal areas through cyclical processes;

3) The ICM code ---ensure adherence to process, documentation and quality management of the coastal areas;

4) The SOC --- regulate performance to ensure meeting goals and targets
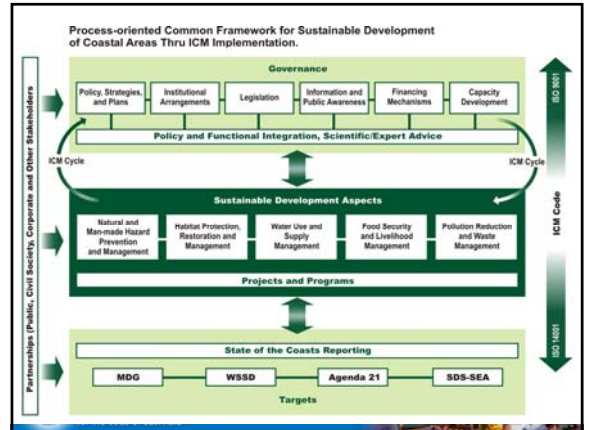
Integrated Coastal Management System (ICMS)
統合沿岸管理システム

The four pillars of ICM system are inter-linked and closely coordinated in operation;

The elements of the ICMS are not static but dynamic so as to allow a certain degree of flexibility for adaptive management and ecosystem management in cases of environmental and management uncertainties

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Process-oriented Common Framework for Sustainable Development of Coastal Areas Thru ICM Implementation.

Thank you

PEMSEA Partnerships in Environmental Management for the Seas of East Asia