

ICM CODE - ANNEX B (INFORMATIVE)

Guidance on the Background and Use of the ICM Code

General Comments

This annex is provided to assist in the understanding of why the approach specified in the ICM Code has been used and to give some guidance in those areas where it is thought additional explanation is necessary. Where clauses of the ICM Code are deemed to be self-explanatory no additional guidance is provided.

This explanation is not intended to be a comprehensive guide to implementing ICM. The ICM Guideline and other sources of advice are available for such purpose.

Process Approach in an ICM System

A management system is a set of interrelated elements used to establish policy and objectives and to achieve those objectives. Management system standards contain many common requirements. Figure 1 identifies six common requirements of management systems and illustrates how the ICM Code draws together these common requirements into the ICM Development and Implementation Process. The ICM Development and Implementation Process is a set of easily understood processes that allow stage-by-stage development of the policy direction and management options of an ICM program. It is equivalent to the PDCA cycle that most management systems follow.

It is important to recognize that there may be specific requirements in individual management systems that are not included in the six generic requirements identified in Figure 1. In such cases, those requirements that are not common need to be addressed in addition to those in the ICM Code in order for a local government to meet a desired standard/specification, (e.g., the Purchasing Process clause in ISO 9001 is not specifically detailed in the ICM Code). Annex A provides further information on the conformance of the ICM Code with two international standards for management systems, ISO 9001 and ISO 14001.

4.0 DEVELOPING IMPLEMENTING AND MAINTAINING AN INTEGRATED COASTAL MANAGEMENT SYSTEM (ICM SYSTEM)

4.1 Planning, Developing and Managing an ICM System

The local government establishes, documents, implements and maintains an ICM system and continually improves its effectiveness by:

- a) defining the scope (coverage) of the ICM system, namely the geographic area and/or administrative boundaries to which the ICM system applies;
- b) identifying the processes of the local government that are integral to the implementation of the ICM system;
- c) establishing the criteria and methods to ensure that the operation and control of such processes are effective;
- d) ensuring the availability of resources and information necessary to support the operation and monitoring of the processes;
- e) monitoring, measuring and analyzing the processes; and
- f) implementing necessary actions to achieve the planned results and continual improvement of the processes.

Guidance Notes

This clause is fundamental as it establishes the basis for the rest of the ICM system. It defines the elements that enable a local government to document, implement and maintain an ICM system that provides effective and reliable performance in a transparent manner.

The local government needs to define the scope (coverage) of the ICM system, as the geographic area covered, within the designated administrative boundaries of the local government. The geographic boundaries should have both land-side and water-side designations. The scope should ideally include the inter-linkages between coastal and marine areas and associated watersheds, estuaries, wetlands and coastal seas. In addition, when setting the scope, the local government should also consider the complexity of environmental, social, economic and management issues within the administrative boundaries. As a consequence, it may be appropriate to initiate the ICM system in a limited geographic area and address a specific priority issue, and then extend or scale-up the area and issue coverage as awareness, experience and knowledge are accumulated.

Experience indicates that ICM coverage, in some cases, needs to extend beyond the administrative boundary of a single local government due to the transboundary nature of a significant environmental risk or hazard. This can occur in a coastal area where economic activities of local governments are competing for space and resources (e.g., port operation and development versus coastal fisheries). It can also occur as a consequence of upstream-downstream uses of a river discharging into the coastal area (e.g., upstream discharge of pollutants versus downstream use of the coastal area for recreational purposes). ICM provides a common platform for local governments to address these cross boundary issues, through partnership and other collaborative approaches.

Once the scope has been defined, all relevant activities, events, products and processes of the local government that operate within the identified boundaries and issues being covered need to be included as part of the ICM system. Some examples of local government processes that are relevant to the implementation of the ICM system include:

- a. policy and legislation for managing and controlling coastal areas/uses;
- b. economic planning and development, incorporating environmental protection and natural resource conservation into the development planning process;
- c. financial management, ensuring efficient and effective use of available funds;
- d. zoning, permitting and licensing of access and use of coastal areas and resources;
- e. utilities and services, such as water supply, waste management and drainage systems;
- f. citizen/stakeholder analysis of needs and expectations;
- g. information management and public awareness, building awareness and mobilizing participation/collaboration among government agencies and sectors;
- h. human resource development and management;
- i. infrastructure development, improvement and management, such as roads, parks and recreational areas; and
- j. monitoring, evaluation and reporting including, for example, water quality monitoring, surveillance monitoring and inspections of permits.

To ensure reliability within and among all key processes and services, the integral character of the ICM system may be defined by:

- a. delineating the processes, their sequence and interactions in a manner that can be clearly understood, managed and improved including, for example, the preparation of a flow chart;
- b. detailing the effective operation and control of the processes and monitoring their performance to determine the achievement of adopted objectives and targets; and
- c. identifying the necessary actions to obtain the planned results and the continual improvement of the ICM system.

The implementation of the ICM system specified in this Code is intended to result in improved performance in sustainable coastal development and management by a local government. The Code is based on the premise that the local government will periodically review and evaluate its ICM system to identify opportunities for improvement and their implementation. The rate, extent and timescale of this continual improvement process are determined by the local government in light of economic and other circumstances. Improvements in the ICM system are intended to result in further improvements in the performance of sustainable coastal development and management.

4.2 Local Government Commitment

The local government confirms its commitment to the development and implementation of the ICM system and continually improving and sustaining its effectiveness by:

- a) establishing ICM policy, strategies, objectives and action plans to facilitate and support implementation;

- b) reviewing the ICM policy and the results and outcomes of implementation on a regular basis;
- c) establishing an appropriate organizational arrangement and institutionalizing this arrangement by executive or legislative means;
- d) ensuring multi-sectoral stakeholder participation in the planning, development and implementation processes, as well as monitoring the effectiveness of the ICM system;
- e) formulating/reformulating, adopting and implementing legislation and regulations related to ICM development, implementation and continual improvement;
- f) communicating to government and non-government stakeholders, the importance of achieving the ICM policy, legislation and regulations, strategies, objectives and action plans;
- g) making certain that adequate resources and financing mechanisms are available for implementation;
- h) ensuring the capacity of persons and institutions involved in the planning and implementation; and
- i) ensuring that internal audits of the ICM system are conducted at planned intervals.

Guidance Notes

Leadership and visible commitments of the top management of the local government, and the active participation of concerned stakeholders, are essential elements of an ICM system.

As a first step, the identification of the benefits to be derived from the ICM system, including how it can help the local government address various impediments to sustainable development of coastal and marine areas and resources, can be delineated and presented to top management. The idea is to ensure that top management understands the relevance of ICM to sustainable development issues in the area, and thereby confirms its commitment and support for proceeding with the development, implementation and management of the ICM system.

The internal audit process provides the local government with the information on the extent to which the ICM system is meeting requirements and its effectiveness in meeting objectives and stakeholder expectations and needs.

The local government should establish a procedure for internal audit, designed to determine whether:

- a) the ICM system conforms to the planned arrangements of the ICM system; and
- b) the ICM system is effectively implemented and maintained.

4.3 Institutional Arrangements

4.3.1 Interagency Multi-Sectoral Coordinating Mechanism

The local government establishes a multi-sectoral mechanism composed of representatives of relevant government and non-government sectors. The interagency multi-sectoral coordinating mechanism is responsible for coordination of policy

making, planning, implementation, monitoring and evaluation of the ICM system.

Guidance Notes

The development and implementation of an ICM system benefits from the participation of all sectors of society, including local communities, the business sectors, academia, NGOs and other civil society groups. It is essential that this mechanism is established early in the process of formulating an ICM system.

The purpose of the coordinating mechanism is to harmonize any overlapping responsibilities of line agencies and stakeholder interest, to identify gaps in mandates and responsibilities, and to integrate policy and management interventions as appropriate.

The results of improved coordination should be seen as a benefit by the majority of the sectors if the coordinating mechanism is to be really effective and efficient. Benefits such as collaborative planning and decision-making for coastal development, sharing of information, and planning and conduct of joint or collaborative capacity development initiatives build trust, reduce overlap and increase cost efficiency in the delivery of products and services.

The Interagency Multi-Sectoral Coordinating Mechanism can be first started up as a Project Coordinating Committee, made up of representatives of line agencies involved and various sectors of civil society, including business, academia, NGOs/POs. During the ICM implementation, the Project Coordinating Committee can be transformed and become a more permanent structure, especially when it is effective and reduces or resolves interagency conflicts. Institutionalizing the Project Coordinating Committee to ensure that the ICM system is integrated into government development plans is therefore an important objective of ICM.

4.3.2 Coordinating Office

The local government organizes a Coordinating Office. The Coordinating Office is responsible for:

- a) coordinating the development, implementation and maintenance of the processes and actions among different government agencies and sectors for the effective implementation of the ICM system;
- b) monitoring and evaluating the ICM system;
- c) reporting to the Interagency Multi-Sectoral Coordinating Mechanism on the performance of the ICM system for review, including recommendations for improvement; and
- d) communicating the needs and requirements of stakeholders to the local government.

The local government defines documents and communicates the roles, responsibilities and authorities of the personnel in the Coordinating Office in order to facilitate the effective development, implementation and continual improvement of the ICM System.

Guidance Notes

The local government should establish/designate a coordinating office for the ICM system implementation. This coordinating office should be located strategically within a section of the local government that has sufficient authority and independence to ensure the vision/mission and coastal strategy are not compromised.

The responsibility for the effective implementation of the ICM system lies throughout the local government and other sectors. The role of the Coordinating Office is to identify opportunities for collaboration and partnership arrangements among the various stakeholders for implementation of the ICM system, as well as to monitor the progress of the implementation process.

The functions, responsibilities and authorities of the personnel involved in the ICM system and its programs should be clearly described.

Documentation of roles and responsibilities can be done in several ways, including, for example:

- a) preparing an organizational chart indicating the hierarchy level and communication lines;
- b) preparing job descriptions;
- c) defining and documenting responsibilities in process procedures and/or other management documents;
- d) issuing announcements or memoranda; and/or
- e) making use of existing documentation (e.g., local government legislation).

4.4 Resource Availability

The local government ensures the availability of resources essential for the establishment, implementation, maintenance and improvement of the ICM system. Resources include people with the required skills, infrastructure, technology, and financing for the implementation of the ICM system.

The local government allocates and makes available adequate budget for the implementation of the ICM system and its programs.

The local government generates and mobilizes external financial resources, in accordance with national law.

The local government informs stakeholders and the general public of its budgeted programs for the ICM system, how the funds are spent, and the resulting outputs and impacts.

Guidance Notes

The local government should consider developing and implementing a procedure for identifying and accessing resources necessary for the realization of the ICM system, including people, infrastructure, work area, information, contractors, suppliers, materials and financing. Resources may be accessed from readjustment of existing resources available in concerned sectors or new programs within the local government and/or

mobilized from various sectors, partners and donors. However, ICM should not be perceived as a resource-demanding mechanism. It builds on existing government planning and management processes to offer an integrated coordinating approach. What is crucial is the availability of human capabilities for the planning, implementation and management of the ICM system.

Aside from taxes, local governments may have other mechanisms for generating revenue to support ICM, depending on national policy and laws, such as discharge fees (for industrial and household wastewater); water pricing (e.g., for household and industrial water use); permit and licensing fees for access and use of natural resources; fines for violation of permit limits for allowable discharges; user fees for access to environmental facilities and services; etc. In addition, a number of local governments have also been successful in mobilizing expertise and financial resources for ICM from the private sector, through public-private partnership (PPP) arrangements, based on corporate social responsibility programs of the business community, as well as identifying investment opportunities for the private sector in environmental improvement projects.

The local government should develop a resource utilization plan covering management and coordination, monitoring and evaluation, training, education, learning, communication and continual improvement of ICM system performance.

The local government should ensure the allocation of adequate funds among concerned offices for the development and implementation of the ICM system and its programs. The concerned agencies need to include budget appropriations for development and implementation activities and programs, including recurrent training and education programs.

The local government should develop procedures for the implementation and control of the financial resources derived from the various financial mechanisms in support of the ICM system.

These procedures should cover:

- a) national and local government policy and administrative procedures and regulations;
- b) project planning;
- c) project development and budget preparation;
- d) project management and implementation;
- e) procurement processes for products and services;
- f) financial management and accounting;
- g) law enforcement; and
- h) information dissemination and transparency

4.5 Documentation

4.5.1 Documentation of the ICM System

The local government prepares and maintains documentation concerning the planning, development and implementation of the ICM system for reference and use by concerned authorities and personnel.

The following are important documents in an ICM system:

- a) policy, strategies, objectives and action programs;
- b) an ICM system manual;
- c) procedures needed for effective planning, development, implementation and control of the ICM system; and
- d) records required to verify the effective implementation and continual improvement of the ICM system.

Guidance Notes

Documentation refers to the documents and records that the local government maintains relating to the ICM system. A document normally refers to information concerning the planning, development and implementation of the ICM system and its processes. Therefore, because of changing circumstances and conditions over time, documents must be periodically reviewed and revised (e.g., a communication plan).

A record refers to data or information that provides evidence of activities performed or results achieved. A record is a historical document that does not change over time (e.g., minutes of a meeting with an attendance list).

Documentation provides the local government with:

- a) a formal methodology for ensuring ease of directing ICM system;
- b) consistency and uniformity of practice;
- c) a means of measuring the performance of each process in the ICM system, thereby making it verifiable; and
- d) a way for stakeholders to view and assess ICM system implementation and its impacts.

The nature and extent of documentation should satisfy relevant statutory and regulatory requirements and the needs and expectations of the stakeholders. Documentation may be in any form or medium suitable to the needs of the ICM system.

When planning the documentation needed for the ICM system, the local government should consider the following:

- a) the scope and coverage of the ICM system;
- b) government policies, including local and national policies;
- c) applicable laws and regulations;
- d) employees' and stakeholders' competence;
- e) programs, projects and services provided within the ICM system;
- f) information needs and expectations of stakeholders;
- g) documentation of results and impacts of implementation of programs and activities; and
- h) baseline information.

The ICM manual may be seen as a road map that explains how all the processes, functions and stakeholders involved in the ICM system fit together. It can also be viewed

as a description of a formal system, i.e., one that is documented, implemented and verifiable.

The manual should not be complex or difficult to read, with every bit of information on the ICM system. Rather, it may contain references to other documents and applicable procedures that are not included in the manual.

The manual should describe or provide reference to:

- a) the ICM policy, vision, mission and strategies of the local government;
- b) the scope of the ICM system;
- c) the objectives, targets and action programs;
- d) the organizational arrangements for the ICM system;
- e) the processes of individual functional sections of local government needed to implement the ICM system action programs, and their interactions where appropriate;
- f) the detailed procedures for operating specific processes or performing specific tasks, which may include work instructions, protocols, guides or standard operating practices, or reference to such procedures; and
- g) supplementary documents, forms and records.

The nature and level of the documented manual can vary depending on the size and complexity of the ICM system.

4.5.2 Control of Documents

The local government establishes and maintains document control procedures.

Guidance Notes

During the implementation of the ICM system, different local government agencies and personnel and other stakeholders will use available documents to accomplish their roles and responsibilities. To ensure that every one is consistently doing the right job, they must be provided with the correct tools, which include proper and up-to-date procedures. Without a mechanism to control the documentation, the local government will not know or be able to verify if the right information is being used.

The local government should have a procedure in place that describes how documents are controlled. The procedure should describe:

- a) mechanisms to issue, revise and approve documents for internal use by local government agencies, including their identification and revision status;
- b) mechanisms for controlling documents that should be made available to stakeholders, such as policies, strategies, applicable legal documents, ICM system progress reports, etc.;
- c) mechanisms to facilitate access to the latest version of documents by local government agencies and other stakeholders.

The document control procedure should designate responsibility and authority for preparing documents, making changes to them, and keeping them up-to-date.

If there are already effective document control procedures in the local government, then the ICM system documentation can be integrated into the existing procedures. If it is necessary to start a new system, or improve upon an existing one, a simple step-by-step approach may be followed:

- a) identify the documents that need to be controlled;
- b) designate responsibility for managing documents;
- c) establish document control procedures; and
- d) document, maintain and communicate control procedures.

4.5.3 Control of Records

The local government establishes and maintains records to provide evidence of effective implementation of the ICM system.

Guidance Notes

Records provide information regarding the activities performed by the local government and are kept as proof of the result of the implementation of the ICM system. As such, records should remain legible, readily identifiable and retrievable.

The local government should establish procedures to define the controls needed for the identification, availability, storage, protection, retrieval, retention time and disposition of records. Most local governments already have a records management system in place, in which case the ICM system records need to be integrated into the existing system rather than starting a new system.

Local governments should also establish a policy and procedures covering access of records by stakeholders.

If it is necessary to start a new system, or improve upon an existing one, or even simply add the ICM system records into the existing system, a simple step-by-step approach may be followed:

- a) identify those records that need to be managed;
- b) establish retention times for those records;
- c) generate a master list of records;
- d) establish a procedure to secure storage and easy retrieval; and
- e) document and communicate the records management procedure.

Records should cover:

- a) legislative and regulatory requirements;
- b) permits;
- c) relevant management programs and their associated activities, outputs, outcomes and impacts;
- d) training activities;
- e) measurement, calibration, and maintenance activities;
- f) monitoring data;

- g) incidents, complaints and follow-up actions; and
- h) audits and reviews.

The effective management of records is essential to the implementation of the ICM system. Key features of records management include the means of identification, collection, indexing, filing, storage, maintenance, retrieval, retention and disposition of pertinent records.

In gathering and storing data, it is recommended to establish/use a database system, such as an Integrated Information Management System (IIMS). The IIMS will ensure the timely access of reliable information that can aid in planning management and assessment of the ICM system.

5.0 ICM POLICY AND COASTAL STRATEGY

5.1 ICM Policy

The local government establishes an ICM policy to express its overall intentions and directions with regard to sustainable development of marine and coastal resources and environmental management.

The ICM policy embraces:

- a) interagency/multi-sectoral coordination, partnership and participation;
- b) a unifying platform or shared vision to promote stakeholder participation;
- c) an integrated approach to managing marine and coastal areas and resources;
- d) compliance with applicable statutory and regulatory requirements, policies and other sustainable development policies, frameworks, principles and obligations to which the national and/or local government subscribes;
- e) development, implementation and continual review and refinement of the objectives of the local government with respect to managing marine and coastal areas, including the protection of ecosystems; and
- f) coordination and cooperation among government and non-government stakeholders for the sustainable development of marine and coastal resources.

Guidance Notes

The ICM policy is the driver for implementing and improving a local government's ICM system, so that it can implement and potentially improve its sustainable development performance. The policy also forms the basis upon which the local government will set its objectives and targets. Its area of application (scope) should be sufficiently clear to be understood by stakeholders in all sectors, and should be periodically reviewed and revised to reflect changing conditions and information.

The ICM policy is put into practice by the local government through:

- a) adoption by executive and/or legislative means;
- b) implementation and regular review to ensure its continuing suitability; and

- c) dissemination and communication to all stakeholders and interested parties.

5.2 Coastal Strategy

The local government together with concerned stakeholders develops a comprehensive strategy for sustainable marine and coastal area development and management that provides a platform for multisectoral and interagency cooperation, as well as a framework for planning and implementation.

A comprehensive coastal strategy contains:

- a) a profile of the area including the people and their activities, the values and threats to the marine and coastal environment as identified by stakeholders, and other related challenges and issues of concern;
- b) a listing of the desired changes and outcomes that stakeholders want to see in the area;
- c) a shared vision and mission as agreed by the stakeholders; and
- d) strategies, objectives and actions that are required in order to achieve the desired changes and outcomes.

Guidance Notes

The coastal strategy is an embodiment of the stakeholders' shared, long-term vision and provides policymakers, environmental and resource managers, communities and other concerned parties with a common framework for the sustainable development and management of their coastal and marine area.

The local government adopts the coastal strategy by executive or legislative means and disseminates and communicates the information to all stakeholders and interested parties.

The coastal strategy should address various sustainable development issues that are relevant in the area including, for example: natural and man-made hazards prevention and management; habitat protection, restoration and management; water use and supply management; food security and livelihood management; pollution reduction and waste management; reduction in conflicts arising from multiple uses; improvement of environmental quality; preservation of social and cultural values; poverty reduction; and promotion of environmentally and socially responsible economic development.

The preparation of the coastal strategy should be guided by key principles (e.g., ecosystem based management approach; adaptive management; integration and interrelationship) and a shared vision and mission of stakeholders, along with their perception of the values of ecosystems, the threats to sustainable development, and the desired outcomes of management interventions.

Coastal Profile

The local government develops a coastal profile to describe the area covered by the ICM system. The profile, as a minimum, includes demographical and biophysical characteristics, resource-use patterns, socio-economic setting, status of the coastal and marine environment, and legal and institutional arrangements.

In establishing the baseline information for the implementation of the ICM system, the local government should consider the preparation of a State of the Coasts (SOC) baseline. The SOC baseline can be used to:

- a) provide comprehensive qualitative and quantitative baseline information on the demographic, socioeconomic, environmental status as well as management actions in a given area;
- b) determine any existing governance mechanisms and implementing arrangements that are in place;
- c) determine and prioritize pertinent issues that can be included in an ICM program;
- d) set baseline social, economic and environmental conditions, which change over time and can be compared; and
- e) identify critical gaps that need further research and monitoring.

Vision and Mission

The shared vision defines the local government's, citizens' and stakeholders' long-term objectives and expectations regarding sustainable development of the marine and coastal environment and resources, as well as the benefits to be derived socially and economically.

The coastal strategy's vision contains the long-term outcomes expected by the stakeholders, provides direction for setting up and implementing the ICM system, and serves as the basis for measuring progress toward desired changes.

The mission includes commitments to protect and enhance values, reduce threats, and avoid unsustainable use of the coastal and marine areas/resources by employing a systematic, integrated and multi-sectoral management approach.

The mission statement contains the means by which the vision will be achieved, who will be involved, and their roles/responsibilities.

The vision and mission can be used to guide the local government in the development, implementation, monitoring and continual improvement of the ICM system.

Strategies and Objectives

Strategies define the approaches for achieving the desired changes and outcomes defined in the vision.

Strategies represent implementation approaches for the integrated management and sustainable use of the marine and coastal environment and the resources therein. For example, the following strategies cut across various political, social, economic and environmental issues in the coastal and marine area:

- a) Protect human welfare and the ecological, historical, cultural and economic features of the area;
- b) Mitigate environmental risks that occur as a consequence of human activities;
- c) Develop areas and opportunities in consonance with environmental goals, policies and plans;
- d) Communicate with stakeholders regarding their rights, roles and responsibilities concerning sustainable development of coastal and marine resources; and
- e) Implement policies and programs in support of sustainable development of coastal and marine areas through interagency and multisectoral partnership arrangements.

Objectives take into account the legal requirements, as well as the hazards and risks that are determined within the scope of the ICM system.

Objectives are goals for ICM system performance. An objective should be capable of being measured in order to facilitate an effective and efficient review by the local government. Some examples of measurable objectives include:

- a) Quality of coastal waters maintained and enhanced;
- b) Coastal habitats rehabilitated and protected;
- c) Land-based sources of marine pollution reduced;
- d) Disaster prevention and management system established to address natural and man-made hazards; and
- e) Food security and sustainable livelihoods improved for coastal dwellers.

When establishing objectives, the local government should consider:

- a) current and future state of the coastal environment;
- b) needs of stakeholders;
- c) statutory and regulatory requirements;
- d) sustainable development aspects and risk assessment results;
- e) comparison with conditions and objectives of other similar coastal local governments;
- f) resources needed to meet the objectives;
- g) capacity to meet the objectives;
- h) continual improvement of the performance of the ICM system; and
- i) measurability and assessability.

The objectives should be communicated in such a way that the stakeholders can contribute to their achievement. Responsibility for deployment of objectives should be defined.

Objectives should be systematically reviewed and revised as necessary through a monitoring and assessment process. The local government should regularly report on the fulfillment of the objectives to the stakeholders.

Actions

Actions include short, medium and long term measures to be undertaken by national and local governments, citizens, NGOs, the private sector, scientific and technical institutions,

and other stakeholders in the area in order to achieve the coastal strategy's objectives. In the coastal strategy, actions are broadly defined in order to allow flexibility and adaptability, and are based on the capacities of the stakeholders, access to/availability of financial resources, and the mechanisms and programs of the local government.

An example of a strategy, objective and corresponding actions include:

Strategy: Protect the marine and coastal ecosystem from risks originating from human activities in the surrounding watershed area.

Objective: Quality of coastal waters maintained and enhanced

Actions:

- a) Assess pollution sources and loads from watersheds and direct discharges to coastal waters (short-term) and formulate and implement a pollution reduction management program (long-term);
- b) Strengthen upland forest management (short-to-medium term);
- c) Regulate sand/gravel exploitation in rivers and coastal areas (short-term);
- d) Stop illegal mining activities (short-term);
- e) Develop and implement a land- and sea-use zoning scheme and permit system (short-to-medium term); and
- f) Implement a comprehensive water quality monitoring and reporting system, for fresh and marine waters (short-to-medium term).

6.0 PLANNING

6.1 Sustainable Development Aspects

The local government, in partnership with stakeholders, plans and coordinates the development of processes and controls for programs to address aspects of activities, products and services within the defined scope of the ICM system that have or can have significant negative impact(s) on sustainable development and management of the marine and coastal area (i.e., significant sustainable development aspects).

The local government ensures the effective implementation of programs to manage the significant sustainable development aspects.

Guidance Notes

Sustainable development aspects of concern to local government, in general, cover five main issues, namely: natural and man-made hazard prevention and management; habitat protection, restoration and management; water use and supply management; food security and livelihood management; and pollution reduction and waste management.

Sustainable development is a complex undertaking and entails a long-term commitment. Therefore the planning process should be systematic, and targeted at identifying those priority aspects that will be addressed first. The idea is to address what is doable within

the resources and capacities available, and then to scale up as experience, skills and resources are gained.

The local government can follow the continual improvement cycle (PDCA cycle) in developing programs to identify and address those aspects of activities, products and services that are having a significant negative impact on sustainable development and management of marine and coastal areas. Major steps in this ongoing process include the following:

Plan:

1. prepare a coastal profile/SOC baseline assessment
2. complete an initial environmental risk assessment
3. determine the needs of its stakeholders with regard to the marine and coastal environment;
4. identify the sustainable development aspects and their significance in the ICM site;
5. identify legal requirements applicable to the ICM system and the sustainable development aspects;
6. set objectives and targets for the significant sustainable development aspects and formulate programs to achieve them; and
7. develop a coastal strategy implementation plan, including performance indicators for monitoring and assessing progress and achievements.

Do:

1. assign roles and responsibilities to facilitate the implementation of programs and processes to address the significant sustainable development aspects;
2. provide adequate resources including competent personnel;
3. establish and maintain necessary operational control and documentation to support the implementation of the programs; and
4. communicate the programs to concerned stakeholders.

Check:

1. monitor the objectives, targets, outputs and outcomes of the ICM system and the sustainable development aspects programs, and evaluate progress against the SOC baseline and performance indicators;
2. evaluate the status of compliance to legal and regulatory requirements; and
3. identify non-conformities and take corrective, preventive and improvement actions.

Act:

1. conduct a management review of the ICM system and the sustainable development aspects;
2. identify areas for improvement; and
3. take actions to improve performance as well as to scale up the ICM program as appropriate.

The local government should ensure the effective implementation of programs to address these sustainable development aspects, as they are a priority and relevant to the local situation. The procedures to identify and determine significant sustainable development aspects, as well as the objectives, processes and activities for the effective

implementation of management programs for each significant sustainable development aspect, should be documented.

6.2 Environmental Risk Assessment

The local government identifies the hazards and assesses the risks associated with the sustainable development aspects in the area covered by the ICM system.

The results of environmental risk assessment are employed in planning and developing action programs covering the significant sustainable development aspects.

Guidance Notes

The local government should establish, implement and maintain a procedure for conducting environmental risk assessment.

Environmental risk assessment refers to the scientific methods used to quantify risks to particular systems, as a prelude to managing the identified risks to minimize potential damage. It varies widely in scope and applications, and various methodologies are available to suit specific applications.

In the context of ICM, risk assessment is employed in order to provide information and guidance relevant to the protection and management of the marine and coastal area in relation to human activities as well as to natural factors.

Risk assessment involves systematically identifying the two elements of risk (or likelihood of harm): the potential harm or hazard associated with a certain substance, activity or process; and the likelihood of exposure of the target to the potential harm/hazard.

Risk assessment is the process of estimating the likelihood of occurrence of and the severity of the adverse effect.

The risk assessment can lead a risk manager to decide whether a substance or activity is:

- a) safe (there is no significant risk);
- b) unsafe (risk is too high, abandon the project); or
- c) safe but exposure must be limited to maintain the desired margin of safety (i.e. risk management is needed).

Applied on a suite of substances/processes, risk assessment can provide a ranking of priority concerns, based on an objective assessment of available scientific evidence.

The technical results from the risk assessment are designed to serve as inputs, in conjunction with social, economic, political, legal and other factors, in formulating policies, decisions and management actions.

6.3 Stakeholders' Requirements

The local government determines:

- a) requirements, needs and expectations of the stakeholders regarding the sustainable development aspects;
- b) requirements not specified by the stakeholders but necessary for the ICM system;
- c) statutory and regulatory requirements related to the ICM system and the sustainable development aspects; and
- d) its ability to meet the defined requirements.

Guidance Notes

The local government should implement and maintain (a) process(es) to ensure adequate understanding of the needs and expectations of the stakeholders. This process should include identification and review of relevant information and should actively involve the stakeholders.

Records for the determination of stakeholder needs and expectations should be maintained.

6.4 Legal and Other Requirements

The local government determines legal, regulatory and other requirements to support the implementation of management programs for its sustainable development aspects.

Guidance Notes

The local government should establish and implement a procedure to:

- a) identify and have access to applicable legal and other requirements; and
- b) determine how these requirements apply to its sustainable development aspects.

Legal, regulatory and other requirements refer broadly to any requirements or authorization that is relevant to the local government's ICM system and its sustainable development aspects.

Legal requirements can take many forms, including:

- a) legislation, including statutes and regulations;
- b) decrees and directives;
- c) permits, licenses and other forms of authorization;
- d) orders issued by regulatory agencies;
- e) judgments of courts or administrative tribunals;
- f) customary or indigenous law; and
- g) treaties, conventions and protocols.

To facilitate the identification of legal and other requirements, the local government should maintain an up-to-date register or list of applicable requirements.

Information on these applicable requirements can assist the local government in establishing its sustainable development aspects objectives, targets and management programs.

6.5 Objectives and Targets

The local government establishes objectives and targets for controlling and managing the identified significant sustainable development aspects.

Guidance Notes

In setting objectives and targets, the local government considers several factors including:

- a) the sustainable development aspects having significant impact on areas covered by the ICM system;
- b) principles and commitments in its ICM policy, coastal strategy, vision and mission statements;
- c) applicable legal and other requirements;
- d) views of its stakeholders and interested parties;
- e) technological options and feasibility; and
- f) financial, operational and organizational capabilities and resources.

6.6 Coastal Strategy Implementation Plan (CSIP)

The local government formulates, adopts and implements a CSIP that provides a short-to-medium term work program for implementing the coastal strategy in accordance with the significant sustainable development aspects, stakeholder requirements, and legal and other requirements. The CSIP contains the following features:

- a) priority objectives of the sustainable development aspects programs;
- b) measurable time-bound targets;
- c) actions and work schedule for achieving the time-bound targets;
- d) designation of roles and responsibilities among stakeholders;
- e) resource commitments including human, financial and capacity requirements; and
- f) a process for monitoring and evaluating progress toward the objectives and targets.

Guidance Notes

The implementation of the coastal strategy requires ground level actions. The first step is to develop a plan of action for implementation, which takes into account:

- a) identified priority risks in the coastal and marine area;
- b) actions identified in the coastal strategy to address the priority risks;
- c) local government plans and strategies for development of the coastal area;
- d) the available capacity of the local government and their partners;

- e) the short-to-medium term priorities of the local government and stakeholders in accordance with the coastal strategy's objectives;
- f) the current activities that are already being undertaken by the local government and/or their partners;
- g) collaborative and/or partnership arrangements with concerned government agencies and stakeholders, and identification of roles and responsibilities that contribute to the delivery of agreed targets;
- h) the adoption and approval of clear, time bound targets by the local government authority and/or government agencies along with the required human and financial resource commitments;
- i) related policies and regulatory and economic instruments to facilitate the implementation process; and
- j) a monitoring and assessment process to measure progress and changes according to identified indicators.

The CSIP also needs to address coastal governance, including required improvements in policy, coordinating mechanisms, local legislation or ordinances, creating an informed public, identifying and accessing financial resources, and building local capacity to plan, manage and implement project activities.

6.7 Coastal Use Zoning Scheme

The local government develops, adopts and implements a coastal use zoning scheme to regulate and manage land and sea uses. The zoning scheme is based on the ecological, social and economic functional capability and suitability of the areas to the desired uses, the significant sustainable development aspects, the types and levels of development envisioned by stakeholders, policy direction, and cultural and/or traditional considerations.

An institutional mechanism is developed and adopted by the local government to support the implementation of the coastal use zoning scheme.

Guidance Notes

The local government should develop, adopt and implement a coastal use zoning scheme to:

- a) protect and rehabilitate important habitats, ecosystems and ecological processes, and natural and cultural heritages;
- b) harmonize conflicting uses among users and beneficiaries of coastal and marine resources and areas;
- c) protect lives and infrastructure from natural and man-made hazards, including the impacts of climate change;
- d) designate areas for future economic activity and development, in line with the sustainable development policy of the local government; and
- e) preserve species and areas of the coastal and marine environment that are pristine or of ecological, social or cultural significance.

Coastal use zoning is an efficient mechanism for allocating coastal space for conservation and development. It is also an effective way of solving multiple resource

use conflicts in the coastal areas and conflicts between and among human activities, such as ports, shipping, fishing, aquaculture, industry, tourism, and conservation.

Zoning is a regulatory mechanism, and identifies the different zones in the coastal area and the acceptable (dominant use and compatible uses), regulated and prohibited uses and activities in each zone. A local law or ordinance should be enacted for the adoption of the coastal use plan and zoning scheme. This zoning ordinance may include registration, permitting, licensing and user fee collection.

The coastal use zoning process should consider best available scientific information and have stakeholder participation. Coastal use zoning should consider the following:

- a) formation of an interagency, multi-sector task team/committee to coordinate and guide the development of the coastal use zoning plan and scheme;
- b) identification of zoning needs and goal setting; and
- c) preparation of the zoning plan and scheme in accordance with the following steps:
 - Compilation of existing policies, zoning schemes, land use plans, sector plans and development plans;
 - Analysis of the biophysical characteristics of the area;
 - Delineation of risks as a consequence of natural and man-made hazards;
 - Identification of multi-use conflicts in the coastal area;
 - Identification of appropriate uses based on the needs and goals, multiple-use conflicts and other situations;
 - Determination of the zoning plan for land and water capability and suitability; and
 - Establishment of institutional mechanism for administration, monitoring and enforcement of the zoning scheme.

The coastal use zoning scheme should be integrated into the local government's land use plan (if existing) to harmonize the multi-sector development plans, uses and activities in watershed and coastal areas, covering both lands and waters.

7.0 IMPLEMENTATION

7.1 Sustainable Development Aspects Program

The local government establishes, coordinates and implements programs to address significant sustainable development aspects, in accordance with the CSIP.

Guidance Notes

Programs to address sustainable development aspects should include:

- a) a management plan, including objectives, targets, strategies and time table;
- b) personnel allocation, including designation of responsibility for achieving objectives and targets;

- c) allocation of resources, including infrastructure, equipment and budget or necessary financing mechanism to support the implementation of the sustainable development aspect programs;
- d) an institutional mechanism to facilitate continual implementation of action programs;
- e) monitoring and reporting of program implementation, performance and achievement of objectives and targets; and
- f) specifications for documentation requirements for the development and implementation of programs.

7.2 Roles and Responsibilities

The local government defines, documents and communicates the roles, responsibilities and authorities of local government personnel performing the development, coordination, implementation and maintenance of the programs to address significant sustainable development aspects within the scope of the ICM system.

Guidance Notes

The functions, responsibilities and authorities of the personnel involved in the ICM system and its programs should be clearly described.

Documentation of roles and responsibilities can be done in several ways, including, for example:

- a) preparing an organizational chart indicating the hierarchy level and communication lines;
- b) preparing job descriptions;
- c) defining and documenting responsibilities in process procedures and/or other management documents;
- d) issuing announcements or memoranda; and/or
- e) making use of existing documentation (e.g., local government legislation).

7.3 Capacity Development

The local government determines the capacity needs for personnel performing work affecting the implementation of the ICM system, and prepares and provides a responsive capacity development program.

Guidance Notes

Personnel performing specified ICM-related tasks should have the necessary education, training, skills, and experience required for the implementation of ICM system.

The local government should establish procedures for systematically determining the capacity needs of such personnel.

In order to ensure the availability of competent personnel, local governments may consider implementing the following practices:

- a) specifying job profiles for key positions, including educational qualifications;
- b) defining the required competence (e.g., training, skills and experience), multidisciplinary work, interagency coordination, stakeholder consultation and resource mobilization;
- c) monitoring and evaluating the performance of personnel; and
- d) keeping records of job performance

The local government in partnership with stakeholders should develop and implement a capacity development program for maintaining and improving the capacity of personnel who are performing work for the implementation of the ICM system.

Strengthening the skills and competence of personnel implementing the ICM system can be facilitated through local government actions and programs to:

- a) determine training or other needs by comparing the job requirement with the current competence levels of the personnel;
- b) implement awareness programs to familiarize personnel with the ICM policy, objectives and targets, and the action programs to achieve them;
- c) organize training programs or other activities needed to ensure the availability of competent personnel, such as on-the-job training, appropriate supervision and coaching until personnel become fully competent, or hiring of new personnel with the necessary competence;
- d) assess the results of training and other actions performed to determine the benefits to ICM system implementation; and
- e) review the training needs and determine further actions as necessary.

The local government should evaluate the effectiveness of the capacity development program and maintain appropriate records of the education, training, skills and experience of people involved in the implementation of the ICM system.

Some of the basic training requirements associated with ICM system development include:

- a) ICM development and implementation;
- b) ICM policy development;
- c) Stakeholder identification and analysis;
- d) Environmental profiling/SOC baseline development;
- e) Information management;
- f) Communication planning and implementation;
- g) Coastal strategy/implementation plan development; and
- h) Institutional analysis and development

As the ICM system moves into full implementation, specialized training courses may be needed for personnel to acquire appropriate skills necessary to ensure the efficiency and effectiveness of programs, covering issues such as: risk assessment; disaster prevention and management; coastal use zoning; habitat rehabilitation and management; water use and supply management; waste management; pollution reduction; etc.

A process of recognition may be developed as a means of acknowledging and providing incentives for personnel and organizations that contribute to the effective implementation of the ICM system.

The local government should also establish an information and knowledge sharing mechanism by developing means to disseminate information such as community events, newsletters, websites and other means.

7.4 Legal Arrangements

In order to institutionalize the ICM system and the implementation of management programs for its sustainable development aspects, the local government develops and adopts local laws and/or ordinances, as authorized and appropriate, and in line with applicable national legal and/or policy requirements.

Guidance Notes

Legal arrangements are put in place to ensure that executing agencies have the necessary authority and responsibility to implement the ICM system.

The local government should enact local laws, ordinances and/or decisions to facilitate the institutionalization and mainstreaming of ICM programs into the local government economic development agenda, including for example:

- a) institutionalizing the interagency, multi sectoral coordinating mechanism and coordinating office to oversee, coordinate, evaluate and make recommendations for continual improvement of the local government's ICM policy, strategy, objectives and targets and implementation program for sustainable coastal development and management;
- b) CSIP activities in the local government's regular budget allocations;
- c) adoption of the coastal use zoning plan and/or integration of the plan with the existing land use development plan;
- d) a conflict resolution process;
- e) control of industrial and commercial activities in the coastal area;
- f) control of recreational activities
- g) protection of areas of ecological, natural, historical and/or cultural value;
- h) pollution reduction and waste management;
- i) coastal erosion and soil protection;
- j) coastal hazards and high hazard coastal areas;
- k) monitoring and sanctions of permits;
- l) appropriate economic instruments, such as service and environmental fees, fines and incentives;
- m) stakeholder participation, including participation/investment by the private sector;
- n) training and education of local government personnel and managers, who are responsible for ICM development and implementation processes; and
- o) environmental education and awareness building among the general public, including schools.

The local government should also identify regulatory requirements applicable to the ICM system and ensure compliance with these requirements. To keep track of legal requirements, the local government can establish and maintain a list of laws and regulations pertaining to the implementation of activities, processes and programs of the ICM system (i.e., a legal register).

To facilitate the preparation and maintenance of a legal register, the local government should establish, implement and maintain a procedure(s) to identify and have access to legal and non-regulated requirements that are applicable to its activities, processes, environmental aspects and hazards.

The local government may also subscribe to voluntary requirements, other than legal requirements. These requirements may include: voluntary principles or codes of practice, international agreements, requirements of trade associations, agreements with community groups or non-governmental organization, public commitments, etc. Some of these commitments or agreements may apply to several issues of the ICM system, and the local government should exert efforts to identify and address such requirements.

7.5 Monitoring, Surveillance and Law Enforcement

The local government ensures that monitoring, surveillance, and enforcement of applicable legal and other requirements are implemented by the concerned agencies.

Guidance Notes

The local government and line agencies should ensure that they have the capability to implement the monitoring, surveillance and law enforcement process. This includes availability of competent personnel, equipment and other infrastructure needed to implement a monitoring and surveillance process.

7.6 Information and Public Awareness

The local government communicates the ICM vision, mission, desired outcomes, objectives, programs and accomplishments of the ICM system.

The local government facilitates internal communications between and among the different sections of the local government, as well as external communications to concerned stakeholders.

Guidance Notes

Communication aids in the effective implementation of the ICM system and leads to improved ICM system performance. Communication is a two-way mechanism for sharing information, experience, feedback and insights among the various stakeholders.

The local government should develop and implement a communication plan to raise awareness, motivate and help people/institutions maintain good environmental practices,

make correct decisions, and be active participants and collaborators in planning and implementation of ICM and various action programs.

Procedures should be established, implemented and maintained for:

- a) communicating information on the ICM system to achieve improved ICM awareness and understanding;
- b) disseminating the coastal strategy and coastal strategy implementation plan;
- c) communicating the potential benefits of implementation of, and/or consequences of non implementation of, the ICM system;
- d) facilitating the continual improvement and scaling up of the system;
- e) mainstreaming the system into the local training and educational programs;
- f) promoting networking and coordination among information originators and users;
- g) enhancing stakeholders' willingness to share resources for program implementation;
- h) assessing feedback and satisfaction level of stakeholders, including complaints and suggestions; and
- i) verifying corrective and preventive actions are being implemented to address problems encountered in the implementation of the ICM system.

Internal communications are communications between and among the different sections of the local government, including the coordinating office and the interagency multi-sectoral coordinating mechanism. Methods of internal communication may include meetings, bulletin board postings, internal news letters, suggestion boxes, websites, e-mail etc.

Communication with external parties is an important and effective tool for ICM system implementation. External parties include: the citizens, the companies, organizations and visitors to the ICM site.

The local government should encourage feedback and communication from stakeholders as a means of involving them. The local government should establish, implement and maintain procedures for receiving, documenting and responding to relevant communication from external parties.

7.7 Stakeholder Participation and Evaluation

The local government includes stakeholder participation throughout the development and implementation of the ICM system.

The local government assesses the perception and behavioral changes among stakeholders and evaluates and reports on the benefits and impacts.

Guidance Notes

The participation of stakeholders is a key contribution to the successful implementation of the ICM system. This is particularly significant at three stages of the ICM development and implementation process, namely:

- a) the development of the coastal strategy, including the formulation of a common vision for the coastal area and building consensus on desired outcomes, objectives and action programs for ICM;
- b) implementation of action programs, including participation/collaboration in the organization and conduct of projects/activities/events;
- c) monitoring and evaluating outputs, outcomes and impacts of the ICM program, and refining/scaling up the program.

The local government should establish a process and mechanisms to improve:

- a) stakeholder commitments to sustainable development;
- b) coordination and cooperation;
- c) multi-sectoral partnerships; and
- d) stakeholders' ownership of established policies and programs.

Advocacy and communication activities should also be implemented at various levels and across different sectors to gain commitment, support and involvement of stakeholders. Advocacy and communication activities can include:

- a) consultations, briefings, workshops and other meetings;
- b) notice-boards;
- c) use of mass media, e.g., newspapers, journals, magazine, audiovisual and electronic media (email/websites);
- d) survey and suggestion schemes;
- e) training;
- f) recognition, awarding and incentives; and
- g) intersectoral collaboration, including NGOs, youth, women, fisher folk, and others for planning and implementation of on-the-ground activities (e.g., coastal and river clean-up; mangrove planting; waste segregation and recycling; etc.).

In order to determine the effectiveness of its stakeholder awareness and participation program, the local government needs to identify the measurement requirements for assessing the perception and behavioral changes among stakeholders. This information can be acquired through:

- a) a survey of opinion of stakeholders toward the ICM program activities, outputs and outcomes; or
- b) an assessment of individual and collective performances and their contribution to the ICM programs.

The local governments should also establish procedures for evaluating and reporting the benefits and impacts of ICM system implementation. In evaluating the benefits of the ICM system, the local government should consider the compliance/performance indicators, the conduct of external audits and the measurement of progress among the ICM programs.

8. PERFORMANCE ASSESSMENT

8.1 Monitoring, Measurement and Evaluation

The local government monitors and measures, on a regular basis, the development and implementation of programs for the significant sustainable development aspects. The monitoring and evaluation covers:

- a) program performance;
- b) applicable operational controls;
- c) conformity with objectives and targets;
- d) fulfillment of the needs and expectations of stakeholders;
- d) compliance with applicable legal and other requirements; and
- e) the impacts of implementation.

The local government defines and implements effective measuring and monitoring processes, as appropriate for the ICM system, including the provision and use of verified and calibrated monitoring and measurement equipment and devices.

Guidance Notes

Once an ICM system has been developed and implemented, it is necessary to ensure that it is functioning as intended and that improvements can be made. This must take place on an on-going basis.

Monitoring involves collecting information, such as measurements or observations over a period of time. Measurements can be quantitative or qualitative. Monitoring and measurement can serve many purposes in an ICM system, such as:

- a) tracking the progress toward ICM policy commitments, objectives and targets (e.g., monitoring the implementation of the ICM system and the processes therein, including accountability for delivery of agreed targets and objectives within agreed timeframes and budget);
- b) evaluating the performance of sustainable development aspects programs (i.e., assessing the performance of the individual programs using appropriate process, status and outcome/impact indicators); and
- c) assessing the overall performance of the ICM system, with a view to continuous expansion in scope and scale over time (i.e., monitoring the outcomes, changes and impacts occurring as a consequence of ICM implementation, using appropriate sustainability and impacts indicators, and determining areas for improvement and expansion).

Monitoring can also be undertaken for research or learning purposes, or for establishing a baseline from which future measurable indicators can be established.

The results of the monitoring program should be analyzed and used to identify both successes and areas requiring correction or improvement.

In gathering and storing data it is recommended to establish/use a database system such as IIMS (see 4.4.3).

Monitoring, evaluation and reporting procedures should be established and implemented to check performance of individual processes, as well as the overall system, and to correct situations of non-conformance to planned arrangements, such as policy, objectives, targets, action programs and legal requirements.

The procedures should be implemented in order to enable the local government to determine the successful areas of the ICM system, as well as areas for corrective action and improvement, to prove conformance with planned arrangements, and to determine the satisfaction of stakeholders.

Measurement, analysis and improvement procedures should consider:

- a) analyzing and converting data into information and knowledge for transfer and benefit to the local government and the stakeholders;
- b) using information and knowledge to establish and review priorities of the ICM system;
- c) reviewing measurement methods and verifying data on a continual basis for accuracy and completeness;
- d) improving the effectiveness and efficiency of the concerned processes;
- e) measuring stakeholder satisfaction as an evaluation that is vital to ICM system performance;
- f) communicating information resulting from the analyses of the measurements;
- g) using appropriate statistical techniques to analyze data and evaluate performance; and
- h) conducting self assessment on a periodic basis to assess the maturity of the ICM system and the performance of the programs and projects.

The local government should keep records of the results of monitoring.

The results of monitoring and evaluation should be one of the inputs to the management review process, in order to provide information for improving the performance of the ICM system.

The local government should determine the monitoring and measurement requirements, and the monitoring and measuring instruments needed, to provide evidence of conformity to policy, objectives, targets, action programs and legal requirements. It then establishes processes to ensure that monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements. The processes can include direct measurements, surveys, simulations and other measurement and monitoring activities, as appropriate.

In order to provide confidence in data, the measuring and monitoring process should include calibration or verification of instruments to ensure that they are fit for use and are maintained to suitable accuracy and accepted standards. The local government should establish which monitoring and measurement instruments need to be calibrated or verified, and the degree of accuracy, error and frequency with which the calibration/verification should be done.

When a verification or calibration is necessary, the local government should establish verification/calibration methods and define the records to be maintained.

Where necessary to ensure valid results, measuring equipment should be:

- a) calibrated or verified at specified intervals, or prior to use against measurement standards traceable to national or international standards;
- b) adjusted as necessary;
- c) identified to enable calibration status to be determined; and
- d) protected from damage and deterioration.

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application is confirmed.

Control of monitoring and the required measuring instruments should be performed by qualified and impartial personnel.

9. IMPROVEMENT

9.1 Refining and Adapting

The local government reviews the effectiveness of the sustainable development aspect program(s) at planned intervals to ensure their continuing suitability, adequacy and effectiveness by:

- a) assessing the results of monitoring and evaluation relative to the objectives and targets of each program and the CSIP;
- b) communicating with internal and external stakeholders to determine levels of understanding, awareness and satisfaction with the implementation of the programs and the CSIP and their impacts;
- c) identifying changing circumstances, including developments in legal and other requirements, related to the sustainable development aspects;
- e) identifying areas for improvement; and
- d) taking actions to improve performance.

Guidance Notes

The local government can follow the “Plan-Do-Check-Act” cycle of the ICM Development and Implementation Process (Figure 1) in initiating continual improvement of the sustainable development aspects. This can be done by assessing the program’s achievements, outcomes and impacts and refining the program’s goals, approaches and activities. The Coastal Strategy, the Coastal Strategy Implementation Plan, the operational mechanism (e.g. institutional set-up, financial mechanism, human resources and management capacity) and sustainable development aspects programs may also be refined and improved as a result of actual implementation and continuous feedback from stakeholders.

At this stage the local government should update the State of the Coasts (SOC) report to consolidate the program’s achievements and take stock of the resulting changes. These assessments will aid in planning for the next ICM program cycle.

The local government should initiate the next ICM program cycle by formulating and implementing a revised action program based on experiences and the foundation of the previous program. The new cycle should also address the challenges of scaling-up the ICM program with regard to the following:

- a. geographic expansion of the existing ICM program, such as replicating ICM in other coastal areas within the jurisdiction of the local government;
- b. functional expansion of ICM with regard to management issues, including the linking coastal management and watershed and the river basin management; and
- c. temporal consideration or making the ICM part of government programs instead of being implemented as a separate project.

9.2 Corrective and Preventive Measures

The local government reviews and continually improves the sustainable development aspect program(s) within the ICM system, identifying actual and potential non-conformities and taking preventive and corrective actions as appropriate.

The local government ensures that the results of the sustainable development aspects program review, including the extent to which the program objectives and targets have been met, along with the status of corrective and preventive actions, are provided as input to the Management Review.

Guidance Notes

The local government should continually seek to improve the effectiveness of the ICM system to enable it to achieve its defined objectives. This requires involvement of all personnel and stakeholders in identifying areas for improvement in their activities.

The local government should establish a procedure for identifying and making improvements to the ICM system, covering:

- a) investigating nonconformities within the ICM system, determining their cause(s) and taking actions in order to avoid their recurrence;
- b) evaluating the need for action(s) to prevent nonconformities and implementing appropriate actions designed to avoid their occurrence;
- c) identifying and correcting nonconformities and taking action to prevent and mitigate their adverse social, economic and environmental impacts;
- d) recording the results of corrective actions and preventive actions taken; and
- e) reviewing the effectiveness of corrective actions and preventive actions taken.

Actions taken should be appropriate to the magnitude of the problems and the impacts encountered.

The local government should ensure that any necessary changes to ICM system documentation, resulting from the corrective and preventive actions, are recorded.

Methods/sources to identify potential improvements in the ICM system include:

- a) evaluation of the awareness of all stakeholders towards the ICM system its vision, mission, objectives and programs;
- b) performance and achievement of its objectives;
- c) process implementation results;
- d) monitoring and evaluation reports;
- e) inputs from stakeholders;
- f) complaints received;
- g) results of audits; and
- h) non-conformities identified in the monitoring and measurement of the ICM system.

Corrective and preventive actions should be properly documented, recorded and properly communicated to ensure effective implementation

10. MANAGEMENT REVIEW

10.1 ICM System Review

The interagency multi-sectoral coordinating mechanism reviews the ICM system at planned intervals, to ensure its continuing suitability, effectiveness and sustainability. The review includes assessing opportunities for improvement and the need for changes to the ICM system, including the local government's ICM policy, objectives and targets, based on continual improvement and adaptive learning.

The interagency multi-sectoral coordinating mechanism recommends the necessary actions for improvement of the ICM system to the local government and to other concerned stakeholders.

Guidance Notes

The Interagency Multi-Sectoral Coordinating Mechanism composed of representatives of relevant government and non-government sectors established by the local government should conduct a regular review of the ICM system. The result of the review should be used by the Interagency Multi-Sectoral Coordinating Mechanism for coordination of activities related to policy making, planning, implementation, monitoring, evaluation and improvement of the system.

Inputs to Management Review should include:

- a) results of internal audits and evaluation of compliance;
- b) communication with citizens and other stakeholders, including complaints, requests and results of surveys;
- c) resource utilization for system implementation and operation;
- d) results of monitoring and evaluation of ICM system performance including the extent to which objectives, targets, outputs and outcomes have been met;
- e) status of corrective and preventive actions;
- f) follow-up actions from previous management reviews;

- g) changing circumstances, political and administrative changes and development of legal and other requirements related to the ICM system; and
- h) recommendations for improvement.

The outputs from Management Reviews should include proposed changes to ICM policy, strategies, objectives and targets, actions and other elements of the ICM system, as appropriate, consistent with the commitment to continual improvement and sustainable development.

The Interagency Multi-Sectoral Coordinating Mechanism should recommend the necessary actions for the improvement of the ICM system to the local government and to other concerned stakeholders.

Records of the Management Review should be maintained.

The local government, which has the mandate for the implementation of activities within the local government jurisdiction, should consider initiating the necessary actions based on the recommendation of the Interagency Multi-Sectoral Coordinating Mechanism at operational and strategic levels in order to facilitate the continual improvement of the ICM system.