Integrated Watershed & Coastal Areas Management In Caribbean SIDS

INDICATORS TEMPLATE

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PRESENTATION OUTLINE

- **Objectives**

- **Criteria for inclusion of indicators in template**

- **Template: PIs**

- **PI descriptions**

- **IWCAM objectives & concerns (SRIs & ESIs)**

- **Template: SRIs and ESIs**

- **SRI and ESI descriptions**

Indicator Themes

Enabling Environment

- Vision
- Policy
- Legislation
- Coordination
- Commitment
  - Legal
  - financial
- Financial support
- Reallocation of authority
- Granting/delegating responsibility

Institutional Environment

- Strategy
- Management
- Mechanisms & Processes
- Resources
- Human resources
- Training
- Enforcement
- Participation
- Public awareness
- Monitoring & Evaluation
- Data & information

Levels of Assessment

- Indicators were developed to assess response at three levels:
  - Regional
  - National
  - Local

SELECTION CRITERIA FOR PROCESS INDICATORS

- Relevance to project and programmatic IWCAM objectives
- Contribute to the fulfillment of project and MEA reporting obligations
- Able to be monitored regularly , easily & cost effectively
- Assess progress in IWCAM project activity
- Assess the extent to which the project is addressing and solving the problems that catalyzed its creation
- Assist in tracking domestic and regional institutional, policy, legislative, and regulatory reforms necessary to produce the IWCAM project outcomes.
  - Indicate the completion of the institutional processes that will result in joint action on needed policy, legal and institutional reforms and investment required to reduce environmental stress.
  - Measure the responses to mitigate human pressures on the environment and ameliorate its state as well as improve the socioeconomic conditions of coastal communities.
- Assess the progress and quality of the governance process essential to the sustainability of IWCAM programme

PROCESS INDICATORS TEMPLATE

- Core and supplementary *Process Indicators* were arranged by thematic area and geo-political level (regional, national, local)

- Major relevant frameworks shown for core indicators

- Core indicators are those that were judged to be most pertinent to tracking and verifying IWCAM project objectives and outcomes and relevant to national, regional and international frameworks and for which some data already available

- Brief descriptions (meaning, rationale, policy relevance, data and lead agencies, comments) are provided for 12 core PIs that are most relevant to the principal regional and international frameworks, and considered to be very pertinent to IWCAM.

- Indicator descriptions came from a number of sources and adapted to Caribbean SIDS

ENABLING ENVIRONMENT: Policy and Legislation	
Regional	***Existence and adequacy of policies and legislation enabling IWCAM*** •Appropriate policy and legislation in support of IWCAM objectives adopted at the regional level. •Sustainable political and financial mechanisms established to support coordination of IWCAM among PCs at the regional level. •Agreement by PCs to ratify and implement international conventions related to IWCAM (UNCCD, UNCBD, UNFCCC, and SPAW and LBS Protocols to the Cartagena Convention, the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, Ramsar Convention on Wetlands, CITES).
National	***The existence and adequacy of national policies and legislation enabling IWCAM*** • Reforms in policy, legislation and institutional arrangements in support of IWCAM. ***Existence status and coverage of national IWCAM, policies, legislation, plan, and strategy.*** •The coordinated implementation of sectoral initiatives in support of IWCAM. •National Land Use and Planning policies enacted that incorporate IWCAM principles. ***Ratification and implementations of all IWCAM-relevant regional and international conventions*** •Enabling legislation enacted to facilitate compliance with international and regional environmental conventions. •Regulations enacted to support compliance with International and regional environmental conventions. •National plan and strategy for the effective enforcement of environmental regulations is developed and enacted. •Legislation for mandatory Environmental Impact Assessments (EIA) enacted.

ENABLING ENVIRONMENT: Institutional

Regional	*Regional IWCAM Strategy endorsed by PC Government.* *The existence and functioning of a representative Regional coordinating mechanism for IWCAM.*

- IWCAM regional mechanism adopted and supported by regional agreements and institutes.
- Establishment of an inclusive and representative regional Partnership Forum for IWCAM related issues with strong input from private sector and other potential funding partners.
- Partnership Forum meets on regular basis and provides positive recommendations which are put into action.
- Regional IWCAM Strategy Developed
- Effective regional cooperation and sharing of information and lessons on IWCAM.
- Development and transfer of more appropriate technologies and IWCAM-related techniques.

National

High-level steering committee established to oversee and coordinate the preparation and implementation of a National IWCAM plan and strategy (oversight).

Inter-ministerial Committees established to engage ministries with IWCAM responsibilities (coordination).

Inclusive, participatory, national integrated watershed management council established
Active management in areas covered by IWCAM plans.

- An integrated management mechanism for IWCAM is developed and implemented.
- National framework established to make operational the coordinated and integrated management of watersheds and coastal areas.
- Annual strategic management assessment conducted to ensure that management effort, resource allocation (human, material, and financial) and skills levels are
- IWCAM plans developed and implemented for major watersheds.

National sustainable development policy incorporates IWCAM principles.
- National Sustainable Development Councils convene at least twice a year (ILAC).

National IWCAM training-needs assessment and skills development programme approved and implemented.
- National IWCAM training-needs assessment and skills development programme.

ENABLING ENVIRONMENT: Stakeholder Participation

Regional	***Level of stakeholder participation in IWCAM and satisfaction with IWCAM outcomes*** • Stakeholder participation is institutionalized and adopted as policy within IWCAM. • Regional participatory IWCAM policy and process enacted. • Stakeholder identification processes established and completed (e.g. regional representatives from the private sector, tertiary and research institutions, labour organizations, environmental NGOs, agriculture, fisheries, Gender Interests groups, professional organizations such as (engineers, lawyers, water and waste water management, etc.). • Special provisions made to address traditionally under-represented groups (e.g. poor, indigenous, women)
National	***Level of stakeholder participation in, and satisfaction with IWCAM decision-making process.*** • National participatory watersheds and coastal areas management policy and plans enacted. • Documentation of stakeholder involvement in preparation & creation of stakeholder involvement plan. • Representative involvement of broad spectrum of stakeholders in project activities and development, especially key decision makers and traditionally under-represented groups. • Project activities and deliveries targeting the strengthening of stakeholder input and management participation. • Number of NGO and CSO programmes and action plans addressing IWCAM by year four of the IWCAM Project.
	Suitably skilled CSOs and NGOs assist in stakeholder identification, needs assessment, conflict management and capacity development processes at the regional, national and local levels.
Local	***NGOs, CSOs, and CBOs, actively involved in IWCAM*** • Stakeholders understand the roles and responsibilities of stakeholders and authorities by year five. • Number of CSOs, NGOs, and community groups actively involved WCAM. • Evidence of increased levels of understanding and commitment of local authorities and communities to IWCAM objectives • Community based natural resources management programme implemented in at least 20% of watershed communities by 2012 • Community forestry wardens appointed in major watersheds by 2010.

EXAMPLE OF INDICATOR SHEET

Indicator	**Regional coordinating mechanism for IWCAM**
Definition & meaning	**The existence of a functioning and representative Regional coordinating mechanism for IWCAM**
Rationale	**A regional coordinating mechanism is required to facilitate the evolution of the current IWCAM initiative from a short-term, project-based approach to IWCAM capacity development and implementation to a sustained programmatic approach.** **A regional coordinating mechanism will facilitate the coordination of the different regional actors influencing coastal, marine and terrestrial areas and resources and facilitate the coordination representation of the relevant national and intergovernmental stakeholders**
Policy relevance	**Agenda 21, WSSD.**
Data & lead agencies	**Formal mandate, official documents, meeting records.** **CARICOM, National agencies with IWCAM-related responsibilities, Ministries of Foreign Affairs**
Comments	

EXAMPLE OF INDICATOR SHEET

Indicator	**National coordinating mechanism for IWCAM.**
Definition & meaning	**The existence of a functioning and representative national coordinating mechanism for IWCAM**
Rationale	**A coordinating mechanism will facilitate the mainstreaming of IWCAM principles and approaches into sectoral polices and plans by incorporating the best practices, lessons learned, and capacities acquired through the IWCAM project in a sustained programmatic institutional framework.** **A coordinating mechanism will facilitate ensure the coordination of the different national actors influencing coastal, marine and terrestrial areas and resources and facilitate the coordination representation of the relevant stakeholders in the policy, planning and implementation processes.**
Policy relevance	BPOA, Agenda 21, WSSD Johannesburg Plan of Implementation
Data & lead agencies	Formal mandate, official documents, meeting records. Agencies with IWCAM responsibilities.
Comments	

EXAMPLE OF INDICATOR SHEET

Indicator	National IWCAM plan and strategy.
Definition & meaning	An IWCAM plan that details goals and objectives, the institutional arrangements, and management measures to be undertaken to achieve the stated goals and objectives, the legislative and financial mechanisms established to enable effective action.
Rationale	To provide an inclusive and transparent roadmap to facilitate and guide the coordinated mainstreaming of IWCAM in national policy and planning processes. The national IWCAM plan reflects the commitment of the relevant government agencies, private sector and civil society stakeholders to adopt an integrated, multi disciplinary, multi-sectoral approach to the management of watersheds, coastal, and marine areas.
Policy relevance	BPOA, FAO Code of Conduct, Agenda 21, WSSD Johannesburg Plan of Implementation, UNCCD, UNCBD, UNFCCC, and SPAW and LBS Protocols to the Cartagena Convention, the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, Ramsar Convention on Wetlands, CITES.
Data & lead agencies	Official documents, meeting records, reports, financial estimates, budgets, M&A reports, enforcement records. Government agencies with IWCAM responsibilities.
Comments	

OBJECTIVES

Identify an indicator framework consisting of SRI, ESI/SEI, PIs, to:

- Monitor changes in the state of the watershed and coastal environments

- Monitor trends in socioeconomic pressures and conditions in watershed communities and coastal towns

- Assess the efficacy of IWCAM in addressing these issues and mitigating harmful impacts, both during the project and in the post-project period.

It is hoped that the relevant indicators would be adopted and tracked by the participating countries, according to their particular circumstances and needs.

Stress Reduction
&
Environmental State Indicators

SELECTION OF INDICATORS

Criteria for inclusion of indicators in template:

- *Objectives and expected outcomes of the overall GEF-IWCAM project and of the demonstration projects*. **These objectives and outcomes reflect national IWCAM and sustainable development issues in the participating countries, as revealed in a number of reports and documents.**

- *Relevance to other regional and international frameworks.* **A number of relevant frameworks exist, e.g. OECS St. George's Declaration, ILAC, MEAs, MDGs, under which indicators are being developed. Where possible, the core indicators are common to regional and international frameworks and initiatives, so that they represent a common tool to assist governments in meeting international requirements for reporting and avoid imposing an unnecessary burden on governments and other partners.**

- *Availability of data for compiling the indicators*. **A number of initiatives for developing environmental statistics have been undertaken in the Caribbean, at the national and regional levels. The indicators mechanism assessment in Part I revealed the existence of several indicator mechanisms and associated data and information related to a number of themes pertinent to IWCAM.**

SELECTION CRITERIA FOR ENVIRONMENTAL INDICATORS

Each indicator should meet as many of these criteria as possible:

- Serve as a robust indicator of environmental change;
- Reflect a fundamental or highly valued aspect of the environment;
- Be either national in scope or applicable to regional environmental issues of national significance;
- Provide an early warning of potential problems;
- Be capable of being monitored to provide statistically verifiable and reproducible data that show trends over time and, preferably, apply to a broad range of environmental regions;
- Be scientifically credible;
- Be easy to understand;
- Be monitored regularly with relative ease and cost-effectiveness;
- Have relevance to policy and management needs;
- Contribute to monitoring of progress towards implementing commitments in nationally important environmental policies;
- Where possible and appropriate, facilitate community involvement;
- Contribute to the fulfillment of reporting obligations under international agreements;
- Where possible and appropriate, be consistent and comparable with other countries' indicators.

(adapted from Commonwealth of Australia 1994)

'SMART' INDICATORS

"SMART" concept of indicators:

- **S**imple (easily interpreted and monitored)

- **M**easurable (statistically verifiable, reproducible and show trends)

- **A**ccessible (regularly monitored, cost effective and consistent)

- **R**elevant (directly address issues or agreed objectives)

- **T**imely (provide early warning of potential problems)

IWCAM OBJECTIVES & CONCERNS

Based on the GEF IWCAM project document and the demonstration projects, 6 major IWCAM objectives and 18 concerns were identified for the SRIs and ESIs:

1. Sustainable water resource use
- Declining water resources; human health risks

2. Conservation of ecosystems and natural living resources
- Vegetation cover loss
- Land degradation
- Coral reef degradation/loss
- Mangrove degradation/loss
- Seagrass degradation/loss
- Biodiversity loss
- Beach loss
- Unsustainable fisheries exploitation
- Unsustainable tourism development

3. Improved agricultural practices
- Unsustainable agricultural practices

4. Pollution control/reduction
- Solid waste
- Industrial waste
- Sewage/domestic wastewater
- Atmospheric emissions

5. Improved water quality
- Reduction in quality of coastal/marine waters
- Reduction in quality of freshwater

6. Reduction in exposure to natural disasters
- Increased vulnerability to natural disasters

INDICATORS TEMPLATE

- Core and supplementary SRIs, ESIs/SEIs were arranged according to these objectives and concerns

- Major relevant frameworks sown for core indicators

- Core indicators are those that were judged to be most pertinent to IWCAM and are relevant to national, regional and international frameworks and for which some data already available

- Brief descriptions (meaning, rationale, policy relevance, data and lead agencies, comments) are provided for 42 core SRIs and ESIs/SEIs that are most relevant to the principal regional and international frameworks, and considered to be very pertinent to IWCAM.

- Indicator descriptions came from a number of sources and adapted to Caribbean SIDS

INDICATORS (numbers)

OBJECTIVES	SRIs		ESIs	
	Core	Suppl	Core	Suppl
Sustainable water resource use	7	2	7	-
Conservation of ecosystems and natural living resources	24	17	25	10
Improved agricultural practices	3	2	3	-
Pollution control/reduction	16	8	9	-
Improved water quality	4	-	8	-
Reduction in exposure to natural disasters	2	-	5	-
TOTALS	56	29	57	10

EXAMPLE OF INDICATOR SHEET

Indicator	Reduction in pollution loads to coastal areas
Definition & meaning	Measures the total annual volume of pollution loads entering coastal areas from point and non-point sources. It captures the risk to coastal ecosystems and living marine resources, as well as to users of coastal areas, from land-based pollution.
Rationale	Land-based sources of pollution are estimated to account for 80 - 85% of marine pollution in the region (OECS/UNDP 1994). These include industrial, residential, and agricultural sources from which pollutants are transported to the coast in streams and water run-off by leaching and infiltration in the soil as well as direct discharges to the sea. Several coastal hotspots have been identified in some of the larger industrialized islands (Siung-Chang 1997) and are related to direct point or non-point pollution discharges. Pollution of coastal areas not only impacts on the structure and function of sensitive ecosystems such as coral reefs, but could contaminate seafood and harm humans and marine organisms through direct contact, and reduce the aesthetic value of coastal areas.
Policy relevance	GPA; Landbased Sources Protocol (Cartagena Convention)
Data & lead agencies	Relevant Ministries, IMA, CEHI, UNEP CAR/RCU….
Comments	Input from non-point sources difficult to measure - may require proxy indicators. See indicators related to coastal water quality, waste management, agricultural practices

BREAK OUT GROUPS

Refer to Handout 2 for guidance on break out group discussions

THANK YOU