



# **Implementation of GEF projects as a tool for ecosystem-based management**

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# We will briefly touch the following:

1. What is GEF?
2. LME concept
3. GEF approach: TDA and SAP
4. A few examples of GEF IW projects

**Disclaimer:** this is NOT an official GEF presentation!!!

# Acknowledgments/credits

## **LME concept:**

- LME website ([www.edc.uri.edu/lme/default.htm](http://www.edc.uri.edu/lme/default.htm));
- Kenneth Sherman (NOAA);
- Alfred Duda (GEF).

## **TDA and SAP concept, GEF project examples:**

- GEF website ([www.gefweb.org](http://www.gefweb.org));
- IW LEARN project ([www.iwlearn.net](http://www.iwlearn.net));
- David Aubrey (WHG);
- Vladimir Mamaev (UNEP/GEF).



# 1. What Is the Global Environment Facility?



The Global Environment Facility was established to forge international cooperation and finance actions to address critical threats to the global environment. The facility that emerged after restructuring after the Earth Summit in Rio de Janeiro was more strategic, effective, transparent, and participatory. In 1994, 34 nations pledged \$2 billion in support of GEF's mission; in 1998, \$2.75 were allocated to protect the global environment and promote sustainable development. In 2002, third replenishment has been made.



## **The Global Environmental Facility (GEF) has been established in 1991 by:**

- United Nations Environment Programme (UNEP),
- United Nations Development Programme (UNDP),
- World Bank (WB).

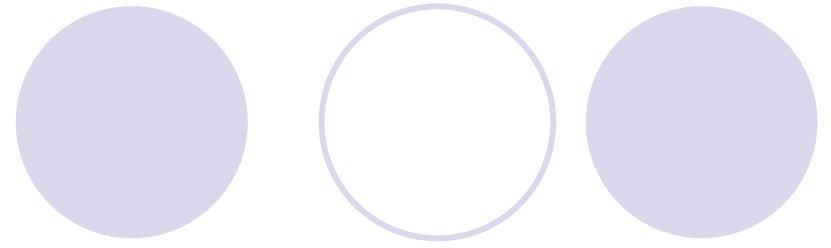
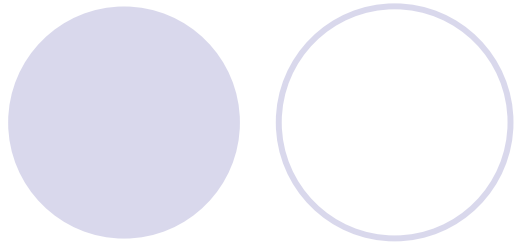
## **Priority sectors of GEF projects are as follows:**

- **International Waters (IW),**
- Biodiversity,
- Climate Change,
- Ozone Layer,
- Land Degradation,
- Persistent Organic Pollutants (POPs).



*We will talk about this!*

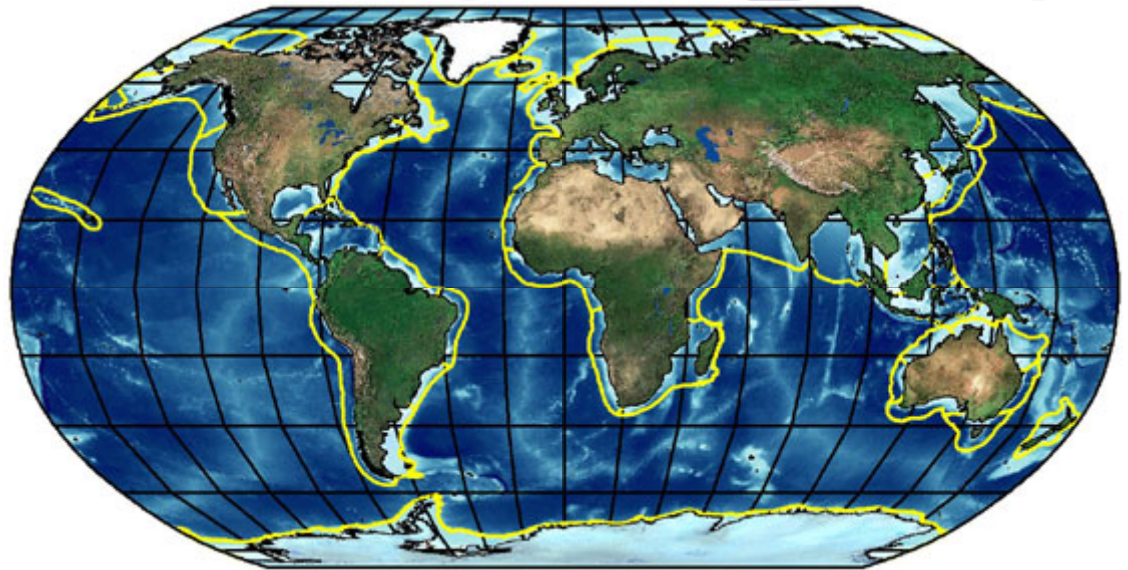




## 2. Large Marine Ecosystem (LME) concept

- Home
- Introduction
- LME Modules
- Publications
- News and Events
- Maps and Data
- Other Projects
- Contacts

## Large Marine Ecosystems of the World



### Sponsors



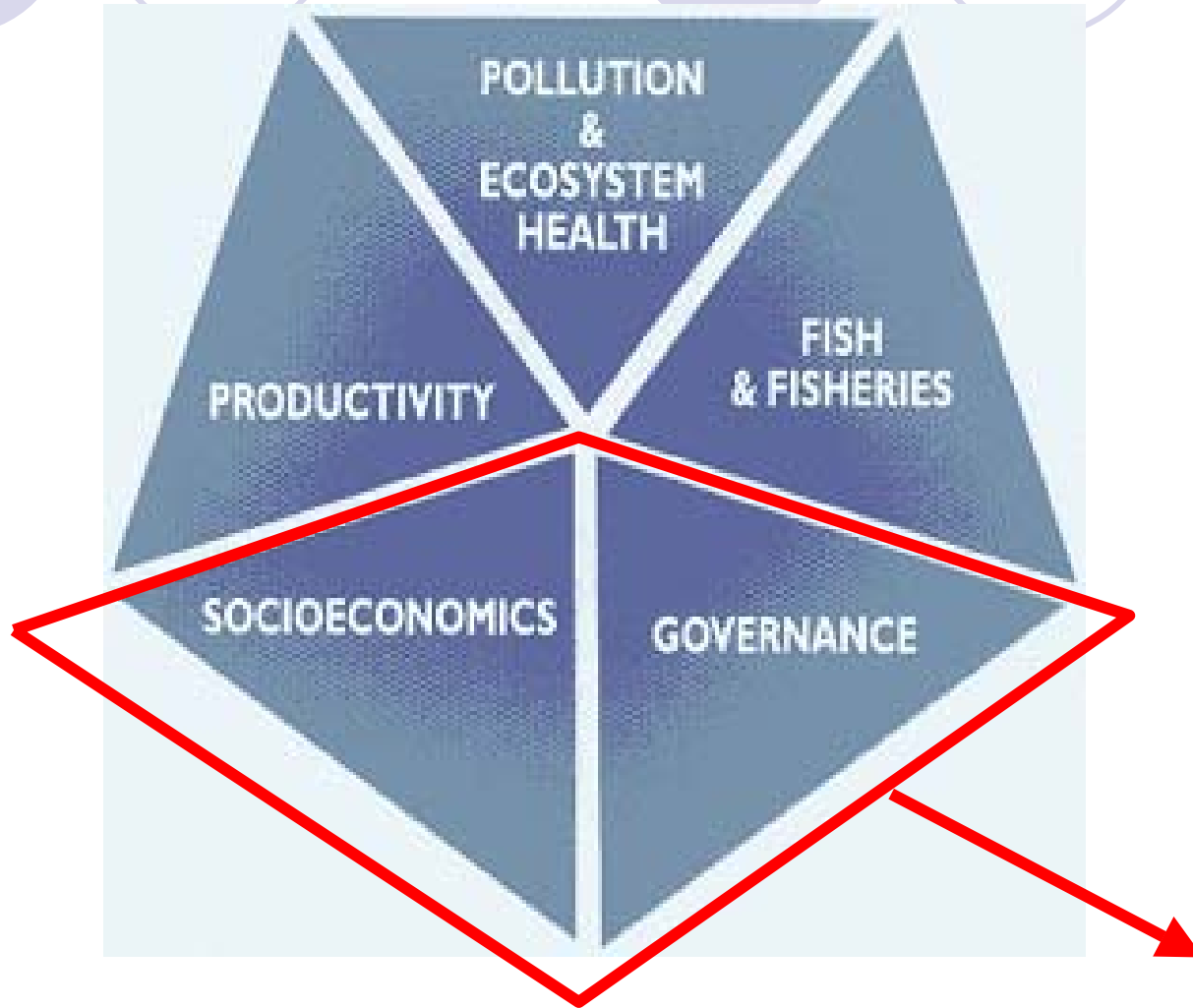


# GEF LME projects

- There are 64 LMEs in the World Ocean
- GEF has provided/allocated funds to implement 17 LME projects with more than 100 countries involved
- Average project cost is between \$5M and \$15M



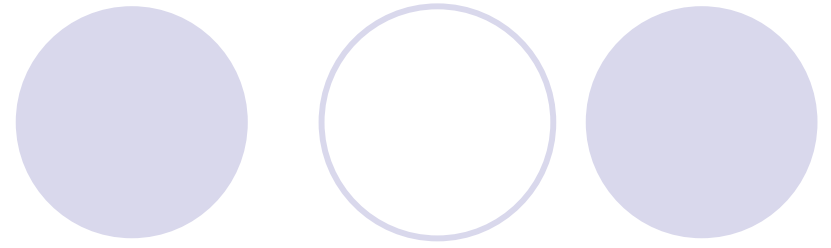
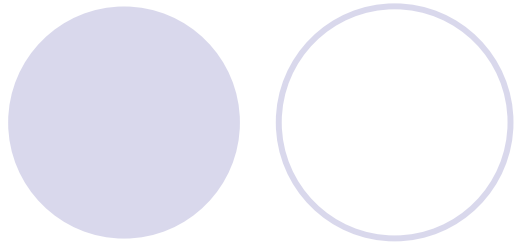
# Five LME modules






## **LME modules:**

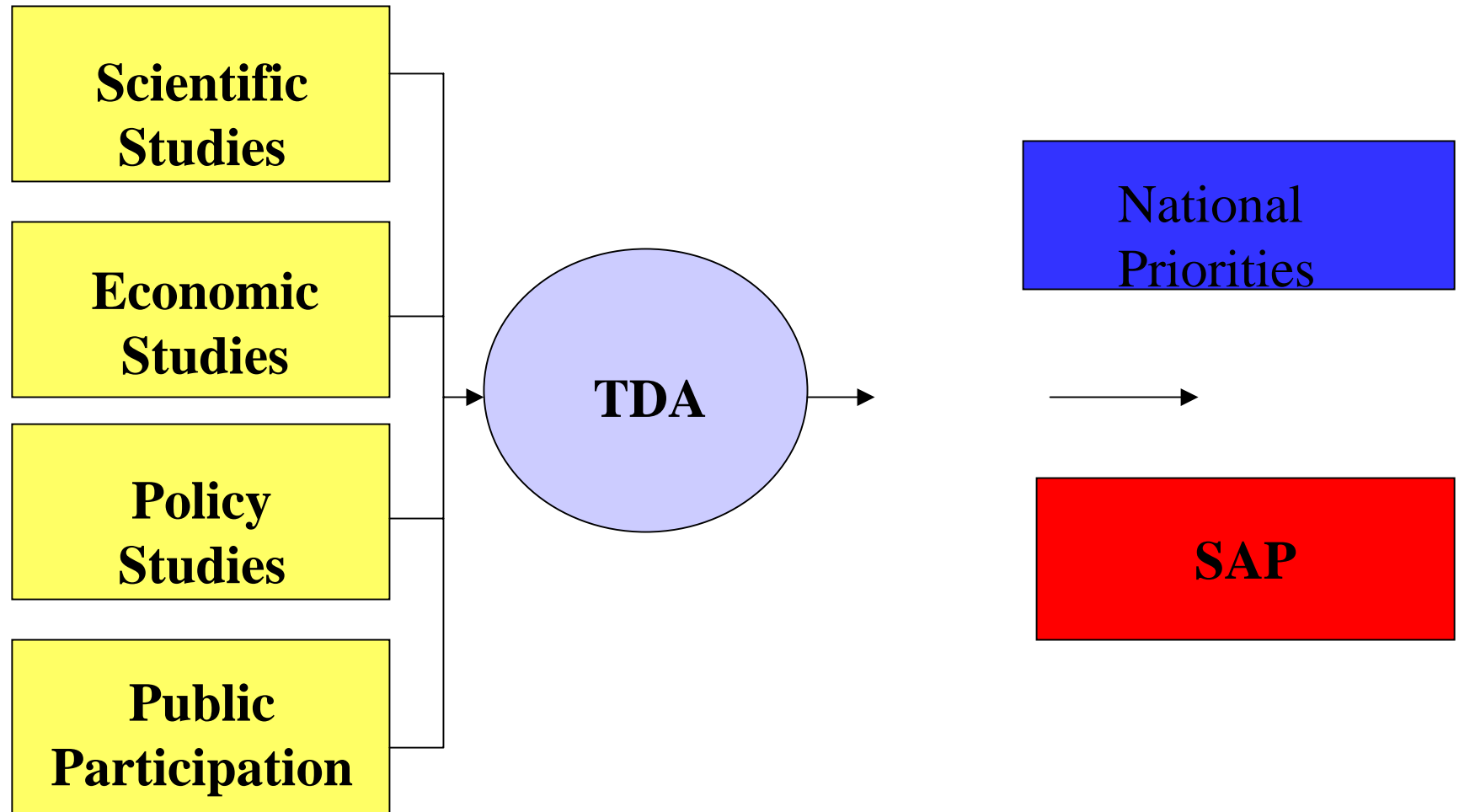
- 1. Productivity** (*photosynthetic activity, zooplankton biodiversity, oceanographic variability*),
- 2. Fish and fisheries** (*biodiversity, finfish/shellfish, demersal/pelagic species*),
- 3. Pollution and health** (*eutrophication, biotoxins, pathology, emerging disease*),
- 4. Socioeconomics** (*integrated assessments, human forcing, long-term sustainability, socioeconomic benefits*),
- 5. Governance** (*stakeholder participation, adaptive management*)



### 3. GEF approach: Transboundary Diagnostic Analysis (TDA) / Strategic Action Programme (SAP)

- 
- **One of the two** principal processes used by the GEF to engage the science community in each of the participating countries for establishing ecosystem-based priorities for transboundary issues is the Transboundary Diagnostic Analysis (**TDA**).
  - **The other** process, known as the Strategic Action Programme (**SAP**), enables cooperating nations to jointly determine what policy/legal/institutional reforms and investments they need to make to address the TDA priorities.

# TDA/SAP process



# Transboundary Diagnostic Analysis

The purpose of conducting a Transboundary Diagnostic Analysis (TDA) is to scale the relative importance of sources and causes, both immediate and root, of transboundary 'waters' problems, and to identify potential preventive and remedial actions. The TDA provides the technical basis for development of a Strategic Action Programme (SAP) in the focal area of international waters (IW) of the GEF.

# TDA definition



A TDA is a scientific and technical assessment through which the water-related environmental issues and problems of a region are identified and quantified, their causes analyzed and their impacts, both environmental and economic, assessed. The analysis involves an identification of causes, and impacts at national, regional, and global levels and the socio-economic, political and institutional context within which they occur. The identification of the causes would specify sources, locations, and sectors. A key component of a TDA is the identification of the transboundary nature of the identified issues.



# Typical Outline for a TDA

- Geographic area and environmental boundaries;
- Geomorphology, hydrology and biophysical processes;
- Major environmental issues (incl. status and trends);
- Analysis of social, legal, economic, administrative and institutional context and constraints to action;
- Stakeholder analysis;
- Causal chain analysis;
- Scenario development and policy options;
- Recommendations for actions to be included in the SAP;
- List of references.



# Analysis of Root Causes of the Identified Concerns and Issues

The analysis aims to identify the underlying factors or root causes that contribute to the major perceived issues and problems so that these may ultimately be addressed during the implementation of a Strategic Action Programme. As such it is intended to improve recognition of connections between the components of the environmental and socio-economic sub-systems through a causal chain analysis.

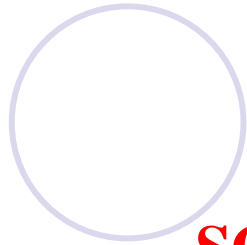
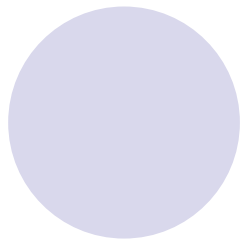
Four decorative circles are arranged horizontally at the top of the slide. From left to right, they are: a solid light purple circle, a white circle with a light purple outline, a solid light purple circle, a white circle with a light purple outline, and a solid light purple circle.

## 4. Examples from recent GEF IW projects

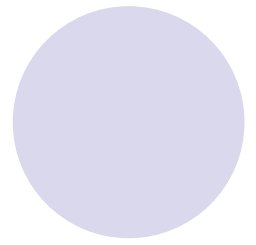
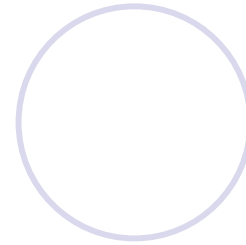
(TDA/SAP for the Black Sea, Caspian Sea,  
South China Sea, Yellow Sea)

...may be these examples are not so  
good as e.g. Chesapeake Bay,  
Great Lakes, Rhine River or  
Dokai Bay (Japan) –

**GEF is just over 10 years old!**



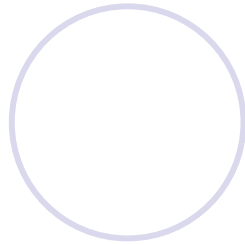
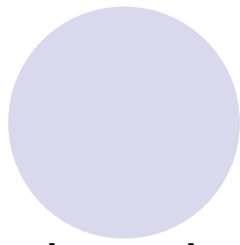
**SOUTH CHINA SEA**



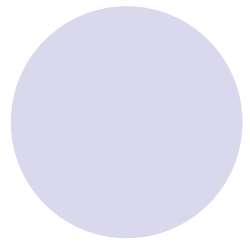
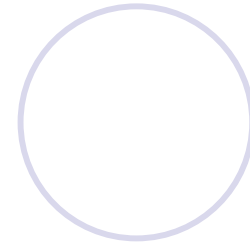
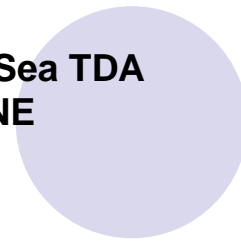
# **TRANSBOUNDARY DIAGNOSTIC ANALYSIS**

**DRAFT**

**1999**



## South China Sea TDA OUTLINE



### **1**      **Background**

- 1.1      **Global and regional significance of the South China Sea and its associated freshwater catchments**
- 1.2      **Purpose of the Transboundary Diagnostic Analysis (TDA)**
- 1.3      **Process of the TDA**

### **2**      **Biophysical and socio-economic setting of the South China Sea and its freshwater catchments**

- 2.1      **Physical setting**
- 2.2      **Biogeography**
- 2.3.      **Socio-economic features**

### **3**      **State of environment**

- 3.1      **Modification of habitats**
- 3.2      **Overexploitation of living aquatic resources**
- 3.3      **Pollution of aquatic environments**



# **Yellow Sea Large Marine Ecosystem**

## **Preliminary Transboundary Diagnostic Analysis**

**February 2000**

Global Environment Facility-United Nations Development Programme  
Project Development Facility (PDF-B)

**1 Background and Introduction. Geographic Scope**  
**. Analysis of the Economic, Legal, Administrative, and Political**  
**Context and Constraints to Action**  
**Major Perceived Water-related Environmental Issues and**  
**Problems (Step I)**  
**5 Analysis of Root Causes of the Identified Concerns and Issues (Step**  
**II). Synthesis Matrix**  
**7 Priority Areas of Future Interventions (Step III)**

Area I: Sustainable Management of Fish Resources and Mariculture

Area II. Protection of Biodiversity

Area III. Reduction of Stress on the Ecosystem

Area IV. Improvement of Water Quality and Human Health

Area V. Sustainable Institutional and Human Development

A

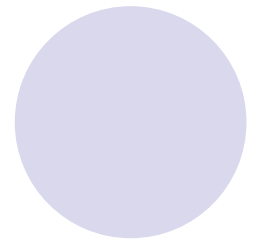
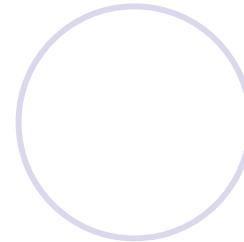
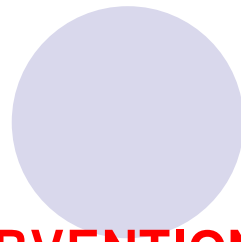
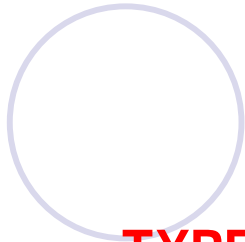
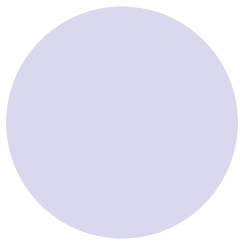
**8 Detailed Information on Action Areas (Step IV)**



# SAP outputs



- **REGIONAL PRIORITIZED TRANSBOUNDARY ISSUES AND RELATED ACTIONS**
- **DIVERSIFIED INTERVENTIONS**
- **STRATEGY FOR ACHIEVING ACTIONS AND INTERVENTIONS (baseline investments, incremental costs, grants, etc.)**



## TYPES OF INTERVENTIONS

### CASPIAN ENVIRONMENT PROGRAMME

**POLICY ACTIONS**  
**PA**

**LEGISLATIVE REFORMS**  
**LR**

**INSTITUTIONAL STRENGTHENING**  
**IS**

**CAPACITY BUILDING**  
**CB**

**BASELINE INVESTMENTS**  
**BI**

**INCREMENTAL INVESTMENTS**  
**II**



# Diversified sources of financing:

- National/local government budgets
- Private sector investments
- Direct foreign investments
- Bank loans (ADB, EBRD, WB)
- Grants (incl. loan/grant packages) from donors (AusAid, CIDA, KOICA, USAID, etc.)
- Grants/projects from UN organizations (FAO, GEF, UNIDO, etc.)

# Black Sea SAP



- **POLICY ACTIONS**

- **REDUCTION OF POLLUTION (RIVERS, AIRBORNE, POINT-SOURCES, VESSEL SOURCES, DUMPING, WASTE MANAGEMENT, CONTINGENCY PLANNING, EMERGENCY RESPONSE, ASSESSMENT AND MONITORING)**
- **LIVING RESOURCE MANAGEMENT (COMMERCIALY EXPLOITED RESOURCES, BIOLOGICAL DIVERSITY PROTECTION)**
- **PROTECTION OF HABITAT AND LANDSCAPE**

# Black Sea SAP (continued)

- **SUSTAINABLE HUMAN DEVELOPMENT**
  - ENVIRONMENTAL IMPACT ASSESSMENT
  - INTEGRATED COASTAL ZONE MANAGEMENT
  - SUSTAINABLE AGRICULTURE AND TOURISM
  - PUBLIC INVOLVEMENT IN ENVIRONMENTAL DECISION-MAKING
- NATIONAL BLACK SEA ACTION PLANS



**Strategic Action Programme  
for the South China Sea  
(*Draft Version 3, 24 February 1999*)**



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- 3 ESTABLISHMENT OF TARGETS FOR ENVIRONMENTAL QUALITY IN THE SOUTH CHINA SEA**
- 4 COST BENEFIT ANALYSIS OF PROGRAMME ACTIONS**
- 5 INCREMENTAL PARTNERSHIPS**
- 6 PRIORITY REGIONAL AND NATIONAL ACTIONS TO ADDRESS THE CAUSES OF ENVIRONMENTAL DEGRADATION AND THREATS TO THE ENVIRONMENT OF THE SOUTH CHINA SEA**


# Environmental problems addressed in the South China Sea SAP

- Habitat conversion and loss (mangroves, coral reefs, seagrass, estuaries and wetlands)
- Unsustainable exploitation of living aquatic resources
- Land-based pollution (urban/municipal wastes, industrial wastes, agricultural wastes, hydrocarbons, suspended solids)
- Freshwater shortage and low water quality

# SAP: important issues

- Involvement of all governmental sectors: finance, policy, industry, not only environment
- Stakeholders involvement
- Public participation
- Private sector involvement





So, GEF projects might be useful instruments for ecosystem-based management *(at least, they...*

*...provide initial funds...*

*...bring stakeholders together...*

*...give approach to this...)*

*Thanks!!!*