



**2<sup>nd</sup> Thematic Workshop**  
**on Water-Related Disaster and Its**  
**Management in Asian Countries**

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# LLDA Mandate

**RA 4850 (1966).** . .to promote and accelerate the development and balanced growth....with due regard for environmental management....

## **EO 349 (1996)**

Adoption and implementation of Laguna de Bay Master Plan

## **PD 813 (1975)**

Expanded the mandate of LLDA to address environmental protection including the power to issue permit for the use of surface waters

LLDA



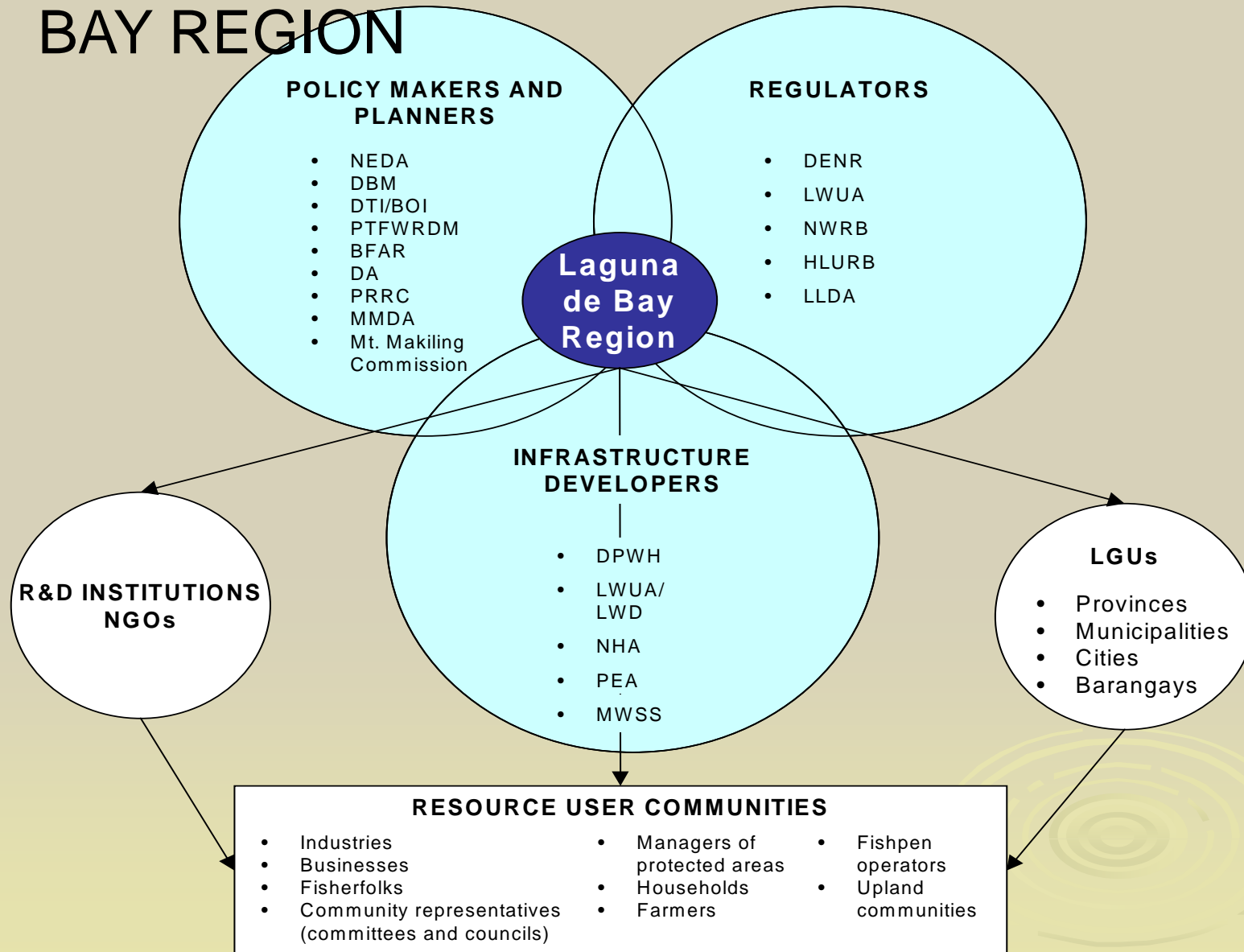
## **EO 149 (1993)**

Placed under DENR for administrative supervision and policy coordination


## **EO 927 (1983)**

- Classified LLDA as Class A Corporation
- Authorized to modify its organization
- Granted water rights over Laguna de Bay and other water bodies within the region
- Granted power to control and abate pollution within the region
- Authorized to collect fees for the use of lake water

# STAKEHOLDERS IN THE LAGUNA DE BAY REGION



# Issues and Concerns

- Garbage dumpings
  - Flooding
  - Shoreland reclamations/encroachment
  - Forest denudation
  - Quarrying
  - Water pollution
    - Decline in fish harvest/Fish kills
    - Unsuitability of water for irrigation
    - Hazard of water for recreation
    - More costly water treatment
  - Air pollution
  - Rapid siltation
  - Loss of biodiversity
- 

# Issues and concerns

## ➤ Institutional

### ➤ Policies

- Positive = there is a series of separately formulated and separately implemented policies, mandates, and programs each striving to meet the relatively narrow and stand-alone goals
- Negative = no coherent and integrated environmental or development governance system,.
- Result = fragmentation of the plans and created barriers to the effective management of the Lake and its watershed

### ➤ Conflicts as to the use of resource

- Irrigation vs fisheries / aquaculture (Napindan Hydraulic Structure)
- Fisheries vs water supply
- Shoreland areas vs wetland

# Issues and concerns

## ➤ Institutional

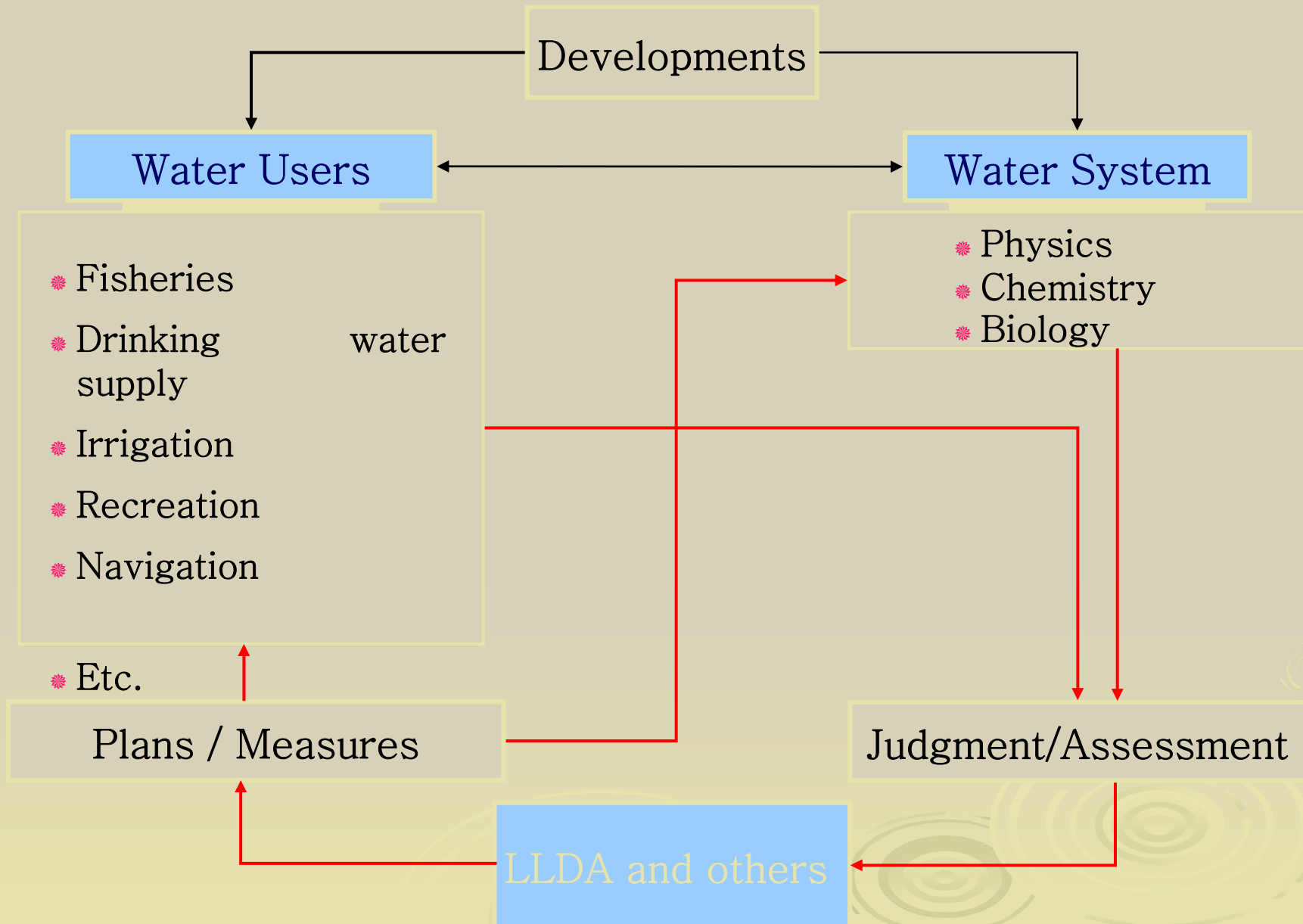
- Conflicts among institutions
  - fragmented and often conflicting policies in environmental and natural resources management of the Lake and its watershed;
  - Limited capacities in environmental management particularly at LGUs
  - weak political will in central and regional environmental agencies (to expeditiously address the conflicting institutional arrangements in the region
  - inadequate effort to strengthen the governance and the capabilities of LGUs to assume a greater responsibility in fulfilling their mandates
  - narrow opportunities for community and private sector participation in the management and sustainable use of the natural resources in the region

# Issues and concerns

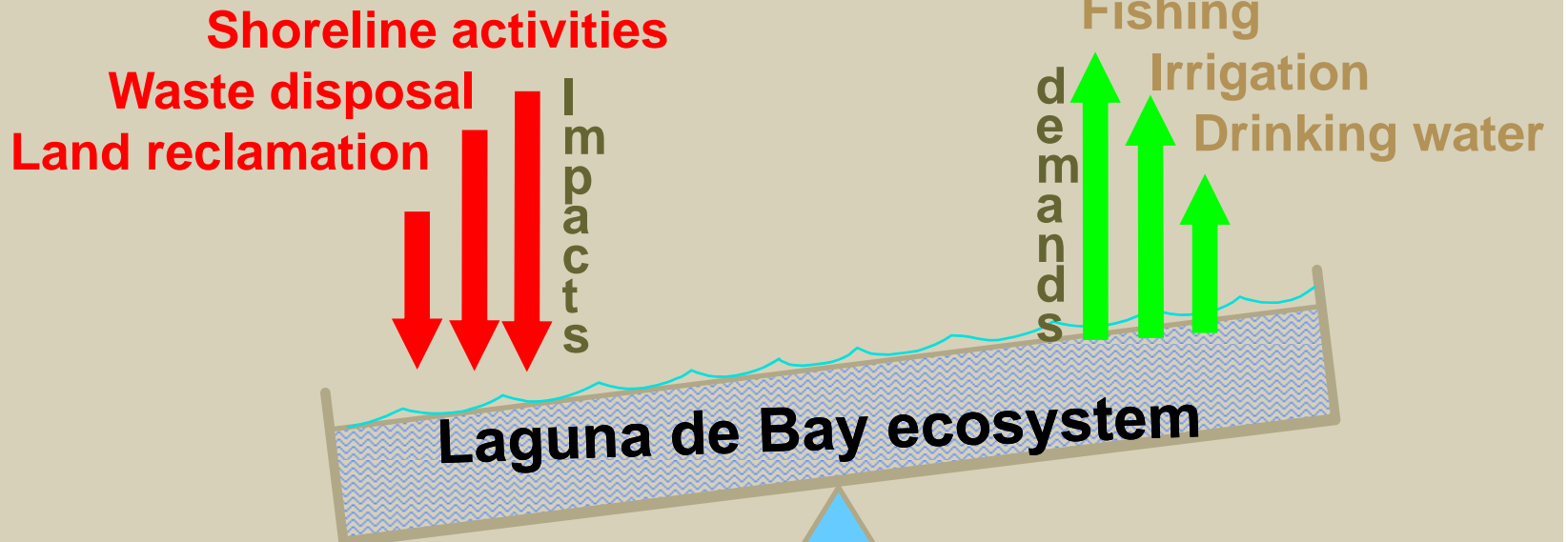
## ➤ Note:

- Balancing the treated waste recipient role of the Lake with increasing demand for drinking water supply, fisheries, and irrigation water poses the greatest challenge to the LLDA and all the agencies involved and the **citizens** of the Laguna de Bay region.

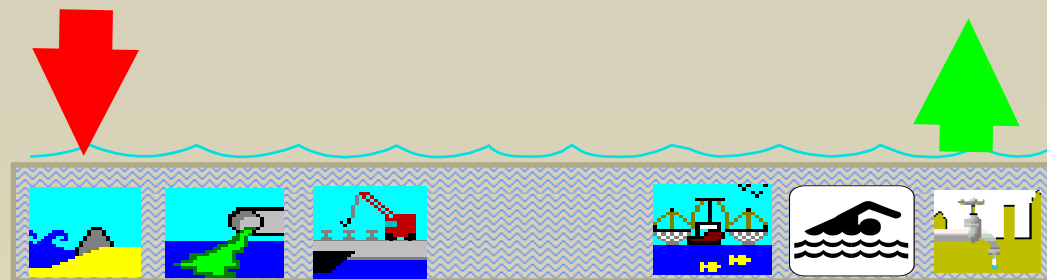
# LLDA and the IWRM process







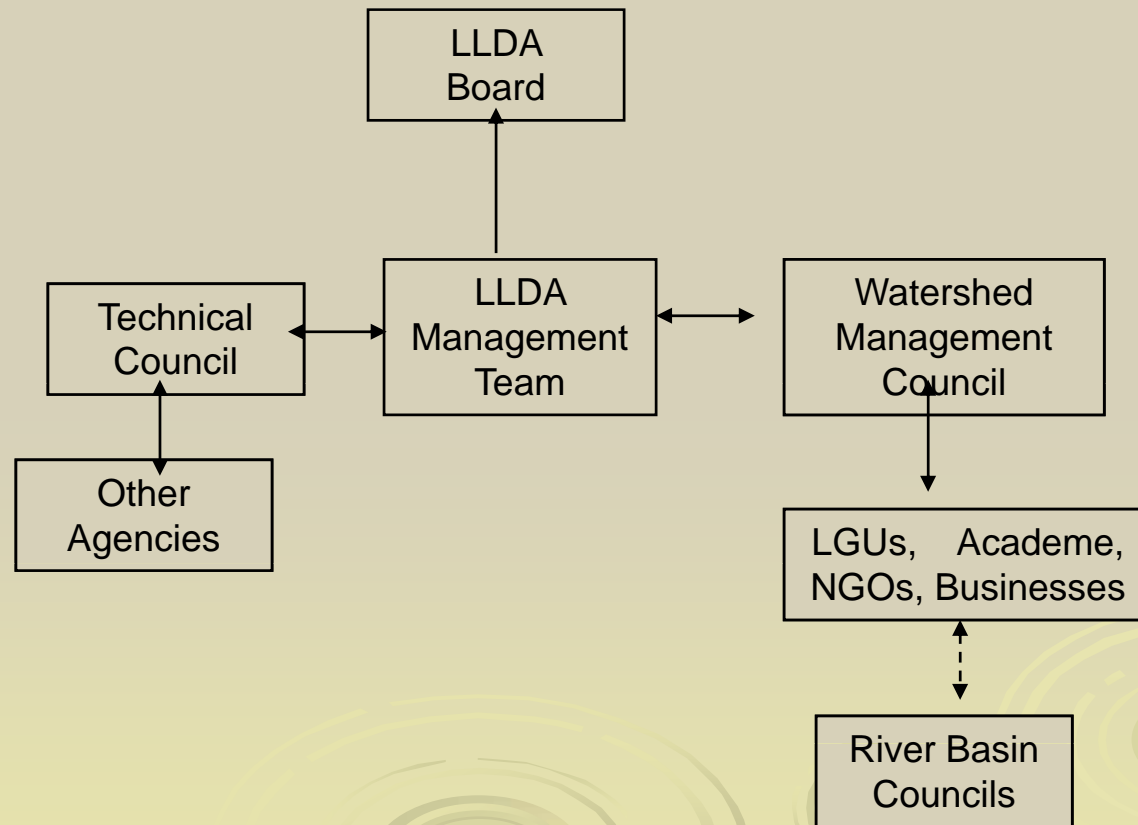
Out of balance: decision making without appropriate knowledge on system functioning



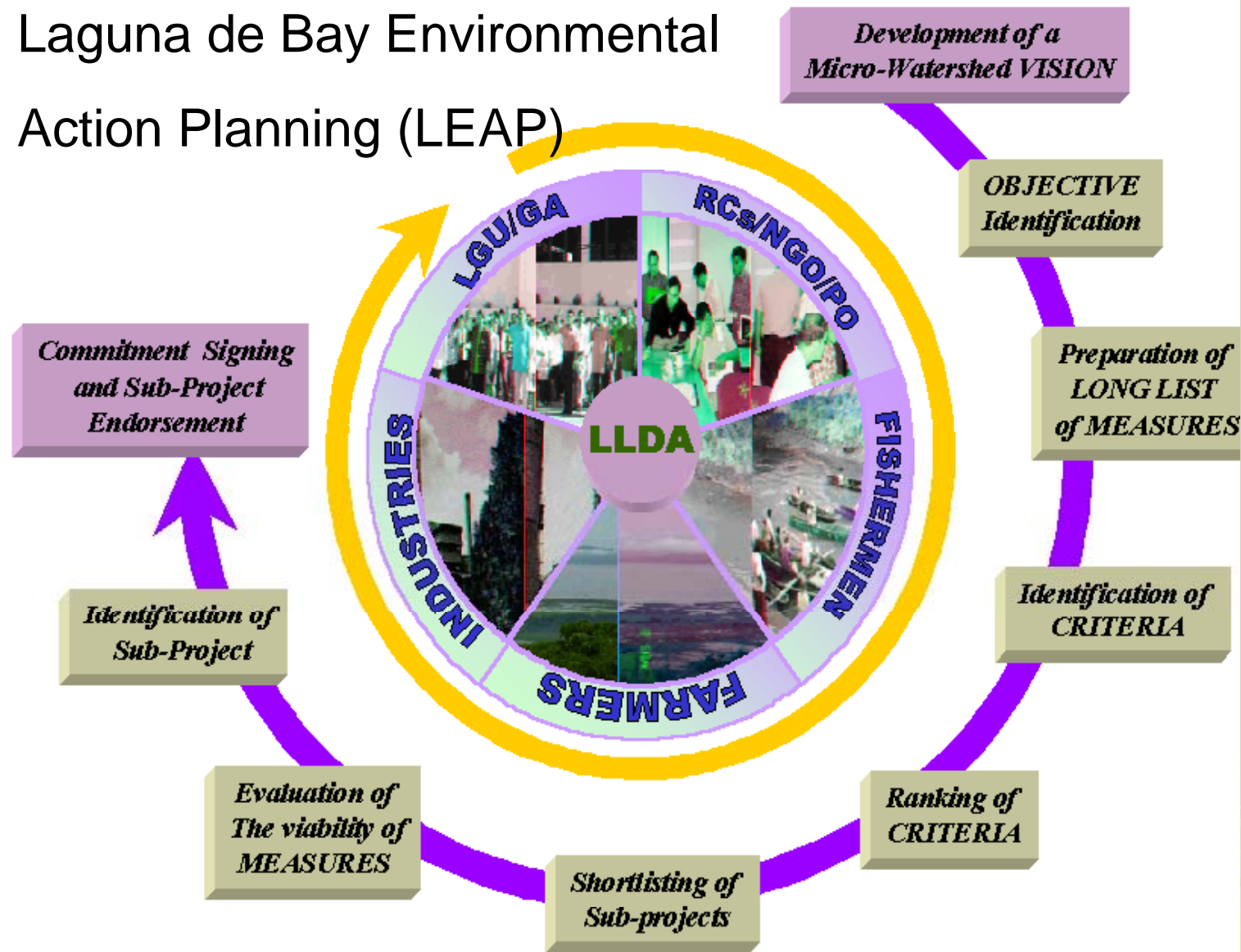
In balance: decision making based upon a comprehensive assessment!



## INTEGRATED WATER RESOURCES MANAGEMENT AND DEVELOPMENT MODEL (as approved per Board Resolution No. 157; January 25,2001)



# Laguna de Bay Environmental Action Planning (LEAP)



## **Strategic social marketing**

*Informing and enhancing,  
LEAP Manual,  
strategy/activities and  
project implementation*

LEAP Manual

Strategy/Activity

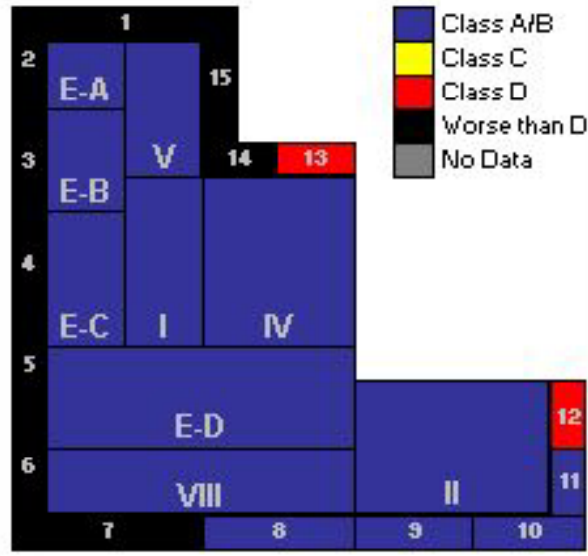
Implementation  
of program/project

## **Operational social marketing**

*Applied as a planned specific  
process as a social marketing  
program or social marketing  
campaign*

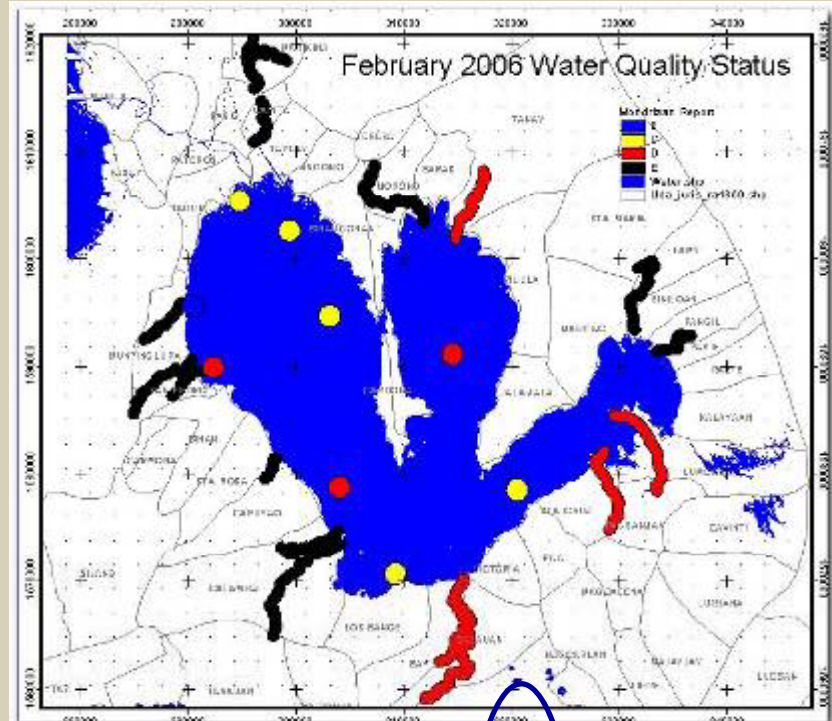
# River and Lake Status

%DO Feb 2006



Class A/B  
 Class C  
 Class D  
 Worse than D  
 No Data

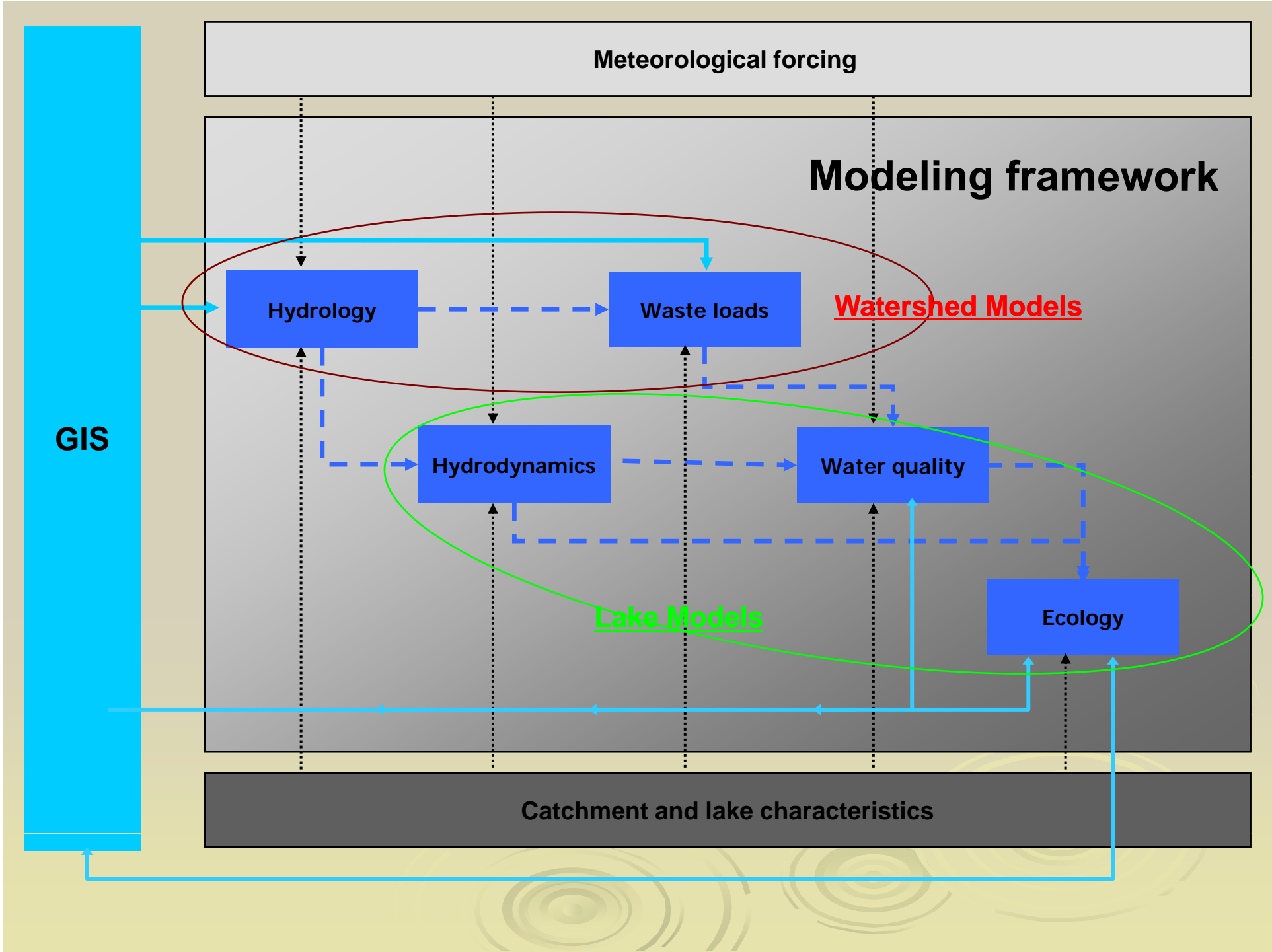
INWRM	EQMD	LOCATION
EW/A	EW-A	Western West Bay - Taguig
EW/B	EW-B	Western West Bay - Cupang
EW/C	EW-C	Western West Bay - Cuyab
EW/D	EW-D	Western West Bay - Sta. Rosa
I	Is. I	West Bay
II	Is. II	East Bay
IV	Is. IV	Central Bay
V	Is. V	West Bay near Pasig River
VII	Is. VII	South Bay
1	TR-1/1rk	Marikina
2	TR-1/2n	Mangapale
3	MT	Mouth of Tulasan
4	T3	San Pedro River
5	TR-Cab	Cabuyao
6	T3	San Cristobal River
7	T3	San Juan River
8	T8	Bay River
9	T6	Sta. Cruz River
10	T4	Pagsanjan River
11	TR-Pang	Pangil
12	TR-Siluan	Siluan
13	TR-Tan	Taray
14	TR-Mor	Moring
15	TR-Sabah	Canta, Sapang Baho



STATION		MONDRIAN MONTHLY STATUS 2005											
ID	Location	January	February	March	April	May	June	July	August	September	October	November	December
I	Central West Bay												
II	East Bay												
IV	Central Bay												
V	Western West Bay												
VI	South Bay												
E-A	Taguig												
E-D	San Pedro												
E-C	Alibon												
E-D	Sta. Rosa												
I	Marikina River												
2	Mangapale River												
3	Tulasan River												
4	San Pedro River												
5	Cabuyao River												
6	San Cristobal River												
7	San Juan River												
8	Bay River												
9	Sta. Cruz River												
10	Pagsanjan River												
11	Pangil River												
12	Siluan River												
13	Taray River												
14	Moring River												
15	Sapang Baho River												

\* Only listed parameters with DENR water quality criteria for freshwater systems have been included in the assessment of the overall status.

STATION		MONDRIAN MONTHLY STATUS 2006				
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# DRM Action Plan

Improved Environmental Quality of  
The Lake and its Watershed

Strategic Goals

Priorities for  
Action

Key Activities  
For Action

Cross-cutting issues

Effective Governance  
Efficient Service and Partnership with Stakeholders