ENVIRONMENTAL PROTECTION INDICATORS FOR CALIFORNIA (EPIC)

PROJECT OVERVIEW

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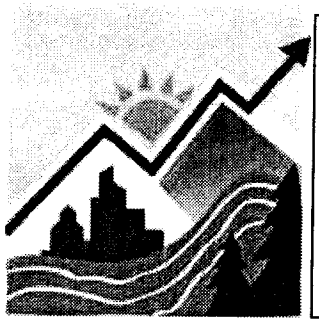
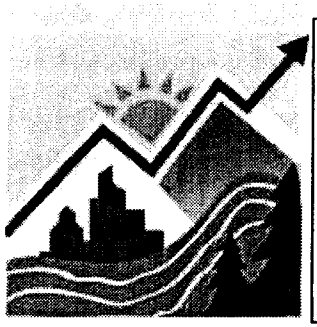


What is an environmental indicator?

- A measure that presents scientifically based information on the status of, and trends in environmentally-related parameters.
- It has a significance extending beyond that directly associated with the parameter measured.



Environmental indicators as new tools for Cal/EPA

Environmental indicators as part of the strategic planning process: "managing toward environmental results"

- formulating policy
- allocating resources for maximum value
- making adjustments to priorities

Types of Indicators

Mission-based

assess status and trends associated with the agency's mission
= **Environmental Indicators** for Cal/EPA

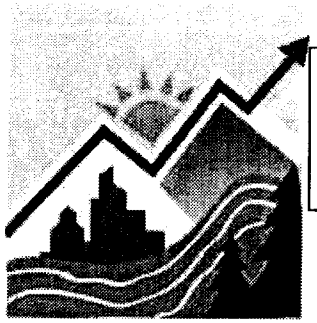
Policy

Program performance

Program activity/efficiency

Administrative

Source: FSU/USEPA, *Chemical and Pesticides Results Measures*, January 2001



Cal/EPA Strategic Goals

www.calepa.ca.gov/Publications/Reports/stratplans/2000

Goal 1: Air that is healthy to breathe, sustains and improves our ecosystems and preserves natural and cultural resources.

Goal 2: Rivers, lakes, estuaries and marine waters that are fishable, swimmable, support healthy ecosystems and other beneficial uses.

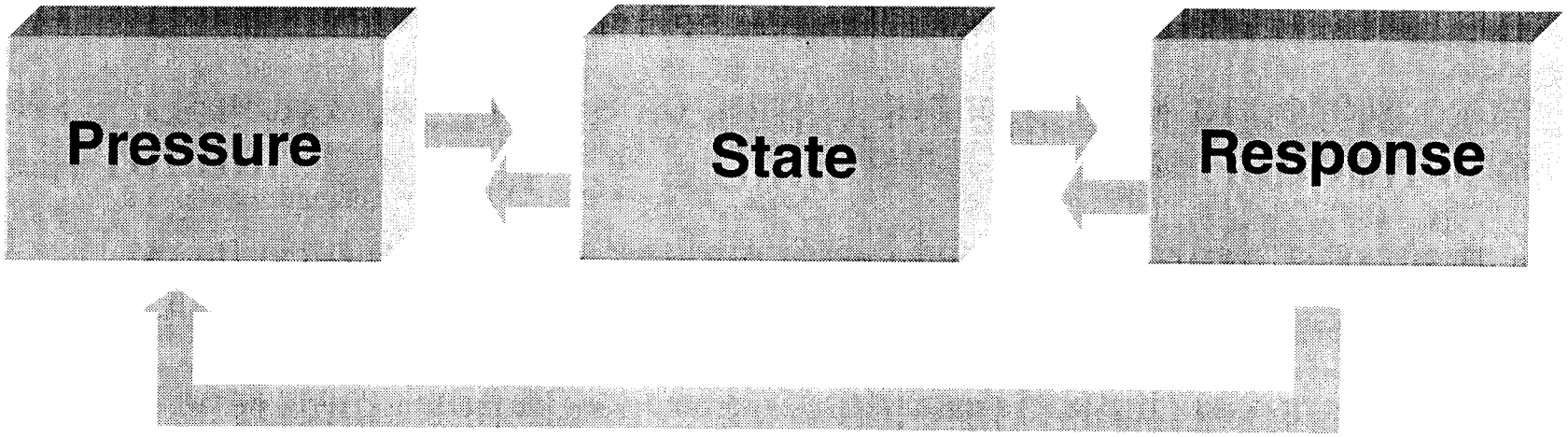
Goal 3: Groundwater that is safe for drinking and other beneficial uses.

Goal 4: Communities that are free from unacceptable human and ecological risks due to exposure from hazardous substances and other potential harmful agents.

Goal 5: Reduce or eliminate the disproportionate impacts of pollution on low-income and minority populations.

Goal 6: Ensure the efficient use of natural resources.

Pressure-State-Response



Stresses placed on the environment by human activity or natural causes

Condition of the environment, human or ecological health

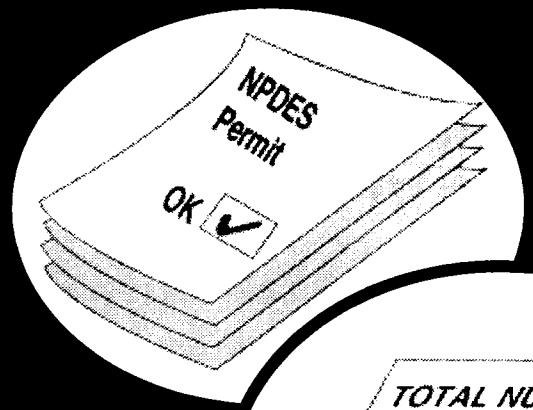
Government or societal actions

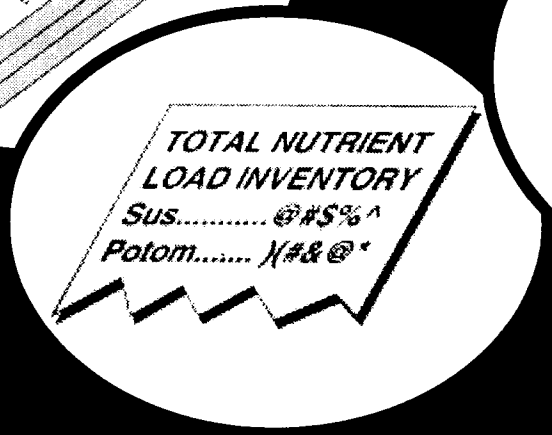
Source: Organisation for Economic Cooperation and Development

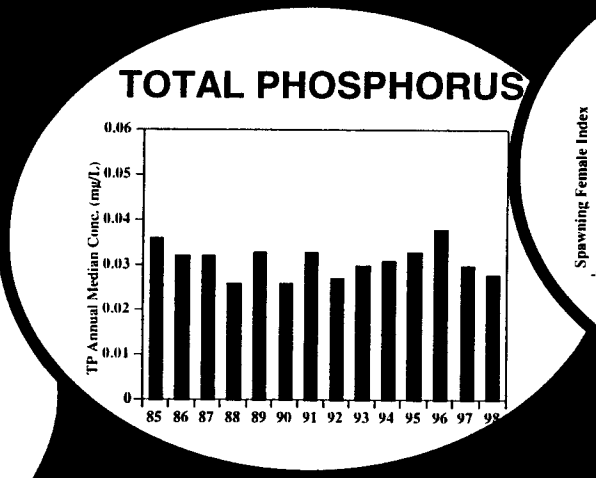
Hierarchy of Indicators

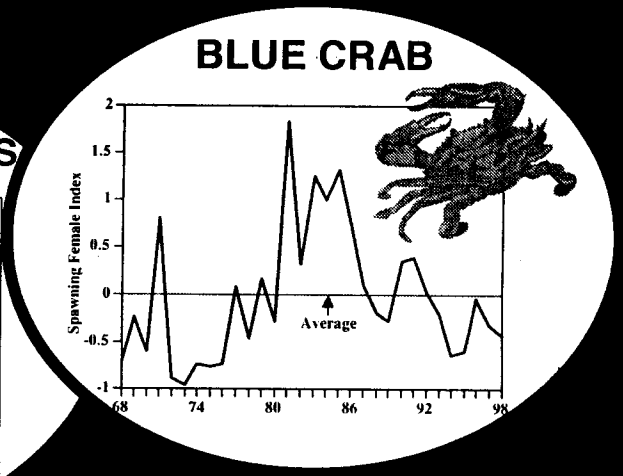
This is how we measure environmental change

Administrative		Environmental			
LEVEL 1 Actions by EPA/State Regulatory Agencies	**LEVEL 2** Responses of the Regulated & Nonregulated Community	**LEVEL 3** Changes in Discharge/ Emission Quantities	**LEVEL 4** Changes in Ambient Conditions	**LEVEL 5** Changes in Uptake and/or Assimilation	**LEVEL 6** Changes in Health, Ecology, or Other Effects









Environmental Protection Indicators for California

Directive:

OEHHA to collaboratively develop environmental indicators for Cal/EPA

Project's first year goal:

To develop a process for identifying environmental indicators and an initial set of indicators using an open, participatory process involving various collaborators.

⇨ Report entitled, *A Framework for Cal/EPA's Environmental Indicator System*

Scope of EPIC

- ✓ Reflects an issue that affects California, or a global/transboundary issue of interest to California
- ✓ Relates to the missions of Cal/EPA and areas of overlapping jurisdictions with the Resources Agency, Department of Health Services
- ✓ Measure **pressures** exerted on the environment by human activities, ambient environmental **conditions**, or **effects** on human or ecological health

EPIC Collaborators

Project staff

Develop Report

- OEHHA
- Cal/EPA BDOs
- Dept. Health Svcs
- Resources Agency
- US EPA

Advisory groups

Input on Project

Interagency Advisory Group

- Cal/EPA BDOs
- Resources Agency
- Dept. Health Svcs
- US EPA
- Others

External Advisory Group

- non-profit groups
- local government
- private sector
- UC/CSU

Contractors

Environmental indicator consultant

Assist in design and implementation of indicator development process

Cal/EPA strategic vision consultant

Ensure Framework is consistent with Cal/EPA needs

Stakeholder coordinator

Coordinate advisory group/ public input

Developing an "environmental indicator framework"

What are the **environmental issues**?

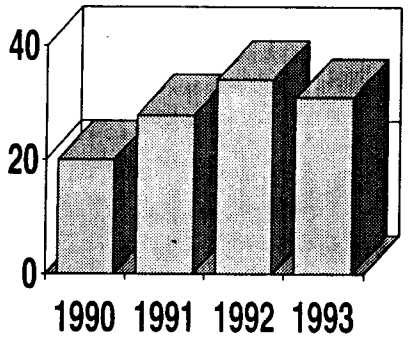
DRAFT **"Issue Structure"**

- Air quality
- Water
- Land/Waste/Materials Management
- Human Health
- Ecosystem Health
- Pesticides
- Transboundary Issues

How can these be **measured**?

Criteria

Develop Indicator



Indicator Selection

Primary criteria

- ✓ Data quality
- ✓ Representative
- ✓ Sensitivity
- ✓ Decision support

Secondary criteria

- ✓ Anticipatory
- ✓ Data [illegible]
- ✓ Beneficial [illegible]
- ✓ Cost effective

How "integrative"?

- ✓ Integrative indicator
- ✓ Index
- ✓ Indicator suite

EPIC: Next steps

Maintenance of EPIC system

- continuous public input and comment on indicator system
- ongoing project staff evaluation, validation and updating of indicator system
- annual evaluation by boards/departments to ensure consistency with strategic plans

IWM Tip Fee Discount Calculation (2001)

Permitting and Enforcement Division Branches	Total Budget	% of time spent on active landfills	Net Cost
Remediation, Closure & Technical Services	$808,865	20%	$161,773
Permitting and Inspections	$1,882,312	80%	$1,505,850
Facilities Operations	$1,176,324	80%	$941,059
LEA Support Services	$167,977	25%	$41,994
Total			**$2,650,676**
Board's IWMA Budget	**$50,641,000**		
% of Total Budget Spent on Active Landfills/ IWM Tip Fee Discount		**5.2%**	

Using the discount rate of 5.2%, the discounted IWM Fee for $1.34 would be $1.27, and for $1.40 it would be $1.32.