The Value of Environmental Evaluation: When Does Data Become Information?

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Scenarios to consider in today's presentation:

1. Decision makers wanting information to make decisions about investments in a data rich, information light environment: Puget Sound Partnership

2. A decision made with information and stakeholder involvement: Oneida Nation

3. Decision support for decision makers and citizens with information from a watershed report card: State of Massachusetts

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Today's Presenters:

Mary Beth Brown, Puget Sound Partnership, Washington

Jennifer Falck, Oneida Nation, Wisconsin

Warren Kimball, Dept. of Environmental Protection, State of Massachussetts

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IN WASHINGTON STATE, THE GOVERNOR AND THE LEGISLATURE SAID:

BUILD AN ACTION AGENDA: ACHIEVE A HEALTHY PUGET SOUND BY 2020

Include outcomes and how you will measure them….

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LEARN!
MONITOR!
ADAPT!

- The council shall revise the Action Agenda as needed and revise the implementation strategies every two years using an adaptive management process informed by tracking actions and monitoring results in the Puget Sound. (RCW 90.71.310)

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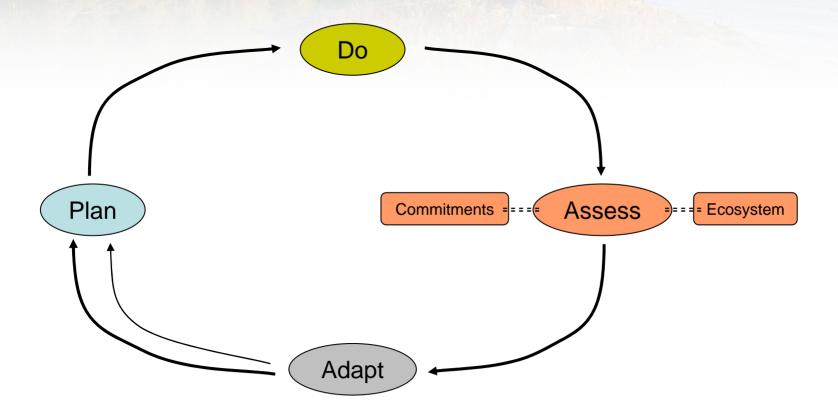our sound, our community, our chance

Establishing Indicators and Benchmarks

The science panel shall:

- Identify environmental indicators measuring the health of Puget Sound;

- Recommend environmental benchmarks that need to be achieved to meet the goals of the Action Agenda.

(RCW 90.71.280)

Implementation Framework

Here's what we said we needed for Accountability in April and July…

Plan
- A goal that can be measured
- A set of activities that can be tracked
- Logic links between goals and activities
- Buy in from implementers
- Information management strategy

Do
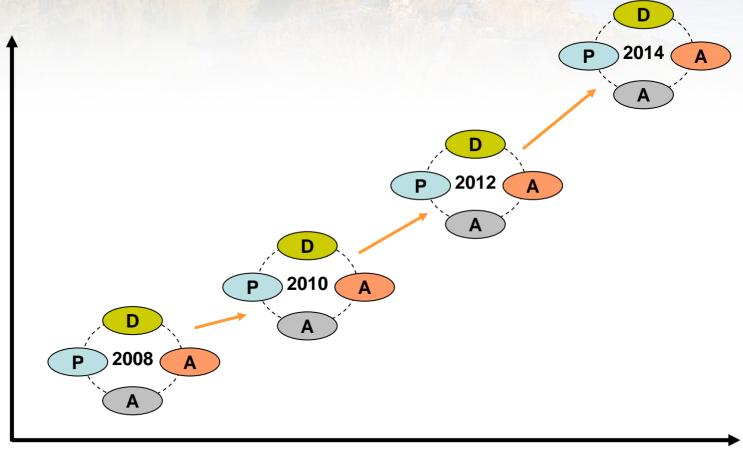- Implementers who can track and report progress
- A system to hold the data

Assess
- Capacity for analysis
- Forum and format for reporting out findings

Adapt
- Capacity to change strategies and actions based on analysis

Improving the Action Agenda

Key Linkages

Ultimate Policy Intent →

...so that...

...so that...

...so that...

Activity: We assist governments to adopt LID regs

 # governments assisted

Process

Governments adopt regulations

% of governments assisted who adopt LID regulations

Outputs

More LID projects are implemented

% of projects using LID

Immediate Outcome

Water Quality improvements achieved

Indicator data

Ultimate Outcome

Degree of Influence/Control by individual entity →
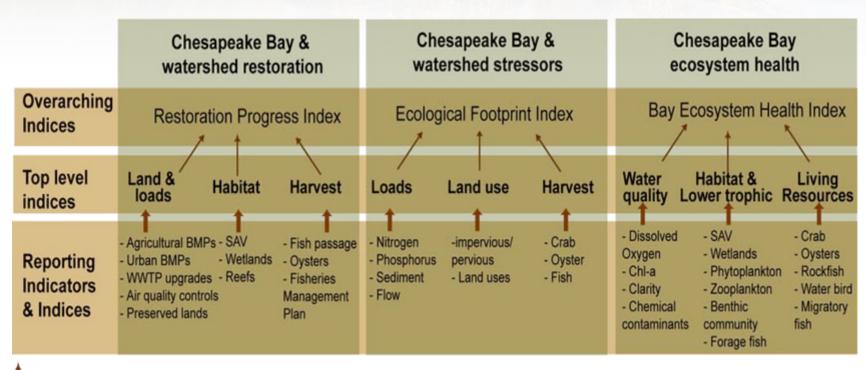
Progress depends on organizational capacity

Toward 2020 and beyond	Strategic, Systematic Focus	**Stage 5: Leveraging accountability for strategic outcomes**	• We do what we said we would do, our actions are integrated and effective, and we can prove results with data
		Stage 4: Improving the accountability process	• Disciplined funding of effective activities • Strategic study of unknowns • Progress is made and explained • Adaptation is routine.
Implementation and Adaptation of Action Agenda	Capacity Increases	**Stage 3: Developing a complete accountability portfolio**	• Funding and activities follow strategies • Activities linked to performance measures • Adaptation based on results.
2008 Action Agenda		**Stage 2: Building an accountability foundation**	• Goals set. • Strategies and outcome measures adopted • Rough alignment of activities and budgets with goals
2007-09 Puget Sound Plan	Project Centric Focus	**Stage 1: Creating accountability awareness**	• Random acts of kindness • Ad hoc processes • Fragmentation

Status of Identifying Indicators

By April: Indicators work group inventories existing potential indicators

April - May: Indicators work group identifies ecologically important, relevant, data-rich indicators

April – July: Leadership Council advises on the short list of indicators to identify for reporting in 2008 Action Agenda

Example Roll Up of Indicators

	Chesapeake Bay & watershed restoration			**Chesapeake Bay & watershed stressors**			**Chesapeake Bay ecosystem health**		
Overarching Indices	Restoration Progress Index			Ecological Footprint Index			Bay Ecosystem Health Index		
Top level indices	Land & loads	Habitat	Harvest	Loads	Land use	Harvest	Water quality	Habitat & Lower trophic	Living Resources
Reporting Indicators & Indices	- Agricultural BMPs - Urban BMPs - WWTP upgrades - Air quality controls - Preserved lands	- SAV - Wetlands - Reefs	- Fish passage - Oysters - Fisheries Management Plan	- Nitrogen - Phosphorus - Sediment - Flow	-impervious/pervious - Land uses	- Crab - Oyster - Fish	- Dissolved Oxygen - Chl-a - Clarity - Chemical contaminants	- SAV - Wetlands - Phytoplankton - Zooplankton - Benthic community - Forage fish	- Crab - Oysters - Rockfish - Water bird - Migratory fish

⬆ = direct numerical relationship

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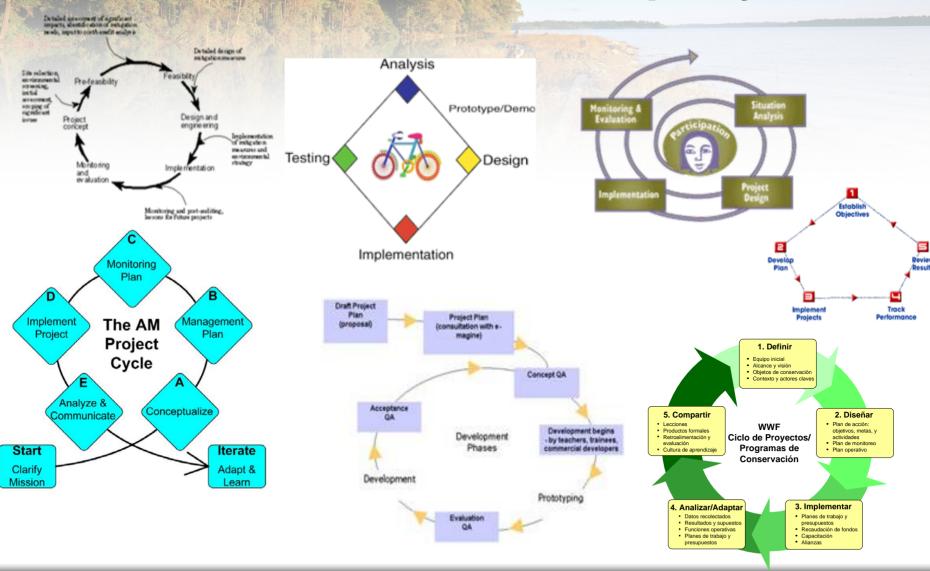
Examples of Existing Benchmarks for Reporting

- Consumption advisories (servings/month)
- Swimming beaches (bacteria levels)
- Native forest cover (% cover)
- Watershed protection (# management plans)
- Chinook recovery (# adult spawners)
- Airshed health (standards for ozone, particulate matter)
- Water quality index (roll up)

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Other Plan-Do-Assess-Adapt Cycles…

www.conservationmeasures.org

Open Standards for the Practice of Conservation Version 2.0

1. Conceptualize
- Define initial team
- Define scope, vision, targets
- Identify critical threats
- Complete situation analysis

2. Plan Actions and Monitoring
- Develop goals, strategies, assumptions, and objectives
- Develop monitoring plan
- Develop operational plan

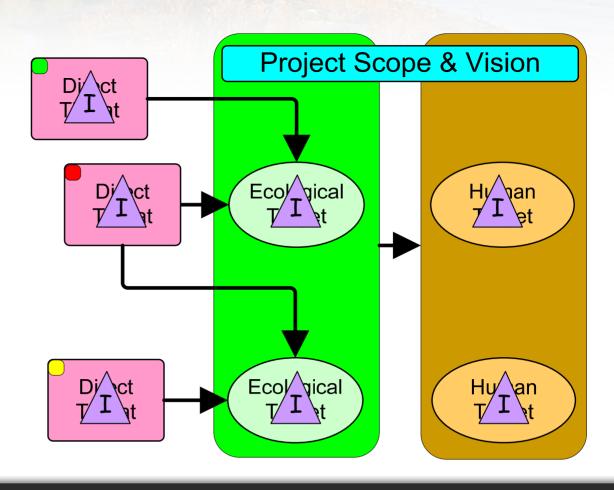**3. Implement Actions and Monitoring**
- Develop work plan and timeline
- Develop and refine budget
- Implement plans

4. Analyze, Use, Adapt
- Prepare data for analysis
- Analyze results
- Adapt strategic plan

5. Capture and Share Learning
- Document learning
- Share learning
- Create learning environment

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Step 1 Targets & Threats Used to Define "Status Indicators" of the System

Project Scope & Vision

Direct Target

Direct Target

Direct Target

Ecological Target

Ecological Target

Human Target

Human Target

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Step 2

Identify Strategies to Change Situation

Project Scope & Vision

Direct Threat

Strategy → Factor → Direct Threat → Ecological Target → Human Target

Factor

Strategy → Factor → Direct Threat → Ecological Target → Human Target

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