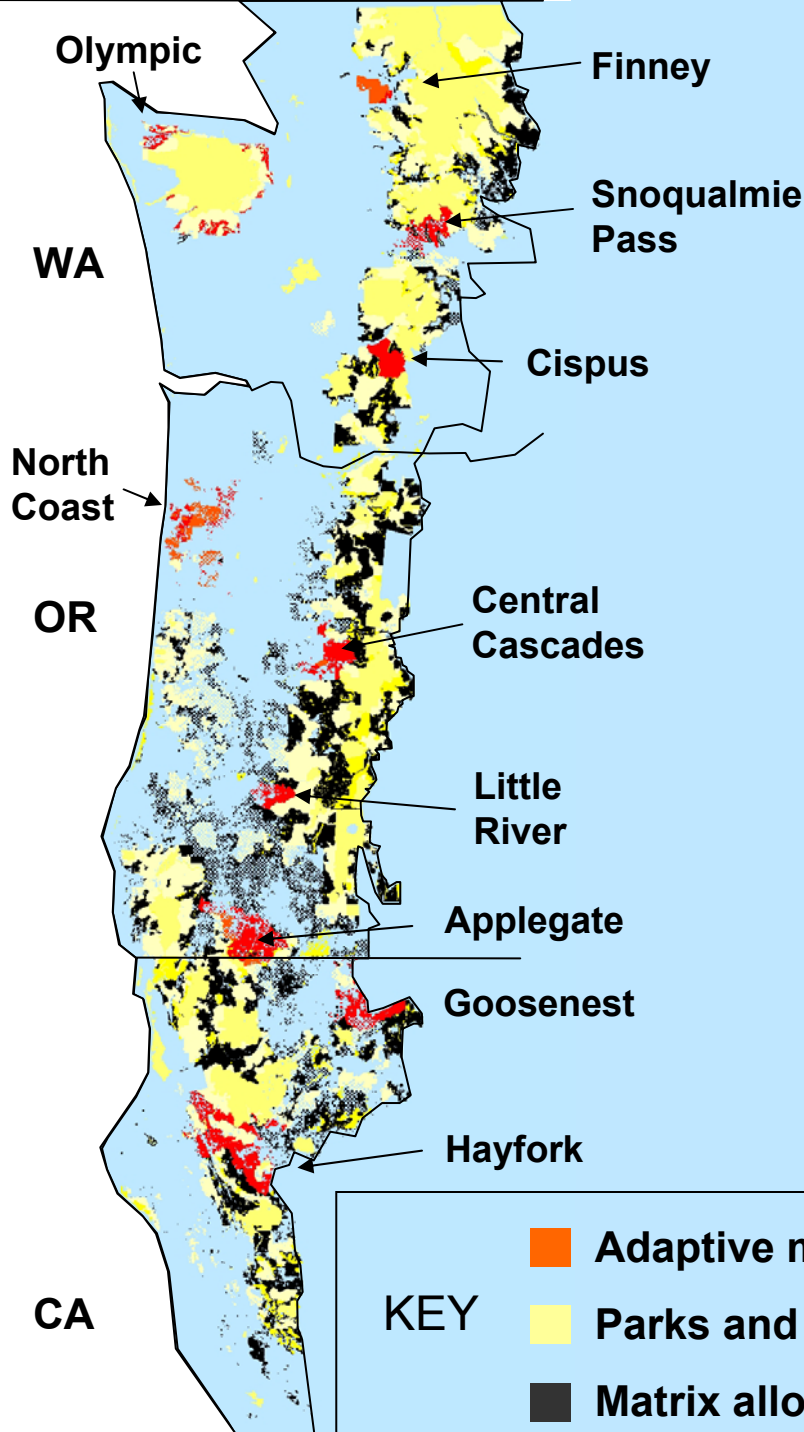
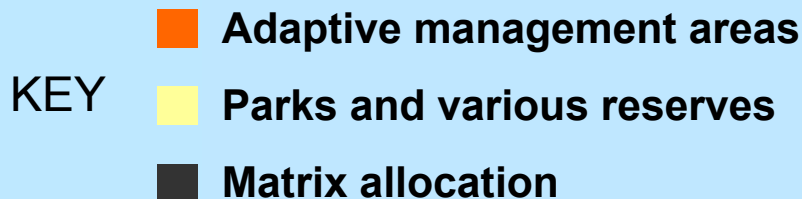


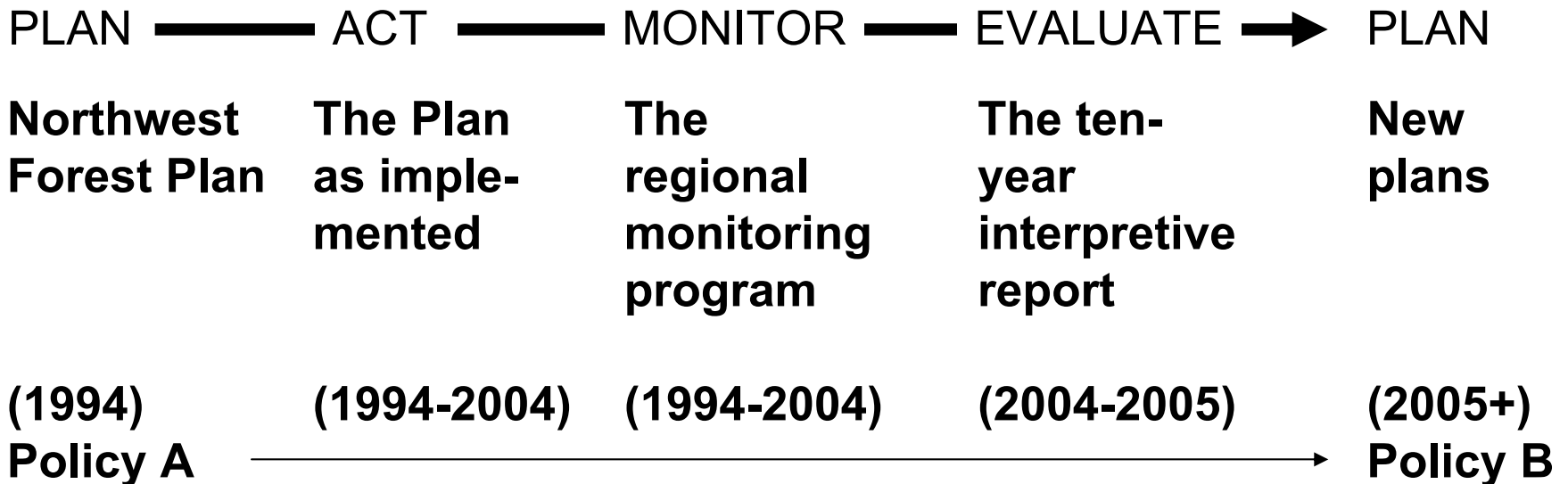
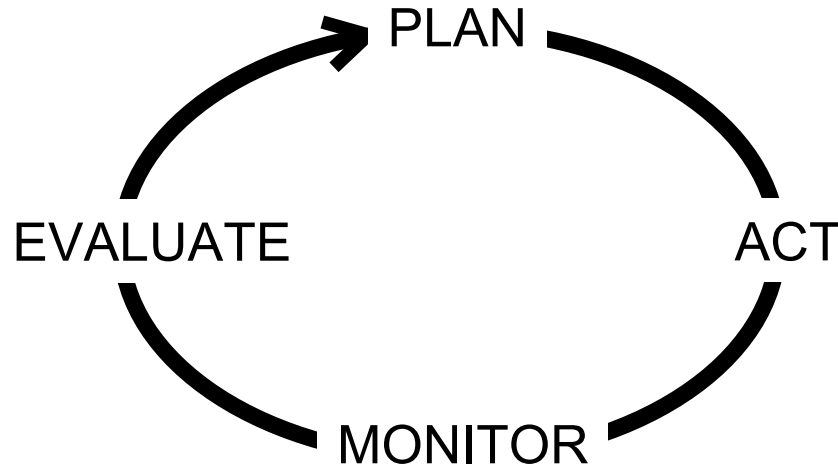
The dual strategy for adaptive management:



- ☀ Allocate ten **adaptive management areas**; and
- ☀ Apply the adaptive management concept Plan-wide, including in regional monitoring and in this interpretive report.



The adaptive management cycle



Adaptive management

Policies are experiments; learn from them.
Without surprise, learning does not expand the boundaries of
understanding.

Kei Lee

Adaptive management views policy as...questions masquerading as answers.

Lance Gunderson

The great obstacle to discovering the shape of the earth, the continents,
and the ocean was not ignorance, but the illusion of knowledge.

Daniel J. Boorstin

I participated in 25 planning exercises for adaptive management; only 7
resulted in large-scale management experiments; only 2 had good statistical
design.

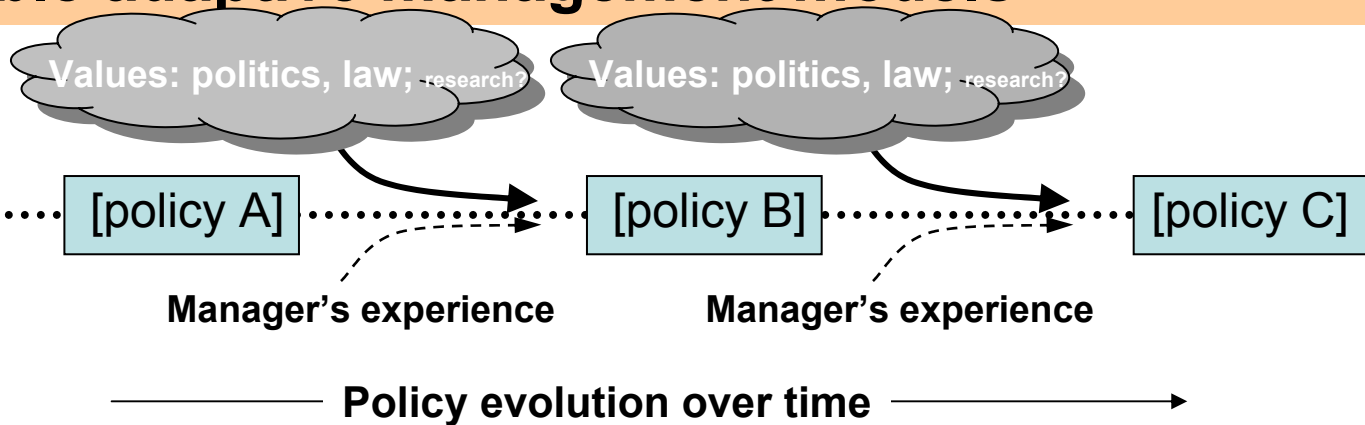
Carl Waiters

You cannot initiate the experiments until you provide rigorous empirical
research results that guarantee they will not adversely impact endangered
species. *Paraphrased from a critique of a proposed adaptive
management trial in a riparian zone*

Available adaptive management models

Reactive
(poorly
adaptive)
management

Forces:
External
Internal

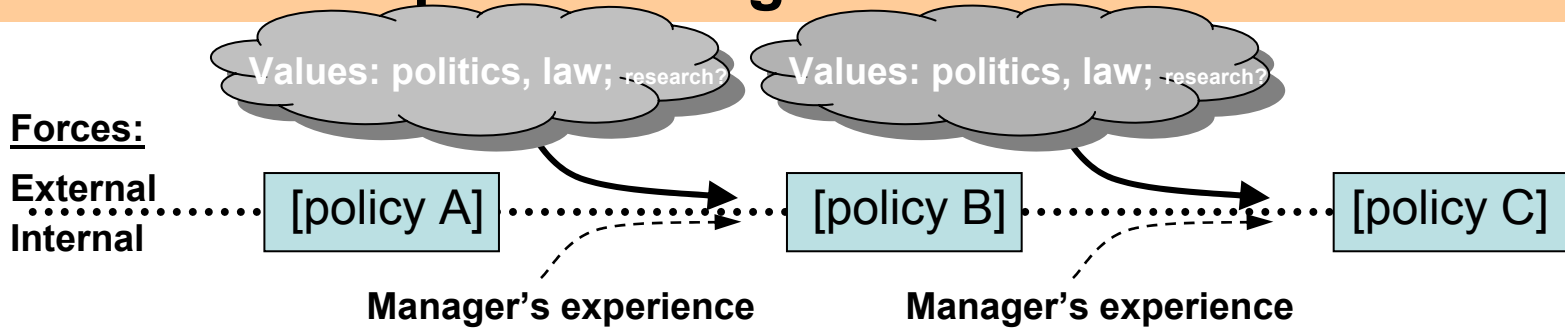


Passive
adaptive
management

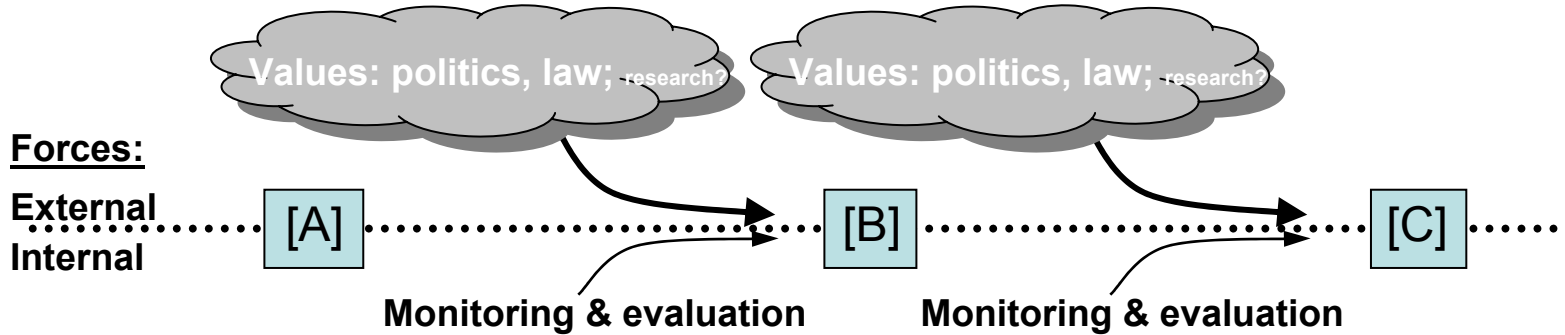
Active
adaptive
management

Available adaptive management models

Reactive
(poorly
adaptive)
management



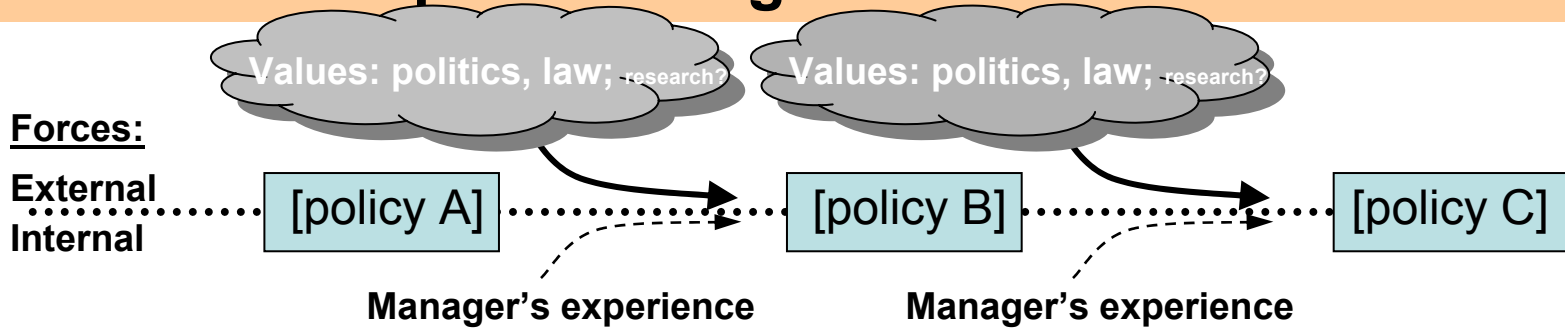
Passive
adaptive
management



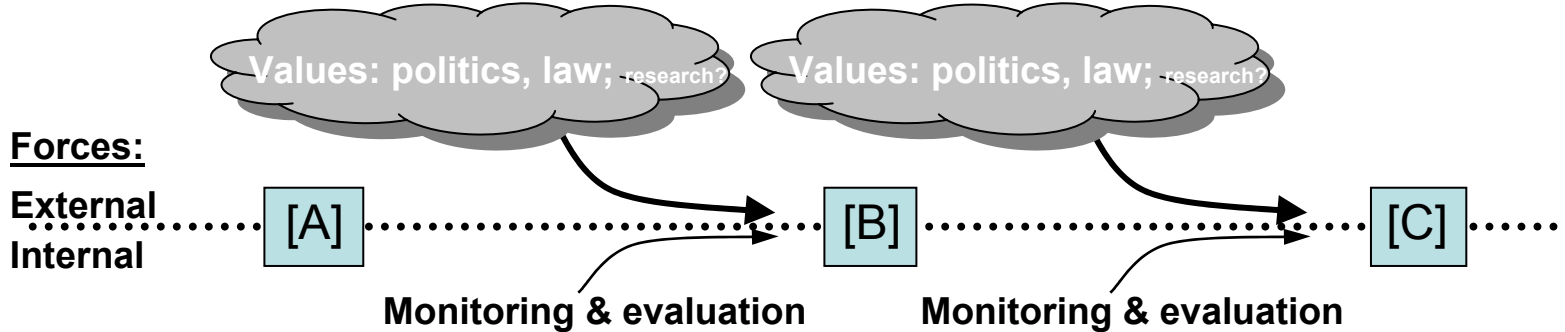
Active
adaptive
management

Available adaptive management models

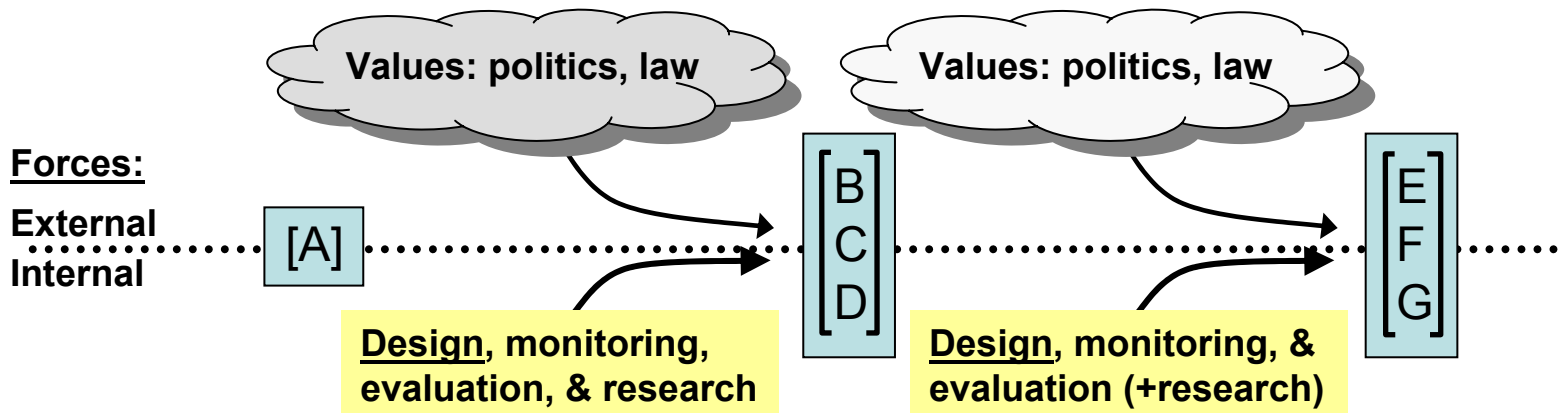
Reactive
(poorly adaptive)
management



Passive
adaptive
management



Active
adaptive
management



Policy evolution over time →

Interpreting adaptive management in the first decade of the Northwest Forest Plan

What was the intent for adaptive management in the Plan?



Adaptive management was considered the cornerstone of the Plan—because the regional-scale reserve-matrix strategy had never been tried before and, during planning, other options were recognized but not chosen.



The intent for adaptive management was **to lead Plan evolution** through time.

Did adaptive management lead Plan evolution?



Monitoring and experimenting takes time, and the process is still unfolding.



Our interpretation, therefore, focuses more on the processes in play.

Interpreting adaptive management and regional monitoring

In retrospect, was adaptive management justified?



Monitoring and research confirm large uncertainties.



Evaluating the initial Plan approach against other approaches remains a necessary and urgent task, given the high uncertainty and risks of undesirable outcomes.

When we realize we are trying an entirely new strategy:

- ☀ Where do we find the confidence to be quite certain how it will turn out?
- ☀ How do we know that the approach chosen will work better than the one rejected?
- ☀ What if the confidence intervals strongly overlap?
- ☀ What outcomes are we forgoing?

Interpreting adaptive management and regional monitoring

Adaptive management is harder than we thought—the first decade saw progress toward the intent:



Different agencies and groups of managers, researchers, and citizens learned from each other for the first time;



Small-scale research-like studies were started in adaptive management areas;



Regional monitoring was well institutionalized; and



The closing of the first adaptive-management cycle is nearly complete with this interpretive report.

Interpreting adaptive management and regional monitoring

Adaptive management is harder than we thought—the first decade also saw:

- ★ Few large-scale management experiments started in adaptive management areas.**
- ★ The adaptive management areas were not considered a core business, and now most are idle.**

Adaptive management: the devil's in the details

Why adaptive management areas have unmet expectations:

**Problems
were mostly
institutional**

- ☀ **Built-in constraints (as interpreted by regulatory agencies);**
- ☀ **Lack of Agency leadership;**
- ☀ **Increasing workloads and declining budgets;**
- ☀ **Lack of institutional processes; and**
- ☀ **Lack of learning structures to increase the value of monitoring.**






*(Adaptive management: rhetoric or reality?
Stankey et al. 2003)*

Ideas to improve adaptive management in the next decade



- ☀ Have regional decisionmakers, **regulators**, and citizen groups participate in designing the questions for the 2014 report;
- ☀ **Add learning objectives** in new plans that place learning on same level as traditional resource objectives;
- ☀ **Value a diversity of constituents ideas** by accommodating reasoned disagreement—consensus can be unreasonable; and
- ☀ Have researchers help design large-scale **management experiments**, and support retrospective and other research linked to the experiments.

Moving toward an adaptive management system

**Institutionalize adaptive management as core business
(for all agencies at regional and sub-regional scales)**

-  **Interpret existing information** in a broad context (this effort);
-  Redefine the **questions and expectations** for the 2014 report;
-  Continue **regional monitoring** of status and trends;
-  Initiate sub-regional, **large-scale management experiments**; and
-  Initiate **retrospective & experimental research** focused on causes.

Better institutionalization includes:

-  Balancing investments among these learning and adapting activities; and
-  Balancing investments in learning (15%) and doing (85%)?