

The Hitch-Hiker's Guide To Adaptive Management

A Trilogy in Four Parts
(Maybe Five. 6??)

By:

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With Apologies to Doug Adams.....

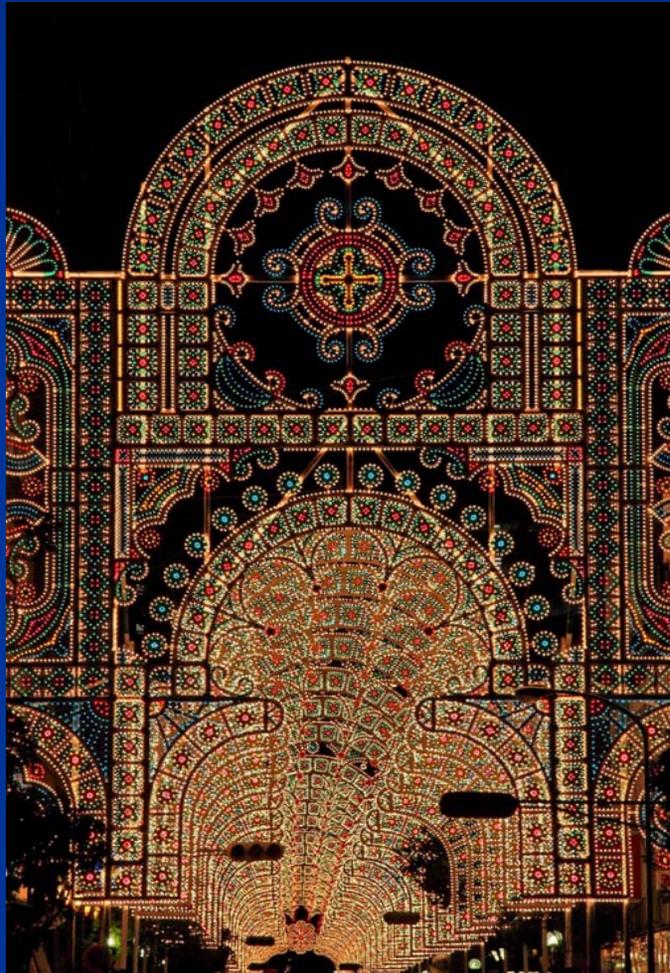
This talk used some of the ideas from Doug Adams' series of radio shows and books starting with "The Hitchhiker's Guide to the Galaxy" to provide a humorous touch to the otherwise dry topic of Adaptive Management. Although I explained this when I introduced the talk, it may not be apparent to someone who simply looks at the power point slides (unless that person is a fan of Adams' work). If something looks strange in this set of slides it is probably because it comes from H2G2.

Mike Healey

Table of Discontents

- The Hitch-Hiker's Guide to the AM Galaxy
- Finding Adaptive Management on the Universal Menu
- Adaptive Management, the Universe, Everything
- Adaptive Management -- Mostly Harmless
- Goodbye and Thanks for Adapting

The Hitch-Hiker's Guide to the AM Galaxy



Some Universal Questions

- What do we know about the systems we wish to manage?
- How can we use our knowledge to make better decisions?
- How should we engage science to help reduce uncertainty?
- How can we proceed in the face of high uncertainty?
- Why is that creature waving his towel at me?

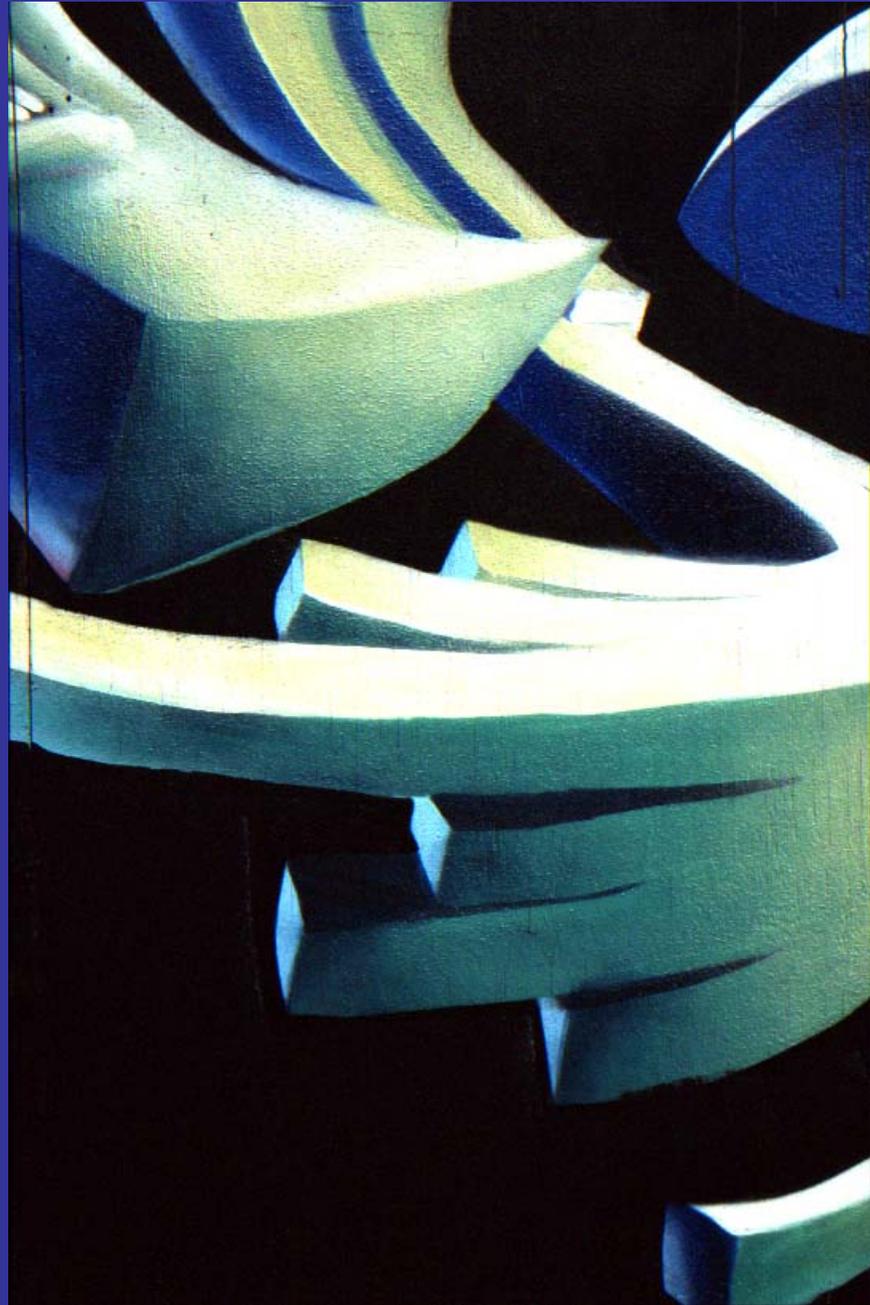
In the Beginning

There was

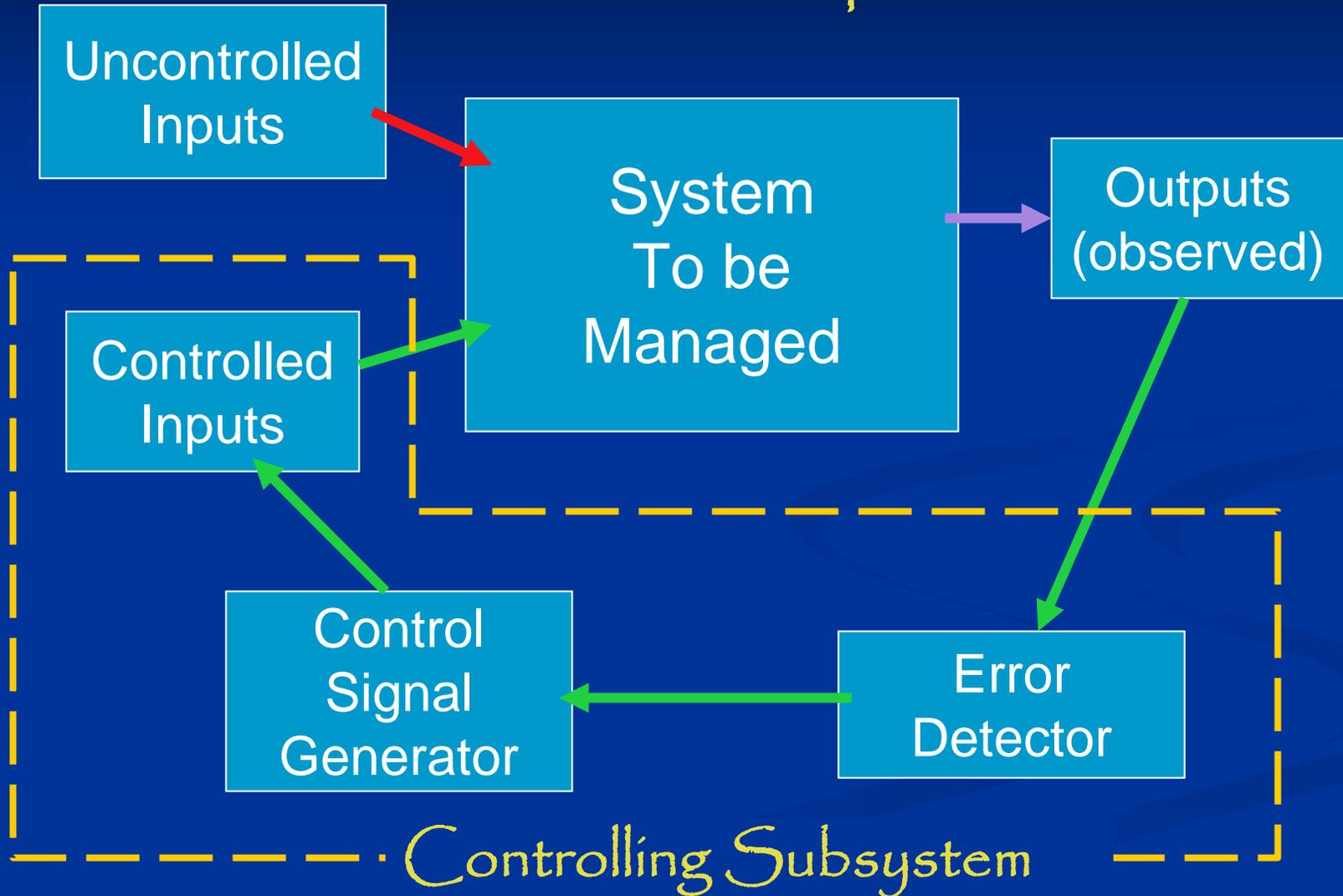
Adaptive

System

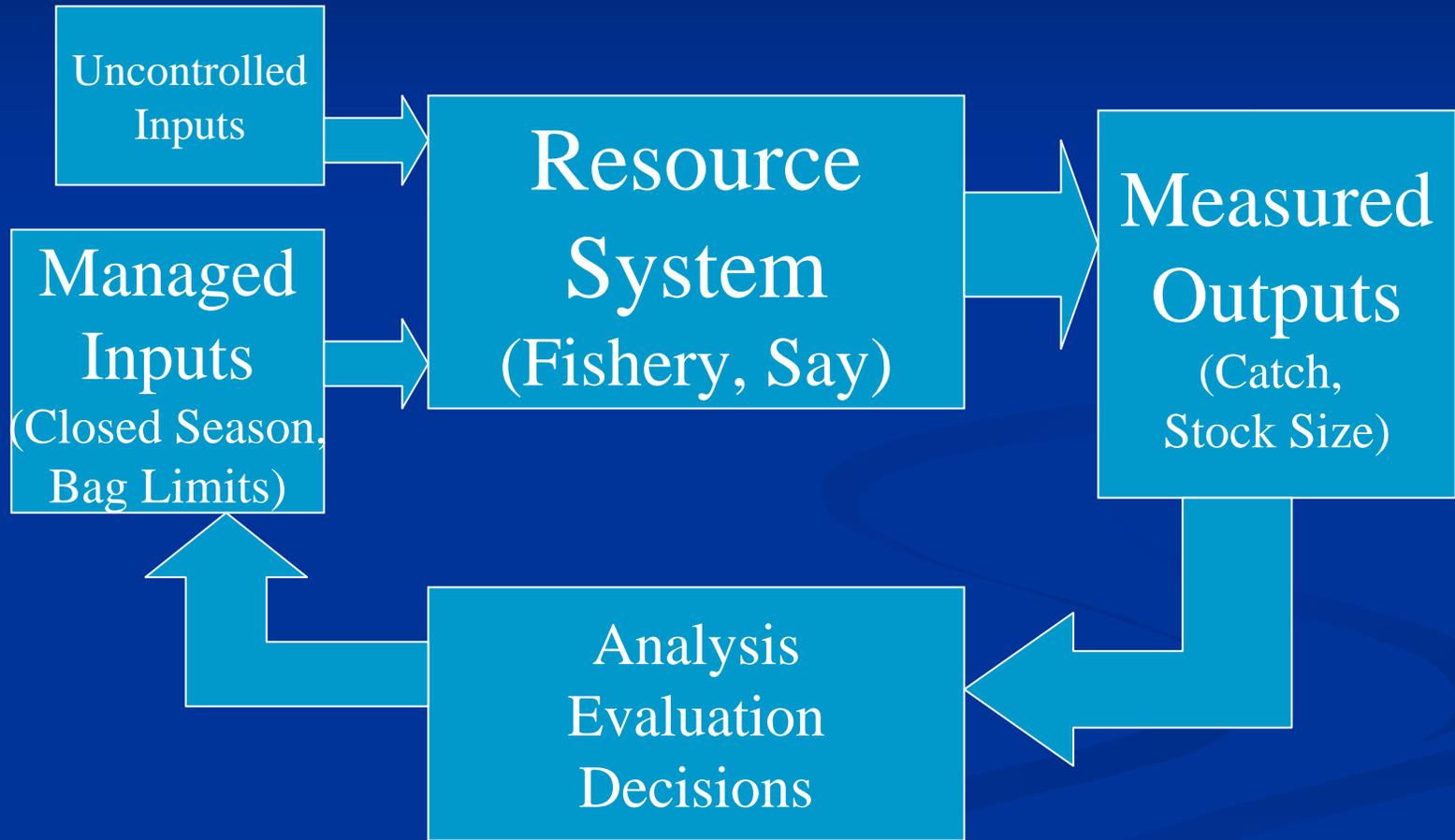
Control



Adaptive System Control Conceptual Model



The Management Decision Cycle Is Very Similar



So What Is Adaptive Management Anyway?

- Colloquial: “Learning by doing”
- Formal: “An approach to designing and implementing resource management policy that takes account of uncertainty and maximizes the opportunity to learn from management actions”
- Practical: “Using science tools to improve decisions made through the Management Decision Cycle”

The Two Solitudes Model



The Adaptive Management Model



Finding Adaptive Management on the Menu



Institutional Foot-Dragging

- It's not part of the SOP.
- If I go to ask for resources because I don't know what solution to implement I will get skewered!
- It's gonna be a lot of work. Where am I gonna find the time?
- I already build learning and adaptation into everything I do.
- We don't have the training or the personnel to adopt that kind of approach.

Adaptive Management, the Universe, Everything



AM is Confusingly Schizoid

PASSIVE AM

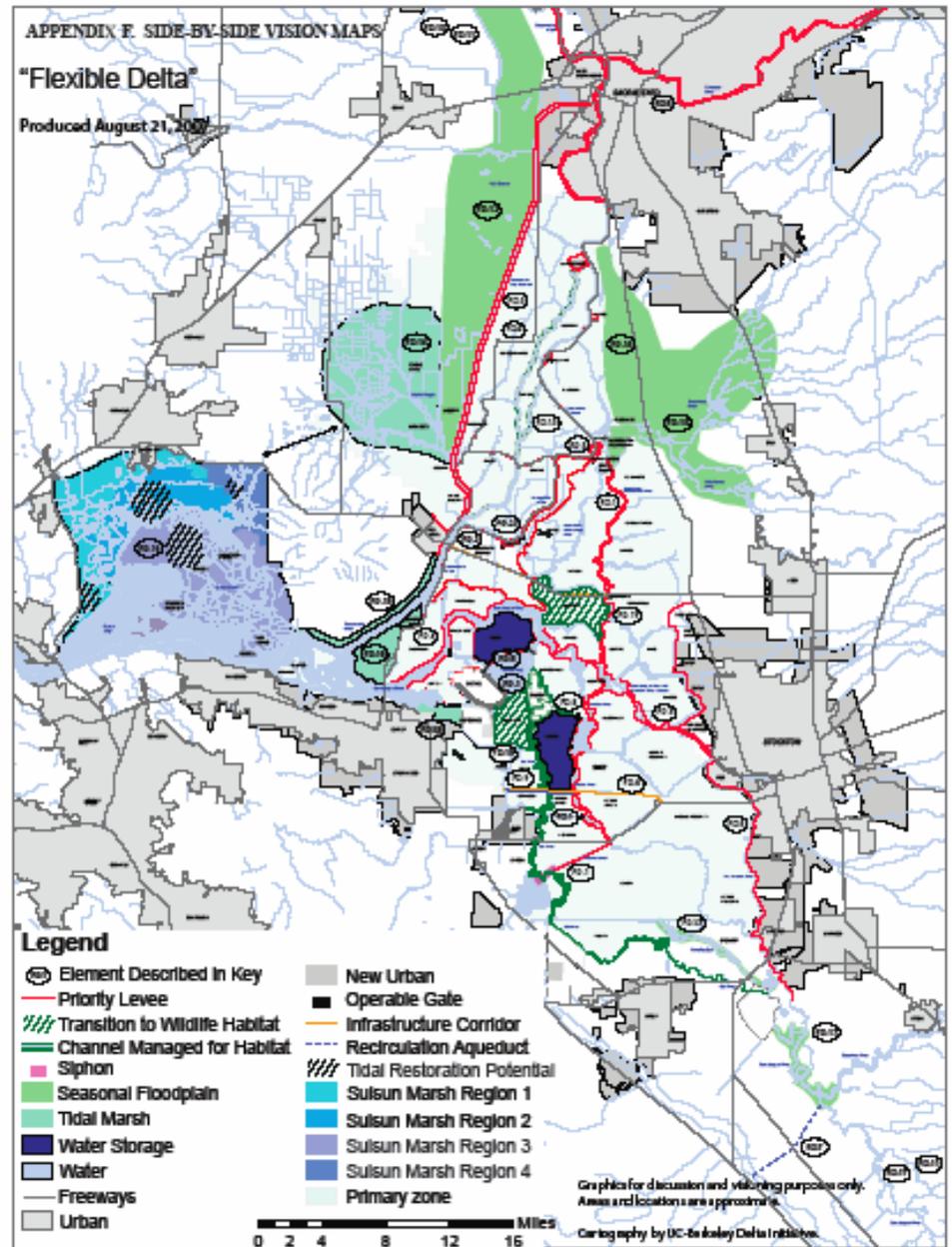
- Choose Most Likely Model of System
- Determine Robust Management Policy
- Implement Policy and Monitor Results
- Adjust Policy Based on Results

ACTIVE AM

- Identify Competing Models of System
- Identify Effective Probing Policies
- Implement Policies and Monitor Results
- Identify Best Model and Proceed

Proposed Delta
Landscapes Provide
Ample Opportunity
For Active
Experiments

Delta Restoration
As a Whole,
However, Must
Be a Passive
Experiment



Adaptive Management -- Mostly Harmless



Fun With Implementation

- Existing agencies express interest in AM but,
 - They are not well structured to do it.
- Every implementation represents an opportunity to learn but,
 - Those on the receiving end are risk averse.
- SOP's and BMP's can be obstacles to learning but,
 - Efficient delivery of services demands such standardization.

Even More Fun

- To learn, one must admit ignorance but,
 - Potential supporters demand certainty
 - Negotiation Required
- Effective AM involves integration and collaboration but,
 - Agencies, NGO's, Academics are used to working independently
 - Under CALFED, collaboration has expanded

Goodbye and Thanks for Adapting



And Thanks for all the Fish....

- Resource management problems have large uncertainties that science can help resolve
- Adaptive management is a process for engaging science in the policy process to address uncertainty and promote learning
- CALFED has made great progress toward implementing AM. However, there is still work to be done before AM will be fully implemented

42....Whatever

