NAWMP Revision

North American Waterfowl Management Plan

Plan nord-américain de gestion de la sauvagine

Plan de Manejo de Aves Acuáticas de Norteamérica

Consultation Workshop

March 22, 2010
Milwaukee, WI

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What makes decisions hard?

- Sometimes you don't know all the possible actions
- The objectives may be complex or contradictory, or in dispute
- The system dynamics may be poorly known
- Sometimes we confuse all the components
- Even knowing all the other components, the solution (optimization) may be difficult to figure out

A Vision for
Integrated Waterfowl Management

- **… the Plan should seek to establish a unified system of waterfowl conservation …**

- **… a fully coherent management system would feature:**

  - **A set of widely supported fundamental goals for waterfowl conservation**

  - **A decision framework that allows managers to understand and balance tradeoffs**

  - **Managers using that framework to efficiently allocate resources**

Structured Decision Making

- **Is a formal method for analyzing a decision, by breaking it into components**

- **Helps identify where the impediments to a decision are, to focus effort on the right piece**

- **Provides a wide array of analytical tools for dealing with particular impediments**
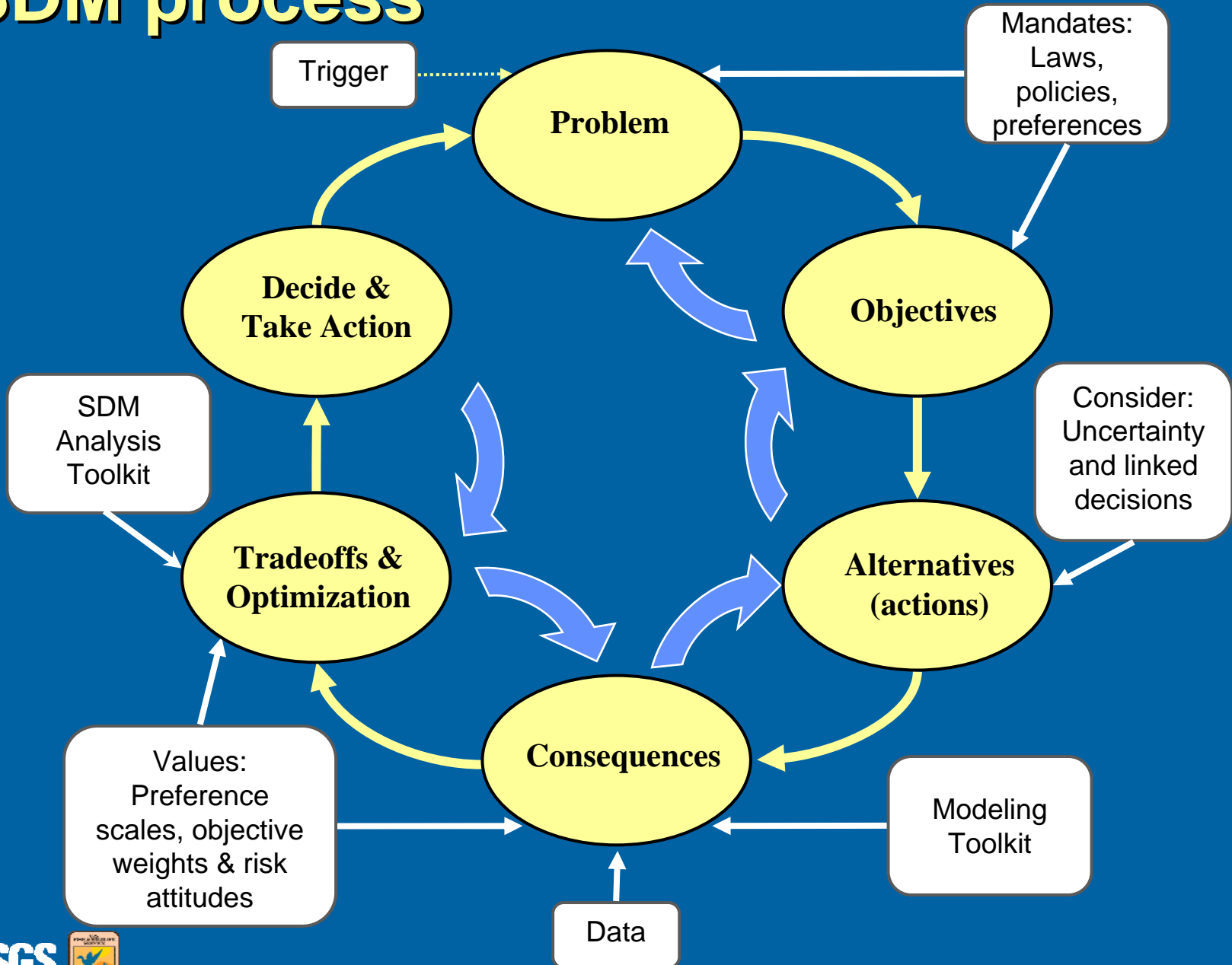
Benefits of structured decision making

- **Decision processes that are**
  - **Relatively bias free**
  - **Transparent**
  - **Explicit**
  - **Deliberative**
  - **Able to be documented**
  - **Replicable**
  - **Efficient, especially when no single person or entity is the decision maker**

- *An important goal is that everyone agrees with the process, knowing that not everyone will agree with the outcome(s)*
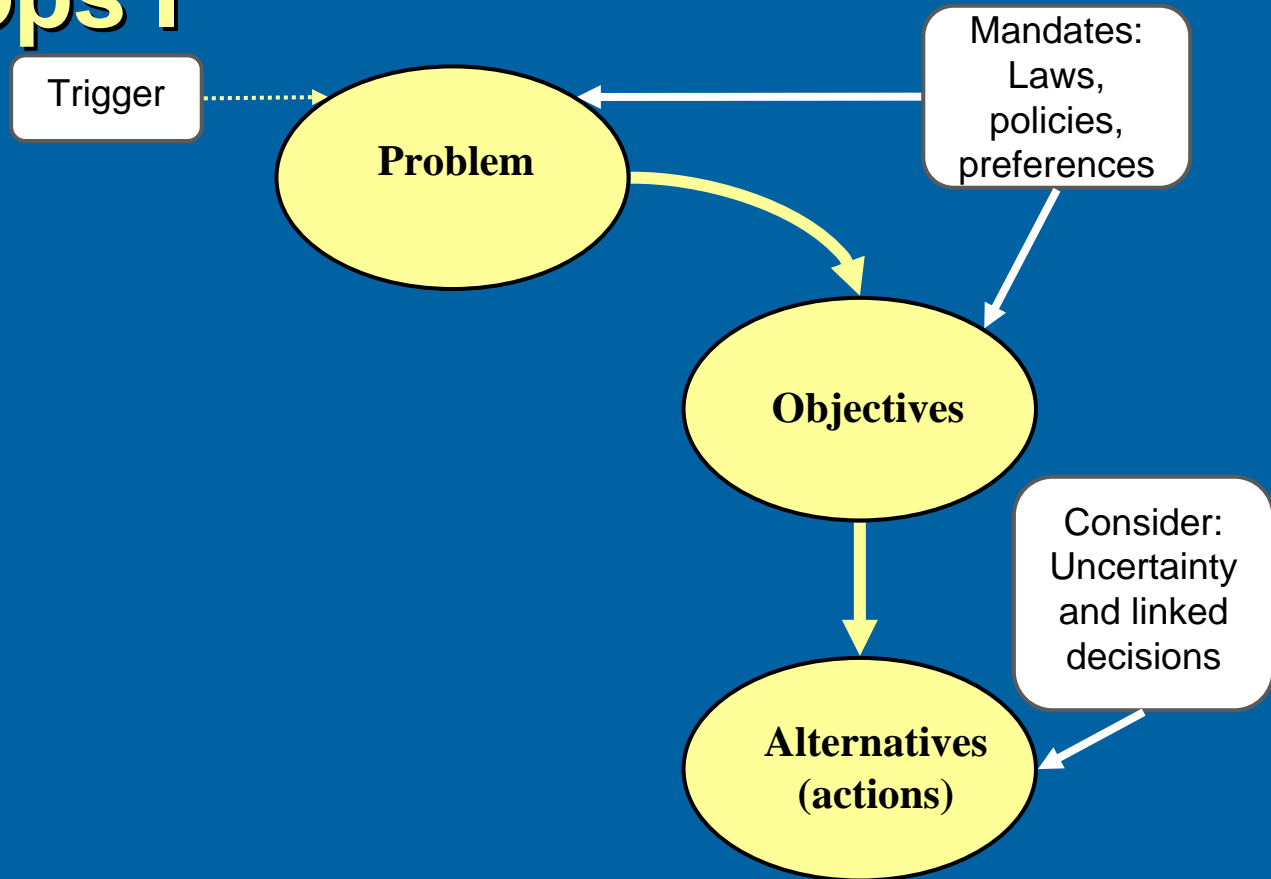
Two key elements of SDM

- **Values-focused**
  - **The objectives (values) are discussed first, and drive the rest of the analysis**
  - **This is in contrast to our intuitive decision-making, which usually jumps straight to a debate of alternative actions or outcomes**

- **Problem decomposition**
  - **Break the problem into components, separating policy from science**
  - **Specify components, gather & analyze relevant information**
  - **Recompose the parts to make a decision**

SDM process

Trigger

Problem

Mandates: Laws, policies, preferences

Decide & Take Action

Objectives

SDM Analysis Toolkit

Consider: Uncertainty and linked decisions

Tradeoffs & Optimization

Alternatives (actions)

Values: Preference scales, objective weights & risk attitudes

Consequences

Modeling Toolkit

Data

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Workshops I

Trigger ┄┄> **Problem**

Mandates: Laws, policies, preferences

Objectives

Consider: Uncertainty and linked decisions

Alternatives (actions)
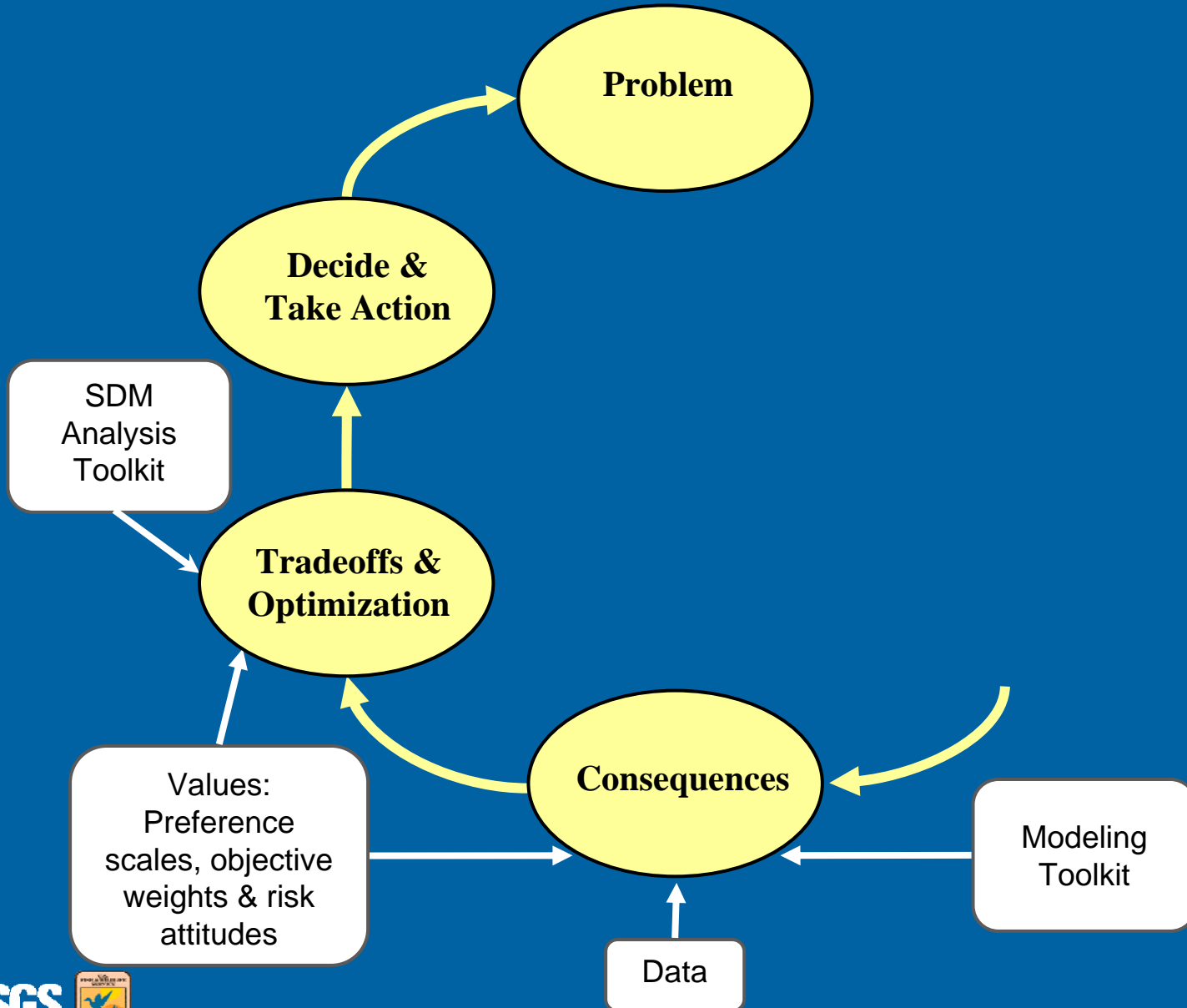
Workshops II

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Workshop I goals

1) To begin a process of engagement with waterfowl managers concerning the practical aspects of fulfilling "A Vision for Integrated Waterfowl Management"

2) To provide stakeholders (and/or their proxies) an opportunity to express their beliefs about the appropriate objectives of waterfowl management, and how they might best be pursued from a large-scale, strategic perspective

3) To provide feedback that will be useful to the Plan Committee as they develop the scope and nature of the pending Plan Revision

Workshop agenda

- **This Morning:**
  - **Introduction**
    - **The Revision Vision**
    - **Taking a SDM approach**

  - **Break-out groups to:**
    - **Discuss the nature of the decision problem**
    - **Identify fundamental & means objectives for waterfowl management**
    - **Identify some measurable attributes**

  - **Group discussion; opportunity for individual input**

- **This Afternoon:**
  - **Introduction to objectives hierarchies**

  - **Break-out groups to:**
    - **Construct an objectives hierarchy**
    - **Identify strategic actions to achieve objectives**

  - **Group presentations; synthesis**

Break-out Groups

- **Review and discuss the Problem Statement**

- **Review the handout of potential objectives**

- **Add missing objectives**

- **Discuss and reach agreement on whether each is a fundamental or means objective**

- **Suggest re-wording for clarity if necessary**

- **Suggest one or more measurable attributes for your fundamental objectives**

Fundamental vs. means objectives

- **<u>Fundamental objectives</u>**
  - An essential reason for your interest in the problem or decision
  - Constitute the broadest objectives influenced by your (conservation) actions
  - Important because *it just is!*

- **<u>Means objectives</u>**
  - Represent a way station in the progress toward a fundamental objective (e.g., decrease natural mortality)
  - Serve to help generate potential actions and can deepen understanding of the decision problem

Fundamental vs. means objectives

- Is this where I want to go? (FUNDAMENTAL) or is it a way to get there? (MEANS)

- Fundamental objectives answer "why?"
  Means objectives answer "how?"

- The distinction usually is dependent on the decision problem; a means objective in one problem may be a fundamental objective in another (and vice-versa)

- The distinctions in our context can ultimately help us define and bound the scope of "integrated waterfowl management"

Objectives vs. actions

- **The two are often confused in wildlife management planning documents**

- **E.g., "protect 1000 additional acres of habitat" - Not an objective, but a management action chosen (either explicitly or implicitly) from a broader set of actions**

- **Means objectives help define a potential set of actions; e.g., increase recruitment (means objective) by restoring native prairie, or constructing predator-proof fences, or creating nesting islands (set of potential actions)**

Measurable attributes

Fundamental objective	Measurable attribute
Maintain duck hunting tradition	Number of people who identify themselves as duck hunters
Ecosystem goods and services	Wetland acres (not counting farmed wetland)
Hunt quality	Proportion of hunters who say they were satisfied or very satisfied with their season
Promote conservation behavior in the public	Annual total of public and private dollars for habitat conservation ($billion)

Break-out groups

Workshop I goals

1) **To gather input on the overarching objectives of waterfowl management, and opinions on how such objectives might best be pursued from a large-scale, strategic perspective**

2) **To obtain information from stakeholders that will help inform the Plan Committee as they develop the scope and nature of the pending Plan Revision**

3) **To discuss with waterfowl managers the practical aspects of fulfilling "A Vision for Integrated Waterfowl Management"**

Draft Purpose of the NAWMP

The purpose of the Plan is to sustain abundant waterfowl populations while preserving the traditions of wildfowling and achieving broad benefits to biodiversity, ecosystem processes and the people of North America.
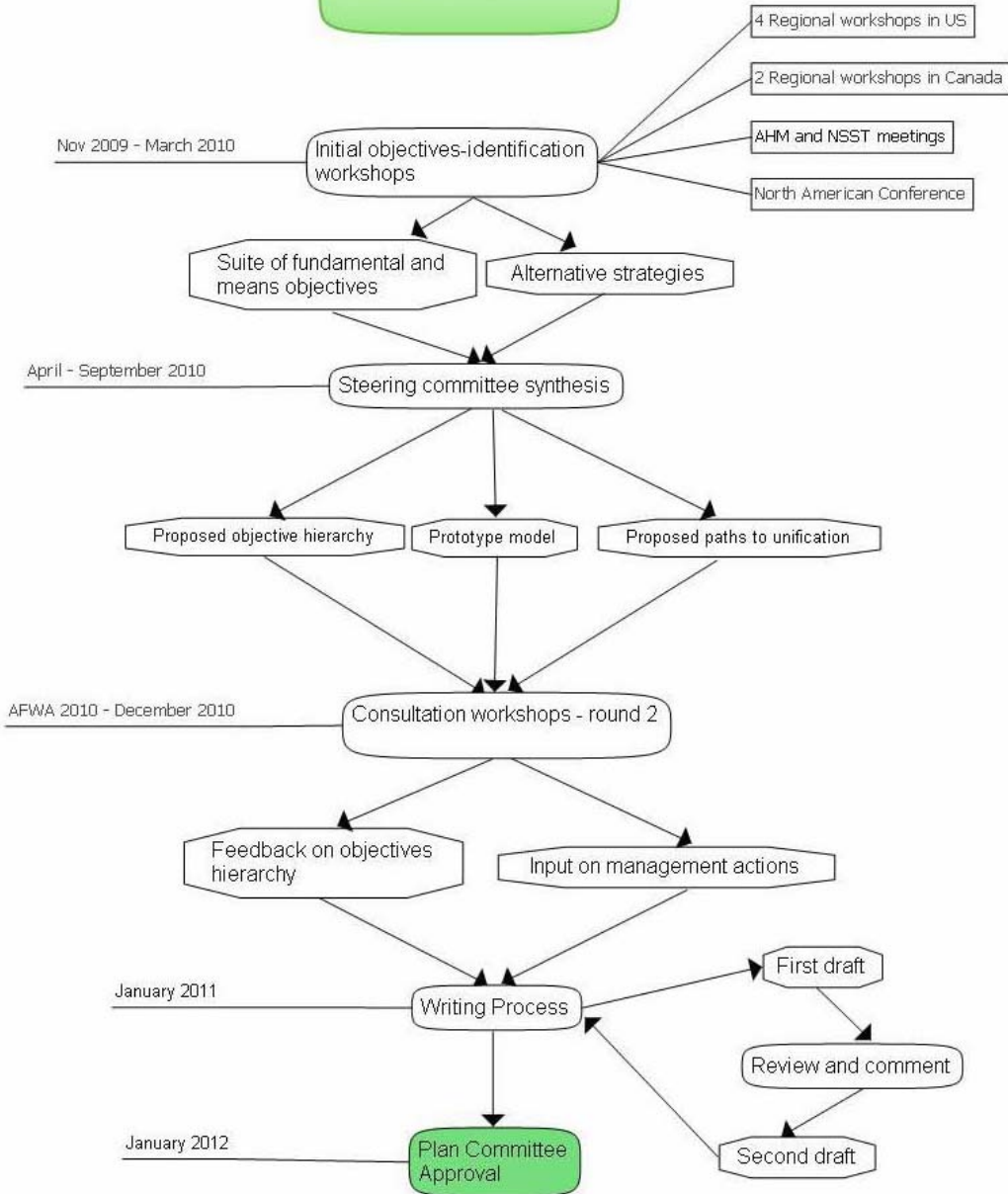
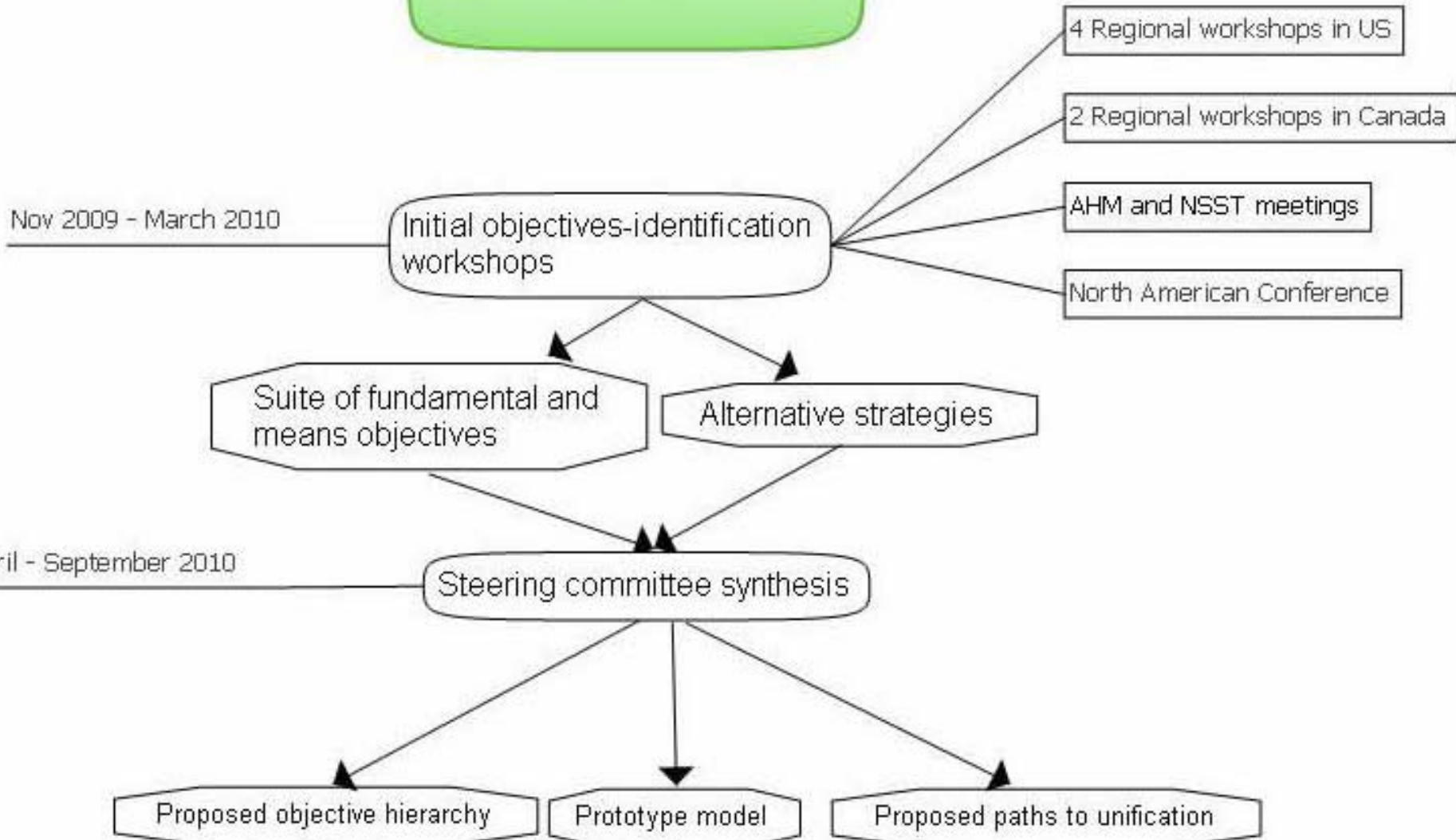**(NAWMP Scoping Report for the 2011 Plan Revision, 8 Aug 09)**
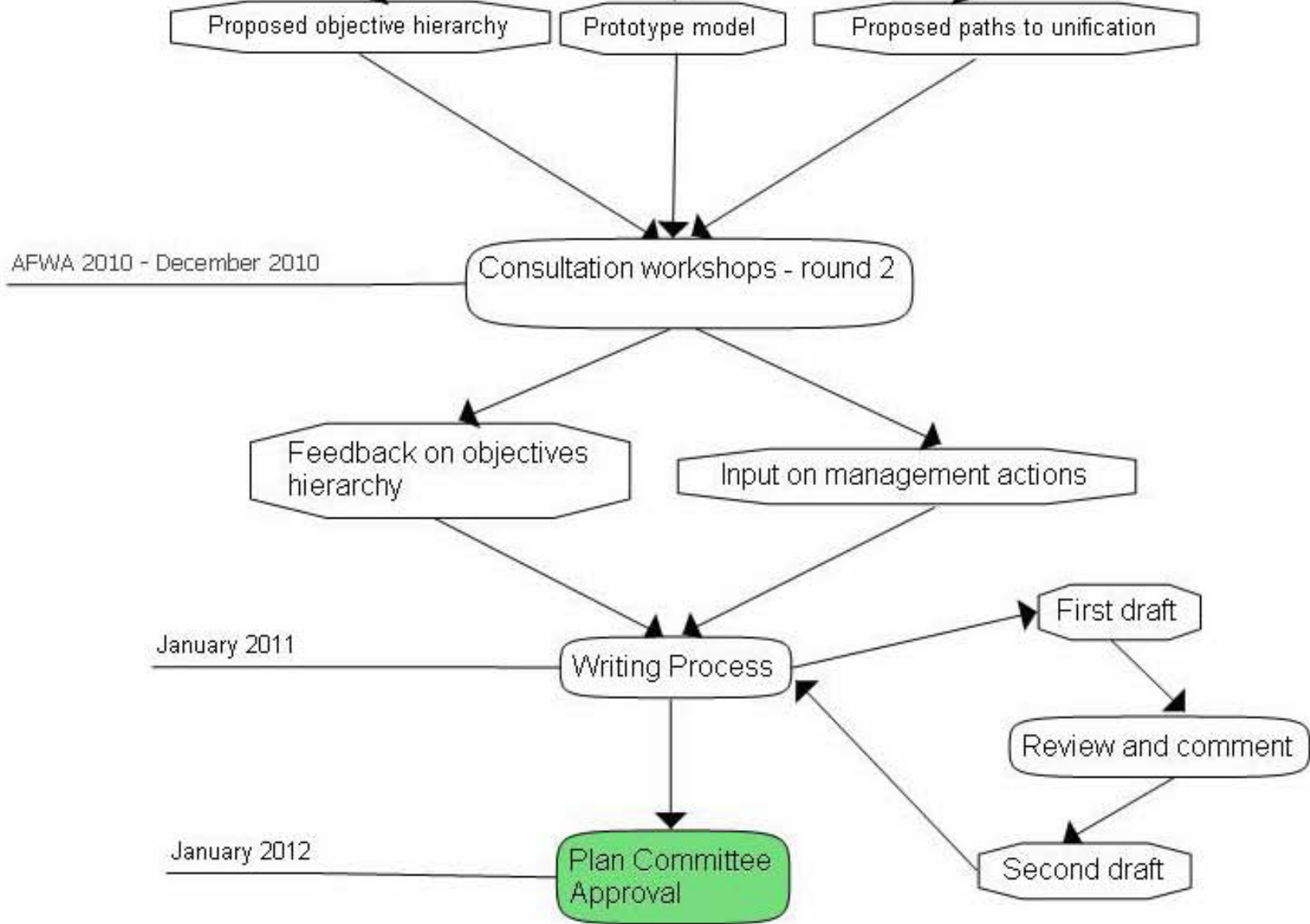
A Vision for Integrated Waterfowl Management

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- **… a fully coherent management system would feature:**
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NAWMP Revision Process

Initial objectives-identification workshops
- Nov 2009 – March 2010
- 4 Regional workshops in US
- 2 Regional workshops in Canada
- AHM and NSST meetings
- North American Conference

Suite of fundamental and means objectives

Alternative strategies

April – September 2010

Steering committee synthesis
- Proposed objective hierarchy
- Prototype model
- Proposed paths to unification

After the break-outs: *Individual input (1)*

- **You will be given the opportunity to express *your* opinion (via Turning Point) about the list of potential objectives**

- **Purpose is _NOT_ to conduct a "vote," but a means to:**
  - ensure everyone has a "voice" in a short period of time
  - determine the degree of variation in opinion
  - understand the sources of variation
  - have a record of (anonymous) responses

After the break-outs: *Individual input (2)*

- **First step is to gather some basic demographics (nationality, affiliation, etc)**

- **Then for each potential objective provided, indicate whether you think it is:**
  - **1 = not a relevant waterfowl management objective**
  - **2 = a fundamental waterfowl management objective**
  - **3 = a means waterfowl management objective**

Workshop agenda

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- **<u>Tomorrow</u>:**
  - **Introduction to objectives hierarchies**

  - **Break-out groups to:**
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