Goals and Objectives in Recovery Planning

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Outline

- The importance of planning
- Goals and objectives in recovery planning
- Using COSEWIC criteria
- Defining goals – advice and examples
- Defining objectives – advice and examples
- Approaches

The importance of planning

Sharp-tailed Snake Recovery Team

The importance of planning

- Strategy = the art of employing plans towards achieving a goal
- Build understanding and consensus on what you are trying to achieve and how you will achieve it
- Summarize complex information in a logical manner for communication
- To provide clear direction for actions to increase probability of success

The importance of planning

- Framework for adaptive management
- Adaptive management:
  - working toward a defined goal in a systematic manner that allows us to learn what works or does not work and why

Goals and Objectives in Recovery Planning

- What do you know about the species?
- What are the knowledge gaps?
- What does recovery mean for the species? (goal)
- What needs to be done to achieve recovery? (objectives)
- What tools will be used? (approaches)

Goals and Objectives in Recovery Planning

Using COSEWIC Criteria

- Understanding the problems (extinction risks)
- Guide questions re: what we know / need to know
- Indicate where we need to be to achieve success (goal) (especially for full recovery)

Using COSEWIC criteria

A. Declining total population
B. Small distribution, and decline or fluctuation
C. Small total population size and decline
D. Very small population or restricted distribution
E. Quantitative analysis

Using COSEWIC criteria

- What do we know about the species' demography?
  - Generation time (average age of breeding individuals)
  - Number of mature individuals (overall and in each population)
  - Distribution (# of populations / locations)
  - Population declines or fluctuations

Using COSEWIC criteria

- What do we know about the species' habitat?
  - Extent of occurrence / area of occupancy
  - Declines or fluctuations in area of occupancy, extent of occurrence and/or quality of habitat
- What level of protection exists? (for the habitat and individuals)

Using COSEWIC criteria

- What do we know about threats to the species?
  - Causes of declines
  - Actual or potential levels of exploitation
  - Effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites

Defining Goals: What is Recovery?

- Involves maintaining or attaining a certain biological state and reducing both current and future threats (extinction risk)
- A continuum from survival to full recovery:
  - survival = maintaining current population size and distribution
  - full recovery = restoring a species to a viable, self-sustaining population able to withstand stochastic events and other environmental variables

Defining Goals

- Briefly describe a desired future state (*where* you want to be)
- Are worded generally to establish broad aims and encompass the entire planning area
- Usually do not have a time frame specified for their achievement
- Are measurable (need to know when you have arrived)

Defining Goals: Useful Questions

- Are there biological or environmental factors that will limit recovery?
- Will recovery involve increasing the number of individual occurrences and filling in distribution gaps?
- Will recovery involve expanding the current range of the species, and to what extent?
- How serious and numerous are threats to the species and can they be reversed?

Defining Goals: Examples

1. To down-list species X from endangered to special concern
2. To improve the status of species X to a level where it is self-sustaining and no longer considered endangered or threatened
3. To halt the decline in species *X* and achieve a population of *N* breeding individuals distributed throughout *y* and *z* valleys

Defining Goals: Examples

1. To down-list species X from endangered to special concern

Comments:

- The end point (down-listing) is not very specific, and we cannot anticipate COSEWIC assessments (should be biologically based)
- Doesn’t provide information about the risks to the species (not related to COSEWIC criteria)
- Does not define what recovery means for the species (maintaining or self-sustaining?)

Defining Goals: Examples

2. To improve the status of species X to a level where it is self-sustaining and no longer considered endangered or threatened

Comments:

- Doesn't provide information about the risks to the species (not related to COSEWIC criteria)
- Defines recovery (self-sustaining)
- However, not specific enough to indicate when it has been achieved (what population level?)

Defining Goals: Examples

3. To halt the decline in species *X* and achieve a population of *N* breeding individuals distributed throughout *y* and *z* valleys.

Comments:

- Indicates what the risks are (linked to COSEWIC criteria)
- Defines recovery in a specific, measurable way
- Note: if quantitative targets are set, it must be both possible and practical to determine when that target has been achieved

Defining Objectives

- Describe *what* needs to be done to achieve the goal
- Are more specific than a goal
- Work together to achieve the goal
- Generally address:
  - population and/or distribution, habitat protection and/or identification, threat identification and/or mitigation
- Should also address key knowledge gaps

Defining *SMART* Objectives

- ***S***pecific – describe what will be done in concrete terms, using action verbs
- ***M***easurable – quantify the amount of change to be achieved
- ***A***chievable – realistic given existing biological and technical parameters
- ***R***elevant and ***R***esults-focused – relates to the goals, and measures outcomes not activities
- ***T***ime-bound – specifies a time by which the objective will be achieved

Defining Objectives: Other Tips

- Use active voice
- Use present tense where applicable/possible
- Use good sentence structure and be consistent

Defining Objectives: Examples

1. Improve the public's understanding of the conservation needs of the species
2. Develop and implement a communications plan for engaging the cooperation of implicated landowners within 3 years
3. 70% of targeted ranchers have used appropriate fencing techniques to protect suitable habitat in riparian areas by 2008

Defining Objectives: Examples

1. Improve the public's understanding of the conservation needs of the species

Comments:

- Specifies an outcome
- Not specific in terms of a conservation target (who is the "public" and what is "understanding")
- Not time-bound

Defining Objectives: Examples

2. Develop and implement a communications plan for engaging the cooperation of implicated landowners within 3 years

Comments:

- Not results-focused (identifies an action rather than an outcome)
- Specific and time-bound but not measurable

Defining Objectives: Examples

3. 70% of targeted ranchers have used appropriate fencing techniques to protect suitable habitat in riparian areas by 2008

Comments:

- *SMART* – specific, measurable, achievable (although ambitious), results focused and time-bound

Defining Objectives: Performance Measures

- Indicators must be measurable, precise, consistent, and sensitive to phenomenon being tracked
- Must measure the outcome not the activity
- Methods to collect data on indicators must be feasible, cost-effective and appropriate
- Monitoring plan should outline assumptions behind tools and detail data needed to collect and test those assumptions

Approaches

- Describe *how* to achieve the recovery objectives (a set of tools)
- Broad categories of approaches:
  - Monitoring
  - Habitat protection / management
  - Habitat restoration
  - Research
  - Stewardship
  - Communication / Outreach / Education

Approaches

- Broad categories in themselves do not communicate *how* the objective will be achieved
- Must provide a general description of the activities needed to meet the objectives
- However, the Recovery Strategy should not be prescriptive
- Should provide direction to action plan – where specific steps will be outlined

Resources

- The BP Conservation Programme planning manual: conservation.bp.com/advice/project.asp
- Salafsky et al. 2002. Conservation Biology 16: 1469-1479
  - a preliminary taxonomy of threats
  - a preliminary taxonomy of approaches and strategies for conservation
- Species at Risk 2004: *Setting Recovery Goals and Objectives 1* – Friday morning in Salon A