

# **LEOPOLD & CARSON:**

## **HOW DID THEY ENGAGE THE PUBLIC IN PROBLEM-SOLVING?**

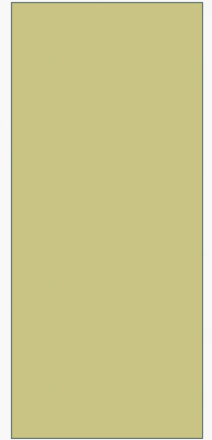
- Based on your reading and your experience of wildlife management in this class or in the real world, how are Leopold and Carson still impacting wildlife management today?
- How did Leopold and Carson change an entire culture through their writing and communication? What made them so effective?
- What lessons can you learn from how Leopold and Carson communicated science to the public? How can you communicate, educate, and motivate your friends, family, and the public on environmental and conservation issues?

# LEOPOLD & CARSON:

- Preference?

# HUMAN DIMENSIONS OF WILDLIFE MANAGEMENT

NREM 450



# OBJECTIVES

- State why communications, outreach, and an understanding of the drivers of human behavior are important to wildlife management professionals
- State two approaches to communications and outreach and give examples of each
- Illustrate and describe the communications process, using the concepts of source/receiver, encoding/decoding, message channel/feedback, and gatekeepers
- Identify the factors that influence decisions regarding appropriate messages and media
- Describe the ideal process one should follow to come up with a game plan for outreach and communication
- Explain what CHANS modeling is and ways in which it might be applied to solve wildlife management problems
- Differentiate between option values and exercised values
- State five methods for valuing wildlife
- Describe how attitudes and values might shape human behavior in ways that might influence wildlife management



## CASE STUDY

- Pueo (Hawaiian short-eared owls) are state-listed as endangered on O‘ahu. One concern is in regards to how rat poison may impact owls through secondary poisoning (owls may eat poisoned rats or mice). Rat poison is used by many stakeholders including DLNR, farmers, and homeowners. You are responsible for minimizing pueo mortality on Oahu. What will you do? How will you address stakeholders regarding this issue?

# COMMUNICATIONS & OUTREACH

1. People live their lives with limited awareness of human effects on wildlife
2. People who are aware of human effects on wildlife choose not to engage in wildlife conservation efforts or fail when they do engage
  - Public opposition a major constraint to implementation

So...

- Promote mission, policies, services, and goods to public
- Understand & influence people's awareness, attitudes, behaviors

State why communications, outreach, and an understanding of the drivers of human behavior are important to wildlife management professionals

# COMMUNICATIONS & OUTREACH

Two approaches

- **Interpersonal:** conversations, group interaction, decision-making processes, speeches, participatory demonstrations
- **Mass-media:** newspapers, magazines, radio, television, billboards, mail, films, publications, social media, other electronic & internet-based techniques

State two approaches to communications and outreach and give examples of each

# ELEMENTS OF COMMUNICATION

## Receiver

- understand receiving audience to effective messages & media
- Audience research

## Feedback

- achieved objectives? (1) increase audience awareness of wildlife issue; (2) shifted their attitudes; (3) changed their behaviors.
- Loop to improve

How do you determine if you succeeded in transmitting the message?

Illustrate and describe the communications process, using the concepts of source/receiver, encoding/decoding, message channel/feedback, and gatekeepers

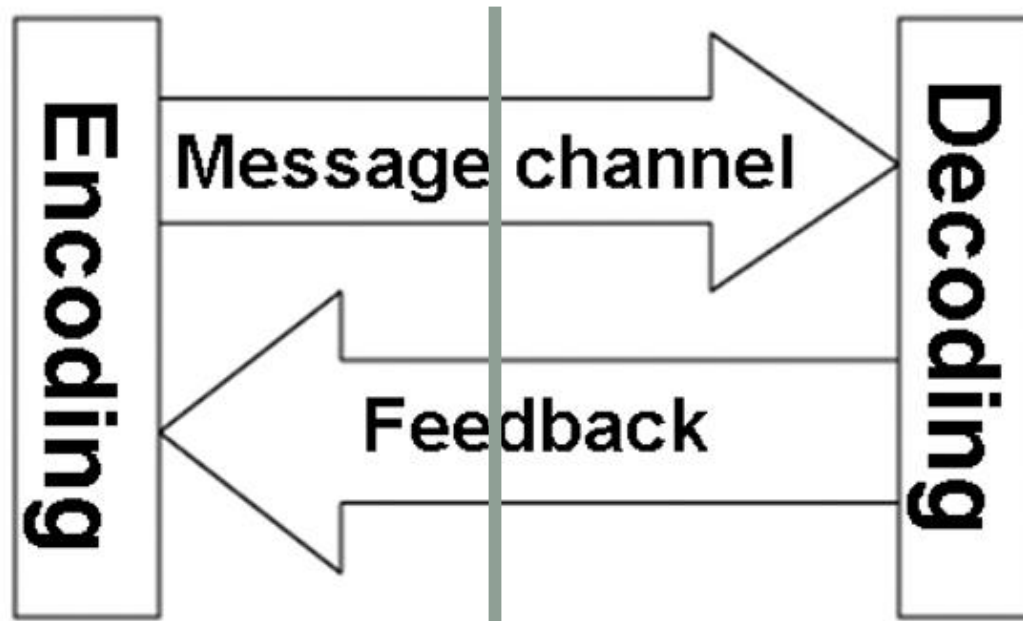


# COMMUNICATIONS ROUTES

Gatekeepers - individuals who filter which information is disseminated (usually between the source and receiver)



**Source**

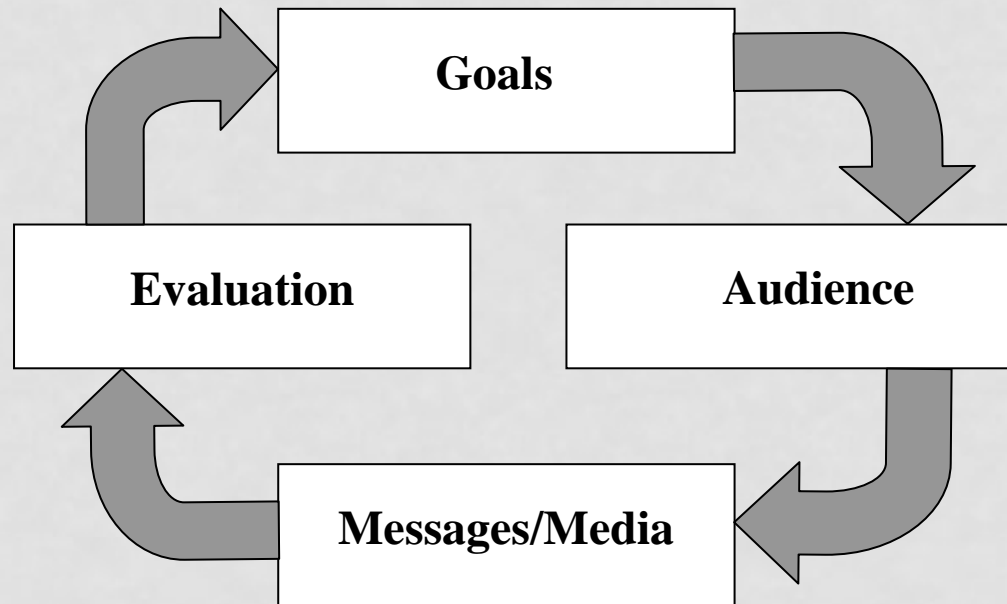


**Receiver**

# FACTORS INFLUENCING DECISIONS REGARDING APPROPRIATE MESSAGES AND MEDIA

Factors	Questions to ask
Background and habits of the audience	What are the interests and media sources of your target audiences?
Attributes of the message	Does it require background knowledge, maps, graphics, color, or sound?
Urgency of the message	Do you need a response today or next month?
Complexity of the message	Is a 30-second sound bit adequate for the message or is a lengthy educational publication necessary?
Frequency of the message	Is repetition needed regularly, seasonally, infrequently? Do new people keep joining the target audiences?
Personnel required	Is staff time available for personal contact, developing materials, providing outreach activities, interfacing with media, or training volunteers?
Cost	How many in your target audience can be reached, for how long, with what detail, at what price?

# GAME PLAN

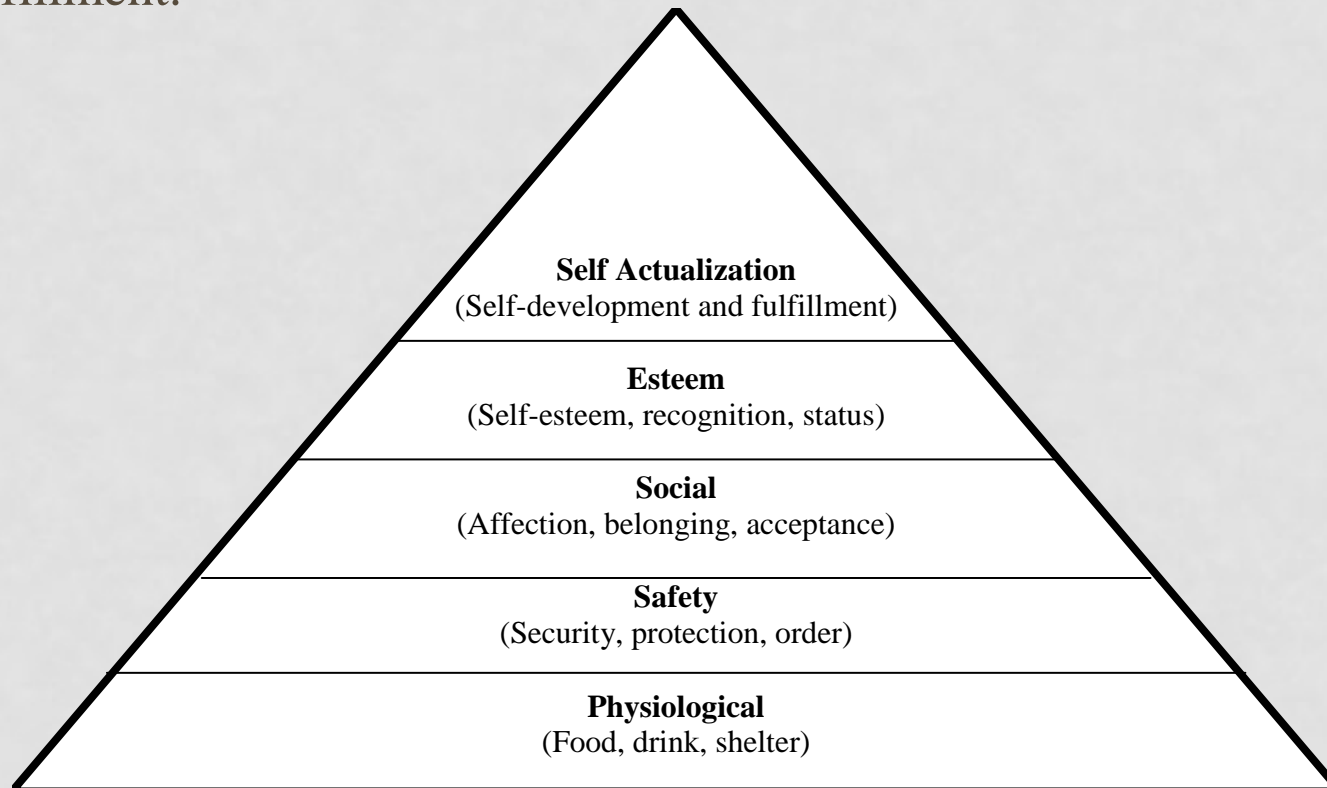


A Game Plan to guide wildlife communications involves an iterative process to identify your Goals and objectives, Audiences, Message and Media strategy, and Evaluation techniques.

# IDENTIFYING COMMUNICATION GOALS AND OBJECTIVES

## ► Influencing Attitudes

- Maslow's hierarchy of needs suggests people must first address their physiological needs before striving for self-esteem and, ultimately, self-fulfillment.



# HOW TO INFLUENCE BEHAVIOR?

## ► Influence:

- knowledge of issues
- skills
- commitment
- beliefs
- values
- perception of efficacy
- social norms or influences



# COUPLED HUMAN-NATURAL SYSTEMS (CHANS) MODELING

- Physical or mathematical models of interactions between human society and its environment
  - Patterns & processes of habitat fragmentation
  - Mechanisms of population dynamics
  - Predicting human behaviors & effects on wildlife
  - Sustainable strategies for balancing development and biodiversity conservation
  - Conservation area management

Explain what CHANS modeling is and ways in which it might be applied to solve wildlife management problems

# ECONOMIC VALUATION

- Option values
  - Willingness to pay to maintain the option of wildlife being available for future use
- Exercised values
  - Direct benefits: an individual's personal experience with wildlife
  - Indirect benefits: arise without direct contact with wildlife (value of passing wildlife to future generations, value of knowing wildlife exist)

Differentiate between option values and exercised values

# ECONOMIC VALUATION

- Methods for valuing wildlife
  - Gross expenditures
  - Market value of catch or harvest
  - Replacement cost
  - Willingness to pay
  - Hedonic (pleasure)



State five methods for valuing wildlife



# SOCIAL PSYCHOLOGY

## ATTITUDES VS VALUES

**Attitudes:** Positive or negative evaluations of an object;  
Shape opinions

- Affect vs. cognitive dimensions
  - Affect dimension: emotional elements & feelings toward object
  - Cognitive dimension: dispassionate evaluation of facts
- Explicit vs implicit attitudes
  - Explicit: object evaluations an individual is consciously aware of;  
**may be formed after a single experience**
  - Implicit attitudes: outside of an individual's conscious awareness or control; **long-term formation**

Describe how attitudes and values might shape human behavior in ways that might influence wildlife management

# SOCIAL PSYCHOLOGY

## ATTITUDES VS VALUES

### Attitudes, cont.

- Methods
  - Closed-ended questions
  - Fixed-format response scales (1-10)
- Benefits
  - Easy to conduct
  - Easy to interpret
  - Allow behavioral predication
  - Provide insight into methods for changing behavior
- i.e. production of “dolphin-safe” tuna label or “sustainable harvest” goods

Describe how attitudes and values might shape human behavior in ways that might influence wildlife management

# SOCIAL PSYCHOLOGY: ATTITUDES VS VALUES

## Values

- Transcend the objects or situations that are the focus of attitudes; may determine attitudes
- Cannot be observed or measured directly; must be indirectly determined using behavior or attitudes
- Assigned value: meaning, goodness, or worth placed on an object
- Held value: stable, meaning-producing super-ordinate cognitive structure; guide “right vs wrong” differentiations; guide approach to conflict resolution and decision-making

Describe how attitudes and values might shape human behavior in ways that might influence wildlife management

# SOCIAL PSYCHOLOGY: ATTITUDES VS VALUES

## Values

- Value orientations: basic beliefs a cultural group brings to bear on decision-making (i.e. mutualistic vs doministic views of nature)
- Wildlife value orientations are highly correlated with
  - attitudes toward hunting and fishing
  - Responses to potentially dangerous wildlife
  - Participation in wildlife-related recreation
  - Political ideology

Describe how attitudes and values might shape human behavior in ways that might influence wildlife management

# SOCIAL PSYCHOLOGY: BEHAVIOR

## Behavior

- Definition: an individual's conscious or involuntary action or reaction to an object or environment
  - Self-reports (often differ from what people actually do)
  - 2 models for predicting human behavior
    - **Norm-activation model:** people attempt to engage in what they perceive as pro-social behavior
    - **Rational choice models:** people weigh positive and negative consequences to generate an attitude toward a behavior option
- \*Relationship between attitudes & behavior: constrained by perceived ability to successfully perform behavior

Describe how attitudes and values might shape human behavior in ways that might influence wildlife management

# DECISION TREE: PUBLIC INVOLVEMENT METHODS FOR WILDLIFE DECISION MAKING

