

# Win-Win? : Incentivizing Harvest of Invasive Species

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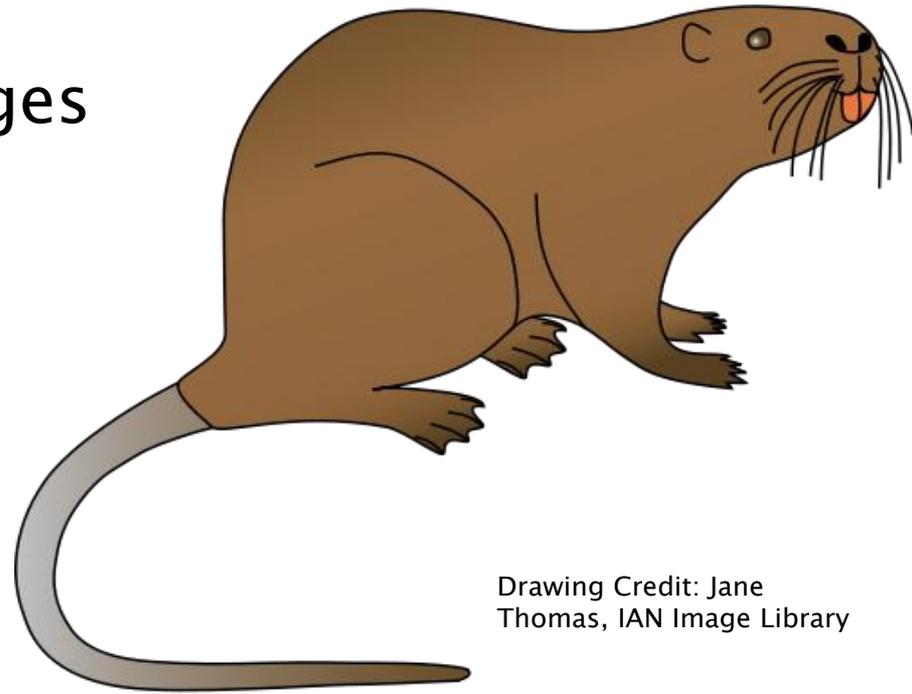
New York Times, 11/15/1877:

“The regular meeting of the American Acclimitization Society was held last evening...Last July the Acclimitization Society freed in the Park some starlings and Japanese finches. Mr. John Sutherland had done the same with some English pheasants. It was expected that they would all prosper.”



# Heart Healthy 'Crock-Pot' Nutria

- ▶ 1 small onion, sliced thin
- ▶ 1 tomato, cut into big wedges
- ▶ 2 potatoes, sliced thin
- ▶ 2 carrots, sliced thin
- ▶ 8 Brussels sprouts
- ▶ 1 /2 c. white wine
- ▶ 1 c. water
- ▶ 2 tsp chopped garlic
- ▶ Salt and pepper to taste
- ▶ 1 c. demi-glace (optional)
- ▶ 2 hind saddle portions of nutria meat



Drawing Credit: Jane Thomas, IAN Image Library



(LA Dept. of Wildlife and Fisheries)

# What is Invasivory?

- ▶ Consumption of an invasive plant or animal species
- ▶ Governments and others are encouraging harvest. Uses include:
  - Food and Food shelters
  - Biofuel
  - Fertilizer
  - Art supplies
  - Clothing
  - Fashion statement

*“There's nothing that can compare to [invasive] crayfish from Lake Tahoe... They're the freshwater Langostino.”*

*- Tahoe Daily Tribune , 12/9/11*



# Hazards of Incentivizing Harvest?

- ▶ Long-run invasive species costs  $>$  benefits, **but** short-run harvest may create perception that benefits  $>$  costs
- ▶ Key question: How can incentivizing harvest programs be effectively designed and implemented to promote long-term conservation goals?

# Examples of Incentive Programs

- ▶ Commercial contracts
  - Fee for service
- ▶ Bounty programs
  - Nutria, rapa whelk
- ▶ Harvest without resale
  - Fishing derbies
- ▶ Open market / commercial use
  - Asian carp fishery, iguanas



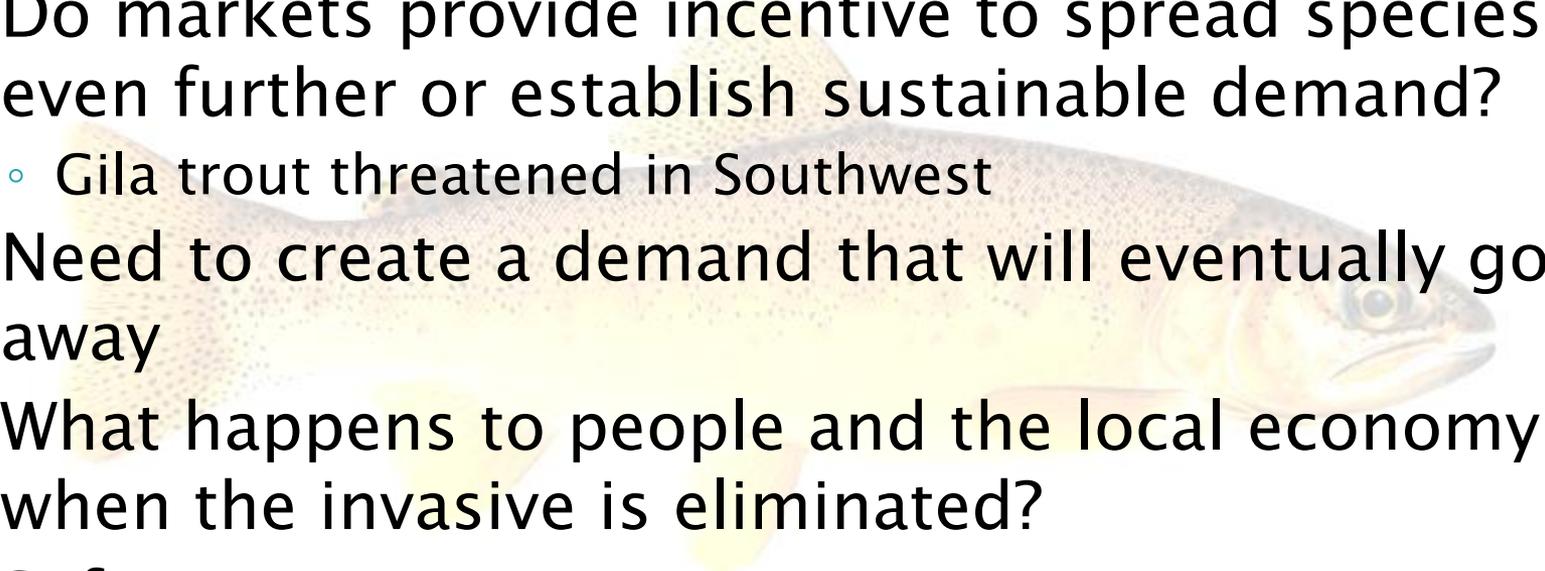
# Opportunities

- ▶ Can support other control, management, and containment options
- ▶ Provide some economic relief and recovery as part of overall restoration
- ▶ Lower overall cost of clean-up and eradication
- ▶ Generate significant public awareness and engagement

# Biological Challenges

- Can the species be detected easily?
- At what population size will incentives be effective?
- What harvest level is needed to ensure reproductive capacity is lost (i.e., “tyranny of small numbers”)?
- When is rapid response and eradication more appropriate?

# Socioeconomic Challenges

- ▶ Capturing species sustainably
  - ▶ Do markets provide incentive to spread species even further or establish sustainable demand?
    - Gila trout threatened in Southwest
  - ▶ Need to create a demand that will eventually go away
  - ▶ What happens to people and the local economy when the invasive is eliminated?
  - ▶ Safety
    - Envenomation
    - Contamination
- 

# Implementation Goals

“Our primary focus...is aggressive monitoring and strengthening our defenses to...keep Asian carp out of the Great Lakes.

Part of this effort includes hiring commercial fishermen to reduce the population...[H]arvesting them for food serves the dual purpose of getting more Asian carp out of the water and creating jobs.

**But the ultimate goal is to eradicate Asian carp from our waters, and any market that is created should be one that can be replaced with native fish.”**

[emphasis added]

– Chairwoman Nancy Sutley, CEQ

# Acknowledgements

The background features a repeating pattern of stylized, light blue waves. Overlaid on these waves are several large, semi-transparent illustrations of fish, including a prominent one in the center-right and another in the upper-left. The fish are rendered in a light grey or white color with a subtle gradient, giving them a soft, ethereal appearance.

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# Questions? Ideas? Recipes?



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