

What is Nature Worth?

Looking at our Natural Resources through New Eyes

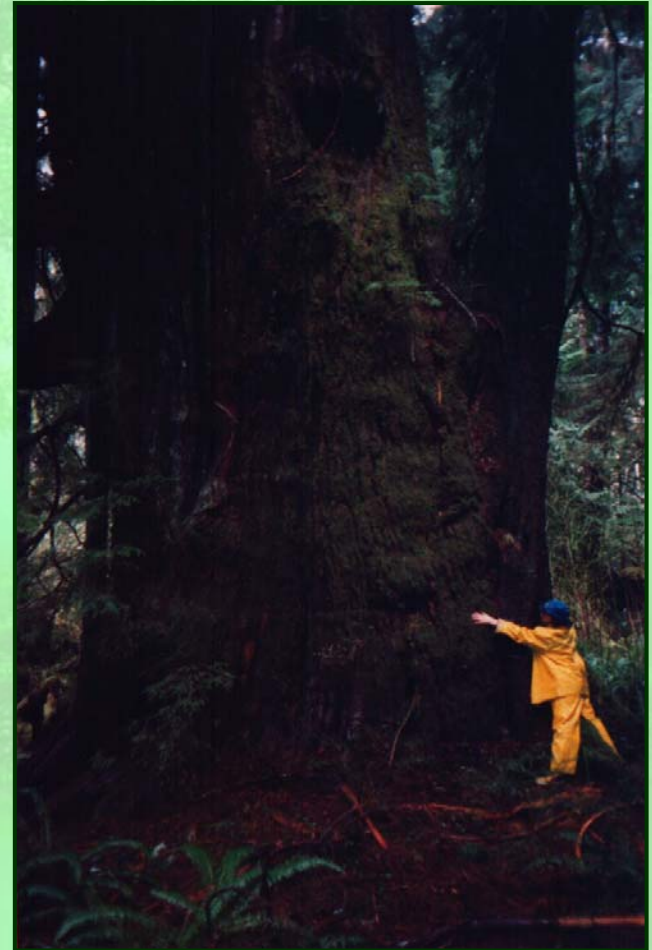
“Memorial Presents”

Monday, April 2, 2007

Dr. Murray A. Rudd
Canada Research Chair in Ecological Economics
Sir Wilfred Grenfell College
Memorial University of Newfoundland

Overview

- ❑ What are prices & where do they come from?
- ❑ Can we (and should we) put a price on nature?
- ❑ Can we 'profit' from nature conservation?



Market Goods and Services

- ❑ Thousands of goods and services are traded in established markets and have market prices
- ❑ Prices reflect people's willingness to make trade-offs between products
- ❑ Money is a tool to make trading easy (humans used to barter...)

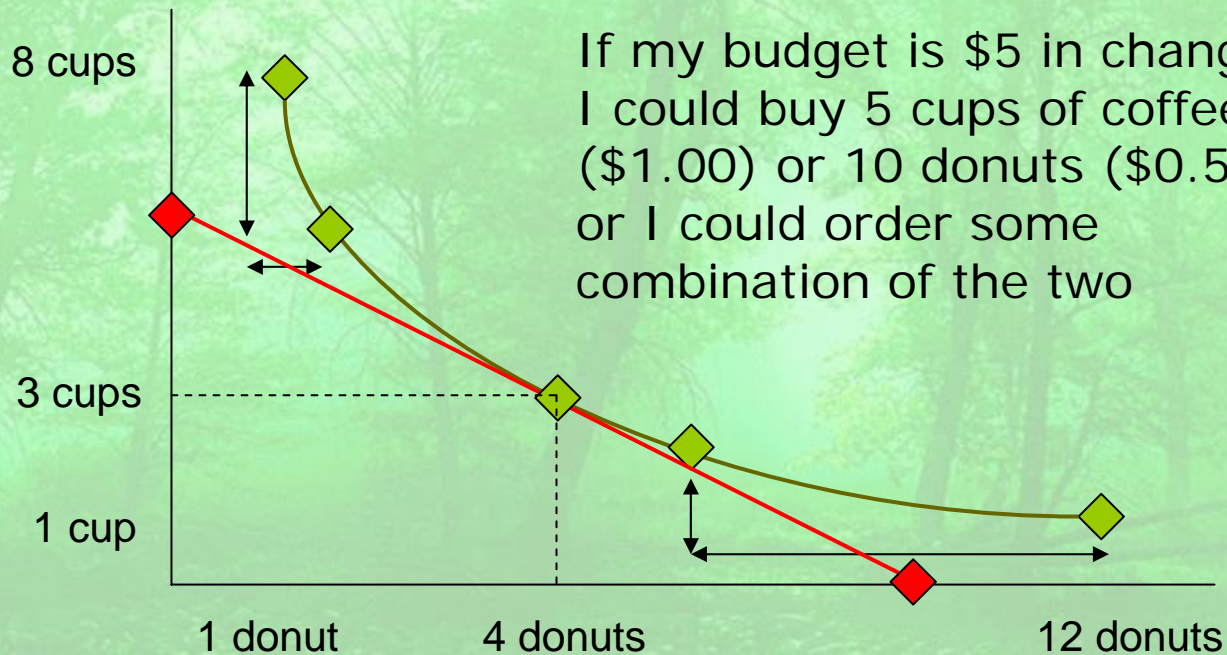


Market Prices

But remember, we can't have everything...
Our budgets limit our purchases!



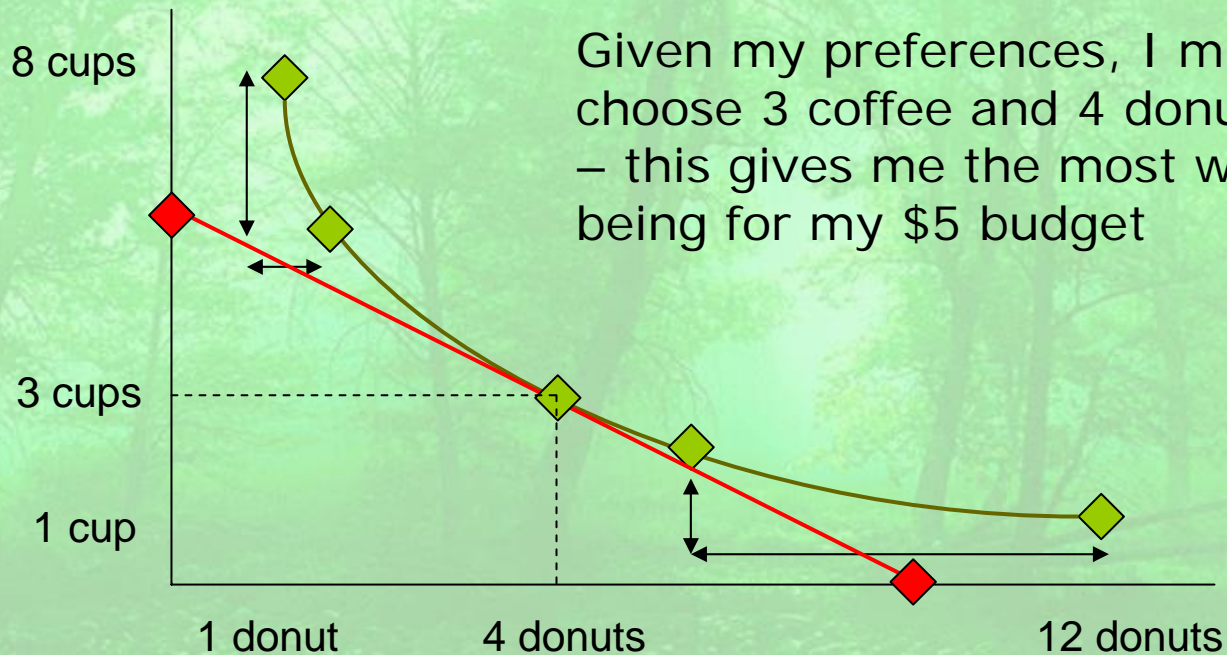
Market Prices



If my budget is \$5 in change, I could buy 5 cups of coffee (\$1.00) or 10 donuts (\$0.50), or I could order some combination of the two



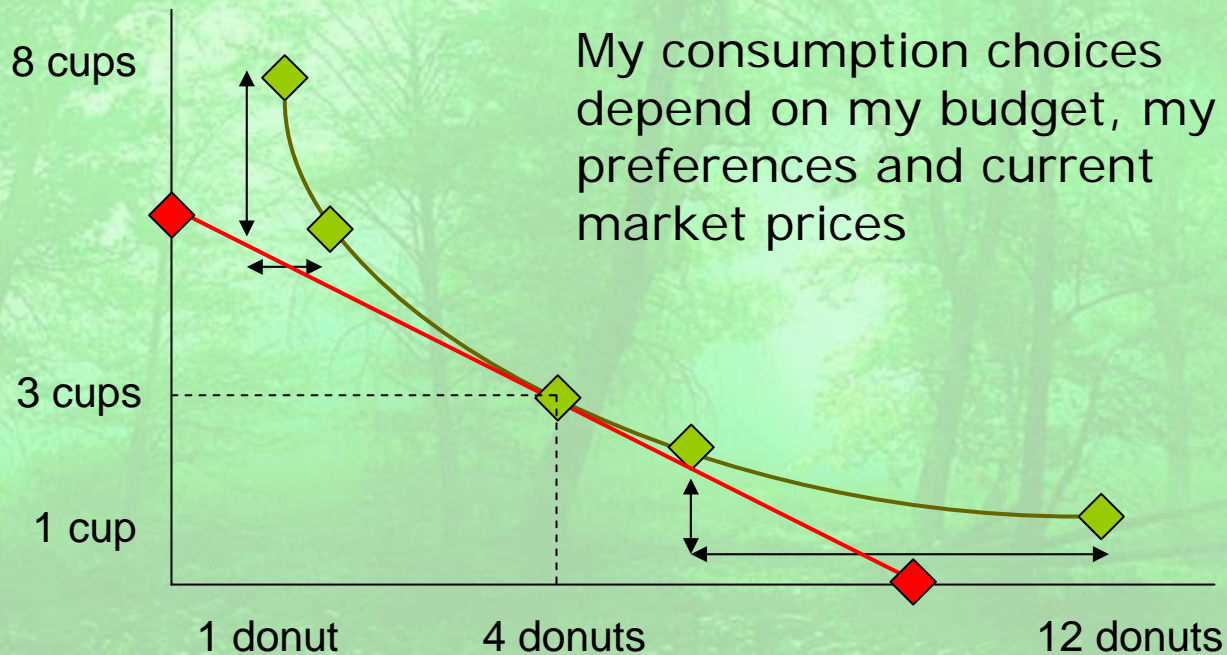
Market Prices



Given my preferences, I might choose 3 coffee and 4 donuts – this gives me the most well-being for my \$5 budget



Market Prices



Choices, Choices, Choices...

- Consumption choices can be complex
 - Each product has different attributes (including price)
 - Each person has different preferences
 - We all have budgets
 - Prices are well known for some things (e.g., groceries) but are less well known for other things that we don't buy all the time (e.g., vehicles, houses)



Non-Market 'Goods'

- ❑ Is consumption all that provides people with satisfaction and well-being?
- ❑ What about recreation, health, history, culture, environment, family and community?
- ❑ Are they valuable?



Non-Market ‘Goods’

- ❑ Some may say that these things are “priceless”
- ❑ But, when it comes to policy decisions, priceless often means price = \$0
- ❑ If prices do not reflect true value, some may say it is “uneconomical” to invest in preservation & protection

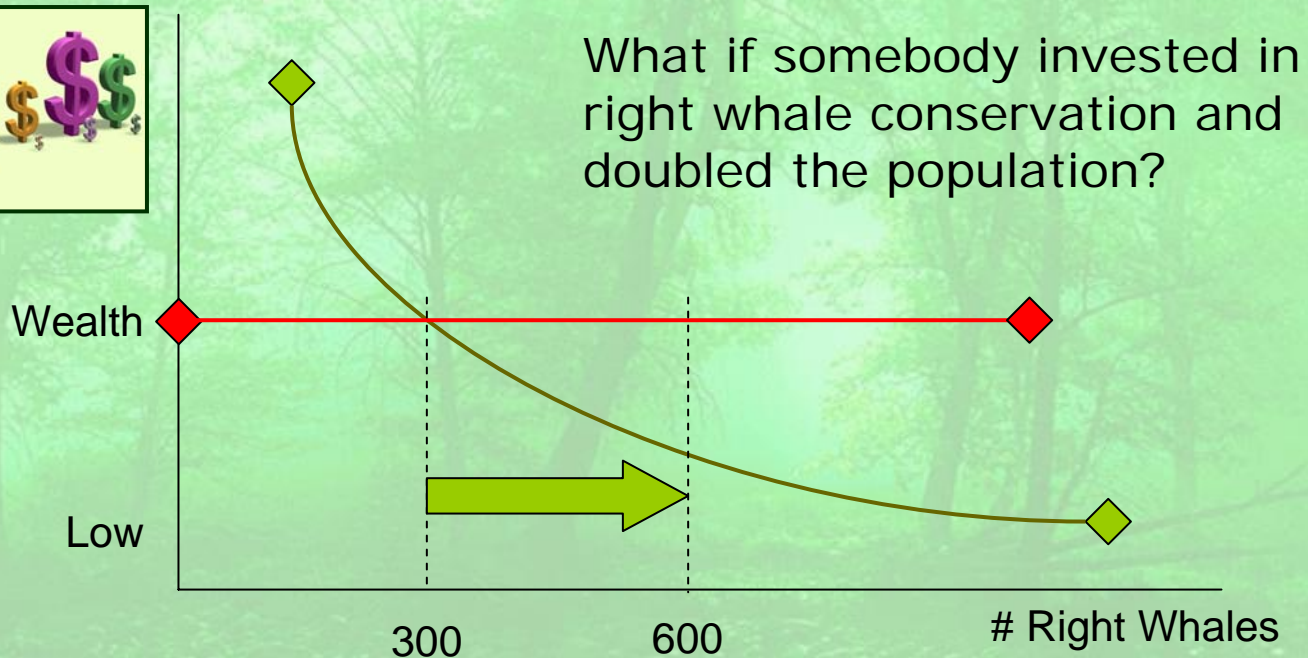


Pricing the Environment

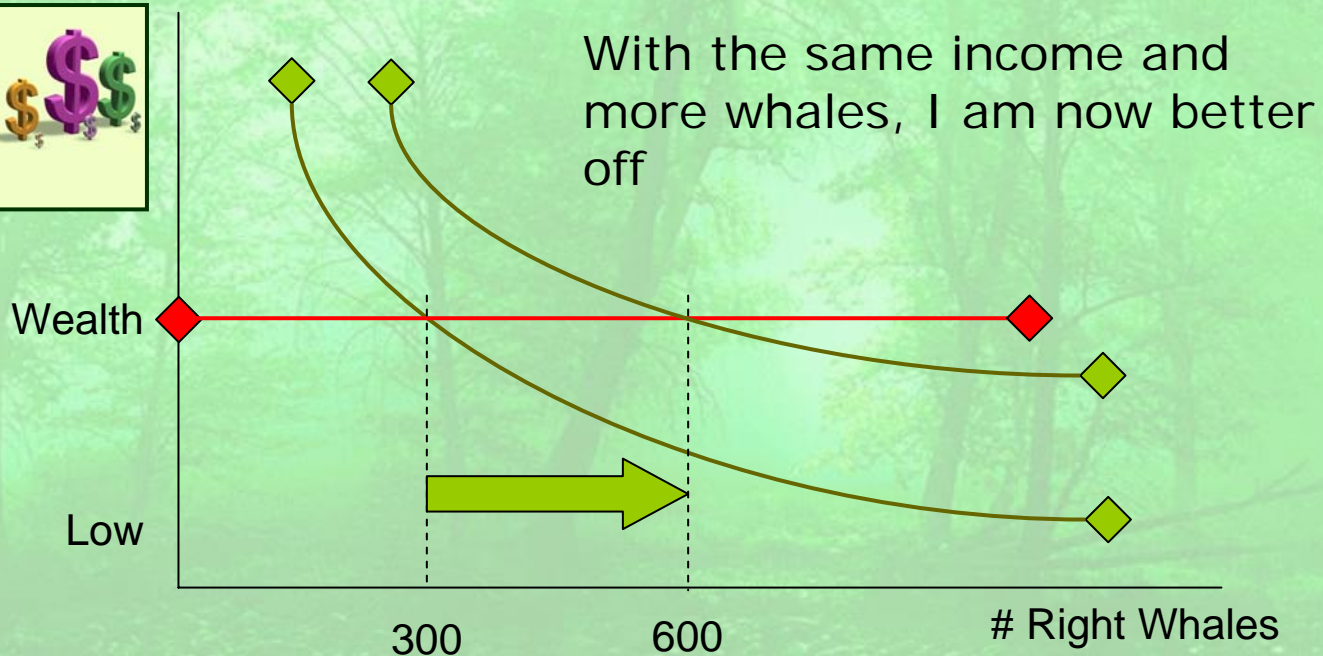
- ❑ Putting a price on the environment highlights the importance of nature to decision-makers
- ❑ It helps in making societal spending decisions
- ❑ It can stimulate new ideas for generating sustainable income from 'new products'



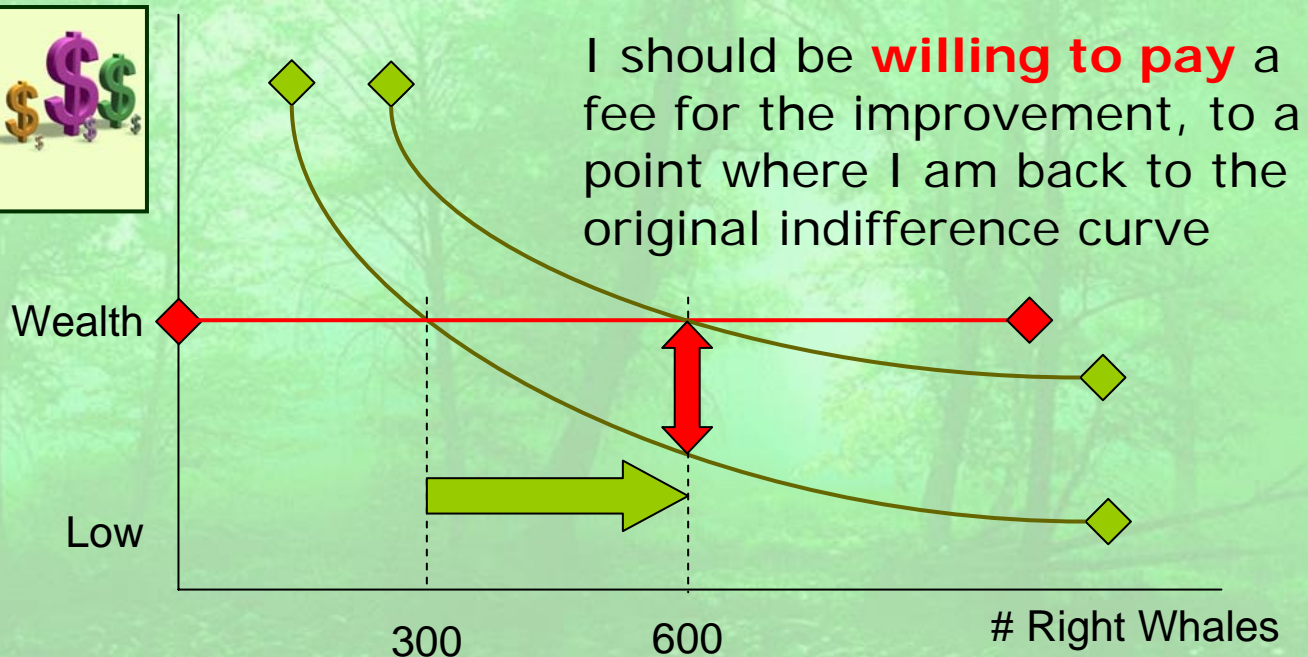
Pricing the Environment



Pricing the Environment



Pricing the Environment



Assessing Willingness to Pay

- In 2006, a national survey was used to assess Canadian's willingness to pay (WTP) for aquatic endangered species in Canada
- Over 2,700 survey responses were collected, from St. John's to Victoria, B.C.
- The survey used queries about preferred conservation programs to identify different groups with different values and different patterns of WTP

Assessing Willingness to Pay

If these were the only recovery programs available, which would you choose?

| | Option A | Option B | Option C |
|---|---|--------------------------------------|---|
| <u>Target Species</u> | <u>Right Whale</u> | <u>Atlantic Whitefish</u> | <p>NONE:</p> <p>If these programs were my only two choices, I would not be willing to support either of them.</p> |
| <u>Population Abundance</u> | 200% Increase | 50% Increase | |
| <u>Listing Status</u> | Threatened (better) | Stays Endangered | |
| <u>Method of Funding Recovery Program</u> | Government Spending is Reallocated | Increase Household Income Tax | |
| <u>Annual Cost (per household)</u> | \$0.50 per year (for 20 years) | \$5.00 per year (for 20 years) | |
| <u>Probability of Success</u> | 100% ('sure thing') | 50% (50/50 odds) | |
| | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Click the button below your preferred choice.

Assessing Willingness to Pay

If these were the only recovery programs available, which would you choose?

| | Option A | Option B | Option C |
|---|--|--|---|
| <u>Target Species</u> | <u>Leatherback Turtle</u> | <u>Porbeagle Shark</u> | <p>NONE:</p> <p>If these programs were my only two choices, I would not be willing to support either of them.</p> |
| <u>Population Abundance</u> | 100% Increase | 100% Increase | |
| <u>Listing Status</u> | Threatened (better) | Threatened (better) | |
| <u>Method of Funding</u> <u>Recovery Program</u> | Increase Household Income Tax | Government Spending is Reallocated | |
| <u>Annual Cost</u> <u>(per household)</u> | \$20.00 per year (for 20 years) | \$5.00 per year (for 20 years) | |
| <u>Probability of Success</u> | 75% (3 out of 4) | 100% ('sure thing') | |
| | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Click the button below your preferred choice.

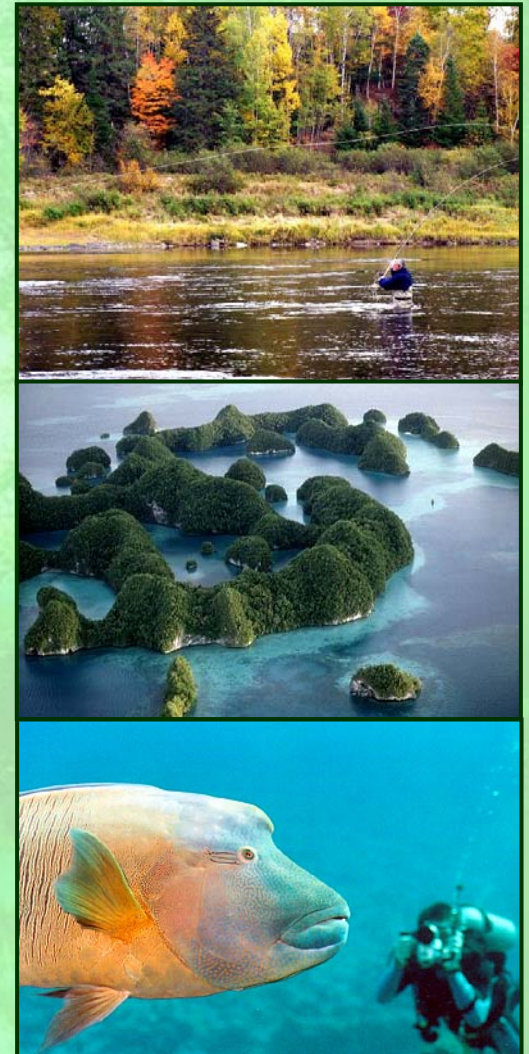
WTP for Atlantic Species

- ❑ Seven distinct segments were identified that varied in their willingness to pay
- ❑ WTP for right whale ranged from \$6-43/year
- ❑ WTP for Atlantic salmon ranged from \$3-101/year
- ❑ People from across Canada value conservation for Atlantic species
- ❑ Signal to government about the importance of conservation



Recreational Opportunities

- Environmental valuation can tell us about WTP for recreation
- Tourists generally have very high WTP for high quality experiences
- Newfoundland and Labrador have a valuable 'comparative advantage' for nature-based tourism



Existence Value

- ❑ People can find something valuable even if they never personally 'use' it but just know that it is there
- ❑ If they do, they should be willing to pay to preserve it – this is called existence value
- ❑ There are many possible reasons for these values – one important one is that supporting conservation can help a person define themselves

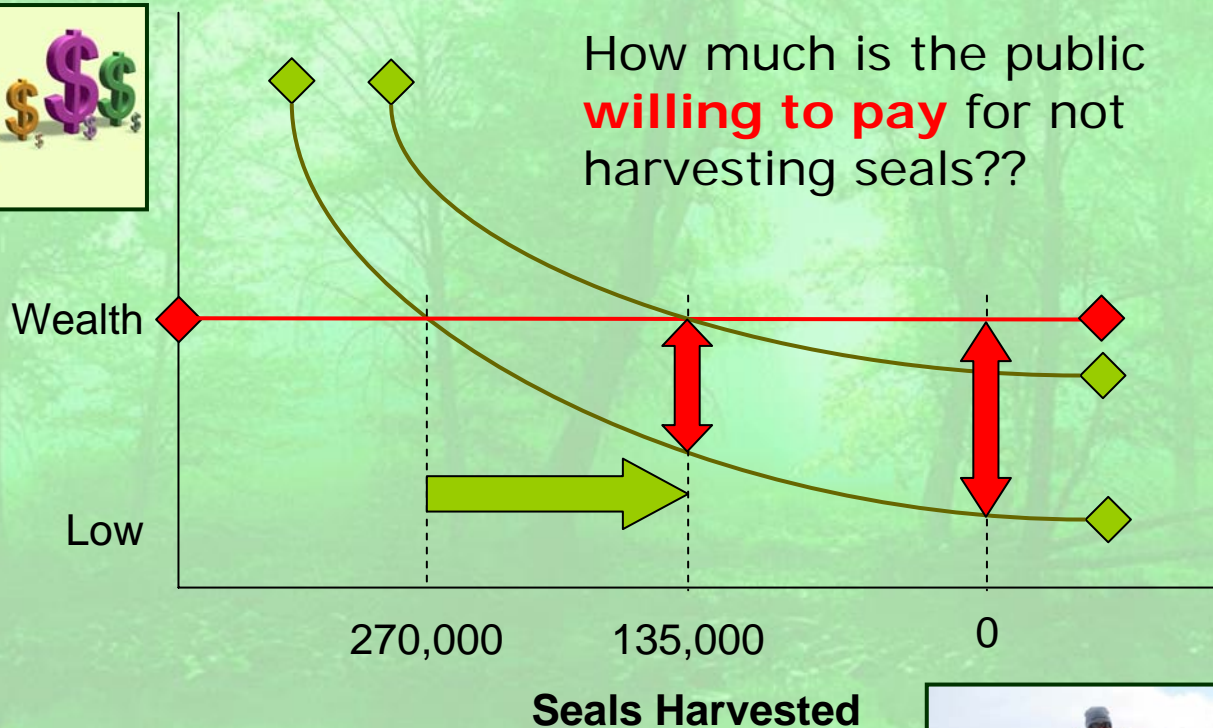


Existence Value & Fur Seals

- A large proportion of the public in Canada, the United States and Europe likely hold existence values for seal conservation
- Arguments regarding the biological sustainability of the population or humane killing are likely irrelevant for most people
- Counter-advertising is unlikely to shift the preferences and underlying values of conservationists



WTP for Reduced Seal Harvests



Markets for Seal Products

- ❑ The established market for fur products
 - Relatively small
 - Competitive
 - Uncertain and fickle
- ❑ The “untapped market” for live seals
 - Potentially huge
 - Based on strong personal values – enduring market



Is there a Market for Live Seals?

- ❑ Are there people who would be willing to pay for reducing the seal harvest?
- ❑ Is a live seal worth more than a dead one?
- ❑ Are there mechanisms for implementing programs that transfer conservationists' wealth (\$) to fishers and communities?
- ❑ What are the broader social concerns that would need to be considered?
- ❑ Is this an option worth exploring?

Is there a Market for Live Seals?

- Remember, this market segment is large and has a lot of money... They may be more than willing to “lease” the annual seal quota at a very attractive price.



To Sum Up...

- ❑ Nature has value – it contributes to quality of life in many ways for many people, in NL, across Canada and abroad
- ❑ Putting a price on nature may be useful for:
 - Raising awareness of the importance of conservation amongst decision-makers
 - Engaging in better pricing strategies in tourism
 - Encouraging the development of new mechanisms to capture the full economic value of nature
- ❑ NL has a rich endowment of “natural capital” – it is important to carefully consider how to use it to reap sustainable, long-term benefits

What is Nature Worth?

Looking at our Natural Resources through New Eyes

“Memorial Presents”

Monday, April 2, 2007

Dr. Murray A. Rudd
Canada Research Chair in Ecological Economics
Sir Wilfred Grenfell College
Memorial University of Newfoundland