

## Human Activity and the Environment – Teacher's Kit

### Slide set # 3: How can the value of ecosystem goods and services be measured?



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- |                |  |
|----------------|--|
| .              | not available for any reference period   |
| ..             | not available for a specific reference period  |
| ...            | not applicable   |
| 0              | true zero or a value rounded to zero   |
| 0 <sup>s</sup> | value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded |
| P              | preliminary  |
| r              | revised  |
| X              | suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>                                   |
| E              | use with caution   |
| F              | too unreliable to be published   |
| *              | significantly different from reference category ( $p < 0.05$ )   |

## Set #3: How can the value of EGS be measured?

Set #3 of a three-part series, this presentation and related learning materials include the following activities:

- Learners discuss possible non-monetary methods of determining the benefits of transportation options.
- Learners identify possible monetary measures of EGS value.
- Learners identify possible non-monetary measures of EGS value.

### Key learning outcomes:

- understand monetary and non-monetary valuation methods
- understand the importance of both valuation methods

**Intended audience:** grades 7 to 12 social studies, geography, science, biology, and environmental education classes; introductory post-secondary

These PowerPoint presentations and corresponding teacher notes and activities accompany and support the learning activities for “How can the value of ecosystem goods and services be measured?” and the Statistics Canada publication, *Human Activity and the Environment 2013: Measuring ecosystem goods and services in Canada*.

Title slide

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## References

kjay, 2014, Douglas Fir Tree Silhouette, <http://us.fotolia.com/id/5470456> (accessed May 28, 2014).

# Think about the task

Today's task

What non-monetary measures can be used to value goods and services provided by this ecosystem?



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## What will I learn?

- the value of EGS can be quantified using monetary and non-monetary methods
- why it might be important to use non-monetary methods to quantify the value of EGS

Slide 1

## References

sababa66, 2014, fisherman on the boat, <http://us.fotolia.com/id/57707069> (accessed May 28, 2014).

# Explore the idea

The value of different transportation options can be compared using monetary measures such as cost. Are there other ways to quantify and measure their benefits?



**THINK** of various ways of quantifying the benefits of each option

**TALK** to a partner

**SHARE** with the class

Slide 2

## References

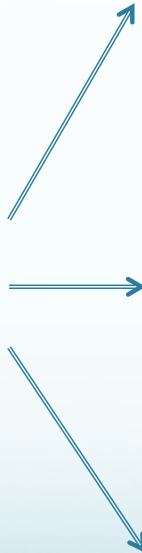
Dudarev Mikhail, 2014, Bicycle, <http://us.fotolia.com/id/49643609> (accessed May 28, 2014).

nerthuz, 2014, Big White Tour Bus, <http://us.fotolia.com/id/52937352> (accessed May 28, 2014).

**Monetary measures** can be used to determine the value of EGS.



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G. MacDougall / Prince Edward Island Department of Agriculture and Forestry

**LOOK** at the images carefully

**DESCRIBE** what you see to your partner

**IDENTIFY** possible **monetary** measures to calculate the value of these EGS

Slide 3

## References

kjay, 2014, Douglas Fir Tree Silhouette, <http://us.fotolia.com/id/5470456> (accessed May 28, 2014).

Hislop, Lawrence, 2010, Tree stumps, Canada, [http://www.grida.no/photolib/detail/tree-stumps-canada\\_18fd](http://www.grida.no/photolib/detail/tree-stumps-canada_18fd) (accessed April 22, 2014).

mahony, 2014, Man relaxing on the seaside, <http://us.fotolia.com/id/63616337> (accessed May 28, 2014).

Gerald MacDougall, Coastal Erosion, Brae Harbour, Prince Edward Island, Prince Edward Island Department of Agriculture and Forestry, <http://atlanticadaptation.ca/erosion> (accessed July 3, 2014).



Much like quantifying and measuring the non-monetary benefits of a transportation choice, **non-monetary measures** can also be used to determine the value of EGS.



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**DESCRIBE** what you see to your partner

**IDENTIFY** possible **non-monetary** measures to calculate the value of these EGS

Slide 4

## References

kjay, 2014, Douglas Fir Tree Silhouette, <http://us.fotolia.com/id/5470456> (accessed May 28, 2014).

U.S. Fish and Wildlife Service, n.d. (no date), Northern Spotted Owls, [http://gallery.usgs.gov/photos/04\\_11\\_2012\\_wcs1Vlh77P\\_04\\_11\\_2012\\_1](http://gallery.usgs.gov/photos/04_11_2012_wcs1Vlh77P_04_11_2012_1) (accessed April 24, 2014).

mahony, 2014, Man relaxing on the seaside, <http://us.fotolia.com/id/63616337> (accessed May 28, 2014).

wiktör bubniak, 2014, Nordic walking in mountains, Young female, <http://us.fotolia.com/id/9463965> (accessed May 28, 2014).

What non-monetary measures might be used to estimate the value of goods and services found in this ecosystem?



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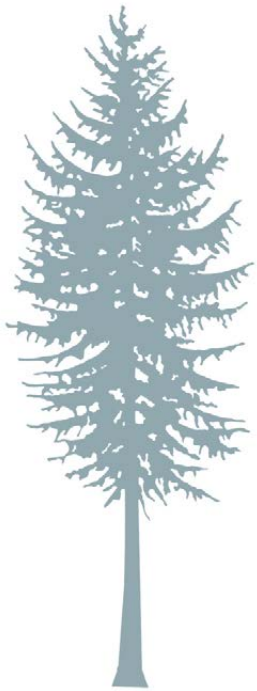
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## References

sababa66, 2014, fisherman on the boat, <http://us.fotolia.com/id/57707069> (accessed May 28, 2014).



Why might it be important to use non-monetary methods to quantify the value of EGS?



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Are there benefits of EGS that non-monetary methods can measure that monetary methods cannot?

Are there situations where non-monetary measures might be more effective or appropriate than monetary measures?

Slide 6

## References

kjay, 2014, Douglas Fir Tree Silhouette, <http://us.fotolia.com/id/5470456> (accessed May 28, 2014).