

INVESTIGATION 1.2: 'A Sample Census - Wildlife on the Move'

- **population** - the total number of individuals of a single species that live in a designated region at a given time.
 - > ex: human population is ~ 6 billion
- **population density** - the number of individuals of a single species that live in each unit area (km², mi², hectare, acre) of habitat at a given time.
 - > ex: deer population is 6 deer per square mile
- **census** - a count of the population.
- **true census** - actual count of all of the individuals of a species in a given area.
- **sample census** - is an estimate of the population.
 - (used when actual count is not possible)

ESTIMATED POPULATION = Estimated Population Density x Area of Habitat

- The '**mark-return-recapture method**' is used to estimate population density.
ex: DFO at Millerton and Cassillis estimate salmon populations on Miramichi River.

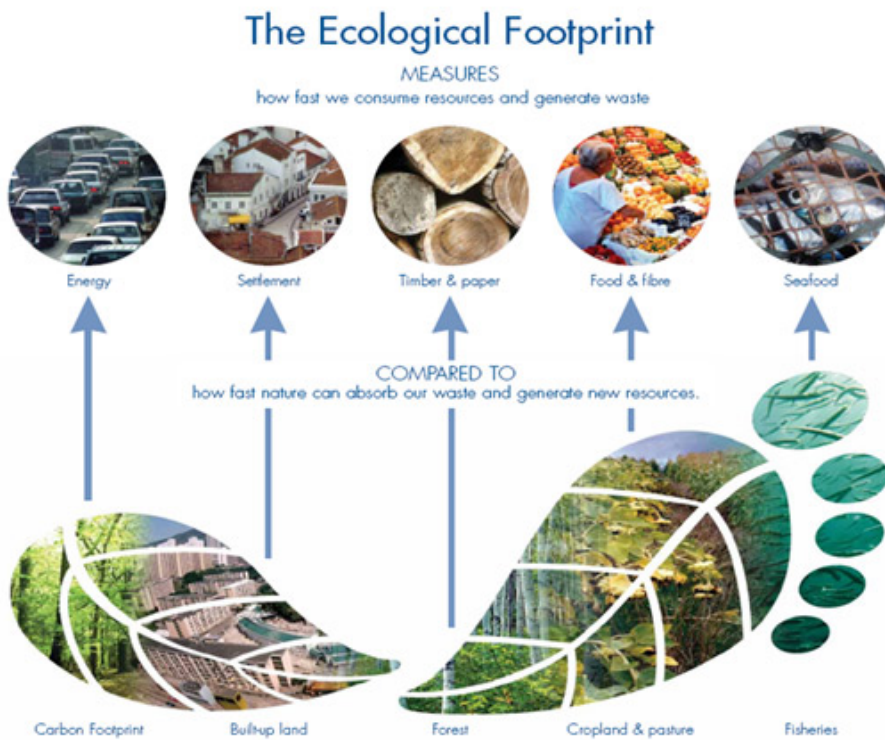
$$P = \frac{T_F T_L}{M}$$

P - estimated population

T_F - total animals captured in first trapping

T_L - total animals captured in later trapping

M - recaptured animals that are marked



http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_basics_overview/

COMPUTER EXERCISE

Determine your 'Ecological Footprint' ...we will do this on Friday!!!

What is your ecological footprint?

How many planets would we need if everyone lived like you? An **ecological footprint** measures the total amount of land and resources used, it includes your **carbon footprint** but goes further. Find out your **ecological footprint** by answering questions about your lifestyle. See how your choices affect the environment and whether you are living beyond the capacity of the planet.

<http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>

Let's do one together...

YOUR PERSONAL ECOLOGICAL FOOTPRINT
print results

Congratulations on completing the first step to reducing your Ecological Footprint.

Your Ecological Footprint is: 7.7 global hectares

Your current consumption requires an area of productive land equivalent to 9.4 Canadian football fields.

Category	Value (Global Hectares)
Your Footprint	7.7
Calgary Average	8.6
Canadian Average	5.8

The imagineCalgary objective is to reduce Calgary's Ecological Footprint 30% by 2036.

Your Ecological Footprint based upon your consumption: (hover over each section for additional information):

- Food
- Shelter
- Mobility
- Goods
- Services

Some ideas to reduce your Footprint – follow the “take action” link below for detailed suggestions:

Energy (70% of Calgary's Footprint):

- Reduce your household energy use – turn down your thermostat when not occupied and at night, use energy efficient bulbs and replace appliances with Energy Star® rated models, add insulation and draft proofing.
- Use public transit, carpool, ride a bike or walk. Keep tires properly inflated, have your vehicle properly tuned and avoid idling.

Local Foods:

- In season, purchase locally grown foods that require less transportation and processing to get products to market.

Goods:

- Reduce consumption of one-time use products. Purchase re-usable products when possible. Avoid products that produce excess waste. Purchase goods that are made locally to reduce their transportation Footprint.

edit footprint

go back and retake parts of the quiz

take action
Return to [Calgary.ca/ footprint](http://Calgary.ca/footprint) to find out what you can do to take action to reduce your footprint

VIDEOS:



While you watch the video, make note of some of statistics presented by completing the following assignment...

Assignment - Human Footprint.doc

DUE: FIRST of next class!!!

Attachments

Assignment - Human Footprint.doc