

## How sustainable are our choices?

People depend on nature for the supply of food, energy and fibre, the absorption of waste products and other life-support services. If we are to continue to have good living conditions, we must ensure that nature's productivity isn't used more quickly than it can be renewed, and that waste isn't discharged more quickly than nature can absorb it. To find out whether nature provides enough resources to secure good living conditions, the Task Force on Healthy and Sustainable Communities at the University of British Columbia has developed an ecological accounting tool: the ecological footprint

A much more elaborate description can be found in the recent book [Our Ecological Footprint](#) by [Mathis Wackernagel](#) and [William Rees](#).



### Our ecological footprint

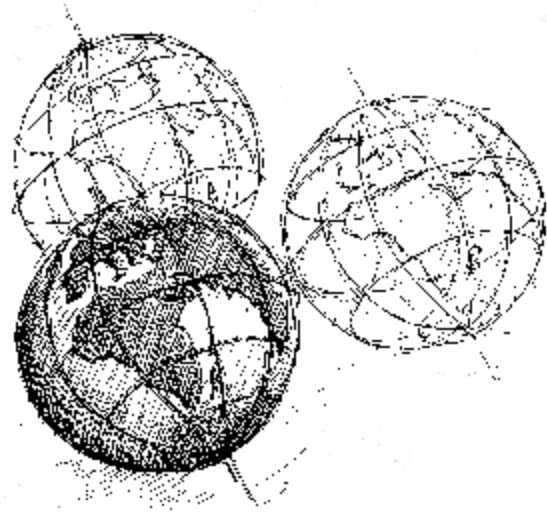
The ecological footprint is an accounting tool for ecological resources. Categories of human consumption are translated into areas of productive land required to provide resources and assimilate waste products. The ecological footprint is a measure of how sustainable our life-styles are.

The ecological footprint of the average Canadian adds up to 4.8 hectares. This is the total amount of land required for food, housing, transport, consumer goods and services. Energy is a large component of the footprint: some 2.9 hectares are necessary

for the long term provision of a biological substitute for fossil fuels. The second largest component at 1.1 hectare is agriculture for food supply and consumer goods. Forestry takes up 0.6 hectare to supply the fibre for housing and consumer goods. Finally, the built environment takes up 0.2 hectares for housing and transport.

**Can everybody on earth live like the average North-American today?**

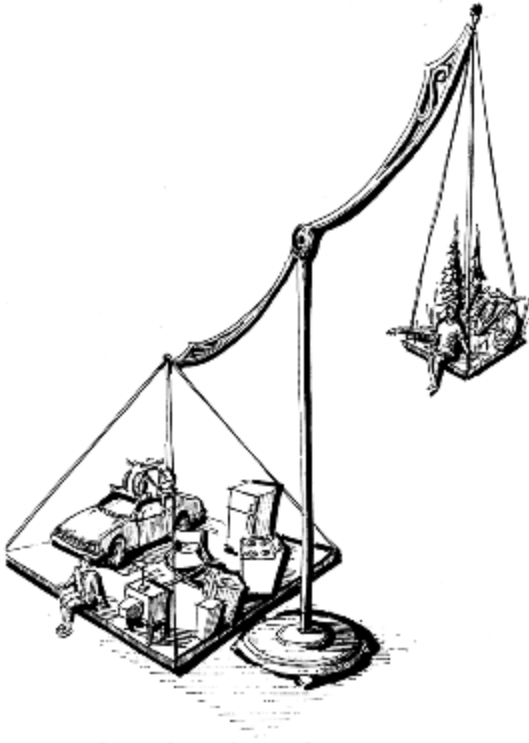
No. In fact, if everyone on earth lived like the average North American, it would require at least three earths to provide all the material and energy she or he currently uses. Preliminary estimates show that the ecological footprint of today's consumption in food, forestry products and fossil fuels alone might already exceed global carrying capacity by roughly 30%.



About 3/4 of the current consumption goes to the 1.1 billion people who live in affluence, while 1/4 of the consumption remains for the other 4.6 billion people. This demonstrates the ethical implications of the sustainability dilemma and questions economic expansionism as a remedy for poverty.

**Ecological footprint for the Lower Fraser Basin**

The ecological footprint can be used to establish the amount of ecological resources required to support a community or region. The Lower Fraser Basin, for example, contains approximately 2 million people, but the area is far smaller than that needed to supply the resources for this population. At the average footprint of 4.8 hectares, the Lower Fraser Basin needs an area 20 times larger than what is actually available for food, forestry and energy. This deficit is "appropriated" from other regions by the import of resources into the basin. With the growing population this appropriation will only increase.



### **Different life-styles, contrasting footprints**

Individual life-style choices have a strong influence on the ecological footprint. These choices include housing, transport, food, energy and water consumption, and other non-consumptive goods. For example, compare how much ecologically productive land is necessary to commute by bicycle, bus or car. Most of the car's land is required to absorb CO<sub>2</sub>. Most the biker's land is required to provide the extra food for quenching the biker's hunger.

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For further information on ecological footprint analysis or to share your own footprint work, please write to:

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