Ecological footprint

An **ecological footprint** is the measure of how much land and water area a human population needs to produce the resources required to sustain itself and to absorb its wastes, given prevailing technology. It is used as a resource management tool.

Ecological footprint analysis

Ecological footprint analysis approximates the amount of arable and agriculturally or ecologically productive land area it takes to sustain one human or group of humans, say in a family or city, based on their use of energy, food, water, building material and other consumables. It is a way of determining relative consumption for the purpose of educating people about their resource use and, sometimes, triggering them to change how they consume. It can be combined with overpopulation concerns and stated as "the number of Earths it would take to support every human living exactly the way you do." Ecological footprints have been used to argue that current lifestyles are not sustainable. A number of NGO websites allow you to estimate your ecological footprint (see Estimate your Ecological Footprint, below).

Changing consumption patterns

Ethically, the number of Earths "consumed" alludes to the categorical imperative, which requires everyone to behave in such a way that they can consistently advise all others to behave. However it is often the case in discussions of ecological footprinting that the focus shifts from how to reduce one's own consumption to the real or imagined threats of increased consumption by people in southern or Asian nations. The implicit idea is that it's acceptable if those currently consuming the largest share of the world's resources continue to do so, and continue to grow in number. How to move footprint thinking from abstract thinking or teaching to action is one of the method's challenges.

One of the less-publicized but most powerful insights of ecological footprint methods is that, contrary to many people's assumptions, it is human use of renewable resources, not of non-renewable ones, that poses the real sustainability crisis. Nature can restore renewable resources at a certain rate. Humans consistently and increasingly consume renewables faster than ecosystems can restore them.

This state of excessive ecological burden eventually threatens those very ecosystems by not allowing them sufficient time to "recharge." Furthermore, humans can clearly live without nonrenewable resources such as metals or fossil fuels, we did so for many hundreds of thousands of years, and will again. It is the renewable resource base on which we and all species depend. The ecological footprint approach can introduce the concept of resource recharge and the rate at which we use resources as key elements in more sustainable human societies. This time element helps us understand that it's not just what we use, or how much, but how fast, and over what period of time. This meshes with other movements to "slow down" human consumption and help people disengage from that acceleration of actions and expectations that has been a crucial feature of industrial and proto-industrial societies.

For videos around this subject and the information written visit http://www.academickids.com/encyclopedia/index.php/Ecological_footprint

Criticisms

The concept of ecological footprinting has been challenged on several grounds. First, many factors of the calculations are based on crude estimates and it is questioned whether the numbers are applicable to other places (the method is biased to Northern Hemisphere lifestyles). Second, the model generally does not count multiple uses of land: a forest is a carbon sink and the same area is not counted for food production. Third, at the household level, the model is biased in favor of households with more children and against, for instance, single-person ones. The model looks only at the consumption of the household in the present moment, ignoring that each offspring is likely to form another consuming household. A large house with ten children can have a "smaller" ecological footprint than a house half its size with only one person.

To counter these uncertainties, the models of ecological footprinting are constantly being refined. Moreover, the use of ecological footprint analysis is considered to be a guide, rather than an exact measure, of sustainability. For instance, few ecological footprint models include the use of fresh or salt water. But since the focus of the ecological footprint is heuristic--to awaken people, particularly those in more heavily industrialized societies, to their extensive resource use and its externalized costs--greater precision or detail might actually get in the way of this teaching goal

