



SUMMARY

Living Planet Report 2002

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The Living Planet Report is WWF's periodic update on the state of the world's ecosystems - as measured by the Living Planet Index - and the human pressures on them through the consumption of renewable natural resources - as measured by the Ecological Footprint. There is a cause-effect linkage between the two measures.

The Living Planet Index (LPI) is derived from trends over the past 30 years in populations of hundreds of species of birds, mammals, reptiles, amphibians and fish. Between 1970 and 2000, it declined by about 35%. The LPI is the average of three ecosystem-based indices. The forest species population index declined by about 15%, the marine species population index fell by about 35%, while the freshwater species population index dropped 55% over the 30-year period. The stark trends indicated by the LPI are a quantitative confirmation that the world is currently undergoing a very rapid loss of biodiversity comparable with the great mass extinction events that have previously occurred only five or six times in the Earth's history.

The Ecological Footprint (EF) is a measure of the consumption of renewable natural resources by a human population, be it that of a country, a region or the whole world. A population's EF is the total area of productive land or sea required to produce all the crops, meat, seafood, wood and fibre it consumes, to sustain its energy consumption and to give space for its infrastructure. The EF can be compared with the biologically productive capacity of the land and sea available to that population.

The Earth has about 11.4 billion hectares of productive land and sea space, after all unproductive areas of icecaps, desert and open ocean are discounted, or about a quarter of its surface area. Divided between the global population of six billion people, this total equates to just 1.9 hectares per person. While the EF of the average African or Asian consumer was less than 1.4 hectares per person in 1999, the average Western European's footprint was about 5.0 hectares, and the average North American's was about 9.6 hectares.

The EF of the world average consumer in 1999 was 2.3 hectares per person, or 20% above the earth's biological capacity of 1.90 hectares per person. In other words, humanity now exceeds the planet's capacity to sustain its consumption of renewable resources. We are able to maintain this global overdraft on a temporary basis by eating into the earth's capital stocks of forest, fish and fertile soils. We also dump our excess carbon dioxide emissions into the atmosphere. Neither of these two activities are sustainable in the long-term - the only sustainable solution is to live within the biological productive capacity of the earth.

However, current trends are moving humanity away from achieving this minimum requirement for sustainability, not towards it. The global ecological footprint has grown from about 70% of the planet's biological capacity in 1961 to about 120% of its biological capacity in 1999. Furthermore, future projections based on likely scenarios of population growth, economic development and technological change, show that humanity's footprint is likely to grow to about 180% to 220% of the Earth's biological capacity by the year 2050.

Of course, it is very unlikely that the Earth would be able to run an ecological overdraft for another 50 years without some severe ecological backlashes undermining future population and economic growth. But it would be far better to control our own destiny than to leave it to nature. If we are to return to a sustainable development pathway, it means making changes in four fundamental ways. First, it is necessary to improve the resource-efficiency with which goods and services are produced. Second, we must consume resources more efficiently, and redress the disparity in consumption between high and low income countries. Third, population growth must be controlled through promoting universal education and health care. And, finally, it is imperative that we protect, manage and restore natural ecosystems in order to conserve biodiversity and maintain ecological services, and so conserve and enhance the planet's biological productivity, for the benefit of present and future generations.