

## FOOTPRINTS ON THE EARTH

by Rosalie Bertell

Rosalie Bertell is director of the International Institute of Concern for Public Health in Toronto, a GEA affiliate.

Either consciously or unconsciously, our generation is determining the number of future generations which will be able to live on planet Earth. We determine the level of their genetic integrity by the level of genotoxic chemicals or radionuclides we release to the biosphere; we determine the physical stress they will have to endure from the hazardous waste we are leaving to be recycled to the food web; and we limit their resources by our increasing overconsumption and misuse of the Earth's resources.

In a rapidly developing global economy, it is important to take stock of both national and global natural resources: How much do we have? How much do we use, and for what? How much will we leave for future generations?

In preparation for the Rio + 5 Conference, convened by the Earth Council in Rio de Janeiro in March 1997, a methodology was developed to assess the progress of nations since the Earth Summit in 1992. The resulting "Footprint of Nations" report looked at 52 large nations, containing 80 percent of the world's population, and undertook a biophysical analysis of their ability to forge an ecologically sustainable future. One devastating finding of this analysis was that although in 1992, humanity as a whole was consuming over 25 percent more resources and ecoservices annually than the natural Earth has or can generate using today's practices, this overconsumption has not ceased, but is increasing. In spite of twenty-five years of talking about environmental crises, major programs to save the biosphere, world conferences and treaties, the 1997 report saw the world community consuming 33 percent more than the global capacity. This amounts to a global resource deficit more serious than the global fiscal deficit, and more devastating to future generations.

The good news is that seven nations are not exceeding their national resources. Those countries with surplus ecological resources above those which they consume are New Zealand, Finland, Sweden, Ireland, Australia, Canada, and Chile. Another seven countries are living at the limit of their natural resources: Bangladesh, Brazil, China, Colombia, Ethiopia, India, and Pakistan. All other major countries are running up an ecological deficit, with their resource consumption exceeding their ecological capacity. In a twist of conventional thinking, all other countries are overpopulated!

The bad news is that only six countries are consuming resources within their per capita share of global resources: Bangladesh, India, Pakistan, Ethiopia, Egypt, and China. Only two more are at the limit of their share of the global ecological capacity: Jordan and Indonesia. All other countries are seriously overconsuming global resources, even though they might be living within the budget of those resources found within their national boundaries. Natural resources were not distributed homogeneously on this Earth, perhaps because the Creator wanted us to learn the joy of cooperative sharing and the social justice and peace it brings!

The top ten overconsuming countries globally are (in highest to lowest order) Iceland, New Zealand, United States, Australia, Canada, Ireland, Finland, Japan, Russian Federation, and Sweden.

It is time for a strong, well-thought-out plan to preserve the planet Earth. Intuitively, we understand that sustainability requires a decent standard of living, and also equitable living and sharing within the means of nature. Having insufficient natural resources and lacking a decent and equitable standard of living will generate new resource wars, further degrading our already-scarce resources and tearing apart the social fabric of the global village. People are a part of nature, and they need a steady supply of the basic requirements of life: quality food and water, housing, energy for climate modification and mobility, fibers for clothing, furniture, and paper products, ecological sinks for waste, and life-support services like bathing and space for living.

Efficiency in resource use should be the first strategy in reducing the ecological footprint. Wasting resources does not have to be part of a good standard of living, so this should be the first place of cutting! Efficiency alone will not, however, reduce overconsumption to within the Earth's carrying capacity. According to Ernst Ulrich von Weizsacker, president of the Wuppertal Institute for Climate, Environment and Energy, a factor-of-four reduction of ecological loads per unit of service delivered by industry could be attained on a worldwide scale, using existing energy-saving technologies, by the year 2040. However, global predictions also estimate that the global population will reach 10 billion by the year 2030, and available global ecological capacity will be reduced to 1 hectare per capita, from the current level of 1.7 to 1.8.

What then are the prospects and obstacles for increasing the productive capacity of Earth's resources, reducing ecological-resource consumption per capita, and reversing those activities which are destroying ecological resources at an ever-increasing rate? Can we find ways of achieving greater eco-efficiency and eco-sufficiency? If I had to name a sector of consumption which the global community could easily eliminate without another thought, it would be the military, whose resource consumption is staggering. Why do we need a military? It has become a parasite on civilization. The proverbial question, "Guns or butter?" may reach its ultimate resolution in our generation.

If we look at the five nuclear powers, we find that the nuclear legacy has not only consumed scarce resources but also massively polluted the land and sea, undermined health, doubled the rate of damaged genes in the human gene pool, and seriously reduced resource productivity over vast stretches of land and sea. Should nuclear weapons be used, life as we know it would cease. Because of its dependence on the civilian economy, the military both lies about the lethal nature of its inventions and tries to create commercial uses for them. Militarism has become a self-destructive, all-encompassing addiction for some of our fellow humans, and the rest of us are passive cooperators with that addiction. Rousing ourselves from that cooperative lethargy is our first priority for disentangling ourselves from the seduction! Money and social approval must be withdrawn from these enterprises, and our focus must change to conserving the planet Earth and securing its viability.

Constructive ways exist to focus human creativity on areas where we can make a positive impact. Why not originate an international competition on how to achieve an acceptable quality of life using only 1.7 hectares of ecological resources per capita? Why not undertake local assessments of ecological footprints

within countries, and see what best achieves ecological balance? The energy and transportation sectors, in particular, offer almost limitless opportunities for greater efficiency and productivity.

Every business, municipality, and household can help affect the global ecological balance -- we just need a new way of thinking about consumption! Urban planning must include all the land on which the urban population depends for support. Countries now struggling to reduce their financial deficits need to awaken to the consumption problem, which will inevitably lead to a global ecological collapse much more devastating than a financial collapse. It is overconsumption which is forcing global poverty, as nations with a negative natural-resource balance plunder others in order to fulfill their wants.

Use of the footprint methodology provides a clear and easily understood way to explain some of these concepts and the idea of sustainability to people who are unaware of their precarious position with respect to the collapse of nature. It is also a convenient tool for measuring progress and providing accessible information, and an important educational resource which can be used to bring about positive changes, especially in outlawing war and developing a spirit of cooperation and care for the global commons.

It is a struggle we share with some of the most wonderful and creative people who have ever lived on this Earth. We are not alone. I, along with many, find in prayer a way to contact wisdom and strength. Certainly our Creator did not make the Earth to become a dead wasteland! She has given us abundant life and we must cherish and protect it, and pass it on intact to the next generation. It is my belief that life is indeed stronger than death, and this enables me to continue the struggle.