

Nine more worlds, please

If seven billion people (roughly today's world population) were to consume as much as in the West today, we would need 10 worlds, not one, to satisfy their needs. If we go on consuming at this rate until 2030, the human race will find it difficult to survive

by Priya Florence Shah

Ladakh. There are few better examples of how modern development paradigms can devastate a traditional culture that has thrived for more than 1,000 years. Ladakh conjures up images of a wildly beautiful desert region in the Western Himalayas. An area scant in resources and an extreme climate, traditions of frugality and cooperation, coupled with an intimate knowledge of the local environment, have enabled the Ladakhis not only to survive, but to prosper.

Hunger, crime, pollution, and ethnic conflict were all but unknown. Strong family and community bonds provided a deep sense of psychological security. Ladakh's traditional culture was not only extremely successful, but also environmentally sustainable. A culture in which knowledge and wisdom were finely tuned to the local ecosystem.

The invasion of the tourists changed all that. The Ladakhis had an extreme, sudden exposure to modern culture. Young people were suddenly exposed to another model of identity -- one which seemed infinitely superior, and was based on what appeared to be infinite wealth and pleasure. People who once described themselves as rich, now compared themselves with the imagery of an idealised Western, urban life. "You could think of it as having spread a giant commercial around the world that essentially tells people that they should adopt a complete change in diet and way of life. That giant commercial produces within people a sense of inferiority if they can't live up to that image," says Helena Norberg-Hodge who has seen the transition, and is campaigning for alternative models of development.

The invasion of anti-rural, anti-farming propaganda -- an underlying theme of the media and advertising messages flooding into Ladakh -- made the Ladakhi way of life seem embarrassingly inferior and primitive. Coupled with the typically Western, centralised model of development introduced by the government it was like a double whammy for the Ladakhi culture.

Centralization replaced local sources of food, clothing and building materials with imports and consumer goods, resulting in the inevitable migration of people to the cities. As subsidised food trucked into Ladakh over the Himalayas is often cheaper in the bazaar than food grown a five-minute walk away, local agriculture has suffered badly, and many Ladakhis have abandoned their farms in pursuit of paid jobs in Leh or outside Ladakh.

Children -- who once learned from relatives and neighbours how to grow barley at 14,000 feet, how to build a house, tend animals, recognise useful plants and herbs -- are being sent to Western-style schools where the curriculum ignores Ladakh's culture and local resources. Trained only as urban consumers and producers, most are left 'educated' but unemployed. Villagers flock to Leh in search of the few scarce jobs available, causing a population explosion in the city. Soulless concrete 'housing colonies' sprawl further and further into the desert, while the thin air chokes with diesel fumes from the trucks and buses that pour into the capital every day. Rubbish piles up in the streets and on open dumps, and once-pristine water supplies are in many places unfit to drink.

In the 'modern' economy created by development and modernisation, women are increasingly marginalised, their status lowered. The traditional Ladakhi farmer, once the backbone of the economy, is increasingly considered backward and irrelevant, an impediment to progress. Some of modernisation's most destructive effects have occurred on a psychological level. Development pressures have been systematically breaking down traditional social and economic structures, while visions of a seemingly superior Western lifestyle are stripping away the self-esteem of young Ladakhis, who now routinely compare themselves with a glamorised media version of the Western, urban consumer. As a result, people who were once proud to be Ladakhi now think of themselves as impoverished, primitive and inferior.

It is a sad but familiar story, one being repeated in nations the world over by those who believe that the spread of the Western industrial model across the globe is an inevitable evolutionary trend. However, global environmental crises have made it increasingly obvious that the consumption levels of the already-industrialised countries cannot be sustained, and that it will never be possible for the rest of the world's population to reach those levels of consumption. It is then a deception to suggest that 'evolution', aided by higher levels of international trade and economic growth, will some day allow the billions in the Third World to live like affluent Westerners, believes the International Society for Ecology and Culture (ISEC), an organisation working in Ladakh. There is mounting evidence to suggest that this is true, and that present patterns of consumption are not sustainable.

Deep impact

Everybody (from a single individual to a whole city or country) has an impact on the Earth, because they consume the products and services of nature. Their ecological impact corresponds to the amount of nature they occupy to keep them going. A nation's 'ecological footprint' corresponds to the aggregate land and water area in various ecosystem categories that is appropriated or claimed by that nation to produce all the resources it consumes, and to absorb all the waste it generates on a continuous basis, using prevailing technology. In a recent report

titled Ecological Footprints of Nations, Mexican researchers compare the ecological impact of 52 large nations, inhabited by 80 per cent of the world population, and shows to what extent their consumption can be supported by their local ecological capacity. One key finding is that today, humanity as a whole uses over one-third more resources and eco-services than what nature can regenerate (as compared to an ecological deficit of one-fourth in 1992).

The researchers calculate that from approximately 2 hectares per capita of biologically productive area that exists on our planet, only 1.7 hectares per capita are available for human use. These 1.7 hectares become the ecological benchmark figure for comparing people's ecological footprints. In fact, humanity's average ecological footprint measures 2.3 hectares of ecologically productive space. This means that the average footprint is more than 35 per cent larger than the available space -- an overshoot which indicates that humanity's consumption exceeds what nature can regenerate on a continuous basis. And if current growth trends persist, the amount of available biologically productive space will drop to 1 hectare per capita in a little over 30 years, or once the world population reaches its predicted 10 billion. In only ten out of the 52 countries does the average citizen use less than what is available on a per capita basis world-wide. India, Pakistan and China are three notable exceptions (see box), being among the few countries that consume at a level which could be reproducible for everybody in the world without endangering the planet's life-support capacity.

According to the Human Development Report 1998, world consumption has expanded at an unprecedented pace over the 20th century, with private and public consumption expenditures reaching 24 trillion dollars at the end of the millennium -- a six-fold increase from half a century ago. The HDR also states that consumption clearly contributes to human development when it enlarges the capabilities and enriches the lives of people without adversely affecting the well-being of others. It clearly contributes when it is as fair to future generations as it is to the present ones, and when it encourages lively, creative individuals and communities.

Today's patterns of consumption, however, are undermining the environmental resource base, and exacerbating inequalities. And as in self-sufficient rural communities like Ladakh, these patterns are accelerating the breakdown of local economies and the communities that depend on them, and steadily eliminating cultural diversity. Runaway growth in consumption in the past 50 years is putting strains on the environment never before seen. The burning of fossil fuels has almost quintupled since 1950. The consumption of fresh water has almost doubled since 1960. The marine catch has increased fourfold and fisheries are now scraping the bottom of the barrel. Wood consumption, both for industry and for household fuel, is 40 per cent more than it was 25 years ago.

A larger slice of the pie

The real issue is not consumption itself but its patterns and effects, states the

HDR. The 20th century's growth in consumption has been badly distributed, leaving a backlog of shortfalls and gaping inequalities. The figures bring out the stark inequalities in consumption. Globally, the 20 per cent of the world's people in the highest-income countries account for 86 per cent of total private consumption expenditures; the poorest 20 per cent a minuscule 1.3 per cent. The richest fifth consume 45 per cent of all meat and fish, 58 per cent of total energy, 84 per cent of all paper, have 74 per cent of all telephone lines, and own 87 per cent of the world's vehicle fleet.

The ecological footprint numbers also reveal the extent to which wealthy people and countries have already 'appropriated' the productive capacity of the biosphere. Based on the conservative assumption that the wealthy quarter of humanity consumes three-quarters of all the world's resources, this wealthy quarter alone already occupies a footprint as large as the entire biological capacity of the Earth. In fact, if all the people of the world adopted the consumption patterns and lifestyle of the first 42 countries, there would simply not be enough ecological capacity to support them sustainably. If developing countries continue to embrace the industrial-country model, the human impact on the natural world will only become more severe and widespread. Some estimate that if seven billion people (roughly today's world population) were to consume as much as in the West today, we would need 10 worlds, not one, to satisfy these needs.

How much nature do they use? -- How much nature do they have?

(all expressed in world average productivity, 1993 data)

	Population in 1997	Ecological Footprint (in ha/cap)	Available Ecological Capacity (in ha/cap)	Ecological Deficit (in ha/cap) (if - ve)
WORLD	5,892,480,000	2.3	1.8	-0.5
Australia	18,550,000	8.1	9.7	1.6
Bangladesh	125,898,000	0.7	0.6	-0.1
Brazil	167,046,000	2.6	2.4	-0.1
Canada	30,101,000	7.0	8.5	1.5
China	1,247,315,000	1.2	1.3	0.1
Denmark	5,194,000	5.8	2.1	-3.7
Germany	81,845,000	4.6	2.1	-2.5
India	970,230,000	0.8	0.8	0.0
Indonesia	203,631,000	1.6	0.9	-0.7
Japan	125,672,000	6.3	1.7	-4.6

Pakistan	148,686,000	0.8	0.9	0.1
Singapore	2,899,000	5.3	0.5	-4.8
United Kingdom	58,587,000	4.6	1.8	-2.8
United States	268,189,000	8.4	6.2	-2.1

(Source: Ecological Footprints of Nations)

The Indian materialist

In India, besides the environmental impacts from subsistence consumption, continued economic growth has translated into a more than doubling in per capita net national product between 1950 and 1990, according to the Tata Energy Research Institute. What this means is that the average person may be demanding substantially more natural resources, generating substantially more pollution, and discarding substantially more waste. And since economic theory states that as income increases, people spend a smaller portion of their income on food, and more on other types of goods (like automobiles and appliances), there may be a worsening in the form of environmental damage affected. The increases in aggregate consumption have indeed had their impacts on air pollution, water pollution, and land degradation.

Between 1970 and 1990, the number of vehicles has grown 11.5 times, from about 1.9 million to more than 21 million. At the same time, the figure per 1000 population has increased from 3.4 to 25.31, and is expected to exceed 40 by the year 2000. Moreover, of the total 25 million vehicles registered in 1993, 82 per cent are personal modes of transport, with the share of two-wheelers and cars at 70 per cent and 12 per cent respectively. An estimated 2000 metric tonnes of air pollutants are emitted into the atmosphere every day in Delhi. Vehicular sources contribute about 63 per cent of total pollutants emitted, followed by industries and thermal power plants, 29 per cent, and 8 per cent from the domestic sector.

India as a whole may face severe water stress by 2025 with a per capita availability of only 1389 cubic metres/annum. Uncontrolled extraction, without commensurate recharge, and leaching of pollutants from pesticides and fertilizers into the aquifers, has resulted in pollution of groundwater -- the major source of drinking water in rural India. In only six years, between 1985 and 1991, per capita electricity consumption expanded by 50 per cent. Energy demand by households is growing rapidly because of rising incomes, growing population and urbanization. Rising incomes are associated with a demand for household appliances running on electricity such as televisions, refrigerators, air-conditioners and washing machines.

These statistics are closely tied to India's economic transition from agriculture to industry and to the general increase in standard of living and shift towards a

more Western-style consumption ethic. Rapid industrialization and economic growth have led to the intensification of consumerism, which in turn has added to the problem of disposing of colossal amounts of garbage generated each day. The towns and cities of India today generate as much as 48 million tonnes of municipal waste; by 2047 this quantity would increase to around 300 million tonnes. As a society, we Indians have gone from self-sufficiency to keeping up with the neighbours, to aiming for the Lifestyles of the Rich and Famous. This is economically manifested in the chronic purchasing of new goods and services, with little attention to their true need and durability, or the environmental consequences of manufacture and disposal. The growing popularity of 'disposable' items exemplifies this. Rather than compete on quality or reliability, products are made for one-time use, resulting in a wasteful use of energy and material.

Government subsidies, like those for the price of diesel fuel, provide little incentive for many vehicle owners to curtail their fuel consumption. Subsidies for agricultural consumers of power -- estimated at around Rs 14,000 crores in 1996/97 -- lead not only to misutilisation of electricity, but also to overexploitation of groundwater resources leading to lowering of water tables.

Challenging consumerism

Unlike the HDR which accentuates the relationship between poverty and environmental degradation, biophysical accounting systems, like the ecological footprint, lay the blame on conspicuous consumption. "The 'smoking gun' of global change is the consumer excess that accompanies high GDP/capita, not debilitating poverty," states William E Rees, co-author of *Our Ecological Footprint: Reducing Human Impact on the Earth*. Improving our own local environments, he believes, is not a licence for private consumption to savage the global commons. "We simply cannot grow our way to sustainability in a world that sees people first as potential consumers and only second as responsible citizens," he maintains. If we don't attain sustainability by the year 2030, according to the Worldwatch Institute, then we are not going to survive as a human race.

To face the challenge of sustainability we need to realise the extent to which humanity's economic activities have to become less resource consumptive and less contaminating. This is the conundrum that Anil Agarwal of the Centre for Science and Environment calls 'the challenge of the balance'. For developing countries, development means increasing their consumption of the products of industry, but can they do this without further risk to the global environment? It has been calculated that the 'environmental burden' of most products must decrease by a factor of 10 to achieve equity in standards of living while remaining within the globe's carrying capacity. The World Bank, in drafting its World Development Report for 1997 on 'The State in a Changing World', conceded that markets do not always produce the most desirable outcomes, most notably in their lack of consideration for future generations and their inability to lead automatically to

equitable solutions. Experts everywhere are now acknowledging that 'price signals' favouring environmentally responsible practice and internalising environmental costs need to be introduced into the market or reinforced by government action. This will require governments to take hard decisions; to change their policies to tax wastage of resources and pollution; to tax efficient transport vehicles at lower rates than those that are polluting. Government policies must make it not just possible, but more profitable for consumers to choose products that consume less resources in manufacture and produce less waste in disposal.

We as individuals also have the duty to fight consumerism that is driven by huge sums spent on advertising where clever minds and fabulous sums of money are spent in convincing us that we need an endless stream of things. A simple way of fighting this stream of propaganda is asking oneself, "If a product is so great and so essential, how is it that I have lived without it until now?" Consuming less also means doing little things that force manufacturers to become environmentally conscious. Like not giving in to advertising hype. Like being more informed, like consciously selecting products with the least packaging and most recyclable material. By reducing overall demand for socially destructive products and services we can take away from the sales of non-sustainable enterprises. These small steps taken by everyone will lead to industrial competition that will lead to more environmentally conscious technologies. It is now upto the concerned citizen and the government to show industry that indeed "Less is More."

Priya Florence Shah is a Mumbai-based freelance journalist who writes on the environment and health-care issues.