ESSAY

The ecological footprint of New Zealand as a step towards sustainability

Alan Fricker

Three studies have derived ecological footprints for New Zealand. Two were done in NZ and are based on land area only. The third is part of an international study which includes marine resources. Absolute comparisons in physical parameters are difficult as they do not all have the same baseline. Relative comparisons, as a proportion of carrying capacity exclusive of marine resources, are comparable, viz. 86, 60 and 70%. Precaution and the maintenance of biodiversity imply that we should live well within our carrying capacity. New Zealand therefore could be considered as already over populated at our present life style and relative to the global carrying capacity. The international study of 52 nations (80% of the world’s population) derives an average global footprint (2.8 ha/cap), inclusive of marine resources, that is greater than the global ecological capacity (2.1 ha/cap). NZ has a very large footprint at 7.6 ha/cap whilst being the most bounteous of all with an ecological capacity of 20.4 ha/cap. However the marine ecological capacity for NZ is proportionately very large (50% of our total capacity) but uncertain and so should be disregarded. Exclusive of the marine component, the NZ footprint and capacity are 7.4 and 10.5 ha/cap respectively—the 70% reported above. A significant minority in New Zealand would not feel they are enjoying the bounty expressed by these figures. There are several reasons—we undervalue nature’s wealth; quantitative growth is unsustainable; we are losing control of our resources; our economic system is flawed. Even so, achieving greater equity within NZ and between nations within the global capacity will not in itself lead to sustainability—to biophysical sustainability perhaps, but that is only survival. Sustainability pertains to the interior, subjective dimensions in life which have no location and are not quantifiable but which provide purpose and meaning in life. Indeed we may even be unable to achieve biophysical sustainability without engaging in the evolution of human consciousness at a collective level. © 1998 Elsevier Science Ltd. All rights reserved
tungished: arable land, pasture, and forest. The more exhaustive investigations include built-up land, fossil energy land, and sea space. Sea space is also an areal measure since the productivity of the ocean is a function of area rather than volume. Fossil energy land is the forest land we should plant for the adsorption of CO₂ from the fossil fuels we consume. Some studies use physical parameters and land equivalents only whilst others work on a monetary base which is then converted to land areas. Some consider only the terrestrial land whilst others include the Exclusive Economic Zone, i.e. the ocean areas. There is therefore some inconsistency between bases used by researchers both within and between countries.

**New Zealand's ecological footprint**

At least three estimates have been made of New Zealand's ecological footprint. The first two are of New Zealand only, although some comparisons to other nations are made in the second. The third is an international study of 52 nations and provides the backbone for this discourse.

As a starting point, just in simple physical terms, the land area of New Zealand is 27 million hectares, 78% of which are productive thus giving an available productive land capacity of 5.8 ha/capita for our population of 3.6 million (MfE 1997). The productive land comprises 2% arable, 50% pasture (inc. 12% potentially arable) and 22% forests.

**Ministry for the Environment**

The Ministry have derived an estimate using information from the World Resources Institute. It is based solely on physical parameters of the land itself. They derive a footprint of 5 ha/cap, i.e. 86% of the available capacity.

**Lincoln University**

Bicknell et al have conducted a detailed study using monetary parameters to measure production, consumption, imports and exports, according to established methodologies, which are then converted to weight consumptions and thus to land yields using average productivities. They derive a footprint of 3.3 ha/cap, which is 60% of the available capacity.

**Earth Council, Costa Rica**

The State of the Environment Report also draws from a recent report on the ecological footprints of nations. Being international it has a standard methodology and thereby is a much more useful investigation. Furthermore it is based on physical quantities rather than monetary values, and is comprehensive including sea space, land for CO₂ and waste adsorption. The study quantifies, nation by nation, the biologically productive areas necessary to continuously provide resource supplies and absorb wastes, using established technology. The study calculates how much nature there is in each nation (the available ecological capacity), and how much nature we use (the ecological footprint). The calculations are based on published statistics from the United Nations.

The global available ecological capacity is the summation of the component category areas for each nation, and is 2.1 ha/cap based on the present world population of 5.9 billion. A yield factor is used to account for the relative productivities of land categories in each nation. The footprint is a complex computation, simply expressed here as production plus imports less exports in terms of equivalent productive land area. Both capacity and footprint however are expressed on a per capita basis such that nations, whether large or small, can be compared. Allowances are made for water-deficient nations and acid rain, and acid rain. The proportion set aside for biodiversity protection is 12% as recommended by the World Commission on Environment and Development—an amount many consider to be far too small. Table 1 contains a selection of the 52 nations surveyed that together account for 80% of the world population.

The global ecological footprint at 2.8 ha/cap is 33% greater than the available global ecological capacity of 2.1 ha/cap. Clearly humanity treads too heavily on the earth. Furthermore we are becoming even clumsier, despite the rhetoric, for in 1992 the deficit was 25%. Only 12 of the 52 nations (65% of the population) have footprints less than the global available ecological capacity. Only three of these however retain some residual available capacity. They are therefore neither over-consumptive nor over-populated. They are Colombia, Indonesia, and Peru. Half of the 20 developed countries that have footprints greater than twice the global capacity
are in ecological deficit. The most populous are Germany, Japan, Netherlands, Russian Federation, UK and the USA.

Only Australia (9.0 ha/cap), Canada (7.7) and the USA (10.3) have footprints larger than NZ (7.6). Our available capacity is a very healthy 20.4 ha/cap for it includes the productivity (not the whole area) of our sea space. Our footprint is 37% of the available capacity. We are by far the most endowed nation on a per capita basis.

Our sea space capacity is computed from the Exclusive Economic Zone (EEZ) of 450 million hectares, 17 times our land area. So large is this area that it totally dominates our other ecological capacity. Australia’s EEZ is 60% of its land area and of course some countries have no sea space. The Earth Council study considers only 20% of the EEZs in their computations, ie. 160 million hectares for NZ, and uses a productivity factor of 5% for each country’s reduced sea space. In other words marine ecological capacity is essentially unknown at this stage. An estimate based on the continental shelf area may be a sounder basis. In the meantime such estimates for small, remote island countries like NZ and Iceland are best omitted.

The Earth Council provides a breakdown of NZ’s ecological capacity. There are productivity factors, eg. efficient farming practices, which ‘swell’ the capacity of the physical areas. (Table 2)

If the sea component is excluded our footprint becomes 7.4 ha/cap and our ecological capacity 10.5 ha/cap. The land based footprint is then 70% of the capacity, which is comparable to the other two NZ land based studies.

### TABLE 1. SELECTION OF ECOLOGICAL FOOTPRINTS FROM THE 52 NATIONS SURVEYED.

<table>
<thead>
<tr>
<th>Country</th>
<th>Popln in 1997 ( \times 10^6 )</th>
<th>Ecological footprint (ha/cap)</th>
<th>Available ecological capacity (ha/cap)</th>
<th>Ecological deficit (if negative) (ha/cap)</th>
<th>Footprint as % of available capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD</td>
<td>5892.0</td>
<td>2.8</td>
<td>2.1</td>
<td>-0.7</td>
<td>130</td>
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<tr>
<td>Argentina</td>
<td>35.4</td>
<td>3.9</td>
<td>4.6</td>
<td>0.7</td>
<td>85</td>
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<tr>
<td>Australia</td>
<td>18.6</td>
<td>9.0</td>
<td>14.0</td>
<td>5.0</td>
<td>64</td>
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<tr>
<td>Bangladesh</td>
<td>126.0</td>
<td>0.5</td>
<td>0.3</td>
<td>-0.2</td>
<td>170</td>
</tr>
<tr>
<td>Brazil</td>
<td>167.0</td>
<td>3.1</td>
<td>6.7</td>
<td>3.6</td>
<td>46</td>
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<tr>
<td>Canada</td>
<td>30.1</td>
<td>7.7</td>
<td>9.6</td>
<td>1.9</td>
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<td>Chile</td>
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<td>3.2</td>
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</tr>
<tr>
<td>China</td>
<td>1247.0</td>
<td>1.2</td>
<td>0.8</td>
<td>-0.4</td>
<td>150</td>
</tr>
<tr>
<td>Colombia</td>
<td>36.2</td>
<td>2.0</td>
<td>4.1</td>
<td>2.1</td>
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<td>Denmark</td>
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<td>5.2</td>
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<td>6.0</td>
<td>8.6</td>
<td>2.6</td>
<td>70</td>
</tr>
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<td>France</td>
<td>58.4</td>
<td>4.1</td>
<td>4.2</td>
<td>0.1</td>
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</tr>
<tr>
<td>Germany</td>
<td>81.8</td>
<td>5.3</td>
<td>1.9</td>
<td>-3.4</td>
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<td>5.1</td>
<td>0.0</td>
<td>-5.1</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>970.0</td>
<td>0.8</td>
<td>0.5</td>
<td>-0.3</td>
<td>160</td>
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<tr>
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<td>6.5</td>
<td>0.6</td>
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<tr>
<td>Japan</td>
<td>126.0</td>
<td>4.3</td>
<td>0.9</td>
<td>-3.4</td>
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<td>Pakistan</td>
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<td>0.5</td>
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<td>160</td>
</tr>
<tr>
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<td>1.6</td>
<td>7.7</td>
<td>6.1</td>
<td>21</td>
</tr>
<tr>
<td>Russian Fedn</td>
<td>146.0</td>
<td>6.0</td>
<td>3.7</td>
<td>-2.3</td>
<td>160</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.9</td>
<td>6.9</td>
<td>0.1</td>
<td>-6.8</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
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<td>3.2</td>
<td>1.3</td>
<td>-1.9</td>
<td>250</td>
</tr>
<tr>
<td>Sweden</td>
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<td>5.9</td>
<td>7.0</td>
<td>1.1</td>
<td>84</td>
</tr>
<tr>
<td>UK</td>
<td>58.6</td>
<td>5.2</td>
<td>1.7</td>
<td>-3.5</td>
<td>310</td>
</tr>
<tr>
<td>USA</td>
<td>268.0</td>
<td>10.3</td>
<td>6.7</td>
<td>-3.6</td>
<td>150</td>
</tr>
</tbody>
</table>
We in NZ at least should all be enjoying a comfortable living.

**New Zealand’s carrying capacity**

Clearly the bases on which such estimates are made can lead to quite variable footprints and capacities. Relative figures however, such as carrying capacity in terms of footprint as a percentage of available capacity, should be more consistent. The three estimates for our carrying capacity at our current lifestyle on a land basis only are 86, 60 and 70%. We could perhaps therefore increase our population to around 5 million whilst still enjoying the same life style. Any further increase may have to be accompanied by a less consumptive life style. But 5 million would be a limiting population, rather than an optimum population.

An optimum population allows some fat in the system to allow for bad years. Indeed natural ecosystems of which we are part are healthier when wasteful, i.e. where species leave a substantial part of their ‘kill’ for other species. Hunter-gatherer societies seemingly maintained their populations at around 25% of the available food sources. This was particularly important to the Australian aborigine who had the unpredictable and sometimes prolonged effects of El Nino to contend with. We are still in effect hunter-gatherer societies. Our sophistication has extended the productivity, but not necessarily the sustainability, of the land.

The population of Australia is 64% of its carrying capacity (based on the survey of nations), suggesting a maximum population of 30 million at its present lifestyle. Elsewhere, the maximum and optimum populations are put at around 40 and 9 million respectively. On a ‘safe’ basis therefore Australia may already be overpopulated, by a factor of two. Back in 1911 the geographer Griffith Taylor postulated a very limited human carrying capacity for Australia. He contended the geologically old and leached soils and climatic conditions could not support a large population. He even put a figure on it (40 million) and suggested the population might reach 19 million by the end of the millennium. The nationalistic jingoism of the time, and even now, entertained several hundred million.

Direct studies based on the optimum population of NZ have not been made. Forty years ago some concerned soil scientists within the DSIR estimated a sustainable population of 5 to 6 million. The El Nino phenomenon affects NZ too (the summer of 1997/8 in particular) and is becoming more frequent. A less generous safety factor of 50% would suggest that NZ is already overpopulated if we wish to maintain our present lifestyle.

Thus far we have conveniently ignored matters of global equity. If we wish a peaceful transition to a sustainable world we need to at least stabilise our population and live more frugal lives. As the global population is likely to at least double, reducing our population could be a desirable global objective too. Cereals and legumes are likely to be the preferred produce of the land in the future. NZ is likely to remain a pastoral nation as our cropping soils are limited, and becoming even more limited as we build upon them. Although our standard of living may have to diminish our quality of life need not and may well be enhanced.
Standard of living versus quality of life

Science through technology has brought much dignity to modernity. It has improved substantially both our standard of living and our quality of life. There have been adverse effects too, and these are becoming more evident the greater the technological development. The solution and management of these revenge effects require social and political rather than technical intervention. Undoubtedly there will be technical developments that have the potential to make further increases in productivity and efficiency. Efficiencies in distribution have so far eluded us. These potentials may enable us to increase the available ecological capacity whilst the global population increases and still enjoy consumptive lifestyles. On the other hand they may not, particularly if we do not manage the direction and application of technological development in a meaningful and equitable manner.

Further technological development is likely to contribute more to our standard of living than our quality of life. The standard of living is not an absolute state. It is determined by the developments that are made and the financial resources at our disposal. But how much is enough? Quality of life on the other hand is more of an absolute state. Improvements in such parameters as longevity, infant mortality, literacy, equity, etc can only go so far. Many are subjective where technology and materialism have no role. Once an adequate standard of living has been obtained, the focus of further improvements in the human condition should be on the quality of life.

This adequate standard may be far less than we might think. In the over-populated and impoverished nation of India, at least to Western eyes, there is a State which has a quality of life comparable to New Zealand and other developed countries where the standard of living, expressed as income, is one tenth that of New Zealand. It is Kerala, and it shines like a beacon but the developed world ignores it. Understandably so, but can we afford to? It is a non-growth sustainable economy with a high quality of life. Indeed the only other examples we have of sustainable economies with high quality of life all have similarly low per capita incomes-Cuba may well become one, and the Amish and Mennonite communities in North America.

Are the choices for New Zealand so difficult? After all we start from an advantageous position. We could go for broke and hope for the best; or consciously work towards a higher quality of life, a less consumptive life style and keep a cap on population. Is growth, in the economy and in population, really a desirable objective? The arguments about achieving a ‘critical mass’ are no longer pertinent—if indeed they ever were. Industry is evolving to a form where large labour forces can be a disadvantage. Trade is international and flexible and can move to countries which have the best aggregate commercial advantages. Countries deter potential aggressors on the basis of their military defensive technology rather than their weight of numbers.

Concerns about an ageing population may be mistaken too. Already New Zealand (like Australia and many industrialised countries) has a surplus of labour. Relatively few people are required to earn the foreign exchange necessary to support the nation. As the population stabilises or reduces the aggregate health costs of the ageing may well increase temporarily as a proportion of GDP. The health of that ageing population however is improving and the individual health care costs are decreasing. Furthermore their capacity to continue earning for longer increases too. A reducing younger population means there are savings to be made in education, child-care, and health care.

Stabilising or reducing populations to attain an optimum may indeed require some relative but minor hardships for a generation or two. What generation has not made sacrifices for future generations. Isn’t that part of the human condition? Perhaps this is how we take our turn. A smaller population may mean there is:

- more ‘fat’ in the system to provide for bad times
- a satisfactory standard of living
- less need to be rapacious to maintain a high standard of living through exports
- less urban sprawl
- a slower pace of life
- less use of non-renewable resources
- less pressure on other species and the environment
- greater ecological diversity
- greater equity
- a higher quality of life

But before we explore whether to stabilise or even reduce the population and pursue quality of life rather than standard of living,
why is it that a significant minority, in the most well-endowed nation ecologically, are not sharing in that bounty?

The sleight of hand?

We now enter the realm of assertion, speculation and contention, but that leads to good healthy discourse. First of all we shouldn’t put too much store on the numbers game itself, particularly when they can’t be rigorously justified. Wackernagel and his colleagues\(^3\) are of the same view. An earlier land based study by Wackernagel and Rees\(^10\) produced smaller footprints—the world (1.8 ha/cap), Canada (4.3), India (0.4), the Netherlands (3.3) and the USA (5.1). The Netherlands footprint was reported as being 20 times greater than the available land area, whilst in the 52 nation study the footprint is only 3.1 times the available ecological capacity. The latter is not the same as the land area for it contains not only productivity factors greater than unity for the land but also the sea space. Nevertheless there is almost an order of magnitude difference.

These uncertainties of datum level at least should be eliminated in the 52 nation study.\(^3\) The authors suggested in March 1997 that their numbers could be precise within the range of 5% too big and 30% too small. Presumably this relates to the footprints rather than the capacities. The November 1997 update of the table has much greater revisions. These arise largely from the consideration of sea space. The original table used a uniform per capita capacity across all people and all nations. The updated table is based on 20% of the each nation’s EEZ, but assumes a common 5% productivity factor. Nevertheless it would require an even bigger shift in precision to displace NZ from its rather dubious position. Why is it that in relative, and even absolute terms, the standard of living and the quality of life for a large minority of New Zealanders appear to have deteriorated over the last generation or so, despite seemingly living in the lap of luxury?

The assertion itself could be challenged. Perhaps we have all enjoyed an increase in many aspects of our standard of living. The revenge effects of these improvements, such as pollution and congestion and the demise of public transport from the spread of the private motor car, impact more on the poorer people. It is they that have to suffer the downsides of technological development. The good and bad things are shared unequally. There is not a lot of evidence that the quality of life has improved greatly over the last generation. The gains in longevity are due primarily to public health advances rather than medical intervention. There is concern about the decline of social capital. Certainly our communities were safer and perhaps more caring a generation ago.

There is no single explanation for New Zealand’s paradox. The reasons are many, interwoven and cumulative. They include:

The resources of nature are undervalued

We measure the health of the nation in monetary terms, eg. the GDP, because it is convenient to reduce everything to a common parameter. This index was a useful indicator until around 1970 but its deficiencies, eg. the inclusion of undesirable economic activity like pollution control, have become too great to ignore. There are now better indices, like the Genuine Progress Indicator (GPI) and the Index of Sustainable Economic Welfare (ISEW), even though not greatly favoured by mainstream economists. Even so the monetary values still tend to be bestowed on man-made goods and services, and not on nature’s goods and services. These are still largely considered to be free despite the advent of ecological economics. The effect therefore in terms of ecological footprints is to accentuate man’s contribution to the production and consumption patterns. Rarely do we put any value on water or minerals in situ or on photosynthesis, but their existence is more valuable than anything we might do to them. Thus the resources of nations so blessed, and lightly populated, are appropriated, usually with agreement, by others not so blessed and upgraded to so-called more valuable products. Thus in monetary terms these other nations appear richer whereas they are in fact poorer in resource terms. Natural capital of perceived little value is converted to man-made capital of high value. Is it any wonder we are eating up the larder? Money cannot continue to make the world go round.

However to be fair to monetary based studies, and to Bicknell and his colleagues\(^2\), their footprint as a proportion of available productive land (60%), although lower, is not greatly different from the two based on physical resources.
Growth is unsustainable

Even though quantitative growth is clearly unsustainable, and these footprints confirm that, we seem wedded to the growth model. The modern economy (capitalism) is predicated on continuing growth otherwise it will collapse. It can only operate by creating difference in relative income to stimulate demand for what it can produce. Capitalism, like socialism, on which it was dependent, will collapse too because of its inherent contradictions. As real wages and social expectations rise, and social and environmental costs become more and more internalised, capital will find fewer and fewer places where it can make a real profit, particularly as it (and the populace) are dismantling the State on which it depended to create an environment of relative or temporary monopoly in which to make a profit.11

The periods in the industrial development of Britain of strong growth were periods of great inequality, relative hardship and personal unsustainability. The periods of slow or even negative growth were periods of more equitable income redistribution, social harmony and personal sustainability.12 Growth therefore is an anathema to sustainability.

The concentration of power and finance

Historically we have functioned in communities and regionally. The glorious artistic and architectural expressions of medieval Italy for instance arose because of the independent city states, rather than the nation, whose wealth lay in trade throughout the Mediterranean. The centralisation of national political power is a more recent phenomenon. It has provided the might necessary for protection (and expansion) but it has diminished the flowering of regional and local expression. This expression is the social capital that Putnam13 refers to in his study of modern Italy. Those regional governments which built upon and involved the communities created the conditions for successful economic enterprise. Putnam has associated the poor economic performance in the USA with the decline of social capital. Here in New Zealand there is a similar perception and a desire at least to devolve more responsibility to local government and to voluntary organisations to remedy a decline in social capital.

Putnam however has his critics. Social capital is very context-dependent and what may be applicable in one situation is not in another. Heying14 in particular attributes the decline in the USA to economic restructuring. Social capital is fixed in place whereas financial capital is mobile. Economic restructuring along free market lines leads to the demise of the locally owned businesses, and the concentration of finance in national companies and ultimately to transnational corporates. Financial capital can be sucked out of a community, locality, or region. People have lost not only their power but their capital.

A similar argument is developed by Douthwaite12,15 and Korten.16 Deregulation and the free market lead to rural depopulation, urban growth and then decay, and the denial to local people to use their capital as they think fit. Once out of investors’ control the only interest they can then have is the rate of return—the higher the better, and who cares if it is in a sweat shop or logging indigenous forests. If it is used in community the investors have other interests to satisfy—jobs for themselves, their children, their neighbours, their basic needs, local facilities and environment. We used to source 90% of our needs locally, now it is 10%. The balance needs to be restored, if only to provide some protection from the probability of global financial collapse.

A flawed economic system

The first economic transaction began with a surplus—a rabbit or axe head after we had met our own needs. Somewhere along the line economics became based on scarcity. Adam Smith merely provided the framework for an economic law to be dreamt up. The law of supply and demand is only applicable under conditions of simple perfect equilibrium competition. The players do their best to avoid such conditions—the quickest route to bankruptcy. There is another party to these transactions, the earth—the Great Mother, one of the Jungian archetypes. If an archetype is suppressed the shadows emerge. We have already created one shadow, scarcity. The polar shadow therefore becomes greed. This duality of scarcity and greed will accentuate until we change our world view.

Since that first transaction was a surplus, we need therefore to develop an economics based on abundance—of good will, of labour, and of renewable resources. We need to get beyond scarcity and greed—the title of a book
by Bernard Lietaer. Lietaer is an economist and has over 20 years of managing international finance. If we are brought up to see scarcity we run the risk of becoming greedy, and scarcity becomes a self-fulfilling prophecy. If we are brought up to see abundance we may achieve abundance. Nothing necessarily may have changed but our attitude—our world view, our cultural framework. Our realities are our perceptions.

Sustainability

Sustainability is more than biophysical sustainability. This is just survival. What sustains us is even more intangible and can’t be measured—thank goodness. The word sustain has an Indo-Aryan etymological origin and means to hold together with tension—not coercion, but tension. Its meaning is still as pertinent today as it was 3000 years ago. Sustainability is about finding meaning and purpose in life and is found through our relationships with ourselves, our families, our neighbours, other species, the environment, and the earth. There is in fact a crisis of perception around this concept of sustainability. Yet we seem preoccupied with measuring it. The most common definition from the Brundtland report, that based on the needs of present and future generations, and other definitions based on ecological integrity and biodiversity, all defy objective definition and operational interpretation. More useful are the perceptions of sustainability, for they suggest the need for discourse. A discourse that explores our inner subjective selves and draws on our experiences as well as our knowledge, and our aspirations and visions for the future and on our creativity—where the journey may even be the destination. Instead of asking how we measure sustainability we should be asking ourselves how we measure up to sustainability.

This is a discourse and a journey we should all take part in. We know the problems we are facing in broad terms. We can pursue analysis to paralysis. Indeed much R and D is a surrogate for social action, for the solutions are not technical but social and political. There is a surreal quality about our inertia; an element of Nero fiddling while Rome burns. We are all watching the spectacle not realising we are part of the spectacle. The real challenge is not in defining or measuring the problem, even though we may continue to deny particular components. Neither is the real challenge in how to live in accord with nature, for we used to and some still do. The real challenge, particularly for the developed nations, is in how to get people to agree on how to live in accord with nature. This wisdom will not be found in objective rational debate but in deep intersubjective discourse that taps the very essence of our beings, about meaning and purpose in life. Governments and communities should push for this discourse through citizens’ juries, consensus conferencing, search conferences, and public conversations. Somehow we need to rise above personal interest and consider the common good, and seek consensus in social action. But the psychological hurdles we have to overcome in solving these social and commons dilemmas have to be faced, accepted and transcended.

Indeed the whole of history, and therefore the future, is a process of transcendence. It is many millennia since we ceased evolving biologically in a Darwinian sense. Now we have to evolve culturally, through the development of human consciousness, not only on the personal plane but on the social and cultural planes too. But we need to do so collectively. The process of transcendence is an inclusive process. Problems that appear insoluble at a given level of consciousness become soluble at higher levels of consciousness, where no doubt a different suite of problems may emerge to be transcended by a further evolution of consciousness. According to Wilber we are stuck in flatland, the exterior physical world of location, the world of objective nature. Within this world the ego-camp (those who see man as apart from and above nature because of our moral capacity) do battle with the eco-camp (those who see man as a part of nature). Both, according to him, are wrong. They overlook the interior subjective world without location—the world of subjective mind. We will evolve consciously if we are able to transcend and include objective nature and subjective mind to find Spirit.

The necessary public and community discourses will not be philosophical explorations of this nature but the paths will be the same. We need to seek mutual understanding of the dilemmas grounded in sincerity from which solutions will emerge. These discourses can only be undertaken by all or most of us at the local and community level. They can’t be conducted entirely by political representatives, whether at the local, regional, national, or global levels. The developed nations surely have
generated sufficient wealth to cut back somewhat, reflect and engage in this discourse to get themselves onto sustainable trajectories.

Notes and references