

## **Whither Conservation**

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The past twenty five years have been truly remarkable. It is hard to recall any quarter century in history during which a comparable revolution in ideas and perceptions has taken place. The relationship between people and nature, heading towards total breakdown over the past two centuries during which western, industrial "civilisation" has set the model for all to follow, is undergoing a gradual but deep transformation.

In this short period, the conservation community has come a long way. Conservation is now a mainstream concern, the subject of major international conventions and conferences. It will be difficult for future decisions, political or developmental, to ignore this issue. Conservation has, in a short time, become a sufficiently respectable profession to attract some of the best scientific talent in the world.

But conservationists can only have a limited impact until they become much better at handling the inter-relationships among the issues of population, resources, environment, and development. And this means that in addition to ecology, they must acquire mastery of many other subjects including economics, social science and technology management. Above all, they must be clear on why conservation is needed and how factors outside their domain affect it. And, in the final analysis, how many of the principles of conservation are they prepared to put into practice in their own lives, not simply preach them to others?

Take for example, consumption patterns. It is becoming obvious that the goals of conservation clearly cannot be reached with today's urban-industrial lifestyles. Nor with the existing disparities in the international economy. Sustainable development implies not only efficient and ecologically sound management of resources, but also the need to establish social equity and political empowerment. What hope is there for this planet if the countries of the South start to consume resources as the North does today? They are not only entitled to do so under any concept of fairness and justice, but are also being encouraged to by the forces of the global market. What will be the demographic, economic and environmental impact in the longer term if their poverty and marginalisation in the global economy further delays the stabilisation of their populations?

Many of these issues, however -- some of them very inconvenient -- do need to be addressed. How many of us are willing, for instance, in our own lives to go beyond rhetoric to practices that

- conserve resources?
- use less energy, and more of renewable fuels?
- minimise wasting of water?
- rely more on public transport than on personalised modes?

And how about all that meat in our diet? Can one imagine the impact on the global ecosystem -- and particularly on conservation values -- of eight or nine billion people each consuming meat in the quantities currently eaten by the average North American? There may well be specific conditions -- the arctic tundra in winter, for example -- where the only source of food is the local fauna. But the vast majority on this planet surely has other choices.

We can no longer use tradition and convention as excuses to justify behaviour patterns that threaten the existence of life on our planet. Practices that were acceptable in times of abundant resources and sparse populations may no longer be sustainable under conditions of growing scarcity and heavy economic pressure. And while cultural diversity needs to be nurtured no less than biological diversity, we must not lose sight of the basic principles that underlie any sustainable

society, just like the principles that underlie any sustainable living system. Unquestionably, some fundamental changes are needed -- in the choice and design of our technologies, in our institutions and policy frameworks, in the way we structure knowledge and, most fundamental of all, in our value systems.

Within the conservation community, there is also a gradually growing recognition of the fact that the obvious solution is not necessarily the best one. To achieve one goal we may have to act in an altogether different sector. And to get the action right, we need much better understanding of how the sectors relate to each other, an understanding that is slowly beginning to move forward. In the years to come, however, conservationists must bring much greater creativity to the question of how conservation can be achieved other than by putting up fences and sweeping up the messes we create. We clearly need more systemic solutions instead of alleviating symptoms. Prevention rather than cure. Achieving such goals will need fundamental changes in the way we manage our resources.

Coming back to the perennial questions of northern consumption patterns and southern population growth, the central issues are, of course, sufficiency and efficiency. How much is enough, and how little do we have to use to get it? This means that conservation goals also require us to reorient the way we produce the goods and services that we consume. The sustainability equation inexorably brings together sufficiency of consumption and efficiency of production. And this means that conservationists will necessarily have to work more closely with the private sector, not only helping them become more resource efficient, but also helping redefine the role they play in society and the economy.

The central goals of our production systems have to be not only the generation of goods and services, but equally the creation of jobs and the efficient use of natural resources. For the poorer half of the world's people, this translates into satisfaction of basic needs, generation of income (and purchasing power), and maintaining the productivity of the resource base.

Today's industrial methods are no good. They involve too much capital. They waste too many resources. They cause too much pollution. And they disrupt too many life support systems -- the material flows generated today by mankind are estimated to be already comparable to geological flows. Large-scale industry causes large-scale disruption, both ecologically and socially.

We need new technologies and also a new science of economics. We need to create work places, jobs, at one hundredth the cost of the ones we are creating today in our globalised economy. And we need to increase the productivity of material resource use by at least 10 times what it is today. Sustainable industrialisation will unquestionably have to be more decentralised, efficient and responsive than it is today. Conservationists have a central contribution to make in the design of such an industry.

There is clearly a widespread feeling that we need to redesign our technologies, institutions and financing methods. The new, sustainable, technologies will need new institutions for innovation and delivery, and new instruments for financing them. Such institutions and instruments do not at present exist, either in the public sector or the private sector.

A synthesising concept that came up in one or two of the workshops might offer some clues: the concept of sustainable livelihoods. A sustainable livelihood is one that gives dignity and meaning to life, provides adequate remuneration and thus creates purchasing power, and produces goods and services that people need. Above all, it does not destroy the resource base. Sustainable livelihoods tend to strengthen local economies, empower women and regenerate the environment. Large scale generation of sustainable livelihoods, both in the North and the South, may well be the surest way

to attain our conservation goals. What do we do now to move in that direction? What are the first steps?

The conservation community needs to show how the issues of technology, institutions, economics and environment come together and how they impact the goals of conservation. This means that it needs to strengthen its understanding of resource pricing, environmental accounting, scales of production, financing systems and the many other factors that are in need of fundamental change.

Sustainable livelihoods not only contribute to conservation but also enable people to benefit from it. And this brings us to the need for our profession to strengthen its understanding of governance. A fundamental issue of conservation concerns how people make decisions that affect their - and our - resource base. This means that conservation is inextricably linked to the question of empowerment, participation of people in decision making, the transparency of government processes and the whole basis of planning.

Radical changes are now needed in the archaic bureaucratic systems of administration in many of our countries. My own country inherited them from colonial times and retains them to this day, largely unchanged. But they were set up to exploit and export natural resources in large quantities as fast as possible, not to conserve and sustain them. With these same structures of governance how can we expect things to change for the better? The methods of community based planning, and the mechanisms for monitoring, evaluation and assessment have to be strengthened.

And this brings me to the most fundamental issue facing conservationists today: the role of ethics - not only as the basis of conservation action, but also as the context of all our scientific endeavour. We cannot hope to do much more for conservation unless we carve out a clearer collective understanding of the reasons and range of concerns that help define their goals and drive their efforts towards these.

The fundamental ethical issue of conservation is, of course, "why do we wish to conserve our fauna and flora?". Is it for the practical benefit of mankind, or is it for the intrinsic right-to-life of all living things? As ecologists who daily observe nature's food chains in action, we can perhaps be forgiven for placing the need to maintain the survival of species above the desire to protect a particular individual. But, sooner rather than later, the conservation movement will have to work out a better balance between those of its constituencies that believe in concepts such as "sustainable use" and those who are driven by a "reverence for life".

It is very easy for us as scientists to fall into the Cartesian trap of separating the heart from the head. It will become increasingly difficult to do this in the future. Science can no longer be divorced from the issues of human aspiration and higher values, disembodied from the realities of poverty and resource destruction. Science offers great opportunities, but it is we who have to set the boundary conditions on how it will be used. Abstract science, with its powerful but limiting methods of reductionism and exclusive focus on "objectivity", quantification and simplification is no longer adequate to deal with the complex, interlinked systems that support life on our planet. It will take a huge jump in the ethics of science for us to bring our work into line with the needs of planetary survival. Merely anthropocentric science and conservation will for sure give us the wrong solutions.

One issue of the greatest import emerging on the horizon is a new and very major threat to the survival of civil society, the independent sector, in the Third World. In this age of privatisation, our economies are beginning to follow the example of the industrialised countries and placing more or less total reliance for development action on the corporate sector. This will leave civil society more and more as marginal players useful for creating awareness, participative planning, monitoring and evaluation, but not much else. To compound this, the side effects of globalisation - sky-rocketing

salaries in the private sector and opening up of international job opportunities - are leading to a massive haemorrhage of talent and skills, with the best minds in the independent sector being siphoned off by multinationals and others who can afford to pay. Unless we quickly develop new and creative niches for ourselves and instruments for generating the income we need to compete in the marketplace of ideas and action, civil society and conservation action will slowly but inexorably go the way of other endangered species over the next decade.

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