

## Anil Agarwal

With the death of Anil Agarwal, the world has lost one of its ablest advocates of the significance of environmental concerns in the developing world, and communicators of strategies to tackle these challenges. Anil was born just as India was about to begin its arduous journey as a newly independent nation on the path of social and economic development. Dams and Institutes of Technology were the temples of modern India and Anil was trained as an engineer in the foremost of the IITs, at Kanpur. Anil always had a strong sense of social responsibility, and a born leader, served as the president of the IIT students' gymkhana. He graduated at a time when the first, unquestioning acceptance of India's development path was beginning to give way to a search for ways to tackle newly emerging concerns. The 1970s saw the peasant women of Garhwal hugging trees to save them from the axe of contractors working for forest-based industries being given raw material at highly subsidized prices. The decade also saw India's first Peoples' Science Movement, the Kerala Sastra Sahitya Parishat (KSSP) undertaking an independent social-economic-technological assessment of the Silent Valley Hydroelectric project and concluding that it would be more appropriate to convert the locality into a nature reserve. KSSP also undertook a study of the pollution of Chazhiar river by a rayon mill and its health impacts.

As elsewhere in the world, this questioning was the work of rebels, of people outside the establishment. The S&T establishment was then, as is even now, co-opted into the mainstream, pursuing the path of development at all costs – which unfortunately translates into destructive development at the cost of the poor and the voiceless. I, myself was startled by the brazenness of this co-option when, one evening twenty-five years ago, an official of the water supply board rushed into the Indian Institute of Science and demanded that one of the faculty members certify that the water was perfectly potable. Apparently some pesticide had leaked into the supply and people were worried. On asking whether our Institute should not actually determine the concentrations of the pesticide and assess whether there were some health risks, he explained to me that this was irrelevant.

The Government wished to ensure that the citizens did not panic, and it was the scientists' duty to support the Government. Certainly the Government did not expect the Indian Institute of Science to objectively ascertain and state the facts.

Anil was a born rebel and in him we had a technically sophisticated person willing to stand up to the establishment and fight for just causes. As all IIT graduates are apt to do, Anil too went West after his graduation, but chose to work at European institutions that had been established in the wake of the Stockholm Conference on Human Environment. Here he became familiar with the western perspective on environmental issues, which held that the developing world was incapable of positive environmental initiatives. But Anil knew of Chipko and KSSP and saw that the poor were finding voices to question their being inflicted with the costs of environmental degradation. He perceived that the answers lay in a different, greener path of development, a path that was crying out to be charted. Kumarappa, a Gandhian economist, had made valiant attempts to do so in important Governmental positions in the early years of independence, but failed to make a dent. His book on *Economy of Permanence* written much before Schumacher's *Small is Beautiful* was an important attempt to draw a road map for such green development. Kumarappa was an accountant. Anil was an engineer, and capitalized on his technical strength to become a leading figure in this quest for development alternatives.

Anil was an able communicator and had been writing for Indian newspapers, as well as the British science magazine *New Scientist* during his stint with European environmental NGOs. Around the time he returned to India in the early eighties, he attended a meeting in Malaysia where he was struck by the just-produced Citizens' Report on Malaysia's Environment. This was a modest, yet path-breaking venture, and there and then Anil decided that he would promote a similar, though far more ambitious Citizens' Report on India's Environment. Settling in Delhi he sought out collaborators for this venture. That was how we first met and struck a friendship that lasted two decades. Under his leadership, some

twenty-five or thirty of us contributed pieces to help a panel of three editors – Anil himself, Ravi Chopra, a physicist, and Kalpana Sharma, a journalist – produce this important document. It concluded with a statement of concern by citizens. While there had been important local initiatives, protests such as Chipko and Silent Valley and constructive experiments such as Forest Protection Committees in Arabari in West Bengal and in Sagar in Karnataka, this Citizens' Report was clearly the first national attempt to address these issues, and address them with respect to all sectors, water, land, forest, industry.

Anil continued to build on this initiative, producing further Citizens' Reports and founding the fortnightly magazine, *Down to Earth*. Through these media he addressed a most impressive range of themes. Amongst these, forests had a pride of place. Ours is a biomass-based civilization. Even today, a majority of Indians depend on fuel wood or crop wastes to cook their food, on small timber or bamboo to build their shelters, on herbal remedies to sustain their health. Forests are therefore vital to peoples' well-being; yet the forest administration, continuing in its colonial tradition has systematically alienated them from a fair share of the forest produce and a just role in managing forest resources. The Chipko movement in Garhwal was a watershed in the peoples' struggle to re-establish a people-oriented regime of forest management in India. Anil's imagination was fired by this movement and over the quarter century that he studied, wrote and campaigned on environmental issues, that of people-forest relationship remained his important concern. Anil's feet were firmly planted on the Indian soil, and he became a personal friend and ally of the many grassroots workers involved both in the struggle and constructive work on forestry issues. He was critical of the heavy-hand of bureaucracy weighing on the programmes of Joint Forest Management that gradually grew out of the new initiatives and wrote an influential book titled *Towards Green Villages*.

The multifarious and ever-growing demands on water – for rural and urban domestic needs, for irrigation, for power generation, and as a sink for sewage, agrochemicals and industrial effluents –

were another major concern for Anil. The conflicts of interests that these have engendered, caricatured as monkeys over men by proponents of the Silent Valley project, needed to be carefully and objectively analysed and Anil's *Citizens' Reports* as well as *Down to Earth* provided a forum. He naturally dealt with much publicized movements such as those relating to Koel Kara and Narmada projects. Equally significantly, he applied his scientific training and critical faculties to assess the whole issue of the relationship between vegetation cover and hydrological cycle. In spite of decades of work by institutions of the Indian Council of Agricultural Research and the Indian Council of Forestry Research and Education, we have little good data on these vital issues. As a consequence, facile conclusions drawn by environmentalists and bureaucrats alike are employed to justify measures such as a ban on all green fellings or nomadic grazing in Himalayas. Anil rose to the task of dispassionately questioning the basis of these conclusions. That a journalist, rather than a scientist, played this role is an indication of a serious weakness of India's scientific establishment.

As water becomes scarcer all over India, the age-old water conservation measures from the arid tracts of Rajasthan furnish

significant lessons. Anupam Mishra, who had translated the Citizens' Report on the State of India's Environment into Hindi, wrote an important book titled *Rajasthan ki Rajat Boonde* (Silver water drops of Rajasthan). Anil followed on this lead with a document on this titled 'Dying Wisdom'.

International concerns over the degradation of global environment, first articulated at the Stockholm Conference on Human Environment continued to gather strength over the eighties with the drafting of the report on 'Our Common Future', and culminating in the Earth Summit at Rio de Janeiro in 1991. The duties and responsibilities of the countries, rich and poor alike were at the heart of the debate in this Conference. Anil played a very important role in this debate, carefully bringing together pertinent facts and developing powerful arguments to support the case of developing countries.

When Anil began his mission, pollution seemed peripheral to Indian environmental concerns. But as time went on, it was clearly becoming more and more grave. Tragically, Anil was to fall a victim to this scourge, a victim of cancer. Characteristically, he carefully analysed all available information on the distribution and incidence of cancer and deve-

loped a powerful case for a possible link between environmental pollution and susceptibility to cancer. He vigorously campaigned for combating pollution of water and air, playing a prominent role in attempts to clean up Delhi's air and Yamuna waters. He helped other possible victims of pollution, such as those believed to be suffering from exposure to the pesticide endosulfon in Kasargod and Mangalore. For these people he provided the only possibility of an honest assessment of the levels of the chemical in the environment and judging whether it was indeed linked to the many malformations of the new-born. For, as I recounted earlier, the whole scientific establishment seemed engaged, not in an objective assessment, but in helping the Governmental agencies using endosulfon ensure that no blame came their way. Surely, the real tribute that India's scientific and technical establishment can and should pay to Anil is to move towards assuming its proper role of honest, objective assessors of the state of India's environment.

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