
“I have never been worried about the Earth. I’m worried about human beings. I was trying to understand what India is all about, what India’s people are all about. And that is how I stumbled upon the Earth. I realised that they have a deep relationship with the Earth, and that is why Earth became important to me.”



ANIL AGARWAL • 1947~2002

On January 2, 2002, Anil Agarwal passed away after a long and painful battle against cancer. He left all of us at CSE orphaned, but left us with little time to mourn him. And he left behind the huge responsibility of walking in his footsteps to fulfil the mandate he had chalked out for CSE. But he also left us the means to carry out the tasks he had set for us — a rich legacy of his thoughts, ideals, passion, commitment, strength and anger. As we look back on what he was, and what he meant to all of us here, we also look forward in hope and confidence that we will fight the battles that he had fought, and we have the determination to win these battles.

Early influences

"For me, understanding the subject of environment has been a long journey into an understanding of my own culture. I wanted to search for and understand my India. It was a very internal drive which became a life-long passion."

Anil Agarwal graduated as a mechanical engineer from the Indian Institute of Technology, Kanpur, in 1970. *He grew up within the ambience of that great idea of the modern world: the idea of science and technology.* Towards the end of his formal education, he began to wonder how he was going to put to use all what he had learnt at this prestigious institute in order to solve the problems of his country. Realising how little he knew of India or of its problems, he decided that he first needed to explore and learn what the country was all about. He read many books in an effort to understand India and its problems, those by Mahatma Gandhi and Gunnar Myrdal, among others.

The uppermost question in his mind was, *"how can India best use science and technology to meet the needs of its people?"* He found the answer in Gandhiji's writings. He learnt that the nature of science and technology needed by developing countries is not the same as prevalent in the West. Gandhiji's science policies, which advocated socially appropriate and traditional technologies, were key to solving many of the problems of urban India.

Anil's encounter with the Chipko movement as a budding journalist once again brought home the relevance of Gandhiji's

philosophy. He saw in the movement the spirit of non-violent protest, the spirit of caring and sharing, and the spirit of self-reliance, among many other things espoused by Gandhi. He acknowledged his debt when he delivered the 1987 Gandhi Peace Foundation lecture: *"In many ways, Gandhiji has been my guru in helping me to understand my country and my people."*

At this point, Anil also read Gunnar Myrdal, who had just published his voluminous work, *the Asian Drama*. Anil met Myrdal at the Stockholm Conference on the Human Environment in 1972, when he was just beginning his journalistic career. Myrdal said to Anil: *"Books are like time bombs. If the ideas contained in them are of value, they will explode one day. And if they don't, they will be consigned to the dustbin of history."*

These words stayed with Anil throughout his life and moved him to produce the State of India's Environment series, books that profoundly influenced Indian developmental policies. *Business India* listed *The State of India's Environment: The Second Citizens' Report* (1984-85) as one of the 15 most influential books of the post-Independence period in India.

Later, when Anil became impatient for results, he used the same idea to develop his knowledge-based advocacy. His successful campaigns on clean air for Delhi, and empowering people to manage their water resources, were borne out of his ingenious idea of shortening the fuse of literary time bombs, so that they would explode sooner and lead to action.

Myrdal also said to him, *"You have the biggest strength in your country — it is a democracy. If you think there is something that you want to change, you have the power to change it. Democracy allows you to do that"*. Anil took this advice very seriously and used the power of democracy to drive his campaigns. He allowed no one to come in his way, however powerful. To achieve his aims, he reached out to all sections of the society — the media, concerned citizens, students, civil society institutions, industry, government officials and politicians. He often described CSE as, *"a product of India's democracy built with 20 years of persistence"*.

Another major influence in Anil's life was Barbara Ward, whose passionate speech at the Stockholm Conference led him to walk on the environment path. Her beliefs and works,

Gandhiji was an ordinary man, but exemplified three qualities — anger, perseverance and humility. I have tried to live by Gandhiji's principles, but these are very tough things to live by and I have a long way to go



If North Block disappears overnight from the face of this earth, it will mean absolutely nothing for these poor people. The North Block is where the Ministry of Finance is located, which is very busy measuring how much increase there has been in the Gross National Product or not. But if the local forest disappears, if the local wells disappear, if the local springs disappear, the people get into very deep trouble

including the path-breaking book, *Only One Earth*, influenced him profoundly.

Anil's mother moulded him into a single-minded and persevering individual who worked hard to achieve his goals. If in later life he was universally known for his courage, honesty and commitment to public interest, the foundations were laid in his childhood. And everyone, friend or foe alike, respected him for his character. He was delighted when he was told by an official in the Ministry of Environment and Forests, "*Anil, my people are a little wary of you, because you have a tendency to call a spade a spade*". Anil often recalled his mother's words to him as a child, "*If you want to do something, never to do it behind my back*." He lived out these words in his later life, and in his work. He said of himself, "*I don't hide anything, whether something is bothering me, troubling me, or if I like something you are doing, I would be full of praise for it*." This trait in him won him many friends, who respected and loved him for it.

The beginning of the journey

"We come out of Presidency College or St Stephen's or IIT Kanpur and think we know everything there is to know. Whereas we know nothing."

When he graduated from IIT-Kanpur, Anil's primary interest was to use his skills and knowledge in science and technology to do something for his country. He felt that journalism offered him a means of travelling across India, meeting people and understanding India in its myriad social, cultural, economic and environmental diversities. Rather than pursuing engineering, Anil joined *Hindustan Times* as a science correspondent.

Early on in his journalistic career, Virendra Kumar, an expert botanist who had been working in the region of the Valley of Flowers, told Anil about a fascinating protest in Reni, a remote Himalayan village. The village women had protected the trees against logging by hugging them, sending the government and logging interests the message that the forest could only be logged over their dead bodies. Although these events had occurred almost a year before, no one had heard or written about this unique form of protest in the English media. Anil's editor, B G Verghese immediately encouraged him to cover the story. Reporting the now famous *Chipko Movement*. This was a great awakening for Anil and changed him deeply.

The government of Uttar Pradesh had decided to auction the forests near Chamoli in the Himalaya to private timber contractors. The people of that region were dependent on the forests for most of their needs. Women, especially, were closely linked to the forest resources for water, fodder, fuelwood and other needs. Angered by this government move, they

decided to prevent the contractors from cutting the trees, even at the risk of their lives, and hugged the trees in face of the lumberjacks. Anil realised that these women hugged the trees not because they loved them, but because the trees were their very lives. Their survival depended on their environment. Contrary to popular perception, the poor had even more reason to be concerned about the environment than the rich.

This understanding of the relationship between the poor and their environment soon turned Anil into a lifelong environmentalist. Many of his pioneering ideas on the relationship between environment and development, environment and poverty and the need to empower communities took root here. Moved by his experience with the *Chipkomovement*, Anil dedicated his life to promoting the importance of the *Gross Nature Product* in alleviating poverty, instead of the *Gross National Product* that governments do so much to enhance. This encounter also led to his long association with Chandni Prasad Bhatt, the leader of the *Chipko Andolan*.

Reaching out to the citizens of India: The Centre for Science and Environment

"Science and environment are possibly the two greatest ideas of the 20th century. One has brought immense power to create unprecedented wealth. The other has made human beings realise that wealth creation, or development, as it is often called, can also be self-destructive. Therefore, the urgent need to reconcile environment with development."

In the late seventies Anil spent three years in England working on an environmental information project at the International Institute for Environment and Development. He returned to India with the idea of setting up an institution that would work on topical issues of sustainable development, looking at the linkages between science, technology, and environment. The institution he visualised would create public consciousness on the need for sustainable development, and influence public policies.

Anil was very clear, from the very beginning, that it was the educated class that needed to be educated about sustainable development. He would become very angry when he heard anyone saying that the poor needed to be educated on conserving the environment. His *Chipko* experience had taught him that the poor will protect their environment simply because they are dependent on it for their very survival. He also believed that the initiative for good environmental management must come from the ordinary citizen. He therefore wrote to be read and understood by the average literate and educated person, to create public consciousness about environment and sustainable development.

The State of India's Environment reports

"Sustainable development will never be possible unless we know more about the true nature of relationships between changing nature and changing society. The most interesting thing about these reports is the information they provide on these linkages."

One of the first tasks that the Centre for Science and Environment undertook was publishing the first and second citizens' reports on the State of India's Environment (SOE). This was the first time a citizen's report was produced on the state of a country's environment. These reports were not about the declining numbers of tigers or about forestry programmes, but about how environmental change impacted on the lives of the people. The SOE reports painted an accurate picture of the extent of environmental degradation and how this mirrored the human misery of India.

The SOE reports highlighted the importance of the environment to a poor country because of the extreme dependence that the country's poor have on their local natural resources. In other words, if a country focuses only on its Gross National Product and in the process destroys its Gross Nature Product, it will only lead to more poverty, loss of livelihoods and greater unemployment. Therefore, protecting the environment is not a luxury meant only for rich countries like America, but rather a necessity for poor countries like India. This went directly against the prevailing political opinion that stated that economic development alone is the solution to environmental problems. Mrs Gandhi is

still remembered for her oft-quoted statement, *"Poverty is the biggest polluter"*.

The SOE reports got extensive media coverage, both at home and internationally. They were reviewed by *The Economist*, *The New Scientist*, the *Asahi Shimbun*, *Le Monde*, and *The Guardian*, among many others. They inspired many similar reports, both in India and abroad, and influenced political action within several developing countries. Fred Pearce, reviewing these two books in *New Scientist* said, *"Reading reports from green groups describing real or imagined environmental perils can be a grind. But for passion combined with forensic rigour nothing touches the work of the Delhi-based Centre for Science and Environment, inspired by its founder and director Anil Agarwal"*.

During the making of these two reports, Anil closely interacted with numerous voluntary groups working at the grassroots in the country. In fact, the SOE reports were deliberately termed 'citizens' reports', which implied collaboration with a wide spectrum of individuals, voluntary organisations, grassroots activists and others. These groups had diverse interests within India and abroad also helped sell these reports and spread the message. In the process of collaborating on the SOE reports, they soon realised that conflicts in the developmental processes are in fact conflicts for control over natural resources. The SOE reports were thus able to embed environmental concern within the larger development and social justice dimensions. This, over time, encouraged many movements against deforestation, destructive mining, and construction of large dams, among other civil society initiatives.

The Chipko movement
summoned our attention
and energies and showed
us how the poor relate to
the issue of environment.
In many ways, the
Chipko movement gave a
voice to many of us
belonging to the first
generation of Indian
environmentalists



Chamoli, 1985

It is the so-called educated people who need environmental education more than anyone else. The more educated you are today in the Third World, the more alienated you are

The success of the SOE reports also changed the nature of CSE's work. They resulted in the creation of a network of people interested and committed to change. As CSE's interaction with various groups grew, so did our consciousness of the impact of environmental destruction on the lives of the poor and the inter-relationships between environment, economy and society. Slowly, CSE's activities and focus became centred on the environment, while retaining the scientific dimension of environment as a central issue.

In 1986, the arguments contained in these two State of India's Environment reports attracted the attention of Prime Minister Rajiv Gandhi. He asked Anil to address his Council of Ministers, and later all the 27 Parliamentary Consultative Committees — an unprecedented gesture on the part of an Indian Prime Minister — because he felt that his ministerial colleagues did not understand the importance of integrating environment with developmental concerns. At the end of these lectures, Rajiv Gandhi told Anil, *"My government is spending thousands of crores of rupees every year on flood and drought relief. I believe if the money went in good environment and natural resource management it would help us deal with future floods and droughts better. Can you explain this to the members of parliament?"*

Anil sent this request on a journey across the country, gathering information on the relationship between floods and droughts. He eventually gave the lecture to the Parliamentarians but continued work on understanding the nature of environmental problems in India, the nature of relationships between changing nature and changing society.

The environment — beyond pretty trees and tigers

"For the poor people in this country who live with the environment on a daily basis, the environment is something that we have to use and yet use in a very sustainable manner. And, therefore, the concept of 'utilitarian conservationism' and not the 'protectionist conservationism' becomes very important"

In the early eighties, Anil travelled extensively to different parts of the country, to look at how people live in and manage their diverse environments. As early as the mid-80s, he was already crafting a conceptual framework to bring about growth, equity and sustainability, based on his learning from his travels and his interaction with people across the country. These very concepts are today celebrated as 'sustainable development'. He constantly pointed out that paradigms of development, which create production systems that destroy

natural resources are the root cause of poverty and environmental destruction. The Indian government had newly created a Ministry of Environment and Forests. Anil was concerned that its manifesto was not based on a holistic understanding of the relationship between environment and development. The environmental consciousness that he helped create added a third dimension, 'sustainability' to the biggest issues of the day — growth and equity. He posed this question in every forum he addressed, *"how can our country get more from our natural resource base and at the same time conserve the natural resources?"*

The Gross Nature Product

"Poverty, for a majority of the rural poor of the world, is defined by the shortage of biomass resources to meet basic needs like food, fuel, fodder, manure etc; in other words, the Gross Nature Product"

In his travels across India, Anil examined grassroots experiences in villages, from Pondicherry to Ladakh, Gujarat to Nagaland. These experiences confirmed to him that the rural poor depend largely on biomass for their survival. Whether it is food, fuel (cowdung, timber or crop residues), building materials (timber, thatch), medicinal herbs, or fertilisers like leaf litter, the environment provides the poor with all their survival needs. When the environment degrades, and the Gross Nature Product shrinks, economic and social poverty rears its head. Anil believed the biggest challenge that faces India's policymakers is not only to conserve the natural resources, but also to revive degraded lands. Anil concluded that the problem of rural poverty in large parts of the developing world is not one of economic poverty but of *ecological poverty* — the poverty of natural resources needed to build up the rural economy.

Learning from tradition

"Traditional lifestyles in India were based on its extraordinary diversity of ecological systems and were inspired by sustainable use of the natural resource base"

During this period, Anil also discovered the extraordinary ecological diversity in the country. He was amazed to see how the people of India had developed diverse systems to manage their diverse environments — from the arid deserts of Rajasthan to the wet Northeast to the cold Himalayan regions — that produced the unique culture of each region. He was astonished to discover how centuries ago, people had developed economic systems and lifestyles that make best use of their natural resources.

The people of Rajasthan had developed a nomadic lifestyle and animal care-based

Awarded Padma Shri, 1986



occupations to suit their fragile land; the people of Mizoram had developed shifting cultivation because they had to live on the slopes; and those living in the floodplains of central India developed agrarian economies. These traditional systems, whether in land use, water use, agriculture or health care, became entwined with the cultural systems and were passed down the generations as cultural and traditional knowledge.

He developed a deep sense of respect for the traditional knowledge of the people which, he found was ingenious and innovative in making the best of the natural ecosystem in the gentlest and the most sustainable ways. He constantly advocated not only respect for this knowledge but also commercial rewards for the use made of it in the modern world.

Ecosystem-specific development

"High productivity on a sustainable basis is possible only by observing the laws of nature, not by contravening them. In other words, we have to develop ecosystem-specific development plans"

As Anil learnt more about how traditional systems had managed natural resources by building on the unique strengths of each ecosystem, he began to understand that need for ecosystem-specific development paradigms. Anil realised that a centralised and uniform planning methodology for plateaus, hill ranges, riverine deltas and other ecosystems of India that ignored their diversity and uniqueness, would not work. He pushed for ecosystem-specific development, a development paradigm that is uniquely tailored to each ecosystem to increase India's biomass.

The third citizens' report on the State of India's Environment, *Floods, Floodplains and Environmental Myths*, published in 1991 focussed on the vast Indo-Gangetic Plains ecosystem. SOE-3 studied the ecology of the world's most flood-prone plains, and raised questions about the specific nature of sustainable development needed for India's most economically and environmentally degraded regions. Anil questioned the scientific basis of the prevailing assumptions of the linkages between deforestation and floods. He instead proposed that ecological changes in the floodplains, and not environment degradation upstream, were the key cause of the growing flood menace.

Village ecosystem planning

"Indian villages are highly integrated agrisylvopastoral systems and what India desperately needs today is the holistic enrichment of each of its village ecosystems."



Dehradun, 1997

Interacting closely with the villagers of Sukhomajri, Ralegan Siddhi, Knonoma, Seed and other villages, Anil learnt that people view their natural resource base as an integrated system and, from this learning introduced the concept of the 'village ecosystem'. Anil found that the Indian village is actually a complex and integrated ecosystem consisting of croplands, grazing lands and forest lands, surface and groundwater, the energy system and the livestock system. All these components interact with each other to maintain the delicately balanced village ecosystem. Therefore, the first step in planning for sustainable development has to start from the village and has to be for each village.

Implementing village-level planning requires a lot of discipline — discipline to ensure that animals do not graze in protected commons; that catchments are not polluted and properly maintained; that the resources and products are equitably shared and distributed. Anil understood therefore that the management of natural resources in villages is not possible without the willing and active involvement of the villagers, and therefore any ecological management system for the villagers must be participatory.

Anil put down these concepts in 1989 in a publication titled, *Towards Green Villages: A macro-strategy for participatory and environmentally-sound rural development*. Based on Anil's travels and his learning from people's initiatives, the book was an effort to conceive a macro-strategy for environmentally-sound rural development. It was a landmark publication that, for the first time, presented an operational framework for sustainable development. The book was translated into many regional languages and used by grassroots groups across the country and has helped Indian decision-makers to understand the importance of involving people in natural resource management.

The most sophisticated decision-making will begin only when village people will start sitting under banyan trees as a group to discuss their problems and find common solutions. Only such decentralised decision-making can match the enormous ecological and cultural diversity of Indian villages



Vietnam, 1996

Women and environment

"Rural women are most affected by environmental destruction in India and therefore, women are most willing to participate in environmental regeneration efforts."

Anil was one of the first to document the adverse impact of environmental destruction on the lives of poor, rural women in developing countries. His paper on environment and women, published as a chapter of the second citizens' report on the State of India's Environment, (SOE-2) received media attention worldwide, especially in feminist, NGO and academic circles. During his travels, he found that in the vast majority of rural households, the women usually ventured out to collect fuel, water or fodder. Therefore, environmental degradation causes a disproportionate share of the burden to fall on the shoulders of village women who have to walk longer distances to collect daily essentials. This is hard on the village women who are expected to also perform a variety of other activities including cooking, caring for the livestock and working in the fields. Anil therefore found the women to be more interested in nurturing the environment. While Gandhiji had said, *"Think of the last man"*, when asked who we should keep in mind when we plan, Anil argued, *"the last man is invariably a woman, and therefore, think of the last person"*.

Urban environmental problems

"Urban development in the developing world is a total copy of the Western technological paradigm. But the Western technological model is an inherently toxic model because of its extraordinary material and energy-intensity."

Anil became aware of the urgent and critical state of the urban environment when he started work on air pollution issues in Delhi in 1994. Less than a decade before, he had advised the country's leaders, in a lecture to the members of the Parliament that rural environmental problems were among the most pressing problems of India. But by 1995, he was alarmed at the speed with which pollution grows; the air pollution in Delhi had made it among the most polluted cities in the world. Directing the Campaign on Clean Air provided Anil the opportunity to study these issues in detail. He found that the globalisation process resulted in the rapid spread of Western pattern of development a highly toxic pattern that is energy-intensive, capital-intensive, resource intensive and extremely polluting. Anil often cited the fact that the East Asian countries and the Southeast Asian countries have achieved a near economic miracle in which some of them doubled their

GDP in just about 10-15 years. At the same time, a World Bank study found that even as Thailand doubled its GDP, its pollution load, which is a total amount of toxins that it produced and released into the environment from industries, had multiplied ten times.

The success of the Clean Air campaign in Delhi gave Anil the confidence that the problem of urban pollution can be met by harnessing science and technology wisely. This campaign was a model to show that public pressure can bring about policy change.

Anil used the experience of the Clean Air Campaign to fashion strategies to counter urban environmental problems. Firstly, civil society organisations must improve their skills and competence in science and technology to break through the conspiracy of silence hatched by vested interests like the industry, the government and the scientific establishments. Secondly, they must push not only for technologies to leapfrog to advanced non-polluting systems, but also for small scale decentralised, and traditional technologies that are attuned the local culture. But most of all, civil society institutions must constantly fight for improved governance to ensure accountability and transparency in dealing with environmental problems.

Science, technology and environment

"If as Gandhiji said, India lives in its villages, something will have to be done about promoting development right in the villages. This poses the greatest challenge to India's scientifically and technically trained people – the proud legacy of Nehru's India."

Anil was an environmentalist who never strayed from his science and technology moorings. The first thing he wanted to find out after his graduation as a mechanical engineer was how to harness his skills and knowledge of science and technology to improve the quality of life for the poor people of India. As a journalist working with the International Institute for Environment and Development, Anil shared the first A H Boerma Award, presented by the Food and Agricultural Organisation to journalists for focussing world attention on problems of hunger and poverty. Anil's first task when he established CSE in 1980 was to begin a feature service on the use of science and technology for development. Within the first two years it produced nearly 200 reports on science and society-related issues, which were then published in more than 100 major newspapers, magazines and voluntary organisations.

Anil was different from many environmentalists of his day because he believed that nature lends itself to deep scientific analysis, and therefore the impact of human

Every Indian wants to
live like an American.
But few realise that the
Western economic
dream is a highly toxic
dream. America has
650 million cars and
we have 30 million and
we are choking
ourselves to death

intervention in any form, be it agriculture, industry, or the impact of population growth on the environment, must be scientifically analysed. This 'Science for Ecological Security', he believed, was extremely important for the poor countries to constantly monitor the impact of technological changes on the environment and then to take quick, remedial, regulatory and technological measures to address the problem. Anil argued that the answer to the 21st century's myriad environmental problems lay in traditional, small and decentralised technologies.

In the global environmental arena

"The 1980s saw several global environmental issues come to the fore. But the answers found to these issues in the form of international treaties have not provided equitable entitlements to the environment or globally valid judicial systems that can bring even the most powerful nations to book"

During the eighties Anil believed that the environmental problems confronting the people of India were critical and urgent and therefore, he focussed his attention and efforts on national environmental issues. His entry into global environmental issues was a chance coincidence.

The climate change campaign

One night, Anil heard a news item on *Doordarshan* that claimed India was the fifth largest emitter of carbon dioxide and was a major contributor to global warming. The news item was based on a UN-supported study by the World Resources Institute (WRI) in Washington DC.

Anil was taken aback to hear this; after all, he had been instrumental in creating a social legitimacy for environmental concern by arguing environmental degradation affects the poor the most. But here was a theory that the poor of the world were responsible for one of the world's major environmental problems. He was also outraged at India's green ministers who endorsed this theory by proposing that the people in India must stop eating rice and keeping cows.

Anil studied the Washington report carefully. What he found was that the report was politics masquerading as science. Anil believed that science consists of facts, while allocating responsibility is a matter of politics. He suspected that the developed countries were trying to rope in the developing countries to share part of the blame for global warming that the rich countries had created.

Anil took the same mathematical data of emissions, but changed just one assumption that produced dramatically different results. That assumption was that the global sinks,

which absorbed the carbon dioxide and reduced the total emissions, is a global resource and thus all citizens of the world have equal rights to these resources. The Washington study, on the other hand, had arrogated the maximum resources to the worst polluter.

This study, *Global Warming in an Unequal World*, kicked off CSE's campaign for Equal Rights to the Atmosphere. This book generated considerable global debate and had significant impact on the G-77 position in the negotiations leading up to the Framework Convention on Climate Change. Although initially Anil's concept of equitable sharing of atmospheric resources met with a lot of resistance, the idea has gained ground even in the West. Today, the concept of equity has been accepted and embedded as a benchmark for all actions in the climate change convention.

Anil continued to take very active interest in this issue and called for strategies that would address issues of ecology, economy, social justice and equity. He strongly advocated that the world must move from a fossil fuel-based economy to one based on renewable energy and that this can be done if the market systems make renewable energies competitive with fossil fuels. As this requires all countries to cooperate, Anil believed the framework must be made just, fair and equitable.

Global environmental governance

The Rio meeting and the WRI study catalyzed Anil's entry into international environmental issues. He laid down CSE's mandate in this area — to articulate Southern priorities, and argue on behalf of the poor and the disempowered in the global arena.

Just before Rio Anil wrote a book, *Towards a Green World*, which argued that while global environmental governance was

People who have already created a stock of carbon dioxide that is causing global warming are not being held accountable. We are asked to change our codes of behaviour today for something we might do 40 years later. In other words, those who have already committed murder are preaching to us that we should not commit murder 40 years later

Release function of *Green Politics*, 2000



I often differ from my wonderful environmentalist friends in the Western world when they say that consumption is growing, population is growing and, therefore, we are facing a major environmental catastrophe. I would rather say that as a result of both these factors, we are facing a major environmental challenge. A challenge that can be met successfully

essential to avoid global disasters, its principles should be based on democracy, justice and equality among all world citizens — the key principles of good governance. This book received worldwide attention by journalists, TV commentators, academics and policy researchers. It greatly influenced the negotiations leading up to the Rio Conference on environment in 1992.

In 1994, Anil was nominated as Environmentalist of the Year by *Les Realities de l'Ecologie*, a leading French environment magazine. Dominique Voynet, then leader of the French Green Party said, "two years after Rio, at a time when the GATT agreement has dealt a severe blow to the planet, it is necessary that the environmentalist of the year should be the messenger with a vision anchored in sustainability and solidarity for the future generations. Who can represent the essential synthesis between environment and development better than Anil Agarwal".

As a participant in many global environmental negotiations, Anil found that Northern interests largely dominated these meetings. He repeatedly argued that the management of global resources must be based on the concept of equal environmental rights for all human beings. His angry reaction to the different mechanisms being developed to deal with global environmental problems, including conventions, aid, trade and debt, was, "these are Northern instruments and not international instruments because they can never be used by poor countries and instead will be misused by rich countries to safeguard their interests".

While Anil was critical of the attitude of the West towards global environmental problems, he was equally critical of the

Southern governments and leaders, who, in his view did not participate in these negotiations with any seriousness or from long-term perspectives. He repeatedly urged the Indian and other Southern political leaders to take proactive positions in all global environmental negotiations, positions that would safeguard the interests of their poor and the marginalised.

He recognised the urgent need to demystify the politics and processes of global environmental negotiations, especially to Southern civil society groups and governments. The State of Global Environmental Negotiations (GEN) reports were started keeping this in mind. Anil wanted to inform the actors in global environmental negotiations, particularly those from the South, about the politics involved in these negotiations. The GEN reports analysed the process and outcomes in negotiations, and articulated Southern priorities and concerns. CSE published two GEN reports, *Green Politics* and *Poles Apart* in 1999 and 2001, which were extremely well received across the world. The GEN reports are used as resource material by NGOs working on these issues and are mandatory reading materials in several US university courses.

The challenge of ecological globalisation

Anil believed that the economic globalisation process leading to growing wealth, production and consumption would lead to a corresponding ecological globalisation as the environmental problems created by one country will increasingly cross over national borders and affect the people, economies and ecologies of other countries. However, even as he constantly argued for democracy and justice in global environmental governance, Anil looked at this process of ecological globalisation with optimism and hope.

He believed that the 21st century would usher in a range of more efficient small-scale technologies and pluralistic governance systems in which a large number of people would be involved. He was also confident that the growth of civil society movements in many parts of the world, would give rise to effective leaders who are able to harness the globalisation process for growth and prosperity.

Anil was therefore optimistic that the environmental and technological challenges of the 21st century can be met. Southern civil society institutions can guide their citizens to make better choices to achieve a healthy and sustainable world by improving their technical competencies, ushering in participatory forms of governance and creating a serious and committed leadership that can make use of the opportunities provided by economic and ecological globalisation.

Sudan, 1986



Down To Earth

"This country is held up by its people and not its leaders. Is it not time that you got to know more about what people like you and me are doing?"

This is how Anil first spread word about *Down To Earth*, the fortnightly newsmagazine on science and environment that he launched in 1992. Anil had been nurturing the idea of starting such a magazine for many years. He was convinced that there was a critical information gap, and *Down To Earth*, modelled on the *New Scientist* and brought out from the developing world, would be a powerful tool to influence policymakers and to create awareness in civil society.

Anil had been deeply impressed by the ability of the people, especially the poor, to generate sustainable wealth through the regeneration of their environment. He was also aware that there were several people-based efforts across India that the media ignored, innovative responses by the people to the slow degradation of their survival base. As he learnt more about the relevance of these efforts for sustainable development, he became convinced of the need to create wide awareness about these grassroots initiatives so that they could influence macro-policy development. At the same time, he believed that the technological changes occurring worldwide would impact the environment of India. He was concerned about the need for public awareness and debate on these technological options to generate pressure on the government to make the correct choices.

Thus was born *Down To Earth*, a unique newsmagazine on science and environment that would cover human aspirations, endeavours and struggles, global technologies, the politics behind national and international policies and developments.

Anil received invaluable support from friends and supporters across the world. Even before the first copy of the magazine was printed, Anil had sold over 5000 subscriptions and raised the seed money required to start the magazine. At the first anniversary of the magazine, letters of appreciation poured in. Anil was greatly thrilled when Gro Harlem Brundtland said of *Down To Earth*, "*Reading Down To Earth is cost-effective.... The issues have been clearly defined and pinpointed. The style, not unlike that of The Economist, will ensure a stable, influential readership around the world.*"

Under Anil's leadership, *Down To Earth* became an influential magazine that informs, challenges, inspires and provokes people to act for the environment. Most of all, it has become a symbol of change. Its articles have

resulted in court actions, NGO campaigns, and policy and lifestyle changes. Anil used the magazine to get decision-makers from diverse groups to pay attention to environmental problems, community-initiated solutions, the politics behind policies and governance in environmental decision-making.

Down To Earth reaches every nook and corner of India. Its diverse readers include concerned citizens, NGOs, lawyers, teachers, students, industry leaders, government officials, researchers and others – the kind of people capable of leading change in India in the future. Readers volunteer their time and efforts to conduct surveys and studies and to help spread the word about *Down To Earth*. The public's heart-warming response to the magazine keep us motivated to maintain the high standards Anil had set under his stewardship.

Knowledge-based advocacy

"All of us want to see the results of our actions. CSE's strengths have been in producing publications. So, what could CSE do to change the society? "

By the mid-1990s, Anil had honed and refined CSE's communication skills and the organisation had come to set standards in environmental communications. Anil had by this time produced three State of India's Environment reports, started a newsmagazine, published numerous small publications, produced several video films and exhibitions, started specialised publications for children that created awareness about environmental problems. However, Anil was no longer content to create awareness and wait for people to push the government to take action.

In 1994, Anil was diagnosed for a rare form of cancer of the Central Nervous System (CNS lymphoma), for which he took treatment at the National Institutes of Health in the US. Rather than let his grim prognosis get him down, he typically set about examining the causes of cancer. He found that changing environmental conditions, lifestyle and consumption patterns are the cause of a majority of the new breed of deadly diseases like cancer. He threw himself into the task of creating awareness about these issues and to bring policy change. The onset of cancer only spurred him to climb greater heights in order to achieve results.

From his hospital bed in the US, Anil directed his colleagues in Delhi to continue work on two publications, one on Delhi's vehicular pollution and the other on community-based traditional systems of water management in India. He decided to make full use of the social capital that CSE had built over the years within the civil society, the political world, and the media.



Mizoram, 1988

I am 53 and this disease has given me a sense of mortality, which most people my age don't have. This drives me to work harder, with greater zeal and enthusiasm

What does water harvesting mean in human terms? It means making water everybody's business. It means re-establishing the relationship between people and their environment. It means catching water where it falls

Right to Clean Air campaign

When *Slow murder*, the book on vehicular pollution was ready, Anil approached Dr K R Narayanan, then the vice-President of India, to release the book at his official residence. Anil knew the prestigious address would attract heads of auto companies and many government ministers to the release function. The book immediately attracted the attention of the media, pollution control officials and, importantly, the Supreme Court. The campaign made full use of the media support, and by focusing on the health impacts of pollution, garnered public support.

The extensive media coverage resulted in a *suo moto* notice given to the government of Delhi by the Supreme Court judge, Justice Kuldeep Singh. Anil was pleased with the judiciary taking an active role in learning more about the role that the city's numerous outdated vehicles and dirty fuel played in endangering the city's public health. He hit out strongly against the government for colluding with the auto industry and other vested interests for their support of polluting technologies.

In 1998, following widespread public concern generated as a result of the CSE campaign, the Supreme Court ordered the government of India to establish a powerful authority to manage pollution problems in New Delhi. Anil was nominated a member of this authority and wielded considerable influence in pollution control matters through this committee.

CSE's Clean Air campaign has grown considerably from its initial days of creating awareness about the impacts of vehicular air pollution. It used the power of both media, and the judiciary, to counter vested interests and slowly bring in measures to ensure clean air quality in Delhi. The campaign has since then been instrumental in improving Delhi's fuel and air quality. Today, CSE conducts studies to develop safety and emission norms for Compressed Natural Gas (CNG) and to develop emission factors for scooters and other two-wheelers in an effort to move towards zero emissions. The Clean Air campaign has become a trendsetter for similar campaigns across the world and has won

world praise for bringing about the world's largest CNG city bus fleet. CSE's challenge today is to take this success to the rest of India's polluted cities.

Make water everybody's business

In early 1997, Anil completed *Dying Wisdom*, an influential book on the traditional wisdom of rural India in conserving rainwater.

Anil's interest in traditional water harvesting systems had been kindled years back, in Rajasthan. While travelling through the Churu district in the Thar Desert, he saw several structures that looked like Buddhist stupas placed over a flying saucer. The villagers told him that this structure, called the *kundi*, provided them with rainwater collected in the catchment. The dome ensured no water was lost through evaporation.

Anil was amazed at the ingenuity and simplicity of this structure devised by the local people centuries ago to collect and store precious water available in the arid Thar. The engineer in him made a quick calculation — if the region receives only 100 millimetres of rainfall and if one is able to collect this in one hectare of land, one can collect as much as 1 million litres of water. He marvelled at the traditional wisdom and technology that could create these amazing structures and initiated an in-depth study of the traditional systems that existed to manage water resources. After seven years *Dying Wisdom* was published. The central message contained in the book was that the management of water resources should be wrested from the government and instead placed in the hands of local communities.

Anil launched the campaign simultaneously in different cities of India, once again making use of the social capital and goodwill of powerful leaders CSE had built up over the years, to ensure that the message of the book was propagated by such leaders in their regions.

The success of Anil's campaign campaign surpassed his greatest expectations. Water harvesting is today the new mantra for the people, politicians, NGOs, donors and even bureaucrats. Anil often said, "*There is no village in India that cannot meet its basic drinking and cooking water needs through rainwater harvesting*". But rainwater harvesting demands a new approach to governance — participatory rather than top-down. Therefore, Anil initiated a campaign within the campaign called *jal swaraj* (a term he coined for people's management of water resources).

This campaign has changed the mindsets of bureaucrats and politicians, and provoked several state governments and the central government to sponsor community rainwater harvesting efforts. However, we still have a long way to go to realise Anil's dream of true *jal swaraj*.



Release of *Dying Wisdom*, 1997

The Green Rating Project

The Green Rating Project is yet another of Anil's innovative initiatives to evoke a response from industry, a sector with whom environmentalists usually establish an adversarial relationship. While on a visit to the US, Anil had come across information on a programme that rated companies on their social and environmental performance. He was struck by the idea that such a process could be used to motivate and pressure industry to improve its environmental performance, and started the Green Rating Project (GRP).

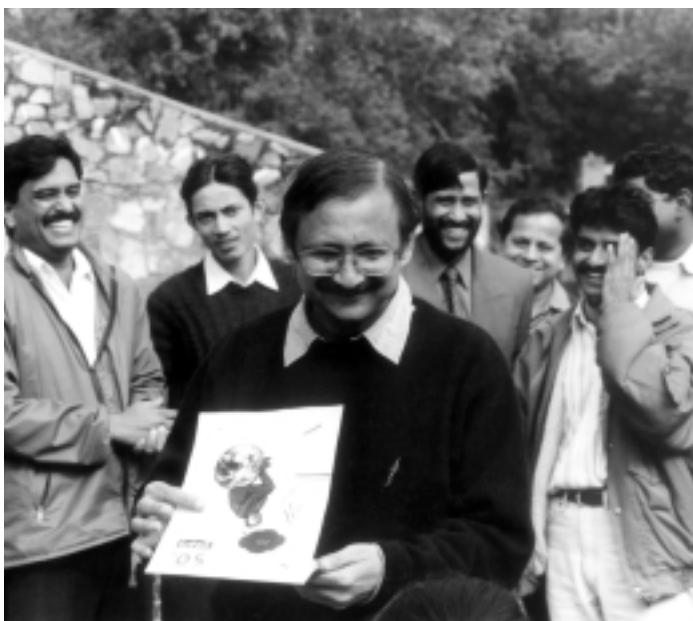
GRP had to overcome several problems. Obtaining environmental data of companies was a huge challenge, as Indian government agencies do not maintain environment data; what little information available is either unreliable or inaccessible. Detailed environmental information on each industrial sector would have to be painstakingly collected, requiring a huge amount of financial and human resources. Anil, in his typical fashion, found an imaginative solution – tap into the committed readership of *Down To Earth*. He advertised in the magazine for volunteers and reaped a rich haul of over 400 applications – many from highly educated professionals. These 'Green Inspectors', as he called them, willingly collected detailed data on each company — at no cost to the organisation.

The Green Rating Project's first assignment was to rate the environmental performance of the paper and pulp sector. The companies, initially unwilling, later became voluntary participants when told the ratings would be widely publicised, and that transparency made good business sense. Anil realised industry would stop at nothing to discredit such an effort. He put together a Project Advisory Committee that consisted of eminent leaders from civil society, industry and government. A technical steering committee that included leading technical experts was created.

GRP is today recognised as a model programme that promotes voluntary improvements in the environmental performance of industry by using market mechanisms and corporate reputation as its chief incentive.

Educating future leaders

In the early nineties, Anil wanted school children to be exposed to environmental education that was holistic in approach. In the 1980s, due to increased public awareness and interest in environmental issues, environment had become a compulsory subject in schools, and in addition, there were a number of voluntary organisations involved in providing environment education. But these efforts projected a conservation or nature-oriented perspective on environment. Having been a strong advocate of an anthropocentric



50th birthday celebrations, 1997

perspective of environment, Anil was keen to initiate a programme of environment education that would inculcate a holistic understanding of the environment including its social and cultural dimensions.

Anil initiated CSE's environment education programme as a unique programme that teaches children about the linkages and continuities between nature and society; how environment is not solely about conserving trees and animals; and, its importance as the survival base for the poor. The programme also educates children about traditional values and practices that ensure the frugal and sustainable use of natural resources.

Recognition and awards

Anil was made chairperson of the world's largest network of environmental NGOs based in Nairobi, Kenya, from 1983 to 1987. He was also awarded the Fifth Vikram Sarabhai Memorial Award by the Indian Council of Social Science Research, New Delhi in 1984, and the Padma Shri by the Government of India in 1986. In 1987, the United Nations Environment Programme (UNEP) elected Anil to its Global 500 Honour Roll for his work in the national and international arena. The Hawaii-based Watumull Foundation awarded him the Honour Summus Award.

These were just the beginning of a long list of awards that he won for his dedication, courage and commitment to the cause of environment. In later years, he was awarded the Padma Bhushan by the Government of India, the Norman Borlaug Award by the Coromandel Fertilisers Ltd and the Global Environment Leadership Award by the Global Environment Facility, Washington DC.

