

Sharing Series 6

*The Environment: A Cross-Cutting Theme  
for Sustainable Development*



**Bala Vikasa: An Environment  
Policy for Action**



## **BALA VIKASA SOCIAL SERVICE SOCIETY**

In 1990 Bala Vikasa was established in Warangal, Andhra Pradesh, as an Indian counterpart to SOPAR, a Canadian Non-government Organization. In 1991, it became a registered, secular, non-partisan, non-profit, voluntary, social service organization. Through its collaboration with donor agencies in Canada and Europe, Bala Vikasa assumes a dual role, that of an implementer and a fund provider.

### **Philosophy**

People themselves have to be the true agents of change. Development is primarily for the people and by the people and thus the motto of Bala Vikasa is 'to help people to help themselves'.

### **Objectives**

- Provide support for socio-economic development of the rural poor, especially women.
- Plan, implement, monitor, evaluate development programs.
- Provide institutional support to partner organizations.
- Impart required training for interested community based organizations.

### **Strategy**

- Concentrate on holistic development programs, primarily on the intrinsic social and ethical aspects of human interaction, gradually leading women/community to economic development.
- Help build confidence and a desirable value system by inculcating discipline and human values, like dedication to work, self esteem, respect for the environment, sensitivity to the less privileged, and willingness to participate in community development activities.
- Build partnerships through collaboration with donor agencies and networks to share and work together with the people.
- Focus on replicable, manageable, accountable and sustainable development programs.

### **Development Programs supported by Bala Vikasa**

- Drinking Water through Bore Wells and Over Head Tank systems.
- Surface Water Management through desiltation of traditional water tanks.
- Safe water supply through Water Purification (Defluoridation) System.
- Farmers Cooperatives.
- Healthy Environment and Quality Education to the Children in Rural Public Schools in A.P., India
- Youth Participation Program
- Integrated Women Development Program.
- Community sponsorship and scholarship for orphans and poor rural students.
- Training in Community-driven development through its People Development Training Center.



# *The Environment: A Cross-Cutting Theme for Sustainable Development*

## **Bala Vikasa: An Environment Policy for Action**

This spectacular "blue marble" image showing India at the center is the most detailed true-color image of the entire Earth to date. Using a collection of satellite-based observations, scientists and visualizers stitched together months of observations of the land surface, oceans, sea ice, and clouds into a seamless, true-color mosaic of every square kilometer (.386 square mile) of our planet

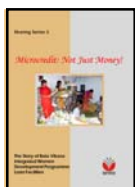
Credits: NASA Goddard Space Flight Center Image by Reto Stockli (land surface, shallow water, clouds). Enhancements by Robert Simmon (ocean color, compositing, 3D globes, animation). Data and technical support: MODIS Land Group; MODIS Science Data Support Team; MODIS Atmosphere Group; MODIS Ocean Group Additional data: USGS EROS Data Center (topography); USGS Terrestrial Remote Sensing Flagstaff Field Center (Antarctica)

**Sharing series**, published by the Bala Vikasa People Development Training Center ( PDTC), as the name suggests, is based on Bala Vikasa’s eagerness to share the outcomes of research and studies conducted at the grass roots in collaboration with the people for whom development programs were and are intended, with like-minded organizations and donor agencies, who could use the insights gained to plan and implement their own programs.



**Sharing Series 1 (SS 1), “Before and After: Impact Study on Bala Vikasa Integrated Women Development Programme (IWDP)”**, April 2004. ISBN 81-902248-0-8

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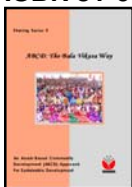


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These publications are a product of Bala Vikasa People Development Training Center (PDTC). For information about PDTC and its Sharing Series please contact:

**Bala Vikasa People Development Training Center**

Fathimanagar, NIT (post) Warangal 506004

Andhra Pradesh, India

Phone : 91-870-2453255 / 91-870-2453356

Fax : 91-870-2453256

E-mail : balavikasapdtk@rediffmail.com

# TABLE OF CONTENTS

<b>FOREWORD</b>	<b>i</b>
<b>CHAPTER ONE: THE ENVIRONMENT: GLOBAL POLICY DEVELOPMENT</b>	<b>1</b>
• <b>Global Concern</b>	<b>1</b>
• <b>Conflicting Perceptions: North Vs South</b>	<b>2</b>
• <b>Policy Development: Landmarks</b>	<b>4</b>
- <i>United Nations Conference on Human Environment (UNCHE) -1968</i>	
- <i>Founex Conference, Switzerland, 1971</i>	
- <i>The UN Conference on Human Environment, Stockholm (UNCHE), 1972</i>	
- <i>Program priorities of UNEP</i>	
- <i>UNEP and its expectations</i>	
- <i>Post Stockholm Conference</i>	
- <i>World Commission on Environment and Development (WCED), 1983</i>	
- <i>The Earth Summit in Rio de Janeiro, 1992</i>	
- <i>The United Nations Framework Convention on Climate Change -1994</i>	
- <i>Kyoto Protocol, Japan, 1997</i>	
- <i>After Kyoto</i>	
- <i>World Summit on Sustainable Development, Johannesburg, South Africa, 2002</i>	
• <b>Efforts to build up and disseminate greater knowledge about man- made climate change.</b>	<b>15</b>
- <i>Intergovernmental Panel on Climate Change (IPCC)</i>	
- <i>The 4<sup>th</sup> report of IPCC on Climate Change</i>	
- <i>UNEPs Global Environmental Outlook (GEO)</i>	
- <i>The fourth report in the Global Environment Outlook (GEO-4)</i>	
<b>CHAPTER TWO: ENVIRONMENT POLICY DEVELOPMENT IN INDIA</b>	<b>19</b>
• <b>Ancient India: Respect for the Environment</b>	<b>19</b>
• <b>Present Day India: Degradation of the Environment</b>	<b>20</b>
• <b>Environmental Laws</b>	<b>21</b>
- <i>Pre-Independent India</i>	
- <i>Post-Independent India</i>	
- <i>The National Committee on Environment Planning and Coordination (NCEPC)</i>	
- <i>42<sup>nd</sup> Amendment to the Indian Constitution</i>	

• The Ministry of Environment and Forest	23
• National Environment Policy (NEP), 2006 Approved by the Union Cabinet of India	23
- <i>General Principles of NEP</i>	
<b>CHAPTER THREE: ENVIRONMENT PROTECTION: ROLE OF CIVIL SOCIETIES</b>	<b>27</b>
• Voluntary Organizations	27
• Environmental NGOs in the world	28
• Environmental NGOs in India	29
<b>CHAPTER FOUR: BALA VIKASA ENVIRONMENT POLICY: A CROSS-CUTTING THEME</b>	<b>31</b>
• Environment Policy for Action	31
• Agent of Change: strategies for sustainable development	32
• BV's On-going Programs and Projects: Practical application of the Environment Policy	32
- <i>Water Supply Projects</i>	
- <i>Sanitation Programs</i>	
- <i>Housing</i>	
- <i>Desiltation of tanks</i>	
- <i>Green Cover: Afforestation program</i>	
- <i>Community Development Projects: Health and Education, Child Care, Employment Generation, Farmer Cooperatives, etc.</i>	
- <i>Capacity Building</i>	
● <i>Bala Vikasa Strategy and Future Action/Plan</i>	<b>43</b>
● <i>Acknowledgements</i>	<b>45</b>
<b>CHAPTER FIVE: CONCLUSION</b>	<b>47</b>
● Environment: Foundation for Sustainable Development	
● Environment and the Millennium Development Goals	
● The role of the Civil Society and of the Voluntary Sector	
<b>GLOSSARY</b>	<b>51</b>

## FOREWORD



*“Suddenly, from behind the rim of the moon, in long, slow-motion moments of immense majesty, there emerges a sparkling blue and white jewel, a light, delicate sky-blue sphere laced with slowly swirling veils of white, rising gradually like a small pearl in a thick sea of black mystery. It takes more than a moment to fully realize this is Earth . . . home.”*

**Edgar Mitchell, USA, Astronaut**

“The Blue Planet!” This is how the astronauts through the porthole of their spaceships have described our earth. This image of our abode brought back to earth by these men and women hurled out on the fringe of the universe, became for many of them the sign of a profound and mystical spiritual experience.

Will the many facets of our “sparkling blue and white jewel” be always crystal pure and bright? “Our Common future” shall tell... but increase in consumption and associate waste is contributing to the exponential growth in existing environmental problems and is threatening the diamond that is our planet earth.

In Asia alone, the well-being of billions of people is at risk because of a failure to remedy relatively simple environment problems.

In India, “climate change is already having severe effect on human health, food production, security and resource availability. Extreme weather conditions are having an increasingly large impact on vulnerable human communities, particularly the poor. Indoor and outdoor pollution is still causing many premature deaths. Land degradation is decreasing agricultural productivity, resulting in lower incomes and reduced food security. Decreasing supplies of safe water are jeopardizing human health and

economic activity. Drastic reductions of fish stocks are creating both economic losses and a loss of food supply. Accelerating species extinction rates are threatening the loss of unique genetic pools, possible sources for future medical and agricultural advances.”<sup>1</sup>

“Since 1987, when the World Commission on Environment and Development launched its report, ‘Our Common Future’ some progress towards sustainable development and environment concerns has been made”. Sustainable development strategies and Environment Policies have been designed and implemented at international, national and local level, unfortunately, often time, with mitigated results.<sup>2</sup>

Sharing Series 6, briefly exemplifies on the efforts of all those who have contributed at all levels to make “our Blue planet” a place of hope for good living and well-being. It focuses on the environment policies that for more than 3 decades have been put forward—most often, bottom up—by people at the international, national and grassroots levels.

A policy is a “course of action”. Good policies include instruments and tools to achieve policy objectives. These means comprise some or all of the following: societal instruments, economic and command and control instrument, direct government involvement and institutional and organizational arrangements.<sup>3</sup> In brief, a policy has to have “teeth” be it at the multilateral, national or local level.

Chapter one of “Environment: a Cross-cutting Theme for Sustainable Development” presents the Action Plans proposed till date, by the international community under the direction of the United Nations. It emphasizes the role of the “Earth Summit” which took place in Rio de

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<sup>1</sup> Global Environment Outlook -4 , United Nations Environment Programme. Chapter 1, Environment for Development, Main Messages, p. 6, Septembre 2007.

<sup>2</sup> Ibidem, p. 1.

<sup>3</sup> Please refer to the Glossary at the end of this booklet for an more exhaustive definition of the term “Environment Policy”. The Glossary defines several environment specialized words normally used while discussing “Environment problems and situations”.

Janeiro in 1992, which strengthened interaction among governments, NGOs and scientists, and fundamentally changed attitudes towards governance and the environment.

It is noteworthy that over the last thirty years, the international community has participated in 13 major multilateral environmental conferences. During these meetings, “international negotiations on solutions to global environmental problems have frequently stalled over question of equity. For instance, in the case of climate change, international negotiations have slowed down over the question on how to share responsibilities and burden among nations, given different historic and current levels of national emissions.”<sup>4</sup>

Chapter 2 of this publication describes the efforts of India in the development of its National Environment Policy (NEP). India NEP has been greatly influenced by the Civil Society voluntary sector which continues to actively monitor with a critical eye the role of the central government in implementing its environment policies.

Chapter 3 stresses the role of the Indian Civil Society in pursuing environment concerns. India possesses one of the most articulate body of NGOs whose mandate is to protect the Environment. Along with this expert and activist group, is a multitude of voluntary organizations specialized in community development using an integrated approach, or focusing on a sectoral issue such as primary health, education, etc. It is our view that organizations belonging to the second category, should also have environment as a cross-cutting theme in their programs.

Chapter 4 provides a closer view of Bala Vikasa as a Social Service Society. It illustrates how the Environment Policy designed by the organization for its own purpose is implemented across all Bala Vikasa development activities. This could serve as guidelines to NGOs seeking to formulate their own environment policies.

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<sup>4</sup> Global Environment Outlook -4 , United Nations Environment Programme. Chapter 1, Environment for Development, Main Messages, p. 12, Septembre 2007.

An organization's policy has to evolve in keeping with the need of the changing times, and from the insights it has gained over the years through concrete implementation of its planned activities. The planners and implementers of Bala Vikasa have now reached that stage when they are questioning the effectiveness of their own Environment Policy, and are ready to take up the challenge of enhancing their Environment Policy which would in turn help respond more significantly to the UN's call to Civil Societies as delineated in the UN's Millennium goal.

Sharing Series 6, like all other publications of this Series which have preceded this, is Bala Vikasa's attempt at sharing with donors and other NGOs, the lessons it has learned in integrating the Environment theme in its various development efforts. Bala Vikasa will deem it a privilege to receive valuable guidelines from experienced individuals or other NGOs working on Environmental protection and preservation, so as to further develop its own Environment Policy.

Dialogue is open. Suggestions are welcome!



# CHAPTER 1

## THE ENVIRONMENT: GLOBAL POLICY DEVELOPMENT



*"The earth is finite. Its ability to absorb wastes and destructive effluents is finite. Its ability to provide food and energy is finite. Its ability to provide for growing numbers of people is finite. And we are fast approaching many of the earth's limits. Current economic practices that damage the environments, in both developed and underdeveloped nations, cannot be continued without the risk that vital global systems will be damaged beyond repair.*

*"We must recognize the earth's limited capacity to provide for us. We must recognize its fragility. We must no longer allow it to be ravaged. This ethic must motivate a great movement, convincing reluctant leaders and reluctant governments and reluctant people themselves to effect the needed changes." <sup>5</sup>*

**Statement endorsed by fifteen hundred of the world scientists, including a majority of Nobel Laureates in 1994. In Renewable Resource Journal, Summer 2001.**

### Global Concern

Ever since the state of the environment first became a matter of international concern in the early 1960s, committed publicists for development such as economist Barbara Ward, had linked its plunder with world poverty. Waste

and over-consumption of the earth's natural wealth were counterpoised with humankind's unwillingness to do much for the poor. Others laid responsibility for incipient disaster on the poor, whose extraordinary fertility linked the twin concerns in a different way.<sup>6</sup>

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<sup>5</sup> James Gustav Speth : Global Environmental challenges – Transitions to a Sustainable World, p. 17, Orient Longman Private Limited, India, 2005.

<sup>6</sup> Maggie Black : Children First – The Story of UNICEF, Past and Present, p. 109. Oxford University Press, 1996.

For the common people and the decision-makers, the principal cause of this concern was the pollution of the atmosphere and of water that was beginning to affect visibly and immediately the quality of life. The interest of the people was also directed to the protection and conservation of nature, a concern spurred by rapid and extensive penetration into the countryside of economic activities, human settlements, and transportation networks, and the resulting degradation of nature.<sup>7</sup>

### **Conflicting Perceptions: North Vs South**

#### ***Pollution***

In the 60s, the developing countries were hardly aware of or worried

about environmental pollution. Domestically, for most of them, pollution represented an issue still beyond the horizon. Many considered pollution as something unavoidable and as a by-product of progress and of the economic and industrial development to which they were aspiring. It was also assumed that the developed countries, which were at high levels of economic development and had the necessary resources at their disposal to control and prevent environmental pollution that was mostly of their own making, should bear the responsibility to the damage that was already done. In view of pressing social and development needs, the developing countries felt that worrying about pollution was a luxury they could ill afford.

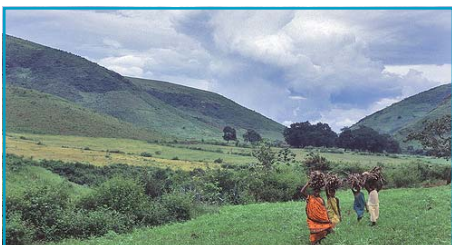


<sup>7</sup> Banislav Gosovic : the Quest For World Environmental Cooperation – The Case of the UN Global Environment Monitoring system, pp. 4-6, Routledge – London and New York.

## ***Protection and Conservation of Nature***



The challenge of many developing countries in the protection and conservation of nature, was not so much of preserving, protecting, and rehabilitating nature but the awareness of the vulnerability of their renewable natural resource base and of the need to exploit and manage it with care. Arguments put forth by some non-governmental groups and scientists from the North who called for strict conservation measures was regarded in the South as not being sensitive to their development objectives. Many in the developing world came to regard 'conservation' as 'anti-development'.



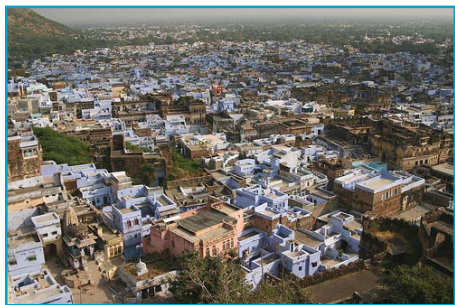
## ***Population Growth versus Natural Resources***

The environmental alarm of the late 1960s also extended to the exhaustion of some key natural resources. Some biologists and neo-Malthusian economists and demographers, in particular, were quick to point out the implications of rapid population growth and limited natural resources. Remedies were proposed for limiting both population growth and economic



growth by adopting the zero-growth or steady-state development model for national economies. Such ideas were not viewed favorably by the developing countries, especially as they came from the North which accounted for the lion's share of the global demand on renewable and non-renewable natural resource base, and whose affluence, consumption and life-styles were responsible for

squandering energy and natural resources. They were seen as conflicting with their development aspirations and aimed at perpetuating their status of dependence and economic underdevelopment.



#### **Policy Development: Landmarks**

##### ***United Nations Conference on Human Environment (UNCHE) - 1968***

When the preparatory process for the United Nations Conference on Human Environment (UNCHE) was launched in 1968, it was hardly surprising that the developing countries were not among its enthusiastic supporters or keenest participants. Emphasis of the North being placed on pollution and environmental assessment and, in general, on environmental issues, many in the South came to perceive the conference as an

event of the industrialized countries. In fact, public figures from some developing countries even began to express doubts of their government's participation.

##### ***Founex Conference, Switzerland, 1971***

In order to secure greater interest and participation by the developing countries, and in the light of what has been learned during the initial preparatory process, the Secretary General of the UNCHE Conference made a fresh attempt to define the conceptual framework. For this purpose he convened a panel of experts at Founex in Switzerland, to clarify and define the relationship between the environment and development. This was one of the milestones as the Environment became an issue on the international agenda.

It marked the beginning of a protracted effort to secure the interest and participation of the developing countries, to overcome the limitations of the initial North-South formulae, and to seek more universally appealing definition of the environmental "problematique"

linked to the principal concerns of development. The Founex report affected the orientation of the Conference and, initially, the direction and scope of international environment action in the post-Conference period.

The panel attempted to clarify the interest and concerns of the developing countries with regard to the environment. The experts considered that environment was not simply the biophysical sphere, it was also socio-economic structures; the two formed an interdependent and inextricable web. The debate on the environment was not concerned with pollution and conservation, nor was the danger to the environment attributable solely to the process of development. In many cases, the damage was due to the very same socio-economic forces and causes that were at the root of poverty, underdevelopment, and inequity, and could be overcome only through the process of development, economic growth, and social change.

Thus formulated, environmental issues became more appealing and interesting to the developing countries.<sup>8</sup>

***The UN Conference on Human Environment, Stockholm (UNCHE), 1972***

The UN Conference on Human Environment held at Stockholm in 1972 was a pioneering venture. The knowledge and application of environmental issues was still rudimentary. This was in contrast to other more traditional subjects dealt with by international conferences where, in devising their positions and strategies, governments could draw on their own practice, the existing domestic structures, well-defined interests, and an institutional memory. As a result, governments had to seek advice and guidance on how to approach this still uncharted terrain. They found it in the relatively narrow circle of those in the vanguard of environmental consciousness, namely, the scientists, academicians and a few non-governmental organizations

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<sup>8</sup> Ibid. 2, p. 108

(NGOs). A refreshing and unusual aspect of the Conference was the presence of enthusiastic and vocal non-governmental organizations and grassroots movements. This heterogeneous mix of delegates' backgrounds and profiles reflected the lack of an institutional niche for environment in the domestic set-up of most governments.

However, the conference yielded given formulations and decisions that have played an important role in shaping the perception of environmental issues and national and international responses in the period that followed.

One of the principal decisions of UNCHE, which assured continuity and gave a focus to global action, was its recommendation that the institutional machinery for environment be created. The Conference, however, only offered broad guidelines as to what this machinery should be like. Nor did it consider and decide on the work program of the new body. The Declaration and the Action Plan it elaborated were confined to

providing the overall framework and the recommendations addressed to the UN system as a whole and to its member organizations.<sup>9</sup>

The new machinery, created on the recommendation of UNCHE, was made into an organ of the General Assembly, with the title of United Nations Environment Program (UNEP) and its headquarters was located in a developing country, Nairobi.

### ***Program priorities of UNEP***

Four priority areas, favored by developing countries, accounted for 63 per cent of the apportioned funds.

Human settlements, human health, habitat, and well-being;

Land, water, and desertification;

Education, training, technical assistance, and information; and

Trade, economics, and transfer of technology.

<sup>9</sup> Ibid. 3, pp. 6-7



The program, namely, 'Earth-watch', favored by the developed countries, accounted for only 9 per cent of the total fund.

### *UNEP and its expectations*

Institutionally, there were primarily two expectations:

- That the UN organizations and the governments would accept the central coordinating role of UNEP in the environmental field, and that they would implement various elements of the global program elaborated and agreed to in UNEP and allocate the necessary resources for this purpose, and

- That UNEP would be capable of satisfactorily performing the tasks inherent in the very nature of the subject and the various roles envisaged for the organization, in particular that of global coordination and leadership.

In fact, it was expected that national institutions, and those working in them, would be responsive and adaptable to the thinking and requirements generated by the environmental issues and their multi-disciplinary, multi-sectoral, and often long-term implications.

### *Post Stockholm Conference*

Unfortunately, the period after the 1972 Stockholm Conference on Human Environment, witnessed an aggravation and multiplication of environmental problems, and a lack of appropriate responses on the part of most societies. Unavoidably all this was reflected in UNEP directly or indirectly. It hampered the anticipated progress in most domains. It contributed to UNEP being marginalized and to erosion of its institutional position.

***World Commission on Environment and Development (WCED), 1983***

During the 1980s, a new generation of international environmental worries— species loss, ozone depletion, global warming, deforestation, toxic wastes— had begun to capture not only scientific but popular attention. The world’s environmental resources were being rapidly squandered, often in the name of ‘development’, yet, at the same time, the poverty that development was supposed to correct was still widespread.

In 1983, the UN Secretary-General invited Prime Minister Gro Harlem Brundtland of Norway to chair the World Commission on Environment and Development (WCED) and explore these twin dimensions – environment and development-of global stress.

In 1987, the Commission published its report: “Our Common Future”. From this point on, environmental issues played a dominant role on the international agenda up to June

1992 and beyond until the UN Conference on Environment and Development which took place in Rio de Janeiro.<sup>10</sup>

The WCED Report “***Our Common Future***” stated that poverty in the developing world was both a cause and effect of current environmental degradation. The intensive kind of technological transfer that pauperized land, people and natural systems would lead to no common future at all. For the first time, a body commanding widespread respect convincingly argued that what passed for progress was not an inevitable fast-forward towards a more comfortable world, at least for the majority, but a reckless adventure full of global destruction. Only ‘sustainable’ forms of development could blend the fulfillment of human needs with the protection of soils, waters, air and all forms of life – from which, in the long-term, planetary stability was inevitable.

The report reiterated and elaborated the basic themes of interdependence, identity of

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<sup>10</sup> Ibid. 2, p. 109.

environment and development, and sustainable development. It represented a refreshing policy advance. What really mattered was the selling to the public and decision-makers of the concept of 'sustainable development', as a rallying cry and a useful motto for follow up action. The basic policy message of the report met with an increasingly responsive audience in all parts of the world, sensitized by the media, green political parties and NGOs. <sup>11</sup>

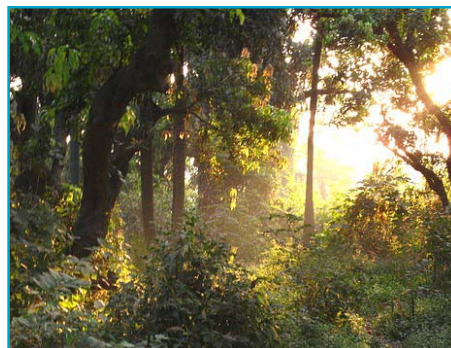
### ***The Earth Summit in Rio de Janeiro, 1992***

'The Earth Summit', convened by the UN in Rio de Janeiro in 1992 gave the Principles of Sustainable Development.

The 'Rio principles' give parameters for envisioning locally relevant and culturally appropriate sustainable development for nations, regions and communities. <sup>12</sup>

- People are entitled to a healthy and productive life in harmony with nature.

- Development today must not undermine the development and environment needs of present and future generations.



- Nations have the sovereign right to exploit their own resources, but without causing environmental damage beyond their borders.
- Nations shall develop international laws to provide compensation for damage the activities under their control cause to areas beyond their borders.
- Nations shall use the precautionary approach to protect the environment. Where there are threats of serious or inevitable damage, scientific uncertainty shall not be used to postpone cost-

<sup>11</sup> Ibid. 3, p. 31.

<sup>12</sup> Sanjay Prakash Sharma : Environmental Education, 2006, p. 55, Vista International Publishing House, Delhi – 110053 (India).

effective measures to prevent environmental degradation.

- In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process, and cannot be considered in isolation from it. Eradicating poverty and reducing disparities in living standards in different parts of the world are essential to achieve sustainable development and meet the needs of the majority of people.
- Nations shall cooperate to conserve, protect and restore the health and integrity of the Earth's ecosystem. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.
- Nations should reduce and eliminate unsustainable

patterns of production and consumption, and promote appropriate demographic policies.

- Environmental issues are best handled with the participation of all concerned citizens. Nations shall facilitate and encourage public awareness and participation by making environmental information widely available.
- Nations shall enact effective environmental laws, and develop national law regarding liability for the victims of pollution and other environmental damage. Where they have authority, nations shall assess the environmental impact of proposed activities that are likely to have a significant impact.
- Nations should cooperate to promote an open international economic system that will lead to economic growth and sustainable development in all countries. Environmental policies should not be used as an unjustifiable means of restricting international trade.

- The polluter should, in principle, bear the cost of pollution.
- Nations shall warn one another of natural disasters or activities that may have harmful trans-boundary impacts.
- Sustainable development requires better scientific understanding of the problems. Nations should share knowledge and innovative technologies to achieve the goal of sustainability.
- The full participation of women is essential to achieve sustainable development. The creativity, ideals and courage of youth, and the knowledge of indigenous people are needed too. Nations should recognize and support the identity, culture interests of indigenous people.
- Warfare is inevitably destructive of sustainable development, and Nations shall respect international laws protecting that environment in times of armed conflict, and shall cooperate in their further establishment.

- Peace, development and environmental protection are interdependent and indivisible.

***The United Nations Framework Convention on Climate Change - 1994***

The most important result of the Earth Summit was a treaty The United Nations Framework Convention on Climate Change (UNFCCC or FCCC). The treaty is aimed at reducing emissions of greenhouse gas in order to combat global warming.

The terms of the UNFCCC, having received over 50 countries' instruments of ratification, came into force on March 24, 1994. The Convention on Climate Change sets an overall framework for inter governmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention enjoys near universal membership, with 192 countries having ratified.

Under the Convention, governments gather and share information on greenhouse gas emissions, national policies and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; cooperate in preparing for adaptation to the impacts of climate change.

The ultimate decision-making body of the Convention is the Conference of the Parties (COP), which meets every year to review the implementation of the Convention.

From the mid 1990s, the Conferences of the Parties (COP) have been meeting annually to assess progress in dealing with climate change, and to negotiate the Kyoto Protocol to establish legally binding obligations for developed countries to reduce their greenhouse gas emissions.

Meetings of UNCFPP Conference of the Parties have taken place in Berlin (1995), Switzerland (1996) Kyoto (1997), Buenos Aires (1998), Bonn (1999), The Hague (2000),

Bonn-2 (2001), Marrakech (2002), New Delhi (2002), Milan (2003), Buenos Aires (2004), Montreal (2004) extending the life of the Kyoto Protocol beyond its 2012 expiration, UNFCCC (2005), Nairobi (2006), Bali (2007), and will take place in Poznan (2008), and in Copenhagen (2009).

### ***Kyoto Protocol, Japan, 1997***

Kyoto was one of the Conference of Parties (COP) which meets every year to monitor the implementation of the UNFCCC.

The adoption of the Kyoto Protocol in December 1997 was a major achievement to tackle the problem of global climate change.

The objective of Kyoto Protocol was to achieve stabilization of greenhouse gases (GHGs) concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

The UN Framework Convention on Climate Change agreed to a set of a "common but differentiated responsibilities."

In Kyoto, countries were separated into two general categories: developed countries which have accepted greenhouse gases emission reduction obligation and must submit an annual GHG inventory, and developing countries which have no greenhouse gases emission reduction obligation but may participate in the clean development mechanisms.

The largest share of historical and current global emissions of greenhouse gases has originated in developed countries. Per capita emissions in developing countries are still relatively low. The share of global emissions originating in developing countries will grow to meet their social and development needs.

In other words, China, India and other developing countries were not included in any numerical limitation of the Kyoto Protocol because they were not the main contributors to the greenhouse gas emissions during the industrialization period that is believed to be causing today's climate change.

However, even without the commitment to reduce according to Kyoto Protocol target, developing countries also share the responsibility that all countries have in reducing emissions.<sup>13</sup>

### ***After Kyoto***

The Kyoto protocol expires in 2012. An agreement on a time-lined negotiation on the post 2012 framework was one of the main subjects of the Bali meeting (2007). The negotiation should take place during the COPs of 2008-2009.

### ***World Summit on Sustainable Development, Johannesburg, South Africa, 2002***

The World Summit, 2002 on Sustainable Development, brought together tens of thousands of participants to focus the world's attention and direct action toward meeting difficult challenges, including improving people's lives and conserving our natural resources in a world that is growing in population, with ever increasing demands for food, water, shelter,

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<sup>13</sup> Kyoto Protocol – Wikipedia, The Free Encyclopedia.

sanitation, energy, health services and economic security.

The Summit focused on accomplishments and areas where further action are needed to implement Agenda 21 and the other agreements reached by UN Commission on Environment and Development (UNCED), and to address the Framework of Agenda 21, new challenges and opportunities that have emerged since UNCED. Furthermore, the World Summit aimed at ensuring balance between economic development, social development, and environment protection as components of sustainable development.

The Summit stressed the indivisibility of human dignity, the importance of acting together, united by a common determination to save our planet, and the promotion of human development and universal prosperity and peace.

The Summit recognized that the implementation of the 'Plan of Action' for sustainable development should:

- Benefit all, particularly women, youth children and vulnerable groups.
- Involve all relevant actors through partnerships.
- Promote good governance within each country and at the international level.
- Promote sound environmental, social and economic policies at the domestic level, and democratic institutions responsive to the needs of the people.
- Promote peace, security, stability and respect for human rights and fundamental freedoms, including the right to development, as well as respect for cultural diversity.
- Recognize the importance of ethics for sustainable development.

Actions at all levels, proposed by the Summit, for provision of clean drinking water and adequate sanitation were:

- Develop and implement efficient household sanitation systems,

- Improve sanitation in public institutions, specially schools, Promote safe hygienic practices,
- Promote education and outreach focused on children, as agents of behavioural change, and
- Integrate into water resource, management strategies. <sup>14</sup>

World Summit on Sustainable Development highlighted the crucial role of the private sector and public-private partnerships in addressing the key environmental challenges. Successful partnerships have been developed. For example: Programmes to promote the protection of watershed and marine eco-systems, to raise awareness and catalyzing action for the protection of the great apes, to help key interventions for developing countries in the field of health and environment, to develop responses to major environmental threats to children's health. <sup>15</sup>

**Efforts to build up and disseminate greater knowledge about man-made climate change.**

***Intergovernmental Panel on Climate Change (IPCC)***

The World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) together formed the IPCC in 1988. The WMO and UNEP recognized that there was a need to help people understand how the Earth's climate system works so that people could make informed decisions about how they would live on the planet. Since our understanding of the Earth's climate is growing broader each year, there is an ongoing need to keep people informed about the current state of knowledge about the Earth's climate. IPCC helps to build and disseminate greater knowledge about man-made climate change.

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<sup>14</sup> Resolutions adopted by the Summit, UN Report of the World Summit on Sustainable, Development, Johannesburg, South Africa, 26<sup>th</sup> August to 4<sup>th</sup> September, 2002.

<sup>15</sup> Government Council of the UN Environment Forum, UNEP Director General, 24th March, 2004.

The IPCC is a group of hundreds of experts from more than 100 countries. The IPCC does not do research about climate change. Instead, the group produces reports that explain what we know about climate change. These reports are based on all the books and articles that describe the science of our planet and climate and as such they are like the world's most extensive book reports.

Government officials in countries around the world use the reports of the IPCC as they make decisions about how their countries will tackle problems like greenhouse gas emissions and climate change.

### ***The 4<sup>th</sup> report of IPCC on Climate Change***

According to Climate Change 2007, the fourth report from the Intergovernmental Panel on Climate Change (IPCC), there is about a 9 out of 10 chance that the earth climate is warming and that it is almost certain that human activities are causing our planet to warm.

The human activities that are causing global warming include burning fossil fuels, changes in land use, and agriculture. Burning fossil fuels like oil, gas, and coal is releasing greenhouse gases into the atmosphere. Land use changes are decreasing the amount of plants that take greenhouse gases out of the atmosphere. And agriculture is releasing greenhouse gases like methane and nitrous oxide.

This is causing air and oceans to warm, snow and ice in earth's polar regions to melt, sea level to rise because of warmer oceans and the added water from melting glaciers and snow. Many effects of global warming have been seen over the past few decades. Arctic temperatures have risen at twice the rate of the global average in the past century. The amount of precipitation in different regions of the world has changed, and so have aspects of extreme weather events such as droughts, heat waves, and the intensity of hurricanes and typhoons.

According to computer models, whose results were summarized in

the IPCC report, more global warming is in our future. For the next two decades global warming of about 0.2° Celsius is projected. If we continue to emit as many, or more, greenhouse gases, this will cause more warming during the 21st century than we saw in the 20th century. During the 20th century, Earth's average temperature rose 0.6° Celsius. During the 21st century, various computer models predict that Earth's average temperature will rise between 1.8 and 4.0° Celsius.

In October 2007 the IPCC headed by an eminent Indian environmentalist R.K. Pachauri was awarded the Nobel Peace Prize jointly with Former US Vice President Al Gore for their efforts to build up and share knowledge about climate change. <sup>16</sup>

### ***UNEPs Global Environmental Outlook (GEO)***

The Global Environment Outlook (GEO) project is the implementation of UNEP's mandate to keep the global environment

under review. GEO is both a process and a series of reports, analyzing environmental change, causes, impacts, and policy responses. It provides information for decision-making, supports early warning and builds capacity at the global and sub-global levels. GEO is also a communication process that aims at raising awareness on environmental issues and providing options for action.

### ***The fourth report in the Global Environment Outlook (GEO-4)***

GEO-4, is the latest in the assessment series of flagship reports from the Nairobi-based United Nations Environment Programme, launched on 25 October 2007. GEO-4 published 20 years after the World Commission on Environment and Development (the Brundtland Commission) produced its seminal report 'Our Common Future', describes the changes since 1987, assesses the current state of global atmosphere, land, water and biodiversity, and identifies priorities for action. It provides a comprehensive and

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<sup>16</sup> Deccan Chronicle, 13 October, 2007, p. 2

authoritative overview of the state of the environment. GEO-4 addresses the key challenges facing our planet, highlights emerging environmental issues that require policy attention and makes recommendations for decision-makers to act on.

GEO-4 issues the following warning to the humankind:

- Major threats to the planet such as climate change, the risk of extinction of species, and the challenge of feeding a growing population are among the many that remain unresolved, and all of them put humanity at risk.
- We are living far beyond our means. The human population is now so large that “the amount of resources needed to sustain it exceeds what is available.....humanity’s footprint {its environmental demand) is 21.9 hectares per person while the earth’s biological capacity is, on

average, only 15.7 hectares per person.

- The escalating burden of water demand will become intolerable in water scarce-countries.
- Water quality is declining too, polluted by microbial pathogens and excessive nutrients. Globally, contaminated water remains the greatest single cause of human disease and death.<sup>17</sup>

GEO-4 states ecosystems and human health in Asia continue to deteriorate, while Population growth and rapid economic development have driven significant environmental degradation and loss of natural resources.

The only way to address these harder-to-manage problems requires moving the environment from the periphery to the core of decision-making: environment for development, not development to the detriment of environment.

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<sup>17</sup> UNEP Global Press Release, Nairobi/New York, 25<sup>th</sup> October, 2007.

# CHAPTER 2

## ENVIRONMENT POLICY DEVELOPMENT IN INDIA



*"This universe is the creation of the Supreme Power meant for the benefit to all His creations. Individual species must therefore learn to enjoy its benefits by forming a part of the system in close relation with other species. Let not anyone species encroach upon the other's rights".*

Isho-Upanishad<sup>18</sup>

The level of a country's economic development, the availability of natural resources and the life style of its population, are closely related to the level of the environmental health of a country.

### **Ancient India: Respect for the Environment**

India is a country where, from ancient times all the components of the environment have been considered as life support systems. Air, water, land, vegetation, soil, rivers, mountains, trees, animals, etc., have all been sacred in one form or another, and their

protection has been of paramount importance. There has also been a



<sup>18</sup> B.P. Pal : Environmental Conservation and Development, p. 18

remarkable continuity in the approach to balanced consumption and conservation of natural resources, including forests and wild life. It is noteworthy that there was such awareness of the interdependence of all living things, at a time in human history when plant and animal resources were unlimited.

Unfortunately, over a period of time, proximity to nature and an appreciation of the necessity to maintain the ecological processes, life-support systems, the great range of genetic diversity which nature has bestowed us with, and, to only undertake development that is sustainable, have all diminished. The rapid modernization of the world, based on scientific discovery, and the rapid development of technology, have contributed to the degradation of the environment.



## **Present Day India: Degradation of the Environment**

Rapid growth of population, poverty, urbanization, industrialization and several related factors are responsible for the rapid devastation of the environment in India. Environmental problems have become serious in many parts of the country, and can no longer be neglected. The main environmental problems relate to air and water pollution, particularly in the metropolitan and industrial zones, resulting in the degradation of common property resources which affect the poor adversely, due to a degeneration of their life support system, threat to bio-diversity, and inadequate systems of solid waste disposal and sanitation, with consequent adverse impact on health, infant mortality and birth rate.



With the growth of environmental problems, a strong need has been felt to develop an Environmental planning strategy. Several efforts have been made, both by the government and the NGOs, for the protection of the environment and pollution control.

## **Environmental Laws**

### ***Pre-Independent India***



Before independence, laws had been enacted for the protection of the environment: In the Indian Penal Code of 1860, Articles 268, 290, 291, 426, 430, 431 and 432 are related to the environment; Article 277 is related to water pollution and 278 to air pollution; Indian Forest Act was passed in 1927; and in the Motor Vehicle Act, 1938, there was a provision to control pollution.

### ***Post-Independent India***

After independence, serious efforts have been made for the conservation and protection of the environment and laws have been passed: Damodar Valley Corporation (Prevention of Pollution of Water) Regulation Act, 1948; River Board Act, 1956; Radiation Protection Rules 1971; Atomic Energy Act, 1972; Wild Life Protection Act, 1972; Water Preservation and Control of Pollution Act, 1974 and 1977; Environmental Protection Act, 1986; Factories Amendment Act, 1987; Central Motor Vehicles Act, 1989; Public Liability Insurance Act, 1991.

### ***The National Committee on Environment Planning and Coordination (NCEPC)***

NCEPC was set up in 1972. Its objective was to provide a focal point in the structure of the Government where environmental considerations could receive close attention in an integrated manner. The committee consisted of ecologists and experts from different areas of specialization,

senior officials of government agencies connected with environmental issues, and the representatives of citizen groups and voluntary agencies. Its task consisted of reviewing, formulating and presenting policies and programs covering development projects, physical planning, legislation, administrative procedures, education and research.

- The NCEPC was serviced by the Department of Science and Technology of the Government of India and the Secretary of the Department is a member.
- Over the years, NCEPC has been involved in a number of activities that have led to several important policy decisions, laying down standards and guidelines to safeguard the environmental quality.



- The NCEPC has drafted a National Environment Policy Statement for the consideration of government.

### ***42<sup>nd</sup> Amendment to the Indian Constitution***

In 1977, a major step, taken for environmental protection and careful use of natural resources, was in the form of 42<sup>nd</sup> Amendment to the Constitution.

- Article 48 (A) imposes a duty on the State and declares that “the State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.”
- Article 51 (A) (g) imposes a duty on the citizens “to protect and improve the natural environment including forests and wildlife and to have compassion for living creatures.”

The country, therefore, has a firm bedrock on which to plan its policies, its laws and regulations to deal with the vast and very complex problem of environment.<sup>19</sup>

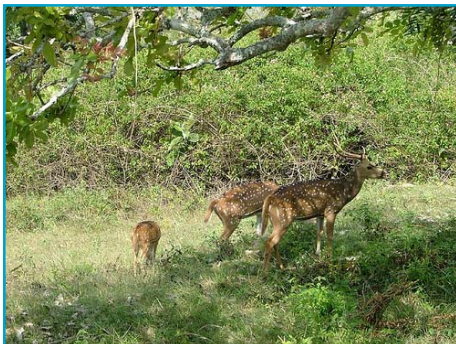
<sup>19</sup> H. M. Saxena : Environmental Management, chap. 14, pp. 281-304.

## **The Ministry of Environment and Forest**

The establishment of the Ministry of Environment and Forest in November 1980 was another step towards environment protection and for policy making and planning.

The national policies for environmental management were contained in The National Forest Policy, 1988, The National Conservation strategy and Policy Statement on Environment and Development, 1992, and Policy Statement on Abatement of Pollution, 1992. Some sector policies such as National Agriculture Policy, 2000, National Population Policy, 2000, and National Water Policy 2002 have also contributed towards environmental management.

All these policies have recognized the need for sustainable



development in their specific contexts and formulated necessary strategies to give effect to such recognition.

## **National Environment Policy (NEP), 2006**

Across the political spectrum of the country there has been recognition of the vital role natural resources play in providing livelihoods, and securing life support ecological services. With this perspective, The Union Cabinet of India approved a comprehensive policy statement on 18<sup>th</sup> May, 2006 in order to infuse a common approach to the various sectoral and cross-sectoral approaches of environmental management.

The National Environment Policy extends the coverage and fills in the gaps in the light of present knowledge and accumulated experience. It has not displaced earlier policies, but has built on them.

Sustainable development concerns in the sense of enhancement of human well-being, are a recurring theme of India's development

philosophy expressed in the following statements:

- Human being should be able to enjoy a decent quality of life;
- Humanity should become capable of respecting the finiteness of the bio-sphere;
- Neither the aspiration for the good life, nor the recognition of biophysical limits should preclude the search for greater justice in the world.



To realize the above, there is a need for balance and harmony between economic, social and environmental needs of the country. The NEP is a response to India's commitment to a clean environment. The National Environment Policy is a statement of India's commitment to make a positive contribution to internal efforts.

The dominant theme of National Environment Policy is that while conservation of environmental resources is necessary to serve livelihoods and well-being of all, the most secure basis for conservation is to ensure that people dependent on particular resources obtain better livelihoods from the fact of conservation, than from degradation of the resource.

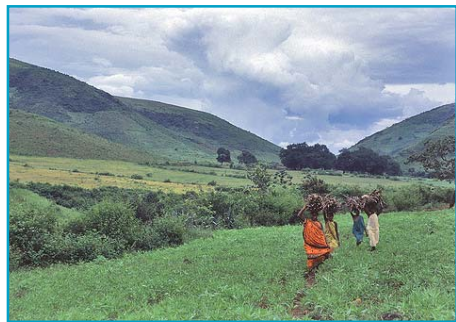
The NEP also seeks to stimulate partnerships of different stakeholders, i.e. public agencies, local communities, academic and scientific institutions, the investment community and international development partners, in harnessing their respective resources, strengths for environmental management.<sup>20</sup>



<sup>20</sup> National Environmental Policy, 2006 : As approved by Cabinet, 18 May, 2006.

### *General Principles of NEP:* <sup>21</sup>

- Adopt and aim to apply the principles of 'sustainable development' that meets the needs of the present without compromising the abilities of the future generations to meet their own needs.
- Strive to adapt the highest available environmental standards in all the programs and meet or exceed all applicable regulations.
- Adopt a total "cradle-to-grave" environmental assessment and accept responsibility for all programs / services.
- Aim to minimize the use of materials, and whenever possible, use renewable and recyclable materials and components.
- Minimize waste produced through any of the processes that are part and parcel of any program and, where waste is produced, avoid the use of



terminal waste treatment, dealing with it, as far as possible, at source.

- Render any unavoidable wastes harmless and dispose of them in a way that has least impact on the environment.
- Be committed to improving relations with the local community and the public at large and where necessary introduce education and liaison programs.

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<sup>21</sup> Environment and Water Resource Management, chapter 4 : The Principles and Tools of Environmental Management, pp. 41-43, Adhyayan Publisher & Distributors, Delhi.

- Adopt environmentally sound transport strategy.
- Assess, on a continuous basis, the environmental impact of all the operations / processes connected with the programs.
- Assist in developing solutions to environmental problems and support the development of external environmental initiatives.
- Protect nature and ecological habitats and create conservation schemes.
- Accept strict liability for environmental damage.



# CHAPTER 3

## ENVIRONMENT PROTECTION



*"The future will be largely determined by the decisions individuals and society make now. "Our common future" depends on our actions today, not tomorrow or some time in the future." For some of the world's persistent problems the damage may already be irreversible. The only way to address the underlying causes of environmental pressures and these harder-to-manage problems, requires moving the environment from the periphery to the core of decision-making: environment for development, not development to the detriment of environment."*

**GEO-4, Media Brief, Nairobi, 25 October, 2007**

### **Voluntary Organizations**

The presence of voluntary organizations is worldwide. They are involved in various sectors of social development, major sectors being Human Resource Development (HRD), Poverty Eradication, Health Care, Environmental Protection, and Human Rights with special focus on women and child.

Non-Governmental Organizations (NGOs) play a vital role in societal developmental initiatives and help benefits of development to reach the most bottom levels. It has now been acknowledged that the voluntary sector is better placed to articulate the needs of the poor people, and also to identify and redress threats to the environment.<sup>22</sup>

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<sup>22</sup> Buckley, Robert, Thematic Evaluations and Institutional Development, 1999, WBOED, Annual Development Review of Development Effectiveness, The World Bank, Washington, D. C, cited in Riley, John M. 2002. Stakeholders in Rural Development – Critical Collaboration in State-NGO Relationship. Sage Publications, New Delhi.

A striking upsurge is under way around the globe in organizing voluntary activity and the creation of private, nonprofit or non-governmental organizations. People are forming associations, foundations and similar institutions to deliver human services, promote grass-root economic development, prevent environmental degradation, protect civil rights and pursue a thousand other objectives formerly unattended or left by the state. The scope and scale of this phenomenon is immense.

It has been now recognized that the voluntary sector may be in a better position to provide services and development in remote areas, to encourage the changes in attitudes and practices necessary to curtail discrimination, to identify and redress threats to the environment, and to nurture the productive capacity of the most vulnerable groups such as the disabled or the landless populations.

Even the World Bank, which had traditionally given only sporadic support to private voluntary organizations, has acknowledged the “explosive emergence of nongovernmental organizations as a major collective actor in development activities” and formed a voluntary-organization advisory committee with extensive Third World involvement.

### **Environmental NGOs in the world**

NGOs focusing their activities on environmental issues are generally called environmental NGOs. According to Jaix (1992)<sup>23</sup> NGOs



<sup>23</sup> Jaix, Randhir B., Public Agencies in local Administration in India, in Comparative Studies of Public Administrations; the Role of Residents Non Governmental Organizations and Quasi – Public Agencies, 1992, pp. 88-113. Tokyo: Eropal Government Centre cited in Riley, John M. 2002. Stakeholders in Rural Development – Critical Collaboration in State NGO Relationship. Sage Publications, New Delhi.

have a more accurate and practical knowledge of local environmental problems than would be possible for government organizations to attain. This helps them to formulate better solutions to the problems than government authorities.

Robert Buckley (1999)<sup>24</sup> states that NGOs provide a closer link to the poor than public sector Institutions. Tsukasa has reported that in a study it has been estimated that by early 1980s there were about 13,000 environmental NGOs in industrialized countries, while the number of environmental NGOs operating in developing countries was estimated at around 2,230. The number of environmental NGOs in developing countries continues to increase. It has been reported that Asian countries may have the largest number in the developing countries with Philippines topping the list in Asia.

## **Environmental NGOs in India**

While the International and National voluntary organizations have played a pro-active role in the cause of the environment and protection of the bio-diversity, in India, the voluntary sector has played a leading role in making the Environment a national issue by:

- Creating awareness, educating and sensitizing people about environmental problems, bio-diversity, protection against pollution from various sources like industries, vehicles, etc.; protecting wildlife, parks and sanctuaries from encroachment by industries, mining, and tourist resorts; and protesting against forces leading to deforestation.
- Carrying out research in environmental education be it in the academic sphere or on policy interventions.
- Being involved in legal intervention: Due to pressure from the environmental lobby,

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<sup>24</sup> Buckley, Robert, 1999 'Thematic Evaluations and Institutional Development', WBOED, Annual Development Review of Development Effectiveness, The World Bank, Washington D. C.

Green Benches have been formed in court and the number of public interest litigations on the issue of environment is on the increase.

- Bringing to the notice of the public several environmental issues such as :
  - Campaigning for the preservation of wildlife sanctuaries, bio-diversity and schemes of joint-management of parks and sanctuaries.
  - Emphasizing the need for an alliance between local communities, voluntary organizations, concerned individuals and government agencies that can save natural habitats and wildlife from the clutches of destructive forces.

- Taking up issues like pollution, ozone depletion, and green house gases, and occupational health, especially of the workers employed in hazardous industries.
- Forming forest protection committees in forest areas

Due to the pressure exerted by voluntary organizations working on environmental issues, a number of government policies have been shaped accordingly: Environmental Protection Act, and the changes in Wildlife Protection Act, to mention just a few. In fact, the whole Environment Policy of India mostly has been shaped by the proactive work being done by voluntary organizations.<sup>25</sup>



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<sup>25</sup> Cited in Riley, John M. 2002. 'Stakeholders in Rural Development – Critical Collaboration in State NGO Relationships'. Sage Publications, New Delhi.

# CHAPTER 4

## BALA VIKASA ENVIRONMENT POLICY: A CROSS-CUTTING THEME



*"Environment and development are not separate challenges; they are inexorably linked. Development cannot subsist upon a deteriorating environmental resource base; the environment cannot be protected when growth leaves out of account the costs of environmental destruction. These problems cannot be treated separately by fragmented institutions and policies. They are linked in a complex system of cause and effect."*

**Our common Future, chapter 1, para 40  
Report of the Brundtland Commission  
World Commission on Environment and Development, 1983**

### **Environment Policy for Action**

Bala Vikasa is a Non-Government Organization. Although it cannot be called an Environmental NGO, as an organization dealing solely with the environmental issues, it is an organization that works across development sectors. In all its sectoral programs and projects, Bala Vikasa integrates the five cross-cutting themes of Sustainable Development, namely,

Political, Economic, Social, Cultural, and Environment.

As a Social Service Society, Bala Vikasa has over the years been in the vanguard of Environment Management and Sustainable Development. It formulated its Environment Policy in the year 2006. All its development initiatives have been directed towards protecting the environment, ensuring conservation of biological

diversity, helping search for alternative forms of livelihoods and development, assisting local people to empower themselves in the management of their natural resources, and build a strong bond with nature.<sup>26</sup>

In its people centered developmental approach, Bala Vikasa has spearheaded the environment dimension of development through people's participation, thereby ensuring that its Environment Policy is put into action and is well entrenched at every stage of the development process— planning, implementation, monitoring and evaluation. As a result, it has helped change at the grassroots, people's attitudes towards the environment and has enabled communities realize their potential through its own interventions and guidance.

Overall, active implementation of Bala Vikasa Environment Policy has contributed to communities accepting a greater responsibility towards the environment.

## **Agent of Change: strategies for sustainable development**

As an Agent of Change, Bala Vikasa has enhanced the quality of the environment and ensured sustainability through its effective strategies:

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Incorporating the concept of environmental management and sustainable development in all its programs;

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Assessing the environmental impacts of all its programs and proposing mitigation measures to reduce the adverse environmental impacts, if any;

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Ensuring environmental awareness and consciousness through workshops, seminars, campaigns, etc;

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Creating awareness among the people at large, policy makers and stakeholders, on the judicious use of resources;

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Communicating the ill effects of population growth and its impact on the environment;

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<sup>26</sup> Vikasa Tharangani, February, 2007.

Implementing activities which create livelihood security, improve socio-economic conditions to reduce poverty, etc., without compromising on the sustainability of the Environment;

Applying principles of sustainable development in activities like land development, desiltation of lakes, water supply, sanitation, housing projects, etc., in compliance with National Environmental Policy;

Conserving the environment through traditional management knowledge and skills and enhancing it through new technologies.

## **BV's On-going Programs and Projects: Practical application of the Environment Policy**

### ***Water Supply Projects***

BV promotes various water supply schemes to the communities where either supply or quality of water is a problem.

#### ***Bore wells***

Several bore wells are installed

under this scheme after giving due consideration to the environmental guidelines in locating the sources. Care is taken to locate them away from drainage lines, septic tanks, etc., and the distance criteria, with respect to existing ground water sources as per the Andhra Pradesh State Groundwater Act, is strictly followed. The important guidelines adopted, as on date, are based on the AP State Groundwater Act No. 10 of 2002.

- No person/subject shall sink any well in the vicinity of a public drinking water source within a distance of two hundred and fifty meters (Andhra Pradesh Water, Land and Trees Act, 2002), to have the supply of requisite quantity of water for drinking purposes from the public drinking water source.
- Ground water resources to be improved by harvesting and recharge, following the guidelines for constructing appropriate rainwater-harvesting structures in all residential, commercial and other premises and open spaces

having an area of not less than 200 square meters.

- Bore wells with hand pumps to be provided with suitable platforms to drain the spills and wastes to avoid stagnation of water leading to breeding of mosquitoes and flies. Spills should be harvested and recharged.
- The drinking water sources to be located at least 20mts. away from the existing septic tank systems in use.



### *Over Head Tanks (OHTs)*

BV constructs Over Head Tanks (OHTs) to supply water through public taps to the communities. It complies with water supply guidelines in operation:



- The OHTs are designed for supplying the required water as stipulated by the Water Supply Guidelines and the pipelines are designed and located as per the specifications. The OHTs are constructed as per the building code.
- The minimum residual pressure is provided as per the water supply requirements of the consumer, in the drinking water schemes.
- The elevation of the OHT is planned in such a way as to maintain residual pressure in the distribution system.
- Capacity of OHTs is based on supply conditions for rural areas.
- In areas where fluoride is a problem, defluoridation plants with Reverse Osmosis technology are installed to provide safe water to the community. Since

excess fluoride can lead to dental and bone fluorosis, treated water which meets the drinking water standards (fluoride – 0.5 – 1.0 mg/l) is supplied to the rural communities in particular where they have no other alternative in resolving the problem.

- To mitigate the impacts of the disposal of wastewater from the RO systems, suitable options like evaporation ponds and solar evaporation ponds are being worked out. The ease of maintenance and cost of the options are being worked out for implementation.
- Rainwater harvesting to conserve water in villages and recharge the groundwater are emphasized in the rural areas in the watershed awareness programs for the farmers in particular. Also, the importance



of check dams and farm ponds for replenishing the groundwater table are explained to the farmers so that they can take up such activities through the various watershed programs for the villages.

### ***Sanitation Programs***

Improper sanitation is a major problem in rural areas, affecting the health of rural communities. Proper sanitation helps improve the health status of the people. It also prevents the spread of diseases and protects the groundwater from the risk of contamination, and consequently, reduces the risk of epidemics like cholera, jaundice, dysentery, etc. It controls rodents, mosquitoes, etc., and the problems associated with them. Sanitation not only improves the living conditions of the people, but also the aesthetics of the place, and in turn, the overall socio-economic development of the community.

BV is instrumental in providing good sanitation facilities in a few communities. The guidelines BV sanitation programs follow are in accordance with the Act:

- Toilets are connected to septic tanks designed as per the Code which insists that the location of septic tanks should be at least 20m away from drinking water source.
- Secondary effluents from septic tanks are properly disposed when the groundwater table is shallow. (i) When the groundwater is about 8ft and above, a cess pool is provided and (ii) when groundwater table is about 5 ft deep, dispersion trench is adopted.
- Wastewater from bathrooms and kitchen, and storm water are provided with suitable drains so that wastewater pools are not created within the community.
- Water supply to these communities is ensured so that the sanitation facilities provided do not fail due to non availability of water.

### *Housing*

Housing projects, taken up by Bala Vikasa, conform to the building regulations and sanitation requirements as stipulated by the Govt. of India. In terms of environment and its protection, the location of septic tanks and disposal of septic tank effluents comply with the regulations in operation. Proper care is taken to locate the septic tanks and its disposal facilities away from the existing groundwater sources. Appropriate designs are adopted for disposal of effluents in areas where groundwater table is shallow. Drainage is given due consideration to avoid the risk of groundwater contamination and reduce the risk





of disease, thereby enhancing the health status of the community.

Bala Vikasa undertook a Housing Project for the construction of 886 houses for the Tsunami affected families in 7 villages in the coastal districts of Krishna, Guntur and Prakasham in collaboration with 3 Partner NGOs. This Project, being implemented in the coastal districts, had to deal with certain environmental and health challenges posed by water logging, caused sometimes by floods, cyclones and by excessive rains. The people living in low-lying areas being exposed to many health risks, Bala Vikasa, with the assistance of a professional environmental engineer, looked into various technologies suitable to meet these challenges. Two different but appropriate technologies have been used in the construction of sanitation facilities

for the coastal area houses.

- 419 houses have been constructed 3' 9" above the ground level.
- 'Cesspool Technology' has been adopted for the construction of septic tanks for each of the 636 houses. The septic tank is built 2' 6" below ground and reaches up to 3' above the ground. Cement mortar is filled up to 6" in the septic tank below, to prevent water from rising up.
- 'Dispersion Trench Technology' has been adopted for 250 houses. Two feet parallel water pipes have been arranged below the ground level so that the filtered sewage water gets dispersed under the ground, making it possible for families to have kitchen gardens for vegetables that have small roots.



By adapting these new technologies in the Housing Projects, Bala Vikasa has enabled to mitigate, to a great extent, the environmental degradation along the coast and health hazards of coastal dwellers.

### ***Desiltation of tanks***

The process of removing silt from the tank bed and channeling it is known as desiltation of tanks. It is also a part of the tank rehabilitation/restoration effort, which impacts environment in several positive ways. Bala Vikasa has, between 2001 and 2007, desilted 245 tanks, removing

approximately 22081905 cubic meters of silt, benefiting 2,30,000 people. This project has impacted environment in several positive ways:

- Increased the water storage capacity by 10-30 percent. and subsequently, the productivity of the area.
- Improved the fertility of the soil and increasing crop production by 20 – 30 per cent by applying silt, rich in nutrients, in the agricultural fields.
- Improved the moisture-holding capacity of the soil through the application of silt in the fields,



thereby reducing water consumption by 15 – 20 per cent

- Reduced the use of chemical fertilizers by 50 – 60 per cent
- Hastened water percolation and recharging ground water, thereby increasing water level in the open wells and bore wells in the radius of 2 kilo meters, by 20 - 30 per cent.
- Increased the level in the ground water table thus improving the quality of water and reducing the fluoride content.
- Increased water facilities improved the green coverage in the villages.
  - Clean and sufficient water in the villages contributed towards hygienic environment and improved health of the people.
  - Desiltation activity taken up during the lean period also provided employment to the rural community and thus it avoided migration of the rural poor to the urban areas, thereby reducing pressure on resources in the urban areas.

- Rehabilitation of tanks helped repair of sluices, tank management for efficient and equitable distribution of water, all of which catered to environmental improvement.
- Controlling deposits of silt through land development activities like contour bunds, rock fill dams, no tillage planting, contour ploughing, etc, all a part of watershed activities, prevented silt reaching the tanks

### ***Green Cover: Afforestation program***

Deforestation, which adversely impacts the environment, is a common phenomenon in spite of the efforts to control the loss of forests by various developmental activities. To compensate the loss of forests, programs are initiated to increase the forest cover by planting more trees.

Bala Vikasa takes up tree planting program, in the focus villages during the months of August and September, as part of its afforestation program to mitigate the adverse environmental

impacts of deforestation. It mobilizes the participation and contribution of the beneficiaries. BV has planted a million saplings thus far, of locally available varieties like mosambi, coconut, guava, pomegranate, vusiri, curry leaves, teak, shady plants, etc., all of which are environment-friendly. With the aim of increasing green cover, BV secures from the



government forest department, an additional 1000 saplings for each of the program villages, during Vana Mahotsavam every year.

Through its tree-planting program, Bala Vikasa has brought the people together, fostering unity among them.

Bala Vikasa afforestation activities follow the government guidelines:

- Trees are planted along the road margins, canal banks, tank-foreshores and water bodies.
- Social forestry schemes are implemented to develop plantations in the rural sector.
- All agricultural land owners, except small and marginal farmers and wetland owners are motivated to plant trees up to 5% of their total land holding.
- Permission for felling trees is granted only when the landowner plants trees in equal extent of land.
- Subsidized seedlings are distributed in rural areas to

promote plantations and thus develop greenery.

- Exotic species of plantations as promoted by the local government authorities are distributed.

***Community Development Projects: Health, Education, Child Care, Employment Generation, Farmer Cooperatives, etc.***

Healthy community always promotes healthy environment, and healthy environment is an indicator of healthy economy. Through its various programs on health and education, childcare, employment generation, farmer cooperatives, etc., Bala Vikasa contributes its efforts towards healthy environment. Better environment results in the development of the nation, the overall goal of the National Environment Policy. Bala Vikasa's programs aim at poverty alleviation which, in turn, improves the living standards of the people and lessens stress on the environment. Creating awareness and knowledge is also a distinctive aspect of BV's Environment policy.

Through its community development projects, Bala Vikasa has achieved the goals set by the National Environmental Policy:



- Health and education programs have helped better health, reduced poverty, and improved literacy rate.
- Childcare programs have focused on preventing malnutrition in children and enhanced welfare especially in the infant stages.
- Poverty reduction through employment generation has led to better living conditions.
- Farmer cooperative societies have concentrated not only on financial aspects of produce and marketing but also on bio-farming concepts.
- Reduction in the use of fertilizers, pesticides and insecticides, the main source of the pollution, has decreased pollution of ground water and surface water and the optional utilization of fertilizers, pesticides and insecticides has improved water quality.

### ***Capacity Building***

Creating awareness among the general public, specifically among sections of the youth, adolescents,



urban dwellers, industrial and construction workers, municipal and other public employees, on the consequences of environmental degradation, is crucial to Environment protection and conservation and it is a main feature of the National Environment Policy. Awareness involves not only internalization of environmentally responsible behavior, but also enhanced understanding of the impacts of irresponsible actions, including public health, living conditions, sanitation, and livelihood prospects. Bala Vikasa, through its People Development Training Center (PDTTC), organizes capacity building programs seminars, workshops, etc., both for NGOs and the public specifically aimed at creating greater public awareness and developing environmental consciousness. The aim is to enhance people's

participation in formulating future Environment Policies of the government towards improving the environmental conditions.

**Bala Vikasa's awareness programs have helped in:**

- Proper management of water by making people understand the significance of using water sparingly avoiding water wastage, and keeping the taps closed after collection of water.
- Proper canalization of waste water after domestic use for growing kitchen gardens and fruit trees.

As a result, people in the program villages not only enjoy clean and safe drinking water but also appreciate its preciousness by adapting environment-friendly and health promoting ways of managing water.



**Bala Vikasa Strategy and Future Action/Plan**

Bala Vikasa development interventions, as illustrated through its programs and projects, clearly reflect how the organization has integrated the Environment as a cross-cutting theme in its environmental initiatives. It also reveals the results of its Environment Policy in improving the environment.

Scientific understanding of environmental matters is advancing rapidly. In the technological world of today, the environmental issues that are significant now, may change over time, and new priorities may arise. Globally as well as nationally, changes in economic structure, technologies, resource availability, etc., are likely to occur, as a result of the evolution of global environmental regimes, and norms, arising from knowledge.

Bala Vikasa wishes to move with the times and hence desires to review its Environment Policy at regular intervals and make suitable modifications wherever necessary.

It fully realizes that a policy can achieve results only if meticulously planned and effectively implemented. Therefore, to further enhance its Environment initiatives, Bala Vikasa will in the future focus on:

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### **Ecosystem's carrying capacity and sustainable yield:**

Efforts will be directed towards evaluating the carrying capacity of the ecosystem and the concept of sustainable yield will be promoted, so that the stability and assimilative capacity of the ecosystem are not disturbed.

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### **Resource management –**

Programs promoting economic improvement need to consider environmental values and accordingly the resource utilization will be planned so that exploitation of resources is controlled. Approaches such as 'natural resource accounting' will be developed.

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### **Integrated approach -**

Poverty, population dynamics, natural resource consumption and environmental degradation are related in several complex ways that are not directly visible. Programs and projects that make use of these three concepts – that can meet a range of environmental objectives in development – will be given high priority.

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### **Conservation of resources –**

Programs to prevent wasteful use of resources in different sectors need to be emphasized. Conservation of resources, just as implemented in watershed programs like water, soil and vegetation conservation will be stressed.

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### **Human resources –**

Bala Vikasa will use existing environmental expertise and actively support the development of additional environmental and sectoral expertise, both within and outside the organization, to promote the enhancement of human resources to implement

its environmental policy effectively. The organization will engage and develop local environmental expertise in support of program implementation with partner organizations.

**Information transfer** – As some of the problems identified are due to lack of public participation, Bala Vikasa will adapt data management systems to allow data on environmental programs and projects to be readily accessed and will analyze and disseminate information on environmental issues.

**Evaluation of Environmental Impacts**– In the course of planning, monitoring, implementation and evaluating the various projects and programs taken up by the organization, the environmental impacts will be given due consideration. When required, through environmental management plan, the adverse impacts will be mitigated.

**Training and capacity building** – Environmentally sound practices which aim at sustainable development will be designed for the stakeholders and field staff and implemented. The multi-stakeholder character of environmental issues and continuous developments in the field of environment, make it necessary to have a continuous focus on capacity building in all concerned institutions: public, private, voluntary, academic, research, and the media.

**Public awareness** – The organization will take up programs to create awareness and environmental consciousness in various sectors of the community, and will inform them of its initiatives for environmental sustainability. Environmental education is the principal means of enhancing such awareness, both among focused groups and the public at large. Such education may be formal, or informal, or a combination of both.

## Acknowledgements

Bala Vikasa Environment Policy proposed here is in tune with goal number seven of the United Nations Millennium Development Goals (2000). It is based on the lessons learnt during the implementations of its several programs. While formulating this policy the documents, Viz., National Environmental Policy, India, 2006, CIDA Hand Book for Community Development – Additional

Resources, 2005 and CIDA Policy for Environmental Sustainability, 1992 have served as guidance factors. The organization acknowledges the various experts and officials for their keen interest and concern in preparing the documents named which can provide guidance to any policy. Published research literature has also been extensively reviewed and cited. Our gratitude is due to all those authors.



# CHAPTER 5

## CONCLUSION



*"A Chinese tale tells of some men sent to harm a young girl, who upon seeing her beauty, become her protectors rather than her violators. That's how I felt seeing the Earth for the first time. "I could not help but love and cherish her."*

**Taylor Wang, Astronaut, China/USA**

There is still much debate about the place of the environment in the process of achieving Sustainable Development. However, unanimity is slowly taking shape as it is recognized that environmental degradation is undermining sustainable development and threatening future development progress.

If the development process in the developing world is to fight poverty and better people well-being, this type of "long-term development can only be achieved through sustainable management of various

assets: financial, material, human, social and natural. Natural assets, including water, soils, plants and animals, underpin people's livelihoods."<sup>27</sup>

### ***Environment: Foundation for Sustainable Development***

The recent report of UNEP states: "Sustainable Development is a long-term process of furthering people's well being based on increasing the asset base and its productivity, empowering poor people and marginalized communities, reducing and

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<sup>27</sup> Global Environment Outlook -4, United Nations Environment Programme. Chapter 1, Environment for Development, Main Messages, p. 4, Septembre 2007.

managing risks and taking a long-term perspective with regard to intra and inter-generational equity. The environment is central to all four of these requirements".<sup>28</sup>

With the above in mind, it is the firm conviction of Bala Vikasa that respect and sound management of the environment is a condition sine qua non for Sustainable Development.

In promoting Sustainable Development, concerns for the environment should not be subordinated to other considerations such as economic or political. All dimensions of Sustainable Development have to be treated with equal seriousness. This is the main reason why Bala Vikasa has designed and implemented its own Environment Policy and why the environment is a cross-cutting theme in all its development activities, be it drinking water program, women development program, capacity building program, etc.

### ***Environment and the Millennium Development Goals***

In September 2000, the General Assembly of the United Nations adopted the United Nations Millennium Declaration. This declaration was adopted by 189 nations and was signed by 147 heads of state and government:

"We – the signatories of this declaration - will spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty, to which more than a billion of them are currently subjected. We are committed to making the right to development a reality for everyone and to freeing the entire human race from want."<sup>29</sup>

The Millennium Development Goals (MDGs) are eight goals to be achieved by 2015 that respond to the world's main development challenges.

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<sup>28</sup> Ibid, p. 10.

<sup>29</sup> 55/2 United Nations Millennium Declaration, September , 2000.

“Environmental sustainability, Millennium Development Goal 7, is critical to the attainment of the other MDG goals. Indeed, sustainable management of natural resources contributes to poverty alleviation (MDG 1), helps reduce diseases (MDG 6) and child mortality (MDG 4), improves maternal health (MDG 5), and can contribute to gender equity (MDG 3) and universal education (MDG 2).”<sup>30</sup>

Unfortunately, in India, while some significant progress is being made towards meeting some of the targets, in many cases progress is patchy or too slow.<sup>31</sup> It is highly improbable that the country will meet the MDG targets by 2015. According to Mandakini Gahlot, United Nations Special Ambassador for Millennium Goals in the Asia-Pacific Region: “In India, there has been some progress but the problem is that the MDGs are not

being approached holistically. The MDGs are inter-dependent. If a group of women are employed to plant trees, you immediately promote three goals – eradicating extreme hunger and poverty, achieving gender equality and ensuring environmental sustainability. So India needs to realize that progress on one goal will lead to progress on others”.<sup>32</sup> This is particularly the case of Goal 7: “Ensuring environmental sustainability”.

### ***The role of the Civil Society and of the Voluntary Sector***

To achieve Sustainable Development all over the world, and particularly in India, the Environment and the other facets of development, namely economic, political, social and cultural, need to be intimately inter-connected and it requires a holistic approach.

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<sup>30</sup> Global Environment Outlook -4, United Nations Environment Programme. Chapter 10, Environment for Development , p. 11, September 2007.

<sup>31</sup> For a performance assessment of India related to the MDGs, the site of UNICEF India is worth consulting: [www.unicef.org/india/about\\_unicef\\_3703.htm](http://www.unicef.org/india/about_unicef_3703.htm).

<sup>32</sup> Interview given by Mandakini Gahlot, United Nations Special Ambassador for Millennium Goals in the Asia-Pacific Region, to the Indian Express, October 27, 2007.

For those individuals, profit organizations and public and national institutions who often, for selfish interest and short term objectives, seem to forget this reality, NGOs should act as the 'conscience' and make efforts to increase awareness of the precariousness of our mother-earth, while simultaneously pursuing their own development activities as role models of good sustainable environment managers of our natural resources "Imagine a world in which human well-being for all is secure. Every individual has access to clean air and water,

ensuring improvements in global health. Global warming has been addressed, through reductions in energy use, and investment in clean technology. Assistance is offered to vulnerable communities. Species flourish as ecosystem integrity is assured.

Transforming these images into reality is possible, and it is this generation's responsibility to start doing."<sup>33</sup>

It is hoped that this small publication has sufficiently made this point.



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<sup>33</sup> Global Environment Outlook -4, United Nations Environment Programme. Section A: Overview, p. 34, September 2007.

## GLOSSARY<sup>34</sup>

The following is a glossary related to the environment.

<b>Abiotic Factors</b>	Abiotic, meaning not alive, are non-living factors that affect living organisms. Environmental factors as habitat (pond, lake, ocean, desert, mountain or weather such as temperature, cloud, rain, snow, hurricane etc, are abiotic factors.
<b>Abiotic Resources</b>	Resources which are considered abiotic and therefore not renewable. Zinc and crude oil are examples of abiotic resources.
<b>Acid Rain</b>	Rain polluted by sulphur and nitrogen-based acids from combustion processes which damages lakes and forests.
<b>Biodegradable</b>	Biodegradable substances are those that can be decomposed through biological processes.
<b>Biomass</b>	All materials of vegetable and animal origin produced through biological process
<b>Biosphere</b>	That part of the earth's surface, including the ocean, the atmosphere of which supports life.
<b>Biotic Factors</b>	Biotic, meaning of or related to life; factors are all living factors - plants, animals, fungi and bacteria are all biotic or living factors.
<b>Biotic Resources</b>	Resources which are considered biotic and therefore renewable. The rainforests and tigers are examples of biotic resources.

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<sup>34</sup> Sources: Glossary of Environmental Term downloaded from Google; Wikipedia, the Free Encyclopedia; The National Environmental Policy, India, 2006; H.M. Saxena, Environmental Studies, 2006, Rewat Publications, India.

<b>Carbon Footprint</b>	A carbon footprint is a “measure of the impact human activities have on the environment in terms of the amount of green house gases produced” measured in units of carbon dioxide.
<b>Damage</b>	Damage means deterioration in the quality of the environment directly attributable to depletion or pollution.
<b>Deforestation</b>	Clearing of forests. The impact of deforestation on the environment can be seen in the forms of micro-climatic change, increase in temperature and decrease in humidity / rainfall, soil erosion in the form sheet, rill and gully erosion, increase in frequency of floods and landslides, loss of soil fertility, etc.
<b>Depletion</b>	Depletion is the result of extraction of abiotic resources (non-renewable) from the environment or the extraction of biotic resources (renewable) faster than they can be renewed.
<b>Desertification</b>	Desertification means transformation of productive land into desert.
<b>Ecology</b>	Ecology is the study of relationships between living organisms, and their environment.
<b>Eco-Efficiency</b>	The relationship between economic output (product, service, activity) and environmental impact added caused by production, consumption and disposal.
<b>Eco-system</b>	Living organisms, their necessary resources and their habitat, and their interaction in a self-contained and sustainable manner.
<b>Energy Resources</b>	Sources of fuel, i.e., renewable and non-renewable.

<b>Environment</b>	<ol style="list-style-type: none"> <li>1. Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, and their interrelations. (This definition extends the view from a company focus to the global system)</li> <li>2. Surrounding conditions, influences, or forces, by which living forms are influenced and modified in their growth and development.</li> </ol>
<b>Environmental Aspects</b>	Elements of an organization's activities, products or services which can interact with the environment. A significant environmental aspect is an environmental aspect that has or can have a significant environmental impact.
<b>Environmental Concerns</b>	The degradation, through actions of humans, of environment - comprising all entities natural and man-made, external to oneself, and their interrelationships - which provide value now or perhaps in the future to humankind.
<b>Environmental Impact</b>	Any change to the environment, whether adverse or beneficial, wholly or partially, resulting from an organization's activities, products or services.
<b>Environmental Issue</b>	A point or matter of discussion, debate, or dispute of an organization related to environmental aspects.
<b>Environmental Management</b>	Those aspects of an overall management function, including planning, that determine and lead to implementation of an environmental policy.
<b>Environmental Objectives</b>	The overall environmental goal that an organization sets itself to achieve, and which is included in its environmental policy.

<b>Environmental Performance Indicators</b>	Environmental performance indicators are the different parameters that describe the potential impact of an organization's activities, products or services on the environment. These parameters are the result of characterizing classified environmental interventions/environmental aspects.
<b>Environmental Policy</b>	Environmental policy is a statement by an organization of its intentions and principles in relation to its overall environmental performance. Environmental policy provides a framework for action and for the setting of its environmental objectives and targets.
<b>Environmental Manage System</b>	The part of overall management system which includes structure, planning activities, responsibilities practices, procurements, processes and resources for developing, implementing, achieving, reviewing and maintaining an environmental policy.
<b>Environmental Target</b>	Detailed performance requirement, quantified where practical, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
<b>Erosion</b>	The loss of soil caused by winds and water.
<b>Fertilizer</b>	Organic and inorganic compounds used to make the land more productive.
<b>Fossil fuel</b>	A source of non-renewable energy such as oil, gas and coal resulting from the fossilization of biomass.

<b>Gaseous Atmospheric</b>	Pollution from the burning of fossil fuel, industrial emissions etc., that can cause intoxication, bronchitis, asthma, and other respiratory illnesses.
<b>Greenhouse Effect</b>	Heating of the atmosphere due to the trapped solar energy as a result of a rise in the carbon dioxide concentration of the atmosphere.
<b>Immutable Resources</b>	Resources incapable of much adverse change through man's activities, such as: wind power, precipitation, tidal power, atomic energy.
<b>Impact of Changing Factors</b>	If a single factor is changed, perhaps by pollution or natural phenomenon, the whole system could be altered. For example, humans can alter environments through farming or irrigating. While we usually cannot see what we doing to various ecosystems, the impact is being felt all over. For example, acid rain in certain regions has resulted in the decline of fish population.
<b>Misusable Resources</b>	Resources with little danger of complete exhaustion, but when inappropriately used, their resource quality may be impaired, such as solar power, atmosphere, oceans, water power of flowing streams.
<b>Natural Resource</b>	Natural Resources Any element of our natural environment such as soil, water, forest, wildlife, minerals, etc., that man can utilize to promote his welfare, may be identified as a natural resource. Since natural resources vary greatly in quantity, mutability, and re-usability, these can be classified into two major categories, namely, inexhaustible and exhaustible.

<b>Non-renewable</b>	Once gone, there is no hope of replacement. These are mineral resources, fossil fuels, species of wildlife.
<b>Human Settlements</b>	Cities, towns, and villages inhabited by people.
<b>Ozone</b>	Gas containing three molecules of oxygen, a powerful oxidant. An ozone layer above the earth absorbs dangerous ultra-violet radiation. In the lower atmosphere, it is involved in producing photochemical smog.
<b>Ozone depletion</b>	Ozone is a form of oxygen with three atoms, instead of the usual two, and forms a fragile shield scattered in the stratosphere absorbing the sun's ultraviolet radiation, away from the earth's surface. It forms simply a three- millimeter thick layer, but if it disappears or thins, all terrestrial life will be annihilated. Near the earth's surface, ozone is an increasingly troublesome pollutant, but safely up at a height of 20 to 30 kilometers from the earth in the atmosphere, it is an important to life as oxygen itself.
<b>Pollution</b>	The changing of a natural environment, either by natural or artificial means, so that the environment becomes harmful to the living things normally found in it. Most often this refers to the input of toxic chemicals into the environment. Undesirable state of the natural environment being contaminated with harmful substances as a consequence of human activities. The state of being polluted. The act of contaminating or polluting; including (either intentionally or accidentally) unwanted substances or factors. The contamination of an environment by

introducing chemicals / pollutants which have a detrimental effect on the environment and subsequently the organisms which live in it.

**Prevention of Pollution**

Use of processes, practices, materials or products that avoid, reduce or control pollution, which include recycling treatment, process change, control mechanisms, efficient use of resources and material substitution.

Note: The potential benefits of prevention of pollution include the reduction of adverse environmental impacts, improved efficiency, and reduced costs.

**Raw Sewage**

Untreated municipal sewage water containing human excreta etc.

**Recycling**

The recovery and reuse from scrap or other waste materials.

**Renewable**

The living or dynamic resources whose perpetual harvest is dependent upon proper planning and management by man. These are: water in place, soil fertility, products of the land - agricultural produces, forests, forage land, wild animals, products of lakes, streams and ponds – freshwater fish, black bass, lake trout, catfish, products of oceans – marine fish, marine mammals.

**Resource Conservation**

The word 'conservation' is derived from two Latin words, 'con' meaning "together", and 'servare' meaning "to keep or guard". (Gifford Pinchot)

- Resource conservation is the Scheduling of resource use so as to provide the greatest yield for the greatest number over the longest time period. (P. Haggette).

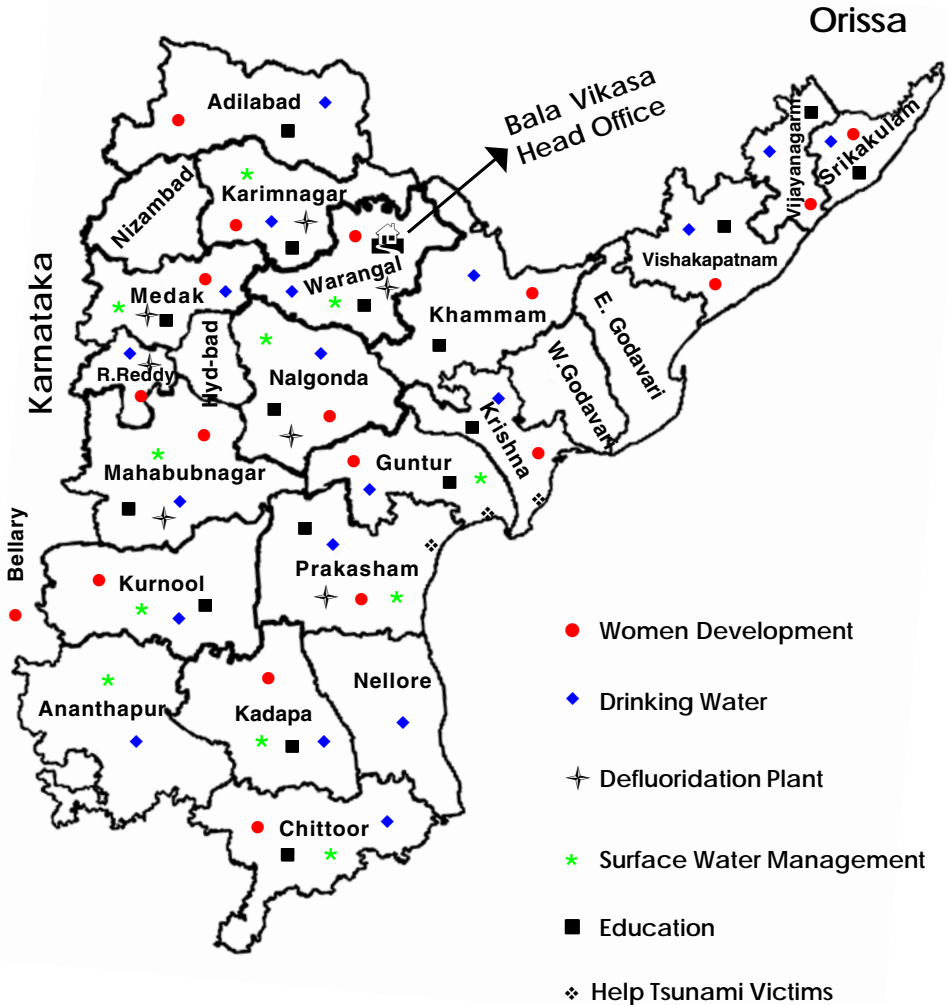
- The wise use of our natural environment, the prevention of waste and despoilment while preserving, improving and renewing the quality and usefulness of all our resources (John F. Kennedy)

The conservation of natural resources is a concept that deals with the rational use of resources so that a harmony between man's resource requirements and its availability can be established. While renewable resources need a proper resource management system, (a part of conservation), the non-renewable resources require a long-term strategy for their proper use.

<b>Resource Intensive</b>	Activity, mainly human, that requires large input of natural resources.
<b>Smog</b>	Air pollution consisting of smoke and fog.
<b>Social Costs</b>	The quantitative and qualitative burden imposed on society by a given activity.
<b>System (Ecosystem)</b>	Biotic and abiotic factors combine to create a system or more precisely, an ecosystem. An ecosystem is a community of living and non-living things considered as a unit.
<b>Zoning Regulations</b>	Regulations designed to control land use for specific activities, industrial, residential, nature reserves etc.

# Map of Andhra Pradesh - India

## Bala Vikasa Programmes



*sketch map not to scale*

This booklet is published by Bala Vikasa People Development Training Center.

Bala Vikasa is a registered, secular, non-partisan, non-profit, voluntary, social service organization in India, working mainly in Andhra Pradesh for a common goal: to help the people to help themselves without distinction of caste and creed.

## Bala Vikasa

H. No. 1-1-867, Siddarthanagar,  
NIT, Warangal-506 004, A.P. India

Phone: 0870 - 2459287

Fax : 0870 - 2459738

E-mail: [balavikasa@sify.com](mailto:balavikasa@sify.com)

Website: [www.balavikasa.org](http://www.balavikasa.org)

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