

TOWARDS THE FORMULATION OF INDIA'S NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN

A BACKGROUND PAPER

Kalpavriksh Environmental Action Group¹

I. Background to India's National Biodiversity Strategy and Action Plan (NBSAP) Process

India became a signatory to the Convention on Biological Diversity (CBD) in June 1992. The Convention came into force on December 29, 1993. Article 6 of the CBD requires parties to the Convention to prepare National Biodiversity Strategies and Action Plans (NBSAPs), including the integration of biodiversity conservation and sustainable use into various sectors, as the main instruments for implementation of the CBD at a national level. The process to prepare India's NBSAP was started under this mandate.

In 1994, the Ministry of Environment and Forests (MoEF) initiated consultations with representatives from ministries, governmental agencies, NGOs and academicians for preparing a national action plan for biodiversity conservation. A core group, consisting of representatives from various governmental authorities and autonomous institutions under the Government of India, was constituted for this purpose.

Adopting a consultative process, the MoEF prepared a National Policy and Macrolevel Action Strategy on Biodiversity in 1999. This document is a macro-level assessment of gaps and a statement of policies and strategies needed for conservation and sustainable use of biological diversity. At this stage, a need was felt for a more detailed plan, including state-level strategies and actions. For this purpose, the MoEF accessed funds from the Global Environment Facility (GEF), through the United Nations Development Programme (UNDP), to start the process of preparing the NBSAP. In a unique move, the MoEF decided to request an independent, non-governmental body to carry out the technical coordination of the process. After examining proposals invited and received from a number of NGOs and institutions, MoEF assigned the technical execution of the project to Kalpavriksh, a 27-year old NGO based in Pune and Delhi. To aid in this, a 15-member Technical and Policy Core Group (TPCG) was set up. It consisted of professionals and activists from different parts of the country with expertise and experience in different fields related to biodiversity. The administrative execution was entrusted to the Biotech Consortium of India Ltd (BCIL).

¹ An Environmental Action NGO, based in Delhi and Pune (www.kalpavriksh.org)

The process of preparing India's NBSAP had from the very beginning taken the integration of biodiversity concerns into various sectors as one of its main process goals. Raising awareness of the importance of biodiversity was also seen as an integral part of the process of preparing the NBSAP and is a major component of the plan itself.

The NBSAP Project Directorate was based at the MoEF, with the Joint Secretary, MoEF, as the National Project Director. A National Steering Committee consisting of the Additional Secretary, MoEF (Chairperson), and representatives from eight ministries, the Planning Commission, UNDP and four NGO experts provided overall guidance to the process.

II. Scope and Approach of the NBSAP

The broad purpose of the NBSAP process was to produce an implementable action plan that would help conserve India's vast biodiversity, orient utilisation of biological resources towards sustainable directions, and ensure that decisions regarding access to such resources and the benefits accruing from them are taken democratically and equitably. However, rather than prepare just one national plan, it was decided to prepare plans for several sub-national sites and for various themes. The process envisaged the formulation of Biodiversity Strategy and Action Plans (BSAPs) at the following five levels: local and regional sub-state sites (18), all of India's states and Union Territories (33), inter-state ecoregions (10), and major thematic areas (13). In addition, 35 sub-thematic reviews were commissioned or voluntarily offered, for addressing certain specialised aspects of biodiversity².

III. Brief Description of the Methodologies Used

All the plans were prepared by multi-sectoral groups/committees, involving diverse people from both within and outside government. These groups/committees were in turn coordinated by an executing agency nominated either by the TPCG or by respective state governments, and appointed by the National Project Director at MoEF.

The process of developing the NBSAP attempted to be highly participatory in nature, with complete transparency and openness to all points of view and interest groups, and reaching out to a large number of village level organisations and movements, NGOs, academicians and scientists, government officers from various line agencies, the private sector, the armed forces, politicians and others who have a stake in biodiversity.

The NBSAP process was from the beginning designed to accommodate the use of flexible and innovative methodologies for preparing the BSAP. This was primarily because it was felt that the process of the formulation is as important as the final product itself. The process has attempted to move away from the general trend of centralized planning, decentralizing the planning as far as possible and proceeding upwards from the grassroots level. Several thousand people, spread all over the country and from different walks of life and backgrounds, including women and men from local communities, have been involved through the use of various methodologies. Methodologies were also suggested to the

² *Note:* Not all BSAPs and sub-thematic reviews were submitted or completed.

participating agencies, at local, state, ecoregional and thematic levels, through the guidelines developed by the TPCG.

Apart from the conventional methods of workshops and formal meetings, many BSAP processes have used innovative methods for both outreach and feedback. To begin with, several states formed networks to help facilitate substantive inputs into their plans. Public Hearings were held at various levels of the process. These Hearings were organized for data collection, awareness generation, information dissemination and to obtain feedback on issues. Students were also involved at various stages and levels of the process. In some cases, students undertook projects on NBSAP themes.

Perhaps the most innovative methodology used was organizing biodiversity festivals and related cultural events. These were in the form of *melas*, cycle rallies, cultural programmes, bullock-cart rallies, *yatras* (foot marches) and boat rallies. These festivals helped rekindle pride in the country's vast biodiversity. Discussions during the festivals also sent out the message that there is much biodiversity that has already been lost, and efforts need to be made to revive and retrieve this where possible, while conserving what still exists.

Closer to the more commonly used methods of research was the deployment of questionnaires, formation of drafting committees and thematic working groups, commissioning academic papers and intersectoral and interdepartmental meetings aimed at seeking coordinated work. Some states already had or were in the process of drafting biodiversity/environment plans under initiatives other than NBSAP. In addition a number of action plan and policy processes relating to specific aspects of biodiversity had been held earlier in India. Instead of starting from scratch, the NBSAP process linked up with and built upon the work that had already been done in such cases.

Media outreach was also an important component of the NBSAP process. The use of audio-visual and print media was encouraged. It was used by most executing agencies at sub-national levels, as well as at the national level.

As the process progressed, the need to ensure involvement of specialized target groups was recognized and addressed. Focused meetings with traditional healers, fisher folk, snake charmers, specially-abled children, Buddhist monks, armed forces and nomadic pastoralists are a few examples.

IV. The National Action Plan

The national level document, originally called the draft National Action Plan, was built on the following sources:

- 70 draft biodiversity strategy and action plans (BSAPs) at local (sub-state), state, ecoregional, and thematic levels, produced during the NBSAP process;
- 31 draft sub-thematic reviews commissioned or voluntarily offered during the NBSAP process;
- A large number of secondary sources, that included previous national level documents (e.g. the National Wildlife Action Plan, National Forestry Action Plan, National Conservation Strategy, country reports for Agenda 21, Biodiversity Conservation Prioritisation Project report, National Environment Action

Programme, the IXth and Xth Five Year Plan Documents and others) and inputs / comments from several thousands of people.

The draft document for National Action Plan was produced in two volumes. Volume I has eight chapters (**Annexure 1**).

Volume 2 of the NAP includes the summaries of each of the local, state, ecoregional, and thematic BSAPs, and of the sub-thematic reviews. In addition, it contains annexures relevant to various parts of Volume 1, such as listings of protected areas and threatened species, forest types, germplasm collections, and so on. It also includes, a chart showing the points of commonality between the strategies of the NAP and those recommended in the local, state, and ecoregional BSAPs.

The draft NAP went through an extensive assessment by executing agencies, sub-thematic reviewers, and other partners of the NBSAP process, as also a few hundred other institutions, experts, government officials, NGOs, and activists. Its Executive Summary was made available in large numbers, in English, Hindi, and Telugu. It was also hosted on the website <http://sdnp.delhi.nic.in/nbsap> and made accessible for anyone to review. Information on its availability was sent out, with a short description, to the mass media, NGO and other networks, and various websites.

The first (October 2002) and second drafts (March 2003) of the National Action Plan were produced and widely circulated under the MoEF's name, commented upon, and revised based on comments from Government of India ministries, state governments, NGOs, community groups, and individual experts. These were also publicly discussed during the Final National Workshop in December 2002. Apart from this is the Executive Summary of the first draft was sent out to all those persons that had requested to participate in the NBSAP process in response to the Call for Participation.

The third revised version was looked at by a peer review group set up by the MoEF in mid-2003. The peer review group shared their views with the members of the Technical Implementing Agency at a meeting organized and hosted by the MoEF in May 2003. It was only after this that a fourth draft was prepared and sent for external editing and finalization of design. A final draft was produced after this, and till this time the understanding with MoEF was that this would now be considered for approval as the National Plan.

IV. MoEF's Changing Stance

In January 2004, MoEF took the view that the final draft could only be published as a Final Technical Report, and that this would provide the basis for a National Action Plan for the approval of the Union Cabinet. This was decided upon in the final Steering Committee meeting held on 29th January 2004. The process of getting Cabinet approval was perhaps necessary (especially to make the final document more politically acceptable), but this was unfortunately being communicated at the very final stages of the process, when the TPCG had been earlier told that such an approval was not necessary. It was also pointed out to the MoEF that previous action plans (such as National Forestry Action Plan and National Wildlife Action Plan) were approved without going through for Cabinet approval.

The MoEF representatives also stated that since the Cabinet had recently mandated MoEF to come up with a National Environment Policy (NEP) and since that would be a more over-arching document, the NBSAP would have to be in harmony with it. The NBSAP could therefore not be accepted as final till the NEP was finalized. This point seemed unreasonable to the TPCG and the technical implementing agency, considering the fact that the NBSAP process had started four years earlier, it seemed inappropriate to hold it back because a new process had begun in the government. If anything the NBSAP could be used as inputs into the formulation of the NEP.

In May 2004, without any intimation to Kalpavriksh (the technical implementing agency) or the TPCG, the MoEF further changed its position and did not sanction the publication of the draft even as a Final Technical Report. It was learnt that the MoEF was not comfortable with some parts of the report, but this was officially conveyed to Kalpavriksh only in early 2005 that too orally after Kalpavriksh members met with the Minister and requested for an update on the status. A list of the specific points of discomfort has never been made available to Kalpavriksh or the TPCG in writing. It also came to light at a later stage that, in mid-2004, the report was put through yet another review process, the results of which were also not made public.

For the members of the technical implementing agency, information came through external sources like Parliament questions and using the Right to Information Act. In December 2004, in response to a 'Short Notice Question' raised by a Member of Parliament, the Ministry sent a written response which stated that:

“The draft report which has been prepared by the organization Kalpavriksh headed by Mr. Ashish Kothari is a consultant's report which needs to be reviewed at the government level for financial, administrative and legal implications and for scientific accuracy. A consultant's report cannot be accepted as a National Plan unless it is vetted and endorsed by the government. The draft report contains numerous irreconcilable discrepancies, scientific inaccuracies, implausible and unacceptable recommendations, which if published unedited may put the government to great embarrassment and invite international ridicule and criticism.”

Some of the discrepancies were listed. The letter went on to say:

“The Ministry is in the process of bringing out a National Environment Policy 2004, whose draft has been put on the Ministry's website and national and state level consultations have already been held. Any long term Biodiversity Action Plan of the country should be in conformity with and flow from the proposed Environment Policy. The Ministry therefore is of the view that the draft report prepared by Kalpavriksh should be scrutinized and then synthesized with the Environment Policy before being sent to the cabinet for approval. We have in fact already initiated the process. A group of experts was constituted by the Ministry to scrutinize the draft report prepared by Kalpavriksh and rectify discrepancies and inconsistencies. The task has been accomplished and now an exercise is underway to draw a specific Action Plan, which would be put up before the Cabinet for approval. The draft report put up by Kalpavriksh runs into approximately 4000 pages and to bring out an actionable National Plan with inputs from this report would require time effort and attention. This whole exercise is likely to take another few months”.

In February 2005, MoEF told Kalpavriksh that it was now finalising a draft based on this review, which would go to the other ministries and then to Cabinet for approval. It did not however publicly share the revised draft, nor was it agreeable to provide a time frame for the finalisation of the plan. It did however; submit a 'revised' version of the draft to UNDP as part of its commitment to the donor agency.

MoEF has to date also not conveyed its approval of the state, sub-state, thematic, and ecoregional action plans, to the relevant coordinating agencies, thereby delaying the implementation of these plans (except in the case of those agencies who have decided to go ahead with implementation regardless of receiving the formal approval from MoEF).

In March 2005, MoEF wrote to Kalpavriksh asking it not to publish or in any form make publicly available, the report submitted in December 2003.

These decisions were in complete contrast to the open and transparent process carried out throughout the NBSAP phase. The MoEF ignored the energy and inputs that thousands of people had put into the process, and also violated the contractual agreement between MoEF and UNDP/GEF. Over the period of a year and a half, MoEF's stance underwent dramatic transformations, from denying it had ever accepted the report as a "draft NBSAP", to denying its acceptance of the document as a final technical report, to finally rejecting it altogether.

V. Publication and After

With the above scenario in mind, Kalpavriksh, in consultation with the TPCG, then decided to make the report (submitted in December 2003) available to the public in a published form, as the Final Technical Report of NBSAP (in the form agreed to by MoEF in writing, in early 2004). This report had already been available on the Kalpavriksh website and electronically for anyone who requested it. This was to enable the public easier access to the information, analysis and recommendations contained in the report, without further delay. This move was also aimed at providing public access to the 100 - odd other documents produced in the NBSAP process. Finally, it was aimed at enabling the public to compare the final action plan as and when brought out by MoEF, with this Final Technical Report.

The highlights of the final report entitled, "Securing India's Future: Final Technical Report of the National Biodiversity Strategy and Action Plan (NBSAP)" are given in **Annexure 2**.

The report was release to the public on October 04, 2005. This was done in the form of a printed version of the concise summary and a CD containing the full final technical report, all the BSAPs, subthematic reviews and other documents related to the process.

The day after the release, On October 05, the MoEF issued a press statement. The key points in the statement were:

1. A team of scientists that reviewed the "consultant" Kalpavriksh's report has "concluded that the report is for the major part scientifically invalid".
2. MoEF has rejected the report and started the process of developing the action plan afresh.

3. Kalpavriksh was paid over Rs. 3 crores as consultancy fees.

On October 07, 2005 Kalpavriksh issued a rejoinder to this and contested the points raised by the MoEF, particularly regarding the financial transactions, a clarification for which was later given in a response to a petition filed by an NGO under the Right to Information Act. Details of this are given in the following paragraphs. A rejoinder was issued in the form of a Press Release, a letter to the Minister of Environment and Forests and a letter to the Prime Minister.

The report was subsequently released in Pune, Bangalore, Guwahati, Hyderabad, Bhubaneswar and Mumbai. There were also subsequent events in Chennai to discuss the report.

There have been several lobbying efforts after this to influence the MoEF. These included writing to all the executing agencies; outreach to the media and also writing articles in several newspapers and journals; meeting with relevant politicians and with officers in the Prime Minister's Secretariat. The lobbying with some of the relevant Members of Parliament led to a few questions regarding the NBSAP being raised in Parliament. There was a written response on November 28, 2005 to a parliamentary question raised and was as follows:

“The Ministry has started the process of developing the National Bio-diversity Action Plan. As a first step, work was assigned to two organizations, ‘Kalpavriksh’ and ‘Bio-tech Consortium India Ltd; under a United Nations Development Programme –Global Environment Facility sponsored project to prepare a project report based on which the National Biodiversity Strategy and Action Plan (NBSAP) was to be finalized. Pursuant to the completion of project tenure, the Ministry of Environment and Forests received the draft Project Report as consolidated and prepared by Kalpavriksh. Subsequently, a group of experts was constituted by the Ministry of scrutinize the draft Report prepared by the Kalpavriksh and rectify the discrepancies and inconsistencies which were noticed in the Report . The report has since been duly corrected by the Group of Experts. This corrected and revised report is going to act as an input for the draft National Action Plan (NAP). The first draft of the NAP has been discussed in the Ministry and the final draft is to be prepared, harmonizing it with the provisions of the draft Environment Policy. After approval of the draft National Action Plan within the Ministry, the following actions will be initiated:

- Inter-ministerial consultation on the draft National Action Plan;
- Preparation of the Cabinet Note for approval of the Action Plan by the Cabinet;
- Release of the National Action Plan”

The National Action Plan has not been released to date.

On November 14, 2005, an NGO filed an application under the Right to Information Act asking about the status of the NBSAP. The following response was issued by the MoEF:

“ - The Report prepared by the Consultant runs into 850 pages. The Report prepared by the Task Force constituted by the Ministry of Environment and Forests runs into 709 pages. The same was forwarded by MoEF to UNDP. Annexures to the Report runs into 594 pages.

In case you need a copy of the documents, required fee as per the Right to Information Act, 2005 need to be deposited (Number of pages – 2153, cost @ Rs. 2/- per page=Rs. 4306/-).

- Regarding accounts of the project, it may be noted that approximately Rs. 4.5 crore have been spent on the Project. Out of this, direct release to Kalpavriksh is about Rs. 40 lakhs and about Rs. 3 crores have been paid to other organizations, departments, individuals on Kalpavriksh's proposal and their recommendations."

There were also been subsequent efforts to have more questions raised by other members in both houses of Parliament. There were a few derogatory reports in the media as a response to the MoEF Press Release to which adequate responses were given. On the other hand there were also several articles written by independent people condemning the stand MoEF has taken. Specific lobbying efforts included, meeting with select Planning Commission members and Members of Parliament.

Finally, the issue was also raised at the 8th Conference of Parties to the Convention on Biological Diversity, held in March 2006 in Brazil. An article in the daily NGO newsletter *ECO* asked why India, after having asked for a deadline of 2006 for all countries to have final NBSAPs, itself did not have one! Many participants enquired about the status of the NBSAP, having heard of its unique process and waited to see the final outputs.

Soon after the submission of the draft NBSAP, National Action Plan to the MoEF, UNDP had planned for a follow up of the plan through its next 5-year funding cycle for India, the Country Cooperation Framework (CCF2). About a dozen local sites, most of them sub-state NBSAP sites had been short listed for intensive implementation of practical activities to generate biodiversity-based livelihoods. This was supposed to be implemented, accompanied by national level policy analysis, community networking and exchanges, documentation, and monitoring, all focused on community based natural resource management. However, even before the release of the NBSAP project document by Kalpavriksh, this too was stalled for many months. There was then an intimation that this project was not going to happen. Subsequently, the MoEF requested that the project proposal be resubmitted without any mention of Kalpavriksh or any reference to follow up of the NBSAP. This proposal has now been accepted by the MoEF, but will not officially be considered a follow up of the proposed NBSAP.

VI. Why This Turn of Events?

Despite considerable questioning from the public, MoEF has never bothered to explain its "rejection" of the NBSAP report, or its transformation of NBSAP from an open, transparent process to a furtively secret one. The characterization of the report as being full of mistakes, or being too 'embarrassing', or being "scientifically invalid", seemed to signify something much deeper. After all, previous versions of the report, which were in substance not too different from the final one, were circulated by MoEF under its own name. Moreover, the team leader of the scientific team that evaluated the report informally stated that the team had done an "academic" review, and had come up with some factual mistakes, some statements without references, and a few places where the analysis or recommendations were seen to be somewhat biased. These were corrected or changed, but crucially, *most of the report was left intact*. There was no way the draft could be termed as "scientifically invalid" based on the review.

Take the NBSAP report into a wider context, and one could perhaps understand to some extent this change in stance.

Witness what has happened in MoEF in the last couple of years. Of its major activities, the ones that stand out for their sheer lack of environmental and social sensitivity are the National Environment Policy process and the proposed changes in the notification governing Environment Impact Assessment and Clearance.

How are these events related to NBSAP? One does not need to dig deep to find the answers. Indications of the links began to appear when in January 2004, the MoEF Secretary took the view that NBSAP could not be finalized before the NEP was put into place. No amount of argument that NBSAP was four years old, while NEP was still an infant of only a few months, swayed him. Assessing the NEP draft, it becomes clear why. As 90 groups and people's movements from across India stated in an Open Letter on 29 October 2005, the draft NEP was more an apology for conventional economic growth than a strong statement on how to conserve the environment. It lacked coherence, was strongly human-centred in its approach, paid lip service to decentralization and the interests of local communities, and was even scientifically flawed. It was also clearly meant to pave the way for an overhaul of the system by which 'development' projects have to be licensed, by asserting that such projects were being delayed due to bothersome environmental clearance processes. By mid-2005, MoEF's intentions on this were clear; it issued a draft notification with sweeping changes in the EIA/Clearance process. Once again, environmental and social action groups had to strongly protest. They assessed that the already beleaguered environment of the country, and the equally badly cornered *adivasi* (tribal) and other ecosystem-dependent communities, would be dealt a huge blow by the new approach to EIAs. With the protest drawing no response from MoEF, these groups had to take the unprecedented step of occupying MoEF's headquarters and issuing its death certificate, on Children's Day, November 14, 2005. The efforts to raise concerns with the new EIA notification and the National Environment Policy continued till recently. However, by its own admission, the MoEF has consulted the industry associations in changing the environment clearance regime for the country, which is implemented through the Environment impact Assessment notification. The Ministry has issued a new notification on 14th November 2006, amidst stiff protest, and also intervention by Members of Parliament.

All of this needs to be viewed in the light of the changing face of environmental governance in the country which gives primacy to economic growth and investment over environment, conservation or people's livelihoods. The proposed changes to the Coastal Regulation Zone notification, special fast tracking and pushing for Special Economic Zones are clearly a symbol of this.

The final technical report of the NBSAP with its pro-environment, people's livelihood recommendations has too been a victim of this backlash and thrust of the Government of India.

What has this to do with the NBSAP report? In a detailed analysis, the report argues that the root of India's biodiversity crisis is a fundamentally flawed development process, and in decision-making processes that put all power in the hands of a small elite living in big cities.

It also squarely points to the current phase of “globalization” being a major environmental and social threat. It then goes on to recommend:

- radical changes in ‘development’ models, and over-hauling of sectors like mining, infrastructure, energy, agriculture, irrigation, and industry to make them more sensitive to biodiversity concerns (which would mean dropping proposed projects like River Linking);
- strengthening of the EIA and Clearance process with full public participation;
- decentralized decision-making building up from the ‘local’ to the national;
- a national land/water use plan that identifies critical biodiversity areas and permanently sets them aside from destructive activities like mining, big dams, industries, and so on;
- expansion of the network of conservation sites to 10% of India’s territory (with at least 2% inviolate), using not just the Wild Life (Protection) Act, 1972 with its subsequent amendments, but also the Biological Diversity Act 2002, the Environment Protection Act 1986, and even the *Panchayat* (Local Self Governance Institution) laws;
- full attention to the entire range of threatened species and taxa (in the wild and in agriculture), including much greater focus on flora and small fauna;
- measures to safeguard the livelihoods of tens of millions of people dependent on natural resources for their daily survival;
- a host of other such measures aimed at ensuring conservation, spreading awareness, building information, safeguarding people’s interests and knowledge, generating resources, using appropriate technologies, and responding at international levels.

The NBSAP report very clearly runs counter to the National Environment Policy 2006 and the dilutions to the environmental regulations. It also challenges the view that environmental expertise exists only in government, or only in formal scientific institutions. In the final analysis, it is perhaps this that MoEF finds uncomfortable, but not being able to say so, it has resorted to crude attempts at discrediting the report.

AND YET THERE IS HOPE.....

VII. Emerging Implementation at Various Levels

For many in the coordinating team, and perhaps for several other participants, the NBSAP process was the most intense professional experience of their lives. Reaching out to a vast number of people, to people of all kinds, was made entirely possible due to the commitment, resources, and spirit with which thousands of women and men participated.

From the outset of the process, the core team encouraged the executing agencies to consider their local, state, ecoregional, or thematic plan processes as relatively independent- including for the purpose of implementation. This, along with the open platform that the process provided to different sectors of society, resulted in a large number of implementation measures being initiated even before the national plan process was over. The NBSAP process has yielded some action on the ground and at policy level, at many of the sites.

STATES:

News of the implementation of the NBSAP recommendations at various state and local levels from some parts of India continues to come in. Four or five States have committed to taking the State-level action plans forward, as part of the work of their newly set up State Biodiversity Boards. Some, like Sikkim and Madhya Pradesh, have already been implementing elements of their plans.

Several BSAPs have also been printed independently. These include the States of Assam, Andaman and Nicobar Islands, Punjab, Gujarat, Tamil Nadu, Haryana, West Bengal, Orissa, and Sikkim; Ladakh, Lahaul-Spiti and Munsiri substate sites; the Aquatic Ecosystems theme, and the Shiwaliks and Western Ghats ecoregions. A meeting of the Working Group of the Uttaranchal BSAP was held in February 2006 to discuss the printing of the BSAP.

More specific implementation initiatives are described here:

Arunachal Pradesh

The Government of Arunachal Pradesh constituted a State Biodiversity Cell headed by the Development Commissioner and Secretary Finance and Secretary Planning as members. The first coordination meeting was held in July 2003 at Itanagar to sensitize all the government departments and NGOs and stakeholders on biodiversity concerns and explain State BSAP. All were requested to incorporate the biodiversity components in their annual plans and projects. Following a discussion on the implementation of the SBSAP, it was decided to meet every two months to review the progress.

Assam

- The state nodal agency had a discussion with the State Forest Minister who took keen interest in the BSAP process and assured to facilitate implementation, including with the Chief Minister of Assam. The Chief Minister agreed to convene a meeting with the concerned government departments /NGOs/experts for the same.
- In an effort to incorporate various actions in the ongoing schemes and projects in the State the nodal agency organized a few Public Hearings under the National Environment
- Awareness Campaign (NEAC) of MoEF in the North Cachar Hill Districts of Assam in
- early 2003.
- The Assam Science Society is also publishing a book on biodiversity of Assam incorporating issues from the state BSAP.

Haryana

- The state nodal agency attempted to build in all the BSAP proposals into an overall forestry project for the Haryana Aravallis for which it is seeking funds.
- The nodal agency also plans to use the final installment of preparing the state BSAP to organize a *mela* highlighting the state's indigenous agrobiodiversity so that the collection of the surviving seeds can begin.
- The nodal agency indicated that gradual inputs from the BSAP are being used into the making of forest management policy and the state agriculture policy. Further

they have stated that the NBSAP process has had an enormous impact in reshaping thinking and perceptions in the State.

Madhya Pradesh

- The district administration in Seoni is attempting to formally integrate biodiversity issues into various programmes and plans of relevant departments. A circular was issued by the State government to enable this. Attempts are being made to extend the idea to other districts as well.
- The State Biodiversity Board has taken into account several recommendations made in the State BSAP.
- A workshop for the Satpura Ecoregion was organized in August 2003. The base paper for the workshop was based on the Madhya Pradesh State BSAP with the linkages with the national and state level processes being spelt out.

Mizoram

The Mizoram State Nodal Agency while helping in the preparation of the State of Environment Report attempted to integrate the State BSAP priorities into the report, to avoid duplication, overlaps and contradictory information.

Karnataka

- The State Steering Committee headed by the Chief Secretary accepted the action plan and subsequently some funding from donor agencies was routed into its implementation.
- Representatives from the State Nodal Agency have been following up BSAP issues in district level discussion meetings with the District Collectors, other government officials and NGOs (selecting 10 districts representing different regions of the State). A follow up meeting of the State BSAP in Tumkur triggered formation of State NGO Forum for implementing BSAP recommendations. Member NGOs would oversee and lobby for the implementation of relevant State BSAP elements in their respective areas.
- Following the endorsement of the BSAP (by the MoEF), the State Steering Committee felt it essential to meet once in three months to review the initiation of Karnataka BSAP. Tasks have been assigned to the members to follow up with the recommendations of the BSAP with government officials and the district commissioners of ten districts.
- Schools, which had participated in School Biodiversity Register programme of the BSAP process, were asked to go through the BSAP and conduct an essay competition at their respective schools. Two best essays from each school were selected and sent to the State Nodal Agency for evaluation. The Minister for Primary and Secondary Education was part of this initiative. The Education Department, Government of Karnataka, also accepted the SBR concept and has agreed to take this up in the whole state.
- The State Nodal Agency is also putting together information for the biodiversity sector for the Karnataka State of Environment Report. They have taken this as an opportunity to follow up of the state BSAP by building in the strategies and actions into the State of the Environment Report.

- The Karnataka Biodiversity Board took note of the key recommendations of KBSAP at its second meeting.

Rajasthan

- The Development Commissioner of Rajasthan, while endorsing the need for a mechanism to ensure implementation, indicated that the BSAP be included in the State's 10th Plan.
- The Coordinating Agency for the State level-working group (which is the State agency for the training of government officials) has indicated that it would like to set up an Environment Cell at the HCM Rajasthan Institute of Public Administration. A temporary Biodiversity Cell had been earlier set up to facilitate the state BSAP preparation.

Sikkim

- The State is in the process of finalizing the State Biodiversity Bill, which was initiated alongside the preparation of the State BSAP.
- The medicinal plant component of the Sikkim BSAP formed the base for the preparation of the PDF-B document prepared for the UNDP- Foundation for Revitalisation of Local Health Traditions. Medicinal Plants Conservation Project in Sikkim.
- The Sikkim State BSAP was used as the base document for the preparation of the management plan for the sanctuaries and national parks of Sikkim by March 2003. Some select action points related for Barsey and Maenam Sanctuary have been taken up for implementation.
- In the South and West Wildlife Forest Development Agency Programme of National Afforestation and Ecodevelopment Board (NAEB), MoEF, the afforestation planning including choice of location, species, protection etc are being suggested as per the detailed strategies of the State BSAP.
- The nodal agency is attempting to implement the suggestion of an *Amji* Training Centre, which was an idea that came up at Public Hearings in north Sikkim, and was subsequently incorporated in the State BSAP.
- The coordinator of the Rathong Chu BSAP, who was also part of the Sikkim BSAP process, has assured that strategies and actions from both the BSAPs could be implemented through The Mountain Institute, an organization that the coordinator joined after the finalization of the BSAP.
- The Sikkim government has also notified the Biodiversity Rules for the state. This was also a result of the recommendations of the State BSAP.
- Participatory guidelines for the lake conservation in Sikkim have been formulated for the state of Sikkim.

West Bengal

A reflection workshop on the State BSAP was organized in July 2003, and followed with the finalization, approval and printing of the BSAP. One of the resolutions of the workshop was that a copy of the report was to be sent to concerned agencies for comment and consideration for implementation. The Principal Secretary, Department of Environment who also participated in the workshop, was requested to issue necessary directives for the same to elicit a more serious response.

Punjab

Punjab has also set up its State Biodiversity Board. It is hoped that it will use recommendations of the BSAP, which has also been translated into Punjabi.

SUB-STATE SITES:

Simlipal (Orissa)

- Following the LIFE 2000 cycle rally and other efforts as part of the BSAP process, some funding was procured for the implementation of certain activities listed within the BSAP.
- Attempts are being made integrate biodiversity issues into the functioning and planning of JFM Committees etc.
- Since 2004, the lead agency's organization, Gram Swaraj has taken a lead in initiatives in wildlife conservation in collaboration with local tribes and WWF India. The tribal priests and village headmen, who were in the past, instrumental in organising ritual hunting, are now partners in conservation. This was a key recommendation in the BSAP.

North Coastal Andhra (Andhra Pradesh)

- One of the recommendations in the BSAP for the sub-state site was to incorporate into traditional tribal festivals and events, discussions and exhibitions pertaining to biodiversity and the control over natural resources. Local communities who had made these recommendations voluntarily arranged for this event to take place in Neradivalasa village of the Angarada Hill region of the Eastern Ghats in Kurupam Mandal in October 2002. The festival, attended by a few hundred people, was a voluntary effort with no external funding. This festival also provided a platform for information exchange, revival of traditions etc. The Forest Department distributed free saplings to the participants. Some government departments indicated that they might be interested in supporting such festivals in the future. Similar kinds of festivals have been subsequently organised from 2003-2006 in the same village but the initiative is now taken only by the lead agency. Other networks, however, participate in the event. Issues discussed range from the *Gram Sabha* (Village Council) empowerment to forest rights of tribals and forest dwellers, including an expression of full support to the Joint Parliamentary Committee recommendations on the recently formulated draft Scheduled Tribes (Recognition of Forest. Rights) Bill 2005, to concerns over the recent land slips in the Eastern Ghats. In the year 2006, the local *Panchayat* leader took the initiative along with the lead agency to organize the festival.
- Following a recommendation of the BSAP, a case study pertaining to environment justice issues related to medicinal plants in Kurupam Mandal, was undertaken.
- The nodal agency also met the Integrated Tribal Development Authority (ITDA) Project Officer, who in turn directed the *Mandal* (Block) Education Officer to take note and implement some of the BSAP recommendations.
- An inter-departmental meeting was also planned, where the BSAP process and recommendations were to be presented and discussed.
- The draft BSAP is also being shared with local politicians and officials for the implementation of the action points.

Deccan Area ((Andhra Pradesh)

- The District Collector for Medak district has agreed to include components of the sub-state site BSAP into the district planning.
- As a result of the Mobile Biodiversity Festivals and other NBSAP related processes, more and more farmers are initiating biodiverse, organic farming. The festival has become an annual event ever since it was first organized in 2001.
- The Deccan Development Society organized a workshop for media persons in April 2003. This was to take forward recommendations of both the Deccan Area sub-state site plan as well as the Media and Biodiversity sub-thematic review.

Vidarbha (Maharashtra)

As part of the BSAP process, a village has decided to protect a heronry in its midst.

Rathong Chu (Sikkim)

- In Rathong Chu Valley, the nodal agency lobbied that the issues raised should be a part of the manifesto of the *Panchayat* elections in September in Sikkim. Two LAC members contested and won the local elections from Yuksom Dubdi *Gram Panchayat* as an attempt to be formally part of the government towards successfully implementing Rathong Chu BSAP.
- Illegal Nepali settlers at Yuksom village (which is at the base of a trekking route through the Kanchendzonga National Park) have been persuaded to move out of the valley. The Himalayan Mountaineering Institute is becoming more sensitive to biodiversity/cultural issues in its promotion of trekking /mountaineering in the area (both these are outcomes of the BSAP process).
- An important output from this process has been the publication of the booklet "Khangchendzonga: The Sacred Mountain, A Biodiversity Handbook", which borrows a lot from the Rathong Chu BSAP. It is meant for schoolteachers, students, field practitioners and tourists, and is published by the Khangchendzonga Conservation Committee (KCC), Yuksam.
- After successfully lobbying to get the Humana Company evicted from the ancestral land of the villagers, the Rathong Chu LAC has also been institutionalized in the *Panchayat* and the Yuksam Joint Forest Management Committee. They have also prepared the microplan for Yuksam under the South Territorial Forest Development Agency wherein they shall seek to implement the forestry part of the Rathong Chu BSAP. The West Territorial Divisional Forest Officer is also helping in this regard.
- The ecotourism component of the BSAP to be implemented through project supported by the UNDP/Small Grants Programme.
- KCC has now developed a visitor information center in Yuksam for sensitizing the tourists who visit KNP/Rathong Chu.
g) KCC is now also going to upscale this learning experience in five other trekking tourism destinations in Sikkim with the support of UNDP. Three new trekking trails have been opened in Rathong Chu Valley managed by the local CBOs. KCC is now going to initiate capacity building programmes here.
- 90% of the exotic 1200 yaks have been phased out from KNP with the support of local community.

- Himal Rakshaks (Honorary Mountain Guardians) programme has been launched and 21 ex-herders and poachers have volunteered into this unique community-policing initiative here.
- Conservation zones for blue sheep, medicinal plants and musk deer were also endorsed by the community and notified by the state government.

Uttara Kannada (Karnataka)

- In Uttara Kannada, biodiversity festivals and seed exchange workshops led to an increased emphasis on home gardens for food/nutrition/health security by some people of the district. For the first time, the Agriculture Department carried out surveys of crop diversity still being used in the district. Discussions on starting a Biodiversity Centre for the district have also started.
- The Malenadu home garden and seed exchange network was launched with a seed display at the National Biodiversity Strategy and Action Plan Biodiversity *Mela* in Sirsi town. Subsequently, the network has taken up the several activities including documentation, seed exchanges, networking, awareness etc. Conservation-based livelihoods are being encouraged in a modest way. Seed *melas* continue to be a good way of reaching out.

Lahaul Spiti (Himachal Pradesh)

The Lahaul Spiti BSAP has been published. However, it is not known how this is being used.

THEMES:

- Some recommendations of the Education/Awareness/Training thematic group including the need for targeted, widespread awareness campaigns are already being implemented. This is in the form of involvement of schools to document local biodiversity and the use of mass media in the form of regular columns in *Chandamama*, Hindu Young World and so on.
- The coordinator of the Economics Thematic Working Group (TWG) is formulating a training course on Biodiversity/Ecological Economics for senior government officials, NGOs, and others.
- The Coordinator of the Economics TWG has begun the process of collating all the major Bibliographical information, which we may have from all the thematic working group reports, and also from various state and regional reports of NBSAP.
- The Action Plan on Domesticated Biodiversity has been published by the Deccan Development Society.
- The Aquatic Biodiversity report has been published.
- Emerging from the recommendations of the thematic report on micro-organisms and biodiversity, several initiatives have come about. Some of these are:
 - An international conference was held in 2005 on ‘Microbial Diversity; Current Perspectives and Potential Applications’
 - There was also a publication of a special section on microbial diversity in Current Science, July 10,2005, Volume 89(1), pages 47-151. Prof. B N Johri was the Guest Editor for this section.

- In view of their far-reaching influence on soil processes including health, a day long Brainstorming Session was held in in March 2006 on the theme, Belowground Biodiversity in relation to Cropping Systems at Bhopal, under the aegis of National Academy of Agricultural Sciences.
- To highlight the significance of microbial diversity in various areas of human endeavour and to expose the school students (10+2) and undergraduates to the challenges of microorganisms, a special competition was organized in Bhopal. Successful achievers from this competition will be provided an opportunity to present their posters during the 47th Association of Microbiologists of India, due December 6-8, 2006 at Barkatullah University, Bhopal
- To highlight modern developments in the discipline, two commentaries have been printed during the last six months by the undersigned in Current Science. These are entitled, Taxonomy of Rhizobia, and Endophytes to the Resue of Plants.

SUB-THEMATIC REVIEWS:

- The Thermal Power and Biodiversity sub-thematic review has been published in the Indian Journal of Air Pollution Control as an attempt to lobby for the recommendations made in the paper.
- In order to share and discuss the findings of the Toxics and Biodiversity sub-thematic review, a workshop is being proposed inviting representatives from MoEF, Central Pollution Control Boards, NGOs, toxicologists and others. Follow up pilot initiatives to be taken up, can also be discussed at such a meeting.
- Environment Justice Initiative, an NGO based in Delhi, recommended the sub-thematic review on EIA and Biodiversity to feed into the NEERI/MoEF exercise to prepare a National Guidance Manual on EIAs.
- A shortened version of the sub-thematic paper on natural dyes has been used in the Crafts Council of India souvenir for a natural dyeing seminar to be held in 2006.
- A meeting of pastoralists is being organized in New Delhi December 8-10, 2006, lobby for secure tenure rights of access to grazing sites and water sources.

REGIONAL/ECOREGIONAL

- At the Final National Workshop of the NBSAP process, the coordinators of thematic, state, substate and ecoregions from the western zone have decided to establish a strong network of the partners to share their experiences /information and help each other to advocate for the implementation of the BSAPs. The network is called the Western India Biodiversity Network. This network now operates as an independent body and is attempting to get financial support for the implementation of several recommendations in the Western Ghats Region BSAP.
- The issues of ecosystem services (integral part of the West Himalaya ecoregional BSAP) were actively considered in one of the people's hearings conducted for Uttaranchal.
- At the government level a beginning has been made to consider ecosystem services flowing for Uttaranchal for seeking financial support.

- As a follow up to the Central Forest Belt ecoregion process, the coordinator prepared and sought funding for a proposal for working with communities around the Tadoba National Park, on issues of livelihood and participatory conservation. The project area is located around Nawegaon National Park.
- An Andhra Pradesh level meeting is being planned to bring together various agencies and other interested organizations in order to follow up on the implementation of the four (Andhra Pradesh, North Coastal Andhra, Deccan Area, Eastern Ghats) relevant BSAPs. Prior to this an exercise of synthesizing the concerns and strategies of the four BSAPs was undertaken to prepare a blueprint for biodiversity conservation in the state.
- The Eastern Ghats and Western Ghats BSAPs are being extensively used to develop proposals to legally declare parts of these ecoregions and/or the entire ecoregions and Ecologically Sensitive Areas under the Environment (Protection) Act, 1986.
- Recommendations from the Strategies and Action Plans on Eastern Himalaya and the North East were used for preparing Recommendations for 11th V year plan on Mountain Ecosystems.
- Several initiatives have been taken up as a follow up within the Central Forest Belt by the executing agency, the Vidarbha Nature Conservation Society (VNCS). These are:
 - The executing agency has started Community Based Biodiversity Conservation and livelihoods Project in five villages around Nawegaon National Park in Gondia district with the help of UNDP and in 15 villages in Armori Taluk of Gadchiroli district.
 - The State Forest Department and VNCS took initiative to identify areas to bring under the category of Conservation Reserve. A participatory process of identifying these areas with the involvement of Forest Department, local community representatives, local politicians and fisher folk has been initiated in the areas around Nawegaon National Park as model.
 - RST Nagpur University decided to set up Biodiversity Park and a Committee was constituted to prepare action plan. VNCS is one of the members of the committee. The final plan of action has been submitted to RST Nagpur University for approval.
 - The Participatory Biodiversity Registers (PBRs) process have been initiated by the Indian Institute of Science, Bangalore and other NGOs in eight villages in Vidarbha.
 - The process of drafting Biodiversity Rules for Maharashtra state has been completed. The draft Biodiversity Rules have been submitted to the state government for approval. NGOs are demanding debate on it and have requested the state government to make it public for necessary comments/suggestions by the stakeholders.
 - An e-group on PBR implementation has been formed for Vidarbha region in a recently held meeting of the NGOs.
 - A Vidarbha level workshop was organised through a DFID programme on August 7-8, 2006 at Nagpur on how to address implementation of Biodiversity Act and Rules and incorporate the BSAP in their regular programme.

- The State Government of Maharashtra has started process of constituting its Biodiversity Board.
- The NGOs involved in formulating the BSAP along with other NGOs have started making people aware about the Biological Diversity Act and Rules.

NATIONAL:

- The Centre for Environment Education has dedicated a page for NBSAP follow up in their bimonthly newsletter *News EE*.
- Scientists of the ZSI have expressed interest in implementing the SAPs relevant to them in the National Action Plan. The Coordinator of the TPCG made a presentation to some representatives including the Director, Zoological Survey of India in early December 2003.
- Earthcare Films has made a series of films on Women and Biodiversity, the proposal for which was discussed and responded to by the TPCG during the NBSAP process. Two of the films in the series are located in NBSAP sites and drawing from the processes and recommendations in there.
- The Concise version of the NAP has been translated into Telugu and published.

INTERNATIONAL:

- The International Institute for Environment and Development (IIED) published a handbook of participatory tools used in prepare India's NBSAP titled, "An Activist Approach to Biodiversity Planning".
- IIED's journal Participatory Learning and Action (PLA Notes No.53) has published an article on NBSAP titled "Creating stakeholder ownership of biodiversity planning: lessons from India ". It also carried a separate piece on the interactive radio drama initiative done for the Karnataka BSAP.
- A scoping exercise for mainstreaming the ecosystem approach into integrated water resource management, India carried out by IUCN in 2004 integrated many initiatives and recommendations from the NBSAP.
- Another scoping exercise for select mountain regions of India carried out by IUCN in 2003 incorporated recommendations from some of the ecoregional plans done under the NBSAP.

VIII. Conclusion

The process of formulating the NBSAP and what has happened subsequently has been a fascinating learning experience. There have been several questions since the process started and was stalled as to what really went wrong and what could have been done better. Many are of the opinion that perhaps there was not enough political lobbying to begin with. If the need to get a 'buy in' from the political lobby from the very beginning had been perceived, then there could have been more effort put into engaging with politicians and orienting them to the entire process. As a result of the poor lobbying, some politicians who were contacted later were of the view that the entire process of getting the final report to be accepted by the government could have been handled better.

What can be done now? It is imperative that the MoEF informs the relevant people about the current status of the NBSAP. As per India's commitment to the CBD, it is committed to submit the country's NBSAP in 2006. There is however, no information if this has been finalized. Lobbying and campaigning efforts to make this document available to the public need to continue. In the event the MoEF does come up with the final NBSAP, it would be interesting to compare it with the final technical report submitted by Kalpavriksh to see what kind of changes have been made. There also needs to be continued efforts towards getting the MoEF to approve the remaining BSAPs and then getting them published.

The process of formulating the technical report of the NBSAP generated a very impressive network of likeminded individuals working on biodiversity conservation and livelihood issues throughout the country. This network needs to be revived and then kept going. The technical report also came up with a range of recommendations for various sectors. These need to be used as and when opportunities arise. The report represented the voice of thousands of people and these recommendations thus need to be implemented wherever possible. Key strategies from the document can be presented at appropriate forums and implementation sought. As is indicated in this paper, implementation of strategies and actions from various BSAPs continues at various levels. It is important to keep track of this too.

This four year process of formulating the technical report for India's NBSAP was perhaps the largest participatory exercise this country has seen. It was a unique process that yielded some extremely interesting outcomes. It is important that the energy from this process is not allowed to die down.

ANNEXURE 1

Structure of the Final Report

Chapter 1 deals with the background, objectives, scope and approach of the NBSAP methodology and a critical analysis of the project.

Chapter 2 contains the statement of principles on which the analysis and recommendations are based.

Chapter 3 deals with the evolutionary, physical and, historical context of India's biodiversity.

Chapter 4 discusses the overall profile of India's biodiversity. It is sub-divided into sections dealing with the components, range, global position, and current status of biodiversity as well as the importance and uses of biodiversity.

Chapter 5 deals with some of the key proximate and root causes for the loss of biodiversity in India.

Chapter 6 discusses ongoing initiatives in conservation, sustainable use and equity, and the major actors involved. This chapter is divided into two sections: 1) natural ecosystems and wild taxa, and, 2) agricultural ecosystems and domesticated taxa; further subdivided into the following sections:

Understanding and information (including research and monitoring)

- *In situ* conservation
- *Ex situ* conservation
- Sustainable use
- Equitable access, use, and sharing of benefits
- Capacity building
- Inter-sectoral coordination
- Policies and laws
- Financial measures
- Technological measures
- International fora

Chapter 7 deals with the broad strategies and related actions for achieving conservation, sustainable use and equitable access/sharing of benefits. It too is divided into two broad parts: 1) natural ecosystem and wild taxa, and, 2) agricultural ecosystems and domesticated taxa, with each section divided into further sub-sections as listed above. It also contains an opening section on the overall strategies needed, and a closing section giving a list of prioritised strategies.

The Strategies and Actions are divided into four sections:

- -Overall **planning and governance directions**, and the broad framework within the context of which specific strategies and actions are to be seen.
- -Strategies and actions for **wild biodiversity** (i.e. natural ecosystems and wild taxa);
- -Strategies and actions for **domesticated biodiversity** (i.e. crops, livestock, and pets);
- -Strategies and actions relating to the **links between wild and domesticated biodiversity**.

In each of these sections, there is a set of broad **strategies**, and within each strategy, specific **actions** that are required. Each action is accompanied by details on the *justification* for the action, the specific steps needed, the agencies recommended to be responsible for these steps, and the *time frame*. Also mentioned in many cases are ongoing initiatives that can be built upon or learnt from. Cross-references amongst strategies/actions that need to be read together, are also given.

In the case of many of the actions, existing **Government of India schemes/programmes** that are relevant and could therefore provide support to these actions, are also mentioned in a box at the end.

A total of **101 strategies** and **345 actions** are recommended, with the following break-up:

-Overall planning and governance: 2 Strategies, 2 Actions

-Wild biodiversity: 65 Strategies, 250 Actions

-Domesticated biodiversity: 34 Strategies, 89 Actions (it may be noted here that a number of strategies and actions listed

for Wild biodiversity are relevant to Domesticated biodiversity also, hence are not repeated).

-Links between wild and domesticated biodiversity: 4 Actions

Chapter 8 deals with the overall implementation mechanism that would be needed for the strategies and actions presented in the earlier chapter.

Sections prior to or after these eight chapters also provide:

- Definitions of key terms used
- Glossary and List of Abbreviations
- An index of agencies and organisations identified as the lead agencies responsible for each action
- Annexures with lists of the Technical and Policy Core Group, the executing agencies and sub-thematic reviewers, and various people who contributed to or commented on the NAP.

Annexure 2

Highlights of the Final Technical Report of the National Biodiversity Strategy and Action Plan (as submitted by the Technical Coordinator)³

Diversity and Importance of India's Biodiversity

India, with only **2.4% of the world's area, is home to over 8% of its biological diversity.** This makes it one of the world's megadiverse countries.

Its diversity of ecosystems (forests, wetlands, grasslands, marine areas, and deserts) is amongst the world's highest, and harbour over **137,000 species of wildlife** (about 47,000 plants, and 90,000 animals). The extent of micro-organism diversity is unknown.

The diversity of crops, livestock, and pets is also one of the world's greatest. Crops with high diversity include **rice (over 50,000 varieties), mango (over 1000), sorghum (over 5000), pepper (over 500).** Livestock with high diversity include **goat (20 breeds), sheep (42), poultry (18), buffalo (15) and cattle (30).**

This diversity is important for its own sake. It also directly **sustains the lives and livelihoods of over 70% of India's population.** Several hundred million people use wild biological resources for health care, scarcity foods, supplementary nutrition, housing, fodder, fuel, biopesticides, and other uses. Agricultural diversity is the basis of survival of most small farmers and pastoralists.

Biodiversity is also the backbone of ecological and human security for us all, including through **climatic stability, sustaining water sources, soil productivity,** and other benefits.

Without biodiversity, we would all perish in minutes!

Loss of India's Biodiversity

In the last couple of centuries, **India has lost over half of its forests, 40% of its mangroves, and a significant part of its wetlands.**

At least **40 species of plants and animals have gone extinct,** including the Cheetah and the Pink-headed Duck. **Several hundred more** are under threat of extinction.

Much of the diversity of crops and livestock has been lost or is threatened in the field. **All 18 of India's poultry breeds are under threat!**

³ The Technical and Policy Core Group that coordinated the NBSAP process included: Vibha Ahuja, Seema Bhatt, P.C. Bhattacharjee, Ravi Chellam, Deepa Kapoor, Kanchi Kohli, Ashish Kothari, B.M.S. Rathore, Madhu Sarin, P.V. Satheesh, Darshan Shankar, Virinder Sharma, Gam Shimray, V. Shruti Devi, Bansuri Taneja, M.V.M. Wafar.

Immediate causes of biodiversity loss include habitat destruction, hunting, over-exploitation, and introduction of exotics.

Behind these factors, are **root causes** of destruction: an unsustainable and insensitive model of 'development', break-down of traditional management practices and institutions, centralization of decision-making powers in the government, serious social and economic inequities, changes in moral and cultural values, lack of recognition of the full value of biodiversity in economic planning, destructive trade practices, and demographic changes.

Biodiversity loss is also accompanied by a high level of **biopiracy**, the theft of bio-resources and traditional knowledge.

The above trends have been significantly worsened by the processes of **globalization**.

Ongoing Positive Initiatives

Serious **attempts to tackle the threats to biodiversity, and conserve what remains**, include widespread research and documentation, setting up of wildlife protected areas, community initiatives in conservation, revival of organic biologically diverse farming, legal and policy measures, participatory methods like joint forest management, sustainable use of biological resources for livelihoods, creation of institutions for natural resource management, and so on.

Despite the above, **huge gaps** remain in:

- our understanding of biodiversity (a lot of India's biodiversity is still to be discovered!);
- ensuring conservation of the full range of wild and agricultural biodiversity;
- achieving the empowerment and participation of citizens, especially local communities;
- building capacity of various sections of society to tackle biodiversity issues;
- ensuring that local people receive the full benefits of biodiversity conservation and use;
- developing and using the most appropriate technologies;
- coordinating various agencies of the government that relate to biodiversity, and in particular sensitizing the agencies dealing with 'development' activities;
- harmonizing the plethora of laws and policies relevant to biodiversity;
- ensuring adequate financial resources for biodiversity;
- adequately using international agreements, and influencing their course.

Key Strategies and Actions

Given the above situation, the key recommendations include:

- ◆ Preparing a **national land and water use plan**, mapping the areas of the country that are essential for ecological and livelihood security, and declaring them off-limits to large-scale commercial developmental purposes;
- ◆ Creating or strengthening **decentralised institutions of governance**, with the basic planning and decision-making unit being at the village or hamlet level;

- ◆ **Re-orienting development-related** policies, laws, and schemes, to ensure that biodiversity and people's livelihoods are secured;
- ◆ **'Ecoregional planning'** on the basis of ecological boundaries such as river valleys, forest blocks, coasts, etc., including 'ecoregions' cutting across state and international boundaries;
- ◆ Strengthening the **Environmental Impact Assessment** procedure, by integrating biodiversity in all its aspects (especially agricultural biodiversity, currently missing), and increasing the role of citizens;
- ◆ Integrating biodiversity concerns **through inter-sectoral and inter-departmental coordination** at local, district, state, and national levels;
- ◆ Expanding and strengthening the network of **conservation sites for wild animals and plants**, including protected areas (national parks and sanctuaries), community conserved areas (like sacred sites, community forests, village tanks), Biosphere Reserves, Ecologically Sensitive Areas, Heritage Sites, Medicinal Plant Conservation Areas, etc.;
- ◆ Conserving areas ("agrobiodiversity protected areas") critical **for indigenous crop and livestock diversity**, and promoting practices that would help to conserve this diversity amongst farmers, pastoralists, fisherfolk, and others, including through food policy;
- ◆ Respecting, protecting, and building on **traditional knowledge** of biodiversity, including through community-led development of biodiversity knowledge registers, and innovative legal or other means of traditional knowledge rights that do not fall into the trap of privatised intellectual property rights like patents;
- ◆ Strengthening and promoting community-level crop **gene banks and seed banks**;
- ◆ Promoting indigenous, nutritionally-superior food crops such as coarse millets in the **Public Distribution System**, mid-day meal schemes, Food for Work programme, and other such public sector programmes;
- ◆ Regulating **tourism** in natural land and waterscapes, and facilitating genuine ecotourism through strictly enforced guidelines, including by enhancing the capacity of local communities to manage it;
- ◆ Tackling a range of **threats** to biodiversity, including quiet but widespread ones like alien (exotic) invasive species, and climate change;
- ◆ Facilitating sustainable, **bio-resource based livelihoods** (including micro-enterprises), of fisher folk, adivasis and other forest-dwelling communities, small peasants, artisans, and pastoralists, with special attention to disprivileged sections like women, nomads, and the landless;
- ◆ **Building capacity** of all sections of society to handle various issues of biodiversity conservation, especially of decision-makers, urban citizens, and others who are particularly alienated from ecological and livelihood concerns;
- ◆ Estimating the full economic and social **values of biodiversity**, especially its role in ensuring water and climatic stability, soil productivity, and people's livelihoods;
- ◆ Re-orienting **state and national budgets**, to squarely integrate the true and full value of biodiversity and the environmental services performed by natural land and waterscapes, and redirect funding for rural and urban development into conservation and sustainable use;
- ◆ Increasing **funding** for conservation measures, including **through innovative financial mechanisms** such as a tax on industries that use biological resources, an urban tax on rich citizens that benefit from 'free' services provided by natural ecosystems;

- ◆ Promoting traditional and new **technologies** that reduce the negative impact of current human activities and use ecologically sustainable alternative materials, such as organic farming, non-conventional energy, environmentally friendly architecture;
- ◆ Facilitating and developing ecologically conscious **consumer groups and markets**, such as for organic food, alternatives to plastics, and other eco-friendly produce;
- ◆ Ensuring that decisions on **genetically engineered or modified organisms** (GMOs) are evaluated taking into account long term ecological and socio-economic studies by independent agencies, ensuring the participation of key stakeholders in decision-making and disclosure of information generated in evaluating biosafety.
- ◆ Advocating the integration of biodiversity and livelihood issues specific to India, at all international forums, including environmental treaties, and economic agreements such as under WTO.

The report specifies that the report's strategies and actions can be implemented through:

- ◆ relevant **authorities** or **boards** at local, state, inter-state, and national levels, with a focus on empowered local community institutions;
- ◆ a committee under the National Biodiversity Authority (Chennai);
- ◆ a **National Biodiversity Network** that builds on the network created in the NBSAP process;
- ◆ specially **designated officers** to handle biodiversity matters in each Union Ministry.

Overall, the national report advocates that the focus of all planning and decision-making in India should be to achieve the twin objectives of ecological security (including conservation of ecosystems and species) and livelihood security (especially of the most under-privileged sections of society).