

**The Pakistan National Conservation Strategy:
A Plan of Action for The 1990s**

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The Pakistan National Conservation Strategy: A Plan of Action for The 1990s

Tariq Banuri

Introduction

The Pakistan National Conservation Strategy (NCS), approved by the government on March 1, 1992, provides a broad framework for addressing environmental concerns in the country. The strategy was formulated through a three-year long process of consultation between individuals, groups and organisations representing a broad spectrum of views and interests in the issue. Because of its consensual nature, it shall enable effective coordination between the actions of federal and provincial governments, NGOs, the private sector, local bodies and local communities in pursuit of sustainable development.

The document placed below presents a plan of action for the implementation of the NCS during the period of the Eighth Five year plan, 1993-98. In addition to a brief overview of the action plan and its evolution, presented in this section, the document includes a background description of the situation on environment and development in the country (Part I), actions already initiated in the government and elsewhere (Part II), and the future plan of action in the areas of institutional development, supportive regulatory and economic incentives, and promoting mass awareness (Part III). A fourth component, namely development projects to be undertaken during the Eighth Five Year Plan period, is being circulated separately. The objectives of the action plan and the project proposals are both to strengthen the initiatives in hand, and complement them with new actions as required in the future. As in the case of the NCS, these documents represent the firm intention of the government to ensure that the development process henceforward is environmentally sustainable.

Background: The National Conservation Strategy

The NCS begins with a diagnosis of the country's environmental problems (including the action to date) and goes on to prescribe a number of remedies for their amelioration. In recent years, environmental problems have begun to acquire increasing salience both within the government and in public discussions. While the NCS is the cutting edge of the response to these concerns, it is by no means the only one. Indeed, a major element in the implementation of the NCS is the need to incorporate and integrate the sundry other policy measures introduced from time to time into a coherent and effective package.

The main environmental problems identified in the NCS are a rapid increase in demographic and economic pressure on finite natural resources, water and land, because of overuse as well as poor husbandry, a high rate of deforestation in a country that already has too little of this resource, wasteful energy consumption patterns in the face of demonstrated scarcity, and inadequate systems for the disposal of industrial and municipal wastes, which by producing a high level of water and air pollution, contribute to endemic environmental illnesses in the population. These problems contribute both to a long-term deterioration in the economic base of the country, and to social and economic costs that reduce social welfare as well as disposable income.

These, however, are the symptoms of the environmental crisis. Addressing the symptoms requires not only remedial action in the form of restorative or projectionist projects, but also a

wide ranging assault on a number of structural weaknesses that created and have perpetuated this situation. In this respect, three areas were highlighted as in need of particularly attention. These are: Institutional strengthening, mass awareness, and the enactment of regulatory legislation as well as the introduction of economic incentives and other policy measures.

Besides highlighting the urgent need to remedy structural weaknesses, the NCS also recommends action in fourteen core programme areas through an investment programme, tentatively estimated at Rs. 150.7 billion over ten years. The fourteen core area are:

1. Maintaining soils in cropland
2. Increasing irrigation efficiency
3. Protecting watersheds
4. Supporting forestry and plantations
5. Restoring rangelands and improving livestock
6. Protecting waterbodies and sustaining fisheries
7. Conservation of biodiversity
8. Increasing energy efficiency
9. Developing and deploying renewables
10. Preventing and abating pollution
11. Managing urban wastes
12. Supporting institutions for common resources
13. Integration population and environment programmes
14. Preserving the cultural heritage

The Implementation Process

While granting approval to the NCS on March 1, 1992, the Federal Cabinet decided to establish an Ministerial Committee to oversee the implementation of the strategy, the committee had the following members:

1. Sen. Anwar Saifullah Khan, Minister of Environment and Urban Affairs, *Coordinator*
2. Sen. Sartaj Aziz, Minister for Finance and Economic Affairs
3. Syed Fakhar Imam, MNA, Minister for Education
4. Mr. A. G. N. Kazi, Deputy Chairman, Planning Commission
5. Secretary, Environment and Urban Affairs Division

Simultaneously with the governmental approval of the NCS, a number of other recommendations of the strategy were also put into action. These include the establishment of the **Sustainable Development Policy Institute**, an independent, non-profit policy research institute designed to provide expert advice to the government as well as the private and NGO sectors **Government Roundtables** intended to provide continuous consultation on policy issues related to the implementation of the NCS. Earlier, a **Journalists Resource Center for the Environment** had been established to provide information to the mass media in support of the NCS. In the NWFP, the government has embarked upon the preparation of the a **Sarhad Provincial Conservation Strategy**, to carry out the recommendations of the NCS. Lastly, in separate but related developments, the federal government as well as the four provinces have established **Environmental Protection Agencies** to monitor the actions of individuals, firms and organisations for their environmental impact.

Keeping these and other developments in view, the Implementation Committee directed the Environment and Urban Affairs Division to prepare a detailed and integrated proposal for the implementation of the NCS during the period of the Eighth Five Year Plan, 1993-98. the proposal prepared accordingly after wide ranging consultations with relevant federal government ministries, provincial government agencies, federal and provincial EPAs, selected NGOs and private sector business firms, forms the basis of the document placed below. It was discussed

by the Implementation Committee in its second meeting on September 3, 1992. The committee approved a four component action plan, chosen in accordance with the spirit of the NCS prescriptions.

The four areas are the following:

1. Strengthening of institutions, in particular technical, regulatory and participatory institutions;
2. Creation of a supportive framework of regulations and economic incentives;
3. Formulation of a broad based communications campaign for mass awareness; and
4. Implementing projects in NCS priority areas.

It may be noticed that the objective of the first three components of the action plan is to modify individual and organisational behaviour, in order to make it compatible with the demands of environmental sustainability. The modification of behaviour is achieved by regulations, incentives, and awareness or education. However, in order to ensure that these actions produce the desired effect, it is necessary that they be supported by appropriate institutions. Effective regulation requires the existence of effective regulatory institutions, the formulation of incentives would be made possible by appropriate research and policy institutions, and their implementation by regulatory and/or participatory institutions, and so on.

Institutional Strengthening

All studies carried out to evolve a mechanism for the implementation of the NCS have laid strong emphasis on the obvious need for strengthening of the institutional system. the following types of institutions need to be strengthened:

- a) Policy and planning institutions, including the key policy making institutions in the federal government -- the NCS Unit, EUAD, the Environment Section in P&D--and in provincial, municipal and local government, as well as policy support institutions in the non-government sector.
- b) Regulatory institutions, covering not only the federal and provincial EPAs, but also normal legal and judicial institutions.
- c) Technical Institutions, including research institutes, think tanks, laboratories, and appropriate educational institutions.
- d) NGOs, including not only environmental NGOs or those with an environmental orientation, but also umbrella NGOs, and institutions needed to service and support the programmes undertaken by individual groups.
- e) Local Participatory institutions, including the strengthening and re-orientation of municipal and local governments, as well support for NGOs engaged in community development activities.
- f) Private Sector institutions, including chambers of commerce and industry, financial institutions, labour research and educational institutions, mechanisms to promote green business, and Business-Government Roundtables.

In the area of institutional development, action has already been initiated on virtually all the recommendations of the NCS. The major thrust of the effort now is to strengthen the capacity of relevant institutions, create effective linkages and networks between them, and to ensure their sustainability.

Regulation and Incentives

Besides appropriate institutions, the shift towards sustainable development requires the creation of mechanisms that would induce economic agents to undertake the desired actions on their own.

In terms of policy, these mechanisms include a proper regulatory and legislative framework, and a system of incentives.

As for the legislative framework, Pakistan does have several laws on the on the statute books whose ultimate intent is to protect the environment. The most of important of these is the Environmental Protection Ordinance, 1983, but there are many laws predating the EPO. Because of a number of failings, however, they were not being implemented fully and effectively. The existing laws are often fragmented, outdated or otherwise inadequate, mainly because they had been drafted and enacted when environmental concerns were not paramount. In addition, many important areas are omitted from the legislative domain altogether. Finally, given the government's intention to eliminate regulatory impediments to industrial activity, the nature of environmental regulation must be such as to facilitate rather than obstruct activities that meet the approved standards and criteria.

Work has already begun on the review of existing laws and regulations including the consolidation of earlier laws, resolution of outstanding sources of confusion, provision of legislation cover to NCS implementation, and introducing new legislation where required.

As mentioned, however, legislation and regulation are only one aspect of the policy package for sustainable development. Indeed, this is to be used only when a more desirable alternative, namely economic incentives, is not available, or where it is needed to complement and support the incentive package. Without the provision of appropriate economic incentives, most prescriptions would fail. In view of this, the Environment and Urban Affairs Division has directed SDPI to prepare a comprehensive set of recommendations on economic incentives needed to promote natural resources management and conservation. the recommendations shall be sector specific and internally consistent, and keep in view other policy objectives of the government, namely promoting industrial development and investment, employment generation, revenue generation, and human resource development. These will then be submitted to the government for action in the context of economic planning and budgeting.

An important part of the incentive package shall be the creation of an Environment Fund for providing credit to the private sector and grant assistance to NGOs. An amount of Rs. 30 million has been allocated in the current years non-development budget as a special grant for supporting NGOs. This initiative can be changed into a more elaborate programme of support in the future.

Mass Awareness

The third component of the proposed action plan is a coordinated communications campaign for mass awareness. The change in popular consciousness through this process is a necessary pre-condition to a gradual but permanent change in attitude and behaviour. The communications campaign should use all elements of the mass media, including the print and electronics media, as well as such small scale or informal channels as lectures, seminars, workshops, school classes, sermons, advertising, theatre, film and plays.

An important component of the awareness campaign is the institutional and skill development in the mass media. Many earlier communications programmes tended to exhibit a certain lack of professionalism, including random and often conflicting, meaningless and somewhat irritating signals with a propagandist rather than a persuasive tone. The result is that the limited financial, human and cultural resources available for mass education are being dissipated. The development of professionalism requires coordinated action in the public and private sectors and the NGOs. It would take the form of support for capacity building, facilitation of access to information generated locally as well elsewhere, and training and skill development of media

personnel. It is expected that the creation of opportunities in this area would lead to a response from potential suppliers.

Development Projects

Under the instructions of the Implementation Committee, a revised list of projects in the fourteen core programme areas of the NCS has been prepared in consultation with the various agencies of the federal government as well as the provincial governments, and prominent environmental NGOs. Given the desire of the government to initiate swift action against environmental degradation, it was decided to prepare an exhaustive list of projects rather than limiting it only to ones that are at an advanced stage of development. As a result, the projects included in the list range from some at the pre-feasibility stage to others at the stage of feasibility, detailed design, and given some partially implemented ones. One consequence of this decision is that aggregate figures of investment outlay cannot be estimated at this point. the figure of Rs. 150.7 billion quoted above, must therefore, be treated with caution.

As mentioned the above list of projects also includes those to be undertaken by NGOs. In order to enable and encourage NGOs to undertake development projects to further the goals of the NCS, the government has already created an Environment Fund.

Part I
The State of Pakistan's Environment

Introduction

This section describes the overall problem that the NCS seeks to address, namely the state of the environment in Pakistan and the institutions and policies that effect it. The objective is to set the stage for the actions that have already been initiated in response (Part II), and the proposals for the future (Part III).

Although environmental concerns in Pakistan have only a recent history, they have grown in importance very rapidly. A major reason is that the combination of high rates of economic and population growth, which has caused the economy to begin hitting against its natural resource constraints. As a result, there is a palpable increase in the speed of environmental degradation, notwithstanding the low aggregate level of economic activity in the country.

The rate of utilisation of the two key natural resources of a predominantly agricultural country, land and water, has almost reached full capacity; forests have begun to disappear; the rapid extinction of flora and fauna, and the disappearance of habitats has become a source of major concern; and the pollution of air and water resources has reached intolerable levels.

Unfortunately, legal and policy responses to environmental problems date from a period when the pressure on natural resources was considerably lower. As result, even laws pertaining to the regulation and use of natural resources often lack a proper definition of the environment, quantifiable standards, and implementation tools, thus leading to sporadic and arbitrary enforcement. In many cases, operational regulations under the laws still needs to be prescribed, and penalties are either too harsh or have been depreciated by inflation., all of which contribute to tax enforcement.

In addition to this, economic policies have traditionally been formulated with other imperatives in mind, not on the basis of their impact on the environment. While a number of actions have been introduced to remedy the most glaring problems, the proper analysis of existing policies and the formulation of a coherent and integrated policy package needs to be undertaken. this is important also because laws and regulations will generally not be effective in the absence of an enabling incentive system.

A related issue is that institutional arrangements for policy implementation, also dating from the earlier period, are often not suited for a quick and effective translation of the government's growing concerns into action on the ground. Skills, capacities, and equipment needed to monitor or remedy environmental change are often in short supply, and can only be developed slowly; data and information on important issues is only now beginning to be collected and collated, and will take some to be absorbed and analysed before it can form the basis of judicious policies; and the personnel of many government or other institutional have not been sufficiently exposed to environmental concerns or solutions.

Institutional weaknesses appear equally in the public and private sectors. Business are often equipped to respond even to profitable opportunities for environmental conservation, let alone to those that impose a financial cost; most NGOs are either welfare oriented or developmental rather than environmental in character, and often lack mid-level professionals and properly trained support staff; other civic organisations too are only now beginning to acquire the knowledge and competence on environmental issues.

More generally, since the environmental problem is of a recent vintage, the alarm has not yet filtered through to influence the actions of countless individuals and organisations. The sensitisation of all these decision makers to the consequences of their actions requires a major campaign of mass awareness in the country.

The path to sustainable development, therefore, shall require concerted action on all four fronts: development projects to conserve natural resources, introduction of appropriate legislation and incentives, institutional development, and mass awareness.

Environment and Development in Pakistan

Pakistan's economic record has been well documented and subjected to detailed periodic reviews. A recent assessment summarised the progress so far as being a case of "unbalanced development"¹, i.e., an impressive growth record accompanied by poor achievements in human development. Income growth since independence has been considerable, particularly during the 1980s, when Pakistan was ranked as the sixth fastest growing economy. International migration and resulting remittances have also contributed to widespread economic benefits. Compared to their South Asian neighbours, Pakistanis generally enjoy a higher standard of living. The long term prospects of the economy appear to be reasonably bright, despite short term constraints.

Unfortunately, however, this respectable performance has not been accompanied by a similar improvement in the quality of life. Literacy and life expectancy are much below those of countries with comparable levels of GNP, and access to health and education services, particularly for women and rural populations unacceptably low. Lastly, environmental problems, caused by a combination of one of the highest rates of population growth in the world and an inadequate system of managing natural resources, threaten the sustainability even of this unbalanced pattern of growth.

Pakistan,² the tenth most populous country in the world, has the fourteenth highest rate of increase of population among countries with more than 1 million people. It covers only 0.67 per cent of the world's land, contains 2.15 per cent of the world's people (which proportion will increase to 4 per cent in the next 10 years),. Consumption as well as production in Pakistan is derived almost exclusively from biomass produced within the country. As such, Pakistan's natural resources and environment are crucial to its future.

Less than 20 per cent of the 88 million hectares of the country (including Northern Areas and AJK) has the potential for intensive agricultural use, and it is under considerable threat from waterlogging, salinity, wind and water erosion, flooding and loss of organic matter. the amount of cultivable land is nearly matched by the land actually being cultivated.

Pakistan relies on irrigation for more than 90 per cent of its food and fibre production. Water withdrawals have increased markedly since 1960-61, but there been no significant improvement in water-use productivity (crop output per unit of water). Yet there is an absolute limit to the amount of water available in the Indus basin; the mean value is 137.2 million acre-feet (MAF), with an 80 per cent chance of exceeding 123 MAF , Approximately 104 MAF are already diverted at canal heads, and additional withdrawals may be unacceptable because of harmful environmental side-effects, such as on coastal mangroves. As such, future growth in agriculture, still the bedrock of the economy, can only come from improved husbandry of soils, and better water management practices.

Areas classified as forests are estimated to cover approximately 4 million hectares, of which less than 2 million are under some form of tree cover. While precise data are still being collected, it is feared that the combined effect of logging, foraging for fuelwood, overgrazing by livestock and the expansion of human settlements into hitherto afforested areas has taken a

1 For details see Balanced Development in Pakistan, [UNDP, Islamabad, 1992]

2 This description borrows extensively from the NCS document, pp. xvi-xix

severe toll of the limited forest resources of the country. More generally, although serious thought has been given to the protection of biological resources, a number of species face extinction, in part because of the loss of habitats to deforestation. Also, the coverage of ecosystems in national parks and protected places is far from comprehensive.

Although energy resources in the country are limited and underdeveloped, energy efficiency is extremely low because of transmission and distribution losses, unsuitable design and overall wastage in consumption. The NCS estimates that the industrial sector could save 22 per cent of the energy it uses with no loss of output.

The air and water resources of the country are highly polluted, because of improper disposal of municipal and industrial wastes, inadequate treatment of effluents as well as water supplies and poor regulation of vehicular emissions. The result is a high incidence of gastro-intestinal diseases, economic losses (such as in the production of fish), respiratory illnesses, and long term health effects that have not even begun to be estimated.

Pakistan's economic development is entering a new phase. The government is committed to allowing the private sector to play a greater role in future growth. A major liberalisation programme is currently under way, opening the economy to competitive pressures. However, growing budget and balance of trade deficits place a pressure not only on the development process, but also on the objectives of the NCS.

Laws and Policies

Pakistan has several laws on the statute books with an incidental environmental impact. Although they far from adequate for dealing with the emerging problems, these laws too are not being implemented fully and effectively. A selective list of the most important of such laws is given in Annexure I.

As in many other countries, the implementation of laws relating to the environment is less than satisfactory. There are a number of reasons for this. First, the objectives of most laws were other than environmental (e.g., raising government revenues, or regulating loan disbursement); therefore, their environmental impact is ancillary. This creates problems of motivation for law enforcers, and of awareness for potential violators.

The legitimacy and effectiveness of the laws is also affected by their precision and objectivity. Most laws do not define the environment precisely, thus leaving implementation open to contrasting interpretations. Also, since many were enacted at a time when the problems were not sufficiently acute, they do not include precise or quantitative standards, again leaving enforcement to the whims of the enforcing authority; a reason for this deficiency is the absence of tools of implementation (such as monitoring equipment or laboratories). Finally, the fragmented nature of the laws tends to render them subject to arbitrary and inconsistent enforcement. All this results in a loss of respect for the law.

Another set of reasons for the poor state of implementation is the disjunction between the magnitude of the offence and that of the penalty. Laws tended to be punitive rather than reformatory in nature. The problem was, however, that the degree of punishment that would deter violators was generally not awarded. Indeed, even if it was awarded, it did not constitute a sufficient deterrent, because most people viewed it as discriminatory and selective. On the other hand, many laws have become ineffective because the rate of inflation has rendered the level of fines ridiculously small in comparison to benefits from violation.

The item of legislation with the most concrete relevance to environmental conservation is the Pakistan Environmental Protection Ordinance, 1983 (EPO). Although the EPO was viewed as the country's earliest clear statement on the issue, the government now feels that it was at best a modest attempt to meet Pakistan's growing environmental problems. It does not cover specific important areas, such as water, air, marine and noise pollution, such important sources of pollution as municipal or agricultural activities, or specific geographical areas or fragile ecological systems (such as the coastal region). More importantly, it views the environment only in negative terms, i.e., as pollution control, without giving importance to resource conservation. It is partly due to these deficiencies that the Ordinance has not had an impact on Pakistan's environment.

The upshot of the discussion is that there is a need to overhaul the legislation on the environment, to consolidate and update existing laws, enact new ones, and to strengthen institutional arrangements for enforcement. As we shall see below, some actions have been initiated in this area, and others are proposed for the future.

As in the case of legislation, government policies too had generally not been introduced with the environmental objective in view, even though these too often have environmental consequences. Major objectives include promoting industrial investment, agricultural development, national integration, raising government revenues, and subsidising the consumption of poor or otherwise critical groups in society. Again, the environmental impact of these policies was incidental. Some policies--such as the promotion of tubewells, selected agricultural research programmes, seasonal tree plantation campaigns, watershed management programmes, industrial zoning laws--had a favourable impact.

Other policies conflicted with environmental considerations. Examples include low energy prices, which encouraged wasteful consumption and discouraged the development of such sustainable alternatives as biogas or solar energy; encouragement of pesticides; low or flat irrigation water charges; forest exploitation policies; price controls on agricultural and livestock; and the promotion of chemical industry, mining, and local transportation without adequate environmental safeguards.

In short, until recently, the government's policy response to environmental concerns was characterized by a degree of fragmentation and incoherence. Although several environmental problems were recognized and addressed through amelioratory policies or legislation, it was done on a case-by case basis rather than through a coherent and integrated framework.

The absence of a suitable policy framework created a number of problems. Since each issue and each resource was looked at in isolation from a broad environmental context, there was a tendency to favour direct control over a more integrated response; moreover, the disregard of cross-linkages between issues and resources validate the prevailing revenue-maximizing attitude towards nature. Lastly, it also encouraged a view of local populations as obstacles rather than partners in management.

Environmental issues were not a major factor in planning documents, the choice of fiscal or monetary incentives, or even in the determinants of expenditure policy. Macroeconomic policies have long been driven by more immediate concerns, such as the need to manage the balance of payments, budgetary deficits, or international debt. Fiscal instruments, such as depreciation allowances, tariff rebates, effluent charges, user charges, or concessional finance have not been employed consciously in support of environmental objectives.³ In fact,

3 For further discussion of economic incentives, see section three of the report.

environmental considerations have only recently been introduced into the project approval process.

Investment in national resources was generally oriented towards techniques rather than people and resources. Even when policies pertained to the rights and interests of local populations, plans would be formulated and enforced from the top rather than discussed with and implemented by local people and their institutions. The result was that indigenous knowledge and local patterns of resource use were often ignored in official analyses, and traditional while more expensive and less effective administrative systems were being created.

The alternative to popular involvement is the reliance on simple techniques which can be applied everywhere. Major techniques in which considerable investment has been made in recent years include: watershed development, social forestry, on-farm management, and soil conservation. Most if not all techniques are based on a standard package of inputs, dominated by civil works and machinery, which changes very little over time and across regions.

The absence of an integrated framework diverted attention away from fundamental issues of institution building. Barring a few exceptions, legislation for coping with environmental degradation either exists or has been enacted in the last two decades. The main obstacle to sustainable development is not the absence of laws but the absence of institutions through which the laws can be implemented effectively and consistently⁴. Similarly, the problem is not the absence of policies but the absence of institutions and regulatory bodies that can execute the policies effectively in the environmental field.

Once again, the need for incorporating environmental considerations into policy making is well understood, both as a means to avoid unanticipated costs, and to use economic and other incentives as the primary means for promoting environmental objectives. Some steps have already been initiated in developing a basis for such incorporation. Future progress shall depend on the efficiency of the institutions being established to oversee action.

Institutions

According to the Constitution, the environment is under the concurrent jurisdiction of the federal and provincial government; i.e. both levels of government have executive and legislative powers in this area. At the federal level, the primary responsibility for the subject rests with the Environment and Urban Affairs Division, and in the provinces, with the exception of NWFP, with the Physical Planning and Housing Departments. In the NWFP, the subject has been entrusted to the Planning and Development Department.

The growing concern over environmental problems has only slowly begun to be translated into a strengthening of the relevant agencies in the government. To look at the situation on the ground, the following agencies have a direct relevance to environmental conservation:

1. *Policy and Planning Institutions*
 - a. Federal Government Institutions: EUAD, PEPA, NCS Implementation Unit, Environment Section in P&D Division
 - b. Provincial Government Institutions: Provincial Departments, P&D Departments, Sarhad Provincial Conservation Strategy Unit (SPCS)
 - c. Metropolitan Corporations
 - d. Policy Support Institutions: SDPI

4 However there is a need to rationalise the 1983 Environment Protection Ordinance, a matter taken up in part three of this report.

2. **Regulatory institutions:**
 - a. Environmental Protection Agencies: PEPA, Provincial EPAs
 - b. Judicial Institutions
 - c. Metropolitan Corporations
3. **Technical institutions:**
 - a. Research Institutes: SDPI, PIDE, AERC, PCSIR, HEJ Research Institute,
 - b. Educational Institutions: LUMS, University of Peshawar, Engineering Universities (Lahore, Karachi, Peshawar), IBA
4. **NGOs:**
 - a. Environmental NGOs, e.g. WWF, SCOPE, EPSOP, MHS, Shehri, PEPF, PAEDAR, NICE, KAWWS, JRC, Action Aid
 - b. NGOs with Environmental Programmes, e.g., AKRSP, BRSP, SRSC, OPP, SUNGI, Shirkatgah, Aurat, FPAP, TRC, SRWCO, Bannh Beli, Alif Laila, PFD
 - c. Umbrella NGOs, e.g. IUCN, AKRSP, NRSP, TVO
5. **Local Participatory Institutions**
 - a. Local Governments
 - b. Community Development NGOs
6. **Private sector institutions**
 - a. Chambers of Commerce and Industry
 - b. Financial Institutions
 - c. Labour research and educational institutions
 - d. Business-Government Roundtables.

At present, government institutions are understaffed and under-equipped. This is only partially due to financial constraints. A more critical constraint is the scarcity of skilled professionals. This scarcity affects government and non-government institutions equally, and can only be remedied gradually. Other problems endemic to governments, such as corruption or poor work ethic are also pervasive, but they need extensive national reforms.

At a more intermediate level are structural deficiencies that can be overcome through medium run institutional reform. An important one of these is the ineffective coordination within the government as well as between governmental and non-governmental agencies caused by procedures and rules of government. For example, sub-watersheds in mountain and plateau areas, which need considerable conservation works, are arbitrarily divided under current arrangements not only among land- and use-controlling departments (e.g. Board of Revenue, Forests Department, etc.), but also among different programme agencies (e.g. WAPDA watershed unit, ABAD, the Soil Conservation Department). The result is often each agency patrols its sector boundaries and is not required to be concerned with sustainability. Rational long term use of natural resources requires effective coordination between the actions of different government agencies and private sector institutions.

Such coordination can only be produced through appropriate redrawing of responsibilities, establishment of routine procedures for inter-agency coordinating, and the entrustment of coordinating powers at all levels to specific institutions.

An important element in this respect is the issue of participatory institutions. The NCS justifiably lays strong emphasis on a participatory approach to implementation. The catalytic and often underestimated contribution of participatory institutions is to promote accountability, and to act as the watchdogs of the public interest. In general, NGOs have proved more effective at eliciting

popular participation in development or other actions. However, very few NGOs are currently capable of performing this role or to execute development projects. As such, there is a need to set up mechanisms through which new NGOs can be nurtured, strengthened and monitored for performance. This too would require effective collaboration between the government and a number of umbrella NGOs.

Lastly, the issue of institutional development is not limited to particular tiers of the government, or to the NGO sector. There is an even stronger need to strengthen the capacity of metropolitan and local governments to monitor environmental variables, enact laws and regulations, and to coordinate public action in the area. Similarly, the effective enforcement of environmental laws and regulations requires the provision of information, incentives, and support to normal judicial institutions. Lastly, the extension of regulation into the area of industrial activity would be helped by the participation of business and labour groups through Government-Business-Labour Roundtables. This process would also be facilitated by the establishment of policy research groups in the chambers of commerce and industry, in major business associations, and among labour groups.

Awareness

The third dimension of the situation on the ground is that of public awareness of environmental degradation is the lack of awareness of the issues, not only among the lay public but also amongst regulators, enforcing agencies, and even the judiciary. The result is that enforcers often ignore violations of environment related offenses. As a result, a communications campaign aimed at enforcers is just as important as one aimed more broadly. The objective of the latter is to overcome the generalised apathy towards environmental issues as well as the disrespect for the law.

There are signs that changes have already begun to enter into the public consciousness. The coverage of environmental issues in the mass media has increased considerably over the last two decades, and in particular during the last five years. This progress has been achieved despite a number of handicaps, including variable standards of professionalism, inadequacy of information data bases. especially on environmental issues, and a dearth of professional training institutions. However, much more needs to be done.

Part II
The Response to Environmental Degradation

This section describes the initiatives already undertaken by the government and other agencies to implement the NCS. There are two components to this section of the paper: ongoing activities of relevant government, NGO and private sector agencies in these areas. The basis of this section is the federal and provincial ADPs for 1992-93. It enables an approximate value to be attached to the ongoing expenditure in areas relevant to the NCS.

Documenting ongoing activities in the area of the environment is more complex than is apparent at first sight. First, a number of actions, such as salinity control and reclamation of land, which were previously not thought of as environmental in nature, are now being brought under the umbrella of the NCS. But reformation is not the total agenda of the NCS. A degree of continuity blends with an agenda of investments in new areas of activities, both where the technology or processes are relatively well known (e.g. abatement of industrial and vehicular pollution), and where the options are not so well developed, such as solar and wind power. In the latter case, small pilot projects are being considered.

Institutions

The strengthening of environment related institutions in the federal government has begun with the creation of an NCS Implementation Unit, and the Pakistan Environment Protection Agency in the Environment and Urban Affairs Division (EUAD), and Environment section in the Planning and Development Division. However, all these units, as well as EUAD itself are severely understaffed. Besides the secretary, EUAD has only five officers working directly on environment policy. Similarly, the NCS Unit has only four officers (one Joint Secretary, one Deputy Secretary, and two Section Officers), and PEPA has a sanctioned strength of one Director General, one Director, and three Deputy Directors.

The NCS Unit is intended to serve as the focal point for coordinating action in the implementation of the NCS. It will provide enabling and facilitating services to all agencies involved in the implementation. Its staff shall be increased to ensure that it has at least one technical staff member for each of the four components of the action plan. PEPA, as envisaged under the EPO, shall be the regulatory agency of the federal government, and shall be complemented by provincial EPAs.

In the non-government sector, the Sustainable Development Policy Institute (SDPI) has been established with financial support from CIDA for operational expenses, and NORAD for establishment and project expenses. Even though it is still in its formative phase with only one researcher (out of 6 initial positions), SDPI has started to provide advice to EUAD, P&D and the Population Welfare Division on matters pertaining to sustainable development.

The Water and Power Development Authority (WAPDA) has recently established an environment cell in its water wing in order to conduct detailed EIAs on all major future investments undertaken by WAPDA. Accordingly, an 18 month training component is part of the programme. While the creation of environment cells in an institution such as WAPDA is an extremely important development, EIA results will need to be incorporated into the decision making process. A similar environmental cell is being planned in the power wing of WAPDA.

All four provinces have established EPAs, although only the Punjab EPA has adequate staff and technical support in the form of laboratories and professionals available to them. It has a strength of 45 officers, and has started action through a communication exercise pending and delegation of regulatory and other powers. In the remaining provinces, the Sindh EPA has 6 officers (out of 9 sanctioned posts), NWFP 5, and Balochistan only one, the Director General.

Judicial interest in environmental matters has increased after a conference on the NCS and the judiciary in the January 1992, organised by IUCN, and attended by serving and retired judges of the Supreme and High Courts. Separately, in a landmark decision, the Supreme Court of Pakistan opened a window for primary jurisdiction for cases on environment (and other) matters involving the public interest. Under this window, any one may approach the court for the protection of constitutional rights of citizens.

The Government of the NWFP has also decided to entrust the subject of the environment to the Planning and Development Department, in view of its better situation for handling interdepartmental coordination. An environment section has accordingly been established in the P&D Department; it is being assisted in the formulation of a Sarhad Provincial Conservation Strategy (SPCS) by a special SPCS unit set up with the support of IUCN-Pakistan.

At present, environmental education is being provided only at the Environmental Studies Department of the University of Peshawar. This department too has limited financial and human resources, and needs considerable strengthening. It is receiving assistance in the form of physical hardware for geographical information systems and remote sensing. In addition, LUMS, IBA, and the Engineering Universities at Karachi and Lahore have announced plans to introduce environmental subjects into their curricula. A degree programme in environmental engineering is being introduced at the Engineering University of Karachi. LUMS is also about to get involved in research and training work with the corporate sector. A programme for rangelands development and forestry at the Pakistan Forestry Institute at Peshawar is being supported. Within the government, the National Institute of Public Administration (NIPAs) include environmental issues in their training programmes for mid-career government officers.

As mentioned in Part I, a number of NGOs are working on environmental issues, or have environmental programmes, and many new ones emerged in the last five years. In the area of the environment, the leading NGO is IUCN-Pakistan, which managed the preparation of the NCS. It has also played an active role in bringing other NGOs into NCS process, and of channelling funds to them.

At the governmental level, an important part of the incentive package for NGOs is the creation of an **Environment Fund** for providing grant assistance to NGOs, and possibly credit to the private sector. An amount of Rs. 30 million has been allocated in the 1992-93 non-development budget as a special grant for supporting NGOs.

In addition, a number organisations are devoted solely to supporting NGOs. The newly formed Trust for Voluntary Organisations (TVO) expects to support approximately 10 projects in the areas of human resource development, community health, and women in development. The small Projects Office (SPO) is a CIDA initiative, established to provide financial grants and technical and organisational assistance to NGOs; it efforts on community based organisation, set up to assist CBOs in capacity building, management and resource mobilisation. The Lahore based South Asia Partnership (SAP) was registered in 1989 to help NGOs in capacity building and for the development of partnerships with Canadian NGOs.

In addition, IUCN-Pakistan has taken the lead in designing a strategy for coordination of actions of NGOs in support of the NCS. This strategy is being discussed and developed through consultations between leading environmental NGOs in the country.

In the area of institutional development, two major shortcomings are evident: the relative absence of private sector institutions in the NCS process, and the neglect of municipal authorities and local government institutions. Since a substantive component of NCS projects will involve local management, this gap needs to be addressed. For example, managing urban

wastes and pollution abatement require the strengthening of capacities and skills at the municipal level.

In a separate development, the government has supported the establishment of a national NGO, the National Rural Support Programme (NRSP), with a budgetary allocation over 10 years, of Rs. 10 billion to undertake community development in all district of the country. Given the thrust of the NCS on participatory and grassroots institutions, there are strong possibilities of a synergy between the two initiatives.

In the private sector, interest in sustainable development and in the NCS has increased considerably. The Management Association of Pakistan (MAP) included the NCS in its meeting in February 1992, a number of business houses have started supporting voluntary environmental action, financial institutions are beginning to develop expertise to evaluate environmental impact statements, a leading labour group, the Pakistan Institute for Labour Education and Research (PILER) has started providing education in environmental issues to industrial workers, and IUCN has taken the lead in setting up consultative Business-Government Roundtables.

In addition to these, Habib Sugar Mills, Nawabshah invested Rs. 40 million, funded entirely by the company, on pollution abatement equipment. The equipment was adapted locally in consultation with PCSIR, after visits to India and Mauritius. In Karachi, the Pakistan Tanners Association took the initiative to finance a pilot effluent treatment plant. In Kasur, however, despite the investment of the government, the effluent treatment plant has not made much headway.

Legislation and Policies

The Environment and Urban Affairs Division, with the assistance of IUCN-Pakistan, has begun work on the review of existing **legislation**, including the Environmental Protection Ordinance, 1983. The objective is to propose new legislation, in order to consolidate earlier laws. resolve outstanding sources of confusion, provide legislative cover to NCS implementation, and reinforce the visibility and coherence of the action programme. It would incorporate strengthened and updated elements from other relevant statutes, and thus help rationalise, simplify and consolidate the vast array of legislation directly or indirectly affecting the environment. In addition, it would give careful attention to the problem of enforcement. This project envisages an expenditure of US\$ 0.312 million over the next year.

The government has already instituted the requirement that development projects should be evaluated for their environmental impact. Discussion is under way on specific mechanisms for improved planning at the federal and provincial levels, investment in the protection and improvement of natural resources through government systems for the protection and development of common property resources.

An initial review of the links between economic policies and natural resource management was undertaken for the NCS. An update and a more detailed study for the formulation of appropriate incentives and institutional design, has now been entrusted to SDPI. The study shall include an assessment of the environmental impact of existing economic policies, a set of recommendations and mechanisms for incorporating environmental concerns into future policy actions, and an incentive package to induce businesses to undertake environmental cleanup. This package would accompany the decision to implement the amended environmental laws strictly.

Awareness

A three year project entitled "Environmental awareness through the use of the mass media" is in the second year of implementation, with allocations of Rs. 2 and 4 million respectively in the two years. An allocation of Rs. 4.28 million is envisaged for the year 1993-4.

Some provincial EPAs, numerous NGOs, and various government agencies are involved in some activity in the area of mass awareness. Almost everyone agrees that the widespread ignorance about environmental issues is a major obstacle to conservation, although there are concerns that a large exercise may raise expectations to unrealistic levels, and thus fuel discontent or apathy. Environmental awareness messages, however need not emphasize the role of government exclusively, and must focus instead on the responsibility of citizens for a cleaner environment. This suggests the need for a co-ordinated communications campaign rather than random, disturbing or meaningless messages.

The current, somewhat chaotic, situation is being addressed through an initiative to develop a communications strategy for the implementation of the NCS, planned by a combination of institutions. Precise details still have to be worked out.

Development Projects

The final section of the review of ongoing activities contains a preliminary description of the resources currently allocated to the 14 NCS areas in the 1992-93 Annual Development Programme. Annexure II contains details of the projects identified under the 14 core areas. This does not, however, include development activities undertaken by municipal or local governments. Also, since the NCS core areas do not map easily and directly into the sectoral division of the ADP, it is possible that the coverage of this review may be incomplete.

Annexure II provides both the total cost of ongoing projects in the NCS core areas, and the allocation of date. The balance is the current estimate of the resources needed to complete this phase of the work. These, however, are only government projects, and do not exclude the expenditures that may be required on projects to be undertaken by NGOs or the private sector.

Special mention needs to be made here of two pilot projects, namely the Kasur Clean Water Programme, and the Karachi Clean Air Programme, on which work was started in 1991-92 against a block grant for environmental projects. The two projects received budgetary allocations of Rs. 15 million and Rs. 20 million respectively in 1992-93, and have demanded additional allocations of Rs. 4.74 million and Rs. 17 million respectively in 1993-94.

Part III
A Plan of Action for the 1990s

Introduction

Economic development is a function of three types of capital: human, physical and natural. In earlier years, primary emphasis was placed on the accumulation and maintenance of physical capital. Recently, attention has shifted towards human capital formation, particularly in the light of East Asian economic success. Costs to natural capital, however, have been neglected. Sustainable development is concerned with the productivity and maintenance of all three forms of capital. Policies should be formulated that devote resources to the development and maintenance of natural and human capital. These form the subject matter of two inter-sectoral development initiatives currently under way in Pakistan, the sustainable development framework emerging from the NCS. and a human development initiative built around the Social Action Plan (SAP).

The 14 priority areas of the NCS contain numerous activities with a long history in Pakistan--e.g. reclamation of waterlogged and saline lands, population control programme. However, a number of changes have been proposed. Some pertain to the introduction of new areas into development planning--e.g. urban air pollution and industrial waste disposal. In other cases, a re-orientation of the objectives or the means of implementation of existing programmes has been recommended. For instances, the NCS places particular emphasis on participatory mechanisms for implementing projects, for involving the private sector, and defining and delimiting the role of the government clearly.

Four principles were kept in view while preparing this programme. These are, the importance of linking all four components through the projects, ensuring the visibility of implementation, stressing and maintaining compatibility between environmental and developmental objectives, and keeping a simple implementation design.

Institutional Strengthening

The NCS has identified a critical need for strengthening institutions and building capacities in the government (at all levels) as well as in the NGO and private sectors. Priority areas include technical, regulatory and planning institutions, and local participatory, regulatory and planning institutions, and local participatory institutions, besides private sector institutions for collaboration and self-regulation. The following plan lays out a framework for the development of various governmental and other institutions.

As is clear from Part II, planning as well as regulatory institutions in federal and provincial governments are still grossly deficient in resources.

Among planning institutions, the top priority is for the strengthening of the **NCS Unit in EUAD**. This unit is the secretariat of the NCS Implementation Committee. It is meant to support agencies and institutions involved directly in the implementation of the NCS, be they federal, provincial or local government agencies, or NGOs or private sector units. It is important that it step into its role as the focal point for the co-ordination of various activities that constitute the NCS. The main requirements of this unit are technical personnel, consultants, office and other equipment, and access to support institutions and services. A project with those objectives has been prepared at a total cost of US\$ 0.799 million over five years.

Equally important is the **Pakistan Environmental Protection Agency (PEPA)**, which is currently operating with a skeleton staff, including a Director General and two management level officials. It needs support in the form of technical personnel to perform EIAs, consultants to help establish systems of regulation, operating costs, equipment and materials, and access to information and expertise. A sum of Rs. 1.433 million has been allocated in the current year, while another Rs. 29

million have been budgeted over the next five years from the World Bank funded Environment Protection and Resource Conservation Project (EPRS).

Besides the two new units, the **Environment and Urban Affairs Division** itself needs support to enable it to discharge its rapidly expanding responsibilities. In particular, the large demands generated by the follow up to the UNCED conventions cannot be fulfilled from the normal personnel of the division. Some additional staff--3 Deputy Secretaries, 9 Section/Technical Officers, and appropriate support staff--have been committed through the EPRC Project, in addition to equipment, training and technical assistance.

A major need of these institutions shall be for proper policy research to support and inform decision making. There is a need to build up capacity in this area as well. Policy research institute, the **Sustainable Development Policy Institute (SDPI)**, has already been established in the non-governmental sector, with financial support for design as well as operation by CIDA, and with additional financial support for establishment expenses and selected research projects by NORAD. SDPI has been asked to assist the government on devising an incentives package for pollution control, and for the follow up to UNCED. It is essential that adequate support is available to the Institute to enable it to fulfil its function of providing support to policy makers.

Support for policy research include the strengthening of laboratories and technical institutions, such as the HEJ Institute in Karachi, and the PCSIR laboratories. Also, specialised research institutions, like PIDE, AERC, NIPS, NIH, can be mobilised to support NCS implementation. Research capacity is a critical part of the long term ability to analyse problems and identify solutions. Accordingly, institutional strengthening or research organisations imply investments in, for example, SPPI, PIDE, and AERC.

In province, it is proposed to establish **Provincial Conservation Strategy Units**, along the lines of the NWFP initiative, to coordinate action on the NCS, and to mobilise the support of various organisations. In addition, there is a need to strengthen provincial EPAs to supplement the actions of PEPA in regulation and provincial agencies are being worked out.

The regulatory function shall also involve support and information to normal investigative and judicial institutions. These may take the form of training, improved access to information and access to professional advice.

Implementing the NCS will require a strong input from capable technical, regulatory environmental institutions. This strengthening of regulatory environmental institutions is not inconsistent with the ongoing deregulation of the economy. A judicious and focused domain of regulation is an inherent part of the responsibility of government, as long as the rules are simple, transparent and applicable universally. A number of institutional mechanisms for monitoring the application of the laws are being considered, including the creation of independent institutions to protect and monitor the EPAs.

Staff training needs are a necessary component of institutional development. There are inevitable short term requirements for training staff of various agencies in executing functions such as environmental impact assessment and managing equipment. Some needs can be met in the short-term by foreign trainers and by sending staff on targeted courses abroad, but more sustainable investments in this area must be in building training capacity within Pakistan. Therefore, training of trainers in a variety of institutions (e.g. Peshawar University, NED University, SDPI, NIPAs) is desirable.

The strengthening of the above category of institutions has to be accompanied by support for a diverse set of local, participatory institutions: local government institutions, NGOs and other

voluntary bodies. Most NGOs involved in environment in Pakistan, however, are not development oriented in the project execution sense. Their catalytic, and often underestimated, contribution is to promote accountability and act as watchdogs for the public. In a society such as Pakistan, this role is far more important than is the case in countries where accountability is institutionalised.

Another form of institutional support is to selected NGOs and local government institutions engaged in participatory action on sustainable development. The most prominent NGO in the field of environment is **IUCN-Pakistan**, which has played a pivotal role in ensuring that NCS involve wide consultation within the country. Increasingly, IUCN-Pakistan is moving into the role of an umbrella NGO to support grassroots NGOs in the area of sustainable development. It is also coordinating other supporting arrangements for NCS implementation, including the Business Government Roundtable, and the Journalists Resource Centre for Environment. Adequate support would be needed to ensure that IUCN-Pakistan continues to play its role of providing assistance for policy formation as well as that of supporting smaller NGOs.

Besides IUCN, a number of developmental NGOs are well qualified to play the umbrella role. These include AKRSP, SRSC, OPP, BRSP and TVO. In addition to this, the government has recently announced a decision to launch a National Rural Support Programme (NRSP) along the lines of AKRSP. There is a need to work closely with the new institutions to ensure that the objectives of the NCS are incorporated into such programmes, and that the two initiatives support rather than hinder each other.

Lastly, a number of new or emerging NGOs have also expressed interest in the issue of sustainable development; these include SUNGI, PFD, and PAEDAR. Appropriate activities of such institutions could be supported through the Environment Fund.

Pakistan's economic evolution requires collective responsibility in order to achieve more balanced development. Giving responsibility back to local government is an important part of the NCS and the social action plan. For this purpose, the public sector needs to promote non-governmental organisations as important agents in the development process to not only undertake important social investments in areas where the market fails but also act as public interest institutions to increase accountability in society.

In many projects, local committees can be important implementation partners. For example, the proposed clean up of vegetable markets should involve the market committees which have the management responsibility for sabzi mandis. Similar committees can exist at slaughter houses, the other component of the proposed clean up campaign of public places. Effective local management structures provide useful modes for support and replication. Therefore, local government institutions in rural areas, at the union and district council level, may be the appropriate institutions to have as implementing partners.

As far as private sector is concerned, governmental responsibility lies in creating an enabling environment for private initiative but also strengthening the legal and regulatory framework to ensure environmental rectitude. This objective would be facilitated by the establishment of Government-Business Roundtables.

A technical assistance programme could be directed at private sector bodies. This could include the establishment of environment communications cells at provincial chambers of commerce and industry, as well as at the overseas chamber of commerce. These cells could play an active role, in cooperation with the government and NGOs, in communicating required information on market opportunities, tax incentives for pollution abatement, availability of credit lines for required investment, the regulatory framework, and the financial and social costs of not

responding to the mix of incentives and regulations. It could also serve as liaison and coordinating unit with the government, and could feed information into the Roundtable process.

Training institutions closely allied to the private sector, such as LUMS and IBA, need to integrate environmental management into their courses. Efforts in this direction are already underway and should be encouraged. In addition, these and other non-governmental management and research institutions (e.g. SDPI) should play an active role in training as well as in policy support to the private sector in this area.

Mass Awareness Campaign

The second component of the action plan is a coordinated communications campaign for mass awareness. The change in popular consciousness through this process is a necessary precondition to a gradual but permanent change in attitude and behaviour.

Currently, a three year project entitled "Environmental awareness through the use of the mass media" is in the second year of implementation, with allocations of Rs. 2 and 4 million respectively in the two years. An allocation of Rs. 4.28 million is envisaged for the year 1993-94.

So far many of the approaches to the communications have exhibited a certain lack of professionalism, including random and often conflicting, meaningless and somewhat irritating signals with a propagandist rather than a persuasive tone. The development of professionalism requires adequate support in the form of capacity building, providing access to information, and training and skill development. In addition, the creation of opportunities would itself lead to a response from potential suppliers.

Capacity building efforts in this area have to focus on the development of professionalism, and the gradual elimination of a propagandist tone in environmental messages. Like any other field, modern communications requires appropriate expertise, and goes beyond the production of random 'good messages' on pamphlets, posters and the electronic media. In the short run, appropriately qualified personnel in the public sector, private sector and NGOs could be involved in the formulation of the campaign as well as the future training programme.

The campaign shall be based on five principles. First, a few simple priority messages--e.g. "grow more trees", "save wildlife"--to be conveyed continuously through separate channels, rather than an overload of random messages; similarly, subtle messages woven into popular television plays can be more effective than documentaries. Second, a careful definition of the target audience of each message, and linking this to the appropriate medium. Third, targeting of part of the media message to the priority visible projects (e.g. Kasur tanneries) selected for the first phase of NCS implementation; progress in tackling environmental problems shall be made evident by directing public attention to these projects. Fourth, the messages shall be based on a clear idea of what actions or behaviour are being addressed; this will require a two way flow between communicators and recipients. Finally, attempts shall be made to establish criteria for gauging the success of the campaign.

Legal and Economic Incentives

Legislation and regulation are only one aspect of the policy package for sustainable development. An equally important element is that of **economic incentives**, without which most prescriptions would fail. In view of this, the Environment and Urban Affairs Division has asked SPPI to prepare a comprehensive set of recommendations on economic incentives needed to promote natural resource management and conservation. The recommendations shall be sector specific and internally consistent, namely promoting industrial development and investment,

employment generation, revenue generation, and human resource development. These will then be submitted to the government for action in the context of economic planning and budgeting.

An underlying assumption of the NCS is that economic sustainability is as important as environmental sustainability. Practices that cause a reduction in income are unlikely to be adopted voluntarily even if desirable from an environmental viewpoint. Similarly, practices that require a permanent government subsidy, are by definition not sustainable in the long term. Several principles are relevant here. They are:

1. Private sector initiatives shall be relied upon as far as possible to achieve the desired environmental changes, including conservation, preservation, protection, reparation and enhancement.
2. The need for distinct sectoral policies for old and new industry is well recognised. Before economic instruments can achieve the desired impact, it may be necessary to adopt what in effect are catalytic measures. In the case of new industries, a set of preventive measures which guard against environmental damage need to be prescribed for each sector.
3. The Government of Pakistan may consider the application of environmental conditionalities in suitable cases in the administration of targeted subsidies or grants.

Pilot Projects

While the implementation of the NCS shall be directly in the hands of the line departments and agencies of the federal, provincial and local government, or of NGOs and private organisations, it may be important for the NCS Unit (and EUAD in general) to take a lead role in a few selected pilot projects. This lead role, too, shall consist not of the implementation of the project by the agencies concerned. For this purpose, it is necessary to select appropriate pilot projects. The criteria for the selection of the projects includes, the need or demand for the project (or, the intensity of the problem with which it deals), its visibility, its relevance to the 14 core areas of the NCS, the need for coordination between various agencies, and the need to mobilise non-government agencies in the process. Among the 14 core areas of the NCS, it is important to select those where the maximum amount of work is needed. These are:

1. Increasing irrigation efficiency
2. Increasing energy efficiency
3. Preventing and abating pollution
4. Managing urban wastes
5. Protecting watersheds
6. Protecting waterbodies and sustaining fisheries
7. Restoring rangelands and improving livestock
8. Conserving biodiversity

Work on two pilot projects, namely the Kasur Clean Water Programme, and the Karachi Clean Air Programme, was started in 1991-92, against a block grant for environmental projects. Budgetary allocations of Rs. 15 million and Rs. 20 million respectively were made in the current financial year, 1992-93. Additional allocations of Rs. 4.74 million and Rs. 17 million respectively have been demanded in the coming financial year.

With this background, the following projects are recommended:

1. ***Preventing and Abating Pollution/Managing Urban Wastes***
 1. Kasur and Korangi effluent treatment
 2. Kabul and Ravi River pollution abatement
 3. Clean up of selected public places, *sabzi mandis* and slaughterhouses
 4. Pilot projects for provision of safe and clean drinking water in two small towns.

2. ***Energy Efficiency/Irrigation Efficiency***
 5. Household energy efficiency programme
 6. Energy efficiency in public building construction
 7. On-farm water management projects for increased irrigation efficiency
 8. Reclamation of damaged soils for crop production through gypsum application

3. ***Nature Conservation/Biodiversity***
 9. Protecting Margalla Hills from encroachment
 10. Preserving juniper forests in Balochistan

Annexure

Annex 1

List of Laws with Environmental Impact

1. The Pakistan Penal Code, 1860
2. The Canal and Drainage Act, 1873
3. The Land Improvement Loans Act, 1883
4. The Explosive Act, 1884
5. The Punjab Forest (Sale of Timber) Act, 1913
6. The Boiler Act, 1923
7. The Factories Act, 1934
8. The Hazara Forest Act, 1936
9. The Punjab Health (Emergency Provision) Ordinance, 1944
10. The Regulation of Mines and Oilfields and Mineral Development Act, 1948
11. The Punjab development of Damaged Areas Act, 1952
12. The Punjab Soil Reclamation Act, 1952
13. The West Pakistan Epidemic Diseases Act, 1952
14. The West Pakistan Canteen Rules, 1959
15. The West Pakistan Goats (Restriction) Ordinance, 1959
16. The West Pakistan Agricultural Pests Rules 1959, 1960
17. The West Pakistan Prohibition of Smoking in Cinema Houses Ordinance, 1960
18. The West Pakistan Fisheries Ordinance, 1961
19. The Motor Vehicles Ordinance, 1965 (and Rules, 1969)
20. The Islamabad (Preservation of Landscape) Ordinance, 1968
21. The Agricultural Pesticides Ordinance, 1971
22. The Balochistan Sea Fisheries Ordinance, 1971
23. The Sindh Wildlife Protection Ordinance, 1972
24. The Punjab Wildlife Protection, Preservation, Conservation and Management Act, 1974
25. The Antiquities Act, 1975
26. The NWFP Management of Protected Forest Rules, 1975
27. The NWFP Fisheries Rules, 1976
28. The Grazing of Cattle in the Protected Forests (Ranglands) Rules, 1978
29. The Pakistan Plant Quarantine Act, 1978
30. The Balochistan Groundwater Rights Administration Ordinance, 1978
31. The Punjab Local Government Ordinance, 1979
32. The NWFP (Conservation and Exploitation of Certain Forests in Hazara Division) Ordinance, 1980
33. The On-Farm Water Management and Water Users Association Ordinance, 1981
34. The Pakistan Environmental Protection Ordinance, 1983
35. The NWFP Salinity Control and Reclamation Act, 1988