

MID TERM REVIEW
OF THE
PAKISTAN NATIONAL CONSERVATION STRATEGY

A STUDY OF
THE CONTRIBUTION OF
THE PRIVATE SECTOR AND NON-
GOVERNMENT ORGANIZATIONS (NGOs)
TOWARDS THE IMPLEMENTATION OF
THE PAKISTAN NATIONAL CONSERVATION
STRATEGY (NCS)

PREPARED FOR
MINISTRY OF ENVIRONMENT,
LOCAL GOVERNMENT & RURAL DEVELOPMENT
GOVERNMENT OF PAKISTAN



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ANNEX

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Acronyms

BOD	Biological Oxygen Demand (mg/l)	NIPA	National Institute of Public Administration
CBO	Community Based Organisation	NMC	National Management Consultants
COD	Chemical Oxygen Demand (mg/l)	NRM	Natural Resource Management
CIDA	Canadian International Development Agency	NSSD	National Strategy for Sustainable Development
CPO	Canadian Partner Organisation	NWFP	North-West Frontier Province
EC	Environmental conservation	OPP	Orangi Pilot Project
EPF	Environmental Protection Fund	PAC	Programme Advisory Committee (of PEP)
EPRC	Environmental Protection & Resource Conservation (Project, World Bank)	PCSIR	Pakistan Council for Scientific & Industrial Research
ETPI	Environmental Technology Project for Industry	PEP	Pakistan Environment Programme
FGD	Focus Group Discussion	PEPF	Pakistan Environmental Protection Foundation
FPCCI	Federation of Pakistan Chambers of Commerce & Industries	PITS	Performance Indicator Tracking System
GEL	Global Environmental Laboratory	POA	Plan of Action
HRMD	Human Resource Management Development	PMA	Performance Measurement Adviser
IUCN	World Conservation Union	PNCS	Pakistan NCS
IUCNP	IUCN Pakistan	RBM	Results-Based Management
KDA	Karachi Development Authority	SCOPE	Society for Conservation and protection of Environment
KMC	Karachi Municipal Corporation	SD	Sustainable Development
KK	Khwendo Kor (an NGO)	SDPI	Sustainable Development Policy Institute
LCDP	Lyari Community Development Project	SPO	Strengthening Participatory Organisation
MTOE	Million tonnes of oil equivalent	SRSC	Sarhad Rural Support Corporation
MW	Megawatt	TEMS	Total Environmental Management System
MTR	Mid Term Review	TORs	Terms of Reference
NCS	National Conservation Strategy	TTB	Taraqqi Trust Balochistan
NEQS	National Environmental Quality Standards	WWF	World Wildlife Federation

Executive Summary

This Study, prepared in response to the terms of reference provided by the Clients, provides the results of six focus group discussions, three each with NGOs and the private sector, conducted in Karachi, Lahore and Peshawar during November 1999. The discussions sought to elicit the views of participants on six questions, provided by the Clients.

Background

Pakistan National Conservation Strategy (NCS) is widely regarded as having been instrumental in promoting the concept of sustainable development—an integration of social, environmental and economic goals so as to meet the need of tomorrow as well as today. With the passage of time, it is felt that if the NCS is to continue, it must be focused on sustainable development. The Clients therefore wish to find out what people feel have been the main areas of progress in promoting and achieving sustainable development, how this was achieved (with, or without, the NCS), what constraints are likely to impede future progress, and how they can be overcome. This will help determine what mid-course corrections to the NCS, if any, are necessary. The present Study is one of a series of studies and efforts being carried out according to a well-conceived plan of studies leading to this determination.

Contribution of NGOs toward NCS Implementation

The NGOs have reported successes in a diverse variety of micro level projects. These include sanitation, composting, tree planting, substituting for fertilisers, etc. An important component of these successes was the ability of the NGOs to work with the local communities, targeting felt needs, and involving the communities in the design, operation, and execution of the programmes. Additionally, the NGOs felt that international support, in form of donor contributions or expertise supplied by international agencies or other NGOs outside Pakistan, were important to the success of their projects. International donors, however, were felt to be a mixed blessing, in the sense that the NGOs had to modify their agenda to suit the terms on which their support was provided. This shift was not always beneficial to the target population. The lack of interest and funding by the government of Pakistan was felt to be a major obstacle by nearly all of the NGOs.

Contribution of the Private Sector toward NCS Implementation

While the NGOs are engaged in a broad range of social projects, the private sector's contribution are mainly in the area of treatment of pollution, which is a by-product of industry. In this regard there have been a limited number of domestic innovations, as well as use of expensive imported technology for the reduction or elimination of harmful by-products. The need to certify for ISO 9000 or 14000, and the necessity to maintain certain standards in order to export, has been responsible for private sector actions in this area. In other cases, where pollution would cause long-term harm to the industry itself, steps have been taken to reduce it. Unexpectedly, there are cases where expensive action has been taken on purely moral grounds. The conclusion emerges that government intervention to reduce the gap between social and marginal cost would be effective. In addition, moral suasion may well be a cheap and effective tool.

Consultants' Conclusions and Recommendations

There are some inherent limitations of this study. The TORs' emphasis on assessing "progress" does not allow for analysis of failures and larger problems with the nature of the project. Keeping this in mind, the following principal conclusions emerge. The NCS has been found to result in many successes, especially by the NGOs (and not merely in attitude change and increase in awareness.) In these micro level projects, NGOs and private organisations felt that their own contributions, and the efficient use of scarce resources on their part, was critical to success. Another important factor was indigenous development of appropriate tools and technology, adapted to local conditions (as opposed to technology imports). There was substantial room and need for progress. The private organisations felt principally constrained from moving forward by lack of resources, and inadequate government support. The NGOs added to these two factors, lack of technological expertise and insufficient community support.

Preface

In response to an advertisement, dated May 27, 1999, an Expression of Interest was submitted by Consultants to the National Conservation Strategy Unit, Ministry of Environment, Local Government and Rural Development, on June 21, 1999.

As a follow up, on September 30, 1999, Clients invited Consultants to submit their technical and financial proposals for the present study, according to terms of reference that were attached. The proposals were sent on October 7, 1999. Following discussions with Dr. Asif Zaidi on October 19, 1999, a contract was signed on October 27, 1999, to conduct six focus group discussions to assess the views of participants on six topics. Following the fulfilment of conditions of effectiveness by Clients, the Study began on November 11, 1999.

By way of preparation, Consultants met with the Mid Term Review Co-ordinator, Ms. Maheen Zehra on November 1, 1999 to discuss and finalise a 12-page draft research design prepared by Consultants. Consultants also held an administrative meeting with Clients in Karachi, on November 2, 1999, to discuss the aims and objectives of the study, the strengths and limitations of the methodology (including the draft design), and identify potential participants in the focus group discussions. Based on these, and follow-up, discussions Clients gave the Consultants a go-ahead on the research design and final list of participants on November 3, 1999.

On this basis, focus group discussions were conducted in Karachi (November 12-13), Lahore (November 17-18), and Peshawar (November 16). As had been agreed, Consultants provided Clients with brief progress reports on the focus group discussions, within three days of their conclusion. In her comments, the MTR Co-ordinator felt that these reports were too brief for Clients to give their final comments and clearance, as had been provided in the contract. Accordingly, Consultants proposed and Clients accepted that Consultants would also prepare a Draft Report, at their cost, on which Clients would provide their final comments and clearance.

Accordingly, a draft report, along with 12 cassette tapes bearing the audio record of the focus group discussions, was sent to Clients on January 7, 2000. Clients provided their comments on this report, by email and as a marked up copy of the draft, on January 20, 2000. In the course of follow-up discussions, Consultants finalised the agreed changes with the MTR Co-ordinator on January 22, 2000. This report has been finalised on the basis of these agreed changes.

The study was prepared by a team consisting of Arshad Zaman (Study Director), Samina Khalil (Environment Economist), Salma Siddiqi (Focus Group Facilitator), M. Wasiuddin (Administrative Officer), and other supporting staff.

We are indebted to Dr. Asif Ali Zaidi and Ms. Maheen Zehra for their advice and guidance and assistance throughout the conduct of this study. We are also indebted to participants in the focus group discussions – many of whom expressed a desire to see their report in final – and to other experts, who prefer to remain unnamed, for their helpful comments.

Arshad Zaman Associates (Pvt.) Ltd.

January 25, 2000

1. Introduction

1.1 Background to the NCS

1.01 Pakistan National Conservation Strategy (PNCS) is widely regarded as having been instrumental in promoting the concept of sustainable development—an integration of social, environmental and economic goals so as to meet the need of tomorrow as well as today.

1.02 The Cabinet approved the PNCS on March 1, 1992. It is held to form the basis of a strategy at the national level integrating environmental conservation, social and economic imperatives, and the elaboration of principles for their practical integration.

1.03 The stated purpose of PNCS is to focus attention on the priority requirements for conservation, to stimulate appropriate action, to raise public consciousness, and to overcome any apathy or resistance. The NCS involved numerous complex inputs from many sectors. In addition to the work of scientists, contributions from institutional development specialists and other social scientists required the co-ordination of diverse interdisciplinary teams.-

1.1.1 Content of the NCS

1.04 The NCS covers two main areas. The first describes the current state of natural resource utilisation and the state of environmentally related policies and institutions. The second area is prescriptive, outlining a set of actions required, based on the analysis of existing deficiencies.

1.05 The descriptive discussion on the state of Pakistan's environment implicitly divides natural resources into three categories:

- Directly productive natural resources, both renewable and non-renewable. This category includes soils, range-lands, fisheries, forests, oil, gas and coal.
- Natural resources that act as sinks, absorbing industrial or biological effluents. Examples are air pollution and the contamination of water through chemical or biological effluents.
- Natural resources that neither have intrinsic productive value nor affect the value of other natural resources but have amenity value, i.e. their existence has an ethical or religious value. This would be true of cultural heritage sites, many animal species, and bio-diversity.

1.06 The NCS uses this classification to examine different aspects of Pakistan's environment. One class of issues addresses the effect of urban pollution on natural resources and related adverse effects on their economic contribution. The analysis is supported by data on the economic costs of certain types of pollution. Analytically, the NCS emphasises the divergence between private and social costs and the implicit "subsidy" being given to investors who are not required to make financial contributions towards rectification costs that are external to their unit of production.

1.07 The second class of environmental problems analysed refers to damage caused to productive natural resources. The NCS discusses the causes of damage to soils in croplands in different agro-ecological zones. Waterlogging and salinity are familiar problems in irrigated areas, as are desertification in barani croplands and the fragile base of upland mountain agriculture. Causes of deforestation and deterioration in range-lands are also discussed.

1.08 The third component contains the conservation aspect of the NCS, which focuses on the protection of amenity values. Sites of cultural importance, endangered species and key bio-diversity issues are listed. Inadequate financial resources, disinterest and lack of awareness are stated as the principal causes of deterioration in this area. Finally, the review of current institutions, policies and regulations affecting the use of natural resources highlights the lack of coherence, conflicting signals and poor implementation capacity even where the policies are appropriate.

1.09 The descriptive analysis forms the base of the subsequent prescriptive sections which contain a mixture of legal, technical, institutional and economic recommendations to address natural resource degradation. The prescriptive sections commence with a statement of the three broad objectives of the NCS:

- conservation of natural resources;
- sustainable development;
- greater efficiency in the use and management of resources.

1.10 The three objectives are followed by three operational principles:

- achieve greater public partnership in development and management;
- merge environment and economics into decision making; and
- focus on durable improvements in the quality of life.

1.11 Fourteen core programme areas are identified for policy action:

- maintaining soils in croplands
- increasing irrigation efficiency
- protecting watersheds
- supporting forestry and plantations
- restoring rangelands and improving livestock
- protecting water bodies and sustaining fisheries
- conserving biodiversity
- increasing energy efficiency
- developing and deploying renewables
- preventing and abating pollution
- managing urban wastes
- supporting institutions for common resources
- integrating population and environment programmes
- preserving the cultural heritage

1.12 The NCS explicitly defines three priority areas within the above groups:

- maintaining soils in croplands
- preventing and abating pollution and
- increasing energy efficiency

1.13 The major critical environmental concerns, as analysed in the NCS, including some specific issues which have a bearing on the link between environment and economic development and public welfare are listed in Box 1.1.

Box 1.1 Major Environmental Concerns

- Natural resource management problems emerging from incessant pressure on traditional economic activities. Thus, problems such as waterlogging and salinity have had an adverse effect on soils due to the pressure on irrigated agriculture.
- Problems that have emerged from more recent economic imperatives. These issues are likely to become more dominant in the future due to structural transformation in the economy. Problems of industrial discharges and urban pollution have increasingly acquired considerable prominence within the agenda of environmental concerns in Pakistan.
- Concerns relate to efficient use of scarce natural resources. In this content, Pakistan's environmental concerns have revolved around more efficient use of energy and water.
- Concerns related to the protection of various species, threatened by extinction. These species may have no productive use, but their protection is sought after on the basis of amenity values that emerge from cultural, social or religious concerns.

Specific Issues Related to the Links Between Environmental Impact of Past Pattern of Economic Growth

- Pakistan has a high rate of population growth that causes an increasing pressure on its natural resource base and the environment.
- Less than 20% of the 88 million hectares of the country has the potential for intensive agricultural use. The amount of cultivable land is nearly matched by the amount of land actually being cultivated.
- Watershed lands in the upper Indus and its tributaries suffer from unfavourable soil and moisture regimes.
- Pakistan relies on irrigation for more than 90% of its food and fibre production. Only about one third of diverted water reaches the crop roots. The rest is lost in canals and watercourses or during application on field.
- Accelerated surface erosion is reducing the life of the reservoirs on which irrigation depends.
- Outside the irrigated Indus Basin, water-mining and sharp declines of ground water Tables have become apparent in several areas.
- Since Independence, the growth of grazing livestock populations has been dramatic. Overgrazing has severely reduced the productivity of rangelands. The livestock sector is trapped in a downward spiral of too many animals chasing too little feed.
- The coastal strip of Pakistan is arid. Mangroves are under increasing environmental stress from reduced freshwater flows, from pollution from fuel wood and timber extraction, and from clear-felling for development.
- Fisheries make a small but significant contribution to Pakistan's economy. The level of effort per unit catch has been rising with increased harvesting.
- Pakistan is both energy-poor and energy-profligate. Reserves of oil and gas, which are relied on heavily, are small. Domestic oil production meets less than a quarter of the country's needs. Only a small portion of potential hydropower has been developed to date. Demonstrated and measured coal reserves have increased significantly in recent years.
- Only half the urban excreta is disposed of in sewers: the remainder is deposited on the roadside, into waterways, or incorporated in solid waste. It is the major source of water pollution in the country and the cause of widespread water-borne diseases.
- Only three major sewage treatment plants exist in the country. Much of the untreated sewage goes into irrigation systems, where the waste water is reused, and into streams and rivers.
- A 1985 survey of 100 hazardous chemical plants across the country showed that only three plants treated their wastes to commonly accepted standards. The contamination of shallow ground waters near urban industries is of great concern.
- Another pollution concern stems from the use of pesticides and fertilisers, which has grown rapidly.
- Motor vehicles account for a large portion of the total emission of air pollutants.
- Disposal of solid waste accounts for a large portion of municipal expenditure, although only about half is collected. Collected waste is dumped onto low-lying land without the benefit of sanitary landfill methods.

1.1.2 Resources Needed

1.14 The NCS has assessed that currently 4% of national investment goes into the natural resource sectors. It suggests a doubling of investment expenditure, to reach 8% of national investment. The NCS estimates that these resources could be met almost entirely from reorienting high cost development programmes. A Rs 150 billion investment plan is outlined over a 10 year period. It is suggested that as much as US\$ 40 of the financial requirement of the proposed portfolio is to come from re-focusing certain conventional programmes in resource management and conservation areas by providing more cost effective solutions. Of the remaining Rs 90 billion, 59% is targeted for the private sector.

1.1.3 NCS Implementation

1.15 An important point of departure in this work was to balance immediate pressures for demonstrable action with the need for capacity building. To address these conflicting concerns simultaneously, the Plan of Action proposed a four-component action agenda:

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

1.16 The Plan of Action argues that three types of institutions need to be encouraged in order to create a balanced implementation framework:

- technical, regulatory and planning institutions
- local, participatory institutions, and
- private sector institutions

1.17 When selecting **institutions** to be strengthened, there is a need for a balanced approach. The institutional framework for implementation is particularly important because it defines the process of how implementation activities will be selected and how projects/actions will be prepared.

1.18 The second component of the Plan of Action is a co-ordinated **communication campaign** for mass awareness. The change in popular consciousness through this process is a necessary precondition for a gradual but permanent change in attitudes and behaviour. A communication strategy for NCS implementation has been recently completed. A workshop, held in Islamabad in February 1993, charted the manner in which communications could be used in NCS implementation.

1.19 A review of existing **environmental laws** has begun, and a panel has been formed to carry out the exercise. The objective is to propose new legislation. The proposed Environment Protection Act 1994, apart from performing the critical role of resolving the problems with the 1983 Ordinance, would also act as a symbol of NCS implementation. The Act would provide legislative cover to the first phase of NCS implementation, thereby reinforcing the visibility and coherence of a programme of action.

1.20 Appropriate behaviour for natural resource management and conservation can be stimulated by a set of incentives, based on policy oriented practical study on the specific **economic incentives** that will be required to promote natural resource management and conservation. The recommendations should be sector specific and consistent. If there are any conflicts with existing incentives, these should be brought out. This would facilitate discussion of tradeoffs and viable alternatives.

1.21 The fourth component is a list of **projects** proposed for implementation and classified into the 14 Core Programme Areas. The POA contains public sector and NGO projects, but no private sector projects.

1.2 Research Design

1.22 A detailed research design (reproduced at Annex 5¹) was finalised in consultation with Clients.

¹ All Annexes are placed together in a separate volume.

Table 1. An Outline Analytical Framework to Guide Discussions

Enabling Factors	Key Outcomes					
	Natural resources maintained	Resource use efficiency increased	Industrial and urban pollution prevented	Local institutions developed	Motivation for family limitation promoted	Country's cultural heritage preserved
Own actions						
Mechanisms adopted						
Enabling signals						

1.23 Under this design, the six questions posed in the TORs provided by Clients were re-grouped into three themes.

1.2.1 Theme 1 (Present): What was achieved and why?

- a) *a sustainable development health check (major conservation and sustainable development improvements and their reasons) [—TORs]*

1.24 This part of the discussion sought to *identify* the major conservation and sustainable development improvements, and their reasons.

1.2.2 Theme 2 (Past): How was this/these achieved?

- b) *Where the NGOs/private sector feel their own actions have been able to make progress in sustainable development*
- c) *The signals that have enabled them to do this – policies, legal changes, fiscal changes, market demands, international campaigns, sources of extra financing – and how these were linked to NCS*
- d) *The mechanisms that they themselves have adopted – codes of practice, international links, etc. [—TORs]*

1.25 Having established the main sustainable development improvements, the second theme explored where *their own actions* (including especially, *mechanisms* that they adopted) led to progress, and where *external signals* were the source of progress.

1.2.3 Theme 3 (Future): What challenges/constraints lie ahead, and how will they be overcome?

- e) *Major challenges and constraints for further improvements (external sources and within their own organisations)*
- f) *Recommendations for the future [—TORs]*

1.26 The Groups were facilitated to define (and rank) the top challenges and constraints (the two terms were used interchangeably) to further improvements.

1.27 In addition, the moderator consulted Annex 1 to the MTR TORs (reproduced as Annex 1, Attachment 1, Appendix 1 in this Study), and Zehra (1999) for some of the questions that can be asked in this area.

2. Contribution of NGOs towards NCS Implementation

2.01 This chapter provides a profile of the participants at the three focus group discussions conducted with NGOs (Table 2.1), and based on a content analysis of the verbatim proceedings (at Annex 3), presents the key themes that emerge. Naturally, the selection of “key” themes is subjective and the interested reader may well read the data differently.

2.02 As the data presented in Table 2.1 show, eight women and thirteen men took part in the three focus group discussions (in Karachi, Lahore and Peshawar). Of these, twelve provided personal information. On average, the participants were evenly distributed by age—although in comparative terms, the group in Karachi had a higher share of older men while that in Peshawar, of younger women. Most participants were quite well educated; the bulk, having post-graduate degrees. In addition to formal education, over half the participants reported having taken part in at least one environment-related training course, seminar and workshop. Of the 17 participants who responded, 5 reported over 3 years of experience in working on environmental issues; 7, of 3-6 years; and 5, of less than 3 years. All reported having been associated with at least one or more environment-related projects. On average, for every three respondents, at least one reported familiarity with NCS text and goals; although the group in Lahore was unusually well informed, while that in Peshawar did not respond to this query.

Table 2.1 Profile of Participants: FGD with NGOs

Participants:	Karachi	Lahore	Peshawar	Total
Number	6	6 ^a	9	21
Female/Male	1/5	2/4	5/4	8/12
Age				
Under 30	0	1	6	7
30 to 45	4	2	1	7
Over 45	2	2	1	5
Education				
BA	1	0	4	5
MA	5	4	5	14
PhD	0	1	0	1
Training ¹				
Courses	4	1	4	9
Seminars	4	3	4	11
Workshops	5	3	4	12
Experience ²				
< 3 years	1	1	3	5
3-6 years	3	2	2	7
> 6 years	2	2	1	5
Projects ³	6	5	9	20
Know NCS				
Texts	3	4	-	7
Goals/Tgts	3	5	-	8

^a One participant did not provide his profile.

¹ Formal training in environment-related subjects.

² Experience in working on environmental issues.

³ Associated with Environment-related projects.

2.1 Theme 1 (Present): What has been Achieved and Why

a) a sustainable development health check (major conservation and sustainable development improvements and their reasons) [—TORs]

2.03 Focus group discussions are not the ideal method for a comprehensive “health check” of what the NGOs have achieved in NCS implementation. This is best done through a structured survey. Focus group discussions allow the Client “to get close to the customer,” by viewing the sessions in person, or reviewing the verbatim transcripts (placed at Annex²). In this way, it is possible to uncover a level of detail and nuance, albeit selectively, that is unlikely to emerge from a structured survey. The discussion of major conservation and sustainable development improvements and their reasons presented below should be seen therefore as selective impressions, rather than as a comprehensive statement on the “health” of sustainable development in Pakistan.

² The sessions were recorded on tape. These recordings have also been provided to Clients.

2.04 Most participants chose to discuss the achievement of their own NGOs rather than engage in an abstract discussion of conservation and sustainable development achievements in the country. Significantly, many “development” interventions (in water supply, sanitation, etc.) were viewed as “environmental” ones by the NGOs. This can be attributed both to the nascent stage of development of the NGO sector in Pakistan, and to the success of NCS in raising awareness of environment issues. At the same time, it is significant that even in our small sample a number of achievements were cited that would qualify as “environmental” interventions proper.³

2.05 Strengthening Participatory Organisation (SPO) considers the provision of 350 in-house commode latrines in three villages in Peshawar, Nowshera, and Mansehra as one of its major achievements. Motivated by identified community needs, the project not only provides sanitary latrines but also safety to villagers who were subjected to criminal assault and even murder when they met their natural needs in the fields.

2.06 SPO believes that the degree of success achieved in this programme is largely due to the communities’ enthusiastic participation in this project. The beneficiaries of this project provided most of the labour input. The communities’ sense of ownership enabled them to overcome the financial and resource problems that arose. The key outcome of this project is prevention of pollution.

2.07 The Taraqqi Trust Balochistan (TTB) has contributed to the promotion of hygiene through provision of latrines and proper disposal of sewerage in Quetta. Like SPO’s experience, TTB assisted in the provision of 500 latrines in the underdeveloped areas of Balochistan at the demand of the community. The positive outcome of community mobilisation and interest has enabled TTB to promote environmentally hygienic conditions in the low-income areas.

2.08 Human Resource Management and Development (HRMD) has installed a composting plant in Peshawar where urban waste material and garbage is being composted. This has contributed to reducing urban pollution and improving waste management. Even the livelihood of most of the scavenger children has been improved as they now collect the garbage at household level instead of in unhygienic garbage dumps. The children also get some money to pick the waste material from households. It is significant that HRMD got the technology of the composting plant from an Indian NGO committed to environmental issues.

2.09 Bunyad Literacy and Community Council has adopted and introduced a home grown technology to treat saline land in the agriculture areas of Punjab and Sindh. The replacement of chemical fertilisers in the form of locally manufactured chemical free fertiliser input has helped farmers improve their yield and increase their income. The successful efforts of Bunyad have enabled farmers to earn reasonably high incomes by using low cost fertiliser inputs.

Box 2.1 Nature of Pakistan’s NGOs

David Korten’s widely-accepted typology describes three generations of NGOs. The first generation focuses mainly on relief and welfare, the second on community development, and the third on longer-range ‘sustainable systems development.’ With a few exceptions, virtually all of Pakistan’s CBOs can be described as first generation organisations, concentrating largely on welfare activities.

- Smillie (1992, June)

³ “Development NGOs focus largely on basic human needs – food and agriculture, income generation, health, education, housing, women, human resource development. Environmental NGOs have focused on conservation, managing protected areas, protecting bio-diversity, and reducing pollution and greenhouse gas emissions.” Smillie (1992, June).

2.10 Shirkatgah felt that its major achievement was the initiation of a major programme of rehabilitation and sustainable use of mangrove forests, through community participation, along the Korangi Coast. Over 300 hectares have been covered with *Rhizophara*, *Mucronata*, *Avicennia Marina* and *Leriops Tigal*, with success rates of 80-85%, 70-75% and 40-45%, respectively.

2.11 Shirkatgah feels that local and community participation in mangrove planting are indicators of the project's achievements as these activities have been conducted for the first time at the local level. The NGO has made an attempt in promoting networking among community-based organisations and the community, so as to build capacity and strengthen institutions.

2.12 Finally, the Sarhad Rural Support Corporation (SRSC) has focused on redressing socio-economic imbalances, improving the quality of life, and enhancing skills and income earning capabilities of low-income or disadvantaged groups, such as women. This multi-pronged approach has enhanced living standard of the people. The improved quality of life of the people can be attributed to relentless efforts of the trained field workers of SRSC who have achieved harmony with the people of the community. Apart from regular interaction with the community it has been ensured that people's perceptions, ideas, needs and priorities should be fully incorporated at the planning and implementation levels. Hence the sense of ownership and belonging was inculcated to achieve better and sustainable results.

2.13 In sum, most NGOs expressed a high sense of accomplishment and self-efficacy. The nature of achievements cited reflected the early stage of development of the NGO sector in Pakistan. Overwhelmingly, the reason for success was attributed to community involvement. Access to appropriate technology was also cited both as a contributing factor and an effective constraint that needs to be alleviated.

2.2 Theme 2 (Past): How was this Achieved

2.14 Having explored the main sustainable development improvements, as a second theme, Consultants explored where the NGOs thought *their own actions* (including especially, *mechanisms* that they adopted) led to progress, and where *external signals* were the source of progress.

2.2.1 Where the NGOs' Own Actions Led to Progress

b) *Where the NGOs/private sector feel their own actions have been able to make progress in sustainable development. [—TORs]*

2.15 Participant responses demonstrated a high sense of self-efficacy. Progress was attributed mainly to community support and involvement and the NGOs' own efforts. The latter took the form of the reporting NGOs' efforts and of support from other NGOs working in the area. In several cases, community involvement was reported as being sufficient to overcome unanticipated resource shortages.

2.16 The Orangi Pilot Project (OPP) reported considerable progress in strengthening institutional capacities. It has helped in the development of sound local institutional structures, management systems, and transfer of technical know-how. Two of the Balochistan NGOs, Taraqqi Trust Balochistan and Environment Foundation Balochistan, have benefited from technical assistance and experience of OPP in the sanitation and sewerage disposed system. In this way, OPP has contributed to progress in strengthening other

NGOs, and benefiting the communities they serve. It has also covered a core area of NCS, local institutional development.

2.17 An interesting insight on the impact of the NCS on NGOs is provided by the example of Khwendo Kor (KK). The NGO initiated its endeavours around the broad theme of women and environment, but has refocused its direction towards social uplift of the women in Peshawar and rural areas of NWFP. The uncertainties in their initial donor driven work emerged due to different needs of the women of the community. Further there was no progress anticipated in their program until the basic demands of the women have been addressed. This inability of KK to devise effective environmental programmes for women took the shape of poverty alleviation projects like credit for micro enterprises to help women earn a livelihood. With the start of NCS, KK at its own initiative refocused its approach to address environmental issues, like kitchen gardening, and awareness creation among women regarding environment and sustainable development. With its knowledge of local conditions and its acceptability to the community, KK was able to contribute to the promotion of natural resource management.

2.18 At virtually the other end of the spectrum, World Wildlife Federation (WWF) has worked for the preservation of bio-diversity, and other environment and sustainable development goals, entirely at its own initiative. The training of professionals and other capacity building initiatives in various institutions and field project of mangrove rehabilitation in the wasted areas of Sindh and Balochistan is meant to preserve natural resources.

2.19 By and large most NGOs ascribed a very large role to their own initiatives in the success of their projects.

2.2.2 Signals & their Links to NCS

- c) *The signals that have enabled them to do this – policies, legal changes, fiscal changes, market demands, international campaigns, sources of extra financing – and how these were linked to NCS. [—TORs]*

2.20 The identification of ‘enabling’ and ‘push’ factors draws on the shared experiences of all participants of Focus Group Discussions. Most of the initiatives taken up by the NGOs are ongoing in various phases of implementation. These push factors can be identified under three broad categories: domestic factors, international signals, and own initiatives.

2.21 The NGOs have always been engaged in fostering social sector development. Although not new to the development agenda, environmental issues commanded the attention of local NGOs, in the wake of massive international campaigns. Government policies, macroeconomic changes, and regulations or legal guidance evidently have had no role in the NGOs’ environmental initiatives. Most NGOs responded either to the community's need-based push factors, or to their association with leading international environmental NGOs.

2.22 One enabling factor that participatory NGOs identified is their ability to deal with a recognised community problem. In such a case, it is difficult to ascertain the signal or push factor, as NGOs identified their own commitment to a holistic approach to development that includes environment as a key push factor.

2.23 NGOs focusing on the participatory aspects of developmental work presuppose an ethically motivated and socially aware public, responsible for their initiatives in envi-

ronment friendly programmes. The high degree of social partnership and independent action had led to the adoption of sustainable developmental programmes.

2.24 In many cases, international campaigns started on environmental concerns appear to have had catalytic influence over the NGOs' own initiatives. In many cases, NGOs reported re-packaging their existing programmes as being environment-related in order to reap the benefits associated with such a move.

2.25 In almost all of the enabling factors the vision and direction of the initiatives may be less clear initially, given the fact that multiple perspectives need to be incorporated. It has taken more time therefore to focus on agreed priorities.

2.2.3 The Mechanisms that NGOs Adopted

d) The mechanisms that they themselves have adopted – codes of practice, international links, etc. [—TORs]

2.26 Although the detailed discussion on actual mechanism that these organisations have adopted was not possible because of the time constraint but participants highlighted major steps taken by them from establishment of Research and Development units which focus on environmental issues, to setting goals and priorities.

2.27 They also explicitly mentioned about their own monitoring and learning processes and mode of actions that have enabled them to move successfully in the direction of sustainable development and comply with NEQS. The consensus emerged in all three FGDs that direct international linkages have been catalytic and strong stimulants for the development of mechanisms and operational methods.

2.28 OPP has adopted the community participatory approach with major share of involvement of the local beneficiaries. OPP has mainly resorted to acting as facilitators leaving the people of the community to carry out the programme with their own efforts. The physical labour input is also shared by the community, as people get themselves trained in latrine construction, and construction of main sewage trunks in lanes in their settlements. OPP has extended its work to virtually every corner of the City (Karachi) with the co-ordination of Urban Resources Centre, Transparency International, and SCOPE.

2.29 The Taraqqi Trust Balochistan also mobilises the communities in order to promote sanitation programme and better living conditions. NGOs basically rely on the close interaction with the people of the community. The priorities of the people are given weight and their immediate needs are taken care of accordingly.

2.30 SCOPE was also to develop small delay action dam at Khar River by working in collaboration with local kissan committee. Since this project is beneficial to the farmers in the dam area, farmers were also asked to contribute to its financing. In this way, the project could be completed despite financial constraints.

2.31 The Quetta Katchi Abadis Environmental Management programme by Environment Foundation Balochistan began in December 1997 and preceded with a feasibility study for almost thirty months. Twenty districts in the baseline area were identified and a massive campaign of consultation with local communities was undertaken. The needs and priorities of the people of the community were incorporated in the project plan. The sanitation lane project had 50% share (financial) of the community and in household latrines 20% share is of the beneficiaries. EPF provided technical assistance to the people

for the sanitation lanes and local CBO purchased the inputs like cement, labour, etc. CBO keeps the record of all financial transactions.

2.32 The process involves the concept of a Model Home (by Lyari community Development Project) in a poor locality of Lyari and a workshop was arranged to train the women of the local area in how to keep the house and locality clean and ensure hygienic environment. The process involves regular visits of field workers who organise workshops in the communities and appraise then (especially women) about the benefits of clean and healthy surroundings. LCDP has conducted workshops in the coastal villages of Karachi as well where people are residing in extremely filthy surroundings. People are being made to realise the importance of cleanliness in the light of teachings of Islam.

2.33 Pakistan Environment Protection Foundation (PEPF) is presently involved in mass awareness creation programmes among the general public. It has recently organised a series of walks in different localities with different themes of environmental protection. Well-known personalities are usually requested to lead the walk so as to highlight the seriousness of the issue. The Governor of NWFP joined the walk against tire and rubber burning at Brick Kilns in the suburbs of Peshawar. This activity of rubber burning is meant to give colour to bricks that are used in building construction. Walks have also been arranged against incessant cutting of trees, and air and noise pollution by rickshaws in NWFP.

2.34 As part of its efforts to provide support to communities, Sarhad Rural Support Corporation (SRSC) seeks to sensitise the people about environment, as one of its core initiatives. The need-based approach in kitchen gardening and organic farming has been adopted. Forestation and supply of potable water are the major environment friendly activities for the benefit of the rural communities. SRSC is working in seven districts covering five major components of development and welfare which are social mobilisation in natural resource management, human resource development, credit programmes for small enterprises, small productive construction, social sector development and general welfare issues.

2.35 The mechanism that SRSC has adopted for awareness building is direct contact with the community. The field workers go to the people, talk to them and prepare an area profile while listing the needs of the community. A baseline survey is being conducted to handle the various aspects and dimensions of poverty alleviation actions which establishes the relevance to the environmental objectives. SRSC acts according to the immediate needs of the people in its catchment areas.

2.36 The Natural Resource Management (NRM) section is striving to increase land productivity, transfer of new and improved technology, ensure food security for the rural poor especially pregnant women and children. To achieve these objectives, the NRM section of SRSC seeks to develop a cadre of village-level NRM specialist, on-farm demonstration of well-tested and proven technologies and to promote linkages between Women/Community Organisations and Government/Private NRM agencies.

2.37 HRMD environmental initiatives are in the areas of sanitation and solid waste management. HRMD main focus is on children who work as scavengers. They not only waste their time in picking up the garbage, it is extremely unhealthy activity on their part to be exposed to many diseases and health problems in the midst of hazardous garbage. HRMD initiated a campaign as pilot project in which people were asked to separate the organic waste at household level and get this waste picked up by children for composting and recycling and pay some amount to the pickers. In this way children have been able to get increased income and save their time as well.

2.38 Ulama and religious leaders are being motivated by the National Research Development Foundation to play their role in changing the attitudes and behaviour of the local people in favour of clean and hygienic environment. The Foundation has succeeded in obtaining their targets in various localities of NWFP with the help of Ulama who effectively convince the people about the teaching and tenets of Islam which has stressed upon keeping the environment clean as compulsory duty on the part of all the Muslims.

2.39 Environmental issues are being advocated by Shirkatgah through its network across the board and the people are being mobilised for certain acts. For instance a campaign against the cutting down of trees in the vicinity of Lahore had a very positive impact. A quick survey was conducted of the area where trees were to be cut down to assess the needs and dependence of the people in that particular area on trees.

2.40 WWF identifies its three segments leading to the mechanism that it has adopted for environmental initiatives.

- 1) Capacity Building: WWF regularly holds training workshops for the industrial sector. Personals from industries are being appraised of the concept of environmental auditing plan, environmental laws and regulations. Training in action oriented tasks like waste management, waste minimisation, cost effective pollutants treatment technology is also imparted.
- 2) The government institutions (e.g. NIPA, Staff College, Lahore) for training of various government officials have initiated training in environmental issues with WWF's collaboration. The emerging issues at the local, national and global level regarding sustainable development are being highlighted through press, leaflets, books e.g. "Environment Guide Book" etc.
- 3) The field based projects have been initiatives by WWF in the areas of solid waste management in various communities by adopting the participatory approach. It has also introduced low cost air pollution monitoring kits which are being provided to different NGOs and University students working on environmental issues.

2.41 Society for the Advancement of Education has undertaken various programs in training and education of the masses in environmental issues. The NGO has developed an environmental education kit for the benefits of the trainees. Most of the trainees come from local NGOs and schoolteachers. This is the initiative that the NGO has taken on its own and has been able to run it smoothly.

2.3 Theme 3 (Future): What challenges/constraints lie ahead, and how will they be overcome

2.42 By and large, lack of funds, of moral support from government, and of timely provision of technical assistance from donors (and intermediating NGOs) were identified as the key constraints to past progress. This experience was projected to the future in the identification of constraints and solutions. There was little evidence in the discussions of an independent assessment of factors in the future that were at variance with past experience.

2.3.1 Major Challenges and Constraints

- e) *Major challenges and constraints for further improvements (external sources and within their own organisations). [—TORs]*

2.43 Many NGOs expressed grave reservations and apprehensions about practising sustainable development in a manner consistent with their own objectives. They felt that the primary requirements of the communities are often quite different from the requirements of sustainable development as understood by donors.

2.44 They reported facing many difficulties and uncertainties in acquiring financial resources for project implementation. Some participants suggested that genuine sustainable development can never be achieved, given the seeming intractability of the problems involved, and the many contradictions and conflicts at the government level.

2.45 The government was unanimously singled out as a very passive partner, affecting the climate for change. The government's lack of commitment, reflected in its attitude, was identified as the biggest challenge to furthering the cause of sustainable development. High-level political support, which is seen as not having come forth, is said to be crucial for success in what the NGOs see as a crusade against environmental degradation.

2.46 Some NGOs consider the dearth of information, data on environmental indicators, and of skilled, trained and technical personnel as major constraints to undertaking any project.

2.47 Besides these specific factors, the general current social and economic situation of the country, with declining growth, different priorities of stakeholders, the fallout effects of Afghan refugees (and lack of government policy to tackle refugee problems) were all challenges identified by NGOs as hurdles in their work.

2.48 Surprisingly, constraints within the NGOs' own organisations, were not reported by any participant. All the impeding factors are attributed to external sources, in which lack of facilitation and financial support by the government were cited most frequently. One NGO departing from the popular perception of the indispensable role of donors in execution of programmes and projects, put the responsibility of unsuccessful efforts in sustainable development on the involvement of big donors.

Box 2.2 NGOs in Pakistan

There can be few countries in the world where so many donors are pursuing such a small NGO community with so much money, and with so much eagerness to support, strengthen and build.

- Smillie (1992, June)

2.3.2 Recommendations for the Future

f) Recommendations for the future. [—TORs]

2.49 Surprisingly, a participant from one of the most well-known NGOs, popular with donors, felt that dependence on loans and donors' money should be minimised. While not going so far, many NGOs reported that "donor-driven" programmes force a Faustian compact upon the NGOs in their efforts to provide for the needs and priorities of the people.

Bunyard feels that efforts should be made to replicate this achievement in other areas where soil fertility has declined because of salinity and use of chemical fertilisers. Nature Resource Centre of University of Agriculture Faisalabad has co-operated with Bunyard in the provision of this local technology for the benefit of the farmers. Hence Bunyard has been able to successfully implant the environment friendly technology for improved results because of the total support and co-operation of Nature Research Centre.

2.50 Some of the recommendations that were advanced were:

- There should be an increase in public hearing, and lessening of space between politicians, planners and public. There should be a level playing field; information should not be kept secret by public agencies.
- There is a need to have a more consultative approach at the community level to tackle the implementation problems so people will own the project. Village conservation strategies, based on direct consultation with village people to identify their specific needs and priorities, should also be formulated. For the sustainability of the programmes and initiatives, the community must be consulted to create sense of ownership in the community. If the NCS message has to be made popular, then it should be translated in easy and local language.
- Resource organisations, like IUCN, have not been able to disseminate information on various environmental issues to grassroots NGOs. The timely provision of information, essential to the proper design of their programmes and to better results, is a priority need of all local NGOs and CBOs. In-depth research should be done on each core environmental issue, and the impact of progress in each area on the economy should be publicised. Environmental issues must be covered by the media (paper and electronic) in Urdu and in regional languages, for the benefit of the masses.
- Implementation of NCS has to be done in letter and spirit. The commitment to environmental issues and sustainable development should be the part of the oath taking of the legislators and policy makers.
- Mass composting of the green waste should be the responsibility of municipal corporations.
- Afghan refugees were identified as one of the factors which has exacerbated environmental pollution and degradation. Their “negative” cultural impact was also mentioned. Government must have a policy for these refugees and restrain them from the adverse activities.
- A national network of all NGOs working for sustainable development was said to be “imperative.” Isolated efforts and projects are insufficient to achieve sustainable development. Collaborative and co-ordinated actions are required to achieve concrete outcomes.
- There is a need for a national institution to provide NGOs with information about innovative approaches and technologies, and training on sustainable development.
- The government must also play an active role in facilitation and implementation of NGOs’ programmes and projects.
- The capacity building and strengthening of CBOs is essential. CBOs work in communities, with high degree of commitment. Hence they must be empowered to run the environment protection projects efficiently.

3. Contribution of Private Sector towards NCS Implementation

3.01 This chapter provides a profile of the participants at the three focus group discussions conducted with the private sector (Table 3.1), and based on a content analysis of the verbatim proceedings (at Annex 3), presents the key themes that emerge. Naturally, the selection of “key” themes is subjective and the interested reader may well read the data differently.

3.02 The Study seeks to identify private sector investments and/or projects in the environmental management and greening of the pertinent sectors. Accordingly, for the private sector groups, an effort was made to enlist group members from firms that have made investments, have a programme, or are knowledgeable about environment-related issues in industry.

3.03 As the data presented in Table 3.1 show, one woman and twenty-three men took part in the three focus group discussions (in Karachi, and Lahore). On average, the participants were evenly distributed by age—with about half being under 45 and half, above. Most participants were extremely well educated; with one in five having a PhD degree. In addition to formal education, well over half the participants reported having taken part in at least one or more environment-related training course, seminar and workshop. Of the 16 participants who responded, 5 reported over 3 years of experience in working on environmental issues; 8, of 3-6 years; and only 3, of less than 3 years. Almost all reported having been associated with at least one or more environment-related projects. On average, for every two respondents, one reported familiarity with NCS text and goals; although the group in Karachi was unusually well informed.

	MNCs		Industry	
Participants:	Karachi	Karachi	Lahore	Total
Number	8	7	9	24
Female/Male	-/8	-/7	1/8	1/23
Age				
Under 30	-	-	2	2
30 to 45	2	4	3	9
Over 45	5	3	3	11
Education				
BA	3	3	2	8
MA	4	2	3	9
PhD	1	2	2	5
Training ¹				
Courses	7	5	2	14
Seminars	8	7	4	19
Workshops	7	7	3	17
Experience ²				
< 3 years	1	1	1	3
3-6 years	3	2	3	8
> 6 years	1	3	1	5
Projects ³	7	7	9	23
Know NCS				
Texts	5	5	4	14
Goals/Tgts	5	4	2	11
Note: Numbers may not add up due to non-response.				
¹ Formal training in environment-related subjects.				
² Experience in working on environmental issues.				
³ Associated with Environment-related projects.				

3.1 Theme 1 (Present): What has been achieved and why?

a) *a sustainable development health check (major conservation and sustainable development improvements and their reasons) [—TORs]*

3.04 This part of the discussion sought to *identify* the major conservation and sustainable development improvements, and their reasons. A number of participants were able to identify major conservation and sustainable development improvements from the textiles, fertilisers, cement, sugar, leather tanning, and paper and board manufacturing sectors. They provided extensive technical and financial details not only on the improvements that they reported, usually based on first hand experience, but also on comparative developments in the region and in the world.

3.05 Shakaranj Mills Ltd in Jhang has achieved substantial success in the realization of environment friendly production of sugar. The mill claims to have taken care of 100% of the effluents discharged by the mill. The sugar, and associated by-products like alcohol, are being exported in compliance with international standards. A desire to keep up with international practices, as well as sensitivity to export market demands have been the main reasons for their investment in pollution abatement technology.

3.06 Packages Limited has been able to conserve the water consumption in its production process. By reducing wastage, the technology has led to a reduction in consumption of water from 11.5 cusecs to 8 cusecs. The water used is treated at a recycling plant at the manufacturing site. This has required a financial investment of some Rs 400 million, which was reported as being completely unjustifiable on economic grounds. The motivation apparently was almost exclusively the desire of the owners to do so on what might be called moral grounds.

3.07 Shafi Tanneries has adopted a simple and cost effective method of chromium recovery from the wastewater. The hazardous wastewater treatment is a considerable achievement. The improved level of wastewater in terms of freeing it completely from the hazards of chrome was attributed to the commitment of leather industry to pollution abatement, and to comply with export market requirements and the NEQS.

3.08 There is now reported to be a “progressive” group within manufacturing, consisting mainly of large-scale manufacturers, who constitute the vanguard of environmental initiatives in the private sector. By all accounts, their heavy investments are not matched by any present or future financial or economic benefits. Instead the principal motivation is reported to be the desire to bear these costs because this is the right thing to do. Where exports are involved, however, a desire to retain the approval of their customers and to avoid potential costs that might be imposed by emergent quality regulations was also cited.

3.2 Theme 2 (Past): How was this/these achieved?

3.09 Having established the main sustainable development improvements, the second theme explored where *their own actions* (including especially, *mechanisms* that they adopted) led to progress, and where *external signals* were the source of progress.

3.10 Within the private sector, three kinds of interests may be identified. First, multinationals, who behave much as their parent companies do and therefore are internally subject to global pressures. Second, domestic manufacturers whose exposure to international pressures is a function of the extent to which their profits are based on exports. In this group, size is also a factor: it is only among the very big that a concern for the environment can be detected; the medium and small-scale manufacturers are both less well informed, and less persuaded of the moral worth of natural resource conservation and sustainable development. Finally, there is also a nascent private services sector – represented in our discussions by participants from the environment consulting business – that have a somewhat different outlook on issues of concern to this Study.

3.2.1 Where the Private Sector’s Own Actions Led to Progress

b) *Where the NGOs/private sector feel their own actions have been able to make progress in sustainable development. [—TORs]*

3.11 The private sector, even more than the NGOs, attributed their success largely – perhaps even exclusively – to their own efforts. Unlike the NGOs, that did see others

working toward the same objectives, the private sector felt that they were alone in their efforts. Unlike the NGOs, where foreign donors were seen as partners, the nature of the private sector's relationships with foreign customers was more competitive than co-operative. Emerging trends in export markets, however, were reported as important signals.

3.12 The government was castigated for its lack of commitment, and its inability to provide incentives to positive action in the area, either in the form of finance, credit, or policy support. To compound matters, in the views expressed by the private sector, the government was engaged in placing the burden of regulation and compliance also on the private sector. Moreover, the goals of regulatory compliance were uniform – where it made more sense to have sector-by-sector goals – and entirely unrealistic.

3.2.1 Signals & their Links to NCS

- c) *The signals that have enabled them to do this – policies, legal changes, fiscal changes, market demands, international campaigns, sources of extra financing – and how these were linked to NCS. [—TORs]*

3.13 The private sector's efforts and initiatives in pollution abatement rest on two fundamental propositions. First, that international campaigns and emerging market demands are now placed on the environment friendly production process. Second, the government policies, regulatory measuring and legal bindings have acted as the mandatory actions towards compliance for National Environmental Quality Standards. Analytically, therefore a distinction can be made between global and domestic signals.

3.14 The multinationals are most sensitive to global signals, and act according to international standards. This enables them to be more enthusiastic, if not responsive, to domestic signals also. They tend to abide by the country's environmental laws and NEQS, and find it in their own interest to qualify for these standards.

3.15 In case of local industry, external financing for environment-related investment is non-existent. External Pressures for better quality products (ISO 9000) and environment friendly and pollution free production process and systems (ISO 14000) largely contributed to serious efforts in this regard. Government policies, especially the Environmental Protection Act and the establishment of Environmental Protection Agencies, have played key role in the private sector's initiatives in this area.

3.16 The leather tanners are major exporters of their products. They have adopted pollution abatement technologies mainly to comply with the international environmental and quality standards. By contrast, the efforts of some of the leaders and proprietors of the paper and board industry, have been motivated by personal inclinations. The sugar industry is basically concerned about the soil and water conservation in the vicinity of mill and has self-motivation in the installment of their pollution abatement and conservation technology.

3.17 The participants from FPCCI and the environment consulting industry were originally associated with the design of the NCS. Understandably, these professionals were committed to environmental projects. Similarly, one participant, a scientist, who had also been associated with various environmental ventures and projects, has been able to establish a very useful project in the form of Global Environmental Laboratory (GEL). His own interest in the development of low waste pollution abatement technologies most suited to local industrial sector and conditions, has enabled him to undertake a very productive job.

3.2.2 The Mechanisms that the Private Sector Adopted

d) The mechanisms that they themselves have adopted – codes of practice, international links, etc. [—TORs]

3.18 The participants from the private sector felt strongly that focus group discussions were not the appropriate forum for a discussion of the specific mechanisms adopted. This is because the mechanisms tend to involve considerable technical detail, and are specific to each sector (or process, or even plant). Nevertheless, participants provided some details about individual mechanisms that they adopted, at a general level (see Annex 6).

3.19 Engro Pakistan is a heavy consumer of water, as it is a specific input for production of fertilizer. The contaminated wastewater is being recycled, but still retains two to three percent of pollutant in it, as it gets drained out. The chromium sludge is being treated and is passed through chromium recovery units. The recovered chromium is being reused.

3.20 The Hub Power Plant was set up in 1996. Before the completion of the plant an Environmental Assessment Study was conducted as is done in the case of large scale products, this being a project which World Bank has assisted Pakistan since 1985 in its formulation of total Energy policy. So, whenever World Bank is involved in such projects, they do demand that the project should comply with their standards.

3.21 In Dadabhoj Cement, there are basically four different systems of operation for material transport and dusting. Dadabhoj has installed an in-built system of pollution prevention. The system has been upgraded to prevent dust released in the surrounding air by cement production process. For the last sixteen years, their production plants were operating without any system of sulphide processing. Now new technology and model plants are able to clear the sulphides from polluting the environment, to a large extent. But compared to an electric precipitator, which controls dust emissions completely and ensures a dust free atmosphere, this technology is not able to control dust emissions fully. But the electricity requirement of the electric precipitator makes it very costly for the producer. Even so, Dadabhoj Cement Industries are in the process of upgrading the plant from the capacity of 1,000 tons to 2,500 tons and intend to install electric precipitator in near future.

3.22 Shafi Tanneries has been able to adopt a very simple and economical method of chromium recovery from wastewater. The leather industry is a big consumer of water and nature of water in Korangi area is very saline. There are high levels of chloride and other minerals in this saline water, which is used as input for washing of the leather. A simple strategy was adopted to do washing in bulk instead of continuous washing to reduce the level of water outlet. To maximize the uptake of chrome, they have used environment friendly chemicals and its continuous adoption has virtually cleared the wastewater from chrome.

3.23 Taufique Leather Industry has installed effluent treatment plant for tanneries in Kasur. For tanning industry at Sialkot, a clean production centre has been established. It is a lagoon based system at effluent treatment plant site with homogenization tanks for precipitation. 18 giant size lagoons covering an area of almost 1 Km are causing 76% of the BOD load. Then there is another project under construction for sludge disposal which is near completion. Industry feel that a lot need to be done in this regard. A better and modified technology for cleaner production and recycling is imperative.

3.24 In Packages Ltd. wastewater is being recycled, and the use of fresh water in the production process has been reduced substantially, without compromising the quality of

the product. The process of evaluation, implementation and monitoring is involved in the recycling of water. Hence it is a continuous process. There are two processes to treat the effluents in used water. One is segmentation, which removes the suspended solvents. Second is chemical recovery plant in which waste product is burnt, organic portion is removed and convert it back into chemicals which are used in the materials. Packages has spent Rs 400 million on this environment friendly project, and on management of pulp which is produced from indigenous straw.

3.25 Shakarganj Sugar Mills discharge multiple waste and pollutants during the manufacturing process. Solid waste, liquid wastes and air emissions are discharged at various level of production. In Shakarganj the soil is very enriched around the mill area and effluents from the mill are very acidic in nature. The plant installed at the mill separates the phosphates from the waste through filter gates. This is a ETPI project and is taking care of 100% of the effluents coming out of the mill, compared to half of its capacity (50%) last year.

3.3 Theme 3 (Future): What challenges/constraints lie ahead, and how will they be overcome?

3.26 Generally, because Environmental Quality Standards can raise the unit cost of production and/or transportation, it is considered as a major constraint, especially in the absence of government promised incentives. At the same time, the fear was expressed that this would open yet another area of corruption, worsening the crisis in governance.

3.27 The government's non-facilitative attitude was commonly a general complaint that is posing challenge and has created gaps in industries initiatives.

3.3.1 Major Challenges and Constraints

e) Major challenges and constraints for further improvements (external sources and within their own organisations). [—TORs]

3.28 By far the greatest challenge identified by private sector participants was the lack of financial resources to undertake the investments that are needed. To a large extent this was related to the overall slowdown in the Pakistan economy, and the deterioration of industry in general. A close second was the government's lack of commitment, willingness or ability to undertake, support or promote environment-friendly initiatives.

3.29 Some specific comments were:

- The NCS target for investment by industry by the year 2000 was Rs 32 billion. By contrast, due to shortage of resources, only Rs 10-12 billion have been invested.
- The financial constraint is the biggest factor for all the industries to go for pollution abatement technologies. In the short term, they are unable to import this kind of technology from other countries because of lack of financial resources.
- Government industries continue to dump their chemical waste on the Grand Trunk road, and elsewhere, setting a bad example, and providing proof of the lack of their commitment to environment.
- Government ministries delay work, by their bureaucratic red-tapism, and any sanction from the government takes lot of time.

- Government has not provided the incentives promised to industry, on which initiatives by the private sector – including the willingness to meet NEQ standards – were contingent. Still, the private sector is investing in environment-friendly technologies, but there is no sign of any action on part of government.
- On the other hand, environment consultants report an extremely passive response from industry, especially the small and medium-scale industry, and their participation in workshops and roundtables is very disappointing. The urge to learn is also lacking in industry. It is an attitudinal problem.
- The small and medium sized industries are main polluters and there is no such check on them to make them accountable. These industries need to be made aware of environmental pollution and technology that they may adopt to estate pollution levels.
- There are many factories or industrial plants that have space problems. They were not designed to accommodate a treatment plant, and they can not buy the required space.
- Trained technical manpower to take collective measures is unavailable.
- The laboratories to check the level of pollutants in the recycle or treated waste water are not adequately equipped to give reliable results. One sample tested in two different Labs give two different results. PCSIR or other laboratories are not sufficiently standardized to test the industrial treated output with near precision.

3.3.2 Recommendations for the Future

f) Recommendations for the future. [—TORs]

3.30 A number of suggestions were made on what the government could do to assist industry in adopting sustainable development objectives. Government could provide a well-equipped laboratory to check the level of pollutants in treated water. They could set up model projects in each sub-sector to guide efforts, especially by small and medium-size industries, who show little awareness of, much less persuasion by, the message of sustainable development.

3.31 Some specific recommendations were:

- Government has to play a very serious role in getting the funds and investment from abroad for environmental projects.
- Government should also provide basic infrastructure for the technologies to be adopted by industries in ensuring the sustainable development of the economy the role of civic agencies like KDA, WAPDA, KMC is very important.
- Government should give easy loans to the industry for pollution abatement plants (Eastern Tanneries). Large industry is able to purchase the water treatment plants, but smaller and medium sized industries lack financial resources.
- Government sector should setup a treatment plant for the industrial waste and laboratories to check the pollution level.
- Government must come up with the researched technology to convert the tannery's waste into useful and profitable product. This could be an incentive for industrialist to sell its waste output and make money out of it.
- The industrial waste would be transferred into profitable product with the application of technology. Government can provide the facility in the acquisition of this technol-

ogy and motivate the industrialists to invest in it as they have incentive in getting profits out of this technology.

- Industry expects government to keep its promise and provide incentives and facilities that has been committed by the Government in NCS.
- The chief executive of the environment protection council who is also the head of the government must spare time for the issues in sustainable development.
- Self-reliance in terms of adoption of pollution abatement technology. Preference should be given to utilize local human resources (technical) to promote indigenous technology. NCS and Provincial Conservation strategy is not enough.
- NEQS should not be imposed indiscriminately on all kinds of industries and its pollution discharge. The standards should be revised in terms of particular level for specific industry,
- NEQS should be industry specific. It is not correct to have NEQS for all types of industry.
- Better incentives and less stringent regulatory measures.
- Facilitation geared towards environment friendly efforts.
- Case studies should be conducted to draw up a detailed work plan for the assessment of implementation of core programmes of NCS. The revision of NCS on the basis of focus group discussions is not sufficiently reliable methodology. What is needed now is action, not yet another revision of strategy.
- Promotion of homegrown technologies and pollution abatement plans is imperative. The indigenous laborites should be facilitated to encouraged to develop cost effective technologies to cater the local needs of the industry.
- Self-reliance in terms of adoption of pollution abatement technology.
- Promotion of indigenous and home-grown technologies and pollution abatement plants.
- Sustain diversion of resources (financial) towards the improvement of technical know how and expertise to tackle various pollution problems.
- New avenues and actions for advocacy of environmental plans with mobilisation at the grassroots levels.
- Composting system has to be introduced at mass level.

4. Consultants' Conclusions & Recommendations

4.01 Chapters 2 and 3, along with Annexes 2 and 6, seek to provide the views of participants in the six focus group discussions, with as little editorial or critical input from Consultants as possible. Together with Chapter 1 (on background), this concludes our full response to the Terms of References provided (Annex 1), and supplementary agreements reached in the course of discussions.

4.02 In this concluding chapter, Consultants go beyond the views expressed by the participants of the focus group discussions, to provide some additional interpretative conclusions and recommendations on the subject of the study.

4.1 Comments on the Terms of Reference

4.03 As part of our efforts to respond to Clients' concerns, Consultants have reviewed and reflected upon the terms of reference provided (Annex 1, "Study TORs," hereafter). These TORs require us to be guided by the overall NCS MTR objectives, provided in the Overall MTR TORs (Attachment 1 to Annex 1, "Overall TORs," hereafter).⁴

4.1.1 Overall Mid Term Review TORs

4.04 The overall mid term review of Pakistan's NCS is a complex undertaking directed at a comprehensive assessment of the lessons of experience, with a view to effecting changes ranging from radical surgery to mid-course correction, as necessary. In the words of the Overall TORs, the MTR seeks:

To analyse and collate lessons learned so far, draw conclusions and formulate recommendations regarding adjustments of NCS as a holistic and integrated strategic guideline for sustainable development in Pakistan.

4.05 In terms of the overall TORs, the present study appears to be in response to the second of thirteen tasks envisaged for "a meaningful review" of the NCS:

ii. FOCUS GROUP DISCUSSIONS ON THE CHANGING CONTEXT, AND ON PROGRESS AND NEW PRIORITIES IN ENVIRONMENTAL CONSERVATION AND SUSTAINABLE DEVELOPMENT – issues not really covered by the NCS – ... globalisation of markets, new international obligations, etc. explain. [sic.] We need many perspectives on this, to regroup priorities. Furthermore, a contextual discussion will help to focus and revise the sustainable development analytical framework; and it will reveal people who have useful information, for later detailed interviews, etc.

4.06 These focus group discussions are being conducted by the MTR co-ordinator, and "private sector facilitators" – the last referring presumably to the present exercise being undertaken by Consultants.⁵

4.07 The motivation for these focus group discussions can be gleaned from an earlier paper by Bass (1999):

⁴ Consultants have been provided with two versions of the Overall TORs. The first, a draft dated May 26, 1999, was provided with a letter seeking Expressions of Interest, dated May 27, 1999. The second, as an (undated) attachment to a letter inviting Technical & Financial proposal, dated September 30, 1999. The key difference is a major revision of the methodology section – giving a 13-task breakdown of the methodology. A time frame is also provided (10-12 months starting May 1999).

⁵ Bass (1999).

A MTR needs to look forward, as well as back. There were areas covered in the NCS that were never implemented, for whatever reason, but which are still important. But conditions have changed, too. Some things in the NCS may no longer be important. And there are new issues not really covered by the NCS – climate change, globalisation of markets, new international obligations, etc. We need many perspectives on this, to re-group priorities.

If the NCS is to continue, it must be focused on sustainable development. It is therefore useful *to find out what people feel have been the main areas of SD progress, how this was achieved (with the NCS or not), and remaining constraints*. This will help the NCS to adjust.

We cannot assess all the NCS projects. This exercise will help us to focus on those projects that matter in today's context.

Furthermore, a contextual discussion will help to focus and revise the SD analytical framework; and *it will reveal people who have useful information*, for later detailed interviews, etc. [*Italics added*]

4.08 The portion highlighted first appears to point to the conceptual origins of the present Study.

4.1.2 Study TORs

4.09 Within these overall objectives, however, the Study was guided by its separate terms of reference, and supplementary agreements reached in the course of discussions. In relation to the overall TORs, the Study TORs appear to respond to the concerns highlighted in italics: “to find out what people feel have been the main areas of SD progress, how this was achieved (with the NCS or not), and remaining constraints.” A subsidiary goal that has emerged in discussions with the Clients during the course of the assignment is to identify “people who have useful information” (also highlighted in italics, above).

4.10 Whether intended or not, the narrower TORs of the Study led to a narrowing of outlook from the MTR TORs to the Study TORs. The main emphasis of the MTR TORs is to elicit responses to “the changing context,” “progress,” and “new priorities” in environmental conservation (EC) and sustainable development (SD). This reflects two kinds of concerns: first, a concern for “new areas” and second, the somewhat more abstract concern for the need to move conceptually beyond EC to SD. By contrast, the Study TORs seek to assess progress in conventional areas, understand the why and how of these achievements, and identify constraints to future progress.

4.11 These features of the context and manner in which the Study was conceived and implemented should be kept in mind in evaluating the findings of the Study.

4.2 What was Achieved and Why?

4.12 A content analysis of the transcript of the focus group discussions bears out the perception – at least among NGOs. In Table 4.1 we present raw frequencies – the number of times that each factor is mentioned, based on a review of the transcripts of the three focus groups relating to each of the two sectors identified – of major environmental conservation and sustainable development interventions.

Table 4.1 Major Environmental Conservation & Sustainable Development Interventions Mentioned

	(raw frequency)	
	Private Sector	NGOs
Impact on perception and awareness	2	12
Initiatives taken and impact realised	4	12
Initiatives taken, but impact not fully realised	3	9

4.13 On the basis of our discussions, however, it is possible to add some nuances to this assessment. First, among NGOs, it is felt that the NCS has not just increased awareness, but has also led to changes in perceptions and attitudes, that are an essential precondition for behaviour change. Second, with an equally large frequency, NGOs report of successful initiatives – whose impact was realised. Finally, rightly or wrongly, the NGOs reported success with greater frequency (12) than failure (9). By contrast, the private sector was considerably less sanguine about achievements in their areas of concern. Even so, some progress was reported, and the frequency of success reported was ahead of failure (or partial success). Also, in its reckoning, the private sector attached greater weight to implementation (initiatives taken) than to awareness creation.

4.3 How was this Achieved?

4.14 Table 4.2 presents the results of the content analysis in relation to “signals” and “mechanisms” that respondents identified with high frequency.

Table 4.2 Major “Signals” and “Mechanisms” Mentioned

	(raw frequency)	
	Private Sector	NGOs
Own Initiatives	5	6
Signals		
Government policies and legislation	4	3
Donor driven	1	2
International market demands	2	-
Mechanisms		
Indigenous development	6	7
Imported technology or consulting services	3	2
Efficient utilisation of resources	8	8

4.15 The discussions reveal a very high sense of self-efficacy among the respondents, both in the private sector and the NGOs. An overwhelming majority of respondents identified their own efforts as a major factor accounting for success. The availability of external resources or support were identified more as constraints than as contributing factors. Within this overall perspective, however, signals from the government were reported to play a much greater role than from those from donors, for private sector. The private sector was also affected by global market signals. The NGOs reported being influenced by government and donor signals, but felt they were immune from international economic developments.

4.16 In terms of mechanisms, both the private sector and the NGOs appear to consider resource use efficiency as the principal mechanisms that accounts for success. This is interesting given the emphasis in recent academic literature on the importance of govern-

ance and institutions. Participants' responses seem to suggest however that in terms of mechanisms they regard technological innovation – albeit of simple nature – as the proximate determinants of success in environmental conservation and sustainable development. Once again, indigenous developments were reported with greater frequency than imported technology as contributing to success.

4.4 What Challenges Lie Ahead and How to Overcome them?

4.17 Table 4.3 reports on the frequencies observed in the content analysis of the focus group discussions on the questions relating to future constraints and recommendations.

Table 4.3 Major Challenges & Constraints Mentioned (raw frequency)

	Private Sector	NGOs
Finances and Resources	7	7
Information and Technological Expertise	2	7
Government Policies	7	6
Community Participation and Support	1	6

4.18 The NGOs identified four major constraints – with about equal frequency, although finance and technology were slightly ahead of community support and government policies – that need to be alleviated in order to achieve future progress (Table 4.3). Participants from the private sector tended to be more discriminating in their views. Understandably, in their view finance and government policies were by far the more effective constraints to progress. No doubt, this also reflects the comparative advantage that the private sector enjoys over NGOs in its access to information and technology, and in its dependence on community support for success.

4.19 That much remains to be achieved in the private sector is evident from the figures presented in Table 4.4.

Table 4.4 Fact Sheet: Industry and Pollution in Pakistan, 1992

Main Industries	Food products, tobacco, textiles, chemicals, electrical equipment, transport equipment, steel, cement, tyre production	
Energy	Electricity	4,000-5,000 MW
	Oil	52,808 US barrels per day
	Nuclear	1,000 MW when 2 nd plant is complete (0.015 MTOE presently)
	Firewood	54% of domestic requirements
Pollution	Coal & Gas	5% and 40% commercial demand
	Water	Domestic sewage, industrial waste, agricultural fertilisers ¹
	Air	Industrial discharges, power generation, transport
	Land	Domestic sewage, garbage dumps, industrial waste
	Coastal	Oil, industrial effluents, municipal discharges, siltation

Source: Reproduced from Stone et. al. (1992 April)

¹ Consultants suggest adding pesticides.

4.5 Envoi

4.20 While it is not within the scope of this Study's terms of reference to address the larger questions to which the MTR team would address itself, Consultants would like to place three thoughts on the record, for the team's consideration.

4.21 First, there would seem to be some merit in coming up with an early operational definition of sustainable development, if the pros or cons of a conceptual move from energy conservation to sustainable development are to be discussed more widely. Even among high practitioners, the idea of sustainable development borders on the theological. There is a need to provide it with greater empirical content – even at the expense of some reductionism. Unless this is done, there is a danger that participants in the conversations that are envisaged in the conduct of the MTR would attach a multiplicity of private meanings to the term, and the results of the Review would be of questionable meaning and validity.

4.22 Second, in assessing the “success” of, or “progress” achieved under, the NCS, there is a need to distinguish between – with apologies for the barbarism of coining a new phrase – embodied and disembodied progress. A history of the last fifty years of development, in Pakistan and elsewhere, has been the ability of autonomous foreign resource inflows to create islands of “progress,” that have vanished with the cessation of these flows. This kind of progress that is not internalised in the institutional structure of the host society can be called disembodied progress, in contrast to embodied progress that would be sustainable even in the absence of autonomous inflows. With this distinction, the MTR may find it useful to distinguish between these two kinds of progress (or achievements) that may be attributable to the NCS.

4.23 Finally, in making recommendations on the NCS, one important consideration that the MTR team should bear in mind is the sea change that has taken place in the climate of intellectual opinion on the appropriate role of the state and public policy. The NCS was prepared in an environment when it was considered appropriate for governments, assisted by foreign lenders and donors, to spearhead social change. This is no longer the case. Conventional wisdom seems to hold that the NCS was a brilliant global public relations document,⁶ but was less so as an action plan that could be implemented. Today, the question must be asked whether it still makes sense to devise an implementation strategy on the assumption of a donor-supported interventionist state, that in turn supports NGOs and private industry in promoting environmental conservation and sustainable development.

⁶ Could it be that the government “commitment” to which the literature dutifully attests was less a reflection of the Greening of die-hard bureaucrats, than an astute early appreciation by them of the value of the NCS document in mobilising additional foreign assistance for Pakistan?

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