Changing perspectives on forest policy

This report traces the story of how the policy debate has been opened up in Pakistan, principally through experience with participatory forestry projects and conservation strategies. Legal changes have been made to allow communities to play their part in joint forest management, reinforcing a trend away from governmental control alone and towards reinstating community mechanisms and rules. Building on an identification of what works well in Pakistan, recommendations are made for further improving the policy process, and for installing key policies which will help the sustainability of forest management and optimise stakeholder benefits.

Policy that works for forests and people series

Forest issues often concern large amounts of money, long timeframes, huge areas of land, and diverse livelihoods. The issues are complex and vary from place to place. However, a pattern of forest problems is common to many countries: continuing loss of natural forests; over-concentrated control and inequitable access to forests; an ill-informed public; and poorly-resourced, inflexible forestry institutions. Policy is the root cause of many of these forest problems.

This series consists of six country studies - from Costa Rica, Ghana, India, Pakistan, Papua New Guinea and Zimbabwe - and an overview report. The series aims at a better understanding of the forces at play in contests over policy, the winners and losers, and the factors that affect policy outcomes. It also describes the processes that make and manage good policies and the policy instruments that work in different contexts. By dealing with policy in practice - in the 'real world' of people and their institutions - the series aims to go beyond the frequently heard complaint that there is a lack of 'political will' to change, by showing *how* policy can change for the better.

This report was financed by the UK Department for International Development (DFID) and the Ministry of Foreign Affairs, Netherlands Development Assistance (NEDA)

iied

International Institute for Environment and Development

Forestry and Land Use Programme

IUCN

ISSN: 1028-8228

Policy that works for forests and people

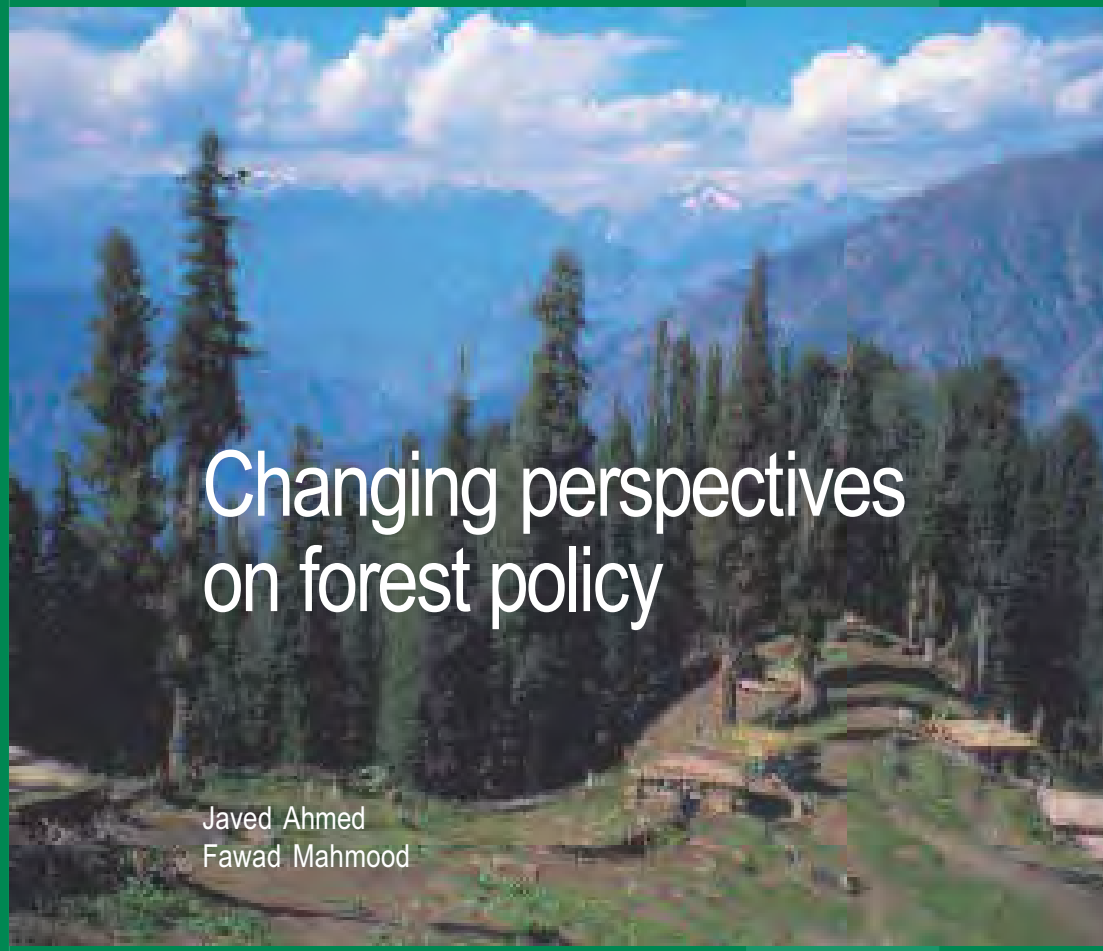
No: 1

Pakistan

Ahmed and Mahmood

iied

PAKISTAN



Changing perspectives on forest policy

Javed Ahmed
Fawad Mahmood

Policy that works for forests and people

Figure 1.2 Vegetation Map of Pakistan

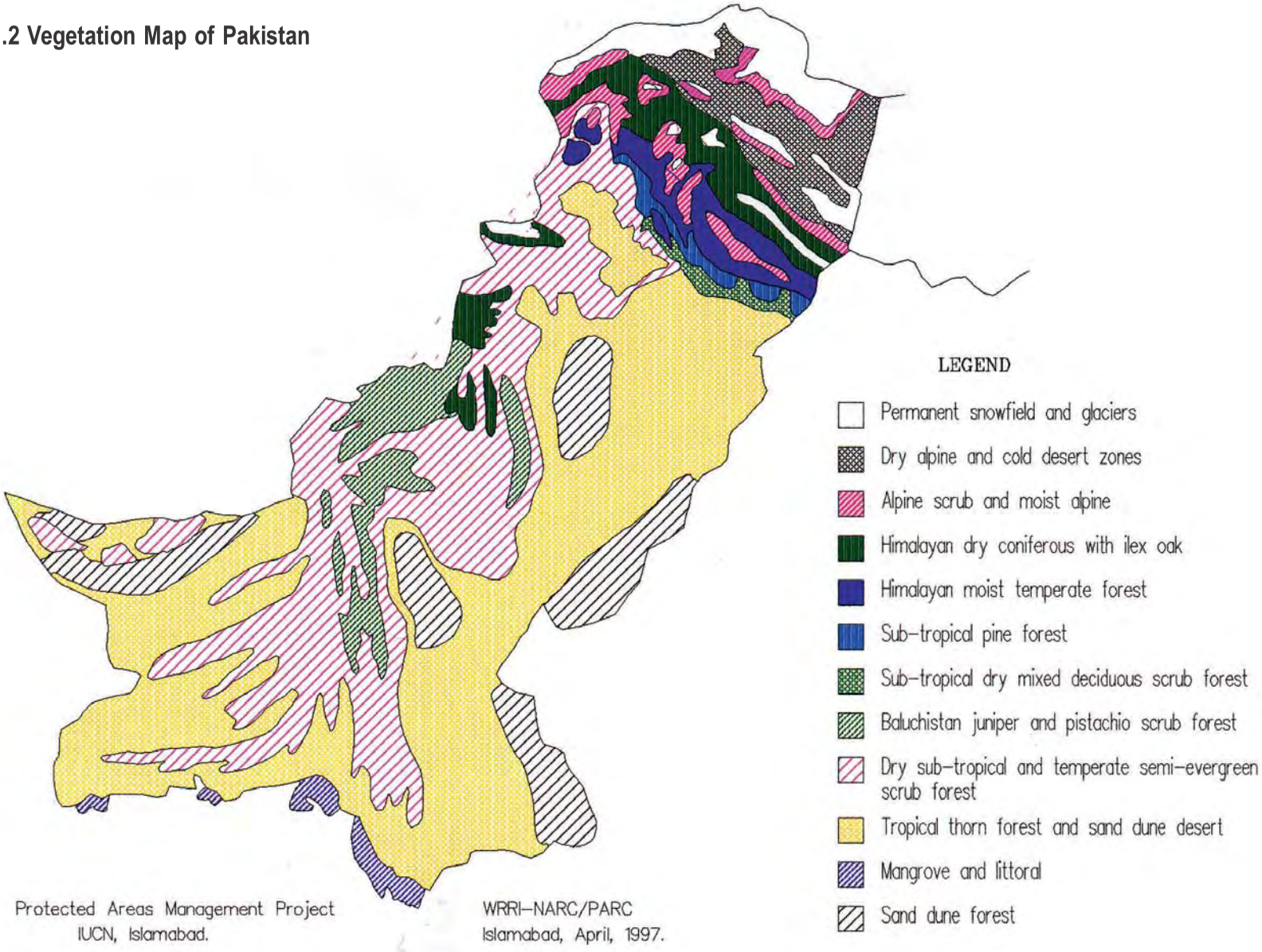


Figure 1.3 Forests and protected areas containing forest of Pakistan

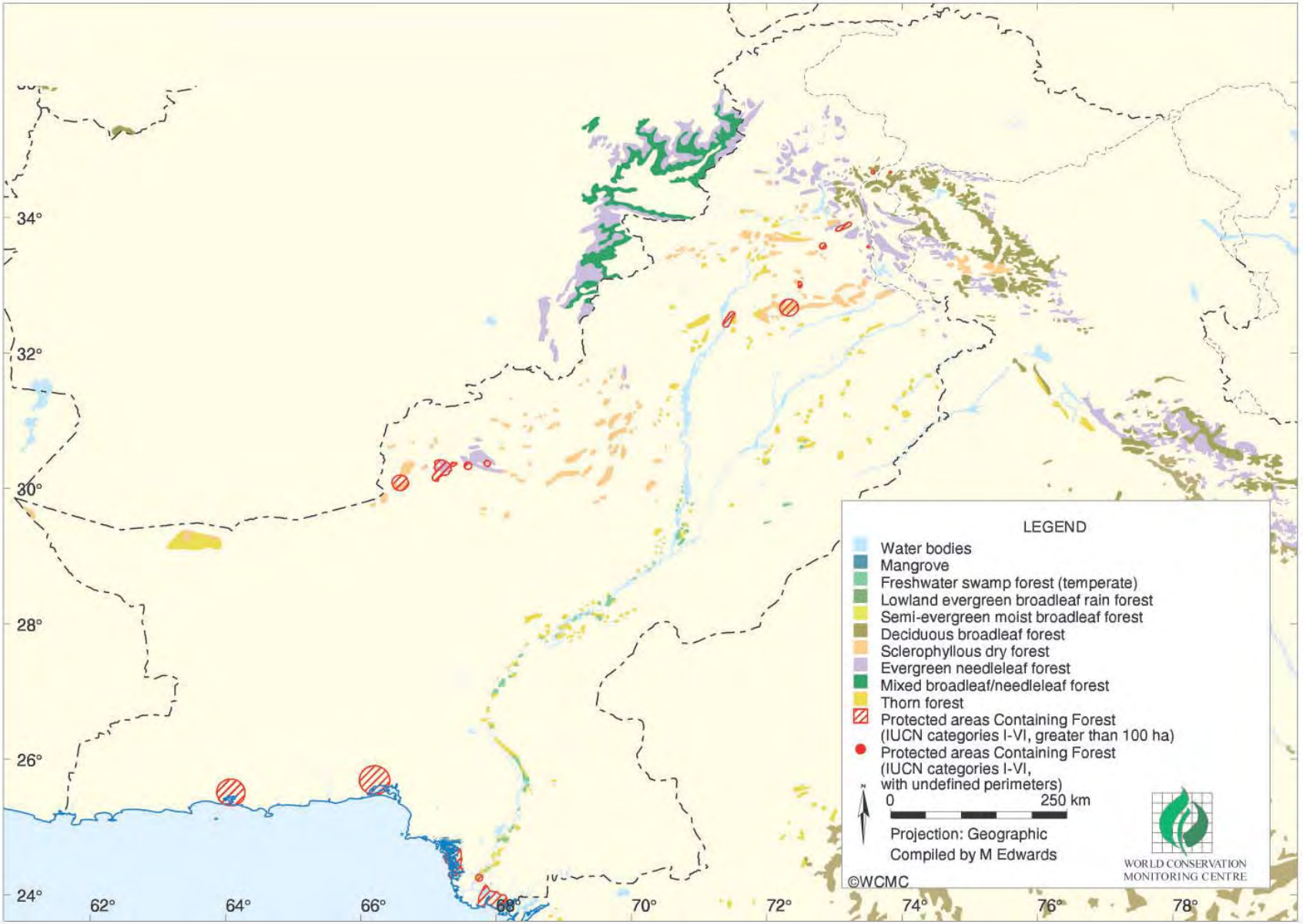


Photo: Stephen Bass

Remaining montane conifer forests are under great pressure for timber production. Here in Kohistan, trees are felled on even the steepest slopes, leading to soil erosion. They are converted into rough-hewn scants in order to get them out of the remote forests. This method, however, can produce over 50 per cent wastage of wood.

Photo: Stephen Bass

Wood prices in Pakistan's cities are often much higher than the world market price. In Karachi, bamboo is imported from Bangladesh to meet simple construction needs

Photo: Sonja Iskov/Still Pictures

The large population of Afghan refugees is placing heavy burdens on the slow-growing forest resources of Balochistan

Photo: Andy Crump/Still Pictures

A new look at energy policy and its relation to forestry is required. Environmental and social costs of energy use need to be driven down. The relative costs of using fuelwood or fossil fuels (such as diesel) will often depend upon how well the forest resources in the locality are managed. Sometimes, subsidies may be warranted.

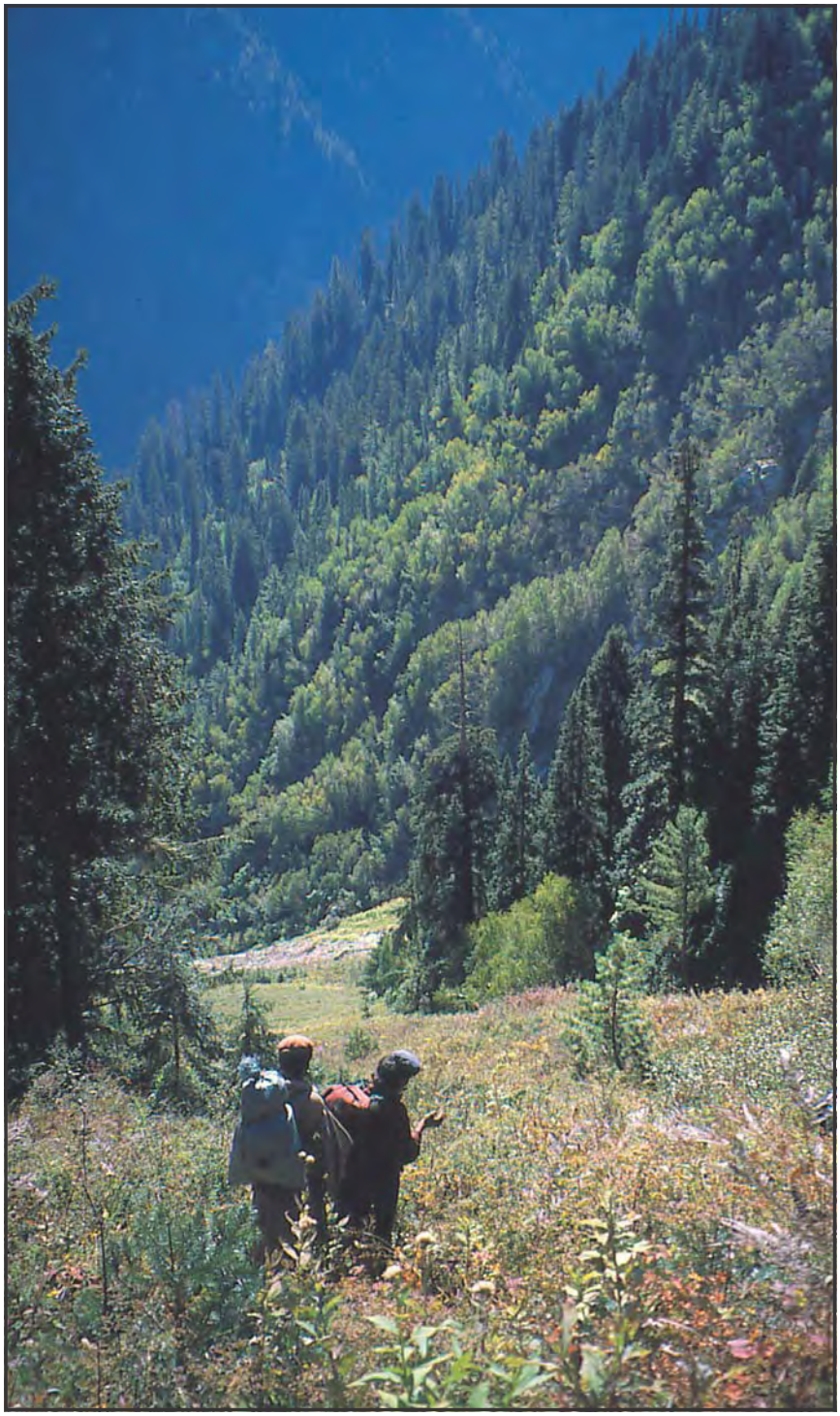


Photo: James Mayers

Palas Valley contains Pakistan's most outstanding area of Western Himalayan temperate forest - internationally recognised as one of the world's highest priorities for biodiversity conservation. Communities have an excellent knowledge of the resource and are becoming involved in its conservation, largely through the facilitation of WWF-Pakistan and BirdLife International.

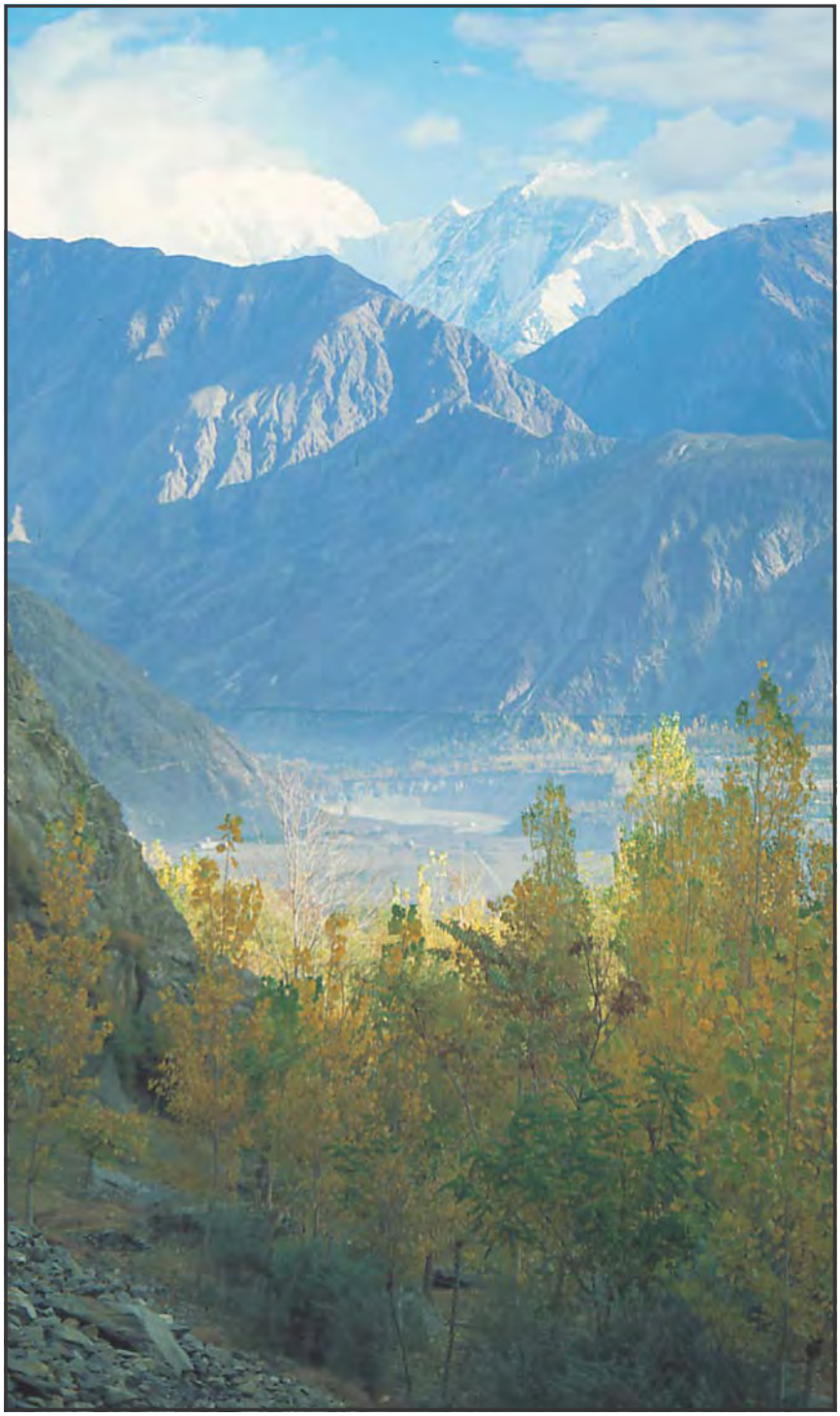


Photo: Willem Ferwerda

Poplar (*Populus spp*) are grown for fuel, timber, poles and fodder on irrigated terraces around Gilgit. Projects such as the Aga Khan Rural Support Programme have built upon traditional poplar cultivation methods and helped integrate trees into farming systems.

Photo: Stephen Bass

Projects such as the AKRSP have established a policy-level understanding that community organisations can hold the key for sustainable forestry in remote areas. Over 1500 Village Organisations are supported by AKRSP in Northern Areas. Communities have been planting large areas to meet a woodfuel and timber deficit, and have been devising rules to protect diminishing natural forests.

Photo: Stephen Bass

Women, such as this group in Hunza, are often responsible for collecting firewood and leaves for fodder. In participatory forest projects, it is all too easy for women's forestry work burden to increase, without the benefit returning to them. In some projects, however, they have made businesses of the skilled work of raising nurseries, and the income goes to them directly.

PAKISTAN COUNTRY STUDY

Policy that works for forests and people series no. 1

Changing perspectives on forest policy

Authors:
Javed Ahmed and Fawad Mahmood

Series Editor:
James Mayers

Study coordinated by
IUCN - The World Conservation Union Pakistan
International Institute for Environment and Development (IIED)
United Kingdom

In collaboration with
Government of Pakistan

1998

Copies of this report are available from:

IUCN-The World Conservation Union
House 26, Street 87, G-6/3
Islamabad, Pakistan
Tel: +92 51 270686-7
Fax: +92 51 270688
e-mail: mail@iucn-isb.sdnpk.undp.org

Publications
International Institute for Environment and Development
3 Endsleigh Street
London WC1H 0DD, UK
Tel: +44 171 388 2117
Fax: +44 171 388 2826
e-mail: bookshop@iied.org

Citation: Ahmed, J. and Mahmood, F. 1998. Changing perspectives on forest policy. Policy that works for forests and people series no. 1. IUCN Pakistan and International Institute for Environment and Development, Islamabad and London.

Cover photo: Palas Valley forest by James Mayers
Design and production by Eileen Higgins at IIED.
Illustration © Christine Bass: based on a wood-carving detail from a mosque in Skardu, Pakistan
Printed by Russell Press, Nottingham, UK.
Printed on Highland Velvet Pro 115gsm, 100% chlorine free

Policy that Works for Forests and People is a project coordinated by the Forestry and Land Use Programme of the International Institute for Environment and Development (IIED) supported by the Netherlands Ministry of Foreign Affairs and the UK Department for International Development. The *Policy that Works for Forests and People Series* derives from this project. Other studies in the series to date are:

no. 2	Papua New Guinea	Colin Filer and Nikhil Sekhran
no. 3	India	Arvind Khare, Seema Bathla, S Palit, Madhu Sarin and NC Saxena
no. 4	Ghana	Nii Ashie Kotey, Kojo Amanor, Lawrence Antwi, JohnnyFrancois, JGK Owusu and Raphael Yeboah
no. 5	Zimbabwe	Calvin Nhira, Sibongile Sibanda, Peter Gondo, JJ Mangono and Crispen Marunda
no. 6	Costa Rica	Vicente Watson, Sonia Cervantes, Cesar Castro, Leonardo Mora, Magda Solis, Ina T. Porras and Beatriz Cornejo
no. 7	Overview report	James Mayers and Stephen Bass

These studies are available from IIED at the address above.

Gram: ENVIRONMENT
Tele : (92-51-9205289)
Fax : 9202211
Telex : 54434 EUA PAK

No.F.1-1/97-DIGF-Pol
GOVERNMENT OF PAKISTAN
MINISTRY OF ENVIRONMENT, LOCAL GOVERNMENT AND RURAL DEVELOPMENT

Islamabad October 2, 1997

DY.I.G.FORESTS

SUBJECT:- POLICY THAT WORKS FOR FOREST AND PEOPLE.

I have gone through the draft on document on policy that works for forest and people. The efforts put in to highlight the gaps and the needs to develop future forest policy of Pakistan are highly praise worthy. My comments on the draft report are as under:

(i) The country study on Policy That Work for Forests and People is a product of the tripartite collaboration between Government of Pakistan, IUCN and IIED. It has been prepared in collaboration with the federal and provincial agencies responsible for implementing and monitoring forest policy in Pakistan. Pakistan has seen a large number of forest policies most of which have been reflection of the professional foresters' perceptions. Except for 1994 policy, there has been very little consultation outside of the professional circles.

(ii) Pakistan inherited only about 5% forests at the time of independence in August 1947. The rapidly increasing population and declining resource base is constantly increasing the pressure on the ecosystems of the country. In recent years, the global warming, desertification and biodiversity etc. have gained prominence as dominant themes on the environmental horizon. Therefore, the forest can no longer be considered in isolation from other sectors and have to be managed for a broad spectrum of goods and services. Because of the multiplicity of interests and demands on the national forests, the policy formulation cannot be prepared without taking into account all the stake holders. The country report sets a precedence and provides a framework for future policy processes in Pakistan. The country report highlights strengths and weaknesses of the past policies, investigates the lessons learnt from different projects and programmes and provides a good foundation on which the future policies can be built. I am

sure that some of the lessons learnt from work in Pakistan would be useful to many other countries of the world. It also provides some good policy recommendations for conservation and sustainable use of scarce forest resources in Pakistan.

(iii) The country report coincides with the 50 years celebrations of Pakistan and would serve as a good reference point for leap into the 21st century. It has a good reference material for the students of forestry, professionals, planner and policy makers. I have already started referencing this work in the forest policy that is now being drafted for Pakistan.

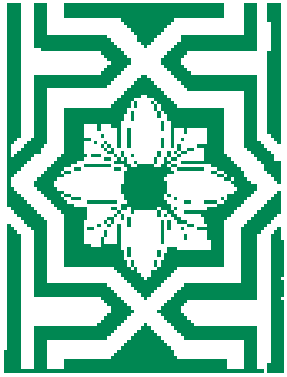
2. I congratulate IUCN and IIED for this initiative and I strongly recommend that this report may be widely consulted for future policy processes.

With best regards,

Yours sincerely,

(Rafiq Ahmad)

Dr. Javed Ahmed
IUCN, Office,
Islamabad.



Foreword

"Policy that Works for Forests and People" is a collaborative research project of the Forestry and Land Use Programme of the International Institute for Environment and Development (IIED). The project is funded by the UK Department for International Development (DFID) and the Ministry of Foreign Affairs, Netherlands Development Assistance (NEDA). The project was implemented simultaneously in Papua New Guinea, India, Costa Rica, Zimbabwe, Ghana and Pakistan. In each country, it was carried out by a multi-disciplinary team drawn from local institutions. The Pakistan case study was co-ordinated by IUCN-Pakistan, with active support and input from the four provincial forest departments and the federal office of the Inspector General of Forests.

In recent years, considerable concern has been voiced over the state of forests in Pakistan. Moreover, there are increasing conflicts between different groups over the goods and services which can be obtained from these forests; and those who 'win' such conflicts often end up reducing the quantity or quality of remaining forests. Various factors have been held responsible for this alarming situation, ranging from the historical colonial structure of the provincial forest departments and their style of governance, to the emergence of a "timber mafia" that thrives on access to power and patronage, and on a defunct policy making process.

Achieving the transition from such a situation to sustainable forest management is a huge challenge for forest "stakeholders" and the authorities. This study grew out of a conviction that a conscious effort is needed to analyse the root causes of forest problems, and to document success or "best practices" in the forestry sector in Pakistan. This could provide information on which to base progress. Yet it is also clear that policy processes themselves are too weak to be able to use such 'policy research' information effectively. Hence the study also undertook two more innovative approaches: analysing the policy processes relevant to forests and people; and involving collaborators from various stakeholder groups - to begin to open up these policy processes themselves to discussion and

analysis. In this way, the study cannot be considered to have been 'detached' from the policy process: it has deliberately set out to move it forward.

Many of the more promising initiatives are participatory rural development projects. However, this does not imply the universal need for a project-led approach to policy, although the space for experimentation will always be important. Most of the projects are still imperfect. Moreover, projects have to be understood in their specific contexts - social, economic or technological - before their results can be replicated and institutionalised widely.

Some recent participatory planning processes such as the National Conservation Strategy have also been documented in this study as leading to a better resolution of forest problems. However, rather than the content matter of these documents, it is their process which is considered to be of great value.

Preparing a generic policy framework that works for forests and people - that is, for sustainable forest management - involves balancing attention to both the content matter and the process of policy. The results of this study should be able to demonstrate that the best way for the forestry sector in Pakistan to move forward is by addressing this balance. There has been much recent progress in this respect, upon which Pakistan can build to meet the challenges of the 21st century.

Dr Javed Ahmed
Head, Natural Resources Group, IUCN-Pakistan

Fawad Mahmood
Programme Officer, Policy Research and Communications,
Aga Khan Foundation, Pakistan

Islamabad, January 1998

Executive summary

The policy challenge

The world over, there is a strong sense of crisis in forestry. Forest goods and services, once thought to be abundant, are now known to be scarce.

Pakistan suffers far more severe forest scarcities than most countries. Its natural forest asset is very small - covering less than five per cent of the total land area. Forest or woodland area per person is one of the world's lowest, at one-thirtieth of a hectare - and most forests are slow-growing. Yet Pakistan's demands on forests are high and getting higher: population is growing at 3 per cent per year, and industrial growth at about 6 per cent demands more and more construction wood, fuelwood, and water from forested watersheds.

Pakistan's government now recognises that there is a broad group of people who are affected by, and who have the power to influence, forestry decisions. The term "stakeholder" has recently become widely used. But policies to encourage responsible stakeholder forestry in natural forests are not well formulated, and are not integrated with policies for farm forestry and timber imports. And, whilst a few policies, laws and markets may signal the scarcity of commercial wood products, the other forest goods and services (such as subsistence fuel and food products, soil and water conservation, and biodiversity) are still treated as if they are freely available.

In the absence of up-to-date policies which can reconcile low natural forest assets with increasing demands, conflicts between stakeholders have spiraled upwards. Currently, few stakeholders are engaged in the policy process. The forest departments maintain an outmoded forestry legislation and administration, which presents many loopholes which can be exploited by influential individuals - the "timber mafia" - who are stripping timber from the few remaining natural forests. The immediate losers are the rural people whose livelihoods suffer. The longer-term loser is the nation as a whole, as the natural forest asset is not utilised to its optimum renewable capacity; as critical watersheds are degraded, leading to soil erosion,

flooding and drought; as biodiversity is lost, diminishing cultural and tourism values; and - critically - as conflicts between local groups grow, leading to all sorts of social and economic problems.

There is good news, however. In the last decade, a number of attempts have been made to deal with the growing forest problem, and they open doors to effective stakeholder involvement in policy:

- Community forestry projects have begun to reinstate community means for management and regulation of natural forests, where government ability to do so is weak, and in places they have considerably increased the forest resource.
- Farmers, encouraged by high timber prices, have been planting trees; irrigated plantations now produce 80 per cent of the commercial wood harvest
- New forms of planning and policy process have been developed to handle the cross-sectoral issues of sustainable development - beginning with the national conservation strategy. They have involved NGOs, the private sector and communities, and are now being articulated at provincial and district levels.

The net result has been to begin to open out the policy-making process from government alone, to include some of the stakeholders who are affected by forest decisions. The challenge is to build on this progress, by evolving policy processes that encourage effective stakeholder interaction; and to use these processes to design policies which enable stakeholders to ensure the security of supply of the multiple forest goods and services that all stakeholders need. Pakistan possesses a number of strengths which can help in meeting this challenge, including:

- the tremendous potential for productive investment in (plantation) forestry amongst entrepreneurs;
- rural people's great resilience and energy for production and conservation - once their rights to resources are recognised; and
- a strong professional spirit in the forest services.

New relationships between these stakeholders now need to be fostered.

This report traces the evolution of Pakistan's forest policies and their impact on stakeholders and the forest, in relation to the criteria of sustainability, equity and productivity that together define sustainable development. It explores the positive experiences noted above, and sets out an agenda for the future.

This report was prepared by a multi-disciplinary team of Pakistani professionals, including foresters, economists, and anthropologists. It was coordinated by IUCN-Pakistan, with active support and many inputs from the four provincial forest departments at very senior level, and the federal office of the Inspector General of Forests. A great many other groups in Pakistan were involved through discussions, written inputs, and interviews. The work was supported, in terms of methodology development, peer review, and debate with five other country teams conducting similar work, by the International Institute for Environment and Development (IIED). The work of the Pakistan and IIED teams was funded through the generous support of the UK Department for International Development (DFID) and the Ministry of Foreign Affairs, Netherlands Development Assistance (NEDA).

How formal policy has evolved

Formal policy has aimed at managing forests for the public benefit, but - somewhat paradoxically - through the alienation of local populations. The general failure of this approach is evident from extensive non-compliance with regulations and the poor state of forest resources.

The forestry sector in Pakistan is amongst the most distinctive of remaining colonial artifacts. The forest departments and laws that were initiated in the nineteenth century continue more or less unchanged. They are centralised in management operations, focused strongly on timber harvesting from natural forest, and place governmental control above local need - attributes which may have been useful to the objectives of imperial Britain, but are not necessarily helpful to democratic Pakistan. Most forest policies, until recently, have viewed people as the prime threat to the forest, and have attempted to exclude groups other than government from decision-making. In practice, excluded stakeholders have always found ways to get what they want - largely though illegal means, or at least means which cannot be formally coordinated with other stakeholders to mutual benefit. Unrealistic laws and administrative requirements neither recognise the *de facto* position, nor encourage improved management by stakeholders. In many ways, therefore, forestry has become a "free-for-all", with the politically strongest being free to take almost all. "Real" policy, in terms of *ad hoc* but highly influential decisions affecting forests and stakeholders, is in the hands of politicians who are, in turn, strongly influenced by logging contractors.

Aside from this lack of local incentives for forest management, the next

most significant policy failure relates to the system of forest harvesting. The report analyses how the timber "mafia" exploits the fixed-price and net-sale systems of allocating forest concessions, leading to the disenfranchisement of the local right holders, the production of large profits for the concessionaires and ultimately the unsustainable harvesting of forests. This chain of events continues because local communities are typically uninformed about their options under the system and because there is a lack of communication and trust between the forest departments and the communities.

By keeping the forest authorities separate from local stakeholders and their concerns, there has been no real way for the policy process itself to be reviewed and renewed. There is a lack of knowledge at the centre about what is going on in forests and why, a lack of ability to do much about it, and consequently a lack of focused response to changing local conditions. Indeed, from the British days onwards, institutions and administration have not encouraged a questioning approach to policy - either by officials or by stakeholders. The common denominator to which the forest authorities can turn in dealing with new problems is the 1927 Forest Act - itself so out of date that it is sometimes at the centre of the problem.

Towards new processes that work

In contrast, the 1990s may go down in the history of Pakistan's forests as marking a turning point in policy. As a consequence of a growing sense of crisis in forestry, courageous individuals from forest departments, key NGOs and certain donor agencies - fueled considerably by observing events elsewhere in the world - have instituted a series of experimental approaches to resolving shortages of forest goods and services, and to reducing the conflicts between stakeholders. These have often filled policy or institutional "vacuums". They have had to create systems for participation - the critical element missing from formal forestry initiatives hitherto. Whilst some of these experiments were resisted by the authorities initially, several senior forest officials can take the credit for permitting these initiatives the freedom to experiment. Now is the time, however, to take on board the policy lessons of these initiatives, and to undertake a fundamental restructuring of policies and associated institutional roles. The key initiatives which mark the path towards sustainable forestry include:

Participatory rural development projects

Eight significant projects with a strong forestry component are reviewed in this report. Their many successes revolve around the ways in which they

have helped to realise the potential for local, collective action in circumstances of resource scarcity:

- developing, or reinstituting, community-based organisations and resource management rules which focus on equity and alleviating poverty
- ensuring that the rights of these organisations and their members to forest use are equitable and clear (this has occurred in a variety of forest tenure classes - the resulting complexity of approaches suggests that there are no simple solutions, but new forms of use rights may hold general promise in future)
- equipping community organisations with the resources and skills to effectively manage forests and to share the associated costs and benefits
- developing and testing means of participation within the organisation - for information-gathering, analysis, decision-making, implementation, monitoring and review - i.e. key policy tasks at local level
- developing and testing ways for community organisations to work with forest authorities
- focusing on multiple goods and services, and on the catchment as a key unit for planning and management
- increasing plantation resources in resource-poor areas, and protecting natural forests in others

Although these successes have been constrained by legislation and governmental attitudes, there are signs that the projects are leading to policy improvements. For example, in North West Frontier Province (NWFP), the introduction of regulations permitting joint forest management, and the appointing of forest department staff to assist social forestry projects. In all provinces, these projects have led to a much greater awareness of the need for forest departments to work with people, rather than against them.

Forestry master planning and conservation strategy processes

The briefs to prepare a National Conservation Strategy (NCS), a provincial conservation strategy for NWFP, and (to a lesser extent) a Forest Sector Master Plan (FSMP), have led to far wider benefits than the resulting plans alone. A mix of donor support and NGO pressure has helped to create the space for a multi-sectoral and participatory approach to these strategies. That the new processes had a chance of success was due largely to key individuals at high level giving the mandate and time to their staff to work in this way.

The NCS and the Sarhad Provincial Conservation Strategy (SPCS) tackle the

political dimensions of sustainable development head-on, while the FSMP is restricted to more of a technical forestry perspective. As such, while the FSMP may be more immediately reflected in incremental changes to formal forest policy, the NCS/SPCS may have more fundamental influence in the longer term. In summary, the processes have already led to:

- a widespread acceptance of the basic principles of sustainable development, as a unifying approach to policy
- a broader realisation of the importance of forests to the mandate of government agencies beyond the forest departments alone
- the development of new ways of working between sectors, institutions and disciplines - e.g. cross-sectoral working groups and the involvement of women, once rare, are now becoming routine
- methodologies for consulting stakeholder groups at district and "lower" levels
- a cadre of Pakistani policy analysis expertise, including an independent Sustainable Development Policy Institute with a broad research mandate
- the creation by the Supreme Court of special environmental appeal procedures to accommodate public interest litigation
- "institutional transformation" in NWFP, through the SPCS: an independent Forestry Commission is in the offing, to ensure forest policy reflects many sectors' and stakeholders' perspectives, and to weaken excessive political influence over the use of forests; and the 1927 Forestry Act is being revised to support joint forest management (allowing forest management involving communities, government and the private sector under firm agreements).

Forest Cooperative Societies

The failure of this initiative, which aimed to devolve forest management responsibility from forest departments, reveals a number of lessons. They include the need for:

- consensus-building in any major process of change
- transparent, participatory and representative forms of management by user groups
- building up forest and enterprise management skills in community groups
- transferring responsibility from public to community bodies only after pilot activities have been closely monitored, in terms of their impact on forests and stakeholders
- avoidance, as far as possible, of politicical hi-jacking of the process, which could result in powerful interests gaining control for reasons other than sustainable forestry - and consequent difficulties for the forest authorities to intervene

In general, therefore, we observe the beginning of a transition from a "command-and-control" approach to forests, where the State "protects" forests from people, towards:

- a broad national commitment to sustainable development
- re-establishing local rights, rules and responsibilities for effective forest management
- developing means for participation and partnerships between state, private sector and community bodies
- new roles for local-level authorities

Constraints to improving policy

The lessons set out in this report would tend to support the contention that participation can improve the management of forest resources - if participation is broadly-based, begins at the planning stage and involves real devolution of authority. Participation processes will be needed in resolving the two principal problems facing forests and people in Pakistan. First are the legal and institutional problems that cause local populations to have little incentive to improve forest conditions, and instead lead to the overuse of these areas. The principal change required here is in attitude on the part of government towards participation in the policy formulation process. Second are the economic and political interests that stand in the way of ensuring that those locals with rights to forests can capture the full value of these rights. Here, entrenched interests, both in forest departments and on the part of concessionaires, still block progress.

In summary, in spite of the good news, progress towards the widespread practice of better forestry is still constrained by:

- entrenched forest department attitudes which are used to a "command-and-control" approach, and are wary of the development-agent/ monitoring role which will be required in future; this is exacerbated by the system of bureaucracy and lack of incentives, as well as by the lack of training in the new areas
- fiscal deficits, putting strain on departmental budgets
- lack of any reconciliation of social and environmental goals with the current, formal departmental goals of revenue maximisation
- lack of accountability
- inadequate information on forests and on stakeholders' needs and capacities
- lack of established fora for review and debate of policies and experimental initiatives

- lack of local level governmental institutions that could reconcile "top-down" policy initiatives and "bottom-up" participatory projects
- weak relations between the State and civil society (NGOs, communities and their representatives)
- weak integration of farm forestry and import policies into policies for forestry, and consequently a continuing and overriding pressure to use the small remaining natural forests for timber

In addition, many policy failures in Pakistan - outside forestry as well as within - stem from institutional and managerial weaknesses, and from ill-prepared decentralisation processes, where devolution has been weak and/or insecure.

Recommendations - improving policy at national, provincial and local levels

We may ask why formal policy is still important, if the "informal" initiatives such as participatory forest projects and conservation strategies can achieve so much?

Formal policy is needed for:

- defining how to agree and record the long-term goals of varied stakeholders
- dealing, in an orderly and transparent way, with trade-offs between objectives and conflicts between stakeholders
- anticipating and planning changes, in a climate of increasing uncertainty about e.g. socio-economic needs and resource capabilities
- sending long-term signals on how stakeholders will be held accountable

Because of rapidly changing circumstances, formal policy processes must allow freedom to experiment - and to learn from and act on the results of such experiments. The time has now come to open up the formal policy process, by considering the first set of lessons from recent experiments, as described in this report.

Federal policy should set the main goals for security of forest goods and services at national level, and the basic principles and criteria for sustainable forest management in Pakistan. These would then be interpreted at provincial level into forestry goals and management arrangements, depending upon local needs and capabilities. The federal level needs to deal directly with international protocols and with the relationship between domestic forest production and trade, so as to achieve

security in the most efficient way. The latter should be based on a closer analysis of the barriers to imports of wood and wood products, the possibilities for reducing them, and the likely impacts on forest management and the forest industry in Pakistan. The federal level needs also to have authority over nationally-important forest services such as biodiversity and major watersheds. It will require a broad-brush monitoring system of forest stocks and flows and the demands on them, which would draw upon provincial forest resource accounting systems (below). The "motor" of future federal policy development should be a healthy interaction between the IGF's office and a new, multi-stakeholder national forest coordinating forum.

The *provinces* should focus on all aspects of forest investment and management, including the preparation of working plans, harvesting, sale, afforestation, credit, research and training. Provincial multi-stakeholder forest fora should be instituted as the primary means of policy review and debate (like the national forest coordinating forum, these fora are new ideas for further exploration); and these should be linked to village- and district-level organisations involved in forest management. Mechanisms for intersectoral policy coordination are also required, especially with the agriculture department to encourage timber production on farms. Inter-sectoral coordination involves trade-offs, however. It is suggested that provincial conservation strategies can help to make decisions between narrow forestry interests and other sector's needs; as these strategies are aimed at balanced, sustainable development.

Provinces should institute forest resource accounting systems to provide information on forest stocks, flows, rights and demands. Such systems should be closely allied to decision-making processes which will zone forest conservation and production, so as to ensure the security of forest goods and services needed by the province and Pakistan as a whole. This will most likely lead to: a greater investment in farm forestry and irrigated plantations for wood production; biodiversity and watershed conservation in natural forests; and consequent reorientation of forest departmental roles.

At present, *local levels of decision-making* are only tangentially related to the forestry sector. However, this study demonstrates the advantages of involving local communities and their organisations, and local government, in forest management. As a general rule, active community participation in forest management for multiple benefits should be sought. Here, the key issues will be:

- strengthening (or developing) community forest management regimes and rules to manage *public* forest goods and services, and ensuring the

legal authority and capacities of community organisations to carry these out;
- building the capacity of local organisations to support the collective management of *private* forest goods and services, where this is efficient;
- clear partnership agreements between communities and government and/or the private sector to help both the above;
- village planning capabilities to integrate land uses;
- legal means and resources to secure and protect local rights;
- NGOs as brokers of new relations between communities, government and the private sector in the medium term.

An overt focus on building capacities for Joint Forest Management would be a useful strategy for the near future; for this would help to integrate forest departments more fully into the second generation of participatory forestry projects. This should include a concentrated review of experience and constraints to date.

In the longer term, forest logging and small-scale forest industries could be managed by local communities - as these are the groups with the incentive to sustain the multiple benefits of forests and to avoid asset-stripping of the timber.

In summary, Pakistan needs :

- multistakeholder Forest Fora at national, provincial and lower levels
- policies that reconcile revenue generation with the need for social and environmental benefits from forests (particularly for rural livelihoods)
- a closer analysis of the barriers to imports of wood and wood products
- clarifying the goals of forest departments, as a prerequisite to decentralisation processes
- a simple, transparent information system on the state of forests and their use, to feed the National and Provincial Forest Fora and to provide material for policy renewal
- a considerable expansion of Joint Forest Management activities, with local communities and private sector groups having clear use rights, and with extensive forest department involvement at each stage
- greater support to farm forestry for timber supplies and rural income generation
- strengthening community and farmer organisations to ensure they can practise sustainable forestry
- reorganising and strengthening forest authorities to support the above

While there will be costs, there will also be savings, as government cuts

back on its current attempted (and not always effective) control of all decision-making on forests.

In this report, we have outlined various improvements to forest policy. Whilst others may continue to be achieved through *ad hoc* changes, there also comes a time when improvements need to be debated and planned on several fronts. We now have enough positive experience - and enough knowledge of the remaining constraints - to know that this time has come. To a considerable extent, therefore, the path to sustainable forest management is already well-signposted.

We hope that this report, in reviewing Pakistan's forest policy experience from colonial times right up to its Golden Jubilee year, will prove to be of value to stakeholders in their debate and planning together.

Acknowledgements

We wish to acknowledge the support and work of all the friends and colleagues who participated in the process of this project, were interviewed as stakeholders, contributed written material at various stages, or took time out to comment on various drafts (see Annex I of this report). Needless to say, this study would not have been possible without their unending interest and support for this work. In particular and without prejudice to all others, key contributors to this study were Dr Tariq Banuri, Dr G M Khattak and Dr Iqbal Sial. The work of Dr Are Knudsen formed the basis for the section on royalties, contractors and intermediaries. Bruce Aylward, John Hudson and Cathrien de Pater reviewed and provided useful comments on the penultimate draft.

We are particularly grateful to Enterprise and Development Consulting (EDC), Pakistan, for providing the services of Ms Maliha Hussain, who admirably facilitated the first workshop; of Dr Tariq Husain, who provided key input in the discussion on property rights and local government; and of Usman Iftikhar, who provided valuable support in data collection and assisted with writing certain sections. We are also grateful to EDC for enabling Fawad Mahmood to make substantial inputs to this study. Fawad Mahmood now works for the Aga Khan Foundation (Pakistan), as Programme Officer, Policy Research and Communications.

We are also grateful to the International Institute for Environment and Development (IIED, UK), particularly Stephen Bass and James Mayers, for methodological and editorial assistance and for the opportunity to be associated with this project, and Pamela Harling for copy editing. We would like to thank the British DFID and Netherlands NEDA for funding this initiative. We are also thankful to our organisations for allowing us the flexibility to work on this exciting project.

The opinions reflected in this study are those of the authors and not necessarily of their organisations, government agencies, IIED, DFID or NEDA. All standard disclaimers apply.

Acronyms

ADB	Asian Development Bank
ADP	Annual Development Plan
AJK	Azad Jammu and Kashmir
AKRSP	Aga Khan Rural Support Programme
AZRI	Arid Zone Research Institute
CBO	Community-based organisation
CCF	Chief Conservator of Forest
CF	Conservator of Forest
CIDA	Canadian International Development Agency
CPR	Common Property Regime
CTA	Chief Technical Advisor
DFFW	Department of Forest, Fisheries and Wildlife
DFID	Department for International Development
DFO	Divisional Forest Officer
DGIS	Dutch Ministry of Foreign Affairs
EDC	Enterprise and Development Consulting
FAO	Food and Agriculture Organisation of the United Nations
FCS	Forest Co-operative Societies
FD	Forest Department
FDC	Forest Development Corporation
FDCG	Forestry Donors Coordination Group
FMC	Forest Management Centre
FP&DP	Forestry Planning and Development Project
FRA	Forest Resource Accounting
FRR	Financial Rate of Return
FSMP	Forest Sector Master Plan
GONWFP	Government of North West Frontier Province
GoP	Government of Pakistan
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German technical cooperation)
IADP	Integrated Area Development Programme
IBRD	International Bank for Reconstruction and Development
IGF	Inspector General of Forests
IIED	International Institute for Environment and Development
IRR	Internal Rate of Return
ITC	Institutional Transformation Cell
IUCN	International Union for Conservation of Nature and Natural Resources (the World Conservation Union)
JFM	Joint Forest Management
KIDP	Kalam Integrated Development Project
KIFMP	Kaghan Intensive Forest Management Project

MPA	Member of Provincial Assembly
MSFP	Malakand Social Forestry Project
NARC	National Agricultural Research Council
NCS	National Conservation Strategy
NEDA	Netherlands Development Assistance
NGO	Non-Governmental Organisation
NIAB	Nuclear Institute for Agriculture and Biology
NWFP	North West Frontier Province
PARC	Pakistan Agricultural Research Centre
PE&D	Planning, Environment and Development
PFI	Pakistan Forest Institute
PFRI	Punjab Forest Research Institute
PRA	Participatory Rural Appraisal
PTW	Policy That Works
RNE	Royal Netherlands Embassy
SAP	Social Action Programme
SDC	Swiss Development Co-operation
SDPI	Sustainable Development Policy Institute
SFD	Sindh Forest Department
SFDP	Siran Forest Development Project
SFM	Sustainable Forest Management
SFSDP	Sind Forestry Sector Development Project
SPCS	Sarhad Provincial Conservation Strategy
SWMP	Suketar Watershed Management Project
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VDC	Village Development Committee
VLUP	Village Land Use Planning
VO	Village Organisation
WCED	World Commission on Environment and Development
WPMP	Watershed Planning and Management Project

Currency: In 1997, there were approximately 65 Pakistan rupees to the pound sterling.

Contents

Tables

Annex tables

Figures

Boxes

Photo: James Mayers

Montane forests, such as these in Kohistan, are a tremendous resource for biodiversity and tourism, as well as for local livelihoods. These values need to be better reconciled with policies for State revenue generation.

Introduction and overview

1.1 Introduction: context for the study

As Pakistan celebrates the Golden Jubilee of its independence, the forestry sector stands at the crossroads of optimism for the future and trepidation about leaving past - and now outmoded - objectives and systems behind. These are turbulent times for Pakistan. The *state* is confronted with crippling financial insolvency and eroding legitimacy of its organs, legislative, executive or judiciary. The *market* does not always produce desirable social and environmental outcomes. The *civil society*, on its part, is confronted with social alienation and institutional fragmentation. Experts believe the only response to this challenge is by moving towards democratisation and improved governance. Indeed, in the new political system, the role of the government is being redefined to provide an enabling environment through institutional, legal and policy reform. These changes have profound implications for the policies of Pakistan, and the forestry sector is no exception.

The endowment of natural forests in Pakistan is extremely meagre to begin with. The National Conservation Strategy (NCS) reports it to be as low as 5 per cent of total land cover, with most of the natural coniferous forests ensconced in the valleys and foothills of NWFP, Northern Areas, and northern Punjab, while the province of Balochistan hosts the unique juniper forest.

The forestry sector in Pakistan is among the most distinctive of remaining colonial artifacts. The department that was created in the nineteenth century in the provinces (there is no federal department) continues to be centralised in management operations, insular in outlook and bureaucratic in nature. These attributes may have been useful to the objectives of imperial Britain, but are not necessarily helpful to democratic Pakistan. Not one management review of the forest departments has been undertaken

since the 1850s. With slight modifications, the pattern of line and staff functions still persist. Most of the forest policies, until recently, besides being scientific in intent and purpose, have viewed people as the prime threat to the forest. However, the 1990s mark a watershed in the history of forest policy. Recognising the historical anomalous policy and institutional limitations, the Forest Department in NWFP has initiated an institutional reform process through: the creation of an Institutional Transformation Cell; revision of the Forest Act of 1927; a people-centred Forest Policy for NWFP; and the creation of a Forestry Commission to advise the Forest Department. These are no trivial achievements. They mark the beginning of a new age where the need to change is no more a taboo, and where there is hope against despair and optimism against pessimism.

Sustainable forest management (SFM) describes the ways in which forests need to be managed to achieve sustainable development: i.e. development that meets the needs of the present without compromising the needs of the future (WCED, 1987). SFM requires conservation through balanced resource use. By attaching value to both present and future uses of a resource, a clear signal is sent about the paramount need to reconcile the needs for and availability of the resource (the capital stock) over a longer period of time. Foresters have, since the introduction of scientific forestry in Pakistan, been used to doing this in the context of management plans for timber, balancing regeneration, stocks and harvests. They have been used to balancing ecological with economic factors, too, to maintain the integrity of forest ecosystem processes. Sustainable development, however, requires the further integration of social objectives - of the needs of different stakeholder groups. Experience of this is more limited, and more recent. This study has therefore concentrated on it.

SFM, therefore, will have to encompass environmental, social, economic and political factors. Conway (1985) describes the basic criteria of any act of management that aims to balance this mix of objectives. These are:

- productivity
- equity
- stability
- sustainability

We use these criteria in this study for analysing the intention and impact of policies and other initiatives for forest management. These are used particularly in the discussion of field projects (Section 5).

This report, organised into seven sections, consists of three distinct components: the *descriptive* component (contained in sections two and three), the *analytical* component (sections four to six) and the *prescriptive* component which recommends a workable policy process for Pakistan, contained in Section 7.

1.2 The key questions

This study aimed to identify policy initiatives that have had a positive impact on forest ecosystems, human wellbeing, and economic development; and to examine the processes by which these initiatives evolved; with a view to recommending improved processes for the future.

The work took off in November 1995, when an assembly of Pakistani foresters, economists and social scientists from government, NGOs, CBOs and research institutions hammered out a broad context for this study. The proceedings of that Inception Workshop have been produced under a separate cover (IIED and IUCN Pakistan, 1995). Despite their differences, there was complete consensus that current forestry problems in Pakistan owe their existence to *policy and institutional factors* which have rarely been resolved in formal forest policy processes and statements.

These policy and institutional dilemmas are best articulated through the following questions:

- *Policy Processes:* How do formal forest policies, processes and institutions facilitate or constrain SFM? What are the constraints and priorities of various stakeholders in forests? Which extra-sectoral influences have a bearing on SFM? How to prepare policy that integrates planning, implementation and monitoring for sustainable forest management?

- *Participatory Approaches*: Is there anything to be learned for SFM from: (a) the forestry co-operative societies and similar initiatives; (b) the forest contractor system; and (c) participatory projects involving several institutions?

- *Tree and Land Tenure*: How does the lack of clearly-defined property rights, and/or rights than do not reflect today's conditions, impinge upon sustainable forest management?

- *Forest Management and Regulation*: How to make laws that: (a) support

sustainable forest management; (b) ensure institutional co-ordination; (c) support effective devolution; and (d) regulate incentives that produce desirable social outcomes compatible with individual motivations?

1.3 Study approach and methodology

Policy in the context of this report is defined "*as a settled course of action adopted and followed by a government, institution, body or individual*" (Webster's Dictionary). Hence a government, an institution, a body, or an individual may all have formal statements of policy, intended to manage their affairs successfully. But in practice, unless they have adopted and followed a settled course of action, formal statements will not qualify as policy, however much governments may keep reiterating them.

Thomas Dye (1972) defines policy as "*whatever governments choose to do or not to do*". The first part of this definition is synonymous with the above-mentioned definition. However, the second part of this definition infers that deliberate "non-action" by government may also constitute policy (Khattak, 1989).

Forest policy has also been defined as "*That branch of forestry concerned essentially with the social and economic aims underlying forest management and forest development*" (Ford-Robertson, 1971). Inherent in this definition is an emphasis on the social and economic needs of human beings, acknowledging that forests produce goods and services needed by several segments of society.

The title of this project is "*Policy That Works for Forests and People*". The emphasis is thus on *success*. The challenge faced by the Inception Workshop participants was on preparing criteria for defining policy success or failure (IUCN Pakistan, 1996). The mandate of this research was not to conduct evaluations but to benefit from the informed judgement of stakeholders in forestry, and from evaluations already made. It was decided that a very objective criterion of success was not possible in the context of this study. What was required was a consensus among the participants on what they considered was *apparently successful* using their own criteria, and for the research team to subsequently validate that consensus through discussions with people who did not participate in the Inception Workshop. During the course of study, it became clear that failure was better documented than success. None the less, the project has identified successful initiatives in forestry which communicate lessons for possible replication or further

development, without denying the value of lessons from initiatives that apparently did not work.

The overall analytical framework for analysing and later recommending policy for sustainable forest management is a modified version of the "policy cycle". This covers five main phases, i.e. identification, appraisal, design, implementation and monitoring and evaluation, for each of which different actors and influences are relevant.

The very nature of the study required going beyond a typical combination of secondary and primary data gathering, to engaging in a dialogue with the Forest Department and other stakeholders so as to create a constituency for this exercise. This was in light of an agreement at the Inception Workshop that the purpose of this project should not only be to identify the policy milestones towards SFM, but also to get the different constituencies to "own" the lessons and the outputs.

1.3.1 Consensus and constituency building

This was not, therefore, a typical detached research project. Rather, by involving the Forest Department and some of the other stakeholders in the forestry sector from the first day, an effort was undertaken to build not only a constituency for this project, but also to initiate a process of change. Throughout the study, the disposition of the participants varied from that of enthusiasm to sheer scepticism. Towards the latter part of the study, however, there was an almost universal enthusiastic response from many of the commentators, particularly at the final, national Validation Workshop.

The consensus-building process included:

- *An Inception Workshop,* which was chaired by the Deputy Inspector General Forests, was held in November 1995. All the provincial Forest Departments, the office of the Inspector General Forests, donors, projects, NGOs, research institutes and private sector helped to define the research agenda. The proceedings of the report were published and widely circulated (IUCN Pakistan, 1996).

- *Collaborative analysis*, with a two-way flow of information from the study team and a range of stakeholders throughout the course of the study.

- *A national Validation Workshop* which was chaired by the Additional Secretary, Forests, Environment and Wildlife was held in March 1997. All the provincial Forest Departments, the office of the Inspector General

Forests, donors, projects, NGOs, research institutes and private sector were invited to comment on the draft findings and to guide the preparation of the recommendations. (Participants in these workshops are listed in Annex I).

1.3.2 Information sources

Secondary data which was reviewed included:

- project reports and related evaluation documents;
- published and un-published statistics and government reports on forestry;
- selected material from the Forestry Sector Master Plan, National Conservation Strategy and Sarhad Provincial Conservation Strategy.

Primary data included:

- Semi-structured, key informant interviews, which were held with provincial Forest Departments, the Deputy Inspector General Forests, Chief Technical Advisors, Programme Officers of the World Bank and SDC, Project Officer of ADB, and the IUCN support unit to Sarhad Provincial Conservation Strategy;
- Detailed stakeholder consultations were conducted in forest areas of Malakand Division.

Box 1.1 The country context

The Islamic Republic of Pakistan emerged from British colonial rule to become a nation-state on 14 August 1947. The western and eastern wings of the country, separated from each other by 1,600 km, became known respectively as West Pakistan and East Pakistan. In 1971, the eastern wing was separated and became Bangladesh, and West Pakistan became the Islamic Republic of Pakistan. Pakistan consists of the provinces of North West Frontier Province (NWFP), Balochistan, Sindh and Punjab, the federally administrated Northern Areas, and the State of Azad Jammu and Kashmir (AJK) (Figure 1.1).

1 The land

Pakistan occupies about 887,700 km^2, a third the size of India and almost four times as big as the United Kingdom. Topographically, Pakistan can be divided into six regions — northern mountains, northern plateau, western mountains, Balochistan plateau, south-eastern desert and the Indus plain. Meandering through it for 2,500 km is the Indus River which arises in Tibet, flows south-west through the mountains to irrigate a populous flood plain, and empties through an immense delta into the Arabian Sea.

2 The people

The diverse topography is associated with diverse and unique cultural settings and traditions. Religion (principally different forms of Islam), history, ethnic characteristics, language, literature, architecture, fine arts, social customs, festivals, amusements, dress and diet all go together to form a mosaic culture. Pathans, Balochis, Sindhis, Punjabis, Kashmiris and the people of Northern Areas are diverse and distinct cultures that add charm to Pakistan's cultural mosaic.

The population of Pakistan was estimated at 132.4 million in 1996 (Kureshi, 1997). Presently, it is estimated that the urban-rural percentages are 34 and 66 per cent respectively. The World Development Report (World Bank 1996) estimates overall population growth to be 2.8 per cent, with rural areas having higher growth rates.

3 The climate

Pakistan lies in the monsoon region. However, as Kureshi (1997) points out, Pakistan's climate is more 'continental' than that of other parts of the sub-continent, which come under a more typical monsoon regime (1997). The efficiency of the rainfall is reduced because it takes place in the late summer months when, because of the high temperatures, much of it is evaporated. The northern hilly and sub-montane mountainous region receives the most rainfall in the country: an annual 100 cm or more. While the rest of the country generally receives less than 50 cm of rainfall annually, thereby constituting a (semi) arid region.

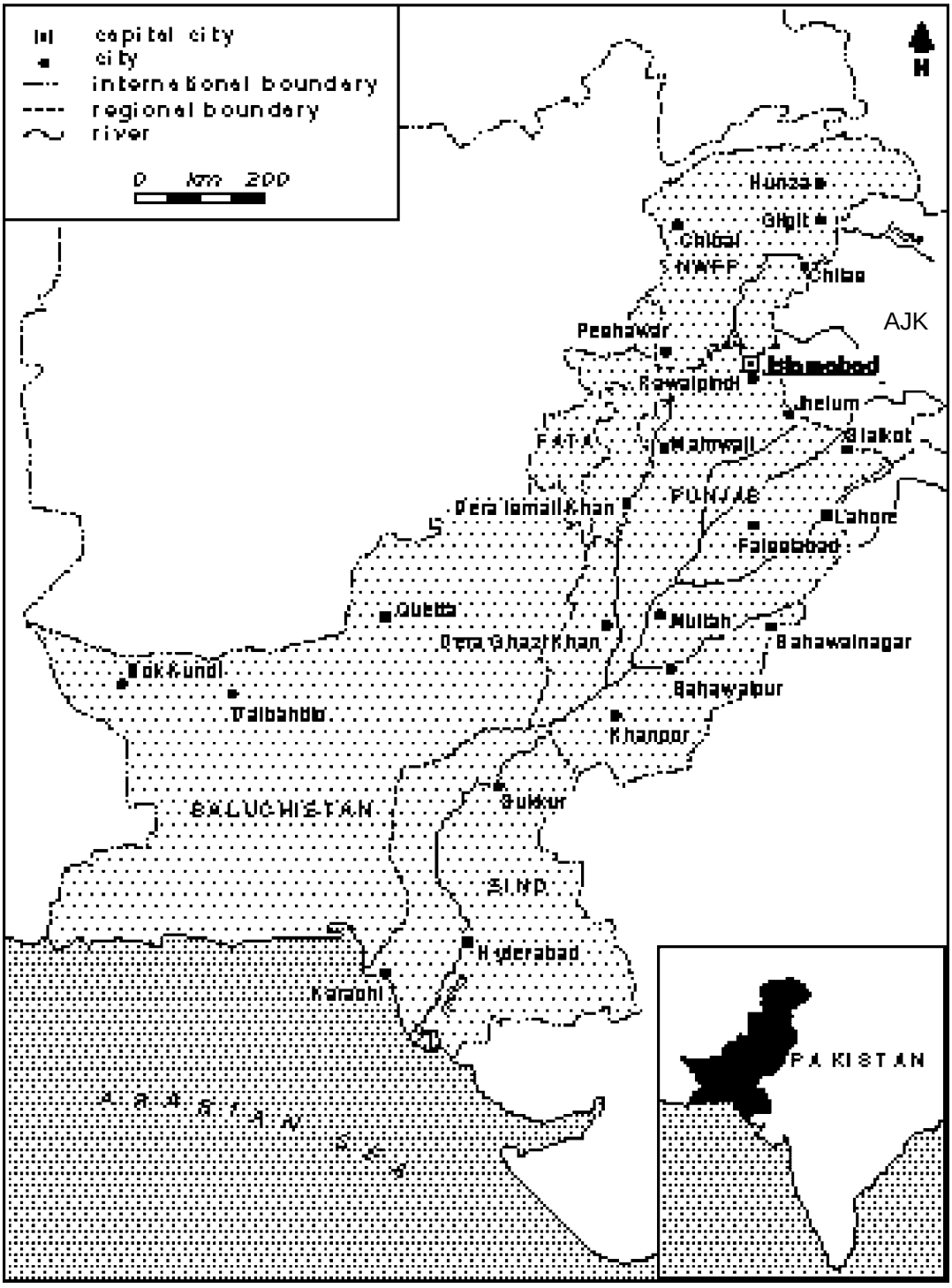
Temperatures also vary from region to region. Mean monthly temperatures in July range from below 20°Celsius, in the north-eastern region, to above 35°Celsius in the majority of country south of Murree. Likewise, mean monthly temperature in January, in the majority of the country, is below 10-15°Celsius, while parts of the north-east will drop way below 0^0C, and only the far southern temperatures average above 15°Celsius.

4 Natural vegetation and forests

Natural vegetation is determined by climatic conditions and soil type. The climate of Pakistan is too dry for dense forests, except in the northern hilly and submontane belts.

Roberts (1991) classifies Pakistan into 10 vegetation zones (see Figure 1.2). There are five major types of forests, namely: the Coniferous Forests in the northern areas, the Scrub Forests in the foothills, the Riverine Forests, the Irrigated Plantations in the plains, and the Mangrove Forests along the coast. The Coniferous Forests, with broadleaf species growing on the lower altitudes, include fir, deodar, blue pine, chir-pine, spruce, cedar and chilghoza pine, associated with broadleaf trees, such as oak, maple, birch, walnut, and horse chestnut. The main species in scrub forests are acacia and wild olive. The Riverine Forests and Irrigated Plantations contain shisham, poplar, mulberry and babul trees. The Mangrove Forests occur along the coast with timur as the main species. The current distribution of forests is illustrated in Figure 1.3.

Figure 1.1 Location/provinces of Pakistan



Forests, people and forestry institutions of Pakistan

2.1 Forest area statistics

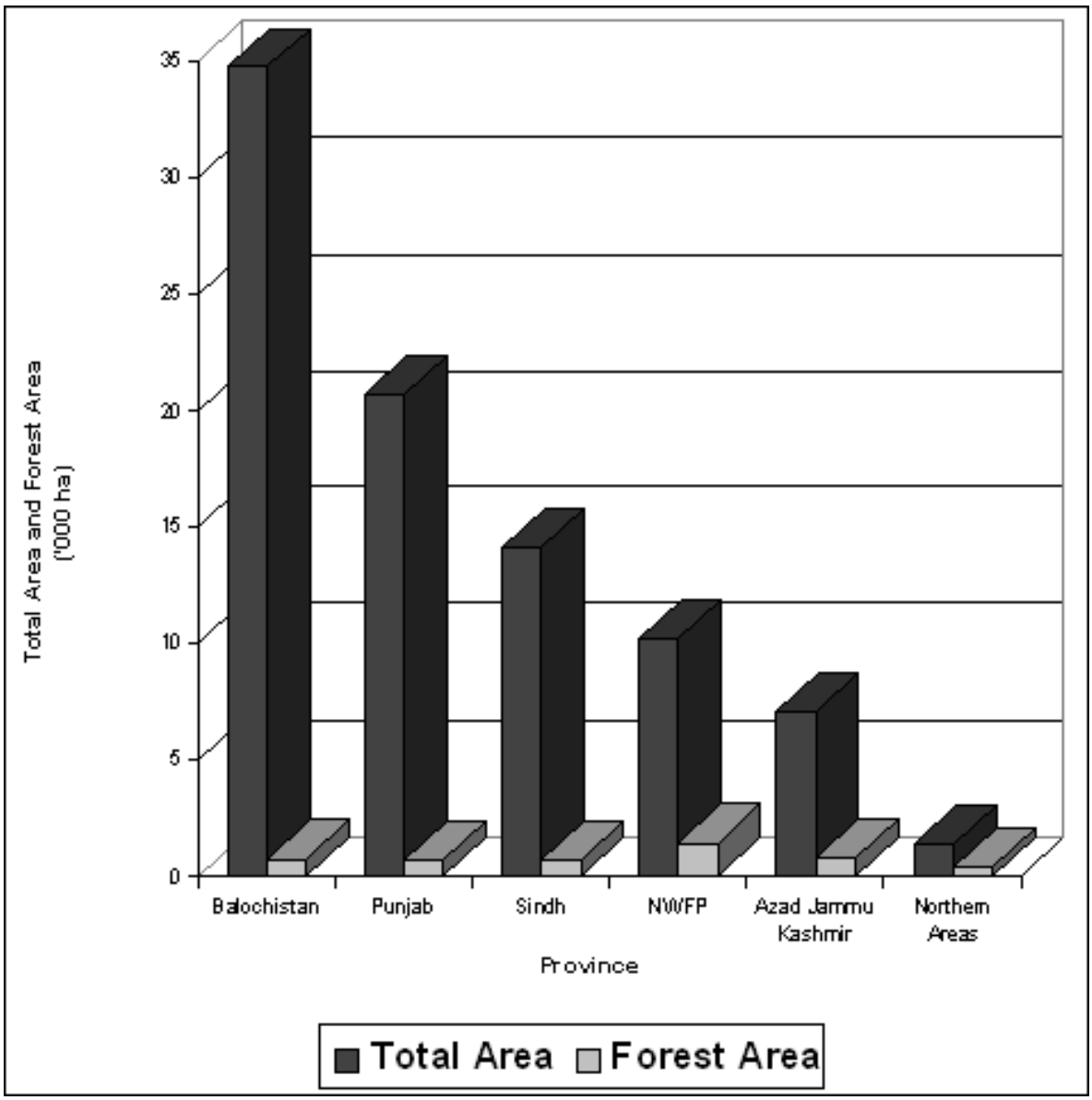
Approximately 5 per cent of the total land mass of Pakistan is under some kind of forest cover (See Annex III for detailed statistics). The National Conservation Strategy (1992) states that the country's wood requirements cannot be met from this forest cover alone. It also reports that 7,000-9,000 hectares are deforested per annum, which equals a 0.2 per cent annual decline in forest cover. Similarly, only 27.6 per cent of Pakistan's forest area is production or commercial forest, i.e. managed by the Forest Departments. Almost 73 per cent of the total forest area is protection forest and cannot be used for commercial extraction (ibid). Even so, the services provided by the protection forest - watershed regulation and biodiversity conservation - are also in short supply and are threatened.

Although there is no denying the fact that Pakistan has a very low forest endowment, there is considerable debate over the precise estimate of the area involved (UNCED, 1992). The problem stems from the use of legal areas of forest land as an indication of forest cover, irrespective of the actual amount of tree cover and its condition. Seen from this perspective, the forest area under the jurisdiction of the Forest Department has increased in the last five decades. The biggest "increase" - of almost 1 million ha came in 1970-71 when several former princely states were merged in Pakistan and their large tracts of forest land were accounted for as state property. Deforestation within state forests and other legal categories of forest land is also not recorded. Counterbalancing this is the lack of inclusion of many farm plantations in forest area statistics. Hence UNCED (1992) reports that:

"although the data suggest a tripling of the legal forest area since independence, this need not have a correlation with the quantum of forests in the country. On

the contrary, widespread anecdotal evidence - in the form of political statements, records of public hearings and journalistic accounts - suggests that there has been a significant reduction in natural forests over the last 30-40 years, a process which many feel is still continuing." (UNCED, 1992; see also Ali, 1990; Hussein, 1993).

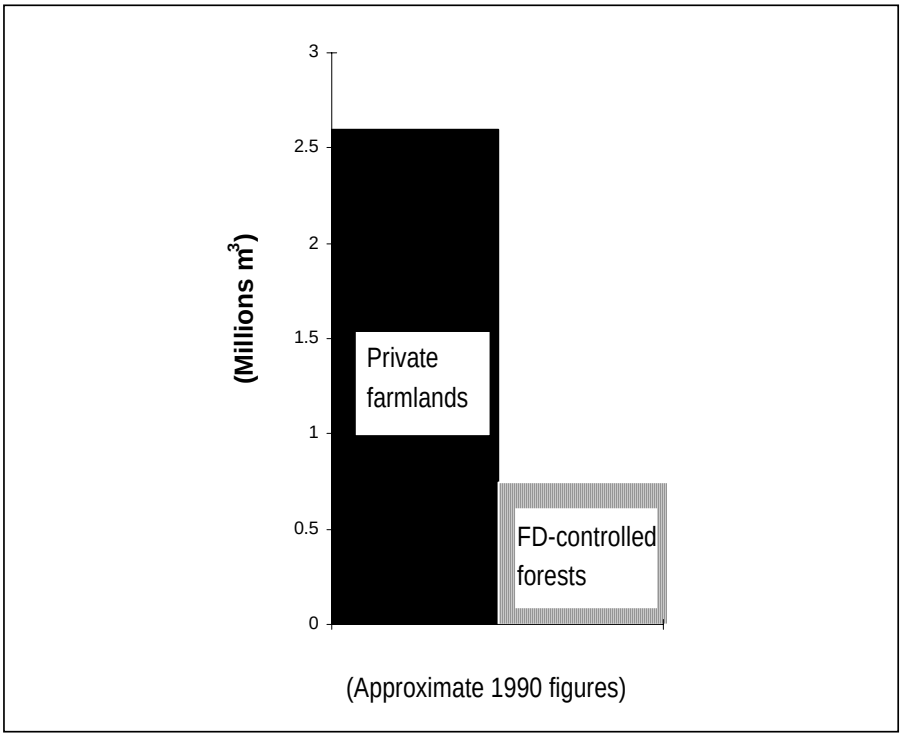
Figure 2.1 Total area and area under forest by province



Source: Jan, 1993(2)

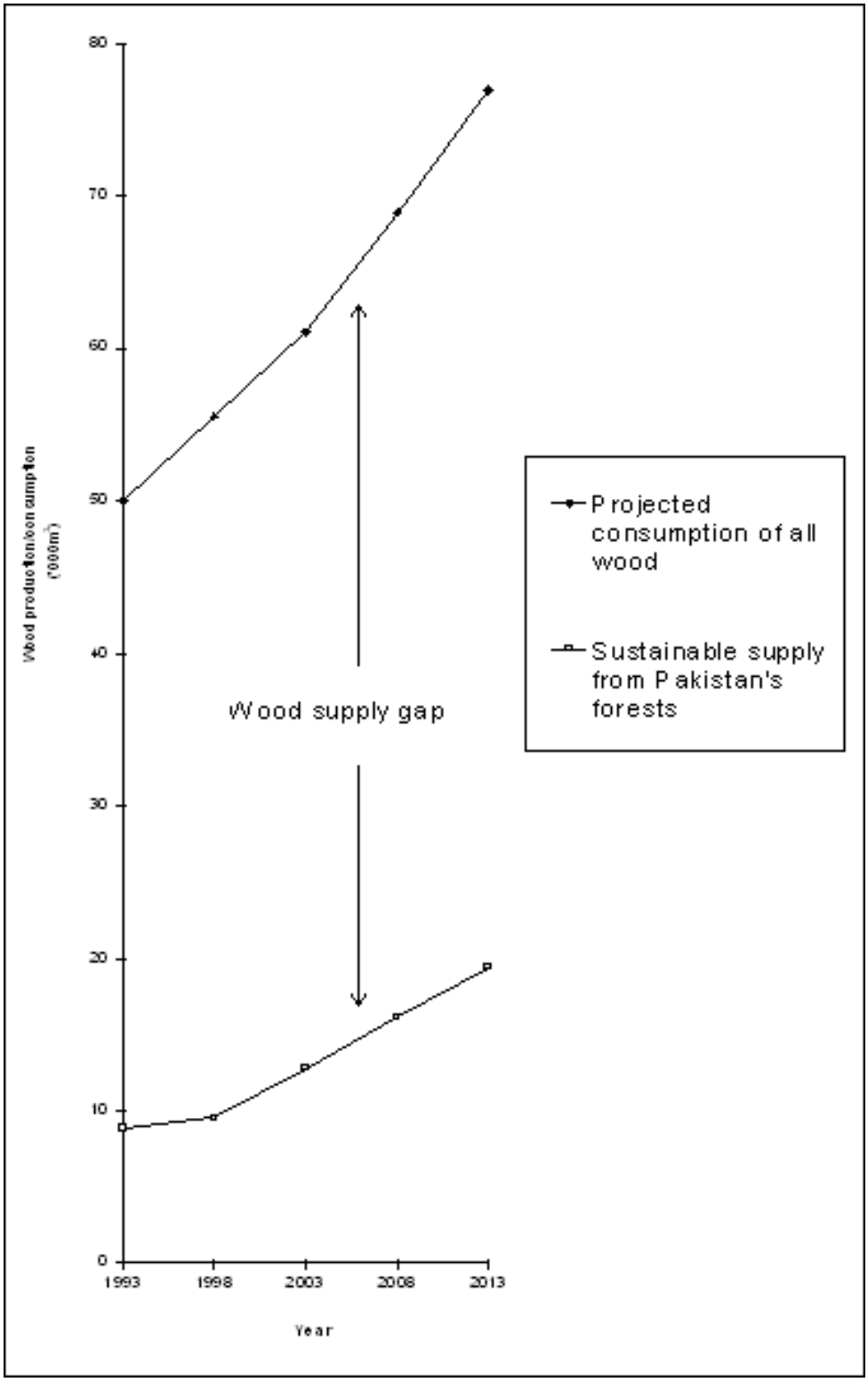
Acknowledging the statistical problems, the coniferous forests in northern Pakistan would appear to occur over 1.93 million ha; they are a major source of construction timber, resin, medicinal plants and wild fruits. The irrigated plantations, covering an area of 220,000 ha, are mostly in the Punjab and Sindh provinces; they are a major source of furniture timber (rosewood *Dalbergia sissoo*), wood used in sporting goods (mulberry *Morus alba* and willow *Salix spp.*) and mining timber (babul *Acacia nilotica*) - and the smaller wood from these plantations is used for fuel. The riverine forests, occupying 300,000 ha, produce rosewood in Punjab and babul in Sindh. The scrub forests, spread over 1.2 million ha in the foot hills, are managed primarily as soil cover, but grazing of livestock by local communities is a major (and often conflicting) use. Scrub forests are also important sources of fuelwood (*Dodonea viscosa*, "sanatha", is a high calorie shrub which is widely collected and sold). Pakistan has the largest tract of arid-zone mangroves on the coast of Arabian Sea (345,000 ha). There are also linear plantations along canals and highways. The private plantations raised under the Watershed Management Programme in NWFP are estimated at 159,000 ha. Although statistics for other farm plantations are available (mostly from Agriculture Departments - Table III.4) they are not routinely used for forest policy and planning purposes - even though plantations are clearly important for timber supplies.

Figure 2.2 Comparision of timber production from private farmlands and FD-controlled forests



Source: Pakistan Forest Institute, 1990 and Reid, Collins and Associates, 1992

Figure 2.3 The wood supply gap



Source: Statistics compiled for Specific Forestry Master Plans (1992) of all provinces, and of Northern Areas and Azad Jammu and Kashmir.

2.2 Forest goods and services

The forests of Pakistan supply the *services* of biodiversity, climate moderation, soil and water conservation, and recreation; they also supply *goods* - timber, firewood, wildlife and minor forest products as noted above.

Although there is, at present, no routine assessment of the production, distribution and marketing of all forest goods and services, it appears that farm plantations produce most of the timber - about 80 per cent of the total of FD-controlled forests and farm plantations (Figure 2.2).

Photo: Stephen Bass

Conversion of trees in the forests - to produce manageable scants that can be carried out - produces much waste, but at least this is returned to the forest nutrient cycles.

Consumption of firewood exceeds that of industrial wood by over ten times and significant growth is expected in each, following population growth. This may lead to huge pressures on forest resources in areas without significant plantations, i.e. most of Pakistan except parts of Punjab and Sindh (Table III.5). It will also lead to pressures to import more wood, which may create price signals - if policies allow - which will encourage investment in plantations and better forest management to fill the supply "gap" (Figure 2.3).

Import and export figures of certain forest derived products are available (Tables III.6 and III.7). Pakistan *imports* most of its pulp, paper and board requirements, lacking suitable plantations to produce such materials efficiently. *Exports* of forest products are insignificant, with the exception of wooden sports goods, e.g. hockey sticks and cricket bats.

2.3 Legal classification and land tenure[1]

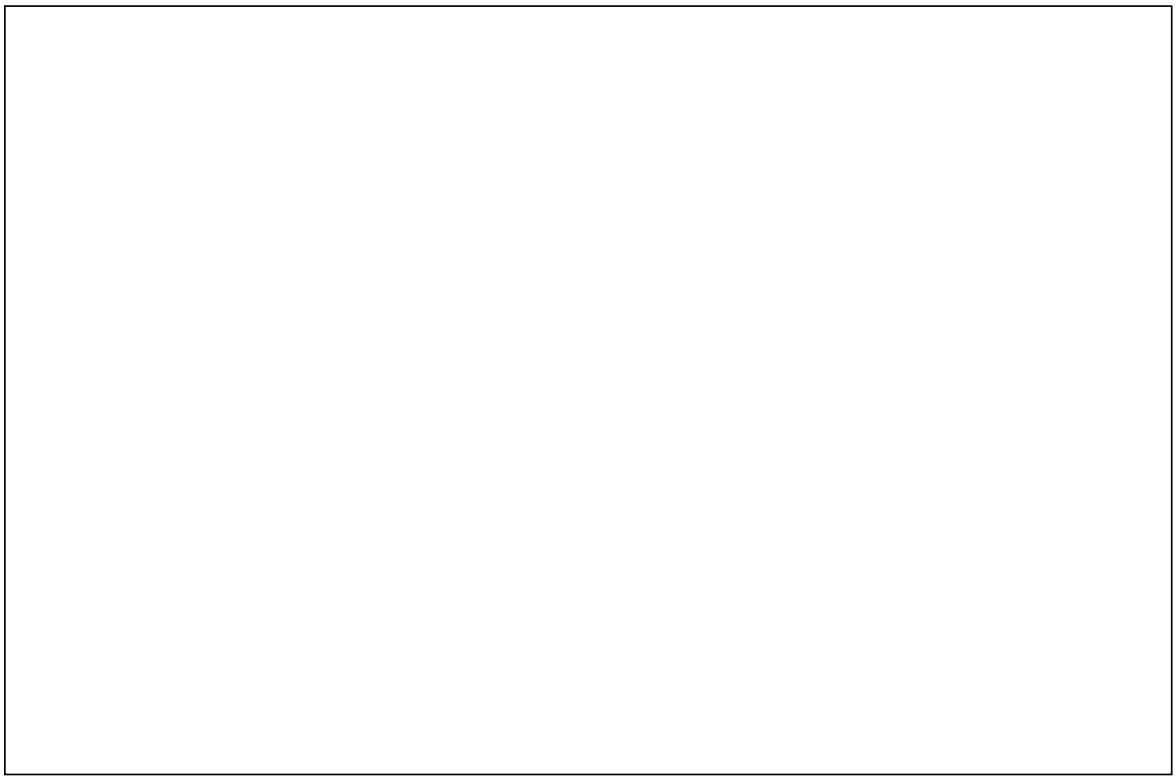
Forest policy and management is defined according to a legal classification system that categorises forests according to their tenure. Forests in Pakistan can be divided into two major tenure categories: State Owned and Privately Owned. Sixty six per cent of the total forests are under state control while 34 per cent of the forests are privately owned. State Owned Forests are

[1] From Jan, 1992

further divided into four classes on the basis of the legal protection provided to them. These are Reserved Forests, Protected Forests, Unclassed Forests and Resumed Lands. The legal term used for the Reserved Forests in Balochistan is State Forests. Cantonment and Municipal forests are also state owned. Privately owned forests are divided into five categories, namely *Guzara* Forests, Communal Forests, Chos Act Areas, Section 38 Areas and Farm Forest Areas.

The distribution of state and private forests in different parts of Pakistan is illustrated in Figure 2.4.

Figure 2.4 Distribution of forest under state and private ownership



Source: Jan, 1993:7

2.3.1 State owned forests

Reserved Forests. These were designated after settling their ownership and usage rights under Sections 4 to 26 of the Forest Act 1927. In legal terms, these forests are usually free from rights and concessions and all acts are prohibited unless permitted specifically by the Government through notifications. In Hazara and Murree Hills, control of some Reserved Forests was transferred from Forest Departments to Cantonment and Municipal authorities.

Protected Forests. These differ from Reserved Forests in two ways. Firstly, they have not passed through the lengthy process of admittance or extinction of local peoples' rights or concessions. Secondly, in contrast to Reserved Forests, all acts are permitted in Protected Forests unless prohibited by a notification of the Government; the title 'Protected Forests' may therefore be somewhat of a misnomer in practice.

Resumed Lands. These are the lands surrendered by big landlords when the ceiling on land ownership was fixed under the Land Reforms Act of 1959. In Hazara Civil Division, big landlords chose to retain cultivated lands and surrender the wooded lands previously owned by them which were in excess of the ceiling fixed by the Government. To differentiate them from Reserved and Protected Forests, these wooded lands are called Resumed Lands. Since this category of land was constituted after 1960, there is no mention of it in the Forest Act 1927 or in the Hazara Forest Act 1936. Legal protection has, however, been provided to these lands by extending to them the provisions of "Protected Forests" under the Forest Act, 1927.

Unclassed Forests. These include those (few) forests which are owned by the Government but have not been notified as reserved or protected forests under the Forest Act, 1927.

2.3.2 Privately owned forests

Guzara Forests. Guzara literally means "subsistence". When forests were reserved for government ownership and management in Hazara at the time of first settlement of land ownership in 1872, sizable patches of wooded lands close to habitations were set aside to meet the *bona fide* domestic needs of the local communities. Such forests were designated as *Guzara* Forests. Their ownership is vested in local people, either as individual property, or as joint property known as "village *shamilat*".

Communal Forests. This is a sub-category of the *Guzara* Forest, where the forest is owned by the entire village.

Chos Act Area. This is privately-owned lands which are subject to erosion hazard, or which endanger vital public installations or structures, can be taken over by the government under the Chos Act, 1900. These areas may be returned to the original owners after their treatment.

Section 38 Areas. Private owners can offer their land to forest departments for afforestation and management for an agreed period, ranging from 10 to 20 years, under Section 38 of the Forest Act, 1927. Such land is then managed on the owner's behalf by the Forest Officer as a Reserved or a Protected Forest, on such terms as may be mutually agreed.

Farm Forest Areas. These are linear or compact plantings of trees on private farm lands. These trees are owned individually or jointly by a family. Farm forests are found throughout the *barani* (rainfall-dependent) and irrigated farming areas of Pakistan. They are not subject to forest department authority. (See Box 2.1)

Box 2.1 Tree planting campaigns - a commentary

The government's annual seedling give-away has enjoyed only limited success, and the reasons for this are illustrative of broader problems with forest policy. The programme usually does not target the population most in need of its assistance: the poorer, less accessible farmers and landless peasants. Also, the programme's emphasis, with the farm population that it reaches, is on the delivery of tree seedlings and a motivational message. The implication is that the principal obstacle to farmer involvement in tree cultivation is lack of planting stock and absence of motivation. In fact, farmers are undertaking substantial on-farm afforestation on their own, and the problems with which they need help have less to do with psychological motivation and more to do with material constraints, problems that, seedlings aside, are not addressed in the annual planting campaigns. Foresters in Pakistan, as elsewhere in the world, interpret deforestation as literally a loss of trees, which they accordingly try to rectify with the provision of trees. In fact, deforestation is caused not by a loss of trees, but by the loss of a niche.

It might be more accurate to say that the tree niche has not been lost but rather transformed [to] favour the growth of trees on private farms as opposed to State forests. Government forestry programmes that are congruent with this trend... will be more successful than those that are not.

Source: Dove, 1995

2.4 *De jure* and *de facto* status of forest legal categories

The previous section described the various ownership arrangements for forests in Pakistan. The following section provides a comparison of the *de jure* and *de facto* positions, to illustrate the widening gap between legal doctrines, based on tenure settlements, and actual practice, which result usually from need and opportunity. We focus on the main legal categories[2]:

Reserved Forests

de jure position	*de facto* position
Reserved Forests are public forests, free of all rights except those admitted in the settlement process which must precede the declaration of an area as Reserved Forest. Such rights are limited. The land on which these forests exist is state land.	All Reserved Forests are used for unrestricted grazing, except small areas which might have been fenced and/or guarded by special watchers for regenerating trees; there is no involvement of the people living in or around the forest with forest departments. Illicit removal of trees and encroachment of forest land is quite common.

Protected Forests

de jure position	*de facto* position
Prohibitions. The protected forests are open to all uses by people residing around them, except those uses which may have been prohibited by special government notifications. Such prohibition usually applies to harvesting of trees (except under management plans), setting fire to the forest, and cultivation in the forest. The land on which these forests exist is state land.	The forests are not demarcated on the ground, and the local people generally resist the process of demarcation and official settlement of rights. This commonly results in encroachment for agriculture. Illicit felling of timber is also quite common.
Share of revenue. People having customary rights in the Protected Forests are entitled to 60 per cent share in net sale proceeds of timber in Malakand Civil Division and 80 per cent share in Hazara Civil Division from areas which are harvested according to the management plan under the supervision of the Forest Department. Such payments are made by the Forest Department to the revenue authorities, who have detailed records of the heads of communities	Some local communities claim ownership of protected forests. In some cases, the government has agreed to pay 60-80 per cent of the proceeds from the sale of timber to locals as royalty, signifying government acknowledgement of such ownership. The distribution of the proceeds from commercial sale of timber is generally fair but very time consuming. Local people frequently cultivate any large opening which may be made in the forest canopy as a result of timber harvesting.

[2] This material was contributed by Dr G.M. Khattak.

entitled to the payments and are conversant with the system of distributing the amounts among the various households. *Domestic use.* Under its rule-making powers, the Forest Department prescribes a certain quantity of timber to be issued to right holders for their domestic use, but not for sale, following a lengthy procedure of departmental assessment of need and actual utilisation. *Grazing.* People owning cultivated lands in villages with customary rights in a particular forest can graze their livestock in the forest. People who do not own such land but reside in these villages are also allowed the privilege of grazing in the forest. People not belonging to such villages must obtain the permission of the right holders (on payment) before they can graze their livestock in such areas.	There are no arrangements for meeting the domestic needs of the non-right holders. So they frequently either buy timber issued to the right holders for their domestic needs (which is illegal) or obtain it themselves by illicit means. The right holders complain about low quotas prescribed by the forest department for meeting their domestic needs.

Guzara Forests

de jure position	*de facto* position
Dry wood may be used without restriction for meeting domestic needs by the owners and right holders, and also by non-right holders residing in the village so long as the owners and right holders do not raise any objections to this practice. *Green trees* may only be cut by the owners and right holders for domestic purposes with the permission of the Conservator of Forests, in accordance with prescribed rules. Non-right holders are not allowed to cut green trees. *Guzara* Forests which are dense enough to be capable of sustaining timber harvesting are harvested in accordance with management plans prepared by the Forest Department. The owners of these forests are entitled to 80 per cent share in the sale proceeds and the government retains 20 per cent as departmental charges.	The management and use regulations concerning *guzara* forests are generally carried out according to the *de jure* position. However, beside *Guzara* owners and right holders, resident non-right holders have traditionally been collecting firewood from *guzara* forest. Illicit felling in *guzara* forest is quite common.

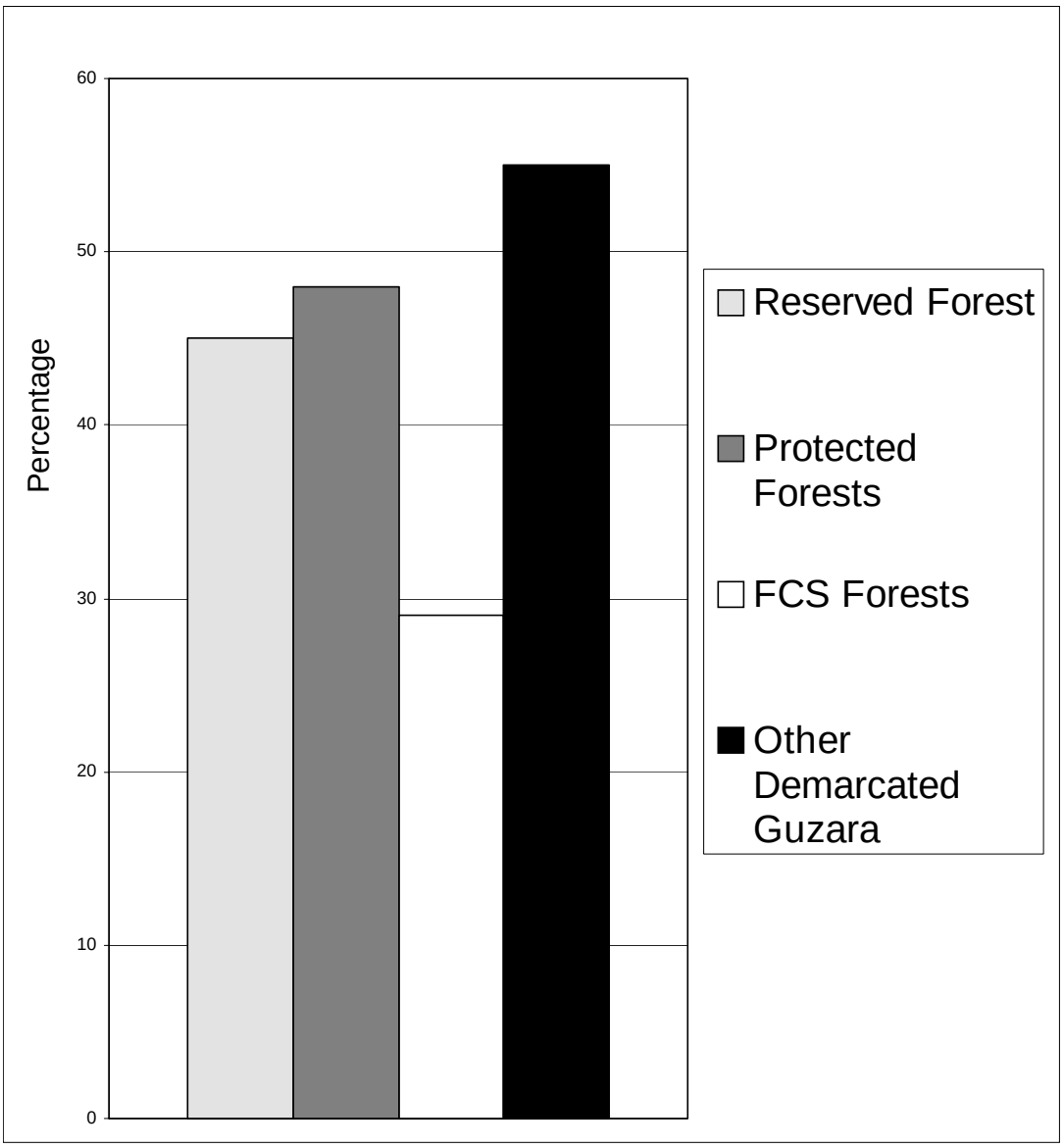
Torch wood. No person is allowed to lop, debark or remove torch wood from coniferous trees. *Medicinal plants* collection and removal is prohibited except as authorised sales, 80 per cent of the sale proceeds going to the owners and 20 per cent to the Forest Department. *Grazing.* Beside owners, right holders as well as resident non-right holders may graze their livestock in the *Guzara* Forests. Non-resident, non right holders must obtain permission to graze from *Guzara* owners, on payment of the agreed amount.	All these practices are common. The forest department cannot rigorously enforce these legal provisions without undue harassment. Grazing pressures adversely affect tree regeneration and the hydrological cycle.

Communal and Private Forests

de jure position	*de facto* position
According to local tradition, only the owners of cultivated land have the right to any income that might accrue from sale of timber trees from the adjacent mountains. All people resident in a village, whether land owners or landless, may graze their livestock and collect firewood from communal forest land belonging to the village. No outsiders are allowed these privileges except with the permission of the village elders, on payment of an agreed sum.	Large land owners in the mountains have generally moved to cities or towns, with the result that communal and private forest lands are now being used for grazing and collection of firewood by small land owners and the landless. Yet large land owners, even though they no longer reside in the villages, will still consider communal forest land as their property. This introduces a major complication in the advance of social forestry: the communities residing in the mountains have little incentive plant and/or manage timber trees because on maturity they may be claimed by the non-resident large land owners.

There has been considerable deforestation in many parts of Pakistan, in some areas almost irrespective of land tenure category. The Siran Forest Development Project has identified major deforestation in the area in which it works in Mansehra District (Figure 2.5).

Figure 2.5 Reduction in forest cover in District Manshera, 1967-1992



Source: Project data, Siran Forest Development project

2.5 Forest stakeholders: stakes in forests and influence on policy

Depending on the legal status of the forest, there can be several stakeholders. As we have seen above, forest land was classified on the basis of tenure settlements made - decades ago - with the stakeholders of the time. Many stakeholder groups are now absent from forest areas (e.g. absentee communal forest owners in cities) and/or face different pressures (e.g. presence of refugees), and motivations (e.g. new forms of commerce).

Stakeholders have different rights and claims in the forest, and different means of securing these:

The local people

Local people enjoyed uninterrupted usufruct rights in the natural forests until the British Administration took over the control of forest areas and declared them as state property, leaving only small forest areas in individual or communal ownership. However, as part of this process, the rights of local people in those forests that were declared as "reserved" were recorded in the revenue record, *Wajab-ul-Arz*. The forest settlement process could not be completed for the "protected" forests category due largely to resistance from the local people.

For many communities, forest goods and services are critical for subsistence livelihoods. For certain communities, timber royalties are also significant for cash income. Amongst the local people, at least three groups of stakeholders can be identified:

Guzara forest owners: Most *guzara* forest owners in NWFP are seriously concerned about the management of their forests by the Forest Department which, they allege, has not even been able to protect the forests effectively. They are also averse to the harvesting and marketing of their timber by the Forestry Development Corporation, which they consider to be inefficient (see section 4.3).

Right-holders: A wide variety of right-holders is recognised by forest laws, ranging from those entitled to shares in timber revenues to those with mere rights of passage through a forest. The former want to obtain regular and high income from forests in which they have a share, and they call for the simplification of the time-consuming and often corrupt bureaucracy that constrains this. The bureaucracy currently compels them to sell their shares, in advance, to influential forest contractors at high discounts.

Non-right-holding forest users: This is the most problematic category of stakeholders in forestry, both in terms of their own ability to sustain livelihood benefits from the forests, and in terms of their conflicting relationships with others and the State. They are recognised neither by the Government nor by *guzara* forest owners. Yet they may condemn a forest to extinction by the sheer pressure of their cutting firewood and timber, and by grazing. Since they are generally not organised, it is difficult to engage them in meaningful dialogue or in forest management partnerships.

Powerful local elites involved in the timber industry (the "timber mafia")

Timber is a precious commodity in Pakistan, with prices currently twice the world average, a function of both shortages in domestic supply and import duties. Therefore, both stakes and profits are high. Despite various measures and policy recommendations to minimise the negative influence of powerful local elites, they continue to be active players in logging and other commercial activities (see section 4).

Federal Government

Historically, federal government, through the office of the Inspector General of Forests, has wielded considerable influence in defining the policy agenda, maintaining liaison with the international community, ensuring compliance with international treaties, conventions and protocols, and inter-provincial co-ordination and legislation. The federal government has also influenced the forestry sector through its fiscal and trade policies. The bans on logging in 1992 and 1997 were imposed by the federal government. Similarly, the Forest Co-operative Societies in NWFP were banned by an order of the Prime Minister (see section 4.2).

Provincial Government

Forests are an important source of provincial revenues, particularly for NWFP, Punjab, AJK and Northern Areas. These financial stakes have conditioned the provincial governments to consider forests as part of the revenue stream, to be increased every year. This compromises the role of the provincial forest departments to prudently manage forests, as they are required to increase their contributions to the provincial exchequer every year. The principal legal means by which they can do this is timber sales, which then takes precedence over mandates to ensure supplies of other goods and services (see section 2.6).

Professional foresters

The majority of professional foresters in Pakistan work for government. As stakeholders, their motivations are secure employment and benefits, status, and professional satisfaction. The current legislation and administration accords them with considerable powers to pursue these interests, especially in "territorial" posts. Hence they tend to have an interest in the *status quo,* even if their professional observations would lead them to conclude that the *status quo* should be changed to meet other stakeholders' needs (see section 2.6).

International agencies

The international community, including the bilateral and multilateral donors, NGOs and international research centres, have supported the

sustainable management of forests in Pakistan. The Swiss, Dutch and Germans are among the significant bilateral donors for forestry, with FAO (World Food Programme), the Asian Development Bank and the World Bank prominent among the multilaterals. Although their objectives vary greatly, environmental and social objectives are - on the surface, at least - often paramount. Many of their pilot initiatives, though localised and not always positive in impact, have generated debate which is feeding into decisions about the future management of forests. In recent years, the formation of a Forestry Donors Consultative Group and the Chief Technical Advisor's Roundtable have provided forums for discussing the emerging forestry-related lessons with the government. The institutional reform, provincial policy formulation and provincial legislation in NWFP, initiated by the Sarhad Provincial Conservation Strategy, have been supported by these forums.

Photo: Stephen Bass

Where forests are becoming scarce, local groups have an incentive to protect them - if they can secure the rights and resources to do so. In Balochistan, forest protection committees have been forming from amongst local stakeholders, and are working with the forest department

Forest products industries

The wood-based industry relies heavily on a continuous supply of timber. Since the furniture and sports goods industries contribute foreign exchange to the national exchequer, the federal government has a stake in ensuring a regular supply of timber. The industry has an interest in forest rehabilitation and growth to enable them to thrive. However, as much of the industry comprises small and medium-sized companies and family businesses, which are not organised together, they have not been able to exercise significant influence over forest policy, in spite of having a major stake in forests. This may also explain their greater interest in plantations, which are established by local farmers and businessmen with whom they have greater contact - provided the wood quality is good.

Contractors

Felling of trees, their conversion and transportation are generally all done on a contract basis, using traditional methods. The capabilities of the contractors are limited, their main problem being transportation of logs

out of the forests. Government policy towards contractors has varied considerably (see section 4.3).

Consumers

The general public, as consumers of forest goods and services, have little input into formal forest policy. Apart from their consumption of forest products (timber, fuelwood, paper and non-timber products), they are interested in forests (knowingly or otherwise) for their various environmental services, such as watershed regulation, landscape and recreation. Except for some activity by the middle classes in the media and in the NGOs noted below, however, there is no forum for the public at large to engage in the national forest policy and planning processes.

Pakistani NGOs

The environmental movement in Pakistan is a recent phenomenon. The preparation of the National Conservation Strategy (1985-92) provided considerable space for the evolution of environmental NGOs. Almost at the same time as the NCS was being prepared, rural support programmes such as AKRSP and other social NGOs included natural resource management as key components of their income generation and poverty alleviation strategies. The NGO phenomenon has taken root strongly in Pakistan today, with social advocacy NGOs such as Sungi and policy institutes such as SDPI playing an active part in addressing issues from different yet often complementary angles. One angle pursued by most NGOs is an advocacy of stakeholder consultation. As a result, public consultations to build a constituency for various policies are now a common part of policy-making - though these are generally limited in outreach and vary in their impact. Leading on from this is the recent realisation of the need to ensure new forms of public-private partnership for sustainable development. NGOs working specifically on forest issues are discussed in section 2.6.

Table 2.1 summarises claims over the resource by different stakeholders and their different means of pursuing these claims.

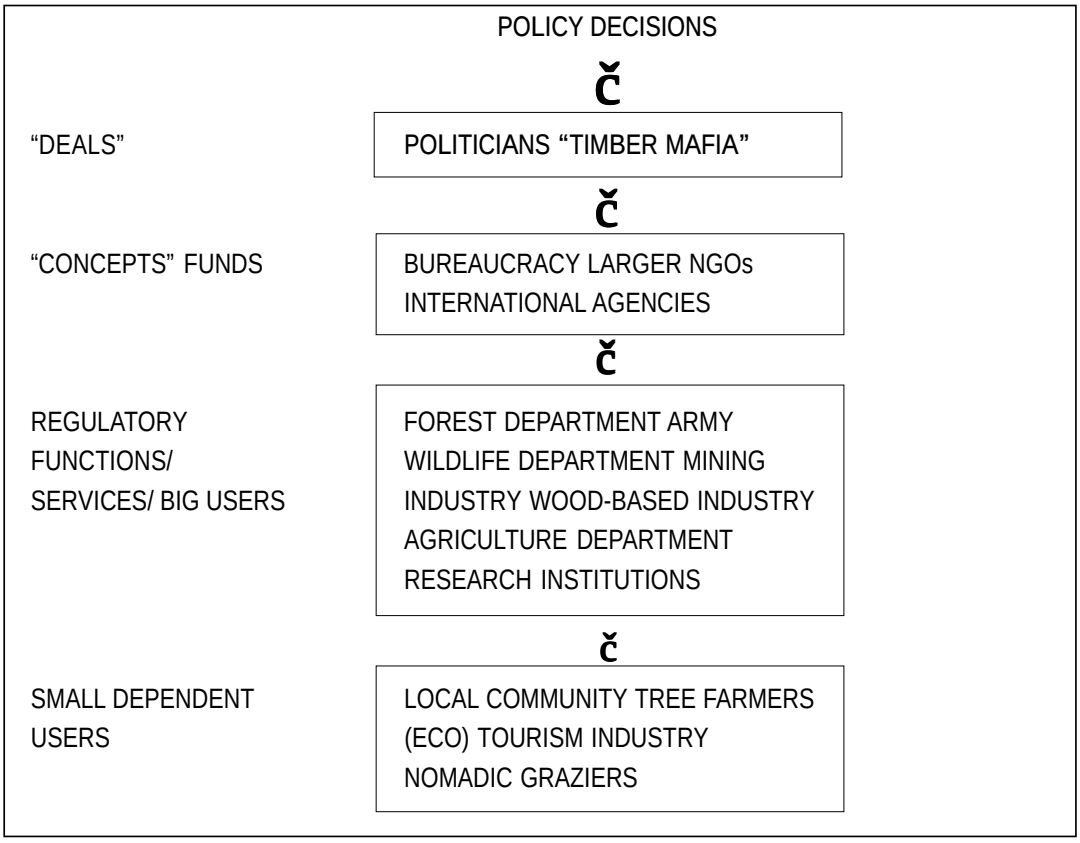
One of the major means to pursue stakeholder interests is the power to influence policy decisions. Figure 2.6 attempts to map the influence of these various stakeholders on forest policy decisions.

Table 2.1 Stakeholders, stakes and means used to pursue them

Stakeholders	Stakes in forests	Means used to pursue them	Constraints and pressures stakeholders face
Local Communities a. Guzara forest owners	Subsistence and commercial use	Individual and shamilat. Legal rights. Illegal means	Continuous degradation of forest reserves; conflicts with other stakeholders. Weak FD/FDC management
b. Right-holders	Flow of royalties and domestic use of wood products	Sale of royalties to timber traders. Collection or purchase of firewood and grazing	Declining income and supply of forest products; low royalty prices
c. Non-right-holders	Use of forest for fuelwood, construction and grazing	Pay in cash or kind to right holders. Illicit felling	Declining supply of forest products for subsistence use, exposure to high risks/security issues
Timber Traders	Commercial profits Political power	Purchase royalties at very low prices. Contacts with FD officials. Removal of more timber than permitted	Dwindling forest resources for commercial exploitation.
State of Pakistan	Ecological and revenue-generating aims		Dwindling forest resources, increasing local and international pressure for prudent management
a. Federal Government	Honouring the relevant international treaties	Policy, legislation and inter-provincial co-ordination, international liaison and support	
b. Provincial Government	Revenue and ecological balance	Management and protection capacities; policy and legislation	
International agencies	Conservation of biodiversity of international prominence. Mitigation of global warming. Support to poor communities	Bilateral and multilateral funding, technical assistance, conditionalities	Continuous degradation and destruction of habitats, ecosystems, biodiversity. Political constraints

Industry	Wood for processing/ profits	Purchase from the domestic market. Import wood.	Rising prices with falling supply. Import restrictions
Pakistani NGOs	Biodiversity conservation; poverty alleviation	Political influence; bilateral/multilateral funds; links to foreign NGOs	Weak state/civil society relations. Inexperience
Consumers	Wood products at low prices	Purchase from the market Purchase substitutes	Rising prices with falling supply

Figure 2.6 Stakeholder influence on forest policy [3]



The political economy of the forestry sector is illustrated, in greatly simplified form in Figure 2.6. Politicians and the "timber mafia" often collude, to gain access to coveted contracts which determine the management, stocking and use of forests; thus they often exercise the most influence on forest policy and decisions. Next in degree of influence is the bureaucracy, the larger NGOs and the international agencies. They wield influence because of their control over funds. Furthermore, in the last

[3] The size of the arrow indicates the degree of influence.

decade, much greater importance has been attached by NGOs and the international agencies to the use of such funds in the pursuit of biodiversity conservation, poverty alleviation and "good governance". The introduction of these concepts has resulted in various initiatives to change policy. Service departments follow in influence on forest policy and decision. These departments derive their influence partly from because of the regulatory functions they perform, and partly from some being significant users of the forest. The effective influence of the Forest Department has recently been diminished, due in part to the interference by powerful local interests ("timber mafia") in Forest Department affairs such as officer postings and transfers, rendering control on the ground weak.

The group having the least influence over both formal forest policy and decisions comprise stakeholders at local level. However, on the ground their influence is strong - often manifest in rampant encroachment, with the authorities looking passively on.

Table 2.2 elaborates the problems faced by different stakeholders at the *local* level, taken from field studies done under this project.

Table 2.2 Local stakeholders' dilemmas

	Owners	Tenants	Landless	Graziers
Objectives/ Stakes	Increase incomes, supply of firewood, grasses, small timber, control soil erosion	Regular supply of firewood, grasses and small timber mainly for own consumption	Regular supply of firewood and small timber for own consumption, grazing needs, cultivation in forest areas	Regular supply of forage for livestock
Constraints	Over-use by non-right holders; inadequate regeneration	Insecure land tenure; and lack of access to forests	Lack of access to forests	Depleted pastures
Impacts	Loss in incomes, subsistence and forest wealth	Financial burden if firewood and forage have to be bought	Financial burden if firewood and forage have to be bought	Reduced livestock productivity, sales
Solutions being pursued	Regulate access of non-right holders to forests. Increase tree growth outside forest areas	Joint management of forests	Joint management of forests	Adjust livestock numbers. Better range and grazing management

At the local level, the forests are under heavy pressure, and there is conflict between the owners and others. Just as their objectives differ, so do their solutions to the problem and therefore their priorities. The tenant and the landless do not respect any programme for resource regeneration, since they do not have a long-term stake in the resource. In fact, they have every reason to illegally graze their livestock and extract firewood and grasses from the forest. The owners, on the other hand, have every reason to protect the resource, since they stand to benefit from it. However, when they see the resource being degraded by the right-holders, they lose the incentive to protect and conserve. Some economists describe this as incentive incompatibility[4]. The emerging solution of co-management of forests, if properly organised with legal agreements, holds potential for generating compatible incentives amongst all local stakeholders.

2.6 Forest institutions

Statutory framework - forestry as a provincial responsibility

In law, forestry is a provincial subject, and the provincial Forestry Departments are the principal institutions that deal with forest administration. The federal government is generally responsible for international liaison and inter-provincial co-ordination; these functions are performed by the office of Inspector General of Forests in the Ministry of Environment.

The Constitution of Pakistan 1973, through articles 32 and 37(i), requires the promotion of local government, and decentralisation of government administration. Forestry and related renewable natural resources and wildlife are, defined as subjects of provincial responsibility. Husain *et al*. (1994) reports that:

> *"According to Article 37(i) of the Constitution, the State ought to decentralise Government administration so as to facilitate expeditious disposal of its business to meet the convenience and requirements of the public. Moreover, items 9 and 11 of the Concurrent Legislative List spell out clearly that the Federal Government is not competent to legislate on contracts relating to agricultural land or transfer of agricultural land. Item 37 of the Federal Legislative List further supports the view that legislative power of the Federation would not extend to property situated in a Province which is always subject to Provincial legislation. It follows, therefore, that the law of*

[4] Incentive incompatibility, that is, the incentives faced by an individual should induce him/her to act in the manner demanded by society.

the place where land is situated, whether such land be with or without tree cover, will apply to such land. ***Consequently, a Province alone has the constitutional power to legislate on land and forestry within its territory****" (our emphasis).*

The word "forestry" does not appear as an item in either the Federal Legislative List or the Concurrent Legislative List. Hence a Province, alone, has the residuary power to make laws with respect to forestry, pursuant to Article 142(c) of the Constitution, which says:

"A Provincial Assembly shall, and Majlis-e-Shoora *(Parliament) shall not have power to make laws with respect to any matter not enumerated in either the Federal Legislative List or the Concurrent Legislative List."*

Box 2.2 GTZ evaluation of the NWFP Forest Department

The origins of the forest administration in Pakistan date back to colonial times. It was established as an organisation with well-defined tasks, a strong hierarchical structure with clear regulations and control mechanisms. The department has remained largely unchanged since colonial times in attitudes, internal rules and regulations, the decision-making processes and the traditional hierarchical and territorial structure. Forestry administration has experienced significant changes which have significantly influenced their organisational and operational capacities. But these changes have not been initiated by the organisation on its own but by external influences, e.g. projects assisted by donors and development agencies. These changes did not, however, result in a goal-oriented and systematic organisation but in ad-hoc changes and decisions to answer particular problems. In conclusion, the structure of the organisation is considered to be one of the major causes of failure. The present organisational set-up distributes territorial and technical tasks (social forestry) without meeting the requirements of territorial or functional organisation principles.

Source: GTZ (1995)

Forestry administration

The provincial forestry departments (FDs), in addition to managing the forests, are generally also responsible for watershed management, range management in the forest areas under their control and, in some cases, wildlife management.

The basic administrative structure of all the FDs is the same. However, there are some variations, due to the specific needs of each province. Generally, a Chief Conservator of Forests (CCF) is the most senior professional in the provincial FDs, but in the Northern Areas, the senior forestry officer is only of the rank of a Conservator of Forest (CF). The CCFs usually have a small

team of professional foresters, called staff officers, in their office to help them with policy, planning and general administration; however, none of them are specialists in these fields.

Under the CCF, there are usually 3-4 CFs, each in turn supervising 3-4 Divisional Forest Officers (DFOs). The DFOs are heads of the forest divisions, which are the basic units for forest management and administration.

Each forest division is sub-divided into 4 sub-divisions or ranges, headed by Range Officers, who in turn supervise 3-4 Foresters each. The lowest forestry official is called a Forest Guard, whose main responsibility is protection of forests. The Forest Guard looks after an area known as a "beat", and 3-4 beats constitute a "block", which is headed by a Forester.

Forest management planning and implementation

The responsibilities for planning and development at provincial level rest with the CCFs of the provinces. Development is often in the form of projects, in order to justify and raise government finance and development aid. Project formulation always begins at the field (DFO) level, where DFOs are asked to prepare forestry development projects in PC-1 format[5]. The projects are appraised in the "planning cells" in the offices of CCFs, and then submitted to the government for approval and funding.

In contrast to traditional forest management planning as learned by DFOs in college, planning for SFM has new dimensions and requires a new set of skills barely in evidence in the forest officers involved. Environmental and social knowledge is especially lacking although - as we discuss in Section 5 - many skills are being developed through work on large aid-funded projects. At present, however, few SFM requirements are met through the routine procedures of FDs. The FD seldom follows participatory approaches in planning, and the needs of the local people are frequently overlooked. Consequently, the (often very good) "scientific" skills of forest officers dominate the results. Every planning document is prepared in a top-heavy, insular manner.

However, things are beginning to change. NWFP has established a Forest Management Centre (FMC) which is mandated to prepare working plans using participatory approaches, and reflecting environmental conditions and demands. The FMC is mandated to prepare state-of-the-art management plans for selected forests, co-ordinate preparation of working plans, and undertake basic silvicultural research. The FMC is also

[5] A PC-1 is a Planning Commission Form 1, which has to be approved by the provincial Planning and Development Departments.

becoming an active player in policy, legal and institutional reform processes.

Planning should be a continuous process, but continuity and consistency in planning are difficult to maintain and require good information and monitoring. Political decisions prevail, changes in government influence the planning process, and priorities are set through ad-hoc decisions which are not based on good information on forests, stakeholders' needs and capabilities. Allocation of funds is conventional and is based on previous allocations. Yet there are often huge gaps between the funds allocated and funds released. PC-1s are prepared, scrutinised and approved but not implemented, due to the shortage of funds. Sometimes projects are stuck part way through their implementation. Jan (1989a) revealed that only 51 per cent and 48 per cent of the allocated funds were released during the Fifth and Sixth Five-Year Plans respectively.

Photo: Stephen Bass

Forest Departments have a much greater emphasis on tree planting than on natural regeneration. Seedlings are raised for plantation even within managed natural forests, as here in Kaghan.

Once funds are allocated, further difficulties encountered in implementing the programmes/projects include lack of trained manpower, transport and physical facilities, and insufficient budget provisions for monitoring visits and field allowances. The middle and senior level officers of the forest departments are burdened with administrative tasks. They do not have enough time to devote to technical matters, consultations and field visits. Lack of communication between officers and subordinates sometimes results in confusion. The upper tiers of the department do not always recognise - or remember - the implementation problems faced by field foresters, and the constraints faced at the upper level are not expressed to the field forester, because of the traditional authoritarian structure of the department.

There is generally no assessment of the impacts of the projects. However, a quarterly and annual review of projects is made in terms of input delivery, project outcomes are often not measured, except in case of foreign-aided projects, where it is the donor requiring the monitoring.

Office of the Inspector General of Forests

The Office of the Inspector General of Forests (IGF) is a federal institution housed in the Ministry of Environment, Local Government and Rural Development. IGF is responsible for policy formulation, national and international liaison, professional education and training, research and processing of foreign-assisted projects. The position is a misnomer as IGF has no mandate to be an "inspector". In reality, his role was mandated to be an advisor to the federal government. The IGF office is under-staffed given its workload, and it is generally thought necessary to strengthen the IGF office to support it in planning and co-ordination, monitoring and evaluation. The secretariat of the National Council for Conservation of Wildlife is attached to the IGF Office.

Forestry Development Corporations

By the mid 1970s, there was considerable evidence that the system of sales of standing trees through competitive bidding had failed, due to the indulgence of contractors in over-harvesting. This forced the government to bring forest harvesting into the public sector. NWFP and AJK have established corporations whose main objectives are to harvest the high-altitude natural forests with modern mechanised methods, to sell timber and to establish wood processing units. However, these corporations, rather than improving the harvesting practices, started awarding logging and transportation contracts, defeating one of the major objectives to improve harvesting operations. The story is told in more detail in Section 4.4.

Rural institutions/NGOs

The existing rural institutions are the village councils and district councils. These institutions are of a political nature, having no direct interest in forestry activities. There appears to be a crisis of confidence between foresters and these institutions.

However, local organisations have developed through the efforts of several participatory rural development projects. The Aga Khan Rural Support Programme (AKRSP) has been at the forefront of establishing a natural resource management strategy in its programme in Northern Areas, in which forestry is an essential element. The efforts to establish new Village Development Committees (VDCs), Village Organisations (VOs) and Women's Organizations (WOs) in Malakand and AKRSP have shown a positive response and forest management is securely on their agendas, but these new village institutions need strengthening and their numbers increased. Questions of their legal status need addressing.

Many other development projects have fostered other forms of grassroots institutions for participatory management (e.g. Kalam Integrated Development Project, and Siran Forest Development Project) and natural resource rehabilitation (e.g. Malakand/Dir Social Forestry Project). The right holders of protected forests in Kalam, with assistance from KIDP, have formed eleven Forest Protection Committees (FPC) to protect the forests against illicit cutting and transportation of timber. The Committees have established three forestry check posts, to which they have assigned their own staff. There are also check-posts established by the FD in which the FPCs have also posted their staff to check if timber is being smuggled. In Siran, the VOs jointly manage the check posts established by the FD. In Malakand and Dir, VDCs prepare and implement village land use plans.

There are hardly any local NGOs working specifically in the field of forestry. One NGO, Margalla Hills Society, has been set up to create public awareness for the conservation of Margalla National Park near Islamabad. NGOs such as Pakistan Tree Farm Society and WWF Pakistan are making strides in the fields of conservation and forestry. The World Conservation Union (IUCN) has recently started to influence policies through its involvement in conservation strategies, and become a partner with the government in demonstrating the value of participatory approaches for natural resource management.

Education, training and research institutions

Pakistan Forest Institute (PFI), presently under the administrative control of the Ministry of Environment, Local Government and Rural Development through the IGF, is the only institution responsible for conducting research and imparting education and training in the field of forestry and allied disciplines at the national level. PFI has seven divisions, six for research in different aspects of forestry, namely Forestry in general; Biological Sciences; Sericulture; Watershed Management; Forest Products; Forest Entomology; and one for Education and Training functions. Forest education, training and research have deteriorated considerably over time, with fewer qualified persons now engaged in them, and money only for disbursing salaries. Policy and socio-economic concerns appear to take second place to technical issues.

Punjab Forest Research Institute (PFRI) was established in 1984 under the Punjab Forest Department, to provide scientific support to provincial forestry through integrated research and training of technicians. Three research sub-stations have been established in different ecological zones, at Ghoragali, Lahore and Bahawalpur. Two technical forestry schools operate under PFRI, one at Ghoragali and the other at Bahawalpur.

Pakistan Agriculture Research Council (PARC) is an autonomous body created under the Ministry of Food, Agriculture and Co-operatives. PARC has the mandate to conduct research, help other institutions carry out research work, and disseminate research information in the field of agricultural research which includes forestry, wildlife, watershed and rangeland management.

Bio-Saline Research Station of NIAB (Nuclear Institute for Agriculture and Biology), Punjab, an independent research station, carries out several experiments to rehabilitate saline lands. Several trees and shrub species have been tested with encouraging results. Co-ordination with the respective FDs may allow the rehabilitation of the saline areas under their control.

In the provinces, one Divisional Forest Officer attached to the FD is responsible for co-ordinating and executing all forestry research work. However, lack of trained research staff and operating funds constrain this in practice.

Formal forest policies and processes of Pakistan

3.1 The evolution of formal forest policy[6]

A comparative matrix of the content of various forest policies from 1955, 1967, 1975 and 1991 is presented in Annex II. This section describes their evolution beginning with the colonial and pre-colonial heritage.

The interest in organised, "scientific" forest management in the sub-continent can be traced back to the middle nineteenth century. Under the British Administration, the intensity of commercial exploitation of forests in British India as a whole (rather than Pakistan specifically) raised concerns about the long-term survival of forests. The first set of forest legislation was promulgated in 1878 to control logging. The Indian Forest Act of 1878 put the major part of forests under state management and gave limited rights to local people. Over the years, the local communities protested against the new legislation, which ultimately led to thousands of acres of forest being set ablaze in Kumaon in 1921. The new forestry plan in 1923 granted villagers more control of the use of forests, which in turn was reflected in a new Forest Act in 1927.

The new policy of granting more control to villagers was, however, implemented very cautiously and came to a halt during World War II. After the war, an evaluation of the forestry situation concluded that only those forests which were under state control had been adequately protected, while those under private ownership had been mismanaged for short-term commercial gains. The Forest Department concluded that private forests should revert to state control.

[6] Policies may be either *formal* in the form of a policy document or statement issued by the government, or *informal* in the form of *ad hoc* directives of the political or professional leadership issued from time to time. The foregoing discussion has focused mostly on the formal policies of Pakistan.

Although the first formal forestry policy resolution under British Administration was not issued until 1894, the local British authorities, cognisant of mismanagement of forests, had been instituting parochial forestry initiatives for many years. The Deputy Commissioner for Rawalpindi promulgated rules for conserving trees and brushwood in 1856. Similarly, the Deputy Commissioner of Hazara promulgated rules for forest conservancy in 1857 and all forests in Hazara were declared the property of the government, although local villagers and right holders could cut trees for personal use with permission.

There is not much evidence available on the process that resulted in the 1894 policy, but it can be safely assumed to have been an outcome of the normative-autocratic approach of the administrators and foresters trained and experienced in colonial tradition. The British administration's policy resolution of 1894 described the sole objective of managing state-owned forests for wider public benefit, which necessarily meant curtailment and regulation of rights and privileges of the people residing around forests. This policy provided fundamental guidelines for classifying and managing forests to protect watersheds, production of timber, and meeting the *bona fide* needs of local people for fuel and livestock grazing. The resolution also allowed permanent agriculture on forest land wherever intense demand justified this.

The first forest policy agenda of the independent Government of Pakistan was issued in 1955. The guidelines for the first policy of 1955 were provided by the Central Board of Forestry, constituted by the government in 1952. The

Box 3.1 Once upon a time ... pre-colonial policies and impacts

Ancient scribes suggest that the Brahmin and Buddhist people of the India sub-continent in earlier centuries lived in harmony with luxurious natural forests. Whether or not this is the case, the conquests of the Aryans, in pursuit of military gains, certainly changed the landscape. Land was cleared as agriculture and pastoralism took root to support the Aryans as they began to settle. The natives who were displaced to the hitherto inaccessible hills cleared some forests to make a living. However, a low population base and a subsistence economy meant minimal pressure on the forest endowment.

The Moguls, while building up their empire in the sub-continent, introduced revolutionary administrative arrangements. Land settlement was one such arrangement. Its purpose for the Moguls, as for any modern state, was to guarantee a regular stream of revenues through taxation. Vast tracts of land (*jagirs*) were provided to village notables, *the Jagirdars*, who represented the monarchy at the village, taluqa or district level. In return for maintaining law and order, and for collecting revenue on behalf of the state, they were provided with use rights over these *jagirs*. In addition, the state also had *khalsa land* (crown land), which was used to generate food and fibre for the consumption of the state. Although there is little documented evidence on the impact of this land settlement on forest resources, anecdotal evidence suggests that the moguls had a strong interest in hunting. Natural sanctuaries for animals were preserved for this. It may be assumed that this practice also led to prudent use of forests.

Board consisted of federal and provincial forest ministers, and secretaries of various ministries including environment, planning and finance. Although it had a wide representation both of elected public representatives and of experts form different fields, it failed to play an effective role in monitoring the policy processes and policy implementation. The professional norms of elite foresters trained in the British/ Indian tradition continued to mould forest policies. The consultation process, if any, remained confined to professional and administrative circles.

The first forest policy coincided with the formulation of the first five-year National Development Plan and focused very much on the role of forestry on economic development. The USAID development programme in Pakistan, which started in the early 1950s, included significant forestry activities. Soil and water conservation started to receive attention through watershed management, with two projects launched in 1960. These, and the merger of provinces into one unit, 'West Pakistan', and other external influences in forestry were influential in the policy statement of 1962.

Protection of forest assets from hazards, and afforestation, were signaled as strong concerns in this policy. The dismemberment of Pakistan in 1971, with the creation of Bangladesh, from what was before East Pakistan, created an acute shortage of paper, bamboo and matches, the bulk of which had come from East Pakistan. In 1972, a National Forestry Committee was constituted to submit its recommendations to the Council of Common Interest, which is answerable to the Parliament and formulates and regulates policies. However, it was not until 1975 that the recommendations, approved by the Council, came to constitute the forest policy of 1975. This focused on stopping deforestation and increasing productivity.

The 1975 policy originated as recommendations of the National Forestry Committee, constituted at the behest of the President of Pakistan in 1972, and comprising both official and non-official members. Their recommendations were further scrutinised by the Ministry of Food and Agriculture through technical sub-committees on afforestation, extension, farm forestry, forest laws, range management, soil conservation and watershed management. Based on the reports of these sub-committees and further deliberations of the provincial heads of forest departments under the aegis of the Ministry of Food and Agriculture, a summary was submitted to the Inter-Provincial Conference in 1974. The recommendations approved by the conference were transmitted to the federal and provincial governments for implementation (Ayaz, 1975). The recommendations of the Agricultural Enquiry Committee, appointed in early 1975 at the behest of the Inter-Provincial Conference, generated the 1975 forest policy agenda after approval by the Council of Common Interest.

In 1977, the Inspector General of Forest's Office analysed the existing situation of forests, rangelands and wildlife resources. Increase in population growth, pressure on the forests especially in watershed areas, and accelerated soil erosion to the detriment of the life span of the Tarbela and Mangla Dams, escalating demand for forest products, and the effect of the creation of Bangladesh on the wood-based industry were the main factors which led to the conclusion to revise and formulate a new forest policy. Consequently, a consultative process with the Provincial Governments was initiated and a draft policy was prepared by the Pakistan Forest Institute in 1978.

The draft policy document was circulated and, in the light of the comments and suggestions given by the provincial governments, was amended by the Inspector General of Forests. Specific forest policy recommendations were placed, along with the National Agricultural Policy, before the Cabinet in January 1980 and approval was accorded. Thus, forest policy was adopted in the shape of statement forming a part of the 1980 National Agricultural Policy.

In 1988, the government constituted a National Commission on Agriculture, which also made some recommendations on forestry. After a long absence, the USAID funded a major forestry project entitled 'Forestry Planning and Development Project' with a heavy emphasis on farm plantations to meet wood shortages. Research and development of the forest policy was also an important objective of the project. The Inspector General of Forests' office, under the aegis of the USAID project and in collaboration with FAO, organised an international seminar on Pakistan's Forest Policies in 1989, with a view to drafting a new forest policy for Pakistan. This led to the notification of National Forest Policy in 1991. Most of the recommendations of the National Commission on Agriculture were finally incorporated in the 1991 policy - Box 3.2. This represents the most recent formal policy at federal level. It is also a more integrated policy, with calls for multiple use and the consideration of social and (particularly) environmental objectives, although it is often vague about the means for achieving these objectives.

Box 3.2 Consultative policy-making - the 1991 forest policy

The starting point for the 1991 Policy was a three-day International Seminar on Pakistan's Forest Policy held in March 1989 in Karachi, which was attended by more than 60 delegates including participants from USA, Canada, Germany and Switzerland. Local participants included the Forest Ministers, provincial Secretaries, Chief Conservators of Forests, serving and retired senior Forest Officers and representatives of wood-based industries, concerned NGOs and relevant ministries of the Federal Government.

After the presentations of papers on experiences and important aspects of forest policy, five working groups were constituted to provide recommendations on: socio-economic conditions; international linkages; legislation; future objectives and directives; financial and political support.

Based on the recommendations of the seminar, a draft Forest Policy was developed and distributed to the participants of the seminar. The draft was revised in light of their comments. Later, a committee was established in the Ministry of Food and Agriculture to consolidate the draft sub-sectoral policies for forests, crops, livestock, fisheries etc., into one sectoral policy on Agriculture. This entailed modifications and revision for integration and balanced treatment. The consolidated draft was once again distributed to the provinces and was modified in the light of their comments.

Thereafter, the draft was presented in a Farmers Conference convened under the Chairmanship of the Prime Minister for the contribution of progressive farmers and leading experts in all sub-sectors of "agriculture". Following this, the draft was revised. This draft was considered in a sub-committee of the Cabinet. In this meeting a package of incentives was developed. The policy was finally approved by the Prime Minister and announced in a press conference in May, 1991. The salient features of the policy were discussed in the National Assembly during the Budget Session in June 1991 and the policy was approved by majority vote.

Today, interaction in formal policy processes can be characterised by the matrix in Table 3.1:

Table 3.1 Responsibilities and influence in the forest policy-making process

	Identification/Design	Appraisal	Approval	Implementation	Monitoring/ Evaluation
IGF Office	V		I	V	V
Provincial Forest Departments	V	V	I	V	I
Govt. Research Institutions	V	V		V	I
Donors	I	I	I	I	I
NGOs	I	I			I
Industries	I				
Political Representatives	I		V	I	

V = formal responsibility I = considerable influence

3.2 Forest policies of Pakistan: issues and agendas

To summarise the above: the first forest policy was declared in 1955; it was revised and updated in 1962, 1975, 1980 and in 1988 as part of the National Agricultural Policy; and the most recent formal policy was produced in 1991. The main provisions are set out in Annex II.

What policy-related dilemmas and challenges have preoccupied these policy processes, and which of them still face Pakistan in its Golden Jubilee year? In this section, we review some of the main policy agenda items that keep recurring, and what the policies aimed to do. It will be noted that policies are far more focused on issues of forest protection and productivity, than on "people" issues.

Management of public forests

The public forests have always been the centrepiece of all the policies. The policy of 1955 recommended that forestry should be accorded high priority in the national development plans. Being the first policy after independence, it recommended classification of forests based on their utility, defining clear objectives of management, and emphasised the need for management plans and ensuring sustained yields. The forests have always been considered as a source of revenue for the state and the policy of 1955 recommended that the forests should contribute to the economic development of the country. The policy of 1962 went on to recommend management of forests as commercial farms, maximising yields. It was not until 1991 that policy recommended integrated use of public forest resources in conformity with wildlife conservation, environmental and social needs.

The lack of regeneration in the hill forests has been a chronic problem, part of which may be attributed to inappropriate silviculture. In many areas, however, it is unabated grazing of domestic livestock which damages regeneration even if other conditions are favourable. The problems remain even though the 1955 policy called for fencing of forests. Thereafter, both the 1975 and 1991 policies emphasised artificial regeneration using high quality stock.

Private natural forests/forestry

The *guzara* forests are privately-owned by individuals or communities. However, their management has been under state control and a bone of contention between the owners and the state. The 1955 policy

recommended sound private management of these forests through legislation, and supported by technical and financial assistance as prescribed by the government. The 1975 policy recommended entrusting management of these forests to owner's co-operatives, with technical assistance to be provided by the Forest Department, and harvesting to be done by the public sector corporations. The co-operatives were established, but were later banned for serious malpractice (Section 4). The 1991 policy recommended grants for the rehabilitation of private degraded forests, long-term loans at concessional rates and introduction of a scheme for the insurance of tree crops.

Increase in forest area

The forest area (5 per cent) has been the focus of forest policies. The policy of 1955 recommended that 10 per cent of land in new canal colonies should be reserved for irrigated plantations in the public sector. The 1962 policy recommended that state lands should be transferred to the Forest Department for afforestation. It also recommended the transfer of land strips along canals, highway and railways to the Forest Department for growing trees. However, there are no such recommendations in later policies because by then it had become clear that there was a lack of suitable area. Rather, there were two feasible alternatives: to increase tree growth on farmlands in irrigated areas; and to restore public degraded forest lands in the high rainfall watersheds.

Promotion of tree plantation in the private sector

Promotion of tree plantation in the private sector has long been recognised as a viable option to narrow the gap between supply and demand for woody biomass. This need was recognised early on after independence and tree planting, once in spring and once in monsoon season, was promoted. Saplings were provided to the general public at nominal prices. The forest policy of 1955 recommended extensive public support through education and extension and encouragement of block plantations by farmers' co-operatives. The 1962 policy also recommended supply of saplings to the public at nominal rates; it also recommended legislation prescribing a minimum number of trees per unit area. Punjab was the only province which went to the extent of passing such a law. Finally, the 1962 policy recommended institutionalising farm forestry by making it one of the functions of the agriculture department.

A number of development projects launched support programmes for establishment of woodlots on degraded farmlands, water-logged and saline soils. This programme received special attention under the USAID-funded Forestry Planning and Development Project. The beneficiaries of these

programmes have mainly been large farm owners and there was some misuse of the support. For example, in some cases, crop lands were converted into woodlands in order to displace tenants. The successes of the project influenced the 1991 policy which made a number of recommendations emphasising promotion of afforestation on marginal, water-logged and saline farmlands, good supply of plants at nominal cost, and an effective outreach/extension programme including a system for monitoring. Today, however, the institutional issue is not fully resolved. Neither the Forest Department - nor the Agriculture Department - have a well-planned and financed set of incentives and support services for private afforestation.

Irrigated plantations

The tradition established, by the British, to set aside areas in canal colonies for plantations to meet the timber and fuelwood needs of townships, received an endorsement in the 1962 policy. These plantations produced excellent quality furniture wood (Indian rose wood) and mulberry timber for the sports goods industry. However, the policies of 1962 and 1975 recommended that irrigated plantations should produce faster-growing species for industrial use. A continuing problem is that these plantations compete for canal water with crop lands, and many plantations face water shortages.

Riverine forests

Natural forests and plantations on flood plains have always been an important economic and ecological resource. However, not all of the flood plains are forests. Some areas are cultivated, while other high-lying areas support only sparse native vegetation. The policy of 1962 recommended acquisition of "blank" areas along river banks for afforestation purposes. However, construction of dams reduced the flooding of river banks, and even the existing riverine forests started to degrade. The 1975 policy recommended the lifting of river water or using bore holes to supply water to those riverine forests which had become cut off from river water supply.

Mangrove forests

Pakistan has a large part of the arid-zone mangroves along the coast of the Arabian Sea. Unfortunately, the mangroves have not been considered by policy to be an economic resource. The management of mangrove forests hardly received any attention in forest policies, except in 1962, at which time policy recommended only the need for planting coastal areas.

Mangroves are vital spawning and nursery grounds for fish and shrimp. Mangrove is a highly dynamic ecosystem depending on sediments and

fresh water from rivers that build up deltas and estuaries and change course in the process. Mangrove forests are common in the Indus delta and near Karachi (estimates range from 250,000 to 300,000 ha). However they have been in decline for about a century, since an ever-increasing proportion of Indus water is used for irrigation and does not reach the coast. The current mangrove acreage in the Indus delta is only a small percentage of its original cover. (Balochistan Environmental Profile, 1992).

Watershed management

Soil and water conservation in high-rainfall montane and sub-montane areas had been a serious problem even in the days of British rule and it continued to receive attention in the post-colonial era. The 1955 policy recommended coercive measures to control land use. However, plans to construct dams for water and power in the late 1950s brought the need for large-scale watershed management programmes to the forefront. Recommendations on watershed management have emerged as an integral component of forest policies since 1962. Large-scale afforestation, planting of fruit trees, soil and water conservation measures such as check dams, gully plugging, proper water disposal from agricultural fields and terracing of fields have been major recommendations. The policies also recommended incentives for farmers and subsidies on cooking stoves and kerosene to cut down the use of wood for fuel.

Although the major watershed areas lie in northern Pakistan, the nation as a whole benefits. The 1991 policy recommended watershed planning and co-ordination to be a federal function, with implementation continuing to be the responsibility of the provinces.

Range management

The management of rangelands appeared for the first time in the 1962 policy, which encouraged implementation of the recommendations of the National Committee on Range Management. The policy also recognised grazing in forests as an important land use and recommended its regulation based on grazing capacity. Range management is a specialised discipline. However it continues to be handled by foresters, who have neither the expertise nor the incentive to manage it well[7]. The 1991 policy made endorsements for an integrated approach, to develop both fodder and feed resources, introducing feedlot operations to reduce pressure on rangelands,

[7] While rangelands have always been under the mandate of the Forest Departments, relatively little attention has been paid to them as compared to 'real' forests. The Forest Departments never fully recognised the herder populations who were the *de facto* managers of the rangelands, and wood production was a stronger imperative for FD officials because of the revenue generating requirement. Yet most of the projects described in this report had to deal with this underlying tension, especially in the development of management systems. The Malakand/ Dir social forestry project, for instance, has developed range management systems (under an integrated forest management approach) which were likely to have much more impact on the village populations than forestry, but official attention always went to forestry, especially to plantations.

improving rangelands, and strengthening range research and extension capacity.

Wildlife

Wildlife is an integral component of forest ecosystems. The 1955 policy recommended adequate protection to wildlife and conservation of their habitats. However, it was not until 1991 that wildlife conservation attracted attention in the forest policy, which made a number of recommendations for the conservation, awareness and collaborative management of wildlife. Note that this was subsequent to considerable national and international attention to wildlife conservation, culminating in the national and provincial (in NWFP) conservation strategies. One reason for the lack of attention to wildlife and habitats in earlier forest policies was that wildlife protected areas had been managed by separate agencies from forests. At the federal level, the National Council for Conservation of Wildlife is responsible for policy-making, inter-provincial co-ordination and international liaison. At the provincial level, Wildlife Departments are responsible for enforcing legislation and managing wildlife.

Environmental forestry

Environmental forestry appeared as a theme in the forest policy only in 1991. The policy recommended pollution absorption through tree plantations, the use of shelter belts in arid zones to combat desertification, saving wildlife habitats and wetlands from pollution, and setting aside 25 per cent of land in urban areas for parks, green areas, etc.

Logging and utilisation

Except for the irrigated plantations in the Punjab province, where harvesting was done by the forest department, standing sale through contracts was the rule until the early 1970s. The contractors, especially in hill forests, obtained the contracts by offering bids that were higher than the market price of timber. Having won the contract, they resorted to the malpractice of cutting unmarked trees and cutting outside prescribed areas. The illegal cutting of trees by contractors had always been a problem and the 1955 policy first recommended doing away with the contract system. The problem persisted and this recommendation was made again in 1962. However, it was not until 1975 that the provinces initiated departmental logging. The NWFP and AJK entrusted this task to state corporations specifically set up for this purpose. The policy of 1991 recommended that logging should continue to be limited to the public sector.

The logging methods are crude, and because of difficult terrain and lack of road infrastructure, timber cannot be extracted in log form. The logs are converted

into roughly-hewn square-section scantlings by hand tools, and consequently, there is significant wastage, usually of around 50 per cent, and the quality of the product is poor. In view of the above, almost all policies made recommendations to improve logging and conservation. The policy of 1955 and 1975 recommended establishment of wood-based industries closer to forests. The policy of 1962 recommended improvements in harvesting methods. This issue was addressed by Kalam Integrated Development Project which successfully demonstrated the benefits of improved logging and harvesting practices. The project also demonstrated the use of aerial ropeways and skyline cranes. Based on these experiences, the 1991 policy recommended adoption of this technology and exemptions of tariffs on import of equipment needed for skyline cranes.

Institutional roles

A need for proper organisation of the forestry service was expressed in the early days of independent Pakistan (Forest Policy of 1955). In the provinces, the forestry department was under the Department of Agriculture until the early 1970s and, therefore, foresters always felt that forestry did not receive the attention it deserved. The Sindh province was the first to establish an independent Department of Forestry and Wildlife in the early 1970s. This development led to a recommendation in the 1975 policy for similar administrative arrangements in other provinces, which now stands implemented in all provinces except the federally-administered Northern Areas. Although administratively separate, the departments were not reorganised.

At the federal level, there used to be a Central Board of Forestry for co-ordination and monitoring. However, this Board was abolished in the late 1950s, and the Inspector General of Forests assumed the responsibilities of the Board. The 1962 policy made a recommendation for the revival of the Board, but this has not happened until today. The 1975 policy recommended strengthening the federal forestry arrangements, a recommendation that was partially implemented.

Private sector groups and NGOs have not so far been involved directly in the management of natural resources. It was only the 1991 policy that recommended leasing of forest lands to industry for growing industrial woods, and expressed the need to involve NGOs in outreach or extension activities.

Consequently, in essence the forest departments remain, in mandate and approach, remarkably similar to their colonial progenitors (discussed further in section 5.2).

Research and information

Technical forestry research has tended to sustain the model of forestry as a scientific exercise to be controlled by foresters. Introduction of fast-growing species, both as a means of increasing production as well as a means of providing quick returns to farmers, received a priority in 1962 and 1975 policies. The efforts focused on introduction of exotics, and a large number of eucalyptus species and poplar clones were planted on experimental basis in different parts of Pakistan. In spite of criticism from many quarters, eucalyptus continues to be the main choice of foresters in all the provinces. The poplars have been more successful in Peshawar valley of NWFP and Rawalakot area of AJK. These are largely planted on boundaries of croplands. Intensive management of hill forests was seen as a means to increase production. Therefore the 1962 policy recommended studies to shorten the rotation. Other areas of research emphasised by policies included suitable species for saline and water logged soils (1962), studies on demand and supply (1975) and improvement in wood utilisation (1962). The focus of research has mainly been on technical issues. It was only the 1991 policy that recommended research on social aspects of forestry management.

The 1991 policy also recommended that the provinces and the industry should sponsor research. It suggested establishment of regional research centres and co-ordination between provincial forestry research units, the universities, and the PFI.

The need for a sound data base for policy, planning and monitoring did not receive attention in forest policies until 1991. The policy of 1991 recommended the need for periodic monitoring of the health and condition of forests and establishment of a geographic information system (GIS). However, currently only a narrow range of information is collected - mainly concerning timber stocks and flows from public forests. As a result, information on environmental and social values of forests is very weak, as is information on the productivity and sustainability of farm forestry. A more comprehensive, GIS-based Forest Resource Accounting system is being considered.

Education

The focus of the forestry education programme at PFI has been to train foresters to meet the staffing needs of the forestry service. A need has been felt for a long time to introduce new topics and specialisation in forestry education, and the 1975 policy made a recommendation to this effect. Some limited changes were subsequently made in the curriculum. The 1991 policy further recommended forestry education needed improvement to cater for future needs. Except for sponsored training and education abroad under bilateral and multi-lateral assistance, there is no in-country arrangement for

in-service training. The 1991 policy recommended provision of this facility within Pakistan. Essentially however, training today is still closely tied to a traditional forester's science-based curriculum, with very little inclusion of skills for SFM such as business management, environmental assessment and participatory methodologies.

People and forests

Although meeting the needs of local people is an objective of almost every departmental forest working plan, the factual position is that foresters frequently want to deny local communities their lawful rights and this has been supported by policies. Both the 1962 and 1975 policies recommended that the rights of local people should be acquired by the State. The 1962 policy even went to the extent of recommending moving people from mountains to plains in the critical watershed areas and, elsewhere, consolidation of scattered homesteads to centrally-located villages. The policies, rather than laying out ways and means to make people part of the solution, recommended greater control over people through legislation. The policy of 1955 recommended greater powers to control land use for soil conservation. The policy of 1962 recommended not only enhancement of penalties under the Forest Act but also demanded magisterial powers for forest officers. This policy also recommended legislation to prescribe planting of a minimum number of trees by the farmers on their lands. Furthermore the policy recommended extending the Forest Act to those areas where it did not currently apply. The policy of 1991 recommended legislative measures for the management of rangelands.

The only policy that can be said to be "people friendly" is that of 1975, which emphasised awareness raising and recommended use of restrictive legal measures as a last resort. It is notable that the policy of 1975 was approved by the Council of Common Interests, as opposed to other policies which were notified through normative autocratic approaches.

3.3 Extra-sectoral policies and influences

It is not only forest policies which have a bearing on forests and forest-dependent people. A multitude of formal and informal policies from other sectors create impacts, some in the most profound ways. Similarly, a range of factors external to the forest sector have influenced forest policy. It is not intended to present a detailed analysis here of the influences of extra-sectoral policies on forests and people. However, an overview follows, highlighting some of the positive and negative impacts of some extra-sectoral influences (not in order of significance)[8].

[8] These influences were identified by the participants of the second project workshop on Policy that Works for Forests and People held in Islamabad on 17 March 1997.

3.3.1 Population growth and urbanisation

Pakistan became the ninth most populous country in the world in 1994, and has one of the highest growth rates at 2.8 per cent per year. The country covers only 0.67 per cent of the world's land but contains 2 per cent of the world's population. The environmental consequences of a rapid population increase are pervasive: the sub-division of agricultural land holdings, the migration of people from villages to cities, the increase in demand for forest goods and services, and the consequent denudation of forested hillsides. More than one-third of Pakistanis live in urban areas (NCS, 1992). The government has in general merely responded to the migratory flows accompanying the development process. Even though its resources are heavily biased towards urban infrastructure, the government has been unable to provide the requisite civic amenities. There has consequently been a rapid growth of *katchi abadies* (squatter settlements).

Since rural communities are the primary users of natural forest for fuelwood and timber, their migration from the rural areas mean decreased rural subsistence demand for wood products, as well as decreased deforestation for subsistence farming, relieving pressure on natural forests to some extent. However, there are negative influences of urbanisation. The rising population in urban areas translates into rising demand for timber and marketed fuelwood, notably for cooking. Even where urban energy requirements are met through hydroelectricity, thermal or nuclear sources, these means of production can themselves have a negative impact on the fragile ecosystems.

Scarcities of forest goods and services within urban areas have not yet led to widespread afforestation within cities, but there is certainly increasing awareness of the value of forests for recreation. Educated urban elites have, however, become concerned about forest loss in general. Perceived threats to water supplies through deforestation (even though deforestation may be a less significant influence on water supplies than natural erosion and run-off from the mountains) has resulted in some 'elite' support for forest conservation, and for the recent logging bans.

3.3.2 Agriculture and land use

The agroforestry practices in irrigated farmlands have been a mainstay of wood supplies for fuel and industry. Increasing wood prices, intensive tree plantation promotion campaigns, and subsidised seedlings have given significant impetus to tree growing on farms. This, and agricultural developments which render intensive agriculture more competitive in Pakistan than extensive systems, is beginning to have a positive impact on forest conservation.

Farmlands now meet more than 80 per cent of the timber and fuelwood needs of the country. Had it not been for the increase in tree growth on farmlands, Pakistan would have suffered a serious woody biomass crisis. However, many cultivated areas are share-cropped by tenants (whose interest in planting trees is weak due to uncertainty of tenure over trees plus the delayed time for maturity). Furthermore, agriculture extension agents continue to discourage farmers planting trees - for various reasons such as difficulties in aerial sprays, adverse effect of shading on crops, etc.

And, while foresters encourage farmers to plant trees closer to water channels, the on-farm water management service advises farmers to cut trees on the banks of irrigation ditches. They do this in the belief that the tree roots damage the channels, and that water consumed by trees can be saved for crops. There is a clear case for rationalisation of the technical and institutional issues notably by integrating extension advice.

3.3.3 Livestock

Policies that provided incentives to dairy and commercial feed industries also resulted in increased stall-feeding. This has had the effect of reducing grazing pressures and helping soil conservation. It has also improved the incomes of small farmers and graziers. However, the impact of such policies has not reached the more remote, high mountain villages, where livestock herding is still carried out in the traditional manner. Since there has been no reduction in the number of goats, grazing pressure on the uplands has continued - especially as the increasing numbers of landless people in mountain areas are dependent largely upon pastoralism for their livelihoods. The lack of policies towards sustaining mountain farming systems is having an adverse effect on forests - with further consequences in silting up reservoirs and irrigation systems.

3.3.4 Energy

Energy usage is a major extra-sectoral influence on forests. Fuelwood remains the principal means of cooking in both rural and urban areas. Despite considerable potential for the development of solar energy, and some potential for biogas energy, energy policies have not encouraged these. Yet the household infrastructure required to utilise electricity, and the running costs, are beyond the means of poor people. Occasionally, alternatives to fuelwood have been promoted as a direct means to conserve forest, but they have not been taken up widely as, again, they are beyond the reach of poor people. For example, experiments with providing kerosene oil stoves to villagers in the Bhurban Watershed Project did not

work, as people could not afford to buy kerosene. As a result, we have a very large population which is, on the whole, still dependent upon fuelwood from ill-managed forest resources.

3.3.5 Industrial development

The wood-based industries consists mainly of furniture, sporting goods, and paper and pulp manufacture. In order to meet their demands, the wood harvests have risen steadily, which has put extra pressure on already-depleted wood resources. On the other hand, it has also triggered a sharp increase in farm forestry. Farm forestry is now a lucrative venture and many farmers are now growing more trees on farmlands - although policies, incentives and support services are weak. The pulp and paper industry, however, is dependent on imports.

Pollutants from the industrial estates of Karachi have become a serious threat to the survival of mangrove forests and the associated sea life (Jan, 1989b; Sheikh and Jan, 1990). The perpetuation of this resource is essential for stabilising siltation in the shipping channels, so as to ensure proper navigation in the Karachi and Qasim harbours, and for operations in Naval ship yards, the oil refinery, the steel mill and many other industries.

3.3.6 Roads

Construction of roads has both negative and positive influences on forests. In forest areas it may help to improve the management of forests and makes logging more efficient. However easy accessibility also means that timber theft and smuggling may increase. In addition, poor design of roads - especially in the mountains - has led to erosion and degradation that eventually adversely affects the forests themselves.

3.3.7 Construction of dams

Water is the life-line of agriculture. Diversion of three of Pakistan's eastern rivers (Sutlej, Ravi and Chenab) by India, in the 1950s, left no choice for Pakistan but to construct reservoirs on the two western rivers (Indus and Jhelum) to supply water to agricultural lands deprived of water. Construction of dams, and ever increasing demand for water for agricultural purposes, have reduced the flooding of riverbanks and fresh water inputs into the delta. This is seriously affecting the health of both the riverine and mangrove forests.

The Mangla and the Tarbela Watershed Projects were undertaken to reduce siltation which had been precipitated by the degradation of uplands through deforestation and grazing. There are estimates that, at the

current level of deforestation, Tarbela dam will be fully silted up by the first quarter of the next century.

3.3.8 Tourism

The Northern Areas of Pakistan have become an increasing draw for trekkers and mountaineers, with several peaks above 8,000 m, spectacular mountain scenery, and some of the largest glaciers outside polar regions. The large number of porters accompanying the mountaineers burn trees to keep themselves warm at night as well as for cooking. Many of the northern mountain wooded areas have become tourist destinations, increasing pressure on wood for both construction and fuel. On the positive side, deforestation has started to attract the attention of visiting tourists and there is now a strong lobby against cutting of forest in general, and exploitation of forests in fragile ecosystems in particular, such as the Fairy Meadows at base camp of Nanga Parbat (the 6th highest peak in the world). These problems have been reported by tourists to the international press.

3.3.9 Wood product imports

Because Pakistan is deficient in forest resources, and because of wood import duties ranging from 10 to 45 per cent *ad valorem* (although there are no quotas) domestic prices for wood are very high. These high wood prices, on the one hand, have encouraged forest contractors to maximise profits by over-harvesting (they are able to purchase rights to harvest communities' forests at rock-bottom prices - see section 4.3). On the other hand, high prices also have created incentives for increased investment in trees on farmlands.

3.4 Analysis and conclusions

Most forest policies in Pakistan have followed a normative-autocratic approach that is conditioned by colonial traditions of governance and forest management. During the formulation of these policies, experts were drawn from different fields, but the consultation process, if any, remained confined to those in professional circles - who generally considered local people to be a main source of forest problems. The policies, consequently, comprised technical solutions with varying degrees of prohibition of rights, and uses. Indeed, some policies recommended the acquiring of legitimate rights of people by the State, the use of strict penalties under the law, and conferring greater power on the forest department to enforce the law. They lacked the local knowledge and imaginative flexibility to make them work in complex, real-life situations.

Since Pakistan has a small wood resource base, most policies have focused on maximising wood production through intensive management of forests: shorter rotations, artificial regeneration, and use of fast-growing species. It is, perhaps, surprising that a more careful analysis of the pros and cons of importing forest products, and thereby concentrating the use of Pakistan's own forests on irreplaceable social and environmental services, has not yet been made. Perhaps this is because such an analysis would inevitably make a case for greater local control of forests and require forest department staff to relinquish their control over timber flows, and to learn skills other than timber production - the very basis of their current professional and social standing.

The best that can be said about the top-down approaches is that tree-planting campaigns can be organised with military precision. Indeed, Forest Department promotional campaigns, along with higher market prices, have provided a boost to tree plantation on farmlands. Increase in tree growth on farmlands, coupled with new technologies (chipboard, vinboard), the use of steel and aluminium for construction, and alternative fuels such as gas and kerosene, may be said to have helped to avert a woody biomass crisis.

It is evident that successive policies have not been able to handle issues which would entail changes to the *institutional status quo* - notably, better relations with agriculture departments on farm forestry, and with wildlife departments on conservation. Fundamental restructuring and re-equipping of forest departments is needed to enable them to work - in partnerships where necessary - on the multiple issues that now face forestry. Furthermore, policies have often been treated as general *recommendations*, not backed up by serious, well-resourced strategies and regulations - the "settled course of action" component of Websters' definition of policy. Consequently, out-dated legislation tends to prevail whenever on-the-ground decisions on how to deal with new situations need to be made. The lack of practical policy innovation, and lack of assessment of associated policy successes and failures, means that policy is treated as a far-off "dream", not linked to reality.

Furthermore, the policies were not based on reliable, accurate data that could project the future needs of forest goods and services. Data sources still continue to be the old revenue records. Modern techniques such as GIS are only now being installed, but with limited acceptance, perhaps because they demand an information-sharing culture to be effective - a culture which is not yet strong. The generation and use of vital socio-economic data remains a particular challenge.

Extra-sectoral influences on forests have rarely been covered in formal forest policies. No forest policy has ever recommended mitigation measures for an effect on forests caused by another sector or policy. Partly this has been a result of forest policy making being dominated by the FD. Had forest policies been co-ordinated by another multi-sectoral department such as PE&D, the results may have been different. Unless a forest policy is prepared that looks at sectors' influence on forests in an integrated, holistic manner, no one policy will address the issue of deforestation. Moreover, the cross-sectoral concerns of poverty alleviation and income generation can be better addressed through such a perspective.

It was not until the late 1980s that the forestry sector revisited, in any significant way, some of its assumptions and operating principles. Although it cannot be said that the 1991 Forest Policy took care of most of the problems associated with earlier policies, it was a turning point in ushering in an era of greater openness and flexibility. Certain factors were responsible for this shift. Most significantly, the results of the large participatory forestry and rural development projects were beginning to have some impact on thinking about community rights and responsibilities in relation to government; we explore this in Section 5. As important, the preparation of the Forestry Sector Master Plan and the National Conservation Strategy pioneered means of looking at cross-sectoral interactions, and helped to draw attention to the need for a more people-centred multi-purpose forest policy (Section 6). In addition, there was emerging consensus about the inability of outdated legislation to deal with new forest "crises" as they emerged. Finally, lessons were coming in about the failures of new co-operative and parastatal experiments to handle the exploitation and sale of forest products; and we turn to this in the next section.

Photo: MSFP

Fuelwood, poles and fencing posts are important inputs to local livelihood systems

Learning from forest cooperatives and state enterprises

4.1 Introduction

We discovered in the previous section that many policies have been treated as recommendations with little institutional and resource support for their implementation. A number of specifically targeted policies have, however been comprehensively implemented. Part of the reason for this lies in the fact that they generally deal with the strong governmental imperatives of organising timber harvests and raising revenue. Consequently, they provide clear "before" and "after" cases, and are worthy of review. The cases analysed in this section are:

- Forest Cooperative Societies in Hazara
- The royalty system
- State-owned corporations
- The logging ban

4.2 Forest Co-operative Societies in Hazara: participation that did not work? [9]

The *guzara* or communal forests cover an area of 1,349,000 ha in the Hazara Civil Division of NWFP. They are the property of the land owners of the villages in whose boundaries these forests lie. The land owners are entitled to use, free of charge for their own domestic and agricultural requirements, any tree growing on these lands. Management of these forests, however,

[9] This section has been derived from a contribution to this study by Dr. Iqbal Sial.

rests with the Forest Department, for which "management charges" are levied at the rate of 20 per cent of sale proceeds.

In 1950, the Government of NWFP issued the Hazara Management of Wasteland Rules, transferring forest management from the district administration to the Forest Department. The move was made to promote scientific management of the forests.

The owners, however, remained disgruntled with continued outside managerial control. They considered the management style of the Forest Department to be too conservative, and yet it neither protected the forests from the incursions of migratory graziers nor dealt with the mounting demands for forest products by growing resident populations. The Government of NWFP's Agricultural Enquiry Committee sympathetically received owners' petitions in 1975, which recommended transferring management of these forests back to the owners, organised into co-operatives. The express purpose of Forestry Co-operatives was given by the Government of NWFP as follows:

> *"Co-operative societies should be enabled to administer their forests in accordance with forest management plans duly approved by the Forest Department. The Department will not interfere in day to day administration of the forests, but will ensure through periodic inspection that provisions of the forest management plans are observed by the co-operative managerial set up of private forests."*

An experiment in co-operative management of the *guzara* forests was launched in 1980. It aimed to test the feasibility of transferring government management responsibility to the co-operative societies under the Co-operative Act, 1925. This Act and the rules made under it (1926) were the main legal instruments under which the Forestry Co-operatives were organised. However, it is now clear that the basic premises of the co-operatives envisaged under this legislation, which emphasises agriculture and credit needs, are not appropriate to the management of the natural resources in the hills of Pakistan. The organisational arrangements that flow from applying the terms of the Act were one of the underlying causes of failure of the Forest Co-operative Society (FCS) system. Only a small proportion of forest owners were able to apply for registration, and they could make decisions without reference or accountability to the general body. Even worse, these cliques are recognised as the agent of government through an amendment of *Guzara* Forest Rules, 1950.

There were also fundamental flaws in the process of encouraging and working with FCSs. These included:

Institutional resistance: FCSs were the "brain child" of the Secretary of Forests at the time, who himself was a forester. Many of the Forest Department officials, including the Chief Conservator of Forests (CCF), had vehemently opposed the experiment for a variety of reasons. However, instead of taking them into confidence through dialogue and consensus building, the Secretary of Forests took the whole process into his own hands and imposed the transformation through a Divisional Forest Officer (DFO), working under his direct control, thus circumventing the CCF. From the beginning, there was no ownership by the Forest Department of the process that shaped relationships between co-operatives and the forest department.

Hasty transfer of management: The transfer of management responsibility from the Forest Department to owner co-operatives clearly involved major risks and uncertainties. But it was never restricted to an experiment, whose results could be evaluated and then applied at a larger scale with necessary adjustments. On the contrary, the transformation was allowed at an operational scale from the very beginning. The experiment was intended to start with trials in less than six areas; but between 1980 and 1983, 18 Forest Protection and Multipurpose Co-operative Societies (FCSs) had been registered. The trend continued and, in spite of consistent recommendations to proceed with caution made by external consultants and internal committees, there were 33 FCSs registered and actively operating by 1993.

The transfer of management from the Forest Department to the co-operatives was both rapid and complete, due to political pressure from the owners (see below). The full "package" of management authority was entrusted to the office bearers, mainly the Managing Directors (MDs) of the FCSs, from the very beginning - although they were technically not qualified and did not possess requisite management capability. Subsequently, when the system back-fired, efforts were made to regulate and restrict their authority. But it was too late. Consequently, hardly any recommendations of the two external reviews, three internal committees and a series of investigations to "streamline" operations could be implemented, and the situation at each subsequent investigation was found to be worse than before.

Politicisation: One of the reasons that the experiment could not be restricted to a pilot scale was that the process became politicised and - in

the words of the Deputy Commissioner, Mansehra at the time - the forestry co-operatives were used by the Martial Law regime as "political bribery" to appease influential *guzara* owners. Due to the strong influence of forest contractors and owners on provincial politics, it was not possible for the Provincial Government to rectify the situation.

The widespread flood disasters of 1992 was attributed to extensive over-cutting of forests, especially in Hazara. Professional circles claimed that deforestation in Hazara was the impact of the Co-operative Societies. Although the provincial government sought to suspend the societies, legal entanglements made this difficult. Finally, in October 1992, the Prime Minister ordered a two-year nation-wide moratorium on logging, and all the Co-operative Societies were suspended.

Operational weaknesses: The FCS "experiment" was riddled with a number of operational weaknesses.

a. FCSs were supposed to be participatory organisations, working towards the management of *guzara* forests in the best interests of both right-holders and non-right-holders. They were meant to be democratic, transparent and accountable to the local people. However, it turned out that they geared more towards meeting the commercial interests of their office-bearers - who tended to be large land-owners and/or politically influential individuals. Decision-making in the FCSs was anything but transparent. The co-operatives were dominated by a few major owners, belonging to a single family in some cases. There was virtually no egalitarian participation by small owners and right-holders.

b. Massive irregularities in the use of funds earmarked for operations and development were evident, and some owners' shares were often misappropriated. Harvesting and other charges were always on the high side. There were many cases of fraud and embezzlement by FCS officials.

c. The management plans prepared for these forests by the Forest Department were defective. They prescribed the cutting of volumes far in excess of any sustainable yield, and failed to adjust the silvicultural system by forest type. This defective management planning, coupled with felling in excess of prescribed volumes, accelerated forest denudation. Even adjacent Reserved Forests could not be saved from the process. A recent evaluation conducted by GTZ of forestry co-operatives alleged that there was massive deforestation during the period 1980 to 1991 (GTZ, 1995).

d. FCSs failed to hire or heed the advice of professionally-qualified foresters.

e. FCSs refused to invest their earnings to establish wood-based industries that would increase the multiplier effect of wood production.

4.2.1 Next steps

Failure of the "experiment" should not be attributed merely to its inclusion of a participatory approach. Participation clearly cannot work when there are weak representation, transparency and skills, and no-one knows where they stand. The concept however, may still be valid provided responsibility is delegated to the owners in a clear and unambiguous manner; guided by clear regulations; controlled by democratic organisations of owners in properly-conducted institutions; assisted in technical and organisational management; and regulated by an honest and efficient authority. These prerequisites are, as yet, far off. But the process is not impossible if allowed to proceed at its own pace, and if it is not hi-jacked by vested interests.

Management systems that are fully participatory, and which can enjoy widespread popular support, could be installed. Community-based organisations (CBOs) representing owners, right-holders and user groups can be associated in integrated management of all categories of land, including *guzara* forests, reserve forests, grazing grounds and denuded hill slopes in a given valley. There are plenty of models in Pakistan, as Section 5 outlines.

4.3 Royalties: contractors' gains and communities' losses[10]

4.3.1 Royalties

The forests of present-day Pakistan had not been considered to be of much commercial significance to the colonial government. However, the situation changed in August, 1947. Pakistan inherited only about 5 per cent of the area under forests of British India, and the natural coniferous forests of northern Pakistan suddenly became a principal source of timber.

Commercial exploitation became an important source of revenue for the State, which did not have to pay royalties to the local people, who had little or no effective rights to forests. However, the merger of the former princely

[10]This section is based on a preliminary report by Are Knudsen (see Knudsen, 1995). For an updated, and more detailed, report on the role of forest contractors, see Knudsen (1996)

States of Swat, Dir and Chitral with Pakistan changed the situation. The government, in its effort to extend legislative control to forests and to auction timber contracts, met with violent resistance by local communities. The government ended up agreeing to pay a fixed percentage of net sale proceeds as royalties to locals - 60 per cent in Swat, and 80 per cent elsewhere.

The royalties are distributed equally among all the male community members, including male children. When royalties are returned to the communities or concessionaries, representatives of the individual tribes assume the responsibility for further distributing the money. The importance of royalties to household income varies, even within a small geographical area. Where work migration is common and cash crops production is widespread, royalties are deemed not too important. In less accessible, and hence more traditional communities, royalties are critical to household viability.

There are two ways of organising the payment of royalties. In 1981 the "fixed price system" was adopted. Under this system, the FD pays the local concessionaires their royalties as a fixed price per cubic foot of the harvested volume. The problem with the fixed price system was that the rate did not keep pace with the rise in the market price of timber. Whereas the market price of cedar in 1990 was close to 200 rupees per cubic foot, the fixed price was a low 51 rupees.

To amend the shortcomings of the fixed price system, the "net-sale system" was gradually implemented from the late 1980s (Treacy, 1994). Under the net-sale system, the harvested timber is auctioned at timber markets and sold to the highest bidders. The full percentage is then returned as royalties. A problem with the net-sale system is that the money must pass through a bureaucratic treadmill before being returned to the local owners. As we will turn to next, the long delay in payments is exploited by profit-motivated middlemen: the forest contractors.

4.3.2 Forest contractors as intermediaries

In Pakistan, timber prices are currently twice the world average, and timber has become a valuable commodity. There are, naturally, several vested interests involved in appropriating the wealth that is represented by mature forest trees. Most of the *unaccounted* loss of forest in Pakistan is incremental loss, that is, single trees are removed in a slow process of deforestation. Some small-scale loss of this kind may be attributed to subsistence users who need trees for firewood and as building material. The most serious

forest loss is, however, due to deliberate over-cutting by forest contractors to make up for their having secured contracts through bidding very high prices in the open auction.

Photo: Willem Ferwerda

Commercial logging for timber is one of the biggest threats to indigenous forests in Northern Pakistan. Cedar (*Cedrus deodara*) is transported down mountain-sides along timber slides, and then taken to market in towns such as Chilas.

The presence of forest contractors has long historical antecedents. They have been an integral part of the commercial exploitation of forest since the mid-19th century and were also at that time accused of cutting more trees that they had legally purchased (Tucker, 1982). Also in present day-Pakistan, forest contractors are often accused of being "thieves of the forest" (*jungle chor*) (Ahmed, 1986). However, forest contractors are not a uniform group. They can be local businessmen or wealthy patrons ("timber barons") with the financial clout to undertake large felling operations involving mechanised equipment and a large number of hired workers.

Whereas popular opinion tends to blame forest contractors for all that is wrong in Pakistan's forest management, part of this critique is unjustified. It is the loopholes in the system which have allowed the contractors to prosper through asset-stripping - rather than through investment in SFM. The bureaucratic forest procedures favour forest contractors as intermediaries between the provincial bureaucracy and rural communities. They know how to work the system, and play with the sentiments, and needs of local people.

In NWFP there is a strong link between provincial politicians and forest contractors (Ahmed, 1986), and many members of the NWFP's provincial assembly are, or have been, forest contractors. We have described how this tie between political and economic interests is popularly known as a "timber mafia" in Pakistan. Politicians, contractors and bureaucrats tend to form informal networks that give them immunity from forest laws and a free hand to undertake forest operations at their own discretion. To add fuel to the fire, some unscrupulous elements of the Forest Department have facilitated contractors for cash incentives - such as bribes to the local FD staff for every cubic foot of timber (Rashid, 1993).

4.3.3 Commercial strategies of forest contractors

Until 1973, forest contractors could bid for standing trees and, once they obtained the contract, were able to take full charge of felling and marketing operations. Unsurprisingly, this generally led to widespread over-harvesting. To amend this system it was decided, in 1977, to augment the NWFP Forest Department with the creation of the Forest Development Corporation (FDC). One of the reasons for the creation of the FDC was to separate forest management from forest harvesting and thereby curb the freedom of the contractors. For a while this was successful. The contractors were now responsible only for cutting the trees and bringing them to the road; they did not at any point own the timber. Contractors therefore no longer had a vested interest in over-cutting. However, by exploiting loopholes in this arrangement, forest contractors were able, over the 1980s, to regain their old position. One reason for this was the advent of the net-sale system in 1982, which began to replace the so-called fixed-price system (above). With this change, the profits to be reaped by contractors from forests increased dramatically.

The way to circumvent the FDC was as simple as it was clever. Instead of dealing directly with the FDC, the forest contractors would approach local owners of compartments which will soon be available, under the management plan for harvesting. The contractor can easily find this out by consulting the forest "working plan", which is the official document stating when compartments are to be logged and how much is to be extracted. With this knowledge, the contractor approaches the local owners, offering to buy their right to forest royalties. For the owners this has the obvious advantage of getting paid on the spot instead of having to wait until the compartment is going to be logged, and then waiting even longer while royalties are returned to him under the net sale system.

The contractor generally offers to pay a fixed price, slightly higher than the FDC's rates. For example, for cedar the contractor offers to pay Rs 60 per cubic feet, against the FDC's fixed rates of Rs 51. To ensure that villagers agree to this deal, the contractor will in advance enlist the support of influential elders, the 'white beards' (*spin giris*) and members of local consensual assemblies (*jirga*) by offering them a part of the profit. When the compartment comes up for logging tender, the contractor who has already purchased the royalties, enters the bidding competition. Since he has already purchased the royalties, he is able to undercut the price of all other bidders. The FDC is obliged to award the tender to the lowest bidder. To hide his identity to the FDC, a contractor bids on the forest compartment by using the name of one of his relatives or his attorney.

When the contractor is awarded the contract, he is in reality entering the same forest coupe, as a contractor, which he has previously bought through the royalty purchase. Because he is the owner of the royalties, his gross profit will be proportional to the timber volume offered for sale at the timber market. There is therefore an enormous incentive for the contractor to cut more trees than have been marked for logging. To cover this up, forest contractors convert logs into scantlings.

To explain how this has been happening, let us look at an example. The contractor purchases the royalties from the community according to an agreed fixed price, usually around Rs 60 per cubic foot for cedar. After being awarded the tender by the FDC, the contractor uses hired labour to log the compartment according to the working plan, which has been prepared by the DFO. After the logging is finished, the FDC takes over and moves the timber to the market, where it is sold according to the "net-sale system." As noted above, the actual market price of cedar is currently four times higher than the fixed price offered to locals. The revenues from the sales are divided among the government and locals as royalties. Since the contractor has already bought the royalties, the 60 per cent "local" royalties will be transferred to him through his attorney. The gross profit to the contractor is therefore the difference between the costs of purchasing the royalties based on the fixed price, the costs of logging the compartment and the sum transferred back to him after the sale of timber according to the net-sale price.

To understand why rural communities are willing to sell their timber below its market value, we need to take into account the socio-economic context of the countryside. In Kalam in upper Swat, the FDC and KIDP have tried to convince local communities of the advantages of the net-sale system (KIDP, 1991). However, villagers tend to distrust government officials, and are suspicious of the net-sale system and instead favour the fixed priced system which is tried and tested. One problem with the net-sale system is that it takes too long for the sales-reports to be completed, usually a long time after the timber has been sold. This means that the refund of royalties to the local owners are delayed too.

There are several other reasons why it may appear rational to villagers to sell their royalties to contractors (Khattak, 1994b):

- villagers lack information about the felling schedule, and hence do not know when the forest might be logged;

- contractors give villagers the impression that, only by co-operating with

them, can they be sure that their forests are logged and hence revenues realised;

- even if villagers have secure information about felling schedules, they know that felling schedules can be changed or manipulated. Hence, they fear that non-co-operation with the contractor can give the contractor reason to pull strings in order to block logging operations;

- poverty of the local communities press them to accept fixed prices in the short term.

4.4 State-owned corporations

4.4.1 Dir forest complex

Dir State was founded during the seventeenth century. It lies in northern Pakistan at the meeting point of the Hindukush and the Himalayan mountain range, bordering Chitral to the north and Swat to the west. Dir's physical remoteness and the autonomous spirit of the people have contributed to a history of constant internal and external feuds and hostilities. In the past, various attempts were made by the British government to have the forest managed by the forest service but they failed to get permission from the Dir rulers. A series of high level dialogues and negotiations were held and, in 1913, the British prevailed upon the rulers - not without political pressure - to regulate felling in the forests and to permit an official of the forest service to be deputed. This arrangement met with considerable resistance over the ensuing years.

It was not until 1960, when the ruler, the *Nawab* of Dir, was deposed by the Pakistan government and a change in administration took place, that the forests could be put under the purview of the Forest Department. The Government of Pakistan formed the Dir Forest Division in 1961 with the forests to be managed by the Forest Department, West Pakistan, even though no forest law was in force in the area. A working scheme was prepared for a five year period: 1964-1968. An important aspect of the scheme was defining the ownership of forests - a formidable task considering the inhabitants claimed ownership of all the forests, and territories being divided between various tribes. However, the State viewed the forests as State property, with prescriptive and liberal usage rights to the forest dwellers.

The state of restlessness and confusion came to a head in the wake of the

Government of Pakistan's decision in 1968 to set up the Dir Forest Complex as a major development project. In early 1967, a Swiss team had identified the Panjkora Valley in Dir as a potential site for a large-scale forest industry. Conceived as a wood processing, timber, plywood, veneer and laminated chipboard production industry, it was expected to meet the entire timber needs of the NWFP. It was based on the assessment that vast timber resources were going to waste with over-mature timber rotting in the forest due to lack of rational exploitation. The project thus aimed at ensuring commercial utilisation of apparently vast resources that were lying untapped. According to the estimates of the West Pakistan Industrial Development Corporation, which did the survey work, 3,500,000 cubic feet of timber in logs would be produced annually, bringing in Rs 5640 million as revenue for the Forest Department. In addition, it would provide employment to locals during the construction of the project, as well as 900 other jobs after completion.

The project was designed to cost over Rs 6 million when approved in 1968, and to be completed in three and a half years. It included construction of a 21-mile road and wood transportation facilities. The technology envisaged for the complex was to be of the kind used in the mountain forests of Europe - mechanised ropeway and skyline cranes. In 1970, the contract for installation of machinery and technical assistance was awarded to a Polish firm. Within three months, Polish machinery started arriving and was transported to the site of the complex. Nevertheless, it could not be installed for the next four years as disputes arose about the location of the complex and who was actually going to benefit (Daily Dawn, 18.2.1974). It became clear that the estimated 3,500,000 cubic feet of timber was not available in the Dir forests, and so the government proposed the use of Swat forests to make up the rest. Even then, only 50 per cent of the wood necessary for feeding the economic capacity of the complex was available.

The abolition of the special status of Tribal Areas in 1969 probably further compounded the problem. In 1972 the NWFP government declared that all forests in the former state of Swat were the property of the government, subject to a payment of 15 per cent of the forest income as royalty to the local right holders. In 1974, when the Forest Act of 1927 was extended to Northern Areas and northern parts of NWFP, all forest land in Dir was declared as Protected Forests. A year later, all trees within protected forests were declared as reserved, and removal of the forest produce was prohibited. The matter had been brewing for some time, with allegations that timber permits were freely distributed among *maliks* and contractors, with no thought being given to replacing the harvested trees. The setting up

of the Dir Forest Complex was thought to create further pressures, unless plans were made to make up for the loss. (Daily Dawn 7.8.73). Simultaneously, a scandal surfaced about illegal cutting of wood involving Forest Department officials, the father-in-law of a cabinet minister, the brothers of a senator and a number of MPAs (Daily Dawn 31.3.74).

There was so much pressure that Prime Minister Z.A. Bhutto ordered a corruption investigation. The NWFP Chief Minister suspended forest contracts and decided that the provincial government would look after forest harvesting and wood supplies until the Forest Development Corporation was set up.

By 1976, the people of Dir and Swat were up in arms demanding proprietary rights. They raised the issue inside and outside the national and provincial assemblies - pointing to the people's dependence on forests for livelihoods and timber needs, and they pressed for royalties. A joint Jirga of Dir, Dir Kohistan and Swat district elders met the Chief Minister and warned the NWFP government that the Dir Forest Complex would suffer if wood was not made available, implying that they could stop wood supplies to the Complex (Daily Dawn 9.9.76).

Thus, by the end of 1976, the NWFP Cabinet, in a meeting chaired by the Chief Minister, had to agree that in Dir and adjacent Swat there would be no distinction between reserved and *guzara* forests. The forests were to be supervised and controlled by the government, with 60 per cent share of the income earmarked for the people (as opposed to the 15 per cent suggested by the NWFP government in 1972) and 40 per cent for government.

After a prolonged tussle, the people of Dir had finally arrived at a situation where their interests were sustained. During the process, however, damage to forest lands had become extensive. As for the Dir Forest Complex, the lack of supply of sustained timber, the prevalent socio-political and socio-economic situation, and the lack of co-ordinated stakeholder consultation, conspired to result in its closure after a couple of years of occasional operation.

The Dir Forest Complex was poorly designed. The survey carried out by the design team had made a technical error in over-estimating the amount of timber that could be extracted from the Dir forest. More importantly, they failed to recognise the socio-political and socio-economic situation prevalent in the region, and assumed the availability of this timber without consulting local people's views and recognising their use rights. The Government of Pakistan also failed to recognise local practices and claims,

and instead moved ahead to take control of the forests. It was only after considerable turmoil that the government came to recognise people's claims and made changes to accommodate them.

4.4.2 Forest Development Corporation, NWFP

Until the 1950s, the Forest Department itself was responsible for timber harvesting. This was done through petty labour contracts for felling and transportation. In the 1960s, due to funding shortages and some political patronage, amongst other things, the Forest Department turned to selling the standing trees to the highest bidder in open auctions. Successful contractors were then responsible for marketing as well as harvesting and transportation. Thus, for the first time, sales went out of the hands of the Forest Department and into the hands of a new class of forest contractors with strong ties to the establishment. This led to serious malpractices and damage to the forests, and was finally eliminated with the abolition of the forest contract system in 1974. A number of the forest contractors entered politics and many of them still hold considerable influence the NWFP government. Although a special unit was later created in the Forest Department to take over these tasks, the exploitative approach to forests was not halted and the Provincial Assembly decided to separate the responsibilities of forest protection and forest management from harvesting and marketing.

The intended solution was the Forest Development Corporation (FDC). It was established under the NWFP FDC Act of 1976. Great expectations accompanied the establishment of FDC, not only for timber harvesting but also for commercialisation and further wood processing. The functions of FDC were:

- economic and scientific exploitation of forests
- sales of forest produce
- establishment of primary wood processing units
- regeneration in areas specified by government
- performance of such other functions as may be assigned to it by government

GTZ notes that the above functions were justified on the basis that forests were a valuable natural resource, which should be "exploited" judiciously for maximum national benefit, and to eliminate "rampant malpractices." (GTZ, 1995).

The FDC was given a special legal and organisational status as a corporate

body. It was exempted from many of the usual financial and organisational restrictions facing government bodies, to facilitate flexibility in its operations and to enable it to serve as a viable, commercial enterprise.

FDC started its operations in 1978 and, since then, the activities in timber harvesting and marketing have been growing steadily: 66,140 million cubic feet of timber have been extracted and 61,230 million cubic feet timber sold in timber markets. The accumulation of unsold timber during this time had two peaks, one in 1983-1985 with around 2,000 million cubic feet and a recent one from 1992 to the end of 1994 with 5,000 million cubic feet. The reason for the disturbances in sales can be attributed mainly to changing market conditions, the general situation of the economy, and competition with timber from Afghanistan (GTZ, 1995).

There is a narrowing gap between revenues and costs. A financial analysis of the FDC in 1994 (GTZ, 1995) showed that, from 1988 to 1992, the average increase in revenue reached 25 per cent annually but the sales and operating costs grew much faster, with an average increase of 31 per cent in the same period. The statistics suggested the continuation of this trend for the following years.

The net profits earned by FDC grew steadily from Rs 11,957 in 1978/9 to Rs 154,750 million in 1988/9. Since then, the trend turned, and in 1993/4 the net profit was Rs 69,052 million. The assets of FDC have been increasing from a nominal capital of Rs 3,000 million subscribed by Provincial Government to Rs 1,793,405 million in 1993/4.

Some analysts emphasise that the accumulated profits represent the contribution of FDC to the development of the forestry sector. However, the purpose of returning revenue for regenerating and rationally exploiting forests has largely been ignored. So have the purposes of eliminating the auction of timber to contractors and promoting the development of forests.

FDC procedures were never made transparent. A disproportionately large share of its funds has been invested in real estate and other commercial ventures, with the result that few resources have been available for investment in the Forest Department and its operations (Sungi, 1995).

4.5 Logging ban and its consequences

A two-year moratorium on timber harvesting imposed in October 1992, following extensive flooding, is a further example of an *ad hoc* policy decision made with inadequate consultation and assessment of its possible consequences. The decision was made without consideration of the timber needs of the country and of alternative arrangements for meeting the same. Some senior forestry officials in the federal government believed that there were enough stocks of previously harvested timber to meet demands over the next two years. In reality, contractors did not remain idle but pursued alternative strategies. The "timber mafia", along with their logging crews, moved across the border into Kunar Province in south-eastern Afghanistan. In 1993 the Government of Pakistan lifted the import ban on timber from Afghanistan, and the timber merchants were quick to transport an estimated 3,000 truck loads of timber. Another source estimates an annual smuggling of 300,000 cubic meters of timber from Afghanistan to Pakistan (Knudsen, 1996). Thus the logging ban resulted - inadvertently - in some deforestation in neighbouring Afghanistan, a country without appropriate infrastructure to protect the environment or local peoples' forest needs. The moratorium expired but the federal Cabinet, in a meeting held on 30 April 1997, again imposed an indefinite ban on logging in Pakistan; international and national concern about deforestation was a significant influence on this.

4.6 Synthesis and conclusions

The well-intentioned experiments described above failed to fully achieve their objectives. The pilot initiative to devolve management of *guzara* forests (private and communal forests) to their lawful owners through the establishment of FCSs did not work out, mainly because some ambitious and influential owners with large forest holdings manipulated the system to their own advantage: over-felling within *guzara* forests, illegal logging in nearby state forests, and management to the disadvantage of small forest owners. The bureaucratic controls become victim to political influence and/or corruption. The Co-operative Societies were so powerful that these could only be disbanded by an interim Prime Minister after the dissolution of the political government.

The system of sale of standing forest trees to contractors was abolished in 1973 and replaced by harvesting through public sector agencies. This involved harvesting through logging contractors and sale by state-owned

corporations. In many areas, the local communities have rights over forests and are entitled to royalties, ranging from 60 to 80 per cent of the income from sale of timber. However, the inability of the FD to pay royalties in advance and thus become the single owner of trees to be harvested has resulted in contractors purchasing royalties from the right holders. This has defeated the spirit of abolition of the standing sale system. The inability or reluctance of the FD to cut through overly-bureaucratic procedure has meant that contractors have become the favoured middlemen for dealings with communities, despite the fact that the communities are not obtaining adequate income. Meanwhile, the forests continue to be over-cut.

Large public sector corporations in Pakistan have generally proved to be failures, and forestry corporations appear to be no exception. An ambitious wood processing complex in Dir (NWFP) established as far back as 1970 failed to become operational due to poor planning and very weak consultation with local people. The FDC, established to replace contractors and introduce scientific forest management, has simply become an agency to award logging contracts to the very contractors it was meant to replace and has failed to invest in forest management.

Pakistan is faced with the dilemma of working out ways to balance the aim to conserve its forest wealth for environmental purposes, with the aim to manage forests for socio-economic purposes. The income from forests makes substantial contributions to the revenues of the NWFP and AJK Governments in particular. However, the federal government is more interested in conserving forests for their environmental functions. Devastating floods of 1992 were attributed to the loss of forest cover and led to a 2-year ban on logging by the federal government. The logging ban of 1992 in Pakistan triggered extensive deforestation in Afghanistan and the smuggling of timber into Pakistan. The impact of the most recent ban remains to be seen. Meanwhile, high prices of timber, associated with scarcity of domestic forest resources and high import duties, continue to serve as incentives for forest contractors and private forest owners to circumvent the controls of increasingly marginalised forest departments.

Learning from participatory rural development projects

5.1 Introduction

In the recent history of forestry in Pakistan, some of the strongest challenges to formal forest policies and legislation have been raised by field projects that cover a spectrum of novel technical, economic and institutional activities in private, communal or state forests. Funded primarily by the multilateral or bilateral donors, these projects have generated a lot of interest in alternative approaches to forest management, which may provide models for increasing sustainability and productivity in future. Some of the results have already been reflected in policy. Social forestry is a case in point. All contemporary policy documents, at least in principle, now identify social forestry as a key means for achieving sustainable forest management. However, many interesting results of these projects have not yielded significant influence, partly because of their localised impact. But in large part this lack of wider application is due to weak or absent monitoring, learning and revision processes in forest policy, and to the closed nature of policy processes.

The purpose of this section is to examine the successes or failures of these projects in changing the perception of forestry at the policy and implementation level. A qualification is in order here: the findings of this section are subjective in nature, since supporting evidence was derived from a review of literature and the previous experience of the authors rather than substantive discussions with project stakeholders. The approach of this review was not to undertake an evaluation of these projects but to identify what they can tell us about how to make the transition to SFM. We have, therefore, dwelled on the more positive lessons.

The projects selected are:

a. Dutch-assisted Malakand/Dir Social Forestry Project (MSFP), NWFP
b. Swiss-assisted Kalam Integrated Development Project (KIDP), NWFP
c. German-assisted Siran Forest Development Project (SFDP), NWFP
d. Forestry Programme of the multi-donor assisted Aga Khan Rural Support Programme, (AKRSP) Northern Areas
e. UNDP/FAO-assisted Watershed Planning and Management Project (WPMP), Balochistan
f. UNDP/FAO-assisted Suketar Watershed Management Project (SWMP), AJK
g. ADB-assisted Sindh Forestry Sector Development Project (SFSDP), Sindh
h. USAID-assisted Forest Planning and Development Project (FPDP), Pakistan/Punjab

No specific criteria were followed in the selection of these projects - except that they have all been under way for several years, have a strong participatory ethos and a particular focus on forest resources in development, and have been widely considered, by foresters and development specialists in Pakistan to include successful elements. A conscious effort was, however, made to select at least one project from each province and to give fair representation to various agro-ecological zones of Pakistan, and to various forest management regimes. Profiles of the projects and their impacts on policy, institutions and the criteria of SFM, are presented in Annex IV.

5.2 Summary of the impacts of projects on policy and institutional change

Many of the participatory projects have been having considerable impact on the ways in which institutions for forestry operate, both at the local (community) level and in the forestry administration. They have helped to establish new ways of working that integrate forestry better into local livelihoods. They have often been able to achieve this informally, through the involvement of FD officers in the projects.

Impacts on formal policy have so far been minimal, because there has not been a policy review process to take account of new experience from these projects. The lessons learned are not being internalised, because there are

strong incentives to maintain the *status quo*. We review these impacts in more detail below; and observations on individual projects are in Annex III.

There are two main levels at which the reviewed projects have had institutional impacts:

Institutional change at local level has been most notable in the development of participatory village organisations of various types. These have come to undertake certain roles that would ordinarily be associated with the "lowest" tier of local government. Because such a local tier had largely been absent before the projects, a considerable increase in local democracy has often been realised - in terms of planning and implementation of development activities to suit large majorities. Community rules on resource sharing and management have been developed by these institutions with project help, sometimes based on traditional systems that had been in abeyance.

However, the new organisations have so far not included many of the features associated with traditional social organisations, which had conferred a degree of community coherence and resilience in the past. This is explored further in section 5.4.2.

One of the most significant signs that government recognises the value of village organisations was the setting up, at government behest, of the National Rural Support Programme in the style of the AKRSP. In doing so, the government acknowledged the cost-efficiency and social validity of the VO model in comparison to an alternative ground-level bureaucracy. However, the VO approach is, as yet, neither widespread in the country nor is its legal position clear.

Resource management systems developed through the projects tend to have focused more on plantations than on the management of existing forests. However, the forest departments have been increasingly open to local groups playing certain roles in natural forest management - notably guarding forests and manning road blocks - as in KIDP where local people are either taking over the responsibility, or are working alongside Forest Guards.

The extent to which poorer or landless groups have been able to benefit from the projects has been limited by prevailing tenure regimes (see section 5.3). Furthermore, whilst the VO approach has enabled clear service "contracts" and smooth service delivery between the aid agencies and

NGOs responsible for the project on the one hand, and the community on the other, relations between the community and local wings of government have not necessarily been improved. In effect, parallel local governance systems have been set up by the projects.

Institutional change in the forest departments, as a result of these projects, is generally restricted at present to:

- improved awareness about new ways of working;
- new skills in participation and planning, for those FD officers seconded to projects; and
- the occasional new functional unit within the FDs.

Awareness of the potential of local groups to be resource managers - and not merely threats or (at best) users of forests - has greatly improved amongst some officers. So has awareness and some skills in two areas that are outside current FD procedures: participatory methodologies and integrated land use planning. In many ways, projects have helped to reorient some FD officers' thinking away from the forest compartment, and towards the village or watershed. The approach of projects such as SFSDP and AKRSP, to train FD officials alongside villagers, seems to have been particularly helpful in improving capabilities for FD-community dialogue.

Whilst this new awareness has not yet always resulted in the revision of the archaic formal procedures in the FDs, it is now accepted that future forestry projects invariably need to involve people, and that some projects (especially those focused on poverty alleviation) need to be centred on people. Furthermore, FDs recognise that such projects need to be planned and managed in different ways. However, as the FDs also acknowledge that they do not yet have a well-tested set of the necessary skills, they frequently request (or accept) donors' employment of consultants and NGOs such as IUCN for project development.

Almost all participatory projects have been careful to include more, rather than less, FD involvement as they progress. Newer ones, such as the EC-supported Environmental Rehabilitation in NWFP and Punjab Project, contrive a mix of FD and NGO responsibility, and a freedom to encourage the development of all sorts of local organisations (village, resource user group, etc). Projects such as the Swiss support to the Forest Management Centre in NWFP help the FD to take stock of the new approaches to planning, so as to evolve new procedures.

Sometimes the institutional impact seems rather obvious - new and

specialised units are set up in the FDs, such as the Watershed Management Extension and Training facility in AJK, in which the SWMP was instrumental, and the Watershed Planning and Management Unit in Balochistan with the help of the WPMP. However, it is not always the case that these units are accompanied by the necessary awareness, skills and functional links. The FP&DP has helped to institutionalise farm forestry programmes within FD objectives and staff establishments - although it has not yet established an adequate degree of interaction with agriculture departments, to enable farm forestry to really take off.

Policy lessons as a direct result of participatory projects appear to have included:

- acknowledgement that people can potentially be involved in forest management
- some acceptance of the value of Joint Forest Management, especially in NWFP
- acceptance of the VO-type approach to local organisation and village land use planning
- integrated approach to forestry, especially in concert with agriculture and livestock production

Unfortunately, most of these lessons have not yet been internalised, and extension is only through development projects.

Constraints to further policy and institutional change through project interventions: From the above, we may conclude that the biggest influence of projects has been on local-level institutions. Furthermore, it is to be expected that the growing strength and increasing ability of VO-type institutions to make demands will place increasing (and usually positive) pressure on FDs. Hence the VOs - more than the projects as such - may have a strong long-term influence, yet to be felt. If the projects want to influence policy and forest authorities, therefore, they should continue to concentrate on strengthening VO-type institutions and lobbying the authorities to recognise these institutions.

The direct influence of projects on both forest policies and the FDs' roles has therefore been only partial and incremental, even though it has been quite significant in weight due to the sheer number of projects, officers and size of funds involved. Yet various constraints even to this piecemeal approach to policy and institutional change are in evidence:

- The FD corporate culture and procedures remain dominated by a cadre

of experts - where other groups (and especially local groups) are treated as if they have no relevant expertise.
- The FD concept of teamwork is one of hierarchical order-giving and reporting, and not of working across disciplines on an equal basis.
- Related to the above is the almost total lack of democratic learning mechanism within the FDs, by which the lessons of participatory projects (or policy experiments or other new approaches) may be considered and revised approaches developed.
- Perks and opportunities for having strong local influence (sometimes to illegal, personal financial advantage) are attached to FD "territorial" posts and not to specialist posts such as those with planning and social/ participation expertise.
- There may be resentment at the growing authority and financial power of large projects in contrast to those of the FD.
- Current legislation constrains what can legally be done and, in a climate of continual flux, the FDs tend to want to stick to this legislation rather than change it.
- Finally, there are no institutions and routine procedures for dialogue between the centralised government administration and representatives of local people. So far, project staff have been the main interlocutors.

The net result of these constraints may be to generate the impression in FDs that certain things - particularly people-oriented forestry - are best done by projects rather than by government, or indeed can only be done by projects. Hence the biggest influence of many of these projects to date may have been on the design of new projects - rather than on the normal ways of working of the FDs. It could be said that there are interests in Pakistan and elsewhere (such as certain consultants and NGOs) who perceive they would profit from the eternal projectisation of "new" approaches such as participatory forestry. There has certainly been a lack of a concerted approach amongst projects to influence policy and institutions. And there is a certain rivalry between the senior staff of many projects, which means that FD and other authorities do not always get a coherent message about the pros and cons of different methodologies.

To an extent, however, this is being countered by the Forestry CTA's Round Table and the Forestry Donors Coordination Group in NWFP. The SFDP, in particular, played a major role in encouraging the development of enabling legislation for Joint Forest Management in NWFP, through a 1996 Amendment to the 1927 Forest Act.

It is undeniable that the influence of projects may partly be correlated, not only with the genuine benefits they bring, but also with their political and

financial clout: funds, equipment, expatriate skills and "independence", "immunity" from active criticism, and training overseas. In the absence of a domestically-driven ability and culture in the FDs to review policies, projects and experiments and to devise suitable responses, donor "weight" (rather than Pakistan's needs) will continue to count for much. More projects will continue, inspired by the almost self-defined "success stories" of earlier projects, without the benefit of in-depth government-led, multi-stakeholder review of these projects.

We have raised a number of issues concerning rights, governance and the need for enabling policy, which are discussed further in section 5.4 in light of experience. Let us now turn, however, in the following section, to a brief assessment of how the projects have actually improved forest management.

5.3 Synthesis of findings in relation to sustainable forest management

The eight major forestry projects, reviewed in Annex IV and summarised in the preceding sections, each have their relative strengths and limitations. Often, what seemed to work in one set of conditions failed to produce the desired results when confronted with another set of conditions, underlining the fact that there are no "quick fix" blueprints for halting deforestation and increasing the equity of costs and benefits. Instead, careful nurturing of positive impacts generated by these pilot projects will be required. So far, forest policy in Pakistan has been an "episodic" event that happens every five years or so, and therefore it seldom accommodates these results.

The following matrix is prepared based on the pioneering work of Conway (1985) and identifies equity, stability, sustainability and productivity as the basic features of any approach for sustainable forest management[11].

[11] Equity is defined as an even distribution of benefits; stability is the ability of the system to respond in the face of shock; sustainability is the ability of the system to continue over a longer period of time through an internally-galvanised impetus; and productivity as the potential for resource regeneration.

Table 5.1 Participatory projects: performance assessment matrix

Project	Forest Tenure	Contributions to the following:				
		Equity	Stability	Sustainability	Productivity	Impact on policy/ Institutional change
MSFP	private	medium	medium	medium	high	high (social forestry)
KIDP	protected	medium	high	high	high	high (integrated development)
SFDP	reserved and *guzara*	high	high	high	high	high (joint forest management)
AKRSP	communal	very high	very high	very high	very high	high (community development approach)
WPMP	communal	high	high	high	high	high (land use approach)
Suketar project	*shamilat*	high	high	high	high	high (social forestry)
SFSDP	protected	medium	medium	medium	high	high (co-ordinated management of riverine and inland forests)
FP&DP	private	medium	medium	medium	high	high (farm forestry)

The matrix presents interesting results. Perhaps among the most helpful for our purposes is that presented by MSFP. Although the project scores high on productivity, it scores less on equity, stability and sustainability. Constraints are presented by the prevailing forest tenure system. The reason lies in the fact that this project undertakes afforestation on private lands, erroneously referred to as communal land. When these private lands (*shamilat*) become closed for afforestation, non-right holders such as tenants and *gujars* lose their access to fodder for their livestock. In many instances, these groups lack the resources to purchase fodder from the market. In addition, landless groups that had earned cash incomes from the sale of grass collected from these *shamilat* are excluded. The pursuit of productivity at the cost of equity may be justified by the high financial gains, but it cannot be accepted for SFM. Distortions such as these provide the incentive to tenants, landless and *gujars* to illegally graze their livestock.

Until recently, these s*hamilat* were treated as open access regimes in which rights and duties were not strictly enforced. Since these lands had scarce vegetative cover and it was physically impossible to exclude others from using them, the incentive to manage had been missing and proprietary rights were never enforced. With plantation establishment undertaken by MSFP, property rights to these lands were not only defined but also enforced. *Shamilat* are no longer open access regimes, but have acquired the status of private property, to be managed by those having established claims. The decision of the owners to ban the use of these *shamilat* by the non-right holders is an indicator of enforcement of property rights, but this reduces the incentive for the latter groups to respect the decision of land closure. In fact, it may provide them with incentives not to respect land closure. This complex interplay of tenure and property rights for management of *shamilat*, and its implications for policy making, is seldom captured in formal forest policy.

The long-term impact of any project depends on its ability to foster lasting participation. The communities that have a common interest, who succeed in developing a certain level of organisation, acquire requisite skills, and are able to accumulate and mobilise capital, can expect to benefit even after project support is withdrawn. The challenge becomes significant when such organisations have to contend with CPRs, as benefits from confirmed participation are not tangible or immediate. The Village Development Committees (VDCs), formed by MSFP to manage its interventions, comprise members who are right-holders in the CPR. By excluding non right-holders, the project is unable to generate broadly-based participation over a long period, and hence commitment from the various stakeholders to the objectives of the project. Under such circumstances, VDCs lack the vision to transform into higher level, multi-purpose organisations with a broader developmental objective. Low equity is thus correlated with low sustainability.

5.4 A discussion of rights, governance and enabling policy

The key policy issues, raised by all the projects assessed above, concern rights and relationships. The issues are not clear cut and will demand further analysis. One question, for example, is whether defining or clarifying property rights will necessarily lead to effective forest management. We have seen two forestry projects suggest different conclusions. In MSFP, we saw property rights militating against non right-

holders, while in Siran we witnessed the reverse. We will begin to explore these issues, and their implications for policy making in greater detail, as follows:

- Property rights and tenure
- Collective action and governance
- Enabling policy, legislation and use rights

5.4.1 Property rights and tenure: lessons and implications

Much contemporary thinking about private property rights conceives such rights not only as a fundamental principle of the free market, but also one which carries immense potential for effective resource management. It is commonly held that private property is better managed than public or common property. Few dispute the merits of this thesis for the management for those goods and services which are valued by the owner, if not for public goods and services. Because SFM is about the production of both public and private goods and services, however, we should ask the question:

- which property regime is best suited to sustainable forest management?

Effective natural resource management is predicated on the belief that: a well-stocked resource exists; that users and their claims on that resource are well-defined; and that these claims and associated rights and duties are socially approved. There is now an extensive body of literature on common property regimes (CPRs) and collective action, that has explored the notion of CPRs as an analytical framework to identify and analyse the constraints and opportunities for collective action (see Bromley, 1987; Uphoff, 1986; Olson, 1985; Jodha, 1991; Cernea, 1992; McKean and Ostrom, 1995).

CPR is best defined as a collective management regime which *"is something provided by a group for its own benefit, and its enjoyment by one does not diminish that which is available for others in the group to enjoy - the management of such a collective good by the group owning it is called a common property regime. A common property regime consists of a defined group of authorised users, a well-defined resource*[12] *that the group will manage, and a set of institutional arrangements that define each of the above as well as the rules of use for the resource in question"* (Bromley *et al*, 1992).

[12] Bromley *et al* (1992) defines a resource as "something that offers a stream of benefits to humans over time, is accompanied by the physical ability to harness that benefit stream, and for which there exists institutional arrangements which define its management and control and hence the nature and allocation of its benefit stream". Seen from this perspective, forests are not only governed by natural imperatives but also by the social environment in which they exist.

Property rights are important economic and social institutions and affect resource use in many ways. While systematic evidence on the impacts of various property rights regimes is lacking, and there will always be exceptions to generalities, a review of the projects tends to confirm a ranking of property regimes in Pakistan, in terms of how destructive they are to forests:

>>>>>> from least to most destructive >>>>>>				
Private ownership and management long-term	*Shamilats* where community rules/ management are still effective	Forests owned and managed by the state	*Guzara* forests, owned by the community but managed by the state	*Shamilats* where local management systems have broken down

Source: adapted from Pakistan National Report to UNCED (1992:75)

For most policy makers and implementers, private property is considered to be the best possible solution available for SFM. Much of this conviction stems from the classical work of Hardin (1968) on the "tragedy of the commons"[13]. Privatising the commons through defining property rights can clarify the definition of the resource and the relevant set of users, so that management tasks are easier to delineate and more amenable to local institutional responsibility. We find this argument relevant, but our findings on the trade-off between productivity and equity in MSFP expose some of the limitations. Furthermore, there will be many situations where private management does not produce broader social benefits - watershed regulation, biodiversity conservation, etc - where effective incentive structures will be needed to encourage the private production of public goods and services - requiring an enabling policy environment (see section 5.4.3). Alternatively, when individual decisions may result in socially undesirable outcomes, some form of collective action could be more effective than governmental "sticks and carrots". AKRSP successfully demonstrates that CPRs in forests can be efficiently managed by the people through collective action (explored in the next section), if effective local institutions are entrusted with that responsibility. The same need for effective responsibility and stewardship applies to private property rights (PPRs). In both CPR and PPR cases, the government's job is to create the right conditions for law and order.

[13] Hardin (1968) described a situation where herders are grazing cattle on common pasture land. If an individual increases his herd, this reduces the total amount of forage available. But each herder's loss is small, perhaps imperceptible, and much less than the benefit gained by the individual who increased his herd. So he has an incentive - as do all other herders - to increase the size of his own herd until the commons are destroyed by over-grazing from all herds.

But the insolvency of government, coupled with concern both to reduce its size and to make it more efficient, has important implications for forest management in Pakistan. Social scientists in Pakistan today accept the fact that our society is faced with institutional fragmentation and alienation. Relations between the state and civil society are being rendered dysfunctional and counter-productive because government cannot assure law and order. In such circumstances, CPRs - where the community itself exercises basic law and order - may be preferable to private property rights (PPRs).

5.4.2 Collective action and governance: lessons and implications

Many observers of local-level development such as Uphoff (1986; 1992), Cernea (1992), and Chambers (1983) stress that local institutional development is imperative for collective action, and thus for SFM which requires an equitable mix of public and private goods and services. Institutions are stabilising structures that develop common expectations and a basis for co-operation "that goes beyond individual interests" (Uphoff, 1992:3).

Literature on irrigation management demonstrates that participation is likely to be greatest over a middle range of relative water scarcity[14]. In extreme cases of abundance or scarcity, people lack the will to organise. Abundance does not pertain in Pakistani forests today. In contrast, heavily degraded *shamilat* or village commons have very scarce forest resources, and hence have low potential for socio-economic benefits. Interest in participatory management is correspondingly low. On the other hand, the good condition of some natural forests in Kalam and Siran still induce people to undertake collective ventures for managing the forest, as the stakes are higher. One can presume that the natural forests in Kalam and Siran are much less dense than a few decades ago, but are still better stocked than, say, the *shamilat*.

It is held that CPRs can be either organisation-intensive or capital-intensive. For the management of forests, an organisational-intensive mode is more appropriate. For example, it is practically impossible to fence a forest (the capital-intensive option), but "social fencing" through community rules and monitoring is a realistic option. Husain (1987) calls this the "Community First Principle".

[14] "Farmer's net benefits from participation in water management are likely to be greatest over a middle range with regard to water availability. At extremes of water surplus or water scarcity, the benefits from participation can be negligible or even negative'" (Uphoff, 1986:30).

Uphoff (1986) identifies four basic roles for a grassroots organisation:

- decision-making;
- resource mobilisation and management;
- communication; and,
- conflict management.

Today, many of the VOs and VOCs have been rapidly evolved in deliberate attempts to undertake such functions. Institutions establish their links with other social entities through roles. These in turn comprise two elements: "role expectation (the institutional dimension) and role performance (the structural dimension) ... In addition a role has with it actual patterns of action. Roles help one to predict the actions and reactions of others and thus enable social patterns and social organisation to emerge" (Coward, 1980). The challenge is to reconcile the "ideal" and the "actual", that is, what people believe should occur (the institutional dimension) and what really occurs (the structural dimension). In this regard, it is helpful to think about reciprocity. Balanced reciprocity invokes similar responses, while negative reciprocity is inherently adversarial in nature. Social organisation functions as a homogenising factor that holds together these expectations by regulating human behaviour through:

Photo: Willem Ferwerda

Fodder is one of the most important products of the mangroves in the Indus delta, along with poles and fuelwood. Village committees are working with IUCN, local NGOs and the Forest Department to protect and reforest mangrove areas.

- defining *rights and obligations* to claim ownership and entitlements;
- presenting a set of *rules and responsibilities* to regulate these rights and obligations;
- articulating *rewards and sanctions* for conformity and non-compliance, respectively; and,
- agreeing on arrangements to *arbitrate conflicts and enforce decisions*.

In traditional resource management, these factors were institutionalised through local decision-making bodies such as the *jirga* in NWFP, and by *panchayat* in Punjab[15], which performed the functions of social reproduction. The transcendental, inter-generational nature of such institutions fits well with their functions. Social innovations such as VDCs of MSFP, VOs of AKRSP and CBOs of KIDP have failed to emulate some of the defining features of such an institution. The VOs formed by AKRSP may come nearest to such an institution because of the peculiar nature of the Northern Areas. The region was in a state of "institutional vacuum" after the abolition of the *mirs*, or local rulers. The VO thus served to bind people together with a common interest. It happened to be closely associated with a major new source of support - AKRSP. The VO commanded respect and trust by its members because of internal democracy and a broadly-based participatory mode of decision-making, in which stakeholders make decisions about actions and resources which influence them.

Forests in Pakistan are managed by the Forest Department, although they may be owned by the people. In spite of the range of traditional and newly-contrived social institutions, decisions regarding management continue to be taken by the Department, in isolation from the beneficiaries. Consequently, Forest Department rules and regulations are beyond the world view of many local people and are therefore considered with contempt and suspicion. The relationship of the Department and civil society is adversarial in nature. Partly, this owes its existence to the diarchy in Pakistan between the political (or representative) system and the departmental (or managerial) system. Departmental project managers or technical experts identify, plan and implement projects, selectively ignoring the potential role of beneficiaries in this process. The following stylised matrix presents the two opposing world views:

	Department-centred forestry	People-centred forestry
Principal mechanism	Bureaucratic organisation	Voluntary association
Decision makers	Administrators and experts	Leaders and members' consensus
Guides for behaviour	Regulations	Consensus and incentives
Criteria for decisions	Normative policy	Members' interest
Sanctions	State authority backed by coercion	Social pressure
Mode of operation	Top down	Bottom up
Lessons learnt	This excludes the poor and is derived from colonial, control-oriented systems	This includes the poor and learns from informal interactions of the society

Source: adapted from Uphoff, 1993.

[15] *Jirga* in NWFP was meant to be an institution that regulated the social organisation of the *Pukhtuns*. Mountain ecology has contributed in shaping *Pukhtun* social identity, political strategy and economic structure. It has also contributed to a stringent code of honour, the *Pukhtunwali*, a complex and potent combination of hospitality, generosity, jealousy and revenge that "has been most successful and self-maintaining, under anarchic conditions" (Barth, 1972:134).

5.4.3 Governance

Banuri (1995) states that policies have not worked, largely because of institutional and managerial weaknesses, much of which are connected to failed attempts to "decentralise", often ostensibly to improve government efficiency. He clarifies the semantic confusion over the term decentralisation by defining decentralisation as a composite of three elements: deconcentration, delegation and devolution[16].

Deconcentration refers to decentralisation of *administration*, that is, reducing concentration of power at the centre, giving authority to lower levels of governance, and modifying the institutional structures within each organisation.

Delegation refers to spinning off certain *functions* of government into autonomous or semi-autonomous bodies that could be private, semi-private or co-operative. The process of privatisation is an example of delegation.

Devolution refers to delegation of *political authority*, by creating political structures at local level which include all the necessary elements of political autonomy, sovereignty, and accountability.

A key element in all these decentralisation processes is *participation*. Decentralisation *without* participation is completely different from (and probably much less consequential for its impact on forests and people than) decentralisation *with* participation. Furthermore, participation is not to be understood simply as a bureaucratisation of informal structures; rather it should help introduce greater efficiency and accountability into the public system. AKRSP is a good illustration of effective decentralisation with participation: not only are clusters of VOs functioning as representatives of a mass culture that is articulating demands through organised forums, but AKRSP is also willing to share the management responsibility with the state apparatus. The case of Chalt-Chaprote in the Nagar valley is an example, where villages sharing a communal forest have established their own organisation to check the extraction of timber. Similarly, the "people's check-posts" in KIDP provide another illustration of people organising for collective action. The Forest Department would otherwise have fulfilled this role - if it had the resources, but it could not have become an integral part of community resource management rules, which the bottom-up approaches have.

[16] The discussion on decentralisation is based on the paper presented by Dr Banuri at the inaugural workshop of this project in November 1995 (IIED and IUCN Pakistan, 1995).

The possibilities for, and the nature of, decentralisation are also determined by the types of individual and collective property *rights*. The problem arises when, as in the case of a forest, the rights of different stakeholders - the local community, the contractors, the state, and individuals - are ambiguous, short-term and/or contested. In such a case, no one has a clear incentive to protect the resource; everyone takes whatever he can, and this generally leads to degradation.

Deconcentration is basically a managerial concern, and means restructuring of governmental authority. The primary requirements here are incentive compatibility, independent monitoring systems, access to and proper management of information, salaries, benefits and responsibilities. This has a number of prerequisites, including clear definition of the goals of the organisation. Forest Departments have often been criticised for seeking to maximise revenues rather than to conserve resources (or even to maximise the value of the resource). Today, the departmental goal of revenue maximisation is in direct conflict with the societal goals of conservation and improved livelihoods. These goals must be resolved before decentralisation can be effective.

Within the organisation itself, goals set for individuals are often in terms of inputs—time, resources, training, information— and not in terms of the goods and services and other outputs produced by these functions. This is because there are no *monitoring* arrangements to measure outputs. Independent monitoring is absolutely essential for incentive compatibility. Without monitoring of output targets, it is impossible to ensure that individuals are acting in conformity with the collective requirements.

Information is a critical issue: if it is not accessible at the broad and popular level, power will become concentrated in the hands of unaccountable functionaries. Modern information technology can facilitate more transparent organisation and dissemination of information, thus enabling greater accountability. The GIS in the SFDP is an attempt to systematically and scientifically collect data about forests and use it for preparing plans and policies. IIED and WCMC have developed a forest resource accounting methodology that is currently being considered for both federal and provincial application in Pakistan (IIED/WCMC, 1996).

The form of governance in this country has variously been criticised as being inefficient, weak, corrupt, and unaccountable. In order for *devolution* of authority to become both possible and desirable, we need an improvement in the form of governance. Instead of concentrating power at the level of federal or provincial government, it is brought down to the

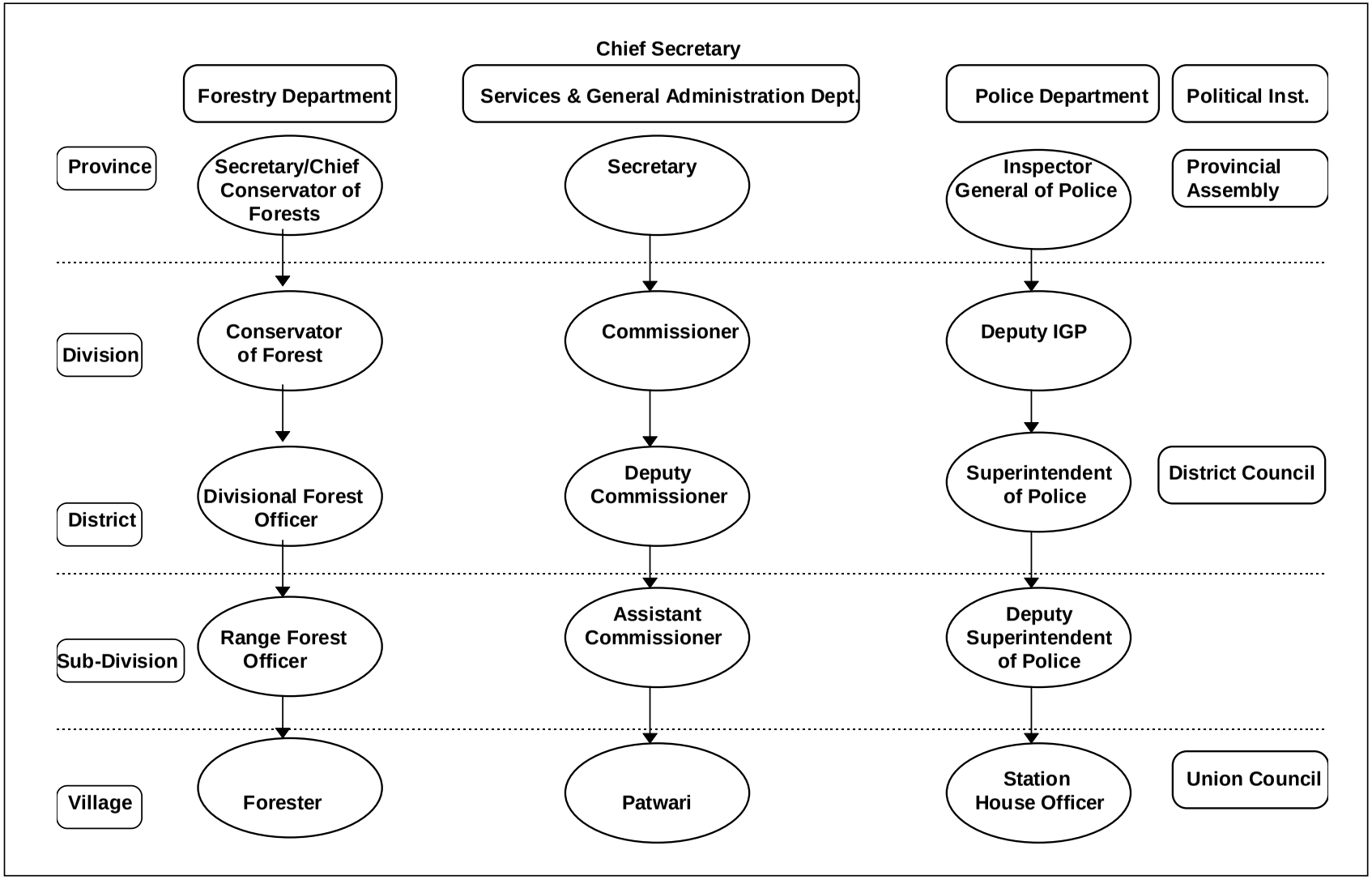
local level. But what does local level mean: the district or the local community?

For SFM, some people argue that the distribution of political authority could correspond with the contours of the natural environment, such as the ecosystem/catchment areas of forests. The SFDP raises possibilities to pursue a land use approach to managing the watershed with input from natural resource sectors such as irrigation, agriculture and livestock. The main questions relate to the size of a community which can make collective decisions in a just and legitimate manner.

Another issue is that of the *autonomy or sovereignty of local institutions*. Devolution is meaningless without autonomy of local institutions on political and financial matters. Decentralisation to local institutions, and devolution to actors other than government, requires commitment and stability over a long period. Moreover, devolution is incomplete without appropriate amendments in the legislation and rules of business. A good illustration of effective devolution is demonstrated by the Siran project through its JFM initiative. The government has devolved authority for management of state forests to the JFM Committee, comprising local people and representatives for the Forest Department - a legal entity acceptable to both the government and local people, and based on a signed terms of partnership. This should give the local institution considerable autonomy, and sufficient confidence in its powers over a period adequate to create incentives for investment in sustainable forestry.

In the current Pakistani system of governance, the local government is not organised to articulate the needs, demands and aspirations of the people at the 'lowest' level. A centralised and remote government system and an institutional vacuum at the local level have constrained dialogue with, and meaningful participation of, people in making informed choices (see Figure 5.1). Documentation from other projects shows that community organisations at the 'lowest' levels consistently perform two functions of collective management - one that tends to village government and another that follows the traditions of orthodox co-operatives. The former deals mainly with public goods, while the latter is about the collective management of private goods. Providing legal cover to these community organisations, to enable them to function as village government, will be required if the void at the local level is to be filled.

Figure 5.1 Structure of state and political institutions in a province



5.4.4 The potential of use rights

Because forests are increasingly under pressure for many specific uses by different stakeholders, use rights have sometimes been considered more suitable for sustainable forest management than territorially-defined property rights. Various forms of use rights can co-exist, for example:

- Use rights of resources that are without disposal rights, e.g. where tenants lack the right to sell trees on farms.
- Part-time rights that are seasonal in nature, e.g. *gujars* from Kohistan rent pasture lands in Kalam and Buner for summer and winter grazing.
- Partial rights (for land but not for forest or trees), e.g. in *tehsil* Matta (NWFP), land owners have sold land to their tenants but have not sold their claim on trees.
- Use rights to land without mineral rights.

Community use rights hold potential for both meeting local needs and organising community involvement in forestry. They exist for State forests, and are tenable under the law. These rights (reviewed in section 2.4) include:

- Villages within an area of 5 miles of the forest, or having traditional rights over it, can apply for timber at a concessionary rate.
- Dead fallen trees and timber will be available free to all villagers, and no permit for their removal will be required.
- Standing dead trees will be given on permit free of charge to villagers, after being marked by the Forest Department.
- Timber for construction and repair to community projects and religious institutions will be granted free of charge.
- Firewood for village domestic use may be removed free of charge from dry and fallen wood from any forest with the use of an axe or other cutting instrument.
- Firewood as described above may be removed free of charge from stumps of trees.
- Torch wood may be cut with an axe free of charge from stumps of trees.
- Grazing of cattle and flocks will be permitted free of charge except in excluded areas, for example areas set aside for harvesting minor forest products. Cutting of grass will be permissible in closed areas.
- Cattle and other livestock will be allowed to pass freely through the forests except through closures, where right of way and access to water will be provided for.
- All minor forest products for the collection of which no contracts have

been given, and which are not prohibited under any special orders, will be allowed free to all villagers.
- The above concessions are for the *bona fide* agricultural and domestic use of the *zamindars*, i.e. those who hold and cultivate land, and tenants or artisans resident and employed in the village.

Changes in statutes to facilitate the creation of an enabling framework and the possibilities of an approach based on use rights rather than merely territorial rights, are also on the anvil. The rules made under the Forest Act of 1927 to accommodate Joint Forest Management are beginning to realise some of this potential.

5.5 Synthesis and conclusions

The projects described in this section have raised interesting lessons, that begin to present an agenda for future debate and policy review:

Property rights and tenure: Defining property rights and clarifying tenure is an important pre-requisite for SFM. Use rights are important, but good institutional arrangements (community management rules and regimes, partnerships, and the application of traditional knowledge) are key to their successful management. A lack of such arrangements has possibly contributed to the forest degradation of recent years. Private rights, unregulated or unmodified by public sector laws and incentives, are unlikely to produce effective social outcomes, especially where government enforcement is weak, as the Siran project has found. Similarly, community rights and regimes, although they may provide an element of law and order, will also be ineffective without equitable and well-resourced legal community organisations. Projects that failed to resolve these points eventually had to compromise on the equitable distribution of their benefits. In projects, such as AKRSP, where rights and tenure are clearly defined and customarily regulated, equity and productivity are relatively assured.

Collective action and governance: Collective action is often the pre-requisite for managing a public good, especially in forests subject to much local demand. Almost all the projects have been based on the involvement of local beneficiaries in the identification, design and implementation of interventions. Although many question the nature and outcomes of decision-making in local organisations (both traditional and designed through the project), few can deny the fact that by supporting grassroots

organisation, these projects have tried to devolve the responsibility of decision-making to these organisations. The results of these initiatives may remain site-specific. Therefore the challenge is to replicate the institutional and resource management innovations generated by these projects at a wider scale. Lack of local government is a key stumbling block to replication. One possible solution may be to ensure that village organisations have adequate legal identities to enable them to function as village governments and to form the basic block of organisation for SFM.

Photo: MSFP

The concept of forest management planning has broadened considerably through initiatives such as the Malakand/Dir Social Forestry Project. Agroecosystem analysis - to link forestry with farm and grazing systems - and participatory planning by villagers are redefining the way forestry objectives are set.

A key issue in the decentralisation of governmental forest authority is to rationalise the current departmental goal of revenue maximisation with the societal goals of conservation and improved livelihoods. The outcome of this clarification of the goals of forest departments will help to determine: the appropriate local levels of decision-making, e.g. village or watershed; the kinds of local institutions with which the FDs should work; the scope of what local institutions do; and the kinds of (use) rights that should be strengthened.

Enabling environment: An appropriate enabling environment, through the creation of well-functioning markets and legal instruments, is a prerequisite for SFM. The Siran project points to the impacts that can be achieved by an amendment in the existing legislation. An enabling environment should offer the instruments to link clear use or property rights and tenure with effective collective action and governance.

Photo: Stephen Bass

In only a few parts of Pakistan is wood abundant enough for housing to be made principally of wood. In the Palas Valley, local people have traditionally had a strong dependence on wood, and are working with NGOs and the Forest Department to work out management systems and incentives for them to sustain supplies.

Learning from planning and policy processes

6.1 Introduction

There is widespread recognition in Pakistan that, among the recent policy initiatives that have had positive impacts on forests and people, the Forestry Sector Master Plan as a *planning* document, and the National Conservation Strategy and the Sarhad Provincial Conservation Strategy as strategic contexts for policy and institutional development, are the most significant. Note, however, that these initiatives are still largely thought of in terms of *documents*, in contrast to the new institutions and procedures in Section 4 and the projects in Section 5. None the less, there is evidence that the conservation strategies, at least, are evolving into continuous *policy networks* and *processes*. In the following, we explore these processes further.

6.2 Forestry Sector Master Plan (FSMP)

Funded primarily by the Asian Development Bank and United Nations Development Programme and approved by the Cabinet, FSMP covers a 25-year period. It is the biggest, most detailed, and most ambitious plan ever produced in Pakistan for the forestry sector. It relied upon 20 sub-sector studies and suggestions, submitted by the federal and provincial governments' forest, planning and development departments, but prepared in large part by consultants.

A Steering Committee, chaired by the Secretary, Ministry of Planning and Development, was established to provide policy guidelines and monitor progress[17]. A Tripartite Donor Agencies Committee was also formed to monitor progress of the technical assistance.

[17] Permanent members included Member III, Planning Commission, Chief Agriculture and Senior Chief Energy, both of P&D, Chairman and Additional Chief Secretaries of the Provincial P&D Departments, Director General PFI, Chief Conservator of Forests from Provincial Forest Departments, Conservator of Forests Northern Areas, and representatives of donor agencies. The IGF acted as Member/Secretary.

The process was initiated with the recruitment of international consultants, who later recruited short-term local consultants. These consultants produced 20 sub-sector studies on the basis of field visits and consultations at various levels, including provincial workshops. In order to estimate the total resource base and to prepare land use maps, a survey of trees growing on farmlands was carried out, and Landsat imagery was obtained to form the basis for a geographic information system model. There has been widespread dissatisfaction over the brief time allocated to the various tasks, and over the quality of some of the consultants.

The resulting Master Plan addresses the main issues of supply and demand of fuelwood and other forest products, amelioration of environmental conditions, conservation of biodiversity, and alleviation of poverty through forestry. It proposes an (extremely ambitious) doubling of tree cover in area terms, and quadrupling wood production by 2018.

The FSMP presumption is very much for increasing *government* capacity: it proposes a doubling of Forest Department staff in order to meet its ambitious goals. However, it is not an operational planning document. The intention was to give FDs, planners and funding agencies an overview of the sector and its priorities, and a planning baseline to support future development in the sector. Programmes are presented as investment profiles, giving objectives, scope, strategies, and expected costs and benefits. The intention was to indicate broad concepts and priorities to be picked up at the project phase for the precise definition of inputs and outputs.

FSMP has not really addressed the issues we defined in Section 5 as being critical prerequisites of SFM - rights, governance and collective action, and notably the fundamental changes needed in the forestry institutions. As such, many constraints, and particularly institutional constraints, are likely to hamper the effective implementation of its long "shopping list" of requests. Indeed, many of the FSMP's project ideas are likely never to be funded, for the simple reason that donors perceive some institutional constraints to be too great, and the value of throwing more resources at outmoded institutions to be doubtful.

6.3 National Conservation Strategy (NCS)[18]

Work on preparing the NCS began in 1985, when a formal request was made by the GoP, through the office of the Inspector General of Forests, to IUCN and CIDA. A full seven years later, on 1st March 1992, the NCS was

[18] Contributed by Aban Marker Kabraji.

approved by the Cabinet of Pakistan. This 406-page document was prepared by a team of experts, concentrated in a three-year period, under the supervision of the Deputy Chairman of the Planning Commission. It involved more than 3,000 people through workshops, comments on drafts and other consultations. The document describes the stark reality of the country's deteriorating resource base and the implications of this deterioration for what is still largely a natural resource-based economy. It sets forth the beginnings of a plan to integrate environmental concerns into virtually every aspect of Pakistani economic life.

The NCS has taken root firmly in Pakistan. Why is this so? Part of the answer lies in the international environmental debate which has been unfolding since 1972. Part of it lies in the Strategy's approach to sustainable development. And finally, part of it has to do with the "*made in Pakistan*" approach.

The initial scoping for the NCS was done by an economist from IIED and by a historian, aware of the historical importance of central planning in Pakistan. They insisted on placing the development of the NCS in the Planning Division, since the "value-added" of the strategy was seen to be its novel multi-sectoral approach. This was resisted by both the requesting ministry and by the Planning Division; the former for reasons of turf, and the latter because it did not perceive the NCS to be of importance at the time. A compromise placed it in the newly-created Environment Division within the Ministry of Urban Affairs, but, in deference to IUCN's insistence, under a Committee headed by the Deputy Chairman of the Planning Commission. With the acceptance by such a prominent person to head the NCS Steering Committee, it became much easier to convince both the donors and the institutions of government to take the NCS process more seriously. IUCN was placed in a technical support/co-ordinating role - partly because an 'independent' agency was clearly necessary where positions of institutional turf would obviously ultimately be debated, partly because of the authority IUCN wielded through having organised the (normative) World Conservation Strategy, and partly because its staff clearly had the energy and will to organise an NCS for Pakistan.

The proposal went out to donors and CIDA agreed to fund the original prospectus, provided a Canadian was involved as an adviser. Tied aid can be viewed as an opportunity if one can insist on using the very best from the country.

Thus the NCS benefited from a Canadian professional who brought with him not only a good knowledge of the issues, but also a remarkable ability to

make friends and "lead from behind", and various experiences from the Canadian context: round-table processes, the "search conference" format, and the practice of consensus building through participatory planning.

Government anywhere can be wary and mistrustful of public consultation in the formulation of policy, but most particularly in countries that have a history of failed democratic processes. To some extent, environmental issues offered a fortuitous place to start in Pakistan, since in the mid-80s these were viewed as marginal to political processes, and therefore safe areas in which to experiment. There is, however, another consideration. This has to do with the complex, but important, relationship between the co-ordinating institution outside government (the NGO) and its perceived character and credibility. In the case of IUCN, this had both the advantage of a quasi-intergovernmental status (since Pakistan belonged to it as a State member, as did other government agencies), and also having a national character (being headed and staffed mostly by Pakistanis).

Thus while the Canadian consultants might have worked on the substance of the strategy, and not merely its process, they did so under a partnership umbrella between GoP and IUCN which was perceived to be national in character. This went a long way to establish legitimacy and trust. The NCS process was seen as "Pakistani-to-Pakistani" and so it was far easier to challenge the bureaucrats it worked with in the context of "our needs" and "our agenda". This is an advantage which many a national NGO also has, but is only gradually learning to use to establish credibility with government.

The partnership between government, donor aid and IUCN has now been in place for twelve years and, under the present project arrangement for full NCS implementation, goes on until the end of the decade. As the process has continued, all three partners have adjusted positions based on perceived needs, the reality and fashion of aid, and international trends, and the personalities of the decision makers. As the strategy evolved, greater consideration turned towards issues of participation and decentralisation, although these issues were not fully resolved. Much of the early success of the strategy could be attributable to the existing close contacts and relative ease of participation amongst "elite" groups in government, industry and the NGOs. Had participation started at the "lower" levels, it may not have been so quickly and tidily achieved a coherence of vision and objectives. Equally, it might have focused on different issues. The further resolution of decentralisation issues is expected, in part, to be achieved through the provincial conservation strategies (see section 6.4).

An independent evaluation of the NCS (Runnalls, 1995) identified the following factors as responsible for making the strategy work:

- It was an indigenous process.
- The Planning Commission took the lead.
- A high level multisectoral group identified the issues.
- Many people participated in the process.
- The Earth Summit raised the political stakes.
- Outsiders played key roles.
- The donor agencies backed a process rather than a project.
- The insistence on quality.

The same source identifies the following as lessons that should be of use to similar exercises:

- The NCS is a political document.
- The NCS must also be a sustainable development strategy, not merely an environmental plan.
- Sustainable development requires major institutional change for its implementation.
- The process is at least as important as the final product.
- Strategies should be designed to build capacity in-country.
- Outside organisations must be sensitive to the indigenous nature of the process.
- Outside consultants must be chosen with care and used sparingly.

However, Qadeer (1996) has questioned the NCS's methodological framework. Whilst acknowledging its ambition and promise as a means to mark a path towards sustainable development, he also points out its reliance on international precepts above and beyond local knowledge and realities:

> *Its concepts and categories are ahistorical and "decontextualised" from political, social and institutional structures of Pakistan... the social conditions and historical lessons of Pakistan's development experience have a secondary and minor role in defining the conceptual framework of the NCS* (Qadeer, 1996)

Perhaps the provincial and district strategies (see section 6.4) may generate the space to define more locally-resonant concepts, and to fit better with institutional structures.

The Results

The NCS process has had a unique impact on the policies of Pakistan. Formulated from a sustainable development paradigm, the NCS has become

the *de facto* (if not yet *de jure*) policy document on sustainable development in Pakistan. Its initial impact was on "green" issues, including forestry - although it is now making waves in the "brown" urban and industrial sectors. Much of the evolving environmental policy and legislation is a direct result of federal and provincial governments taking forward the NCS's recommendations. Concrete NCS results which (potentially) impact on forestry include:

- the Supreme Court has created special environmental appeal procedures to accommodate public interest litigation - which some of the smaller NGOs have been taking up
- an Environmental Protection Act was promulgated in 1997
- round tables have been established to involve the corporate sector
- participation by women has increased (the Pakistan Forestry Institute is providing a special training course for women, designed with IUCN's help)
- training is being developed in environmental assessment
- an independent Sustainable Development Policy Institute was inaugurated, with a broad research mandate
- provincial strategies are being developed in NWFP, Balochistan and Northern Areas, and a District strategy is being prepared for Chitral
- federal and provincial governments have established environment sections in their planning departments.

6.4 Sarhad Provincial Conservation Strategy (SPCS)[19]

Following the launch of the NCS, a public consultation was held, which strongly endorsed the preparation of the Sarhad Provincial Conservation Strategy (SPCS) as a guide to the sustainable development of NWFP. The SPCS took the opportunity to build on the apparent successes of the NCS, with greater attention to bottom-up participation and to early (experimental) action, rather than elaborate and lengthy planning. The Government of NWFP and IUCN constituted the SPCS Unit in the Planning and Development Department (which was then designated as the Planning, Environment and Development Department). The Unit comprised an Environment Section, staffed by Government functionaries, and a supporting cell comprising IUCN personnel. The task was to prepare sectoral strategies in collaboration with people from all walks of life, and then to initiate their implementation in a participatory manner. From the

[19] This section draws from G M Khattak (1996); personal communication

outset, the basic decision was to prepare policies and strategies and simultaneously start elements of their implementation, monitoring the results frequently and feeding the results back to improve implementation. In other words: to set up a learning approach to policy. Public consultations in the SPCS process were held at the provincial capital, divisional headquarters, almost all districts, and a sample of the villages in each district.

The strategy was approved by the GONWFP and its implementation was initiated in November 1995, with the creation of a Steering Committee for overseeing its implementation.[20]

It is the SPCS which has been primarily responsible for galvanising the development of options for policy and institutional change for NWFP forestry. The sectoral strategy for the sustainable development of forestry was formulated under the SPCS following consultations with the stakeholders - foresters, forest owners, forest right holders, and some forest users. For facilitating contact with the stakeholders, meetings were held at Peshawar for the central and the southern zones of NWFP, and at Abbottabad and Saidu Sharif, as these two towns are in the heart of the two major forest areas in NWFP.

Since, at that stage, it was not considered possible to identify the most appropriate representatives of the forest owners, right-holders, and users of forests, the Commissioners of Hazara and Malakand Civil Divisions were appointed as the members of the Committee to represent these interests until such time as the genuine representatives of these groups can be identified. It is also envisaged to create a round-table on forestry with a wider representation of the major interests in forestry, as a forum for generating ideas on making forestry more sustainable, and for feeding proposals to the Steering Committee. A "focal point" is proposed for the Department of Forestry, to involve the functionaries of the Department more intimately in the process - acknowledging that change in the Department is needed, but will be considered only as a threat without their involvement.

The Steering Committee meets about every six weeks to monitor progress. Reporting to the Steering Committee is the Task Force, which fosters discussions on the various institutional reform proposals of SPCS's Forestry Strategy. The Task Force comprises two representatives of Territorial Forestry; one each of Timber Harvesting, Wildlife and Sericulture; two CTAs

[20] The Steering Committee is chaired by the Additional Chief Secretary, GONWFP. Its members include Secretaries of Forest, Finance and Law, Chief Economist, Additional Secretary-I, PE&D Department, three representatives of the Forestry Donors Co-ordination Group, Chairman Task Force for the Forest Department, and a representative of IUCN acting as a member/ secretary.

of donor-assisted forestry projects; the Chief of Environment Section, PE&D; one representative of IUCN; and one from the Finance Department.

An Institutional Transformation Cell (ITC) is being created for conducting detailed studies before institutional changes can be made. Its proposals will be discussed by the Task Force with stakeholders in seminars, and in the forestry round-table. The Task Force will then formulate detailed proposals and put them to the Steering Committee. After approval by the Steering Committee, the proposals will be steered through the concerned agencies in the GONWFP. After approval of any policy, its implementation will be monitored by the Steering Committee or its successor organisation.

Since the inception of this process in November 1995, drafts of a comprehensive forestry policy for NWFP, and a draft Act for establishing a Forestry Commission to improve transparency and breadth of vision, have been formulated and presented to the NWFP government for adoption. A compatible draft forest law is being developed in consultation with stakeholders.

The Secretary of Forest, Fisheries and Wildlife, in the wake of all these changes, has succeeded in getting two major amendments made in the Forest Act: (1) a provision for enabling Joint Forest Management (the pilot of which is already underway in the GTZ-assisted Siran Forest Development Project); and (2) enhancing periods of imprisonment and fines over those which were established in law in the nineteenth century.

The SPCS may be right in attending first of all to ensuring fundamental institutional changes at the Department of Forests level, before moving on to encourage better local representation in forestry decision-making, and revisions to forest/use rights. It is now moving down to district level, in Chitral and Abottabad; it is expected that this is where local participation in decision-making will really take off.

6.5 The involvement of bilateral and multilateral assistance in forest policy processes

The most influential impact of bilateral and multilateral assistance has been to frequently raise new concerns to a high level, as they arise from within Pakistan as well as in relation to outside events and concerns. These concerns have included participation, sustainability, good governance,

decentralisation, property rights and institutional and legislative reform, among many others.

Although, until recently, the donor organisations had an uncoordinated response to forest problems, in recent years they have attempted to address them through initiatives such as the Forestry Donors Coordination Group (FDCG) for NWFP, co-ordinated by the Swiss Development Co-operation. FDCG wields considerable influence in forestry circles and has built a strong constituency among government officers. Today, FDCG and the government are actively pursuing institutional reform, specifically the creation of a Forestry Commission and revision of the Forest Act of 1927. Another important pressure group of the donors is the CTAs Round-Table, in which findings of field projects are discussed, and lessons disseminated for adoption and replication.

The forestry sector in Pakistan has witnessed a steady inflow of bilateral and multilateral funding. Starting in the 1950s with the Tarbela Mangla Watershed Project, donors to Pakistan have supported various facets of forestry in Pakistan. Today, among the bilaterals, the Dutch are renowned for their social forestry approach, the Swiss for their emphasis on participation, integrated land use, and technological innovations for timber harvesting, UNDP/FAO for extension and integrated range management, and the Germans for introducing Joint Forest Management concepts to Pakistan. Among the multilaterals, the Asian Development Bank and the World Bank have recently provided soft loans to support forest sector development projects.

Part of the problem with forestry is the lack of government funding available for an essentially long-term enterprise. A crippling debt burden has resulted in a financially insolvent government. Governmental funds required for implementing ambitious forestry projects and policies are seldom forthcoming[21]. Even the annual sectoral allocation defined in the Annual Development Plan (ADP) rarely materialises in full. Donor funds have therefore offered a welcome respite - but have to be allocated to projects, rather than recurrent expenditure.

The evaluation of the NWFP Forestry Sector by GTZ (1995) provides an insight into the working and influence of donor-supported development projects. Planning and budgeting in the Forest Department is regulated by standard procedures. The Department's development projects are described in detail on the Planning Commission Form I (PC-I) document, to

[21] Interview with Abeedullah Jan.

be approved by the Provincial Planning and Development Departments. "The grant of separate budgets in the ADP aims at an allocation of limited resources on priority basis to important development projects. In reality, this means a reallocation of funds from the regular budget to steadily increasing programme budgets, leaving little or even diminishing resources for regular operations and staff" (GTZ, 1995). Hence there are few recurrent resources available to the FD to absorb and act on the lessons of the "richer" projects with which the FD is involved.

Table 6.1: Financial implications of development projects in NWFP

Year	Forestry Budget (millions of Rs)			Forestry as part of total Provincial Budget		
	Regular	Development	Total	Regular	Development	Total
1988-89	77	41	126	0.9%	1.7%	1.1%
1989-90	101	74	174	1.1%	2.5%	1.4%
1990-91	106	78	186	1.0%	1.8%	1.3%
1991-92	133	93	228	1.0%	1.4%	1.2%
1992-93	146	107	254	1.0%	1.9%	1.2%

Source: GTZ (1995:4)

Thus, although the regular budget, i.e. for routine operations, increased by 90 per cent, the development budget, i.e. for "projects", increased by 161 per cent. The implication of this trend is that hardly any forest working plan operation can be implemented unless an approved "project" provides funds for it. "With the increasing number of short-lived projects, the routine work of forest protection and management is no more ensured. This especially influences long-term activities and sustainable management negatively" (ibid). Hence, although the projects discussed in Section 5 have had many positive benefits, the limited regular budget limits the opportunity to 'scale up' project approaches in routine Forestry Department operations.

Until recently, donor organisations dealing with forestry operated on a project-by-project basis, without paying specific attention to the sectoral and institutional context of the projects. Several reasons are cited for the lack of a well-co-ordinated donor response. There was a perceived lack of coherence in the donors' programmes, lack of an agreed strategy and leadership amongst donors, and lack of understanding of important links (such as between SAP and NCS). When donor funding ceases and the projects come to an end, so does the initiative which the project was meant to support. The cash-strapped government cannot bear the expensive

undertaking. This is partly because donors do not include an "exit" strategy on projects. FDCG and similar initiatives may help to produce a more concerted, integrated response to the problem.

This is where partnerships between donors and recipients need to be worked out. Huizenga and Rafiq (1996) suggest the need to ensure that the SPCS process is managed under a *partnership* between government, NGO and private sector. The lead partner must have a neutral posture and wide acceptability among all the stakeholders. Furthermore, care should be exercised to avoid the SPCS's implementation becoming donor-dependent. This may be achieved by a conscious priority setting, whereby a sufficient local resource availability is assured to be able to carry out the top priorities.

Much of this points to the importance of *priority-setting*. How priorities are currently set in Pakistan, in donor projects and otherwise, is often highly obscure. Institutional reform implies that such priorities better reflect local-level needs, and the need for a greater clarity and transparency of information flows and decision-making. Donors are realising this and are pushing for it - particularly in NWFP at present.

6.6 Synthesis and conclusions

The success of both NCS and SPCS has been partly attributed to their being housed in the Environment Division and PE&D Department, respectively, enabling the development of an inter-sectoral, multi-sectoral plan. The NCS Steering Committee was headed by the Deputy Chairman of the Planning Commission, which forced both donors and government institutions to take the process more seriously. A high level of involvement of government officials in the process - as well as NGOs - ensured that the NCS was an indigenous outcome, reflecting national needs. A strategic constituency was built with the government officials who later advocated the adoption of the recommendations. The NCS and SPCS were perhaps more judicious in the use of consultancy and specifically expatriate expertise that the FSMP. Furthermore, the NCS and SPCS were more overtly *political* than the FSMP, which concentrated on administrative and technical issues. By identifying many of the hot political issues of the time - participation, rights, pollution, etc. - and presenting sensible options, the NCS and SPCS may have caught the attention of government, NGOs and the public. They were managed with a greater degree of tactical skill and awareness than was the FSMP.

The three planning projects have their relative strengths and weaknesses. Our comparison is in terms of the content of the respective plans and strategies, and not yet on their real impacts - since impacts will take time to materialise and there will be uncertainties about precise causations.

Performance Assessment Matrix

Plan/ strategy	Contributions to the following:				
	Potential Equity	Stability	Sustainability	Productivity	Policy
FSMP	medium	medium	medium	high	medium
NCS	high	high	high	very high	very high
SPCS	high	high	high	very high	very high

Our assessment suggests that all the three processes score high on productivity and policy influence. Their performance on equity and stability vary from medium to high. FSMP is a very technical document that provides a comprehensive coverage for the forestry sector until the first quarter of the next century. However, its attention to concerns of equity are rather vague. In comparison, the NCS and SPCS pay particular attention to issues of institutional reform, equity and stability, by making recommendations about NGOs, village organisation, and other facilitating mechanisms. NCS and SPCS are also cross-sectoral in outlook and therefore attempt to integrate resource linkages and responses. Their process of formulation was also more participatory and consultative, and was focused on creating a broad consensus for their respective major thematic areas. In many ways, by tackling the hard issues such as institutional change and equity, the NCS and SPCS go further in pointing to new paths of sustainable development than does the FSMP. However, attention to detail is much higher in the FSMP, since it deals with only one sector. FSMP is also a unique document in providing a perspective for the sector over a longer period, and leaving a menu of project options for perusal by line departments. However, whilst the detail and the sector specificity of the FSMP mean that the FDs may find it easy to "write" formal forest policy based on the FSMP, we suspect that the NCS and SPCS will have a greater policy influence in the longer term: they deal more fully with the fundamental premises of sustainable development, and they raise (if not resolve) the issues of power and rights which determine the real fate or fortune of forests and people.

Policy that works for forests and people

7.1 Synthesis

It is important to understand the challenges we face in the forestry sector. Only 5 per cent of the total land mass is under some kind of forest cover, and most of it is located in the north. With population in Pakistan growing at 3 per cent per year, forests are under increasing demand for watershed regulation and subsistence uses (firewood and grazing) and yet policies are still designed for revenue generation from forests - even though they are of comparatively low productivity for timber. Policymakers' typical response to this challenge has been to make unrealistic targets for increasing the area under forest cover - up to 25 per cent of the total land mass - without tackling the institutional and market factors which underlie real scarcities.

Since forests had an integral role to play in supporting the expansionist objectives of the British colonials, the institution to support these objectives was created in the best of colonial tradition: the Forest Department. Since the first day of its creation, the Forest Department has been oriented and organised as a command-and-control organisation. Being technocratic in outlook and therefore insular in approach, the Department has perpetuated its colonial traditions ever since. The discretionary powers of officials have nurtured a culture of patronage, corruption and rent-seeking. *Ad hoc* policy frameworks and clandestine decision-making have further reinforced the closed nature of the institution. Without any management review since the day it was created, the department has had a complete monopoly over the exploitation of the public good aspects of forests, without the transparency and accountability that should accompany public roles.

The forest policies of Pakistan mainly have been the manifestation of the knowledge, attributes and practical field experiences of *forest officers* - both good and bad. Jan (1992) carried out a subjective assessment of various

national policies. Until now there has been no study on the impact of these policies. As we have attempted to show, in the last two decades, more meaningful lessons have been learnt from a number of NGO - and donor - led participatory field projects that have 'pushed' policy, rather than from many of the government-controlled policies themselves, which were without institutional or other practical "teeth".

The political economy of the forestry sector has also become very clear. In the hierarchy of influence, politicians and the "timber mafia" collude to gain access to lucrative contracts and concessions and thus exercise the most influence on forest policy and decisions. They are followed by the bureaucracy, the NGO community and the international community. International organisations wield influence because of their control over funds. Various line departments fall in the third tier of influence on forest policy and decision-making. These departments derive their influence partly from the regulatory functions they perform, and partly from being major users of the forest. The group having the least influence over forest policy and decisions comprise local communities - even though any changes in policy or decisions will have the most profound impact on their livelihoods.

The recent successes in forest institutional development are largely restricted to the NWFP, where an Institutional Transformation Cell has been created to study the implication of reforming the Forest Department. A Forestry Commission is being created to work as an advisor to the Forest Department and the provincial government. The Forest Act of 1927 is being revised; a modification has already been made to accommodate the initiative of Joint Forest Management, although some things still need to be clarified, such as how benefits from Reserved Forests can be conceded by government to non-right-holders, and/or how owners can do this. Custom and tradition provide some precedents. But it has taken multi-sector, multi-stakeholder processes such as the NCS and SPCS to push forest authorities into these new, enabling roles.

Field-based projects have successfully identified concerns, through pilot projects that are now considered critical beacons for future policies. KIDP, which started as a coniferous forest conservation project in the early 1980s, soon realised that it was not possible to achieve forest conservation without meeting the socio-economic and development needs of the local communities. Project interventions in social and economic infrastructure development helped to bridge the objectives of the communities and the project.

KIDP's experience of managing protected forests, MSFP's experience of managing *shamilat* and the Siran Forestry Project's Joint Management of reserve and *guzara* forest have all demonstrated that, not only is it viable to involve local community organisations in the management of forests, but also that this is the only effective mechanism for devolving the authority for forest management.

The AKRSP model of supporting Village Organisations for natural resource management has proved the efficacy of these institutions for collective action and development at the grassroots level in Northern Areas. A large number of forestry sector projects are now replicating the AKRSP approach for community participation outside Northern Areas.

The experience of establishing public sector harvesting corporations to eliminate the forest contractors, and to improve logging and harvesting techniques, has not been so successful. In contrast, the KIDP experiment to train teams of 3-4 local persons, provide them with necessary equipment such as skylines, and award them small logging contracts, has had better results. This system deserves to be considered in other areas. It provides local people with jobs and improves logging practices and their impacts, serving as a means to replace the large contractors.

It is quite clear that the state has selectively ignored civil society institutions especially for resource mobilisation and governance. This leads to alienation which feeds on other sources of discord and fragmentation and therefore the relationship between the state and society is largely acrimonious. The absence of local government and the distance between provincial or federal government and local people tends to create an institutional vacuum at the local level. It may be this institutional vacuum at the local level, above all factors, which inhibits equitable and sustainable development.

By implication, it is imperative that integration of society through some form of constituency building and experimentation is carried out. Both the processes and the resulting documents of the National Conservation Strategy, Sarhad Provincial Conservation Strategy and the Forestry Sector Master Plan paid varying degrees of attention to extensive public consultation to build a constituency for their respective initiatives. AKRSP and other projects started by filling a local institutional vacuum themselves, but have progressed to encouraging new local institutions and to encouraging governmental institutional change (a process which is constrained by entrenched interests and attitudes and by the paucity of recurrent budgets).

The process of policy-making continues to be archaic, technocratic and insular. Consultation with various stakeholders, in determining the agenda, preparing the action plans and strategies, co-ordinating implementation, and monitoring and evaluating outcomes is very limited and rarely part of a concerted plan. The lessons of projects or other innovations are not routinely assessed, debated or incorporated in policy change. The conservation strategy processes provide perhaps the best precedents for improved policy processes - and certainly have already had some positive impact in opening up decision-making on forests beyond the forest authorities (and their influential political "masters") alone.

7.2 Conclusions: policy processes

Since its independence in 1947, Pakistan has gone through cycles of centralisation (1970s) and decentralisation (1980s), just as it has gone through periods of hope and despair and ambition and indifference. Although real GDP has grown annually at approximately six per cent since the 1960s, there have been periods of stagnation. Real per capita income has increased by nearly 1.5 times since the 1960s. Pakistan has witnessed the emergence of mobile labour, capital goods and entrepreneurship since the early 1970s, which is also reflected in a thriving informal sector. On the other hand, the price stability of earlier times has been replaced by double-digit inflation, interest payments have risen and, although agriculture continues to employ one-half of the nation's workforce, its share in GDP has halved since Pakistan's independence. As a nation that is celebrating its 50th anniversary, and embracing yet another cycle of public spending restraint, prompted by a widening fiscal deficit, gross economic mis-management and a crisis of governance, the future was never so uncertain.

In front of this backdrop of trends, the state is finding it difficult to support what has become a centralised, unwieldy and ineffective public sector. It is left with no other option except to decentralise and, in that way, to pass on its financial insolvency to as yet undefined local tiers of the government. The issue of governance is now the major challenge for the state, at least in the foreseeable future. As the state attempts to resuscitate a defunct local government, the scope for policy making and implementation will be redefined for forestry, as in other sectors.

Policies for sustainable forest management, besides incorporating environmental, social and economic concerns and acknowledging multi-sectoral influences, will have to be made at three levels; (a) the federal

level; (b) the provincial level; and (c) the local level. The following matrix attempts to outline the areas of responsibility for these three tiers.

The *federal tier* should focus on macro activities such as protocols, international conventions and trade. It should also focus on nationally-important forest services such as biodiversity conservation and the protection of major watersheds and on principles and criteria that set the scope for sustainable forest management, but which allow a more precise definition to take account of provincial and local circumstances. It will also entail broad-brush monitoring and evaluation of the stocks and flows from forests, the demands on them, their condition and their relation to imported forest products and substitutes. By virtue of its ability to enact legislation, the federal tier can influence decision-making through all other tiers.

The *provincial tier* should focus on forest management, including the preparation of working plans, harvesting, sale, afforestation, credit, research and training. There is a certain overlap between the functions of the provincial tier and the local tier and the means for developing links and partnerships with the local level, such as JFM, will need to be developed.

At the moment, the *local tier* is only tangentially related to the forestry sector. However, this study should have demonstrated the advantages of involving local communities and their organisations in forest management both for maintaining public benefits, and for managing some private benefits collectively, as seen in the case studies of various projects. Here, key issues will be local forest management rules, partnership agreements, village planning to integrate land uses, and means to secure and protect rights.

Table 7.1 Suggested policy process elements

Level	Issues	Possible Participants/Forum	Possible Instruments
Federal Level	Endangered forest assets such as watersheds and biodiversity; implementation of international agreements and protocols; SFM principles and criteria, monitoring and evaluation of all policies; trade in forest products	Office of Inspector General of Forest; Ministry of Environment; proposed National Forest Coordinating Forum	Legislation; standards; broad-brush forest resource accounting and monitoring of provincial FD activity; information; fiscal incentives

Provincial Level	Forest management including preparation of working plans, harvesting, sale, silviculture, afforestation, research and training; ensuring balance of goods and services	Forest department and forest commission; other line departments dealing with natural resources; proposed provincial multi-stakeholder forums	Legislation; rules of business and partnership; financial incentives; information; departmental co-ordination; monitoring at forest management units
Local Level	Forest management including preparation of village manage ment plans, enforcement of rules and rights, harvesting and sale; balancing subsistence and sale	Village organisations (possibly village governments), cluster of organisations, local and district government; NGOs as 'brokers'	Financial and social incentives; partnership agreements; clear property/use rights; extension and training; Community rules

A missing local government, an inadequate reach of public and private sectors, and an institutional vacuum at the local level, require greater NGO and community participation to enhance the effectiveness, equity and sustainability of development initiatives. The articulation of needs, demands and aspirations of the people through their organisations is the best way to move forward. But NGOs are not necessarily a long term solution; rather, they should be considered as brokers of new relations between local groups, government and the private sector. To make up for the missing local government, it is now being assessed whether it is possible to legally incorporate the village organisations (derived through various projects) as village governments, so that they can mobilise internal resources, raise credit and manage public goods. Indeed, in the current cycle of decentralisation, that may be the only viable option open to policymakers and civil society.

Careful attention also needs to be given to the following factors:

7.2.1 How to ensure participation of stakeholders

The public sector agencies charged with the responsibility of managing the forests have also tended to assume the role of its proprietors. The communities, whether having rights or no rights, have been considered a threat to the forests, rather than stakeholders. The forest authorities have also been reluctant to engage, beyond superficial consultations, with environmental NGOs or policy research institutes. Therefore most policies in the past have been normative. It is recommended that the forestry sector in Pakistan should identify and recognise important stakeholders for the conservation and development of the nation's forests and actively involve these stakeholders in policy making, implementation and monitoring.

As the provincial governments embark on the preparation of provincial conservation strategies - just as NWFP has recently done with the preparation of the SPCS, with Balochistan following suit - a Provincial Forest Stakeholder Forum should be considered to ensure the institutionalisation of continued stakeholder participation in different policy making initiatives. Careful consideration will be needed as to whether this should be mixed government/civil society, or civil society alone initially, and on issues of representation. There are indications that public/private forums may be created within the PE&D Department. Although the provincial level is key for debating and developing forest policies, there are important issues of co-ordination between provinces and between forestry and areas of federal policy - concerns such as environment, which need to be considered. An analogous National Forest Coordination Forum is therefore also suggested.

7.2.2 At what level should policies be made?

Article 37 (i) of the constitution of the Islamic Republic of Pakistan requires the state to decentralise administration. Furthermore, item 37 of the Federal Legislative list states that the legislative power of the Federal Government would not extend to property situated in a province which is subject to provincial legislation. Consequently, provinces alone have the constitutional power to legislate on forests within their territory. However, while forestry is a provincial subject, forestry policy making in Pakistan has always been considered a prerogative of the federal government. Therefore, there has been a gap between the "wish list" (national policy and initiatives such as the Forest Sector Master Plan) and ground realities (local implementation). For the first time, in recent years - and pushed by the SPCS and donors - we now see provincial forest policies in formulation: NWFP is in the process of formulating a provincial forestry policy.

It is recommended that the provincial governments should make their own policies for forests within their territories. The federal government should suggest guiding principles so that the provincial forestry policies conform to the international conventions and treaties on global forest services such as carbon sequestration, and on internationally recognised principles and criteria of SFM. Federal government, in consultation with provinces, should make policies to regulate import and export of wood and paper etc. and inter-provincial movement of wood and non-timber forest products. It should also be responsible for policy in the area of nationally-important biodiversity and watersheds, and national monitoring/reporting systems and protocols.

7.2.3 Policy institutions

Policy making should not be an episodic activity happening every ten years or so. Neither should it be a sole prerogative of the federal government. The policy-making process should be a regular function of both the federal government and the provincial governments but open to other stakeholders. Some essential requirements for policy making should include:

- A Forest Resource Accounting system that manages information on changes in forest quantity, health and condition, uses, and users and which makes such information freely available;
- A related efficient monitoring system that accurately and objectively reports the outcomes of all forestry activities;
- Active participation of different stakeholders in policy making processes so that there is broad consensus and agreement on the vision and mission to be pursued; this should focus on both provincial and national forest fora; and,
- A mechanism for inter-sectoral policy co-ordination. This could be an organisational forum such as might be offered by the Planning, Environment and Development Department or (in the short- to medium-term) an NGO such as IUCN-SPCS Unit in PE&D which has the approval of the provincial government and the line departments.

7.2.4 Monitoring health and condition of forests

Current reporting on forests is based on historical revenue records and therefore does not reflect the actual area, health and condition of the forests and it does not cover the different, actual uses including non-timber uses. A periodic (aerial) inventory of natural forests and large plantations should be carried out as an integral component of the Forest Resource Accounting system suggested above. Relevant information at the level of the forest management unit (obtained by Forest Departments from managers and community organisations) should be integrated, so that there is a much better "stock-taking" of forests. Information technology now easily enables the integration of information from the sources at which it is best obtained e.g. satellites for forest cover, boundaries and village organisations for growing pressure. However, the technology tends to be over-emphasised - it can only manage information, not generate it; its selection is secondary to the fundamental tasks of defining the information needs of SFM, and the form in which forest stakeholders require that information if it is to lead to improved policy and forest management.

7.3 Policies for sustainable forest management

We cannot offer detailed policy recommendations, as these have to be generated by the processes recommended in Section 7.2. Nonetheless, from our analysis in Sections 4 to 6, we can provide some thoughts on the possible contents of future policies.

7.3.1 Objectives of forest management

The full range of forest benefits has never been assessed and, therefore, forests continue to be managed mainly for revenue from sale of timber and fuelwood. Policy recommendations should redefine the objectives of forest management. We cannot be explicit about what these objectives might be, prior to improved information and consultation. But the following is likely:

- Production of timber and fuelwood should not be the primary objectives of the natural forests. They should be managed to maximise the ecological benefits of biodiversity conservation, watershed regulation and mitigation of climate change;
- To meet timber needs, emphasis should be on farm forestry and plantations in the irrigated areas, and a limited area of those upland forests that can be managed without environmental damage

Targets such as 25 per cent forest cover are totally unrealistic, and irrelevant to real demands for forest products. A consideration of such demands would point to the importance of farm forestry and irrigated plantations for construction timber, participatory forestry (in the context of integrated rural development) for livelihood needs and securing the protection of key biodiversity forests and erosion-prone watersheds and other fragile areas. Such a focus on goods and services will result in more sustainable objectives than a focus on forest area alone. Only once these fundamental national and provincial objectives are defined (through processes suggested in section 7.2) can FD procedures and decentralisation be effectively decided.

7.3.2 Community participation and joint management

Active community participation is only possible if the communities are organised and given a stake in the use of forests.

- Active community participation in forest management and conservation should be sought;
- A major effort is required to develop laws, partnership protocols,

forestry methodologies, etc. to support Joint Forest Management. An overt focus on JFM will help to integrate FDs more effectively into the "second wave" of participatory forest projects - but this focus must include mechanisms for learning form past experience.

- Village organisations should be strengthened or - if absolutely necessary - created for natural resource management. Responsibility for managing natural forests should be devolved to these organisations. If possible, the government should legally incorporate these organisations as village governments. However, FDs will need the capacity to support and monitor local organisations.
- Development of capacity for sustainable land use planning at the village level. This is a prerequisite to the sustainable land use strategy that is needed in each province, and which should focus on integrated natural resource management with a particular emphasis on poverty alleviation.
- Government procedures for sharing forest management information with communities, and for efficiently handling royalty payments to communities, need to be improved, to reduce communities' vulnerability to unscrupulous timber contractors.

7.3.3 Farm forestry

The contribution of irrigated farmlands to timber and fuelwood production is currently estimated at 80 per cent. There is growing emphasis on farm and agro-forestry for meeting the increasing needs of industry and subsistence use. In view of this, suggestions for farm forestry are:

- Consultations between important stakeholders including the farmers, the agriculture department, on-farm water management, and the Forestry Department.
- Census of tree stocks and growth on farm lands, as part of the agricultural census.
- Integrated research into farm forestry, to optimise commercial tree and food yields.
- Preparation of outreach materials that are specific to different agro-ecological zones.
- Encouragement of farm forestry associations as "user group" analogues to village organisations.

7.3.4 Logging and forest industries

The experience of the management of logging operations, through either contractors or state enterprises, has not been very encouraging. Since forestry operations should also generate local employment opportunities, it is suggested that:

- Large-scale state logging enterprises should phase out direct harvesting. Instead, they should build the capacity of local communities for co-management.
- Development of small-scale wood based processing industries should be encouraged alongside the various efforts to encourage community afforestation and forest (co-)management, to serve as a commercial incentive for forestry; however, communities need also to take full responsibility for forest protection.

7.3.5 Wood product imports

Given high local prices in contrast to international prices, there are still incentives to cut wood from forests in Pakistan. Yet most of Pakistan's natural forests would be better suited to producing the non-wood goods and services that are also scarce and often cannot be substituted by imports.

More research is needed on the overt and covert barriers to imports. Dismantling these barriers would clearly help wood consumers, although it would obviously hurt royalty earners, concessionaires and forest industry. Further, the removal of such barriers would enable a re-analysis of the extent to which Pakistan actually has a comparative advantage in wood production. This in turn should lead to a reassessment of just what types of forestry activities should be promoted. It could be imagined, for example, that this might entail an increased emphasis on woodfuel production versus timber production. At the same time, liberalization of markets for fuels that might compete with woodfuel would also serve to alleviate pressure to undertake major changes in forest management. Liberalization may assist in breaching the timber 'mafia' by lowering their implicit profit margin. It is assumed that attempts by the 'mafia' to pass such cuts on to royalty holders would only serve to raise questions about the existing system, questions that they would prefer to leave unasked.

7.3.6 Next steps

Following a full discussion of the findings of this study, the first step could be to document and learn from the "best practices" available in the country. For example, documenting and learning from the recent NWFP experience with policy and institutional reform could be rewarding. The second step could be the establishment of multi-stakeholder forest fora, initially at provincial and federal levels. These would put a premium on open and frank discussion, and in commissioning high-quality , independent policy analyses. Institutionalising the use of Forest Resource Accounting (FRA) in informing and reviewing policy could be done in parallel with this. The third parallel step could be to strengthen village organisations that should

be entrusted with the responsibility of forest management, and to further the very promising recent developments in enabling legislation and governmental support services for Joint Forest Management - in all of this work, linking FDs more effectively with local institutions.

All of these steps could be done on a pilot basis, in one region or one province but with much provision for monitoring and review. Once the results are made available to a wider audience, the pilot could be replicated in other parts of the province and later, the country. However, replication would require a careful assessment of the conditions - especially those concerning use rights and tenure - that explain success.

These are interesting times in the recent history of Pakistan's forests. We are beginning to move from an era of deforestation, towards one of investment in forest management and afforestation. Awareness of the forestry problems and potentials is growing, but new regulations and incentives, and more supportive forestry institutions are needed to ensure stakeholders can make the transition to sustainable forest management. One thing is now abundantly clear: things *have* to change. The authors, and a great majority of the many people consulted in the course of this study, believe that the time is "now or never".

Bibliography

Ahmed, A.S. 1986. *Pakistan society. Islam, ethnicity and leadership in South Asia*. Oxford University Press, Karachi.

Ali, A.A. 1990. Whose forest is it anyway? *Herald,* January 1990: 112-117.

Amjad, M. and Khan. 1990. *The state of forests in Pakistan*. Pakistan Forest Institute, Peshawar.

Ayaz, S.M. 1975. *Problems of implementation of forest policy*. Aerial forest inventory series 9. Forest Management Centre, Peshawar.

Balochistan Environmental Profile, 1992.

Banuri, T. 1995. Decentralization and devolution. In: IIED and IUCN, 1995. *op cit*.

Barth, F. 1972. *The role of the entrepreneur in social change in northern Norway.* Universitetforlaget, Oslo.

Bromley, D. 1987. *Institutional development for local management of rural resources*. East-West Environment and Policy Institute. Workshop report no. 2. ICIMOD/ East West Centre, Hawaii.

Bromley, D.W., Feeny, D., McKean, M.A., Peters, P., Gilles, J.L., Oakerson, R.J., Runge, C.F. and Thomson, J.T. (eds). 1992. *Making the commons work: theory, practice and policy*. Institute for Contemporary Studies Press, San Francisco.

Butt, M.R. 1973. *Constitution of Pakistan*. Mansoor Book House, Lahore.

Cernea, M.M. 1992. *Putting people first: sociological variables in rural development*. Second edition. Oxford University Press, New York.

Chambers, R. 1983. *Rural development, putting the last first*. Longman, London.

Constitution of Pakistan. 1993.

Conway, G. 1985. *Agro-ecological zoning of Northern Areas*. Aga Khan Rural Support Programme, Gilgit.

Coward, E.W. Jr. (Ed). 1980. *Irrigation and agricultural development in Asia, perspectives from the social sciences*. Cornell University Press, Ithaca.

Dove, M.R. 1995. The shift of tree cover from forests to farms in Pakistan: a long and broad view. In: Arnold, J.E.M. and Dewees, P.A. (Ed). *Farms, trees and farmers: responses to agricultural intensification*. Earthscan, London.

Dye, R.T. 1972. *Understanding public policy*. Englewood Cliffs, New Jersey.

FAO. 1987. *Forest based rural enterprises: Pakistan*. FAO Regional Office for Asia and the Pacific, Bangkok.

Ford-Robertson, F.C. 1971. *Terminology of forest science, technology, practice and product*. Society of American Forests, Washington DC.

Government of Balochistan. 1994. *State of Forests in Balochistan.* Forest Department, Government of Balochistan.

Government of Sindh. 1996. *Greening Sindh*. Forest and Environment Department, Government of Sindh.

Government of NWFP and IUCN-The World Conservation Union. 1996. *Sarhad Provincial Conservation Strategy.* IUCN-Pakistan.

GTZ. 1995. *Evaluation of the performance and the future of the Forest Co-operative Societies and the Forest Development Corporation: North West Frontier Province*. Prepared by Gesellschaft für Walderhaltung GmbH (GWB).

Hardin, G. 1968. The tragedy of the commons. *Science 162*, 1243-1248.

Huizenga, C. and Rafiq, M. 1996. *Sarhad Provincial Conservation Strategy, NWFP, Pakistan: a case of capacity building for environment*. Presented at The OECD/DAC Workshop on Capacity Development in Environment, Rome, 4-6 December 1996.

Husain, T. 1987. *The community first principle*. Background Paper, NCS. IUCN, Pakistan.

Husain, T. 1992. *On local governance: an introduction to local government, local administration and community participation in Pakistan*. World Bank, Islamabad.

Husain, T. 1997. *Leadership for planning and implementation*. EDC, Islamabad.

Husain, T. and Mahmood, F. 1990. *Community participation and resource management: the role of the Aga Khan Rural Support Programme*. ICIMOD Mountain Series no. 10. ICIMOD, Kathmandu.

Husain, T. *et al*. 1994. *Project preparation technical assistance for NWFP forestry project*. Asian Development Bank, Manila.

Hussein, M. 1993. Inter-sectoral linkages in Pakistan: the interaction between land settlement, tenure, property rights and forest management and development. In: *Forestry policies of selected countries in Asia and the Pacific*. FAO Forestry Paper 115. FAO, Rome.

IIED and IUCN Pakistan. 1995. Policy that works for forests and people, Pakistan country study. *Proceedings of a planning workshop, 30 November 1995, Islamabad, Pakistan.* IIED, London and IUCN Pakistan, Karachi.

IIED and WCMC. 1996. *Forest resource accounting: strategic information for sustainable forest management*. IIED, London.

Jan, A. 1989a. A review of past forestry policy in Pakistan. *Prepared for seminar on Forestry Policy, March 1989, Karachi.*

Jan, A. 1989b. *Role of forests and forestry in National Conservation Strategy of Pakistan*. Government of Pakistan, Islamabad.

Jan, A. 1992. *Review and analysis of forest policies of Pakistan.* Government of Pakistan, Islamabad.

Jodha, N.S. 1991. *Rural common property resources: a growing crisis*. Gatekeeper Series no. 24. IIED, London.

Khattak, G.M. 1989. *Forest policy of Pakistan.* Peshawar.

Khattak, G.M. 1994a. *Strategy for sustainable development in forestry in NWFP- I.* (Draft). IUCN-SPCS, Peshawar.

Khattak, G.M. 1994b. *Strategy for sustainable development of forestry in NWFP - II.* (Draft). IUCN-SPCS, Peshawar.

Khawar, M. 1989. *Pakistan's Environment.* JRC-IUCN, Pakistan.

KIDP. 1991. *Proceedings and recommendation of the timber auction at Chakdara attended by elders from KIDP project area on 5 January 1991*. Kalam Integrated Development Project. Saido Sharif and Kalam, mimeo.

Knudsen, A.J. 1995. *Forestry management in Pakistan: failed policies or local mismanagement*? Chr. Michelson Institute, Fantoft-Bergen.

Knudsen, A.J. 1996. *Deforestation and entrepreneurship in the North West Frontier Province, Pakistan*. Chr. Michelson Institute, Working Paper 1996:11, Fantoft-Bergen.

Kureshi, K.U. 1997. *Geography of Pakistan*. Muhammad Amir National Book Service, Lahore.

McKean, M. and Ostrom, E. 1995. Common property regimes in the forest: just a relic from the past? *Unasylva 180 (46).* FAO, Rome.

NCS. 1992. *The Pakistan National Conservation Strategy.* Government of Pakistan and IUCN, Karachi.

Olson, M. 1985. *The logic of collective action. Public goods and the theory of groups*. Harvard University Press, Cambridge.

Rashid, S. 1993. A forest for the felling. *NCS Bulletin 5* (1): 20-30.

Reid, Collins and Associates. 1991. *Farm forestry in Pakistan, background paper*. Consultant's report for the Forestry Sector Master Plan.

Reid, Collins and Associates. 1992. *Forestry Sector Master Plan, Volumes 1-6.* Pakistan.

Roberts, T.J. 1991. *The birds of Pakistan*. Oxford University Press, Karachi.

Runnalls, D. 1994. *The story of Pakistan's NCS, an analysis of its evolution*. CIDA and IUCN, Karachi.

Sheikh, M.I. and Jan, A. 1990. *Sector paper for forestry, NCS*. The Pakistan National Conservation Strategy. Government of Pakistan and IUCN, Karachi.

Sungi. 1995. *Forest, wealth and politics: a focus on Hazara*. Sungi Development Foundation.

Treacy, M. 1994. The timber harvesting ban and its implications: points for discussion. In: Asian Study Group. *The destruction of the forests*. Asian Study Group, Islamabad. pp. 3-10.

Tucker, R.P. 1982. The forests of the Western Himalayas: the legacy of British Colonial Administration. In: *Journal of Forest History*, July 1982: 112-113.

UNCED. 1992. *Pakistan national report to the United Nations Conference on Environment and Development*. Government of Pakistan Environment and Urban Affairs Division, with the support of IUCN and UNDP, Karachi.

UNDP/FAO. (n.d.). *Suketar Watershed Management Project*. Forest Department, Government of Azad Jammu and Kashmir.

Uphoff, N. 1986. *Local institutional development, an analytical sourcebook with cases*. Kumarian Press, USA.

Uphoff, N. 1992. *Local institutions and participation for sustainable development*. Gatekeeper Series No 31. IIED, London.

Uphoff, N. 1993. Grassroots organisations and NGOs in rural development: opportunities with diminishing states and expanding markets. *World Development 21 (4)* 607-622.

van Hein, G. and Baig, S.M. 1992. *Environmental profile, Balochistan, Pakistan*. LARUS-ITC/ EU-SSP. Land Resource and Urban Sciences Department. Institute for Aerospace Survey and Earth Sciences, Enschede.

WCED. 1987. *Our Common Future: report of the World Commission on Environment and Development.* Oxford University Press.

World Bank. 1996. *World development report.* IBRD, Washington DC.

Annexes

Annex I

Participants at "*Policy that works for forests and people*" workshops

Government of Pakistan

Mr Zaffarullah Khan
Additional Secretary, Ministry of Environment, Local Government and Rural Development

Mr Rana Rafiq Ahmad
Inspector General of Forests, Ministry of Environment, Local Government and Rural Development

Mr Mehboob Elahi
Director General, Environment, Ministry of Environment, Local Government and Rural Development

Mr Nasrullah Khan Aziz
Conservator of Forests

Dr Noor Mohammad
Director, Pakistan Rangelands Research Institute

Dr Shahid Ahmed
Director, Water Resources Research Institute

NGOs

Dr Javed Ahmed
Head, Natural Resources Group, IUCN

Mr A S Bokhari
Strategies Facilitator, IUCN

Mr Shafqat Hussain
Project Administrator - Biodiversity, IUCN

Mr Usman Iftikhar
Research Associate, IUCN

Mr Tahir Qureshi
IUCN Karachi

Dr Tariq Banuri
Director, Sustainable Development Policy Institute

Ms Saba Khattak
Sustainable Development Policy Institute

Mr Guy Duke
Himalayan Jungle Project

Mr Mushtaq Gadi
SUNGI Development Foundation

International

Mr Stephen Bass
Director, Forestry and Land Use Programme,
International Institute for Environment and Development

Mr Peter Jobber
Country Director, World Food Programme

Punjab

Mr Muhammad Amin Khan
Director General, Murree-Kahuta Development Authority

Mr Rashid Mehmood Randhawa
Chief Conservator of Forests , Punjab Forest Department

Dr Sultan Maqsood Khan
Conservator of Forests, Punjab Forest Department

Raja M Atta Ullah Khan
Conservator of Forests, Punjab Forest Department

Mr Javed Akhtar Ahsan
Conservator of Forests, Monitoring and Evaluation

Dr Muhammad Arshad
Divisional Forest Officer, Punjab Forest Department

Mr Nasir Mehmood
Divisional Forest Officer, Punjab Forest Department

Mr Muhammed Farooq
Punjab Forest Department

Mr Ajmal Hussain
Project Director, World Bank Project

Mr Mian Mahmood Ahmed
Director General, Wildlife Punjab

Raja Tariq Mehmood
Project Director, Environment Rehabilitation Project

Mr Marco Marchetti
Chief Technical Advisor, Environmental Rehabilitation Project

Mr M I Sheikh

Dr Rauf Azhar
Professor of Economics, American National College, Lahore

Dr Ejaz Ahmed
Worldwide Fund for Nature - Pakistan

Sindh

Mr Bahauddin Sirhindi
Secretary, Forest Department

Mr Shamsul Haq Memon
Chief Conservator of Forests Sindh

Mr Afzal Haq
Chief Conservator of Forests Sindh

Mr Ghulam Mustafa Sheikh
Project Director, Sindh Forestry Development Project

Dr Kella Lakraj
Conservator of Forests, Social Forestry Circle

Mr Munir Ahmad Awan
Conservator of Forests, Social Forestry Circle

NWFP

Dr G M Khattak
Senior Adviser, IUCN/SPCS

Dr K M Siddiqui
Director General, Pakistan Forest Institute

Raja M Ashfaque
Director, Forest Education Division, Pakistan Forest Institute

Mr G Payr
Acting CTA-GTZ, Siran Forest Development Project

Mr Roberto Barducchi
Technical Advisor, Environmental Rehabilitation Project

Dr Mohammad Iqbal Sial
Project director, NWFP Forestry Sector Project

Mr Muhammad Iqbal Swati
Conservator of Forests, Siran-Kaghan Forestry Development Project

Dr Suleman Sheikh
Project Director, Environmental Rehabilitation Project

Sardar Mohammad Iiyas
Project Director, Dir-Kohistan Upland Rehabilitation and Development Project

Mr Muhammad Yusuf
PMAO, KIDP

Dr Shamshad Khan
Chief Executive, Ghazi Barotha Tarigiati Idaria

Balochistan

Dr Zahoor-ul-Haq
Chief Conservator of Forests

Mr Mujammad Yusuf
DFO Direction, Office of Chief Conservator of Forests

Azad Jammu Kashmir

Mr Rashid Katal
Chief Conservator of Forests, AJK

Dr Manzoor-ul-Haque Awan
Conservator Forests, Northern Resource Management Project

Dr S Asif Hussain
Environmentalist, Planning and Development Department

Mr Shaukat Ali
National Project Manager, FAO/UNDP Mirpur

Northern Areas

Mr Ghulam Tahir
Conservator of Forests, NA Forest Department

Others

Mr Fawad Mahmood
Enterprise and Development Consulting (Pvt) Ltd

Mr Abeedullah Jan
Inspector General of Forests (Retired)

NB Institutional affiliations and job titles are those standing at the time of the *Policy that works for forests and people* workshops.

Annex II

Comparative matrix of policy intentions

	1955	1962	1975	1991
Forestry Objectives/ Management	Classify forests based on utility, and define objectives of management. Forest should contribute to the economic development of the country. Manage forests under working plans. Ensure sustained yields. Forestry should be given priority in national plans.	Manage forests as commercial farms. Maximise yields. Protection against fires Acquire rights of local people. Transfer state lands to forest department for afforestation. Enhance penalties under the Act. Extend Forest Act to tribal and other areas not covered by it. Appoint special forest magistrates. Plant all bare/degraded areas.	Extinguish rights of local people. Do not permit deforestation of wooded areas. Artificial regeneration using high quality growing stock.	Integrated use of forest resources in conformity with wildlife conservation, environmental and social needs. Production of forage an important component of multiple use. Selected public lands will be leased to interest groups for forestry development. Replication of Kaghan Valley and KIDP experience. Reliance placed on artificial regeneration using high quality stock.
Logging/ Utilisation	Fence the forests. Encourage economical utilisation of timber and other products. Stop standing sales and introduce logging by forest department. Establish wood-based industries near forests to create employment opportunities and reduce theft.	Entrust timber harvesting to forest department or autonomous bodies. Improve harvesting methods.	Locate forest industries closer to forests.	Logging to continue to be limited to public sector. Expand forest roads network to facilitate extraction of logs. Mechanisation through use of aerial ropeways and skyline cranes. Duty free import of ropeways and skyline cranes.
Irrigated Plantations	Set aside 10 per cent area of new canal colonies for irrigated plantations.	Grow industrial wood.	Provide funds to raise industrial wood plantations. Use fast growing species to increase productivity. Provide adequate irrigation water.	
Coastal Forests		Prepare plans for planting coastal areas.		
Riverine Forests		Acquire bare areas along river banks.	Increase water supply by lifting or dug wells.	

				Collaborative management through sharing of revenues from trophy hunting. Encourage private game reserves. Provide federal assistance for national parks, and nationally important species. Captive breeding in private sector.
Private Forestry	Sound management through legislation, technical support and financial assistance.	Require village bodies to plant trees around homesteads. Provide legislation to prescribe minimum trees per unit area on farmlands. Make agriculture department responsible for farm forestry. Promote through extension.	Encourage farmers to plant trees around habitations. Provide plants at nominal rates. Provide technical guidance. Entrust management to co-operatives. Forest department to provide technical assistance. Harvesting should be done by public sector co-operatives.	Promote use of village common lands "*shamilats*" for social forestry. Encourage rehabilitation of degraded forest lands.
Promotion of Forestry in Private Sector				Promote afforestation of degraded, waterlogged, and marginal farm lands. Adequate and effective distribution of saplings at nominal rates. Develop outreach/ extension programs and monitor. Involve NGOs/PVOs. Introduce insurance scheme. Long-term low-interest credit for block plantations. Study tours abroad for progressive farmers.
Environmental Forestry				Use tree plantations to mitigate and minimise

Annex III
Forest statistics

Table III.1 Forest area as percentage of total area in Pakistan

Province	Total Area ('000 ha)	Forest Area ('000 ha)	Percentage
NWFP	10,170	1,410	13.9
Azad Jammu Kashmir	7,040	770	11.0
Balochistan	34,720	720	2.1
Sindh	14,090	680	4.8
Punjab	20,630	630	3.1
Northern Areas	1,330	360	27.0
Total	87,980	4,570	5.2

Source: Jan, 1993

Table III.2 Distribution of forests by vegetation type ('000 ha)

Category	Punjab	Sindh	NWFP	Balochistan	NAs	AJK	Pakistan
Coniferous	46	-	1,105	131	285	361	1,928
Irrigated Plantations	136	82	-	-	2	-	220
Riverine	54	241	-	5	-	-	300
Scrub	324	10	115	163	658	1	1,271
Coastal	-	345	-	-	-	-	345
Mazri Lands[1]	-	-	24	-	-	-	24
Linear Plantations	14	-	2	-	-	-	16
Private Plantations	-	-	159	-	-	-	159
Total	574	678	1405	299	945	362	4263

Source: Amjad and Khan, 1990

[1] (Mazri: Nannorrhops ritchiana - *palm plants used to make mats).*

Table III.3: Production of timber and firewood from FD controlled forests ('000 m^3)

Year	Timber		Fire wood
	soft wood	hard wood	
1978-79	205	162	294
1979-80	206	178	204
1980-81	189	66	230
1981-82	207	77	251
1982-83	251	58	249
1983-84	362	58	191
1983-84	362	58	191
1984-85	425	78	198
1985-86	351	73	202
1986-87	418	101	185
1987-88	429	118	164
1988-89	353	129	234

Source: State of Forestry in Pakistan. PFI, 1990

Table III.4 Estimated growing stocks on private farmlands in Pakistan

Provinces	Area of private farms ha	Growing stock on private farmland			Reported removals from private farmlands			
		Timber	Small wood	Total	For sale	Own Use	Total	% of prov stock
		Millions of cubic metres			Millions of cubic metres			
Azad Kashmir	171,523	1.23	0.83	2.06	0.00	0.02	0.02	0.9
Balochistan	1,575898	1.97	1.46	3.43	0.01	0.00	0.01	0.3
NWFP	1,658,680	3.70	4.86	8.56	0.07	0.00	0.07	0.8
Punjab	12,099,508	22.14	23.96	46.10	1.57	0.16	1.73	3.8
Sindh	3,725,884	4.95	3.58	8.53	0.72	0.03	0.74	8.7
Northern Areas	500,000	4.16	3.80	7.96	0.00	0.02	0.02	0.3
Total	19,730,493	38.15	38.49	76.64	2.37	0.23	2.60	3.4

Source: FSMP Farm Forestry Survey. Reid, Collins and Associates, 1992.

Table III.5 Projected consumption and growth of wood in Pakistan

	Units	1993	1998	2003	2008	2013
POPULATION						
Rural Population	Million	81.4	90.9	101.1	111.6	122.1
Urban	Million	41.8	52.5	66.2	83.3	104.7
Total	Million	126.8	147.6	172.2	200.6	233.5
FUELWOOD CONSUMPTION						
Rural	000 m^3	36578	40385	44587	49228	54353
Urban	000 m^3	6917	7636	8431	3909	10187
Total consumption	000 m^3	46455	51289	56626	61521	67028
INDUSTRIAL WOOD						
Total consumption	000 m^3	3549	4280	5339	6419	7933
Consumption of all Wood	000 m^3	50004	55569	61065	68940	76967
Projected Sustainable Supplies from forests	000 m^3	8847	9506	12802	16099	19395
Required From Other Sources	000 m^3	41157	46063	49163	52841	57572

Source: Statistics compiled from Forestry Sector Master Plans of all provinces, Northern Areas and AJK, 1992.

Table III.6 Import of wood and wood products in Pakistan (million rupees)

Item	1990-91	1991-92	1992-93	1993-94	1994-95
Wood rough/squared	84.1	108.0	175.6	259.7	257.4
Wood, shaped	105.3	113.3	96.7	78.2	62.7
Pulp and waste	444.1	657.8	720.4	694.2	794.4
Resins	3730.8	6226.0	6733.4	7926.3	9651.4
Veneers, plywood boards, reconstituted wood etc.	67.3	103.5	84.4	100.6	104.7
Wood manufactures etc.	5.1	8.8	5.7	5.9	27.2
Cork manufactures	3.3	5.8	6.9	9.5	27.2
Paper and paper board	2969.7	3732.5	3366.5	3442.6	3651.9
Articles made of paper, pulp or paper board	171.1	202.3	216.7	212.1	262.6
Furniture	7.3	85.7	38.6	141.5	26.6
Total	7,588.3	11,245.4	11,447.1	12,972.9	14,848

Source: Economic Survey 1996, statistical supplement. Government of Pakistan, Finance Division, Economic Advisers Wing, Islamabad, Pakistan.

Table III.7 Export of wood and wood products (million rupees)

Commodity Group	1990-91	1991-92	1992-93	1993-94	1994-95
Wood in the rough or roughly squared	-	2.0	5.5	2.5	5.2
Resins	3.2	-	3.2	3.5	4.0
Veneers, plywood boards, improved or reconstituted wood and other wood worked.	1.8	3.2	0.7	3.0	2.2
Wood manufactures n.e.s.	28.8	34.5	26.0	48.2	39.7
Cork manufactures.	-	0.1	-	-	-
Paper and paper board	0.6	6.7	7.5	10.4	13.7
Articles made of paper, pulp of paper or paper board	3.1	8.2	10.4	13.7	17.8
Furniture	15.3	9.3	13.4	11.2	42.3
Sports goods (wood based)	1737.1	2036.9	1761.9	2840.1	Unavailable
Total	1789.9	2100.9	1828.6	2932.6	Unavailable

Source: Economic Survey 1995-1996, statistical supplement. Government of Pakistan, Finance Division, Economic Advisers Wing, Islamabad, Pakistan.

Table III.8 Distribution of state and privately-owned forests in Pakistan (000 ha)

Category	Punjab	Sindh	NWFP	Balochistan	Pakistan
State Owned Forests					
Reserved	329	172	94	1,087	1,682
Protected	646	344	4	-	994
Unclassed	23	-	20	-	43
Municipal	116	-	92	-	208
Resumed	8	57	35	-	100
Sub-total	1,124	573	245		3,027
Percentage					66
Privately Owned Forests					
Guzara	37	-	585	-	622
Chos Act	3	-	-	-	3
Section 38	6	-	42	-	48
Communal	69	-	809	-	878
Sub-total	115	-	1,436	-	1,551
Percentage					34
Total	1,237	573	1,681	1,087	4,578

Source: Jan, 1993

Note: Private farm forest is not a recognised legal category. It was not, therefore, taken into account by Jan when computing forest area in Pakistan.

Table III.9 Forest land resource, Sindh

Category	Type	Area (thousand hectares)	% of total area
Productive Forests	Riverine	241	1.71
	Irrigated Plantation	82	0.58
	Sub-total	323	2.29
Protective Forests	Mangroves	345	2.45
	Rangelands	458	3.25
	Sub-total	803	5.71
	Grand total	1,126	8.00

Source: Forest and Environment Department, GoSindh, 1996

Table III.10 Forest land resource, Balochistan

Type	Area (thousand hectares)
Coniferous forest (Juniper)	116
Riverine (inundation) forest	4.5
Scrub and thorn forest	109
Coastal forest	2.3
Rangelands	635
Linear plantations	0.4
Irrigated plantation	0.9
Sand dune plantation	5.2
Canal side plantation	1,000 avenue miles
Total (minus canal side plantation)	874

Source: GoBalochistan (n.d.)

Table III.11 Forest land resource, NWFP

Type	Area (thousand hectares)
Coniferous forest	1,105
Scrub	115
Mazri Land	24
Linear plantations	2
Private plantations	159
Range Lands	150
Total	1,555

Source: Amjad and Khan, 1990

Table III.12 Forest land resource, Punjab

Type	Area (thousand hectares)
Coniferous forest	46
Irrigated plantations	136
Riverine	54
Scrub	324
Linear plantations	14
Range Lands	2,722
Total	3,296

Source: Amjad and Khan, 1990

NB Rangelands are often excluded from statistics of productive and protective forest, as they may have extremely low forest cover.

Annex IV
Profiles of participatory rural development projects

1 Malakand/Dir Social Forestry Project (MSFP), NWFP

MSFP, covering Malakand and Dir districts, was started as a pilot phase in Malakand Agency in 1987-88. Its second phase will end in 1997. The stated aim of the project is to contribute to raising the standard of living in Malakand Agency and Dir district, by improving the productivity and use of hillsides and marginal farm lands. Accordingly, the long term *objectives* of the project are to:

- restore suitable vegetation to the denuded hillsides and marginal farmlands, to create an ecologically and economically improved living environment on a sustainable basis;
- develop extension for these field activities; and,
- stimulate institutionalisation of the extension approach, at local level and within the NWFP Forest Department.

MSFP has covered afforestation, range management, tree improvement, extension, women's activities and training. A key component of the project is Village Land Use Planning (VLUP), a step-by-step approach for preparing a Village Action Plan that contains a complete perspective on land use and zoning as envisaged and agreed by the project and the people. Consensus building is an integral part of this phased methodology. VLUP was not used during the pilot phase of this project but was developed in the second phase. It signifies a shift in the project's approach towards management through extensive participation. Acceptance of the process of participatory planning by the Forest Department has raised hopes that democratic, people-centred forestry management approaches are beginning to take root in the NWFP government.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	Private property, individually or communally held.
Approach	Most activities pursued by the project are forestry-driven, in spite of the interaction between forestry, livestock, range, and pasture management. Although there is significant potential for high-value cash and fruit crops in the region, lack of attention to this not only obviates the project's objective of income generation, but also fails to reduce pressure on forest resources as sources of fuel, fibre, forage and cash. The savings and credit programme of the project is paid scant attention, even though past experience demonstrates that capital formation at the grassroots is a pre-requisite for sustainable development.
Planning	Use of methodologies such as Village Land Use Planning to arrive at products such as Village Management Plans represents a conscious effort on the part of project staff to involve people in decision-making regarding resource use and enforcement of decisions made, and has inculcated a local "ownership" of the entire process.
Participation	The project experimented with public participation in resource management through the social forestry approach and has been quite successful insofar as eliciting interest and mobilising people is concerned. However, the intra-village relationships between, say, the landowners and the tenants or the landless, and their implications for forest management are still not clearly defined.
Sustainability	The project holds consultations in villages that have apparently stable social conditions, thereby permitting conclusive discussions and tangible agreements on ownership, rights and land use. Through vocational and on-site training, the project is contributing to human resource development as well as institutional strengthening of the Forestry Department. Social sustainability of the project's approach will be tested when project support is withdrawn in 1998.
Equity	In principle, formation of broad-based village development committees signifies an attempt towards ensuring equity, thus creating a sense of ownership of the process as rules, rights, obligations, rewards and sanctions are clearly defined and understood, besides distributing benefits equitably. In practice, however, this has not yet happened. There are many constraints, in underlying tensions between landlords and tenants, which the project has had to deal with through a variety of local mechanisms; this all takes time.

Institutional Change The success of the project's approach hinges on how enduring the changes in the attitude and behaviour of the Forest Department will be. The presence of expatriates have so far kept the relationship between the project and the FD working. However, whether the approach of social forestry is eventually permeated to all levels of the Forest Department is difficult to predict at this moment.

Policy change The highly successful impact of this project has been the recognition of the value of social forestry approaches by the project staff, project 'beneficiaries', and policy makers alike. There is now a growing emphasis on social forestry in many policy briefs and statements within NWFP. In fact, the recently initiated ADB-assisted NWFP Forestry Sector Project borrows its implementation approach from this project.

2 Kalam Integrated Development Project (KIDP), NWFP

KIDP is an area development project, covering the whole of Kalam and Behrain *tehsils* in the north of Swat. KIDP started in 1981 and, today, the project area extends to 0.3 million hectares and a population of almost 171,000. The fourth phase will come to an end in 1998. The main aim of the project is to "improve the socio-economic conditions of the population in the project area through people's participation in forestry, agriculture and village development, taking in to consideration the ecological, social, economic and institutional sustainability of all means and activities at all levels". The project identifies various factors as exerting heavy pressure on the natural resources: increased population pressure, change from subsistence to cash crops (potatoes), increasing number of grazing cattle, and the fast-growing tourist industry.

KIDP operates in a relatively egalitarian context, in which each male member of the community (even babies) has a share in the benefits of the forest. However, the *gujars* - landless herders - are not entitled to these benefits.

During 1993-95, the main focus of the project was to strengthen village organisations, channel income generation activities, and develop close interactions with the service delivery departments. The second important task was to streamline innovations in forestry, agriculture and human resource development. During phase IV of the project, KIDP focuses on four principle *objectives*:

a. to create, support and strengthen participatory VOs to the point that they can assert their due rights and avail resources from government and non-government institutions; in short, to increase their bargaining power;

b. to strengthen government line departments - the Forest Department, the Forest Development Corporation, and Agricultural Extension directly and other government agencies and programmes indirectly;

c. to bridge service delivery between VOs and government and non-government programmes; and to accustom all these to working with and delivering services to VOs; and

d. to transfer technical knowledge, both productive and managerial, to farmers and project staff.

3 Siran Forest Development Project, NWFP

Siran Forest Development Project (SFDP), also known as the Siran Intensive Forest Management Project, is located in the Hazara Civil Division of NWFP and extends to most of the Siran watershed. The Hazara forests have been under increasing pressure over the last three decades. To halt deforestation, the NWFP Forest Department, supported by GTZ, established the Kaghan Intensive Forest Management Project (KIFMP) in 1980. By 1991, this had become the Siran Forest Development Project (SFDP). The project area covers all of *tehsil* Mansehra and the newly-formed *tehsil* Balakot. The entire Siran watershed is approximately 181,000 ha, of which 170,000 ha is considered to be a part of the project. The project identifies rapid population growth, inadequate and un-guided land use practices, and low levels of productivity in food and fodder production, as exerting high pressures on forests for agriculture and range use, in addition to exploitation for firewood and domestic timber usage.

The principal *objective* of the project is to maintain the productive and protective functions of forests in the Siran valley through joint forest management. Reserved forests in the Kaghan valley are among the most productive in Pakistan. To effectively tap this potential, KIFMP was instrumental in constructing roads, raising nurseries, providing seedlings, harvesting timber, training people, establishing a range management demonstration plot and a forest workers training school at Malkandi.

What KIFMP never attempted to achieve was forest management in collaboration with the local people. This is the major difference between KIFMP of yesteryear and SFDP of today. SFDP is the first project in Pakistan to implement joint management of forests in Pakistan. Under JFM, local people in the neighbourhood of state-owned forests are involved in the management of those forests, and this is backed by legal Rules. The Forest Department shares power with the local people, who are granted access to state forests to harvest specified forest products (firewood, timber, fodder and medicinal plants). Both elected male heads of the community, and staff of the Forest Department, form a registered JFM Committee. The supreme authority at village-level in relation to the JFM Committee is the General Assembly of the Village, called the General Body.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	Productive (reserved and guzara) forest
Approach	The project is the first in Pakistan that is attempting Joint Forest Management under legal covenant and with the approval of the government.
Planning	The experiment of JFM was not initially supported in full by the Forest Department. The whole system is slowly moving towards evolving the innovations required for sustainable forest management, but whether there will be concomitant changes in Forest Department's planning processes to accommodate such innovations is yet to be seen.
Participation	Under Joint Forest Management, the government and the owners/users of the forest work collectively towards maintaining the forests on private and classified lands. The JFM Committee is responsible for: - preparing the Forest Management Plan, Plan of Operations, and Land Use Plan - smooth and timely execution of harvesting operations - procurement of labour - preventing misuse of the JFM concessions by the beneficiaries - ensuring that beneficiaries receive their entitlements to forest products - controlling trespassing, encroachment, illegal grazing and cutting of trees, etc. - resolving conflicts that may arise
Sustainability	The social sustainability of the project is very promising. It is the first project in Pakistan that has initiated an experiment of Joint Forest Management which aims to unite the forest users and the government, two of the most important stakeholders in forest management.
Equity	By working directly with owners, tenants, government, commercial interests, the project through JFM aims to ensure equity amongst stakeholders. However, this pilot phase may not be the right forum or the initiative to resolve the inherent contradiction between social gains and commercial interests. Moreover, the participation of non-right-holders, in the benefits of JFM has yet to be determined legally, which is a constraint to the project.
Institutional Change	Despite some involvement in the project, the attitude of the mostly conservative staff of the Forest Department is still geared towards their traditional tasks.
Policy Change	The project has introduced, for the first time in the history of Pakistan, the possibility of Joint Forest Management. Already, amendments have been made to the Forest Act of 1927 to accommodate this paradigm shift, through a notification issued in April 1996. This Amendment is known as the Hazara Protected Forests (Community Participation) Rules 1996. This covers: the Joint Forest Management Committee (tenure of office - one year), termination of membership, functions, duties and powers, meetings; functions of the Audit Committee; functions, duties and powers of the beneficiaries; role of the Forest Department; and extent of benefits. There are indications that GTZ may fund the next phase of this project if it is extended to cover more areas.

As such, successful replication of this pilot may modify the whole notion of forestry in Pakistan. However, hasty replication without good analysis of impacts and factors underlying success, should be cautioned against. The project - and its supporting donors - have been at the forefront of the formation of a Forestry Commission. This should take up its work with a mandate to develop a new forest policy and forest law in favour of sustainable forest management, especially related to questions of tree tenure and incentives to plant and manage trees on private and guzara land.

4 Aga Khan Rural Support Programme (AKRSP), Northern Areas

AKRSP, one of the largest NGOs in Pakistan, was established in 1982 to work in the Northern Areas. Today it covers three districts; Gilgit, Baltistan and Chitral, and has formed more than 1,500 Village Organisations (VOs) and almost 1,000 Womens Organisations (WOs). The broad *objective* of AKRSP is to " ... increase the capacity of local people to identify and utilise opportunities and to solve their own problems, so that they can plan and implement development programmes leading to increased incomes and employment; to improve health, nutrition, education and living conditions; and to improve the sustainability and productivity of the environment" (Second Phase Strategy Paper 1987).

In aiming to secure economic, social and environmental objectives, AKRSP has always embodied a sustainable development approach. The key to AKRSP's approach is the VO - a broad-based coalition of all those village residents whose common interest is best served by forming a multi-purpose development organisation. The VO is the executing agency for all village-level projects sponsored by AKRSP and its collaborators.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	State land, communal land (shamilat), and private property.
Approach	AKRSP's resource management approach hinges on a requirement to review resources at three levels - farm, village and valley/watershed. That means work on farming systems, integrated livestock-cropping-pasture systems at the village level, and valley planning and watershed management. Forestry is viewed within the overall context of natural resource management and integrated development. In working on forestry issues, AKRSP considers VOs and WOs as the decision makers and contractual partners, and as the focal point for all AKRSP activities at the village-level.
Planning	AKSRP follows a unique approach of three dialogues between staff a VO, that has proved extremely successful in moving from appraisal of issues, to broad planning, to precise agreement on who will do what.
Participation	AKRSP supports broad-based beneficiary participation in resource management. The programme is today considered as the pioneer in Pakistan in social mobilisation and local-level institutional development for sustainable management of resources. It is not a dogmatic approach, however; e.g. whole plantations are developed communally by VOs, once established they are often divided up amongst individual households. Furthermore, the participation methodologies are attuned to the different forest conditions, e.g. respecting current social hierarchies.
Sustainability	Social sustainability of the project's approach appears promising, although the results from AKRSPs recent decentralisation are still awaited. Ecological sustainability of the approach also appears to be promising, as large tracts of wasteland have been reclaimed, afforestation has been carried out and farm forestry is widely practised. Financial sustainability of AKRSP and its approach will rely on the success of the Development Franchise Institution now being created by the organisation.
Equity	The Programme's emphasis on broad-based participation has ensured that benefits of all interventions accrue to the maximum number of villagers.
Institutional Change	The case of Chalt Chaprote in Nagar tehsil (outlined later in the section) - where the Forest Department has conceded its authority over the local natural forest to a local-level organisation - indicates changing institutional relationships. In particular, however, the Forest Department has a very weak pressure in Northern

	Areas and often AKRSP is the sole forestry agency in many localities.
Policy Change	The approach of AKRSP has a strong following among policy makers and implementers. The model is being replicated in NWFP through the creation of the Sarhad Rural Support Programme; in Balochistan through the creation of the Balochistan Rural Support Programme; and at the national level, through the creation of the largest NGO in Pakistan, the National Rural Support Programme (NRSP). Government has encouraged and supported these initiatives, practically and financially. The Chairman of AKRSP sees the creation of NRSP, a government-supported body - as a particular success: as he had the ambition that AKRSP would encourage government to set up local support structures following the AKRSP model, rather than the administrative norm. The programme has successfully demonstrated the viability of village-level structures to efficiently and equitably manage natural resources. The village organisation is now also the key target for many Government delivery mechanisms. The programme's three-dialogue approach for village mobilisation, planning and implementation has had a strong constituency and is being followed in the NWFP Barani Area Development Project and the forthcoming Malakand Rural Development Project. The programme has also demonstrated the need to approach forestry as part of natural resource management by following a land use perspective. In many ways, therefore, AKRSP has led to a recognition by government of the village organisation as a legitimate unit to support. But it has been more successful in inspiring similar projects than in - as yet - really changing the way that Government bodies work.

5 Watershed Planning and Management Project (WPMP), Balochistan

The primary *objective* of WPMP is to plan and implement programmes for the rehabilitation of seriously degraded watersheds, particularly in northern Balochistan. WPMP is part of the Integrated Area Development Programme (IADP) that integrates the ongoing development efforts and inputs of UNDP/FAO and the Government of Balochistan. The IADP is expected to cover 380 village communities in five districts with an estimated beneficiary population of almost 700,000 people. WPMP will implement all watershed rehabilitation works on IADP sites, in close co-operation with two other FAO/UNDP projects: the Integrated Range-Livestock Development Project and the Feed Resources Development Project.

The project emphasises the preparation and implementation of management plans for watershed rehabilitation, beginning with the Quetta valley. Upland grazing and agricultural lands will be managed and rehabilitated; and improved land use practices will be promoted, which may compensate for a considerable proportion of the present overuse of groundwater. It is envisaged that, through these, and dune stabilisation works, contour ridging, construction of earth dams, spreading of seeds of indigenous grasses and planting of fodder shrubs on gravel out-wash, the project would assist in achieving improved vegetation cover, increased fodder supplies, increased groundwater recharge, and reduced damage by run-off and moving sand dunes.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	State land.
Approach	WPMP's focus is watershed management. However, it closely co-operates with other projects under the umbrella of IADP and thus offers a diversified set of interventions. The project uses VOs as the vehicles for broad-based village participation. It pays particular attention to institutional strengthening of the Forest Department, and to the development of adaptive research. The project is collaborating with Arid Zone Research Institute (AZRI) to develop adaptive trials for tree establishment techniques, suitability of indigenous and introduced grasses, shrub and tree species, and the effect of contour ridges, trenches, dams and other works on water infiltration.
Planning	WPMP uses a participatory approach during its implementation. The project has trained staff to carry out

	PRAs to assist communities in identifying, implementing and monitoring development activities. These "Group Promoters" have backgrounds in sociology, agriculture and forestry. They identify and train Village Motivators, who eventually form the link between the community and the project.
Participation	The project supports beneficiary participation in resource management, so that villagers can establish their own institutions, identify their priorities, organise their resources, manage their development agenda, and forge the necessary links for technical and financial assistance with outside agencies. The project categorically requires that all decisions are made by the general body and not by representatives, whether elected or traditional. It therefore takes a participatory approach, as opposed to a representative approach. The project does not prescribe a single form of local organisation, but recommends Women's Organisations and Interest Groups as alternatives.
Sustainability	In a feudal society, the future of VOs and the other local institutions formed under the project is uncertain when project support is withdrawn. However, the social sustainability of the project's approach appears promising. The project recognises the need for a link between grassroots organisations and line departments, if the sustainability of project's interventions is sought.
Equity	Benefits should accrue to all farmers through the recovery and improvement in vegetative cover.
Institutional Change	The creation of the Watershed Planning and Management Unit within the Forest Department signifies an acceptance of the specific planning and management requirements for watershed development.
Policy Change	The project has redefined the unit of observation, and to some degree of planning and organisation, to the level of the watershed. This is in strong contrast to the forest district or reserve, and implies that forest values of significance at the watershed level - namely water regulation and grazing - are also important. The project has also raised interesting issues regarding the co-ordination of donors and their impact on institutions and resource management. It highlights the potential contributions of a concerted donor policy to resource conservation.

6 Suketar Watershed Management Project (SWMP), AJK

The Suketar Watershed Management Project (SWMP) is a development project jointly undertaken by the Government of AJK, UNDP and FAO. The World Food Programme provides project support in the form of food commodities that are used to help pay for labour required by the project. The project area comprises 30,82 hectares of Suketar Watershed located in Mirpur District. Out of the total project area, 9,52 hectares (31 per cent) constitute government-owned demarcated forest area, 4,36 hectares (14 per cent) cultivated lands, and the remaining 16,94 hectares (55 per cent) uncultivated *Khalsa* wasteland and *shamilat*. In the 1981 census, the human and cattle populations in the project area were 41,551 and 59,000 respectively.

The project area is a typical example of the highly-eroded watersheds of AJK. It is located in the sub-tropical semi-evergreen vegetation type, but has been stripped of trees and grasses to meet grazing and fuelwood requirements. The main *objective* of the project is to reverse the process of land degradation and soil erosion in the Suketar Watershed through sustainable production of food, fodder, timber and fuelwood, involving public motivation and education through extension services, practical demonstration for better land use, participation of the local people and strengthening the Forest Department of AJK.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	Private, communal and state land.
Approach	The project's focus is watershed management, and it pays particular attention to institutional strengthening of the Forest Department in this respect, by emphasising integration of range and forest management programmes. Village Development Committees (VDCs) are developed to act as action groups and not mere passive recipients.
Planning	Watershed management and planning through land use planning and mapping is an innovative and systematic approach to resource conservation and management.

Participation	The project supports beneficiary participation in resource management so that villagers can establish their own institutions, identify their priorities, organise their resources, manage their development agenda, and forge the necessary links for ongoing technical and financial assistance with outside agencies. The project encourages VDC office bearers and other interested farmers to attend periodic meetings of other VDCs, to induce horizontal interaction among VDCs.
Sustainability	The project supports local level institutional development for sustainability of the project's approach.
Equity	Benefits will accrue to all farmers within and beyond the immediate confines of the Suketar Watershed, through the recovery and improvement in vegetative cover and arrested soil and gully erosion.
Institutional Change	Creation and maintenance of the Watershed Management Extension and Training facility may signify the acceptance by the forest department of the need for training staff and contact farmers. However, such acceptance may be related to the fact that the project provides Forest Department staff with overseas training opportunities.
Policy	The project has successfully demonstrated that in unstable and hilly terrain, watershed management is only possible through integrating the work of forestry, agriculture, horticulture and livestock service providers.

7 Sindh Forestry Sector Development Project (SFSDP)

SFSDP's main *objectives* are: (i) to build up Sindh's forest resources to help meet the acute shortage of fuelwood and timber in the province; and (ii) to improve the quality of the environment through afforestation to stabilise river flood plains (mainly along the Indus) and to reduce damage to crops and communities caused by flood waters, strong winds and high temperature. The project pursues a sustained-yield system of management, whereby harvest of mature trees is followed by replanting and/or provision for natural regeneration. It covers, *inter alia*, about 10 per cent of Sindh's existing riverine and inland forest resources identified as urgently requiring rehabilitation. The main components are as follows:

- *Social Forestry:* Assistance to farmers by establishing private farm wood lots and tree plantations in shelter belt areas, on eroding embankments and along waterways covering 12,000 hectares. The project provides assistance in the form of seeds and seedlings and technical advice on site selection.

- *Rehabilitation of Government Reserved Forests:* Rehabilitation of 21,000 hectares of selected forests which are seriously degraded due to lack of regular water supply and silvicultural treatment.

- *Institutional Support:* Strengthening of the institutional capabilities of the Sindh Forest Department (SFD) through the provision of staff training, research facilities, and consulting services.

- *Private Sector Credit Component:* Provision of credit on a pilot basis for private sector participation in the development of up to about 3,000 ha of selected Government Reserved Forests, in combination with the production of agricultural crops and/or industrial wood. However, this component has now been dropped because of government restrictions on lease of state land.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	Private, communal and state land.
Approach	The project's focus is riverine and inland forests. Its orientation is very much support to the authorities and incentives targeted at farmer groups.
Planning	Rehabilitation of riverine and inland government reserved forests require co-ordination with other government agencies such as the irrigation authorities. The project has successfully secured sanctioned water allocations.

Participation	Social forestry is one of the four main components of the project. However, the project does not require the formation of village organisations for managing plantations. It does, however, require farmer groups for the provision of seedlings.
Sustainability	The project is supporting community forestry with the aim of planting 10,000 hectares of forest plantations. The approach appears promising, but may still suffer from top-down targeting.
Equity	The project does not discriminate between owners and tenants for the provision of seedlings and advice.
Institutional Change	Through its focus on social forestry, the project has attempted to secure changing roles and skills among the front line workers of the Forest Department. Training programmes for both government officials and farmers are also meant to build the capacity of the department and the communities to engage in a constructive dialogue.
Policy	Management of riverine and inland forests through the involvement of local groups and NGOs can raise important findings for Sindh and Punjab province.

8 Forestry Planning and Development Project (FP&DP)

FP&DP (1983-94) was funded by USAID with the primary goal to help increase Pakistan's indigenous energy supplies and achieve energy self-sufficiency. The secondary goal was to improve Pakistan's limited forest assets. The primary objective was to strengthen the capability of federal, provincial and local institutions to design, implement and evaluate policies and programmes for increasing the production of fuelwood and timber in Pakistan. The secondary objective was to demonstrate the economic, technical and social feasibility of producing tree crops on privately-owned farm and rangelands. It involved establishing units within the Provincial Forest Departments to conduct farm forestry assistance programmes.

The project has an impressive list of achievements - at least in numerical terms[1]. Project documents report that it has

- supported the establishment of over 5,000 private farmer nurseries;
- produced over 150 million seedlings from these nurseries;
- trained over 20,000 farmers, forest officers and industrial wood users in nursery and plantation management and in marketing principles;
- produced and used 100 multiple language technical training packages to help transfer technology to forestry extension workers and farmers;
- supported 50 studies on topics covering the tree-crop interface, tree management and economic feasibility of tree farming;
- provided grants to 70 NGOs involved in farm forestry and environmental aspects of natural resource use;
- helped establish marketing channels for wood raw material to industries throughout Pakistan;
- helped involve about 150,000 farmers as tree producers with about 130 million additional trees planted; and
- helped afforestation on 5,000 acres in Pakistan.

The following is a subjective profile of the project:

Factor	Implications or lessons learnt
Land Tenure	Private property, individually or communally held.
Approach	Operations were focused on developing a participatory farm forestry approach. This emphasised joint participation by farmers, foresters and industrialists; training programmes in farm forestry and wood utilisation; research to improve farm forestry systems; support to NGOs through a series of grants; and policies and plans to increase the contribution of forest resources to national economic development.
Planning	The project and the implementers included a strong team of professionals which conducted much of the planning but reportedly also involved people in decision-making regarding resource use.
Participation	The project experimented with public participation in resource management, and was quite successful insofar as eliciting interest and mobilising people were concerned. However, intra-village conflicts between, say the land owners and the tenants or the landless, and their implications for forest management, were not

[1] Project monitoring and assessment in Pakistan frequently emphasises numbers of inputs and outputs, rather than processes and qualitative criteria.

	clearly identified and resolved.
Sustainability	Through vocational and on-site training, the project contributed to human resource development as well as institutional strengthening of the Forestry Department.
Equity	Limited use, if any, was made of broad-based village level committees to equally distribute the benefits of the project.
Institutional Change	FP&DP was successful in institutionalising farm forestry programmes within provincial Forest Departments' objectives, establishment appropriations, and permanent staffing structures. Participatory forestry methods are standard practices within farm forestry programmes, and farmer-wood industry linkages are viewed as critical farm forestry components. The project and its approach eventually led to the design and funding of the ADB-assisted NWFP Forestry Sector Project and the WB-assisted Punjab Forestry Sector Project.
Policy Change	The Project Paper envisioned that the project would be proactive in formulating and directing a farm forestry policy agenda for Pakistan. This was commonly interpreted to imply that a revised forest policy for Pakistan would be formulated, and new legislation and administrative regulations would be issued. The policy has been revised, but laws have not yet been passed to effect its implementation. Because no new laws has been passed, many individuals have questioned whether or not Pakistan's forest policy really has incorporated farm forestry as a result of the project. Coherent incentive structures, and associated regulations and co-ordination with Agriculture Departments, have yet to be established.

Annex V

Data used for figures

Data used for Figure 2.1 Total area and area under forests by province (ha)

Province	Total Area	Forest Area
Balochistan	34720	720
Punjab	20630	630
Sindh	14090	680
NWFP	10170	1410
Azad Jammu Kashmir	7040	770
Northern Areas	1330	360

Data used for Figure 2.2 Comparison of timber production from private farmland to FD-controlled forests

Type	Millions m^3
Private Farmland	2.6
FC-Controlled Forests	0.75

Data used for Figure 2.3 The wood supply gap (m^3)

	1993	1998	2003	2008	2013
Projected consumption of all wood	50004	55569	61065	68940	76967
Sustainable supply from Pakistan's forests	8847	9506	12802	16099	19395

Data used for Figure 2.4 Distribution of forest under state and private ownership

Category	'000 ha
State Ownership	
Reserve	1682
Protected	994
Municipal	208
Resumed	100
Unclassed	43
Private Ownership	
Communal	878
Guzara	622
Sectionn 38	48
Chos Act	3

Data used for Figure 2.5 Monitoring and evaluation of Siran Forest Development Project. Reduction of forest cover in District Mansehra

Type	%
Reserved Forest	45
Protected Forest	48
FCS Forests	29
Other Demarcarated Guzara	55