The Quest for Sustainable Forest Management:

Exploring Public -Private Partnerships in the Forestry Sector in Pakistan

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Sustainable Development Policy Institute

For

SUNGI-Food and Agricultural Organization (FAO)

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Acronyms

AEP	American Electric Company
ADB	Asian Development Bank
ANP	Ayubia National Park
ARL	Attock Refinery Ltd.
BOT	Build, Operate, Transfer (scheme)
BP	British Petroleum
CBO	Community based organization
CFC	Chlorofluoro carbon
CPRs	Community property rights
CSR	Corporate social responsibility
DED	Deutsher Entwicklungsdienst [The German Development Service]
DFM	District forest manager
DFO	District forest officer
DSW	Deutsche Stiftung Weltbevölkerung
FAN	Fundación Amigos de la Naturaleza [Friends of Nature]
FAO	Food and Agricultural Organization
FC	Forest Commission
FD	Forest Department
FDC	Forest Development Corporation
FDF	Forest Development Fund
FES	Fuel efficient stoves
FRT	Forestry Round Table
FSMP	Forestry Sector Master Plan
GCO	Green Circle Organization
GHG	Greenhouse gas
GoNWFP	Government of the North-West Frontier Province
GoP	Government of Pakistan
GTZ	Gesellschaft für Technische Zusammenarbeit [German Society for Technical Cooperation]
JFM	Joint forest management
JFMC	Joint forest management committee
LPG	Liquid petroleum gas
M&E	Monitoring and evaluation
MBP	Morgah Biodiversity Project
MDG	Millennium Development Goal
MNC	Multinational company
MoE	Ministry of Environment
NCC	Nature Conservancy, Canada
NEAP	National Environmental Action Plan
NFC	National Fertilizer Company
NGO	Non-governmental organization
NO_x	Oxides of Nitrogen
NRM	Natural resource management
NTFP	Non-timber forest product

NWFP	North-West Frontier Province
OCAP	Oda-Kotoamso Community Agro-forestry Project
PKR	Pakistan rupees
PPP	Public-private partnership
PTC	Pakistan Tobacco Company
RSC	Retail service center
SDPI	Sustainable Development Policy Institute
SO_x	Oxides of Sulfur
SSGCL	Sui Southern Gas Company Limited
TNC	Transnational corporations
UN	United Nations
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNECA	United Nations Economic Commission for Africa
UNECE	United Nations Economic Commission for Europe
USAID	United States Agency for International Development
USD	United States dollars
VBO	Village based organization
VDC	Village development committee
VLUP	Village land use planning
WWF	Worldwide Fund for Nature
ZEF	Zentrum für Entwicklungsforschung [Center for Development Research, University of Bonn, Germany]

Glossary

Ailanthus	Tree of Heaven *(Ailanthus altissima)*
Amaltas	Golden shower *(Casia fistula)*
Angeethi	Stove
Arjun	*Termnalia arjuna*
Begar	Indentured labor
Beoparis	Non-rival purchasers
Biri	Hand rolled cigarette
Bottle brush	*Callistemon lanceolatus*
Dalbergia	Indian rosewood *(Dalbergia Sissoo)*
Gond	Poplar *(Poplar niagra)*
Gujjar	Seasonal migrant nomads
Guzara forest	*Guzara* forests are communal/private forests managed by the government
Jamun	Black plum *(Eugenia jambolana)*
Jareb	Two and a half acres of land
Kanal	One-eighth of an acre
Kandyara	Blessed milk thistle (Silybum marianum)
Khatti	Rough lemon *(Citrus jambhiri)*
Kikar	Babul *(Acacia arabica)*
Lachi	Eucalyptus *(Eucalyptus camaldensis)*
Mada Khel	A clan or sub-tribe of the Yousafzai tribe
Maund	A locally used weight unit which is approximately 40 kg
Miangan/Mians	The descendants of a spiritual pathan saint
Parchoons	Local retail outlets
Phulai	Babul *(Acacia nilotica)*
Qalang	Grazing tax
Robinia	Black locust *(Robinia pseudocacia)*
Sanatha	Hop-bush *(Dodonaea viscose)*
Sukh cheyn	Karanja tree *(Pongamia glabra)*
Tehsil	Administrative sub-unit of a district
Wali	Official title of the ruler of Swat state

1. Introduction

The bulk of Pakistan's primary forests are situated in the North-West Frontier Province (NWFP), with over half of the total forested area within the province concentrated in the Malakand and Hazara divisions. The two divisions cover, respectively, 29% and 17% of the province's area. Forests constitute 7.8% of the total land area within the NWFP and Federally Administered Tribal Area (FATA)[1]. Malakand's forest cover is estimated at 360,912 hectares - about eight percent of the division's area, while Hazara forest cover, at 316,318 hectares, constitutes about five percent of the division's span. About seven percent of the NWFP's forests are state owned, while the remaining 97% are private or *guzara* forests.[2] As with most forest rich areas in Pakistan, the forest cover in Malakand and Hazara is depleted significantly. Data from the Provincial Forest Resource Inventory (1992), indicates that 11% of the existing timber volume is concentrated in only 21% of the surveyed area while 42% of the surveyed area contains only 16% of the standing stock. Clearly, forest productivity is low; in particular, the condition of lowland forests is precarious. Nearly 50% of these are classified as open forest stratum, accounting for a mere five percent of the surveyed timber volume. The only forests with relatively high timber volume are situated in the high-hill regions where accessibility is restricted.

The pre and post-colonial periods witnessed changes in the state of forest related institutions and management, which have been linked with deforestation and loss of community livelihoods. Among other things, the record illustrates that poor communities—small forest owners, rights holders, non-owners, women and grazers—who depend traditionally on forests for their livelihoods were steadily marginalized. Forest management, designed with the specific aim of conservation, proved unable to cope with the multiple, and often conflicting interests of commercial loggers, private developers, government and military agencies, hunters, and impoverished communities, which placed it under relentless strain. Rising prices of timber, fuel wood and forest products, an erosion in the standard of living of the forest custodians, fines and penalties that are selectively applied and fail to match the nature of the transgression, and royalties that are appropriated by the rich and powerful, have combined to create a complex of perverse incentives inimical to both conservation and livelihoods. The irony is that the key inroads into forest resources have began to be made by commercial and development groups which forest management is not in a position to oppose and in fact, cooperates with. On the other hand, it targets communities, whose needs are of an essentially subsistence nature and who - if their rights and traditions are honored - can collaborate with the authorities in the sustainable management of forest resources.

The National Conservation Strategy (NCS), 1991, triggered a donor-led forestry reform process. In particular, it promoted participatory, community-based forest management. There followed a number of donor-driven initiatives, notably the 25-

1 FATA borders the NWFP and is poorly endowed in forest resources

2 *Guzara* forests are private forests managed by the government

year Forestry Sector Master Plan (FSMP), the government's National Environmental Action Plan (NEAP), approved in 2001, and the National Forestry Policy, 1991, all of which strongly endorsed the involvement of communities in forest management. At the provincial level, the forestry reform process produced tangible outcomes in the form of:

- The NWFP Forest Ordinance, 2002
- The Forestry Commission[3]
- Forestry roundtables (to act as think tanks for the Forestry Commission and as a barometer of community concerns)
- Forest Development Fund (to be collected from forest royalties and expended on forest conservation and community welfare)[4]
- The Institutional Transformation Act, 2002 (mandates restructuring of the forest department)

The NWFP Forest Ordinance, 2002, too, contains specific provisions relating to community participation – in effect, they comprise the key elements of joint forest management (JFM).

Not atypically, the reform intent does not echo reality. The consensus is that the Forest Ordinance, 2002 is no different to the enforcement, anti-community thrust of the laws and regulations it has supplanted. Hamid (2002) points out that "the laws…retain almost all the provisions of the old laws relating to reserved, protected and *guzara* forests." With regard to participatory management, Shahjehan et al (2000) notes that, "the ordinance can more or less be seen as a consolidation of forest department responsibilities and authorities, which is incoherent with the substance and spirit of the reforms." Critics observe further that the forest functionary's powers to enter into JFM agreements and assign management rights to village communities are discretionary. In general, they view the reform process as being donor-led and unfriendly to communities, who express ignorance of a process which, purportedly, addresses their concerns. Consequently, the reforms lack ownership, both among communities and the forest department.

The global surge of interest in corporate social responsibility (CSR) and public private partnerships (PPP) as sustainable development agents, suggests a role for the private sector in natural resource management (NRM).[5] This paper assesses the scope of forestry sector PPPs to address sustainable development (SD) concerns. Global examples demonstrate that PPPs offer scope for remediation, linking

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[3] The concept of a forestry roundtable of stakeholders has been institutionalized and given statutory recognition through the NWFP Forestry Commission Act, 1999. Following this act, the Forestry Commission is empowered to guide and oversee implementation of the reforms.
[4] To the Forest Development Fund is to be credited inter-alia timber surcharges, managerial charges, seigniorage fees and fines etc. The Fund is to be utilized for implementing forest management plans including forestry regeneration, forest development and range management, etc.)
[5] In fact, JFM represents an implicit provision in the existing provincial forestry legislation for PPPs. However, as indicated above – and in our case studies -- institutional lapses have prevented these initiatives from making much headway.

sustainable forest management with assured livelihoods for forest dependent communities. PPPs in forestry in the Pakistani context as partnerships between two entities mutually benefiting each other in some manner, are not a new concept. The first PPP can be traced back to 1855, to the Dalhousie era when forests were the common property of state rulers and the people. The communities relied on forests to meet their subsistence needs, while the state rulers used them as hunting grounds.[6] We compare existing PPPs in the forestry sector against a pre-defined norm to see how they measure up, coming up with several recommendations in the process. Among the issues that we grapple with are definitional clarity.

Five case studies were undertaken, representing the various types of extant PPPs in the forestry sector. These are:

1. *Joint Forest Management (JFM): FD - communities*. In the early 1990s, concerned donors initiated a forestry sector reform process in the NWFP in an attempt to arrest the rapid degradation.[7] A key aim of the reforms was to introduce inclusive systems, which ensured an effective voice for forest-dependant communities in forest policy and management. The explicit recognition was that if forests were to be preserved and used sustainably, communities needed to be involved in their management.

2. *Pakistan Tobacco Company (PTC): Corporate entity – farming communities*. This study also highlights a latent partnership between the FD and the PTC.

3. *The Forest Development Corporation (FDC): FD – semi-autonomous forestry body.* The FDC was created to relieve the FD of logging responsibilities. Currently, the FDC discharges all these responsibilities, including marking the trees, to negotiating with contractors for logging and sales, and to distributing sales proceeds.

4. *Shell-Pakistan: FD – corporate entity.* Shell is under contract with the Ministry of Environment (MoE) to promote alternate energy uses among communities in Ayubia's (NWFP) coniferous forests

5. *Attock Refinery Ltd. (ARL) – corporate entity.* ARL is the private component of a pro-poor PPP, co-funded by the GoP and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). The project, the Morgah Biodiversity Project (MBP) has created a biodiversity park where flora and fauna indigenous to the Potwar plateau are reared.

It should be noted that the formal contractual arrangement defines the type of partnership although, informally, many stakeholders may be involved.

[6] Interviews with FDC staff in Peshawar, February 2006

7 Spearheaded by the Dutch, the Swiss, the Norwegian governments and by the Asian Development Bank, a multilateral aid agency.

An aspect that the reforms have ignored, which is central to JFM and, indeed, to public-private partnerships (PPP), is community resource rights. Khan et al (2005, 2006), note in their case studies for Dir-Kohistan and Swat that such rights have been alienated by the growing disjuncture between customary and statutory law, a result of the gradual ascendancy of statutory law. The fluid manner in which these rights are currently defined and interpreted has created tensions among forest dependent communities, as well as between communities and the government. Current JFM initiatives and prospective PPPs will need to address this issue if they are to make any headway.

Section 2 addresses definitional issues, outlines the objectives, approach, and methodology, and undertakes a brief literature review. Section 3 assesses the legal, policy, and institutional framework for PPPs in Pakistan in general, and specifically for the forestry sector. Section 4 undertakes case studies of four types of forestry PPPs. Section 5 concludes with lessons and recommendations.

2. Concept of Public Private Partnerships

2.1 Definitional issues

Definitional clarity is key to establishing the frame of analysis for assessing public-private partnerships. Loew and McLindon provide the following definition:

> PPP arrangements are basically contracts between a private sector entity and the government that call for the private partner to deliver a desired service and assume the associated risks. In return for agreeing to provide the service, the private partner receives payment (in the form of a fee, tariff or user charge) according to certain standards of service and other criteria as specified in the contract. The government is relieved of the financial and administrative burden of providing the service, but retains an important role in regulating and monitoring the performance of the private partner.

An alternative definition is:

> Partnerships between the public sector and the private sector for the purposes of designing, planning, financing, constructing, and/or operating projects which would, traditionally, be regarded as falling within the remit of the public sector (Earle, 2001).

These definitions are grounded in several universal principles enunciated for PPPs, namely:

- A public sector organization plays the role of the entity that requires financial and/or technical assistance to dispense a service or manage an environmental or social initiative;
- A private sector organization provides financial and/or technical assistance to the public sector to generate revenues, and eventually profits;

- The so-called 'partnership' between the two is mutually beneficial in that the public entity can redirect resources to other avenues, and the private entity can engage in operations for profit;
- Such partnerships must address citizens' rights, security, participation, transparency, and accountability. Third party auditing and assessment is advisable.

Ultimately, a public service of a high quality needs to be delivered predictably and efficiently. Guided by market forces, the partnership ensures such delivery while generating profits for the private sector and revenues for the government. Contract types in PPPs can embrace cooperatives, service contracts, management contracts, lease contracts, Build, Operate, Transfer (BOT) schemes, concessions and divestiture, and cut across sectors such as education, health, transport, water, and sanitation (Earle, 2001).

2.1.1 Forestry sector PPPs

In a generic sense PPPs represent the interface of rational economic behavior (efficiency) with the delivery of goods or services with wider social benefits. In the case of forestry, the benefits would embrace both equity and environmental (SD) - imperatives. Further, public-private partnerships in forestry can be viable with regard to biodiversity conservation, plantation management, natural forest management and wildlife management. In our study we focus on both conservation and plantation in primary forests, with ancillary implications for biodiversity and wildlife. The challenge is to tailor the definition to the particular conditions and expectations of the sector, while staying within generic definitional limits.

Drawing upon both international experience and sector characteristics, one could define an ideal forestry PPP with the following attributes:

- A formal partnership between the government, a private sector entity and forest dependent communities. Informally, this would include entities with a catalytic role such as NGOs and donors
- A partnership which promotes the marketing of sustainably harvested forest products, both domestically and abroad (green products), thus ensuring livelihoods for forest dependent communities
- A partnership which ensures conservation benefits[8]

The definition sets a benchmark against which extant initiatives can be assessed. In particular, we reiterate that a formal partnership with local communities is contingent upon clearly defined resource rights. Pakistan's experience with forestry PPPs include joint forest management (JFM) initiatives and forest cooperatives. Private companies (national and multinational), such as the National Fertilizer Company (NFC), Pakistan Tobacco Company (PTC) and Sui Southern Gas

[8] The term is used broadly to include both protection and plantation

Company Limited (SSGCL) also implement afforestation programs as part of their corporate social responsibility (CSR) mandate. Including them expands the scope of the study and yields interesting empirical insights. Such companies could qualify as contingent PPPs in that the potential for environmentally synergistic partnerships between these companies and the government *does* exist. We will expound on this later in the analysis.

2.1.1.1 PPPs and CSR: The linkage

The international experience in the forestry sector illustrates that PPPs are often driven by a CSR mandate where a private entity (company, firm, multinational) enters into a formal partnership with a government agency to promote social and environmental objectives. These objectives are achieved through activities which can be commercial (sale of forest products), or conservation oriented. However, in the first case, the private entity earns profits directly; in the second case, it ensures markets by leveraging goodwill or complying with consumer mandates. CSR is a necessary, but not sufficient condition for a PPP. The latter connotes a partnership, where as a private entity may pursue a CSR mandate unilaterally. Ultimately, both arrangements are flexible and can be mutually reinforcing.

The overarching framework for CSR in Pakistan is the UN Global Compact, launched in 2000. The central idea is for private sector organizations to improve their corporate social and environmental behavior along the lines of nine principles—which are reflected in the UN's Millennium Development Goals (MDGs). These principles fall under three themes, human rights, labor standards, and environment. They include respect for human rights, the right to collective bargaining, the elimination of forced labor, child labor, and discrimination in the workplace, and encouraging environmental responsibility and the development of environmentally friendly technologies.[9]

The notion central to the concept is that modern private organizations no longer have a choice – they must be seen to be socially and environmentally responsible, not only from a human perspective, but a business perspective as well. The associated benefits for private organizations cited comprise improved reputations in the eyes of consumers, better relations with stakeholders, healthier business competitiveness and market position, motivated employees, and sharing best practices. Benefits for the greater population include producing practical solutions to problems related to globalization and sustainable development.[10]

However, here too the gap between rhetoric and reality is very much in evidence. The PTC case illustrates that weak institutional checks allow firms with a CSR mandate to default on their social and environmental obligations. Such lapses occur across sectors, as in the case of Kirthar National Park in the oil and gas sector (Khan, 2004). The bottom line is that social and environmental compliance is

[9] http://www.globalcompact.org.pk/aboutgc.htm#nineps
[10] http://www.globalcompact.org.pk/aboutgc.htm#nineps

contingent upon effective national governance (laws, implemented policies and regulations). Multinational companies (MNCs) may be accountable to their governments (mandatory compliance) or civil society/consumers (voluntary compliance) but in the absence of mirror accountability in the host countries, MNCs tend to connive with national governments to manipulate national laws for commercial gain. Anticipating this, Ward (Ward, 2003) remarks:

> A key challenge is to ensure better integration between national and international policy agendas on good public governance, corporate social responsibility and corporate accountability.

On the other hand, if domestic or foreign firms produce for western markets, then host country compliance requirements will ensure corporate social and environmental accountability. The case of large textile exporting firms, and more product-diffused small and medium enterprises (SMEs) is presented as evidence of this (Khan, 2005). However, prevalent gray areas in the compliance domain reflect the dominance of a "business" as opposed to an innate corporate ethic. Citing Thomson (Thomson, 2003):

> Much of the business literature on this topic makes the 'business case' for improving their social, environmental, and human rights performance of transnational corporations(TNCs); it is profitable to behave well it is claimed. However, the business approach often becomes very narrow, focusing primarily on how to manage stakeholders in such a way that they do not affect TNCs negatively. This approach de-politicises the role of TNCs in the South and ignores the gap which is often identified in the literature between the stated intentions of TNCs and their actual behavior in relation to poor marginalized communities.

CSR as an emergent discipline has been found wanting as a framework for analyzing social and environmental responsibility (Blowfield, 2003). Its formal articulation in the UN's Global Compact has been critiqued by the Regional and International Networking Group (RING, 2003). Both stress the need for an alternative architecture which ensures that MNCs and national firms address compliance/sustainable development concerns more effectively and transparently.

2.2 Objectives, approach and methodology

2.2.1 Objectives

The study objectives are to develop a definitional consensus around forestry PPPs, taking into account both international experience and sector characteristics; assess extant PPPs in the forestry sector in the light of these definitions and; frame institutional recommendations based on these lessons, which would include legal, regulatory, policy and incentive aspects.

2.2.2 Approach

As mentioned, we undertook case studies of four types of forestry PPPs, orthogonally linked to the ideal PPP that we have defined. In other words, we assess how well the cases measure up against the control. This will allow us to suggest interventions aimed at narrowing the gap between the real and the ideal.

Table 1: SD Criteria

		SD Criteria				
	Is it a PPP?	**Economic**		**Environmental**		**Assured livelihoods**
Ideal PPP	**Public-private-communities**	**Domestic sale**	**Export (Green products)**	**Sustainable harvesting**	**Conservation (plantation)**	**Assured livelihoods**
Shell	MoE-private firm	Indirect (sale of wood stoves)	NA	NA	Fuel wood substitute	NA
PTC	Private firm – communities	NA	NA	No	No	NA
JFM	FD-local government-communities	Domestic timber sale	No	No	Limited	No
FDC	FD-FDC	Domestic timber sale	NA	No	No	No
ARL	Federal Government-Private firm-communities-UNESCAP	Medicinal plants	NA	NA	Limited	Limited

Note: NA - Not applicable

Table 1 presents a synthesis of the case study findings and while the observations are cryptic, they become clearer on reviewing the case studies. The shaded cells indicate where there is a potential for meeting the various SD criteria, provided certain preconditions are met.

2.2.3 Methodology

The methodology combined literature reviews with filed investigations, which included group discussions, one-on-one interviews, and on-site observations. The stakeholders involved in the interviews/discussions were tobacco farmers, forest dependent communities, non-governmental organization (NGO) representatives, consultants, company representatives (Shell and PTC), FD and FDC officials, and Ministry of Environment MoE staff.

We visited the following sites:

- Buner (Swat District)
- Madhyan (Swat District)
- Bher Kund (Mansehra District)
- Nisatta (Mardan District)

- Akora Khattak
- Peshawar
- PTC offices in Mardan, Shergarh, and Islamabad
- Morgah Biodiversity Park, Morgah, Rawalpindi

2.2.4 The international experience

As development concepts became more embracing to include social and environmental mandates, implementing development has also devolved in terms of stakeholder participation. Continuing this trend, the private sector has been identified as yet another partner in this growing trend to broad-base development. While PPPs have been introduced with some success in the education, health, and infrastructure sectors in Pakistan, forestry remains a relatively unexplored area (Shah, 2004). Numerous instances of successful forestry PPPs can be cited in other countries, which provide valuable lessons for Pakistan as it attempts to grapple with environmental and livelihood issues in this increasingly fragile sector. The studies were selected from Ghana, Nepal, Bolivia, and Ethiopia.

2.2.4.1 Oda-Kotoamso Community Agro-forestry Project (OCAP) [11]

OCAP was launched in 1997, in the forests of Samreboi in western Ghana by a private timber company Samartex. Farmers used slash-and-burn methods to clear forest area for agriculture partly because license rights owned by Samartex prevented the farmers from selling the trees growing on their leased land. They eventually reached a point where they could no longer leave land fallow for soil regeneration, and had to keep clearing land to sustain themselves.

As a first step, Samartex's agro-forestry project made ownership and user rights concessions to the farmers. They were then motivated through various financial incentive schemes and training workshops to shift to the more economically and ecologically sustainable practice of cultivating a combination of trees, cash crops, and food crops. In addition to this, additional income was generated for farmers through apiculture (beekeeping), pisciculture (fish farming), snail farming, non-timber forest products (NTFPs), and woodcarving.

The partnership between the community and Samartex is a good example of a private organization-community partnership. The partnership was augmented further when the German Government funded non-profit organization Deutsher Entwicklungsdienst (DED) [The German Development Service] began providing technical support to the project the same year. The important point to note in this case study is that user rights were clearly defined *before* the partnership commenced. Also, the introduction of practices unrelated to forestry such as apiculture and pisciculture was an innovative idea for income generation.

[11] Inforesources, 2005

2.2.4.2 USAID: Threats and Opportunities Based Approach - Non-timber Forest Products in Nepal [12]

The United States Agency for International Development (USAID) forestry program began in the 1970s, focusing on the threat that the rural poor in many countries presented in stripping their forests to meet fuel wood needs. The main thrust of the program was to promote community participation in forest management. The partnerships in USAID's case involve local governments, private organizations, and NGOs.

In an NTFP project that USAID is implementing in Nepal, the project covers about 12,000 forest user groups and benefits over 1.4 million households spread over approximately one million hectares of forest. Many of the sites are now actively involved in the production of NTFPs while allowing their trees to reach commercial volume. The NTFPs are exported to India, and are contributing significantly to the rural economy of Nepal. The incentive for the forest user groups to conserve their forests is quite simply the immediate rewards they are able to reap from NTFP sales.

The USAID facilitates a unique alliance between domestic and international NTFP buyers, the Nepalese Government, and the NTFP producers by encouraging responsible buying practices, forest conservation and sustainable natural resource management. The ultimate goal is to help position Nepal's NTFP industry in such a way that it attracts international markets that are committed to buying only sustainable products.

2.2.4.3 The Noel Kempff Mercado Climate Action Project, Bolivia [13]

The American Electric Power (AEP), Pacific Corp, British Petroleum (BP) [14], Fundación Amigos de la Naturaleza (FAN) [Friends of Nature] [15], the Nature Conservancy, Canada (NCC) [16], and the Government of Bolivia formed a partnership to purchase two million acres of forestland adjacent to the Noel Kempff Mercado National Park.

The partners then surrendered their logging rights in an attempt to prove that forest carbon sequestration is a cost-effective green house gas (GHG) mitigation strategy. This project has protected a rich and biologically diverse area from deforestation, and also fostered sustainable development of the local communities. An endowment fund was established to ensure that the forested area remains protected and well managed. The partners estimate that their efforts will prevent the emission of over 21 million tonnes of carbon dioxide over a 30-year period. Large private

[12] USAID, 2003
[13] Harvard University, 2003
[14] All three are large private companies
[15] A Bolivian NGO dedicated to preserving Bolivia's biodiversity
[16] A national charity working to protect Canada's most threatened natural habitats and endangered species

and multi-national organizations around the world have realized the value of a good CSR image and spend millions of dollars on building this image.

2.2.4.4 Wild Coffee Production, Ethiopia [17]

The rainforests of the Southwestern Ethiopian highlands are the only region in the world where coffea arabica grows naturally. However, population pressure and the demand for agricultural land have resulted in extensive degradation. Ethiopia supplies three percent of world exports of coffea arabica, which accounts for 60% of its export revenue. Approximately 1.2 million farmers and their families earn their living directly from coffee. However, due to the depressed world market prices of coffea arabica, many small landowners switched to growing drugs and felling trees that shade coffee plants, to obtain fuel wood. These practices are cause for concern and pose a threat to the rainforest, the survival of the genetic resources of coffea arabica, and the livelihoods of the coffee farmers.

In 2003, two private companies Amber Corporation AG and Kraft Foods, GEO Schützt den Regenwald E.V.[18], Deutsche Stiftung Weltbevölkerung (DSW), Zentrum für Entwicklungsforschung (ZEF) [Center for Development Research, University of Bonn], and the Amber Foundation signed a joint PPP project with the Gesellschaft für Technische Zusammenarbeit (GTZ) [German Society for Technical Cooperation]. A key project objective is to improve coffee production, processing and marketing through various research initiatives. More notable is the participatory forest management program for the Kaffa Zone within the project's target area. Field staff have been recruited and trained in participatory forest management processes. The immediate aim is to gather information on forest boundaries, customary and traditional uses, village and resource mapping, identification of user and interest groups, and the collection of views from different communities. The purpose is to evaluate the information collected and establish a plan for the sustainable use of wild coffee and mountain rainforests.

3. An institutional framework for PPPs in the forestry sector

The existing institutional framework for PPPs is in a nascent stage, a key reason for the FAO to commission a series of PPP studies to develop a legal, institutional and strategic framework for PPPs in Pakistan. However, some of the enabling elements, which can be seen as the basic building blocks of a more formal structure are in place.

The MoE describes forestry PPPs as financial investments by individuals and the corporate sector in forest management. Concurrently, it cites NGOs, forest communities, individuals, and private parties as examples of entities that can contribute labor, finance, and services to a PPP, and share profits and benefits with

[17] GTZ, 2005
[18] A civil society group that advocates the protection of rainforests

the FD. [19] The ministry has established a set of guidelines for PPPs in the forestry sector as follows: [20]

- PPPs in the forestry sector are defined as financial investments by the private sector in activities related to forest management and sharing of profits and benefits with the forest department (FD). Stakeholders can include local communities, NGOs, and private organizations. The 'investment' need not only be a monetary one; labor and materials will also be acknowledged.
- The use of common financial tools such as cost-benefit ratios, internal rate of return (IRR), payback period, and economic life of investment are advocated for determining the production function.
- All prospective stakeholders must engage in extensive dialogues to discuss the implications of technical and legal steps pertaining to any forestry sector PPP.

Realistically, a PPP cannot exclude forest-dependent communities. Pakistan's provincial forest acts make provisions for their inclusion. The NWFP Forest Ordinance, 2002, contains specific provisions relating to community participation – in effect, they constitute the key elements of joint forest management (JFM):

- All reserved forests, protected forests, *guzara* forests, waste lands and other forests placed under the management of a forest officer, shall be managed in accordance with management plans to be prepared with the involvement of local communities and other interested parties
- The government shall facilitate the participation of village communities and interested parties in the sustainable development of forests and waste-lands and encourage women to participate in the management process
- Commercial harvesting of timber will be permitted only in accordance with an approved management plan or regeneration scheme which ensures the participation and assistance of communities, particularly owners, right holders, users and women as may be possible or practicable
- The forest officer may enter into agreements for joint forest management of forest and waste-lands placed under his management with the help and participation of community-based organizations (CBOs), village-based organizations (VBOs), village development committees (VDCs) or any representative group of persons

The forest officer may assign to any village forest community, village organization or joint forest management committee, rights of management over any protected forest, *guzara* forest or protected waste-lands (to be called community forests).

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[19] Prospects of Public-Private Partnerships in the Development of the Forestry Sector (Guiding Principles and General Strategy). Forestry Wing, Ministry of Environment, GoP

[20] Prospects of Public-Private Partnerships in the Development of the Forestry Sector (Guiding Principles and General Strategy). Forestry Wing, Ministry of Environment, GoP

Both state (government) and non-state (the private sector) actors are essential to public service provision—civic, social, or environmental. Historically, adding NGOs to the equation has resulted in conflict between the private sector and civil society. But, it is these very differences that have brought NGOs to the bargaining table along with private organizations and national governments (Murphy and Bendell, 1999). Murphy and Bendell (1999) explain that CSR is not a 'win-win' exercise that improves public relations. Rather it is the private sector's response to constant pressure from civil society organizations and movements – essentially NGOs. An excellent example of this is the 1996 confrontation between Greenpeace and Shell-UK that forced the latter to conduct a series of Europe-wide dialogues between numerous NGOs and stakeholders. The modern global NGO possesses power and recognition. It acts as a corporate watchdog, and an agent of sustainable development.

3.1 The need for transparency

The PPP is unique in that it allows national governments to dispel accusations of selling out to private investors, that is, full-scale privatization. The government is able to maintain a degree of control, divert its own resources elsewhere, and be confident that operations are efficiently managed. The end of the contract sees the private organization leaving the public entity it operated, allowing it to revert to its state owner.

Good governance both internal and at the institutional interface are key factors in a PPP's success. As we indicated, legal and financial institutions, municipal entities, NGOs, and social and environmental action groups are examples of the diverse institutions that maintain a working relationship with one another. Comprehensive policy, legal and regulatory frameworks are required to help these institutions co-exist. Transparency and accountability are an integral part of these frameworks (UNECE, 2004). Transparency refers to the manner in which a policy is designed, how it is implemented, and what sort of selection controls are in place. It makes provisions for all stakeholders, be they citizens, the media, the public, or private sector. It limits the potential for bribery and kickbacks. PPPs tend to lack a tendering process, and are therefore easy targets for corruption. Government legislation must ensure that advance feasibility studies and open procedures be mandatory for awarding PPP contracts. Accountability is especially important as a legislative control because PPP contracts can last many years, often longer than the tenure of an elected government. Many Government contracts in Pakistan—especially those with foreign investors—are negotiated in secret and not made public till after being signed. The 'public disclosure' of civic service provision must be ensured.

Many researchers advocate establishing an autonomous or semi-autonomous body within a national government that is empowered to deal with all PPPs in the country. An important and necessary role would be that of an intermediary (UNECE, 2004). The organization would act as an impartial judge and mediator between the government and the investor. By law, conflict resolution would have to start under the auspices of this body, and only be carried to court after a set time-period if both parties agree to do so.

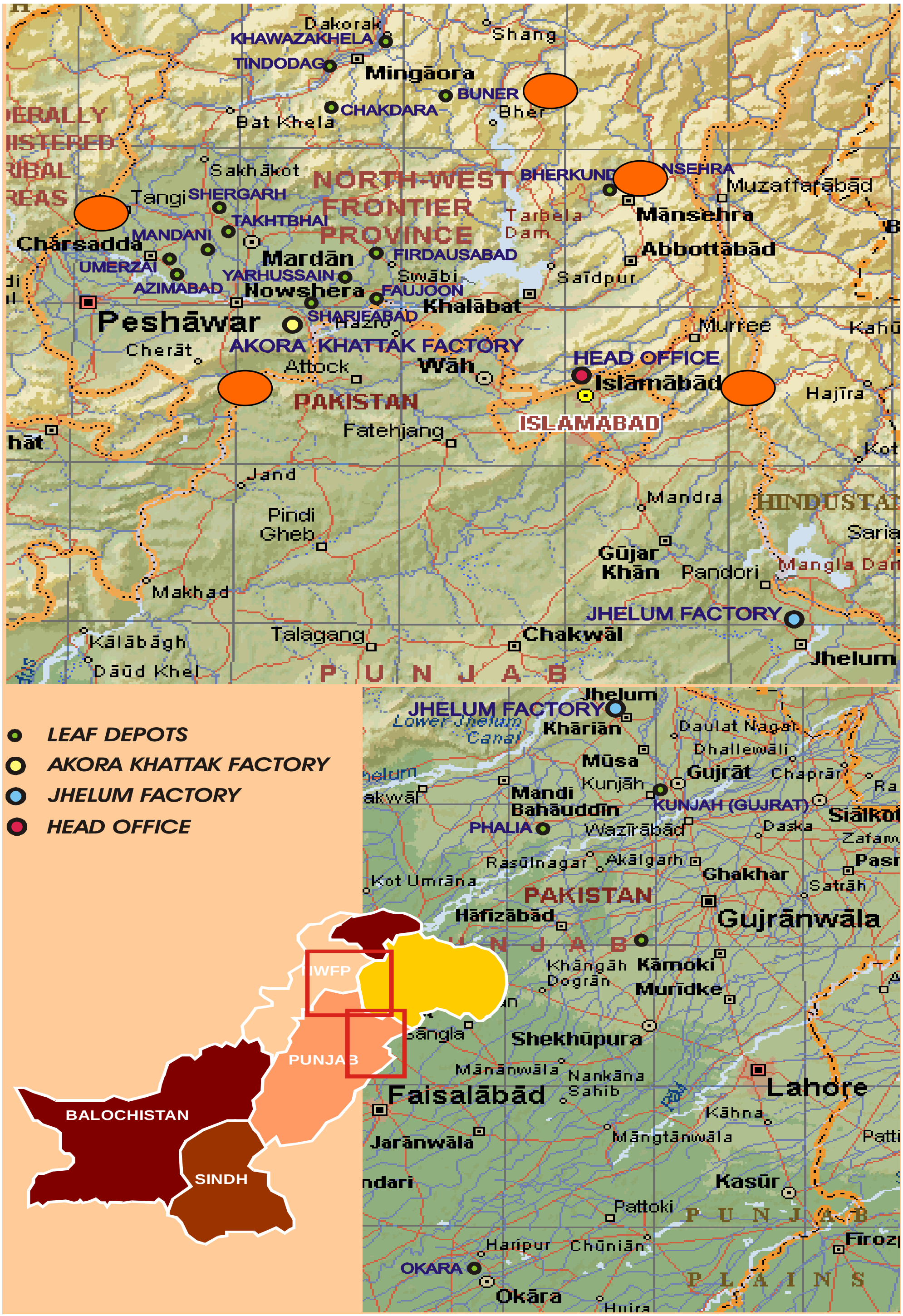
Examples of private investment in the forestry sector include the National Fertilizer company that regenerated and protected 15 acres of forest land in Murree; Pakistan Petroleum that planted trees along the Ravi River in the Lahore-Shahdara forests; and Pakistan Tobacco Company (PTC) that provides saplings to tree farmers. Similarly, to reduce deforestation, Shell Pakistan in collaboration with the MoE provided an alternative energy source in the form of LPG gas cylinders to forest communities in Ayubia National Park.

4. Case studies

4.1 Pakistan Tobacco Company (PTC)

The Pakistan Tobacco Company (PTC) carries out extensive production, support, purchase, and marketing activities in the NWFP and the Punjab. It has established 14 depots in the two provinces, which serve as tobacco procurement, input distribution, and extension centers. While PTC provides seed directly to farmers, it also facilitates the distribution of inputs such as fertilizer, pesticides and fungicides. The company announces the purchase price of tobacco at the beginning of the planting season and undertakes to purchase pre-specified amounts from farmers under formal purchase agreements. The price can vary around this benchmark price, depending upon the grades assigned to the lots. The tobacco is processed in two factories located, respectively at Akora Khattak and Jhehlum. The bulk of the better quality tobacco is exported, while the lower grades are sold to local companies for domestic cigarette production. Lakson Tobacco is PTC's main competitor and there are also non-rival purchasers (*beoparis*) of low-grade tobacco who sell to local retail outlets (*parchoons*). The map indicates PTC's spatial outreach and we have also marked in the areas we visited.

Figure 1: PTC Offices and Factories



4.1.1 PTC and Corporate Social Responsibility (CSR)

Tobacco farmers consume large amounts of fuel wood to cure tobacco, comprising up to thirty percent of total input costs. The farmer either obtains this fuel wood from the market or from hill slopes; either way he contributes to deforestation. To give an idea of the problem's magnitude, about 4,500 tobacco-curing kilns are to be found around the village of Suwarei, in Buner district. At the rate of 5 *jarebs* (2.5 acres) per kiln, these kilns service approximately 11,000 acres of land under tobacco cultivation. Each kiln consumes about 1.4 tons of firewood over a period of 8-10 days. So one cycle of curing for the entire farming area consumes about 6,300 tons of fuel wood. Magnify this sum by the number of villages and districts growing tobacco in the NWFP and the Punjab and one arrives at the scale of the deforestation problem. A combination of informal government pressure and self-assessed corporate social responsibility has encouraged PTC to launch an impressive afforestation program.

4.1.2 The PTC version of its program

Since 1981, PTC has overseen the plantation of 25 million trees at an annual rate of over 4 million trees. The primary objective of the program is to support and encourage tobacco growers in developing their own fuel wood resources needed in large amounts for leaf curing. The planting stock is distributed through its fourteen depots and the afforestation focal point at Islamabad. The beneficiaries are private farmers, army establishments, educational institutions, government, non-government and social organizations. Presently it's tree growing activities are concentrated in the tobacco growing areas of the districts of Charsadda, Mardan, Swabi, Swat, Buner, Mansehra, Gujrat and the federal capital, Islamabad.

Tree plantation is carried out under an informal agreement with PTC. The PTC staff identify the potential growers, assess their needs for planting material, raise or procure healthy planting stock and supply it to the actual users. Subsequently, the staff monitors the plantations. The company charges a nominal price per plant (PKR 0.25/poplar, and PKR 0.15/eucalyptus) to ensure a sense of ownership and care. The main plant species are poplar, eucalyptus, robinia, and ailanthus. The farmers prefer poplar and eucalyptus because of the relatively short elapsed time before maturity and high survival rates (PTC, 2002). Other plants provided are, sanatha (dodonia), arjun, jamun, khatti, amaltas, bottlebrush, sukh cheyn, kikar and dalbergia. Robinia is planted in relatively high areas whereas the eucalyptus and poplar are mostly raised in the plain areas. Re-visits during the afforestation audits revealed an 88% survival rate, well within the acceptable mortality bound.

According to PTC, the farmers have achieved fuel wood self-sufficiency of 135%. In other words, the plantations more than meet their fuel wood needs.

4.1.3 A sustainable development assessment

Our assessment differed in some respects from the PTC claims. We based this assessment on the three identified sustainable development criteria, - economic, social, and environmental.

4.1.3.1 Environmental impacts

An important point of departure in our assessment of PTC's claims is that of fuel wood self-sufficiency. The species farmers prefer is poplar, which constitutes over 90% of the total plantation. Poplar fetches a higher market price than the other species as indicated in Table 2. As a fuel wood it burns relatively fast. Clearly, both on commercial and combustion counts farmers prefer to sell poplar.

Table 2: Wood Prices per maund (40 Kg) – 2006

Species	***Price (PKR)***
Eucalyptus	180–200
Shisham	180–200
Phulai	190–210
Poplar	360–380
Kikar	180–200
Mulberry	160–180
Others	175–200

Source: PTC Shergarh Office, 2006

In effect, this invalidates PTC's afforestation claims. The pressure on both primary and deciduous forests continues unabated. As further evidence, farmers in the Buner villages confessed they were responsible for direct and indirect (via purchases) inroads into the eucalyptus watershed plantations.[21] There is an additional caveat. We were not able to make a correct attribution between PTC, FD, farmer distributed and self-generated plants. The poplar is a hardy species, which regenerates naturally and can be propagated easily. In fact, farmers had started raising their own nurseries for sale to co-farmers.[22]

An opportunity for a related PPP arises out of this mismatch between perception and reality. Specifically, we recommend that PTC enter into a partnership agreement with the FD to afforest and protect designated areas, with community participation, if possible; otherwise, by employing dedicated staff. This will ensure a more transparent and focussed discharge of its corporate social responsibilities.

[21] Eucalyptus is used as a fuel wood

[22] The production of lignotuber is a characteristic of the poplar and eucalyptus this generally makes them respond to coppicing. On the death of the plant stem, either by cutting or through fire, dormant vegetative buds, which have been present in a tuberous mass at the base of the tree, develop and produce new stems

Figure 2: Farmer's poplar nursery - Buner

The inadvertent environmental benefits are more in evidence. The plantations are extensive and villagers concede temperatures have dropped due to the increased canopy cover. Both poplar and eucalyptus are salt tolerant and water absorbent species, and the plantations have reclaimed large tracts of marshy and waterlogged land. However, farmers rightly point out that the trees will, eventually, compete with water for irrigation.[23] The PTC staff claimed they were diversifying their nurseries to include species that could be used as fuel. The farmers confirmed this but it is being done on a small scale.

There is no prior reason to contest the claimed indirect benefits in the form of environmental services, including carbon sequestration, watershed protection, and biodiversity conservation.

Farmers prefer to grow the saplings linearly. The block plantation is preferred only for saline and waterlogged land. Linear plantations ensure complementary benefits, in that farmers can grow annual crops (wheat, maize, and sugarcane) on cultivable land and raise trees with longer maturity periods along the water channels and on uncultivable land.

[23] The impacts of the exotic species like Eucalyptus and Poplar are sometimes massive but often subtle. A potential impact could be the alteration of the whole ecosystem by altering the hydrology. There is evidence from India that large scale planting of eucalyptus and poplar resulted in the rapid destruction of the water resources.

4.1.3.2 Economic Impacts

Trees are assets that grow in value over time and produce a wide range of economic benefits. The direct economic benefits received by each grower are usually associated with higher incomes and increased property values. Indirectly, they produce fodder for livestock and timber for house construction. Income generation is both substantial and often "lumpy", although farmers have begun to time-space space plantations to generate annual returns. Farmers also attributed an appreciation in their land values to tree plantation.

Again, we insert the caveat that PTC is not the sole benefactor and that credit goes equally to the FD and the farmers' own initiative. On a more serious note, farmers complained about PTC pricing practices; in effect, tobacco prices were not keeping pace with rising input prices, thereby reducing their profit margins substantially. Intra-farmer inequities were also pointed out. Thus, PTC gave preferential treatment to large farmers both in terms of grading and procuring tobacco. Small farmers complained that PTC reneged on purchase agreements. Also, Lakson and PTC colluded to keep rival companies out of the area and encouraged farmers to purchase inputs from their designated suppliers. The combination of a misplaced farmer fuel enhancement program and discrimination against small farmers suggest a cosmetic aspect to PTC's corporate social responsibilities.

4.1.3.3 Social Impacts

The villagers derive aesthetic satisfaction from the plantations. More important, tree plantation offers an opportunity for education and empowerment among the community members. Recognizing the multiple social, environmental and economic benefits presented by trees, communities have the opportunity to educate themselves and their children about these benefits and the importance of these plantations.

4.2 Joint Forest Management (JFM)

Perhaps the first question we need to ask here is why joint forest management (JFM) as an example of PPPs. In the strict sense JFM represents a formal partnership between the FD and communities; the FDC and/or individual contractors represent private entities but they are not signatories in the agreement. The reason is that JFM in Pakistan revolves around a commercial activity, namely, timber harvesting. In theory, JFM offers prospects of ensuring such logging in a sustainable and equitable manner. Also, potentially, such JFM committees (JFMC) can link up with private companies for marketing green timber and NTFPs.

Joint forest management (JFM) had precedents in community forestry which, prior to British rule, was how forests were managed in the Indian sub-continent, including Hazara and the NWFP. Community members not only regulated the use of their forest assets to protect them from over exploitation, but also determined how forest assets would be used. The Forestry Act (1927), allowed the British colonial government to appropriate these and to exploit them for commercial, development and construction purposes. New forest classifications (reserved, protected) emerged, ostensibly designed to protect the forests. In reality the forests began to be degraded due to their growing commercial value, a trend recently compounded by governance lapses. A category of *guzara* forests were also designated in Hazara under the *Guzara* Forest Act, 1936; its purpose was to allow communities access to and use of forest resources, thereby reducing pressure on the reserve forests. In effect, community access to these resources was heavily proscribed by government rules and regulations.

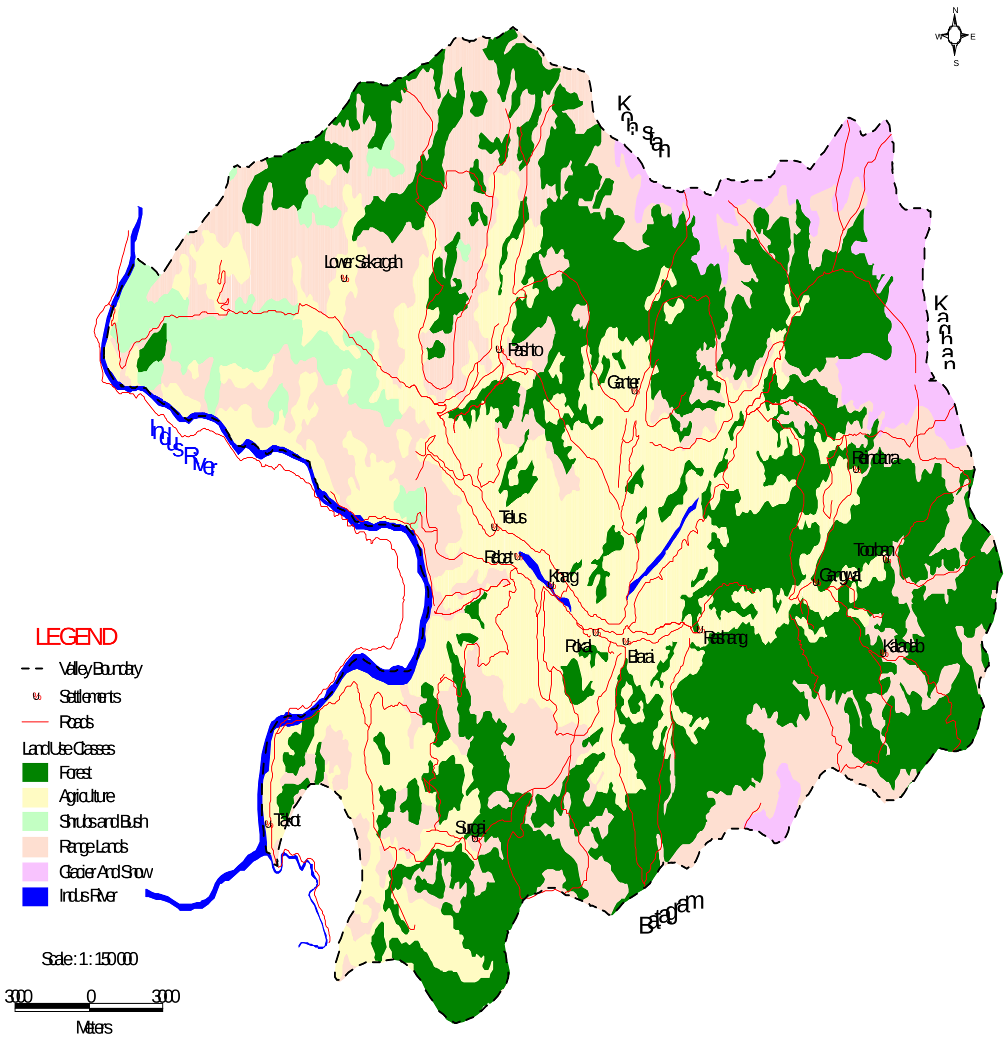
The continued degradation of primary forest resources drew the attention of both the government and donors. Subsequently, in the NWFP Forest Ordinance, 2002, a provision was made for JFM (via JFM bye-laws in the ordinance) in the hope that the re-induction of participatory management practices would arrest deforestation. Events, subsequently, have not borne this out. The official stance is that JFMCs are democratic and involve community members in forest conservation and timber harvesting. The FD staff, however, openly concede that the bulk of the JFMCs are created solely for harvesting and rarely for forest protection.

We argue that the deviation of JFM practices from precepts reflects two anomalies, namely: a) the disjuncture between *de jure* and *de facto* rights and; b) unequal forest ownership patterns. We demonstrate this with the help of two case studies. The first case study, examines JFM in a *guzara* forest where forest holdings are owned privately. Notwithstanding, corruption and governance lapses by the forest department have deprived small forest owners of revenues. In the second case study, we show that where *de jure* and de facto resource rights converge, the type of ownership is no bar to managing the forests sustainably and to ensuring an equitable distribution of revenues. Ultimately, the message is that clearly defined resource rights are a pre-condition for successful partnerships; a necessary corollary is institutional transparency.

4.2.1 Case Study 1: Allai, Hazara

Allai valley, situated in Battagram District of the NWFP, is bounded in the east by the pastures of Chour and Siran valley, in the west by the Indus River, in the north by Indus Kohistan and in the south by the Nandhyar valley. The total area of the valley is 56,378 hectares, which includes 22,463 hectares of *guzara* forests (40%), 15,640 hectares of cultivated land (28%), 15,007 hectares of rangelands (27%) and 2,968 hectares of pastureland. Allai valley has population of 131,765 with 19,377 households with an average household size of 6.8.

Figure 3: Land use Map of Allai Valley (Batagram District)



The valley was ruled by *khans* (tribal rulers) until 1949, when it signed the Instrument of Accession with Pakistan. In 1971, *Allai* was merged in Pakistan as an administrative part of the Battagram sub-division. In 1993, *Battagram* was upgraded to the status of a district and *Allai* become one of the sub-divisions of *Battagram* district. The two main *pathan* tribes, *swati* and *stanadar* have almost the same social status in the valley. The minor sects in the valley are *gujjar*, *kohistani* and *kammis (artisans)*. They are mostly landless but have use (subsistence) rights to forest resources. The local *jirga*, consisting of local elders and religious leaders is a well-established institution for conflict resolution. It has no permanent membership but is constituted when needed to mediate inter and intra-community disputes; the *jirga* substantially reduces official courts litigations. Land holdings are small, with the average holding being less than one acre. Under existing tenancy arrangements, agricultural produce is shared equally between the landlord and tenant. Job opportunities in the valley are scarce, with in country migration to large towns and cities providing an employment safety valve.

4.2.1.1 The Gangwal JFMC

Gangwal is the last village of Allai valley and where joint forest management was initiated on pilot basis. It is situated at an elevation of 2,134 m above mean sea level. The slopes are moderate to steep. The area of the village is 1662 ha of which moist temperate *guzara*/communal forests cover 974 hectares. The *mada khel pathans* own the *guzara* forests formally but all other stakeholders have free access to the forests and hill slopes. The *gujjars* pay *qalang* (grazing tax) to the *mada khel*.

The first dialogue with the community of the village proved extremely difficult. The communities inherently mistrusted the forest department. This mistrust was compounded by some large forest owners, who preferred to continue the previous modes of transactions through timber contractors. In due course, the villagers were won over. A JFMC was constituted and members elected by democratic vote. The committee was assisted by the forest department to draft byelaws and assign responsibilities to its members. The committee membership was broad-based, including forest owners, non-owners, users, local councilors, NGO, and forest department representatives. The proposed financial deduction for the Forest Development Fund (FDF) proved an irritant but was resolved eventually.

The intent was to develop an alternative institutional arrangement for achieving the objectives of forest policy. This entailed the empowerment of local communities, who would take on protection responsibilities in return for a guaranteed share in the sale proceeds of timber. The communities were initially enthusiastic as, for the first time, they were privy to the harvesting plans, and their committee representatives co-signatories to the agreement governing timber marking, extraction and marketing.

However, fairly quickly the JFMC metamorphosed into a harvesting operation, ostensibly in a more democratic form. But here too cracks appeared. The forest owners showed themselves financially indigent and reverted to the old practice of selling their royalty shares to timber contractors for much lower advance payments. However, the practice of authorizing the large owners to collect forest royalties on their behalf through collective powers of attorney which were then misappropriated has ceased. For financial reasons timber marketing also reverted to the contractors, although the marketing process and the distribution of revenues was monitored by the JFMC. Forest regeneration/restocking and maintenance, while mandated, is not markedly visible. The perception is that once marked trees have been harvested and sold, the JFMCs will become dormant. Essentially, the driving force behind JFM in Allai is individual leadership rather than institutional legitimacy. Once the contractor-large forest owner nexus re-asserts itself - and powerful political connections will ensure that it does, JFM will, in all probability, disguise previous practice.

4.2.2 Case Study 2: Lalku, Mata Tehsil, Swat

The case study site is *Lalku* Valley, which consists of *Bar Lalku*, *Koz Lalku* and *Lalku Gharai*. The Valley is situated on the north tip of the *Matta tehsil* of the *Swat* District. *Lalku* Valley is 55 km from the district headquarter *Saidu Sharif*. It is richly forested; according to the revenue record, close to 90% of the assessed area is under forests. The alpine pastures receive heavy snowfall in the months of January and February, which results in long and cold winters. The population of approximately 7,000 is predominantly *sayyad*, who are called *miangan* by the down country people. The area is backward and lacks infrastructure facilities, basic amenities and social services.

The pre-Swat State era was characterized by a tribal set up, with its own system of natural resource management. In this system agricultural lands were owned individually while forests and *bandas* (grazing lands) came under collective ownership (*shamilat).* Agricultural land ownership was and is a precondition to use rights in grazing lands and forests. The *mians* had their own conflict and dispute resolution mechanisms in the form of *jirgas* which work efficiently in land/property disputes.

In 1917, the *wali* (ruler) of *Swat* brought the entire *Swat* state, including *Lalku*, within the ambit of a permanent settlement system. In effect, the control and management of forests shifted from the communities to the State. This arrangement was extended after 1969 when *Swat* state merged with Pakistan. In 1974, the state forests were declared protected forests and their management transferred to the NWFP forest department. New rules and regulations were formulated regarding subsistence and royalty rights. Subsistence rights (fuel wood, fodder, timber for household construction, and extraction of NTFPs were legally made subject to permission by the forest department. With regard to forest royalties, the former forest owners were reclassified as 'concessionists' entitled to 60% of the share in these royalties.

However, legal definitions regarding ownership and use rights have little credibility with communities when the means to enforce them do not exist, or when they are seen to be enforced in a non-transparent manner. Corruption is amply documented both in terms of the gratuities communities have to pay forest department staff to avail their use rights, and the manner in which forest royalties are misappropriated by timber contractors in collusion with the forest department and civil administration officials. Another factor which cements community stakes in the forests is the recognition of their customary entitlements in statutory law. Thus, the forest department concedes both subsistence and royalty rights to the historical owners of the forests.

Perhaps the most important consideration and one having a bearing on joint forest management is the disjuncture – or conjunction, of *de jure* and *de facto* resource rights. At one level, the communities and the forest department contest the de jure ownership of the forests. However, a more important disjuncture is between these rights at the community level. In large parts of the Mata tehsil the *pathan* land owners, with traditional use rights to the forests, reside in the lower valleys. The resident *gujjars* (livestock herders), who are a different ethnic group and live in close proximity to the forests, pay a tenancy (*begar*) and grazing (*qalang*) tax to the *pathan* land owners for tilling their lands and grazing their livestock in the forests. As we indicated above, ownership of agricultural land determined use rights to the communal forests. Although the *gujjars* depend on the forests and live close to them, lacking ownership and royalty rights, they do not have a vested interest in conserving or protecting the forests. Consequently, forest degradation and land use changes are abundantly in evidence, for instance in *Soulaten* and *Chitkarei*.

In Lalku, *de facto* and *de jure* rights converge. The *mians* who live close to the forests also own the agricultural lands which border them. Equally important, they are an ethnically homogeneous group and land ownership is relatively egalitarian.[24] The *mians* have a vested interest in protecting their forests deriving both livelihoods and royalties from them. To that end they cooperated with the forest department in setting up a joint forest management committee (JFMC) in 2003. While harvesting with the intention of earning royalties was a key driving factor, the scope of the JFMC also included plantation and protection activities. The forest department has distributed saplings among the communities and the evidence points to high survival rates. The development orientation of the communities is also demonstrated by the existence village development and *tehsil* committees involved in infrastructure and services provision.

Recapping, joint forest management represents a partnership between the forest department and the forest dependent communities. A key factor driving this partnership is the commercial harvesting of timber; in fact, the majority of the

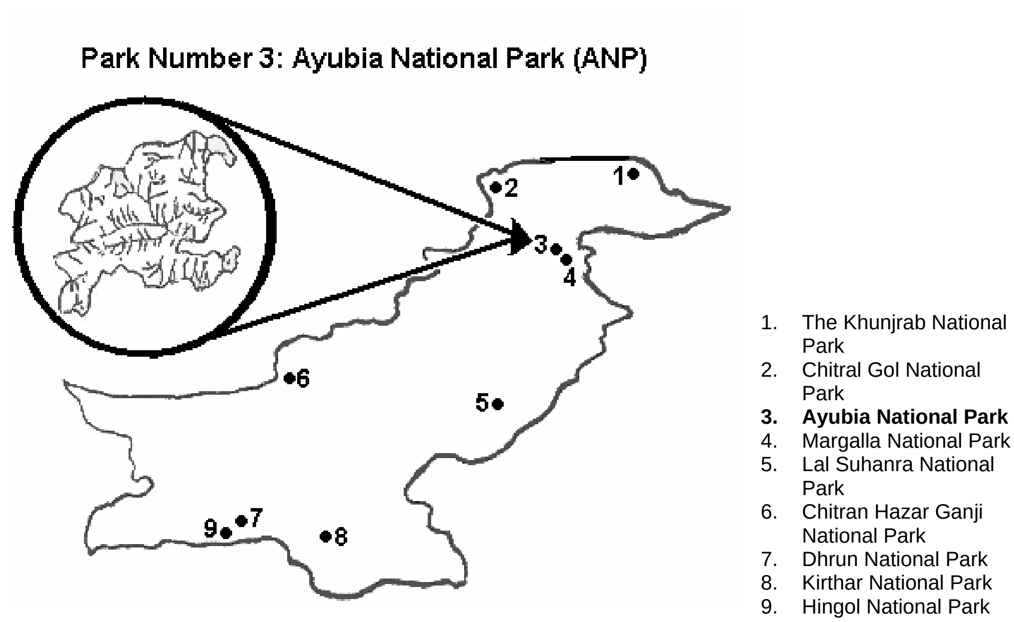
[24] As compared to the large land holdings of the Khans in the lower eco-zone.

extant JFMCs are constituted around harvesting. However, if land or forest ownership is egalitarian and resource rights clearly defined, JFM activities can be extended to include plantation and protection activities. Potentially, these partnerships can also be extended to include private companies, with a view to marketing green timber and non-timber products, as is being done in Nepal.

4.3 Shell Pakistan

The forest resources of Ayubia National Park (ANP) are under threat from a rapidly growing population. Since 1995, the Worldwide Fund for Nature (WWF) was active in the area, implementing an NRM and an ethno-botany project. Shell Pakistan approached WWF in 2002 with a fuel substitution/conservation project proposal. Shell would market liquid petroleum gas (LPG) a fuel wood substitute as a pilot initiative, with possible replication over a wider area if it succeeded. WWF agreed, offering to introduce fuel-efficient wood stoves and assist in information dissemination via its links with the communities. The pilot project was located in Malach village, situated in the buffer zone of ANP.

Figure 4: Ayubia National Park [25]



At the project's inception in 2003, the average consumption of fuel wood —for cooking, and heating homes and water—per family per day was estimated at approximately 40 kg. About five percent of the population was already using LPG

[25] Khan and Naqvi (1997/8)

for heating and cooking purposes. The main objective of the project was to support the local communities in improving their household fuel wood saving. Shell supplied cylinders and LPG sets and, in addition, established a retail service center to provide LPG refills and promote safety measures in dealing with gas storage and use. The local women particularly expressed a keen interest in LPG, as they collected firewood from the surrounding forests, a time consuming task, typically taking three to five hours everyday.

In addition, the WWF promoted and provided fuel-efficient stoves at subsidized rates, that were tested and proven by WWF Pakistan, the Agha Khan Foundation-BACIP, and UNDP to utilize 40% less wood than conventional *angeethis* (stoves). Three hundred households were provided these stoves at a fifty percent subsidy.

Although conceptually sound and demand driven, the project proved practically unviable. Despite a fifty percent subsidy on burner, the locals were unable to use LPG due to the high price of refuelling (PKR 330 to 450 for an 11 kg cylinder), and the costs involved in transporting cylinders (approximately PKR 300) to and from the RSC[26]. WWF's own findings revealed that the wood stove's combustion chamber was actually larger than that of the commercially available *angeethis*, and if anything, was actually less efficient and required more fuel wood. The result was that villagers had no real incentive to purchase WWF endorsed stoves. WWF's evaluation report also confirmed that the project did not specify any formal selection criteria leaving such selection to the discretion of its field workers. Resultantly, many families who already used LPG were provided with Shell's subsidized equipment, while poorer families received nothing. Ultimately, opinion was divided as to the extent of the pilot project's success. WWF was unable to report on the financial efficiency of the pilot project because Shell did not provide this information. It no longer endorses the scheme, and did not participate in the partnership formed for the main project. Shell, on the other hand, believed the project was viable, and warranted replicating in other areas, subject to certain management and structural changes.

4.3.1 Shell's Main Project

Shell Foundation agreed to fund the follow-on project, *Reduction of Indoor Pollution and Conservation of Forests through the Promotion of Alternate Energy Sources, Enhanced Energy Efficiency and Resource Management at Ayubia National Park (ANP) Galiyat'*. The project aims to bring about positive changes in the livelihoods and quality of life of at least fifty percent of the communities of the ANP by combining socio-economic development with ecosystem management over a four year period.

The Green Circle Organization (GCO) an environmental NGO is Shell's main implementing partner. The GCO is expected to take the lead role in social organization, financial mobilization, capacity building, and promotion of LPG and

[26] Conservation of forests in Ayubia National Park – Evaluation Report, March 2004

micro-enterprise development components of the project. The UNDP's role is that of a financer. It has committed USD 160,723 to the project.

Shell combines a profit motive with its conservation mandate, derived from the World Summit on Sustainable Development (WSSD) model called '*Public Private Partnerships for conservation of the environment and sustainable ecosystem management by business promotion, employment generation, and poverty reduction'*. Proposed project activities include: a) the promotion of micro and medium enterprises—nurseries, poultry farms, and retail service centers—via a micro-credit fund of USD 219,416. About three-fourths of this fund will be devoted to consumer credit for the purchase of LPG, and the rest for cottage industries and other small-scale business ventures; b) tree plantation: nurseries, each on half a *kanal* (one-eighth of an acre) of land aiming to produce 20,000 forest plants a year. The species to be produced are pine, poplar, *iple iple*, and sapium and; c) training courses for local masons will be provided to train them in previously unknown energy efficient building technique. In addition, local blacksmiths will receive training on how to design and build solar geysers.

The presumed economic and environmental benefits of the project are contingent upon certain conditions being met, such as, transparency, capacity building, training, access and cost reduction – elements which stalled the pilot project outcomes.

4.4 Forest Development Corporation (FDC)

The FDC originally represented a substitute for a malfunctioning contract system, where the FD sold standing trees under auction to forest contractors on a unit-volume basis. Once the transaction was concluded, felling and marketing responsibilities passed on to the contractors, which resulted in flagrant over harvesting (Ahmed and Mahmood, 1998). The FD abolished the contractor system in 1973 and replaced it with the FDC, through the NWFP FDC Ordinance 1980 (FDC, 2001). The motivating purpose was to separate forest management from forest harvesting and, subsequently, control the contractors (Ahmed and Mahmood, 1998). This worked quite effectively because contractors were now only responsible for felling trees, and at no point in the process owned the timber they harvested.

Since its inception the FDC, itself a semi-autonomous body, has entered into several partnerships. The first was with the Gesellschaft fur Technische Zusammenarbeit (GTZ), Kaghan Forestry project. This three-phase project, spanning 15 years (1980-1995), introduced the FDC to intensive forest management. The partnership assigned co-management responsibilities to the FDC, and involved them in road network planning and construction and setting uptraining schools, and central and field workshops.

A joint venture between the Pakistan Forest Institute (PFI) and the FDC, located in Swabi and Charsada, entailed supplying poplar saplings to local farmers, who were able to achieve a complete cycle from growing to selling within a few years. The FDC's Watershed Management Project, launched in 2004, aimed primarily at afforestation and soil conservation in the Hazara and Malakand divisions and in Indus Kohistan. The project activities were centered around community participation and training. A recent FDC scheme involved buying standing trees from *guzara* forest owners at a pre-fixed price. Knowing that only *standing* trees would be considered prevented sellers from felling their trees indiscriminately. This is a JFM concept that advocates habitat growth, and profit for both parties. The FDC is also attempting to promote leasehold forestry where agreements with *guzara* owners could result in mutually beneficial forestry contracts – a potential PPP between communities and the FDC similar to JFM.

Despite these various partnership initiatives, the FDC remains, essentially an organization with a bureaucratic, hierarchical culture. Also, flagrant collusion with timber contractors and large forest owners indicates an absence of transparency. More critically, land tenure rights are complicated issues especially in the Hazara and Malakand divisions. The opacity surrounding these rights complicates any effort to enter into partnerships with communities, especially when it comes to revenue generated from timber extraction.

4.5 The Morgah Biodiversity Project (MBP)

The MBP established a biodiversity park in Morgah, Rawalpindi, in August 2003. The partners in the project are: UNESCAP, the Economic Affairs Division, GoP, and Attock Refinery Ltd (ARL). The original idea stems from the WSSD.

The project's objectives are:

- The conservation of the threatened species of the Potwar plateau;
- Poverty reduction of the communities of Morgah and Kotha Kalan;
- Awareness raising of the local communities regarding the value of medicinal plants;
- To provide a natural environment for biodiversity research scholars, and the public at large.

Covering 28 acres provided by ARL—with a 15-year maintenance commitment—, the park boasts an aviary with eight species of birds, plantations of indigenous trees, shrubs, zerophytic[27], and medicinal plants with 268 different species, a fishpond with the endangered *Mahaseer* fish, and a butterfly garden. More importantly, the park maintains a record of lesser-known uses of various medicinal plants in collaboration with community members, especially local elders.

[27] Zerophytic plants are those that adopt various natural mechanisms for surviving in areas with minimal moisture

Other livelihood-related initiatives include[28]:

- Honeybee farming training workshop for community members, allowing them to develop bee farms on their own land, and extending marketing opportunities to them;
- Provision of 60 kerosene stoves to local families to discourage the use of firewood based on certain criteria such as family income, number of family members, and assets;
- Distribution (by ARL) of 300 commercial value fruit tree saplings—such as Papaya and Pomegranate—to community members;
- The employment of local community members in the development and maintenance of the park. It currently employs 19 people;
- Information dissemination for on how to collect plants of commercial value.

Other income generation activities include entry fees from visitors, and the sale of medicinal plants. One example of this is the Blessed Milk Thistle or *Kandyara* (silybum marianum), which is used to fight liver diseases. ARL provides PKR 150,000 a month for the maintenance of the park.

4.5.1 ARL's CSR profile

ARL's CSR activities pertaining to the surrounding communities include the provision of a junior model school, three high schools (now nationalized), and one college for girls. Attock Hospital (Pvt.) Ltd. provides health care to ARL employees and community members alike. The Attock Sahara Foundation, a non-profit NGO registered with the Directorate of Social Welfare, Government of the Punjab, maintains a register of the people in Morgah and Kotha Kalan, and provides health care, training programs, primary and technical education, and monetary assistance in the form of scholarships, a dowry fund, and a *zakat* fund.

ARL also provides potable water to the surrounding villages of Morgah, Nai Abadi, Kotha Kalan, Jhamra, and to welfare organizations such as SOS Village, the Deaf and Dumb School, and the Fauji Foundation Hospital.

4.5.2 Analysis

While not related to forestry in the strictest sense, this endeavor does appear to satisfy PPP criteria inasmuch as its composition and types of partners are concerned. The SD criteria (social, economic, environmental), however, are another matter. The park sells a limited amount of medicinal plants each year, although this seldom fetches more than PKR 20,000 a year. Conservation applies, but to a very limited degree. The purpose of the project is to showcase species of indigenous trees and shrubs and train local communities in the practice of deriving

[28] http://www.arl.com.pk/Biodiversity.htm and interviews with park management in August 2006

medicinal uses of local plants. Livelihoods are assured to a limited extent. The park employed local community members while developing the park, but currently employs only 19 individuals. Other livelihood related activities are bee farming training, fruit tree sapling provision, and medicinal plants information dissemination.

5. Resource rights: a cross cutting issue

Resource rights are a common theme across the reviewed partnerships. The opacity of these rights are, arguably, the most serious obstacle in implementing partnerships. Regardless of the various typologies, the absence of clearly defined resource rights either creates overt conflict among stakeholders, or it acts as a disincentive for cooperation between them. More specifically, opaque resource rights emerge at the interface of customary and statutory law and it is appropriate to review these briefly.

The community based rights and management of resources has its roots in customary law, which ensured equitable distribution of land, water, pastures and forests. State ownership and management of forest resources fall within the ambit of statutory law and is defined by two sets of legislation. The 1927 Forest Act was a territorial law with a strong enforcement orientation. It divided forests into three categories: reserve forests, protected forests, and village forests. The forest department had the power to close forests and forbid communities from extracting timber, fuel wood, fodder, and other forest products. Where permission to do so was granted, it was curtailed by a system of permits and fines. The 2002 NWFP Forest Ordinance retained these clauses but also introduced provisions relating to joint forest management. The ordinance was the outcome of a broader institutional reform process, involving forest dependent communities in management and monitoring.

Both state and community-based institutions have a say in the mediation of conflicts over the use of natural resources and the distribution of commercial benefits arising from them. The *jirga*, a body of nominated village elders adjudicates criminal and common property issues. It is not a permanently constituted body but a flexible one where nominated elders come together over specific issues and in specific places to mediate conflicts and resolve issues. Once a decision is taken, the *jirga* disbands until the next issue arises. Concurrently, communities also have recourse to civil and Islamic courts on these issues.

We find an increasing dominance of statutory law, which has subsumed customary entitlements to natural resources. Firstly, institutional inability to enforce these laws has transformed communities from guardians to predators of the common. Secondly, it has induced ingress by commercial loggers who collude with the forest department and local notables to extract timber well in excess of sanctioned limits. Thirdly, the lack of transparency in distributing royalties to communities with entitlements has twice led to conflicts between communities and the state. In one such case, a *jirga* was constituted to mediate the conflict.

A key factor in the disintegration of the state governance system has been the rapid increase in the prices of timber, fuel wood, and non-timber forest products (NTFP) over the past three decades, which has brought about an incompatibility between the need for conservation, the commercial interests of loggers, and the financial benefits derived by the forest department and civil administration functionaries. Dasgupta (2005) refers to the need to study markets 'in order to understand the institutions that govern community property rights CPRs.' Agrawal (2001) provides the local context for this by pointing to 'the gradual change in articulation with reference to external markets'. Available evidence indicates that prices driven by external markets have provided perverse incentives to and engendered uncontrolled logging by what is commonly called the 'timber mafia.'

Comment [p1]: Can you elaborate a little more here

6. Recommendations

PPPs need to be formally defined by the Government of Pakistan. The important fact to bear in mind is that the definition should be broad enough to capture a range of innovative initiatives with diverse stakeholders, yet not so broad so as to lose focus, direction, and effectiveness. Where forestry PPPs are concerned, the forestland owners must be recognized as stakeholders integral to the process of building PPPs. This will require legal backing, and formal descriptions.

Above all, it is crucial the Government begin to realize the potential of the contribution the private sector can make to Pakistan in terms of service provision and marketing, be it through PPPs, or CSR programs. Some examples of where PPPs can be utilized include:

- Reforestation and soil conservation (reserved, protected, and *guzara*);
- Eco-tourism;
- NTFP production;
- Commercial plantation for business (Poplar and Eucalyptus)
- Linear plantations (along canals or roads)
- Water resource management (utilization)

6.1 Stakeholder identification

The public (Government) and private (private firm) cannot be the only stakeholders in a forestry PPP. Of tantamount importance is the recognition of the forest dependent communities who have inhabited the areas around the NWFP's forests for the last 100 years.

Many national NGOs have shown their interest in working with forest dependent communities and have deep-rooted links with the people after years of interaction. The NGOs can therefore play a vital role in mediating and forging agreements between the Government (line departments and local government), the private sector (corporate sector, small business, and contractors), and forest communities (guzara and communal owners, and rights owners). These communities comprise a largely illiterate populace, and mindsets tend to be fairly backward. NGOs can also help ensure that the rights of these communities are upheld, and their interests are not sidelined.

6.2 Resource rights

The absence of clearly defined resource rights is a major hurdle to establishing forestry PPPs in Pakistan. The rights previously granted by customary law and now incorporated in statutory law seem to have less importance today. While customary law prevailed, land, water, pastures, and forests were equally divided. The introduction of statutory law has only served to promote conflict, which clearly, cannot be conducive to the formation of PPPs.

6.3 PPP policy, legislative controls, and good governance

Institutional checks and good governance are key factors in a PPPs success. At the moment, the Government does not have any concrete policy measures that regulate, or even define PPPs. The current PPPs-for-forestry policy needs to be revised after an in-depth study of global examples to use as benchmarks, and the identification of potential stakeholders and the roles they can play, within the context of Pakistan.

The Government's stance on promoting PPPs in Pakistan is a vague one. The term is loosely used, and appears to have no set definition. Available Government literature itself is unclear as to what a PPP really is, especially where the forestry sector is concerned. There is currently nothing concrete from the MoE that defines the framework of forestry PPPs, nor how such agreements should be handled legally. The first, and most important step would be the creation of such a policy, and the identification of the types of stakeholders, and their individual terms of reference.

The creation of an autonomous or semi-autonomous arbitration council that provides third party auditing and conflict resolution between stakeholders is also advisable. By law, conflict resolution between a public and private entity would have to start under the auspices of this body, and only be carried to court after a set time-period if both parties agree to do so.
As with any policy, PPP policy must also encompass accountability and transparency measures to limit the possibility of corruption. Above all, the concerned selection controls must be in place, and open procedures required by law. Accountability is especially important as a legislative control because PPP contracts can last many years, often longer than the tenure of an elected government.

PPP policy must also account for social and environmental compliance. This is particularly important in the case of MNCs, because they tend to be accountable only to their own Governments and not to their host country governments. MNCs tend to connive with local Governments with the promise of foreign direct investment. The legislative controls to prevent this behavior from filtering into the world of PPPs must be overarching so as to allow for a wide variety of PPP arrangements, yet clear-cut to prevent manipulation of the law for commercial gain.

Such controls are important, because weak institutional checks allow firms with CSR mandates to default on their obligations.

6.4 Private sector incentives

Current efforts from the private sector at working with tree plantation have been confused with CSR programs. In addition, none of our case studies have matched the SD criteria for PPPs set out in this study. Clearly, the private sector is driven by a profit motive, and its is not likely to be attracted to projects riddled with uncertainty where communities may start mass protest movements (as has been witnessed in the past), or where powerful organizations such as the Timber Mafia have their own interests. The single most important point therefore, is that land tenure rights must be resolved before forestry PPPs even begin to materialize in Pakistan.

6.5 NTFP production

Case studies from other countries have illustrated the successes of NTFP production. The international market for 'green' products is highly lucrative, yet Pakistan's forests do not boast anything of the sort. There is only very small-scale domestic production and sale of honey, mushrooms, and medicinal plants. Realistically speaking, the FD and local NGOs can form simple partnerships (not necessarily PPPs) where NTFP types and production methods can be disseminated. With the financial backing of a private institution, distribution mechanisms can be set up as well.

Currently, subsistence rights (fuel wood, fodder, timber for household construction, and extraction of NTFPs are legally subject to permission by the FD. The Government must remove this blockade in order to foster the production of NTFPs on a mass scale, so as to drastically increase local sales, and eventually the marketing of green products internationally. This however, will remain an elusive target unless the forest products are eco-labeled and shown to have been extracted from sustainable forests.

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