The Quest for Sustainable Forest Management: Exploring Public-Private Partnerships in the Forestry Sector in Pakistan

Shaheen Rafi Khan, Ali Shahrkh Pracha, Nazima Shaheen, and Riaz Ahmed

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### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AEP</td>
<td>American Electric Company</td>
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<td>ANP</td>
<td>Ayubia National Park</td>
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<td>ARL</td>
<td>Attock Refinery Ltd.</td>
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<tr>
<td>BACIP</td>
<td>Building and Construction Improvement Program</td>
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<tr>
<td>BOT</td>
<td>Build, Operate, Transfer (scheme)</td>
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<tr>
<td>BP</td>
<td>British Petroleum</td>
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<tr>
<td>CPRs</td>
<td>Community Property Rights</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>DSW</td>
<td>Deutsche Stiftung Weltbevölkerung [German Foundation for World Population]</td>
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<tr>
<td>FAN</td>
<td>Fundación Amigos de la Naturaleza [Friends of Nature]</td>
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<td>FAO</td>
<td>Food and Agricultural Organization</td>
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<td>FD</td>
<td>Forest Department</td>
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<td>FDC</td>
<td>Forest Development Corporation</td>
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<td>GCO</td>
<td>Green Circle Organization</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<tr>
<td>GoNWFP</td>
<td>Government of the North-West Frontier Province</td>
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<td>GoP</td>
<td>Government of Pakistan</td>
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<td>GTZ</td>
<td>Gesellschaft für Technische Zusammenarbeit [German Society for Technical Cooperation]</td>
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<tr>
<td>IIED</td>
<td>International Institute for Environment and Development</td>
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<tr>
<td>IRR</td>
<td>Internal Rate of Return</td>
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<td>LPG</td>
<td>Liquid Petroleum Gas</td>
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<td>MBP</td>
<td>Morgah Biodiversity Project</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MNC</td>
<td>Multinational Company</td>
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<tr>
<td>MoE</td>
<td>Ministry of Environment</td>
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<td>NCC</td>
<td>Nature Conservancy, Canada</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>NRM</td>
<td>Natural Resource Management</td>
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<td>NTFP</td>
<td>Non-Timber Forest Product</td>
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<tr>
<td>NWFP</td>
<td>North-West Frontier Province</td>
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<tr>
<td>OCAP</td>
<td>Oda-Kotoamso Community Agro-forestry Project</td>
</tr>
<tr>
<td>PKR</td>
<td>Pakistan rupees</td>
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<tr>
<td>PPAF</td>
<td>Pakistan Poverty Alleviation Fund</td>
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<td>PPP</td>
<td>Public-Private Partnership</td>
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<td>PTC</td>
<td>Pakistan Tobacco Company</td>
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<td>RING</td>
<td>Regional International Networking Group</td>
</tr>
<tr>
<td>SANDEE</td>
<td>South Asian Network of Development and Environmental Economists</td>
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<tr>
<td>SD</td>
<td>Sustainable development</td>
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<td>SDPI</td>
<td>Sustainable Development Policy Institute</td>
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<tr>
<td>SMEs</td>
<td>Small and Medium Enterprises</td>
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<td>TNC</td>
<td>Transnational Corporation</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNESCAP</td>
<td>United Nations Economic and Social Commission for Asia and the Pacific</td>
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<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<td>-------------------------------------------------------</td>
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<tr>
<td>USD</td>
<td>United States Dollars</td>
</tr>
<tr>
<td>WWF</td>
<td>Worldwide Fund for Nature</td>
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<tr>
<td>ZEF</td>
<td>Zentrum für Entwicklungsforschung [Center for Development Research, University of Bonn, Germany]</td>
</tr>
</tbody>
</table>
Glossary

Ailanthus  Tree of Heaven (*Ailanthus altissima*)
Amalatas  Golden shower (*Casia fistula*)
Angeethi  Stove
Arjun  *Terminalia arjuna*
Beopari  Middleman
Biri  Hand rolled cigarette
Bottle brush  *Callistemon lanceolatus*
Dalbergia  Indian rosewood (*Dalbergia Sissoo*)
Guzara forest  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*)
Maund  A locally used weight unit which is approximately 40 kg
Parchoon  Local retail outlet
Phulai  Babul (*Acacia nilotica*)
Robinia  Black locust (*Robinia pseudocacia*)
Sanatha  Hop-bush (*Dodonaea viscoso*)
Sukh cheyn  Karanja tree (*Pongamia glabra*)
Zakat  Charity
The Quest for Sustainable Forest Management: Exploring Public-Private Partnerships in the Forestry Sector in Pakistan

Shaheen Rafi Khan, Ali Shahrukh Pracha, Nazima Shaheen, and Riaz Ahmed

Abstract

Corporate social responsibility (CSR) is a fast growing trend in Pakistan. Large private corporations feel that their customers and clients must see them as socially and environmentally responsible. This in itself is a means of increasing market share, expanding client base, and remaining competitive.

However, the gap between rhetoric and reality is very much in evidence. Case studies in forestry public-private partnerships (PPPs) show that weak institutional checks allow firms with a CSR mandate to default on their social and environmental obligations.

In light of the fact that certain local populations have rights over forestland in Pakistan, we have devised a set of criteria for forestry PPPs that cover three fundamental themes:

- Economic (domestic and international sales of timber and forest products)
- Environmental (sustainable harvesting and tree plantation)
- Social (assured livelihoods)

In addition, we reiterate that forestry PPPs cannot be successful in Pakistan without the complete participation of all concerned parties, namely, the forest communities, the Government of Pakistan (public), private organizations (private financiers and managers), and local NGOs (as intermediaries and liaisons between all parties).

1. Introduction - PPP and CSR Linkages

The overarching framework for corporate social responsibility (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 the 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.1

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 comprise improved reputations in the eyes of consumers, better relations with stakeholders, improved competitiveness and market position, motivated employees,

1 About the Global Compact (undated)
and adoption of best practices. Benefits for the greater population include practical solutions to problems related to globalization and sustainable development.

However, the gap between rhetoric and reality is very much in evidence. The Pakistan Tobacco Company (PTC) case, explained below, 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 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 (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 northern 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 et al., 2004). Having said that, prevalent gray areas in the compliance domain reflect the dominance of a “business” as opposed to an innate corporate ethic.

Citing Lund-Thomsen (Lund-Thomsen, 2003): Much of the business literature on this topic makes the ‘business case’ for improving the 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.

In short, CSR as an emerging 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.

Despite generic as well as experiential shortcomings, CSR is a driving force for public private partnerships (PPPs), where a private entity (company, firm, or multinational) enters into a formal partnership with a government agency to promote social and environmental objectives. CSR is a necessary, but not sufficient condition for a PPP. The latter connotes a partnership, whereas a private entity may pursue a CSR mandate unilaterally. Ultimately, both arrangements are flexible and can be mutually reinforcing.

The purpose of this paper is to define a potential solution to the rapid deforestation in Pakistan that addresses environmental criteria, without harming the interests and rights of forest-dependent communities. We focus on PPPs as a possible institutional arrangement to achieve this purpose. We then
argue that in order for forestry PPPs to be successful, they must satisfy certain sustainable development (SD) criteria (see Table 1).

Section 2 attempts to establish definitional clarity, to provide a firm foundation for the analysis that follows. It also outlines certain principles of good governance to ensure transparent cross-sector collaboration. Section 3 describes an ideal forestry sector PPP, spelling out its structural attributes, and outlines the existing policy and institutional environment. Section 4 presents successful examples of forestry PPPs in other countries. Section 5 discusses the approach and methodology. Detailed case studies follow in section 6. Section 7 concludes.

2. Defining PPPs

Definitional clarity is key to establishing a frame of analysis for assessing PPPs. Loew and McLindon (n.d.) 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.

At this point, it is also useful to define the terms ‘private’ and ‘public’. ‘Private’ refers to organizations that display a clear profit motive, and operate without government assistance (e.g. private firms and MNCs). ‘Public’ has been used in the context of government agencies (e.g. the Forest Department [FD]) that do not necessarily have a profit motive but are more concerned with the provision of public services. Civil society constitutes both communities and NGOs and other entities which represent them.

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, and concessions and divestiture, and cut across sectors such as education, health, transport, water, and sanitation (Earle, 2001).

Ideally, PPPs are unique in that they allow 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, non-governmental organizations (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 (United Nations Economic Commission for Europe [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.\footnote{Government contracts in Pakistan—especially those with foreign investors—are negotiated in secret and not made public till after being signed (Ayine et al, 2005).} 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. The ‘public disclosure’ of civic service provision must be ensured (Ayine et al, 2005).

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 with the agreement of both.

3. **Forestry Sector PPPs**

3.1 **Defining forestry PPPs in the Pakistani Context**

This paper focuses on forestry PPPs. The articulated objectives (social and environmental) can be achieved directly through commercial activities (sale of forest products) or, indirectly, through conservation activities. 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. Forestry PPPs can embrace a range of activities, namely, 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.4

A key aspect which sets forestry sector PPPs apart from others is the central role of communities; without them and more critically, without recognition of their resource rights, the resulting PPP would rest on extremely shaky foundations. Pakistan’s provincial forest acts refer explicitly to forest dependent communities. The North-West Frontier Province (NWFP) Forest Ordinance, 2002, in particular, contains specific provisions relating to community participation in forest management (Government of NWFP [GoNWFP], 2002). However, such provisions have little relevance in the absence of clearly defined community resource rights. Arguably, the opacity of these rights are the most serious obstacle in implementing partnerships. It either creates overt conflict among stakeholders, or acts as a disincentive for cooperation between them. More specifically, opaque resource rights emerge at the interface of customary and statutory laws and it is appropriate to review these briefly.

The community based rights and management of resources has its roots in customary law, which ensures equitable distribution of land, water, pastures, and forests. State ownership and management of forest resources fall within the ambit of statutory law 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 guzara (private) forests. The FD 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.

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 in the NWFP, 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 FD 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 (Khan and Bokhari, 2005). In one such case, a jirga was constituted to mediate the conflict.

4 The term is used broadly to include both protection and plantation.
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 (NTFPs) 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 FD, 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 created perverse incentives, engendering uncontrolled logging by what is commonly called the ‘timber mafia.’

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) 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 on the disposal of an offshore oil installation. The modern global NGO possesses power and recognition. It acts as a corporate watchdog, and an agent of sustainable development (Murphy and Bendell, 1999).

### 3.2 The Existing Framework

The existing institutional framework for PPPs is in a nascent stage, a key reason for the Food and Agriculture Organization (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 Ministry of Environment (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 entities that can contribute labor, finance, and services to a PPP, and share profits and benefits with the FD. The ministry has established a set of guidelines for PPPs in the forestry sector as follows:

- 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 FD. Stakeholders can include local communities, NGOs, and private organizations. The ‘investment’ need not only be a monetary one. Labor and materials are also 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.

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5  GoP, MoE, Forestry Wing, n.d
6  GoP, MoE, Forestry Wing, n.d
4. The International Experience

While PPPs have been introduced with some success in the education, health, and infrastructure sectors in Pakistan, forestry remains a relatively unexplored area. 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, Bolivia, and Ethiopia. In particular, sanctioning resource rights at the outset was a precondition for their success.

Thus, the Oda-Kotomatsu Community Agro-forestry Project (OCAP) was launched in 1997, in the forests of Samreboi in Western Ghana by a private timber company, Samartex. As a first step, Samartex’s agro-forestry project made ownership and user rights concessions to the farmers. Farmers were then given training and financial incentives to shift from slash-and-burn methods to the more sustainable practices of cultivating a combination of trees, cash crops, and food crops (Inforesources, 2005).

American Electric Power (AEP), Pacific Corp, British Petroleum (BP) 7, Fundación Amigos de la Naturaleza (FAN) [Friends of Nature] 8, the Nature Conservancy, Canada (NCC) 9, 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 greenhouse gas (GHG) mitigation strategy (Harvard University, 2003).

The rainforests of the Southwestern Ethiopian highlands are the only region in the world where coffea arabica is found growing wild. Approximately 1.2 million farmers and their families earn their living directly from coffee. However, the depressed world market prices of coffea arabica caused many small landowners to switch to growing drugs and felling trees that shade coffee plants to obtain fuel wood. In 2003, two private companies Amber Corporation AG and Kraft Foods, GEO Schützt den Regenwald E.V. 10, Deutsche Stiftung Weltbevölkerung (DSW) [German Foundation for World Population], 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].

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 (Asfaw, 2005).

7  All three are large private companies.
8  A Bolivian NGO dedicated to preserving Bolivia’s biodiversity.
9  A national charity working to protect Canada’s most threatened natural habitats and endangered species.
10 A civil society group that advocates the protection of rainforests.
5. **Approaches and Methodology**

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

1. **Pakistan Tobacco Company (PTC): Corporate Entity – Farming Communities.** This study also highlights a latent partnership between the FD and the PTC.
2. **Shell-Pakistan: FD – Corporate Entity.** Shell is under contract with the MoE to promote alternate energy uses among communities in Ayubia’s (NWFP) coniferous forests.
3. **Attock Refinery Ltd. (ARL) – Corporate Entity.** ARL is the private component of a pro-poor PPP, co-funded by the Government of Pakistan (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.

We attempt to assess how well the cases measure up against the control, allowing us to suggest interventions aimed at narrowing the gap between the real and the ideal.

Table 1: SD Criteria

<table>
<thead>
<tr>
<th>Ideal PPP</th>
<th>Economic</th>
<th>Environmental</th>
<th>Social</th>
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<tr>
<td><strong>Is it a PPP?</strong></td>
<td>Public–Private–Communities</td>
<td>Domestic Sale</td>
<td>Export (Green Products)</td>
</tr>
<tr>
<td><strong>Shell</strong></td>
<td>MoE &amp; FD–Private firm–UNDP-Pakistan</td>
<td>Indirect (sale of wood stoves)</td>
<td>NA</td>
</tr>
<tr>
<td><strong>PTC</strong></td>
<td>Private firm–Communities</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>ARL</strong></td>
<td>Federal Government–Private firm–Communities–UNESCAP</td>
<td>Medicinal plants</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Source:** Authors’ assessment based on the Brundtland Commission Report and the Rio Convention

NA - Not applicable

Table 1 presents a synthesis of the case study findings. 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.

The indicated SD criteria draw upon: a) the Brundtland Commission Report, in which sustainability is defined in somewhat narrow environmental terms and; b) the broadening of this concept at the Rio Convention, which expanded it to include efficiency and equity concerns.

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11 This study, sponsored by the Ministry of Environment, Government of Pakistan, was funded by the Food and Agriculture Organization (FAO) and coordinated by the SUNGI Development Foundation, Pakistan.
The methodology combined literature reviews with field 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, NGO representatives, consultants, company representatives (Shell and PTC), and MoE staff.

The following sites were visited:
- Buner (Swat district)
- Madhyan (Swat district)
- Bher Kund (Mansehra district)
- Nisatta (Mardan district)
- Akora Khattak
- PTC offices in Mardan, Shergarh, and Islamabad
- Morgah Biodiversity Park, Morgah, Rawalpindi

6. Case Studies

6.1 Pakistan Tobacco Company (PTC)

The 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 at Akora Khattak and Jhelum. The bulk of the better quality tobacco is exported, while the lower grades are sold to local companies for domestic cigarette production. Lakson Tobacco (Pvt.) Ltd is PTC’s main competitor and there are also non-rival purchasers (beoparis) of low-grade tobacco who sell to local retail outlets (parchoons). Annex 1 indicates PTC’s spatial outreach and the areas visited.

6.1.1 PTC and Corporate Social Responsibility

Tobacco farmers consume large amounts of fuel wood to cure tobacco, comprising up to 30% of total input costs. Farmers either obtain this fuel wood from the market or from hill slopes, they contribute to deforestation either way. To give an idea of the problem’s magnitude, about 4,500 tobacco-curing kilns are to be found around the village of Suwari 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 CSR has encouraged PTC to launch an impressive afforestation program.

6.1.2 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 14 depots and the afforestation focal point at Islamabad. The beneficiaries are private farmers, army establishments, educational institutions, government, NGOs, and social organizations. Presently, its tree growing activities are concentrated in the tobacco growing areas of Charsadda, Mardan, Swabi, Swat, Buner, Mansehra, Gujrat districts 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. Other plants provided include Sanatha (Dodonia), Arjun, Jamun, Khati, 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. These plantations are entirely privately owned, which precludes conflicts over shamilat land (common property). Re-visits by PTC staff during the afforestation audits revealed an 88% survival rate, well within the acceptable mortality bound. The FD collaborates with the PTC in providing nursery plants and technical advice.

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.

6.1.3 A Sustainable Development Assessment

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

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

<table>
<thead>
<tr>
<th>Species</th>
<th>Price (PKR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eucalyptus</td>
<td>180–200</td>
</tr>
<tr>
<td>Shisham</td>
<td>180–200</td>
</tr>
<tr>
<td>Phulai</td>
<td>190–210</td>
</tr>
<tr>
<td>Poplar</td>
<td>360–380</td>
</tr>
<tr>
<td>Kikar</td>
<td>180–200</td>
</tr>
<tr>
<td>Mulberry</td>
<td>160–180</td>
</tr>
<tr>
<td>Others</td>
<td>175–200</td>
</tr>
</tbody>
</table>

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. 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.

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.

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. 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.

**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 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. Moreover, 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

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12 Eucalyptus is used as a fuel wood.

13 The production of lignotuber is a characteristic of the Poplar and Eucalyptus which 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.

14 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.
enhancement program and discrimination against small farmers suggest a cosmetic aspect to PTC’s corporate social responsibilities.

**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. At this point -- and given the nature of the partnerships, it is important to point out that by the term communities we are referring to an aggregation of individuals, as opposed to a more homogeneous collective with common goals. However, there is the important caveat that even these aggregations can give rise to environmental externalities. More important, in the social sense, the collective anger felt by poor farmer towards discriminatory corporate practices has the potential to induce remediation.

### 6.2 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) has been active in the area, implementing a natural resource management (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 the ANP (Shell-Pakistan and UNDP, n.d.).

**Figure 1:** Ayubia National Park

![Ayubia National Park Map](source)

1. The Khunjrab National Park
2. Chitral Gol National Park
3. Ayubia National Park
4. Margalla National Park
5. Lal Suhanra National Park
6. Chitran Hazar Ganji National Park
7. Dhrun National Park
8. Kirthar National Park
9. Hingol National Park

Source: Khan and Naqvi, 2000
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 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 (RSC) 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’s Building and Construction Improvement Program (BACIP), and the United Nations Development Programme (UNDP)-Pakistan to utilize 40% less wood than conventional angeethis (stoves). Three hundred households were provided these stoves at a 50% subsidy.

Although conceptually sound and demand driven, the project proved practically unviable. Despite the subsidy on burners, the people were unable to use LPG due to the high price of refueling (PKR 330 to 450 for an 11 kg cylinder), and the costs involved in transporting cylinders (approximately PKR 300) to and from the RSC. 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 (WWF, 2004). 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.

6.2.1 Shell’s Main Project

Shell Foundation (the UK based parent company) agreed to fund the follow-on project in 2005, 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, committing USD 250,000. The project aims to bring about positive changes in the livelihoods and quality of life of at least 50% of the communities of the ANP by combining socio-economic development with ecosystem management over a four-year period (Shell-Pakistan and UNDP-Pakistan, n.d).

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 the micro-enterprise development components of the project. UNDP-Pakistan’s role is that of a financier and consultative partner. It has committed USD 93,000 to the project. The forest and wildlife departments are also expected to play a role in management (Shell-Pakistan and UNDP-Pakistan, n.d).

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
The Quest for Sustainable Forest Management: Exploring Public-Private Partnerships in the Forestry Sector in Pakistan

*environment and sustainable ecosystem management by business promotion, employment generation, and poverty reduction.* (Shell-Pakistan and UNDP-Pakistan, n.d)

Proposed project activities include:
1. The promotion of micro and medium enterprises—nurseries, poultry farms, and RSCs—via a micro-credit fund provided by the Pakistan Poverty Alleviation Fund (PPAF) of USD 219,411. About three-fourths of this fund will be devoted to consumer credit for the purchase of LPG tanks, and the rest for cottage industries and other small-scale business ventures.
2. 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.
3. Training courses for local masons to train them in previously unknown energy efficient building techniques, and training for local blacksmiths on how to design and build solar geysers.
4. 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 – all elements that stalled the pilot project outcomes. The project has not yet been completed, making it difficult to comment on potential outcomes. However, it remains a good example of a PPP arrangement.

### 6.3 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. The aim of the project is to conserve the threatened species of the Potwar plateau; raise awareness among communities regarding the value of medicinal plants; provide a natural environment for biodiversity research scholars and; reduce poverty among the communities of Morgah and Kotha Kalan.

Covering some 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* 15, and 268 different varieties of medicinal plants, 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.

Livelihood-related initiatives include:16
- 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 on how to collect plants of commercial value.

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15 *Zerophytic plants are those that adopt various natural mechanisms for surviving in areas with minimal moisture.*
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.

### 6.3.1 ARL’s CSR Profile

ARL’s CSR activities 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* (charity) fund.

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

### 6.3.2 Sustainable Development Analysis

While not related to forestry in the strictest sense, the endeavor does appear to satisfy PPP criteria inasmuch as its composition and types of partners are concerned. The SD criteria (social, economic, and environmental), however, is another matter. The park sells a limited amount of medicinal plants each year, although this seldom fetches more than PKR 20,000/- a year. In conservation terms, the project showcases species of indigenous trees and shrubs and trains local communities in the practice of deriving medicinal uses of local plants. Livelihoods are assured to a limited extent. The park initially employed local community members while developing the park but, as mentioned, currently employs only 19 individuals. Other livelihood related activities are bee-farm training, fruit tree sapling provision, and medicinal plants information dissemination.

### 7. Conclusion

PPPs in Pakistan’s forestry sector are very much in the embryonic stage. That they are to be found at all reflects an external CSR impetus, rather than any institutional facilitation. In fact, the institutional lacunae, which, among other things, feature the absence of accountability have allowed private entities to promote an image of social and environmental responsibility which is at variance with the reality on the ground. In other words, PTC, falls short of meeting the SD criteria. The national institutional deficit also allows TNCs to engage in unclear planning and poor articulation of goals. Shell’s endorsement of pilot project activities in Ayubia reflects primarily a concern with image building, rather than a commitment to sustainable development. In fact, the Attock project, which is the least ambitious in terms of financial outlays and spatial coverage, performs best on the SD criteria.

However, all three projects demonstrate a poor conception of sustainable livelihoods. A pre-requisite to get such projects off the ground is to delineate resource rights clearly and recognize forest dependent communities as key stakeholders. Such rights are key to the follow-on plantation activities on communal lands, in conjunction with the FD under the PTC arrangement. Similarly, the success of the Shell initiative hinges upon the FD clearly recognizing that the communities have prior rights to forest resources.
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Annex 1: PTC Offices and Factories

Source: Microsoft ® map adapted by PTC