SECTOR ASSESSMENT (SUMMARY): FORESTRY

A. Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. The total forest area in the People’s Republic of China (PRC) is about 175 million hectares (ha) and supports a standing tree stock volume of about 13.6 billion cubic meters. Land classified as forest land accounts for 285 million ha; however, only 60%, or 169 million ha, is forested. Forest land in the PRC is typically of three types: (i) ecological or natural forests, (ii) timber plantations, and (iii) economic tree crops comprising fruit and nut orchards. Of the forest land, 115.8 million ha (66%) is natural forest and 53.3 million ha (34%) is plantation forestry (timber and economic tree crops). The area of degraded and barren forest land totals about 116 million ha and has mostly been left out of the modernization of the rural PRC that focused on agricultural land. Within the western PRC, most of this land still supports traditional low-yielding and low-value cropping systems built around wheat and corn rotations, or is steep gully sidings and desert periphery that are barren or wastelands. The scale of the forest sector has continued to grow, with forest cover increasing from less than 9% in 1949 to about 18% in 2007. However, this impressive expansion of forest cover does not reveal the low quality of forest structure, including thin forest density and a lack of biodiversity in the PRC forests.

2. The forestry sector has lagged behind in reforms and has been slow to respond to the government’s policy priorities oriented towards market development. Policy analyses demonstrate the need for reforms in the (i) management of publicly owned forests, and (ii) role of the government in guiding private forest land operators and forest enterprises to support sector targets. Despite increased sector output and profits, forestry management continues to undersupply the ecological functions and services that the government now seeks. The resultant increases in forest-related natural disasters and associated economic costs are identified as a significant socioeconomic development constraint.

3. Forest land remaining under traditional cropping systems is increasingly considered unsustainable due to overcultivation, overuse of irrigation, low use of organic matter, and increasing use of agrichemicals. Many of these cropping systems have extremely low productivity, often suffering from (i) declining productivity (wheat and maize yield declining by 80 kilograms [kg]/ha per year for unfertilized plots and 60 kg/ha per year for fertilized plots), declining soil carbon limiting yields (a reduction of 1 ton [t] per ha in soil carbon reducing yields by 20–40 kg/ha for wheat and 10–20 kg/ha for maize); and (ii) inadequate and/or expensive water. Contracting of ecological forest land is also enabled. However, these rights are targeted towards the protection requirements of ecological forests. Other non-use options can be exploited, such as recreation, tourism, and payments for ecological services—all providing incentives for the protection of ecological forests. An insecure property right for forest resources is an underlying cause of why forest poverty is so widespread and persistent. Some forest poor will exit poverty through migrating away from the forest, converting forests to other land uses, or gaining agricultural employment or other nonfarm income, etc. A failure to acknowledge the

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1 This summary is based on ADB. 2009. Preparing the Forestry Ecological Development Project in Three Northwest Provinces. Consultant’s report. Manila (TA 7040-PRC).
rights of forest-dwelling communities will increase the chance of social conflict. The collective forest tenure reform is expected to promote poverty alleviation, help enable the improvement of forest resources conservation, and provide incentives for the successful implementation of the ongoing projects.

4. The framework for the PRC’s climate change response highlights the role of forestry in managing its carbon balance. The benefits already achieved from increased forest cover have been estimated from 1980 to 2005 to total about 3 billion t of carbon dioxide (CO$_2$) absorption from afforestation, including 1.62 million t of CO$_2$ absorption by forests and 430 million t of CO$_2$ from avoided deforestation. With the acceleration of industrialization and urbanization, the quest for forest and wetland conservation is increasing, and the PRC still consumes far more wood than it produces. The current set of climate change objectives to be achieved by 2010 includes (i) controlling greenhouse gas emissions; (ii) enhancing the capacity for climate change adaptation in the agriculture sector through adjusting cropping systems and applying new technologies to improve grasslands, reduce salinity, and improve water use efficiency; and (iii) enhancing the capacity for climate change adaptation in forestry by improving natural forest conservation and nature reserve management, and implementing key ecological restoration programs.

5. Forest land is regarded as a national resource with the government assigning management and harvesting rights to state forest farms (SFFs). Currently, there are about 4,000 SFFs, 35,000 forest stations, and 150,000 collectively owned forest farms. SFFs and enterprises manage 42% of forest land, and this land supports an estimated 68% of all standing volume of forests. The main objective of these units is to provide site protection for ecological and environmental objectives. Many of the sites are the consequence of historical decisions when forest resources were transferred into the public sector and the forest farms created and awarded extraction or logging quota responsibilities. The forest land tenure reforms confirmed rights for 70 years while enabling rights to be rented (subcontracted) to operators, including the requirement to meet the responsibilities of the higher-level contract. Because of the logging ban, SFFs and associated counties have experienced major losses in tax-based logging revenues. In recognition of the likely staff impact from lost revenues, operational subsidies are secured through 2010.

2. Government's Sector Strategy

6. The recognition of multiple objectives and ecological services in public forest management was presented in the revised Forest Law of the PRC (Decision on Revision of the Forest Law PRC 2nd Session of the 9th National People’s Congress, 29 April 1998). The revised law redefined the institutional arrangements within the sector, including the reform of the Ministry of Forestry into the State Forestry Administration. The reform accompanied the commensurate devolution of powers and responsibilities to the provinces and counties. The State Forestry Administration’s functions were restated in terms of facilitation, not as direct actors in forest management but in terms of forest administration, policy development and planning, policy research, forest law enforcement, and the management and oversight of national forest programs. The reformed law provided for a revised classification into ecological or commercial forestry, and introduced a logging ban on natural forests and logging quotas on commercial forests to ensure that off-take was less than mean annual growth.

7. Comprehensive forest tenure reform was again revisited after the 1998 law reform. The process of reform was changed with widespread consultation and a period of limited piloting and evaluation prior to the collective forest tenure reform program being introduced in June 2008.
There are three ongoing reforms for the development and implementation of forest land tenure and institutional restructuring, aimed at creating incentives for investment and development in the forest sector. The first is the reform of collective forest land tenure, seeking to allocate forest rights to households and individuals in order to return the mountains, forests, and profits to the people. The second reform will be to accelerate the reform of SFFs through the definition and classification of their forest resources into economic and ecological resources, and the linking of ecological resources to public-good budgets and secure funding systems. The classification of ecological and economic forests will be defined with forest farms and their management restructured to fit these functional objectives. For financial sustainability, forest resources business units will be reformed to ensure viable operations and balance sheets. The third reform seeks to develop the capacity of government and users to support the reformed forestry institutions.

8. Based on the pilot reform program success, the government announced its Collective Forest Rights Institutional Reform. Under the reform program, collective forest land will be classified into two functional categories: (i) ecological forest land whose primary function will be to protect or provide an ecological function, and (ii) economic forest land that will support the production of commercial output. Under this latest round of reforms, contracted forest land-use rights can be (i) transferred for use by subcontractors, (ii) transferred as share for cooperative development of the land, and (iii) used as collateral for bank loans. The tenure reform policy applies to virtually all of the project area. To reduce possible social conflicts and risks, interactive and partnership consultations are needed to encourage joint decision making on the varieties, forest types, and follow-up maintenance; and management patterns appropriate during project design and implementation.

9. For economic tree crops, land will be contracted to the households for 70 years, including the right to renew under the conditions stated in the law at the time of renewal. There is an additional right to subcontract to a third party for operating and managing the forest resources. The subcontracting agreement or rental contract must be consistent with the household contract. Experience with the World Bank projects indicates a preference for most households to enter into rental contracts for their forestry resources, resulting in an increase in the number of trade associations and forest enterprises.

3. **ADB Sector Experience and Assistance Program**

10. The project design reflects the lessons identified in previous development partner and government programs. The lessons from past land degradation and ecological programs, the World Bank’s evaluation of assistance to the PRC forestry sector, and ADB’s agriculture and natural resource lending programs are summarized here. ADB’s Capacity Building to Combat Land Degradation Project has (i) published several high-quality technical reports, (ii) updated laws and regulations, (iii) prepared provincial land degradation strategies and action plans, (iv) established effective institutional cooperation among different sector agencies, (v) implemented numerous integrated ecosystem management activities through 18 pilot sites, (vi) established provincial data centers, and (vii) conducted extensive capacity development and training programs. A follow-up project is being discussed that would further provide support to scaling up activities, developing and sharing its experiences with associated policy and institutional reforms, developing and piloting innovative instruments to improve sustainable land management, and seeking further cooperation and integration with other ongoing programs.

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11. The World Bank has assisted the PRC with five forestry projects. Assistance started in 1985 with the Forest Sector Program that built plantation resources. The project was generally considered successful. However, the key issues identified were (i) limited transfer of technologies, (ii) inadequate consideration of the wood processing sector during design, and (iii) poor implementation of the technical assistance package. Subsequent projects, such as the National Afforestation Project (approved in 1989) and the Forestry Resource Development and Protection Project (approved in 1995), were considered highly successful from the perspective of physical targets (140% achievement). However, there was increasing recognition that the distribution of benefits between enterprises and local households was inappropriate. The Forestry Development Project in Poor Areas (1998–2006) increased forest cover by about 8% in the project area, primarily using economic trees. It was determined that marketing infrastructure support was not required as provision by the private sector already went beyond project capacity. The forest enterprise development component was unsuccessful, with only 14 of the target of 64 established, and of these 33% failed during project implementation. The ongoing Sustainable Forestry Development Project (approved in 2002) includes components in timber plantations, economic trees, ecological or natural forests, and nature reserves. Key forest sector lessons are that (i) farmer participation in the design and selection of crops (using community forestry assessments) is critical, despite being staff-intensive; (ii) there needs to be strong links between research and development, and extension systems; (iii) timber plantations have been successful and are largely risk-free; and (iv) the very poor are susceptible to the substantial business risk attached to economic or long-term crops and emphasis must be placed on good varieties that appeal to the market. The World Bank is preparing two more forestry projects for approval: the Integrated Forestry Development Project in five provinces with timber plantations, ecological forests, and capacity development; and the Shandong Ecological Forestry Project in saline and rocky areas.

12. Success factors in previous ADB, World Bank, and other international development partner projects include (i) flexibility in design that allows stakeholders to revise planned activities to respond to market demand; (ii) a high level of private sector participation and the ability to operate on a commercial basis; (iii) strong ownership by project stakeholders, including private enterprises, farmers, and local government implementing agencies; (iv) capacity development in advisory and other support services to facilitate the adoption of new technologies and practices, in particular among small-scale and poor farmers; (v) effective project management, monitoring, and evaluation; (vi) participatory strategies, such as simple watershed management approaches and solutions to land degradation problems with farmers' involvement; and (vii) promotion of sustainable farming techniques on marginal land. Because of the long lead time to reach full production for agro-enterprises, there is a particular need for long-term capital however, the provision of such capital should not be subsidized for this reason. Instead, the terms and conditions of the financing under the project will be assessed for its viability with the selected enterprises. ADB’s Dryland Sustainable Agriculture Project has adopted these measures and serves as a guide for the involvement of private enterprises in the proposed project. The proposed project has taken into account all these lessons and has completed due diligence of the orchard crops, enterprises, and farmer interventions selected.

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Problem Tree for Forestry Assistance

Underemployment
Underinvestment in rural industries
Low rural incomes
Aging rural population

Impacts and Effects

Low output from rural economy

Declining water availability and quality
Declining productivity of forest lands
Lost land erosion

The Problem: Ecological Degradation

Irrigation expansion low water-use efficiency
Increased use of agrichemicals
Reduced soil organic matter
Deforestation
Negligence illegal actions

Agriculture expansion
Inappropriate land uses

Underlying Causes

Population growth
Policy preference for economic growth
Insecure tenure short-term benefit preference
Lack of technology, skills, and capital

Source: Asian Development Bank and State Forestry Administration.