

Environmental and Social Data Sheet

Overview

Project Name:	CFFL-Hunan Forestry
Project Number:	2013-0285
Country:	China
Project Description:	<p>The project is to establish and improve a total of approximately 21 900 hectares of <i>Camellia oleifera</i> Abel <i>Theaceae</i> forests for the production of edible tea-oil from Camellia seeds. The project includes (i) planting of new stands, (ii) tending of young stands, (iii) improving low-yielding stands and (iv) supporting institutional and technological development in tea-oil production.</p> <p>The project is located in 14 counties of Hunan Province in China. The counties are Liling, Hengyang, Hengshan, Qidong, Shaoyang, Miluo, Pingjiang, Sangzhi, Qiyang, Ningyuan, Xupu, Zhongfang, Huayuan and Baojing.</p>
EIA required	Yes
Project included in Carbon Footprint Exercise ¹ :	Yes

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The protection of soil and water, improving biodiversity, and climate change adaptation and mitigation are the main objectives of this Framework Loan. The Framework has a clear environmental orientation as properly designed and implemented forestry has a positive impact on the environment.

The project is expected to add value to the local economy with increased production of edible vegetable oils and, at the same time, contribute to sound ecosystem management with increased carbon sequestration and biodiversity protection as well as preventing of soil erosion. The life span of the project exceeds 30 years.

Major environmental risks in afforestation are related to heavy land clearance and soil scarification that increase the risk of erosion. A monoculture stand structure also results in biodiversity loss in the early stage of stand development. Through the baseline requirement on certifiable forest management, the project has the potential to encourage the use of more sustainable management regimes that enhance biodiversity and soil protection compared to current management regimes. The use of organic farming methods will also be promoted. The chemical use is requested to meet both Chinese and EU standards. Only those chemicals that are registered both in China and the EU can be used.

Project mitigation measures include appropriate site selection, selection of suitable varieties, implementation of intensive planting regimes with fertilization and replanting the gaps in the event of seedling mortality. In the site selection, steep slopes and protected sites are excluded. All project areas are classified and registered as forest land. The EIA report

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

recommends a biodiversity assessment and a number of measures for biodiversity protection. During site visits, such measures were observed to have already been taken. Fire breaks and other measures to combat fires will be implemented.

Environmental and Social Assessment

Environmental Impact and Mitigation

The People Republic of China's 12th Five Year Plan and China's National Climate Change Program (CNCCP) have a primary forestry objective: to increase the forest area by 12.5 million hectares in order to reach a forest coverage ratio of 21.7% by 2015. This target is ambitious and represents the world's largest forestation program.

The State Council of China also issued "*Suggestions on Promoting the Development of Oil Production*" (2007), "*Suggestion on Promoting Agriculture Health Development and Protecting the Security of Supply of Edible Vegetable Oil Industry*" (2008). Subsequently the State Forestry Administration issued "*State Forestry Administration's Suggestion on the Development of the Camellia Industry*" and elaborated the "*State Camellia Industrial Development Plan (2009-2020)*". Hunan is one of the three provinces where Camellia oil can be produced. In line with the state policy, the Hunan Provincial Government issued "*Suggestion on Accelerating the Development of Camellia Industry*" with the aim of increasing the cultivation area up to 1.333 million hectares. Thus the project is in line with national policies.

The project target is to increase and improve tea-oil production and to engage small scale land tenure right holders (farmers) into growing Camellia oil industry through land-lease and supply contracts. The project will also introduce best management practices and their transparent verification through voluntary certification of sustainable forest management. The project shall aim at certifiable management and apply for first voluntary certification for selected project areas during the loan period

The Camellia tree is a native species that forms a dense low forest (bush) that builds up a carbon pool for the long rotation of 40 to 90 years. Camellia stands will establish a protective vegetation cover against erosion within six to ten years after establishment. The forest protects soil from erosion and is adapted to local climate and biotic pests. Collection of high value seeds for oil production does not damage the habitat. Due consideration is given to selection of the productive and well adapted varieties of seedlings. Currently the project sites are committed to organic farming with manure fertilisation and the absence of pesticide use, which is beneficial for the environment.

Camellia stands will be located on forest land used for production purposes. New stands are to be developed mainly on abandoned or already barren land or low yielding forests. Where required, low-yielding stands will be thinned, using mainly manual labour. The land is cleared for new plantations. Management regimes require measures to mitigate erosion risk and introduction of mixed structure with planted and natural/secondary vegetation in the plantation area.

Chinese regulations do not require set aside areas in Camellia plantations, but they do not allow cutting down of the existing trees on the more or less barren hills. Maintaining these trees will support establishment of mosaic structures. Camellia stands require frequent fertilizing and the occasional use of pesticides. Priority is given to organic fertilizers and the listed potential pesticides meet international standards.

Great emphasis and expertise is given to plant breeding and development of cultivation methods. These establish the main mitigation measures to ensure the use of appropriate proveniences and management regimes. State forest organisations and loan beneficiaries provide technical and professional guidance to farmers.

The project will have a positive climate impact through establishing and improving Camellia stands in the region. Long term vegetation, compared to short rotation crops, increases the

carbon store in the region, and the carbon foot print remains positive despite increased emissions from transport and fertilizing.

The Promoters have long term experience in Camellia seed production and supporting research; seedling production and training is available to disseminate updated information.

Social Assessment, where applicable

Camellia oil demand is predicted to increase and, as a high value product, it generates income and employment for farmers, as well as to land leasing entrepreneurs and the processing industry. In current practice farmers lease out their land for 20-30 years to entrepreneurs, cooperatives or companies that provide them with employment when tending and harvesting the cultivations. Lease contracts are often with fixed price and bind farmers to supply only to the lessee company, which does not necessarily guarantee fair benefits to farmers in the long term. The contracts should have index-linked lease prices and an exit option for farmers. In case of conflict, farmers can appeal to Village Committees and / or the Forestry department.

Some companies had introduced profit sharing systems starting from the point when the plantations produced commercial yield.

Project also supports establishment of farmers' cooperatives that will build up the supply and potentially also the processing chain controlled by farmers' representatives. State forest farms provide technical assistance to farmers, entrepreneurs, cooperatives and companies.

Chinese labour legislation applies to all work in Camellia stands. Remuneration rates are defined by the labour market. The project does not threaten the interests of particular minority groups.

The project does not include resettlement.

Public Consultation and Stakeholder Engagement

Public consultation and stakeholder engagement was coordinated at provincial level and implemented at county and town-ship levels. The participatory process included information dissemination, consultation and voluntary application to project and signing of a project contracts. Companies representing in total over 29 000 households, covered 30.5% of the applicants, farmers' cooperatives representing over 10 000 households covered 13.2 % and entrepreneurs representing over 14 000 farmers covered 56.3% of the number of applications. Most farmers had lease contracts with private processing companies.

The state forest farms carried out meetings and surveys on planned project activities. Great majority of project affected people were favourable towards the project.

Carbon footprint

The Camellia industry is a rapidly growing industry in Hunan. The main focus of the present operation is the improvement of low yielding stands, which delivers a lower mean annual increment (and therefore lower carbon sequestration potential) than new plantations. Estimates are based on promoters' reports. Fertilizer inputs are a significant source of emissions, accounting for 3.2 kt CO₂e/a. New plantations and tending of existing plantations account for approximately 10 kt CO₂ e/a across the full project area. Net sequestration delivered by the project is 6.8 kt CO₂ e/a.