



FORESTRY **INVENTORY AND CONSULTING SERVICES**

WHEN YOU NEED TO BE SURE OR WISH TO IMPROVE YOUR INVESTMENT IN FOREST PLANTATIONS,
TALK TO THE LEADER IN INDEPENDENT VERIFICATION, TESTING AND CERTIFICATION.



FOREST PLANTATION

Forest Plantations gain more and more importance for the future world supply with timber, wooden fiber and solid bio fuel. It is expected that in the year 2020, the most important part of Forest Products worldwide is derived from forest plantations. Approximately 4.5 million hectares of forest plantations are currently established every year in addition to the 190 Million Hectares already existing.

Establishment and management of plantations, especially for precious timber species such as Teak, require very high investments, with relatively long-term returns. Fiber for Paper Production is competitively produced from Eucalyptus varieties in large plantations in Latin America, Australia, New Zealand and South East Asia. In many countries of the world's South, governments are promoting the establishment of forest plantations through direct investments, or tax and other incentives.

THERE ARE OF COURSE UNPREDICTABLE AND UNAVOIDABLE UNCERTAINTIES AND EXTERNAL RISKS RELATED WITH INVESTMENTS IN FOREST PLANTATIONS, BESIDES THE LONG-TERM ASPECT:

- political and economic stability in the country of the plantation over the next two decades (tree growth period);
- ecological risks; social risks; natural disasters like windfall, storms, fire, insects, fungus attacks, floods, etc.

SGS FOREST PLANTATION SERVICES ARE FOR FOREST INVESTORS, OWNERS AND SPONSORS TO UNDERSTAND AND EVALUATE THE IMPLICATIONS ON THEIR FUTURE PROJECTS OF PLANTING FORESTS IN SPECIFIC REGIONS, SOIL AND WEATHER CONDITIONS, WATER AVAILABILITY AND OTHERS.

THERE ARE HOWEVER ALSO A NUMBER OF FACTORS THAT ARE ASSESSABLE AND RISKS THAT ARE AT LEAST PARTLY AVOIDABLE:

- site suitability for the species in question;
- growth models used for the calculation of the expected harvestable volumes;
- silvicultural techniques applied;
- soil management and fertilization;
- pest protection and assessment of undesirable species invasions risks and damage mitigation measures;
- genotype and quality of the seeds or the seedling material, and the harvestable trees;
- harvesting and management costs;
- infrastructure, and transport and processing facilities;
- market access;
- future price, interest and inflation expectations; etc.

As Investors usually aim at minimizing risks and seek to collect information on those factors, Forest Owners and Plantation Companies are increasingly inclined to hire independent consulting to meet or even exceed the investment returns expected.

Independent assessments of inventories of developing and existing plantations is now a must to establish confidence in the industry and SGS is best placed to provide the most complete and independent assessments.

PROJECT DEVELOPMENT ASSISTANCE

- Field assessment, e.g. identify and quantify the available land suitable for the project to plant a forest
- Schedule evaluation by identifying and describing key milestones
- Propose Management Team by benchmarking with similar projects
- Evaluate fertilization requirements
- Identify, evaluate and estimate the costs of equipment and service suppliers.

PROJECT REVIEW AND DUE DILIGENCE

- Forest development plan review
- Site assessment, including water supply, soil conditions, etc
- Review on the development schedules
- Contractors and suppliers' qualifications review
- Review and comment on the extent, quality and cost of activities performed
- Permits and licenses review





PROJECT MANAGEMENT

- Development plan: soil preparation, fertility management, planting, maintenance of the forest land, etc.
- Budget control
- Procurement support
- Management Team onsite
- Project management systems

PROJECT MONITORING

- Milestone monitoring
- Equipment and service cost evaluation
- Inspection on the quality and quantity of inputs acquired by the project
- Site visits and progress reports

INVENTORY

Forest Inventory defines what is actually available in a forest or planted forest. What are the potentials of exploitations at a given time of assessment?

Such forest inventory assessments are required to form a strategy for forest technical management, to estimate possible earnings or to help deciding whether to acquire or sell the forests. The scope of service can also include an assessment of the solid bio fuels potential. The Service is not a review of an existing Inventory but the taking of the Inventory where the status of the forest and its implication to run the forest venture is assessed.

- Description of Location, access roads, surroundings, neighbor plantations
- Surface verification
- Description of the environmental limitations, protection of the plantations, Socio-economic conditions.
- Sampling of the forest tree inventory, numbers, growth, volumes
- Apparent health of the plantation
- Description of renewal availability
- Harvest related assessments
- Photographic reporting, satellite picture mapping

CONSULTANCY

Technical Consultancy on Forest Management is designed to assist smaller Plantation Forest Owners who have no access to large resources and updates on current technologies, trends and equipment. By advising them how to cost efficiently implement and monitor resources and practices, SGS quickly helps them improving their returns.

- Application of Agri Forestry Technology
- Exploitation
- Reforestation
- Re-planting
- Soil management
- Fertilization
- Thinning
- Pest protection undesirable species control
- Good forest practice and harvest this service as a package along with fumigation services completed at the origin the shipment.

Important Notice:

All FPRS services are rendered in accordance with the applicable SGS General Conditions for Customized Audit Services available upon request and accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitations of liability and to the clauses on indemnification, choice of law and jurisdiction which apply unless provided otherwise. By placing any work order, the Client confirms that he/she accepts these Conditions.

In no account may the information supplied be construed as investment recommendations. Interested persons should consult a qualified investment specialist before taking investment decisions.

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