

Technical Bulletin #78:

## Forest Management Plans

Forest management or silviculture is managing, using and preserving forests in a sustainable manner to meet desired goals for human benefit. Forest management plans (FMP) rely on mapped resource inventories showing an area's features as well as its distribution of trees (by species) and other resources. FMPs typically include recommended silvicultural treatments, a timetable for their implementation, logistics and economic return.

For forest managers, sustainably managing a particular forest tract means determining, in a tangible way, how to use it today to ensure similar benefits, health and productivity in the future. Forest managers must assess and integrate a wide array of sometimes conflicting factors – commercial and non-commercial values, environmental considerations, to produce sound forest plans. Because forests and societies are in constant flux, the desired outcome of sustainable forest management is not a fixed one. What constitutes a sustainably managed forest will change over time as values held by the public change.

### FOREST RESOURCE MAPPING AND INVENTORIES

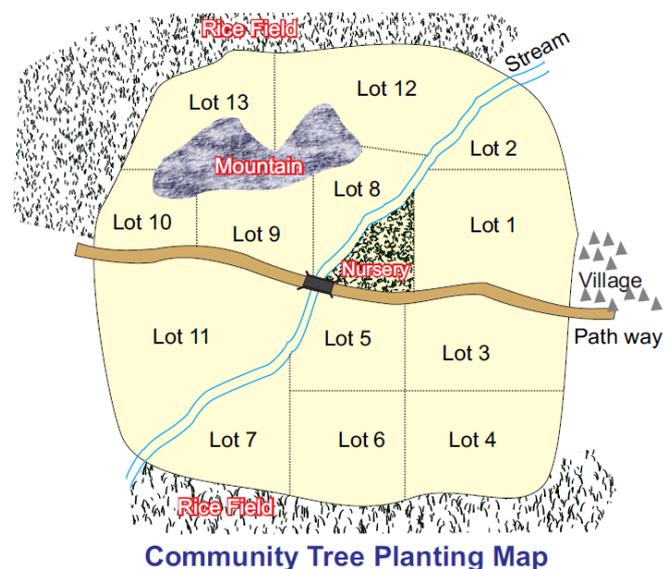
The purpose of forest resource mapping and inventory is to determine the type and quality of trees and lumber that could be harvested from a given area. The process involves identifying and demarcating topographical features (hills), infrastructures (roads), watercourses and any other physical feature easily recognized and that can be used as natural boundaries between annual lots or sections.

Some areas that are difficult to access (hills) can be kept as conservation zones for wildlife, seed source, medicinal plants, watershed protection, etc. These zones will be preserved and not exploited. Inventories are used to determine what is present on the land and assess what is going to be available in the future and from this information a balanced regeneration and careful harvesting plan can be made.

### ROTATIONAL HARVESTING SYSTEMS

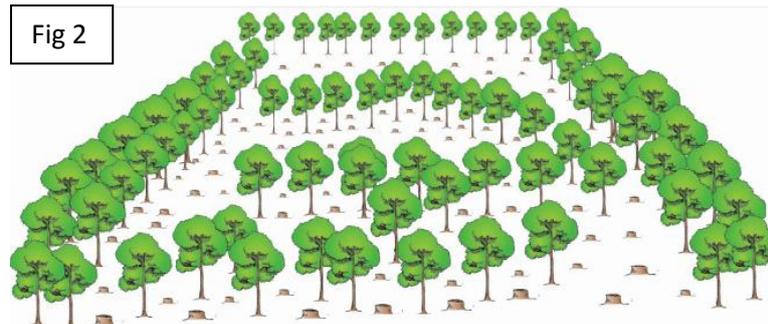
In a rotational silviculture and harvesting system, the forest is divided into sections with the size of the sections or lots depending on the growth rate of the forest, which is determined by resource inventories (valuable species and age class structure). If a zone is poor in resources (few trees), its area must be larger to compensate for the low density of valuable timber species. Each annual section should have a similar standing economic value so that forest communities have regular and viable income generated throughout the years. Cutting is allowed only in the section of the current year with individual or groups of trees that have reached a certain size, while the remaining smaller trees stay. When the last annual section has been cut, logging comes back to annual section 1 (Fig. 1).

Fig. 1



## SELECTIVE LOGGING SYSTEMS

In selective logging systems the forest is kept as a whole and not divided into sections. Individual trees or small groups are cut annually based on a minimum diameter defined for each valuable species to maximize profit and to allow young trees to replace mature trees. An annual logging quota is thus defined using inventories data. Logging is allowed every year and everywhere, apart from excluded conservation zones and as long as the minimum diameter is respected (Fig. 2).



## BUDGET SHARES, TAX & ROYALTIES

The development of a FMP and its monitoring have a cost. A commune forest management committee (CFMC) is responsible for managing the finances of the community. Finances include taxes and reinvestments in the land.

For every tree or cubic meter a certain tax must be captured by the CFMC and recorded into a finance book. Part of these taxes should be redistributed to the local authorities for their support and approbation of the legal and formal logging and transportation activities. The remaining portion of taxes should be redistributed into different local development actions (schools, road repairs, etc.) and also used to finance the reforestation effort.

### **Cambodia HARVEST**

No. 46 Street 310 | Sangkat, Beong Keng Kang 1  
Khan Chamkamorn | Phnom Penh, Cambodia  
Tel: 855 (0) 23 996419

This bulletin is made possible by the support of the American People through the United States Agency for International Development (USAID). The content is the sole responsibility of Fintrac Inc. and does not necessarily reflect the views of USAID or the United States Government.