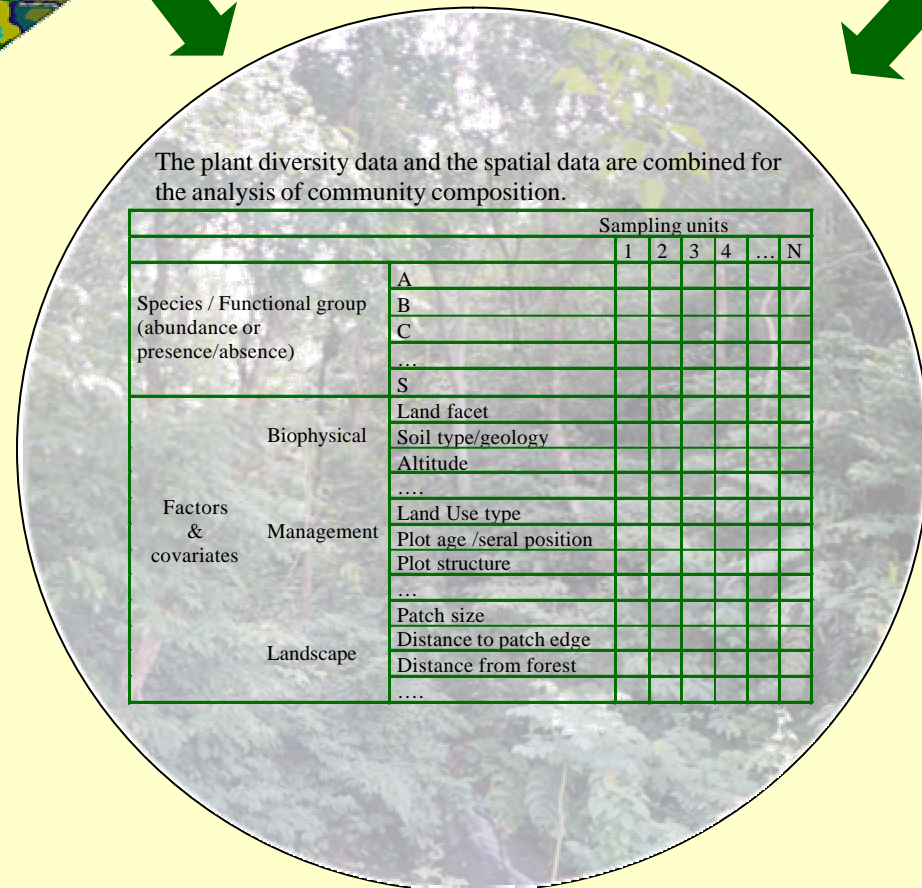
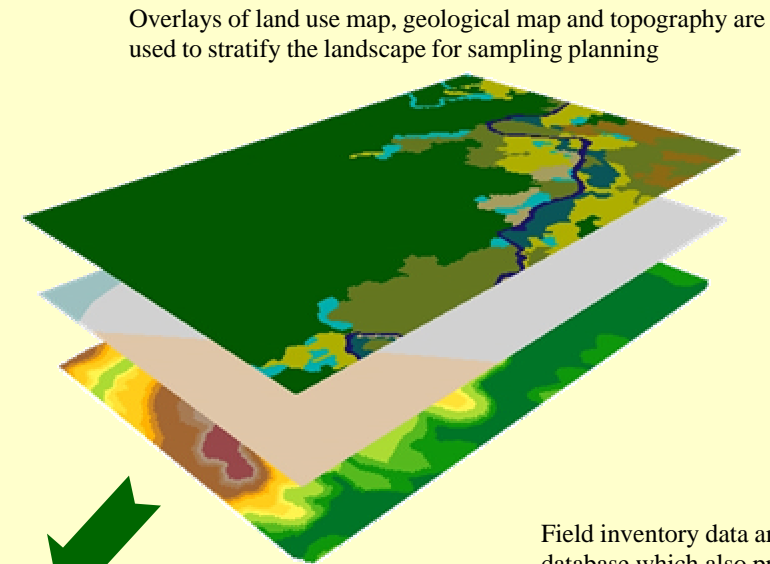
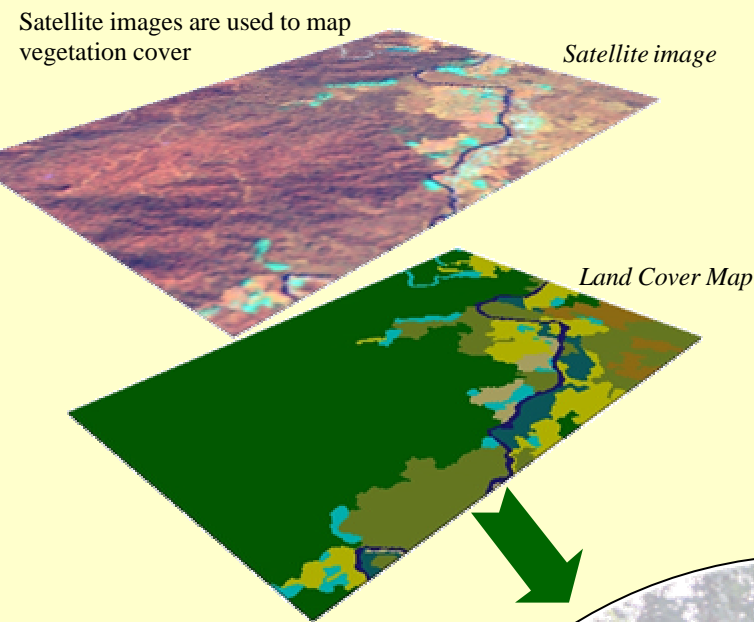


Assessing conservation value of rubber agroforest in the Sumatran lowlands: a landscape level assessment of plant diversity

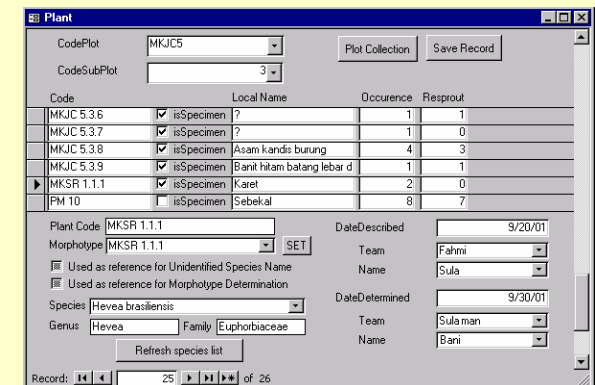
Conservation of forest species in the Sumatran lowlands has become critical because of the rate and extent of forest conversion in the past decade. Previous research has shown that rubber agroforests have high local biodiversity (albeit significantly lower than natural forest) and could play a significant role in conservation of forest species in the future.

However, most of the research to date has been limited to plot level inventories and tells us little about larger scale biodiversity in rubber agroforests. There is therefore a need to scale-up previous biodiversity assessment from plot to region. This implies stratifying the landscape into ecologically meaningful units and conducting a balanced sampling. It also implies assessing the impacts of landscape features (fragmentation, connectivity) on community composition.

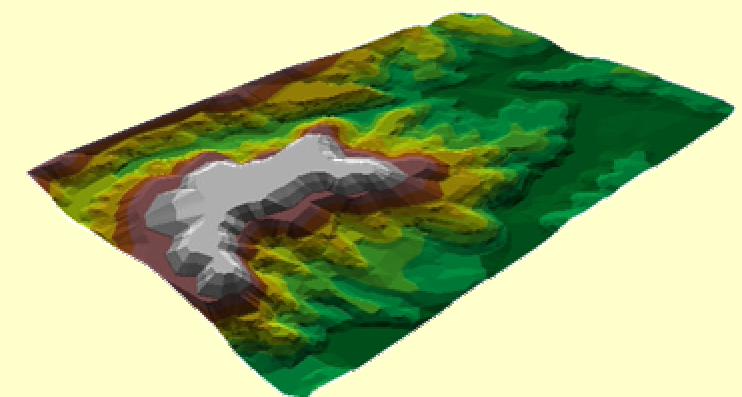
In order to make robust predictions about biodiversity levels at landscape scale there is a need to shift attention from simple species count to ecological processes. In this project which focuses on tree species, plant community data will be assessed both in terms of species composition and functional group composition



Field inventory data are stored in a specially designed database which also provides plant identification facilities.



From Digital Elevation Model (DEM), landscape is further classified into land facets (ridge, upper slope, middle slope, lower slope, valley bottom)



(a species being allocated to a functional group according to its pollination, dispersion, seral position characteristics). Landscape related attributes of sampling units, such as distance to natural forest, size of (agro)forest patch, distance to patch edge, etc. will be assessed using GIS to try and disentangle local from inherently supra-local determinants of plant diversity.