

Estimating distribution of bio fuel yielding species *Pongamia pinnata*, using rapid resource assessment at block level

Hemant Angarkar, NA
NIIT UNIVERSITY Neemrana
Email: hemantp.angarkar@st.niituniversity.in

Abstract

Bio fuels are cleaner alternatives to traditional fossil fuels. *Pongamia pinnata* is a tree, yielding straight vegetable oil which can be utilized as bio fuel. This study was aimed to estimate density & distribution of selected species in landscape of Mangaon block in Raigad district, which is situated in coastline of northern Western Ghats in Maharashtra. To achieve this, rapid resource assessment was conducted and study area was divided in 5 X 5 km cells by grid overlay using QGIS software. Trees were sampled for distribution and density using nearest individual method. This rapid assessment technique helped us to identify 3 clusters of high density of *P. pinnata*. Area and density of trees in these clusters are respectively; cluster 1 with 3 cells, 75 ha and average 42 trees/ha; cluster 2 with 2 cells, 50 ha and average 41 trees/ ha; cluster 3 with 1 cell, 25 ha and 42 trees/ha. Rest of the area had density ranging from 0 to 30 trees per ha. Out of 65000 ha of study area, 15000 ha of area was found to have good *P. pinnata* population. *P. pinnata* is riparian species and hence it was found in cells with rivers and streams. This study will help in setting up a decentralized bio fuel resource center which will help in meeting energy and livelihood needs of rural community.