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ASSESSMENT OF DEGRADATION STATUS OF THE COMMUNITY-MANAGED DEGRADED FOREST LANDS IN SRI LANKA: PRELIMINARY ANALYSIS

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In the past, forest management and protection in Sri Lanka has largely focused on strict government control. However, with the appreciation of the relevance and importance of community involvement in forest management, various approaches to community-based forest management have been introduced. A monitoring and evaluation study was initiated to measure changes in forest condition over time in areas selected to be managed under the Community Forest Management (CFM) Program.

To assess changes in biodiversity, forest structure and biomass over time, 554 permanent sample plots (PSP) were established in 51 community forest areas in 2013, and vegetation data are being collected annually. Selected sites are situated within five main agro-climatic zones (ACZ); low country dry (19 sites), low country intermediate (10 sites), mid-country intermediate (18 sites), upcountry intermediate (3 sites) and upcountry wet (1 site). Using the baseline data collected in 2013, tree density, aboveground biomass (AGB), regeneration and species richness at plot and site levels were calculated. A combined index with regard to both stem density and AGB was formulated for each site to classify them into degradation levels. Sites were classified as critically, highly, moderately and lightly degraded, and numbers of sites within each category are 31, 17, 3, and 0, respectively.

Average stem density and AGB of the sites vary considerably, ranging from 82-1092 stems/ha, and 4-187 Mg/ha, respectively. On average across each climatic zone, the largest biomass is recorded for the low country intermediate zone sites, while the highest tree density is recorded in the upcountry wet zone site. Average density and AGB of a site is expected to increase if the site is recovering with time. Percentage change will be analyzed with respect to the relevant climatic zone over time. The relative contribution of pioneer, intermediate, climax and invasive species will be estimated to monitor changes in species composition. Regeneration will also be monitored.

Key words: *Community forestry, Biomass, Degraded forest, Species composition*