D-22: Spatial distribution and dominance of mangrove species in Rekawa lagoon

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The present paper reports the results of an ecological study, using belt transects (25 x 50 m) at 6 study sites in mangrove vegetation around Rekawa lagoon. Individuals over 5 cm stem circumference were recorded and the distance from the waterfront to each individual was noted.

Eleven mangrove species and seven mangrove associated species were recorded from the six transects. The plant density decreased significantly from the lagoon (distance category 1) towards the land and there was a linear relationship between the distance category (units of 12.5 m) and the number of individuals. *Excoecaria aggallocha*, the most dominant species with highest mean basal area of 5.76 cm^2/individual, accounted for more than 25% of the individuals, followed by *Avicennia marina* (13%) *Aegiceras corniculatum* (11%) *Ceriops tagal* (10%) *Bruguiera gymnorhiza* (8%) *Lumnitzera racemosa* (8%) *Acrostichum aureum* (7%) and *Rhizophora mucronata* (6%) *Bruguiera sexangula* and *Rhizophora apiculata* were rather rare (<0.5%)

Despite relatively less number of individuals, the distribution patterns of *Avicennia marina* and *Lumnitzera racemosa* were similar to that of *Excoecaria aggallocha*. *Ceriops tagal* was found only in the categories 1,2, and 3 of the study sites 1, 2, and 3. *Rhizophora mucronata*, *Rhizophora apiculata*, *Bruguiera gymnorhiza* and *Bruguiera sexangula* were confined to distance category 1 bordering the lagoon.

It was concluded that the mangrove vegetation of Rekawa lagoon is a *Excoecaria aggallocha* dominant *Avicennia marina*, *Acrostichum aureum*, *Ceriops tagal* community. *Bruguiera gymnorhiz*, *Lumnitzera racemosa*, *Acrostichum aureum* (clumps) and *Rhizophora mucronata* had relatively low number of individuals in the community.