

Does the increase of the mangrove cover of Rekawa lagoon accompany economic value of the resource?

The areas covered by total mangroves and different assemblages were calculated by using aerial photographs of 1956 and 1994. The area covered by mangroves in Rekawa was 103 ha in 1956 and 132 ha in 1994 and hence it has increased by 29 ha (28%) over the 38-year period. The net increase of the mangrove cover is due to a newly grown area of 50 ha (49%) and disappearance of 21 ha (20%) during the same time period.

Almost all the areas covered by newly grown mangroves were low-lying mud plains or grassy plains that could have inundated very occasionally. It is clearly evident that the water surface area of the network of freshwater inflow canals is higher in 1994 compared to that in 1956. These canals have been constructed for channeling drainage water from upstream irrigation works. This has increased the water inflow and also the siltation rendering conditions more conducive for mangrove growth.

The increased areas of mangroves are mainly dominated by, *Aegiceras coniculatum*, *Avicennia officinalis* and *Excoecarea agallocha*, which are less usable species in Rekawa area. On the other hand, the destroyed mangrove areas in Rekawa, were dominated mainly by *Ceriops tagal*, *Lumnitzera recemosa* and *Rhizophora mucronata*, which are some of the most demanded species by mangrove users in the world. There are at present no evidence for that this assemblage of less valuable species could be a successional stage that would lead to a climax or another successional stage with higher value species. Moreover the destroyed mangrove areas were with closed canopies, implying that those areas were mature and/ or dense forests, whilst the newly grown mangrove areas are covered by less dense mangroves with smaller trees. Therefore whether the value of newly grown mangrove areas can compensate the value lost with disappeared mangrove areas is questionable.

In addition, differences in crown sizes observed in aerial photographs of 1956 and 1994 indicate that removal of larger trees from the mangrove forest has increased over the period. For all these reasons, it is now possible to assert that the diminution of the value of the Rekawa mangrove forest resulting from human impacts largely rules out the value gained due to the increase in mangrove area.