

# Mangrove forest regeneration in tsunami impacted sites of Nicobar Islands, India

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## Abstract

Anthropogenic disturbances on the mangrove ecosystem are well documented and it has been reported that the mangrove forests are disappearing around the globe at an alarming rate of 1% per year. Natural disturbance like tsunami coupled with the man-made disturbances can drive the mangrove forests to an unrecoverable condition. The paper presents the post tsunami scenario of mangrove forest regeneration in the Nicobar Islands, India. In total, 25 locations over eight Islands were identified and surveyed for recording the re-colonization of mangrove species. The regeneration of mangrove species was quantified by laying plots of varying sizes (100m<sup>2</sup> to 5000m<sup>2</sup>) and saplings of  $\geq 1.3$ m were enumerated. To find out the pre-tsunami status of mangrove species distribution, plots were established in the scorched mangrove habitats and the snags were enumerated. In total, 17 species of mangroves were recorded from the re-colonization sites of which five were recorded for the first time from these Islands. Thirty per cent of the mangrove species recorded prior to tsunami could not be found during the present survey. The abundance of various species in the tsunami impacted sites was much lesser than the pre-tsunami situation. Definite pattern has been observed in the re-colonization of mangrove species. *Rhizophora* spp. dominating the proximal zone, a combination of *Rhizophora* spp. and *Bruguiera gymnorhiza* dominating the middle zone and, *B. gymnorhiza*, *Lumnitzera* spp., *Sonneratia* spp. were dominating the back mangrove zone. We suggest a continuous monitoring programme for these sites which could provide a better perspective on the re-colonization pattern of mangrove species.

## Keywords

tsunami, Nicobar Islands, regeneration, habitat loss