

Post tsunami recovery of fauna and flora of the Barberyn reef, Beruwala, Sri Lanka

S.C. Jayamanne* and D.D.G.L. Dahanayaka

Inland Aquatic Resources and Aquaculture Division, National Aquatic Resources Research and Development Agency, Crow Island, Colombo 15, Sri Lanka

Key words : Barberyn reef, sea weeds, invertebrates, Tsunami

Abstract

Barberyn reef, a reef situated on the South-west coast of Kalutara district Sri Lanka at 6° 26' N and 79° 58' E, which was denuded by the tsunami, 2004 was studied to evaluate the recovery of flora and fauna. Site was visited immediately after tsunami and then 6 months, 1 year and 2 years after tsunami. A line transect was laid parallel to the shore along the reef and triplicate quadrat samples were taken from 16 sampling locations at 50 m intervals. Positions of the locations were accurately noted using a hand held GPS. Percentage cover of sea weeds and abundance of invertebrates were recorded. The reef was observed to be almost bare immediately after the tsunami. A considerable increase of abundance and diversity of seaweeds and invertebrates was observed from January to June, 2005 and full recovery was observed in June 2005. Species richness increased from 2 in January 2005 to 12 in June 2005 while average percent cover of sea weeds increased from 2 in January 2005 to 23.44± 1.56% in 2005 and to 77.81± 27.62% in 2006. Species richness of invertebrates was 0 in January 2005 and increased to 5.22±3.42%, 2.81±1.68% and 10.56±3.69% respectively in 2005 June, 2005 December and 2006 December. Fourteen species of seaweeds under eleven families dominated by *Turbinaria*, *Caulerpa*, *Ulva*, *Jania*, *Gelidium*, *Gracilaria* and *Sargassum* and twenty-seven species of invertebrates consisting of 11 species of polychaetes, 9 species of gastropods, 16 species of crustaceans, 2 species of echinoderms were recorded during the present study. It was also observed that the abundance of invertebrates increased significantly ($r = 0.89$, $p < 0.05$) with the increase of percent cover of seaweeds in the reef.

* Correspondence : sepalika@nara.ac.lk