

Following is a summary of a recent scientific study focusing on climate change.

Climate Change, Human Impacts, and the Resilience of Coral Reefs

By T.P. Hughes, A.H. Baird, D.R. Bellwood, M. Card, S.R. Connolly, C. Folke, R. Grosberg, O. Hoegh-Guldberg, J.B.C. Jackson, J. Kleypas, J.M. Lough, P. Marshall, M. Nyström, S.R. Palumbi, J.M. Pandolfi, B. Rosen, J. Roughgarden
*From **Science**, American Association for the Advancement of Science, 2003*

“The diversity, frequency, and scale of human impacts on coral reefs are increasing to the extent that reefs are threatened globally. Projected increases in carbon dioxide and temperature over the next 50 years exceed the conditions under which coral reefs have flourished over the past half-million years. However, reefs will change rather than disappear entirely, with some species already showing far greater tolerance to climate change and coral bleaching than others.” To increase reefs’ resilience, the authors state that networks of no-take areas, where all extractive activities are prohibited, must be greatly expanded, and adjacent areas must have stronger protections. While no-take areas cannot prevent bleaching, they will help bleached reefs at least partially recover by re-populating them with species that are resistant to climate change. The paper also refers to the isolated reefs of Hawaii, saying that if its reefs bleach, it will take much longer for them to recover because they are primarily self-seeding with little input from distant reefs. Reef systems that are closer together are more resilient to climate change because their interconnectedness increases the likelihood that surviving species will spread and re-populate across reef systems. Contact: T.P. Hughes, terry.hughes@jcu.edu.au