

Response of pure stock of coral reef tiger grouper and hybrid grouper to simulated ocean acidification

ABSTRACT

Ocean acidification driven by climate change has serious implications for marine life. Changes in chemical composition of seawater caused by acidification affect the marine animals which build calcium carbonate shells and interfere with the physiological processes. Acidosis in the bodies of animals is one of those processes which can threaten their normal metabolic functions and survival. Different animals will be affected to different degrees, with some more resilient than others. This paper reviews the work done on the subject and provides interpretation of the results obtained on an experiment based on a simulated ocean acidification system. In this experiment, the response of pure and hybrid stocks of groupers to exposure to seawater treated with carbon dioxide to simulate the ocean acidification conditions was compared. Hybrids appeared to be more tolerant. Further investigations are, however, necessary for making generalizations regarding the specific effects of acidification of seawater on marine organisms and selection of species in climate change adaptations in marine aquaculture.