

CORAL CONSERVATION TECHNOLOGIES AS A TOOLBOX FOR THE PROTECTION OF CORAL REEFS AGAINST FUTURE CLIMATE CHANGE AND GLOBAL WARMING EFFECTS

Fuad A Al-Horani^{1, 2}

¹The University of Jordan, Aqaba Branch, Aqaba-Jordan

²Marine Science Station, Aqaba-Jordan

Coral reefs are deteriorating at global scales. Both natural and anthropogenic damaging factors were reported in many parts of the world, which have resulted in massive coral death. Climate change and global warming are threatening the existence of coral reefs in future. Therefore, the conservation of coral reefs has to be done at a global scale under the concept Think Globally and Act Locally. In light of this vision, we have adopted a tool box for the conservation of Coral reefs in the Gulf of Aqaba-Red Sea. Various conservation techniques were developed and tested. The most effective solutions were found to be through establishing artificial reefs, transplantation of endangered coral species and establishing coral nurseries. Those strategies were proved to be effective in rehabilitation of damaged coral reefs and preserving the endangered coral reef habitats. Recent techniques like coral cryopreservation, *in vitro* fertilization and coral fusion techniques are the new techniques are expected to better preserve corals outside the sea for future usage to replenish the damaged reef areas. They are especially important for replacing coral reefs in the face of massive deaths caused by natural and /or anthropogenic catastrophes.

f.horani@ju.edu.jo