If it is possible to create and manage marine ecosystem in a desert, why is the whole gulf ecosystem under threat?

David A Jones*, Manickam Nithyanandan

Over the last 14 years a mega project, Sea City, Kuwait, has been developed for over 100,000 inhabitants in a saline desert, most dwellings having access to the sea via waterways. These are designed to circulate high quality seawater throughout the city using only wind and tidal power. Virtually all the intertidal and subtidal open sea Gulf marine habitats have been replicated artificially in Sea City following strict environmental guidelines.

Long term monitoring demonstrates that most of these habitats now contain a higher diversity and abundance in comparison to similar habitats, including fisheries, in the open Gulf.

In contrast there is now abundant evidence that the open Gulf ecosystem is in serious decline, particularly with regard to key habitats such as mangrove, seagrass, coral reefs and fisheries. Climate change cannot yet be responsible, as both Sea City and the open Gulf are subject to the same effects.

Hence decline in the open Gulf is likely to be due to a lack of adherence to environmental guidelines and management practices which have been strictly observed in the development of Sea City. These include absence of pollution, monitoring of water quality and ecosystem development, control of dredging, minimal habitat destruction, only protective infill, lack of sedimentation, enhancement of mangrove, seagrass and corals by cultivation and transplantation and regulation of fisheries.

Similar strict environmental regulation needs to be applied throughout the Gulf to save a fragile ecosystem before it is too late.

Cite this article as David A Jones, Manickam Nithyanandan, If it is possible to create and manage marine ecosystem in a desert, why is the whole gulf ecosystem under threat?, Qatar University Life Science Symposium 2015, http://dx.doi.org/10.5339/qproc.2015.qulss2015.14