

# CORAL REEF INITIATIVES IN THE MIDDLE EAST

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## International Year of the Reef

The first ever **International Year of the Reef** was held more than 10 years ago in 1997 (IYOR 97), however, there remains an urgent need to increase awareness and understanding of coral reefs, and to further conserve and manage these reefs and associated ecosystems. To assist in this task, 2008 was designated the International Year of the Reef at the 11th International Coral Reef Symposium in Florida. The main threats to corals have been identified as climate change, destructive fishing, declining water quality from pollution, and the degradation of coastal habitats. Climate change has increased water temperatures and solar radiation exposure leading to coral bleaching and diseases that can result in mass coral mortalities.

IYOR 2008 (<http://www.iyor.org>) follows on from the IYOR 1997 event that was initiated in response to the increasing threats to coral reefs and associated ecosystems, such as mangroves and sea grasses. IYOR 97 was a global effort to increase awareness and understanding of coral reefs, and support conservation, research and management efforts.

IYOR 2008 aims to:

- Strengthen awareness about the ecological, economic, social and cultural value of coral reefs and associated ecosystems
- Improve understanding of the critical threats to coral reefs and generate both practical and innovative solutions to reduce these threats
- Generate urgent action at all levels to develop and implement effective management strategies for conservation and sustainable use of these ecosystems.

## Coral Reef Investigations in Abu Dhabi and Eastern Qatar

In June 2008, Dolphin Energy management announced the completion of a three year collaborative research project, 'Coral Reef Investigations in Abu Dhabi and Eastern Qatar.' The objectives had been to map, for the first time, the extensive range of shallow coral reefs lying in Qatari and Abu Dhabi waters. Coral reefs and their associated mangrove and sea grass habitats in the United Arab Emirates (UAE) and Qatar, are known to play important ecological, economic, recreational and cultural roles. These habitats provide food and shelter for numerous fish and marine species. They also protect coastal areas from storm surge, prevent coastal erosion and support commercial fishing and an array of recreational activities.

Over the three year period, various project teams undertook scale mapping of coral (using satellite imagery), as well as ground verification, accuracy reports, fieldwork around the islands, training of scientific personnel at Qatar's Supreme Council for the Environment and Natural Resources (SCENR) and the Environment Agency– Abu Dhabi (EAD), a coral reef monitoring training manual, production of the conservation master plan and completion of a definitive coral reef conservation management documentary. A new illustrated book, "Coral," and an associated DVD, will be published later in 2008 to commemorate the project. The project has proven to be a successful collaborative venture.

Through this study researchers from the EAD and SCENR were able to identify areas where the coral is thriving and even re-growing, despite extreme temperature conditions in recent summers. The study



Fig 1. Translocated coral (Qatargas)

also assessed the dangers involved in regional coastal developments and these were highlighted in the resultant Coral Reef Management Plan which shows that these are accelerating coral die off. The authors of the report are encouraging regional government authorities to review and implement effective legislation and policy strategies, so as to protect these essential marine habitats for the benefit of current and future generations. The work was sponsored by Dolphin Energy Limited and managed by the UAE's Emirates Wildlife Society (EWS) and the regional branch of the World Wide Fund for Nature (WWF).

## Coral Translocation by Qatargas

During April 2008, Qatargas completed a major environmental initiative involving the relocation of over 4,500 coral colonies from future pipeline corridors which would have been affected by proposed expansion projects. This programme is considered unique and the largest coral protection effort conducted so far in the region. The coral protection plan was implemented in close cooperation with the Supreme Council for the Environment & Natural Reserves (SCENR), Qatar.

An Environmental and Socio-Economic Impact Assessment (ESIA) was conducted in 2004. A key recommendation from the ESIA was to move representative coral colonies from the areas affected by the pipeline construction activities to a safe and sustainable location.

In 2004, 2005 and 2006, Qatargas contracted Continental Shelf Associates (CSA) to survey the marine seafloor to identify the coral colonies located along the future pipeline corridors. Following the selection of seven possible sites, visual surveys of one site south east of Al-Khor found it to be suitable. This location had the right water quality, water depth, hard sub-sea substrate and already contained live corals including those of the same species as the relocated corals.

Removal and relocation operations started in October 2006 and continued over five months. First the coral colonies were carefully detached by scientists and placed in basket-shaped storage containers on the seafloor until ready for transport. Once ready for transport the baskets were transferred onboard a ship where they were placed in large circulating seawater pools specially constructed for the project. The corals were then transported to the new location and reattached to the seafloor. The new colonies were then numbered and tagged for future monitoring.

Future work will include an environmental monitoring survey to determine the success of the relocation program. The coral's colour, health and any major changes to the surrounding habitat will also be recorded.



Fig 2. Shallow water coral (Qatargas)