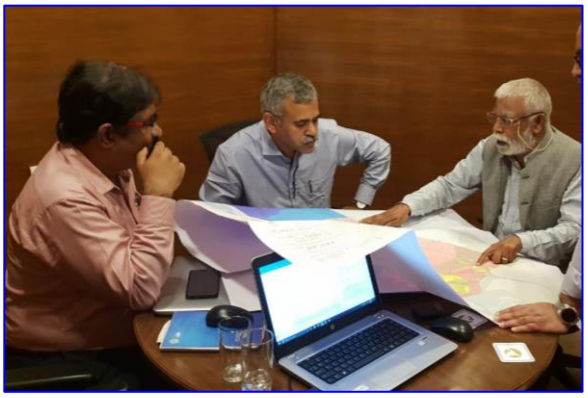
Events at Indomer

Mr. Abel Riaza Frutos, Abengoa conducting Jar Test in Indomer

Visit of Dr. Zingde, Former Dy. Director, CSIR – NIO

HTL Demarcation at Jodiya, Gujarat



Discussion with ESSEL on outfall location

LTTD Plants

Low-temperature thermal desalination (LTTD) is a desalination technique which takes advantage of the fact that water evaporates at lower temperatures at low pressures, even as low as ambient temperature. The system uses vacuum pumps to create a low pressure, low-temperature environment in which water evaporates even at a temperature gradient of 8°C between two volumes of water. Cooling water is supplied from deep sea depths of as much as 600 metres. This cold water is pumped through coils to condense the evaporated water vapor. The resulting condensate is purified water. The LTTD process may also take advantage of the temperature gradient available at power plants, where large quantities of warm cooling water are discharged from the plant, reducing the energy input needed to create a temperature gradient.

The principle of LTTD has been known for some time, originally stemming from ocean thermal energy conversion research. Some experiments were conducted in the U.S. and Japan to test low-temperature-driven desalination technology. In Japan, a spray flash evaporation system was developed by Saga University. In the U.S. Hawaiian Islands, the National Energy Laboratory tested an open-cycle OTEC plant with fresh water and power production using a temperature of 20°C between surface water and water at a depth of around 500 m.

LTTD was studied by India's National Institute of Ocean Technology (NIOT) from 2004. Their first LTTD plant was opened in 2005 at Kavaratti in the Lakshadweep islands. The plant's capacity is 100,000 litres /day at a capital cost of INR 50 million. The plant uses deep sea water at a temperature of 7 to 15 °C (45 to 59 °F). In 2007, NIOT opened an experimental floating LTTD plant off the coast of Chennai with a capacity of 1,000,000 litres /day. A smaller plant was established in 2009 at the North Chennai Thermal Power Station to prove the LTTD application where power plant cooling water is available. NIOT is the pioneer organization for setting up LTTD plants and has proposed to set up LTTD plants at six islands (Amini, Androth, Chetlat, Kadamat, Kiltan, Kalpeni) of Lakshadweep. The EIA studies were done by Indomer and obtained CRZ Clearance recently.

DRAFT CRZ NOTIFICATION 2018

Based on the representations received from various Coastal States and Union Territories and other stake holders including recommendations made by the Committee under the Chairmanship of Dr. Shailesh Nayak, Ministry of Environment, Forest and Climate Change issued the Draft Coastal Regulation Zone Notification (CRZ), 2018 on 18th April 2018 for seeking comments / suggestions from all concerned. The aforesaid draft notification is available in this Ministry's website in public domain. This draft notification has major recommendation which would boost tourism development in coastal areas of the country which remains untapped due to stringent regulatory framework.