

## **WATER – THE FOCAL AREA OF SOCIETAL IMPORTANCE AT KITS**

Karunya means 'compassion' and the founders of KITS had a vision to build an institution of higher education to address the livelihood issues of the society. Water was one such focal area identified along with food, healthcare and sustainable energy. Considering the importance of water management at the national and global levels, Karunya established a Water Institute in 2008 to address the academic, research, consultancy and extension activities in the area of water, especially with reference to the semi-arid zone.

The Water Institute introduced an M. Tech. Program in Integrated Water Resources Management, the scope of which was expanded to include environmental and water resources engineering. The Institute also offers Ph.D. Programs and a few of the past scholars are pursuing PhD in reputed institutions abroad and are serving as Scientists in RD institutions. Around 60 students completed M.Tech and 10 scholars have been awarded PhD. Some of the topics of National relevance taken up being: Impact of hydro power stations on downstream environmental flows Land use change as an indicator of hydrologic characteristics in river basins Reservoir operation policy for Parambikulam-Aliyar Project Models to develop agricultural hubs in India Impact of climate change on ground water conditions in the Cauvery delta Application of isotopes in groundwater recharge investigations Electrochemical techniques for water treatment and hydro-dynamics of Point Calimere wetland.

During the past 5 years, 42 papers were published in Scopus/Web of Science indexed journals and six patents were filed and published in the area of water, one in collaboration with an Israeli university. Consultancy assignments of more than Rs. 1 crore were taken up for GoI, JICA and WISA. During the period, 7 major research projects were funded by DST, CWRDM and MoEF, of which 5 have been completed. Currently, a consultancy assignment of Rs. 42 lakh on Point Calimere wetland is being carried out for GIZ, Germany. A state-of-the-art electrochemical laboratory for water treatment was established in KITS campus with expertise from Prof. Yoram Oren of Zuckerman Institute of Ben-Gurion University, Israel. A student of Karunya is now a Post-Doctoral Fellow at the Water Institute of Technion, Israel. The recently launched BSc (Hons) Agriculture Program has opened several avenues for research in irrigation and agricultural water Management.

Karunya has entered into MoUs with Agriculture Research Organization of Government of Israel, Ben-Gurion Desert Research Institute and the Hebrew University of Israel. Also, MoUs for water research have been signed with RWTH, Aachen, Milwaukee University and NIH (GoI), Roorkee. The Water Institute was represented in various capacities in Wetlands Regulatory Authority of GoI, Research Committee of CWC ICID, Dam Safety Authority of Government of Kerala and Research Council of CWRDM.

KITS was actively involved in relief operations related to natural hazards caused by water - Kerala Floods and cyclones of Tamil Nadu.

As part of the community service and social commitment initiatives, the University has installed several sanitation facilities and rain water harvesting structures in the neighbouring villages.