Deccan Chronicle – 13 April-2024

STATE ALLOWED TO USE WATER FROM N'SAGAR

BALU PULIPAKA I DC
HYDERABAD, APRIL 12

The Krishna River Management Board on Friday approved the use of 8.5 tmc ft of river water by Telangana and 5.5 tmc ft by Andhra Pradesh to meet drinking water needs till the end of May. At a meeting here, Telangana state had requested 12 tmc ft and AP nine tmc ft, including the 2.5 tmc ft that it has not used so far.

At Friday's two-hour long meeting, the two states agreed with KRMB's proposal to leave water in the Srisailam as emergency reserves, and use water from Nagarjunasagar. It was also decided to bring the minimum draw down level at Nagarjunasagar down to 500 feet from the 505 feet.

The Hindu – 13 April-2024

IISc researchers design novel hydrogel to remove microplastics from water

The Hindu Bureau
BENGALURU

Researchers at the Indian Institute of Science (IISc) have designed a sustainable hydrogel to remove microplastics from water.

According to the IISc, microplastics pose a great threat to health as these tiny plastic debris can enter our bodies through the water we drink and increase the risk of illnesses.

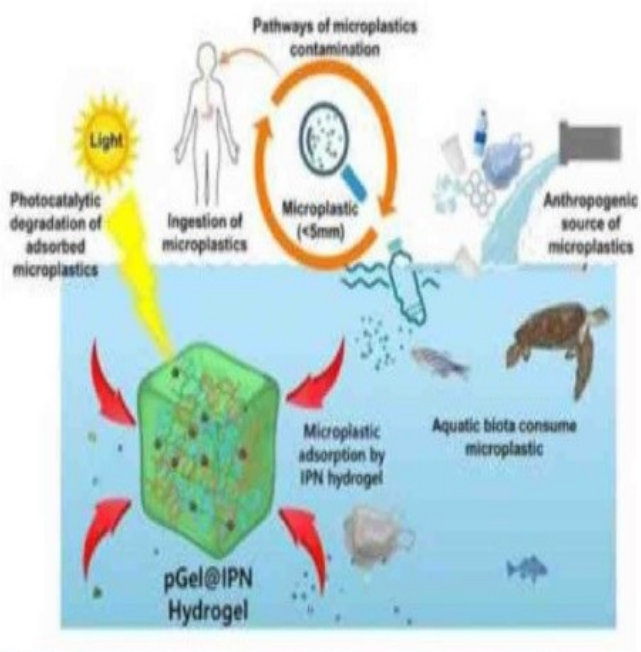
The hydrogel designed by the researchers has a unique intertwined polymer network that can bind the contaminants and degrade them using UV light irradiation.

Scientists have previously tried using filtering membranes to remove microplastics. However, the membranes can become clogged with these tiny particles, rendering them unsustainable.

Instead, the IISc team led by Suryasarathi Bose, Professor at the Department of Materials Engineering, decided to turn to 3D hydrogels. The hydrogel developed by the team consists of three different polymer layers - chitosan, polyvinyl alcohol and polyaniline - intertwined together, making an interpenetrating polymer network (IPN) architecture.

The team infused this matrix with nanoclusters of a material called copper substitute polyoxometalate (Cu-POM). These nanoclusters are catalysts that can use UV light to degrade the microplastics. The combination of the polymers and nanoclusters resulted in a strong hydrogel with the ability to adsorb and degrade large amounts of microplastics. The team found that the hydrogel could remove about 95% and 93% of two types of microplastics in water.

The study has been published in *Nanoscale*.



Safe water: The hydrogel can bind the contaminants and degrade them using ultra violet light irradiation, says the IISc study.