7 AFFORDABLE AND CLEAN ENERGY

GOOD HEALTH AND WELLBEING

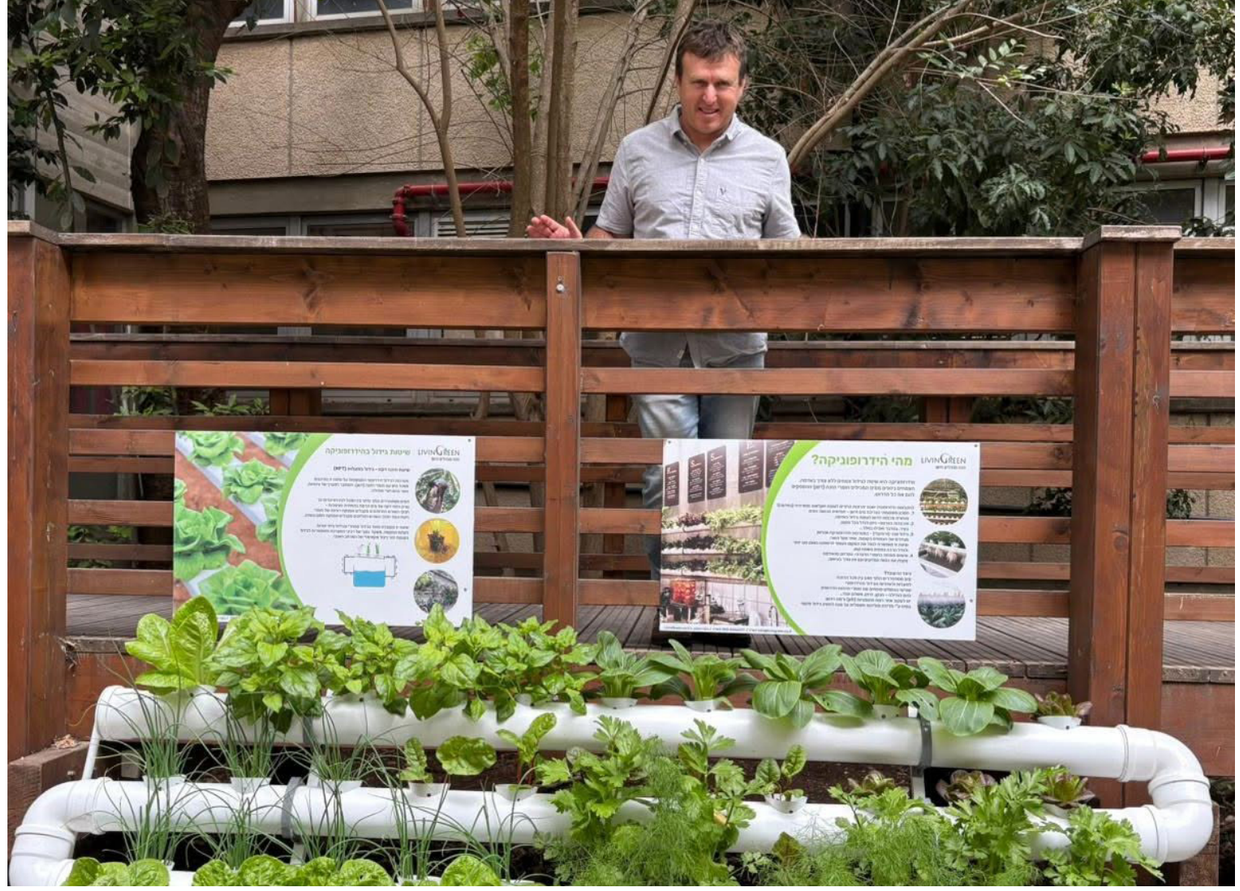
RESEARCH

Powering the Future of Underwater IoT

Prof. Roee Diamant, Department of Marine Technologies, has been awarded funding from Israel's Ministry of Energy and Infrastructure for a pioneering project on energy harvesting for the Underwater Internet of Things (IoUT). The research aims to develop compact underwater generators that convert ambient ocean noise and motion into electrical power, extending the operating life of marine monitoring devices without relying on batteries. By combining advanced materials, innovative engineering, and real-world sea trials, the project could enable a new generation of self-powered underwater sensors for environmental monitoring and marine research.

Smarter Pumps, Lower Energy Costs

Prof. Mashor Housh and Dr. Elad Salomons, Department of Natural Resources and Environmental Management, have developed a practical, model-based control strategy that makes water pumping stations significantly more energy efficient. Designed for systems with multiple variable-speed pumps, the approach optimizes pump operation without requiring costly infrastructure upgrades. Tested on a real-world case study, the method reduced energy consumption by approximately 10% while maintaining reliable water pressure and meeting operational constraints.



Dr. Igal Berenshtein, Dept. of Marine Biology (Credit: University of Haifa)

PUBLIC ENGAGEMENT

A Just Transition for Haifa Bay

The Environmental Justice Clinic is helping advance the transformation of Haifa Bay by supporting the phase-out of petrochemical industries while protecting workers' rights. Through research, policy development, and collaboration with government agencies, labor organizations, and environmental partners, the clinic is promoting a just transition, ensuring that the shift toward cleaner industries and renewable energy creates new opportunities for affected workers while improving environmental and public health.

Standing Up for a Cleaner Haifa Bay

Following the efforts to restore the Oil Refineries (Bazan) facilities after damage from Iranian strikes, the Environmental Justice Clinic, part of the Faculty of Law, is challenging the rehabilitation, arguing it should not undermine the government's plan to close the outdated industrial complex. Working with environmental organizations and local communities, the clinic advocates for a safer, healthier Haifa Bay by participating in planning discussions, supporting public engagement, and helping residents respond to proposed emissions permit changes.

LEARNING AND STUDENTS

Law, Energy, and the Environment

The Energy and Environmental Law course, taught by Mr. Zvi Levinson in the Department of Natural Resources and Environmental Management, provides students with an in-depth understanding of the legal frameworks governing environmental issues. The course introduces key stakeholders, their legal tools, authorities, and decision-making processes, while focusing on real-world legal challenges and practical solutions faced by professionals in the field.

OPERATIONS

Turning Waste into Energy and Community

Dr. Igal Berenshtein from the Department of Marine Biology and winner of last year's Green Campus competition, transformed a hidden green space on campus into a living showcase of sustainability. The project features a Home Bio-Gas system that converts organic waste into clean cooking gas for a shared coffee station, alongside an advanced aquaponic and hydroponic garden that provides fresh produce. The Green Corner hosts monthly community gatherings, where students, researchers, and staff from nearby labs and offices come together to enjoy coffee brewed with biogas and harvest produce from the garden.

