**Active children for reducing our environmental footprint and teaching civic responsibility**

**Hen Frimana\*, Ifaa Bannera,b ,Yafa Sitbonc, Yulia Einava,c , Nava** [**Shaked**](http://www.hit.ac.il/en/faculty_staff/Nava_Shaked)**b**

aFaculty of Engineering. H.I.T - Holon Institute of Technology, Holon, Israel

 bSchool of the Multidisciplinary Studies, H.I.T - Holon Institute of Technology, Holon, Israel

cDean of Students Office. H.I.T - Holon Institute of Technology, Holon, Israel

*\** *henf@hit.ac.il*

**Abstract**

An ecological footprint is an area that continuously creates resources or disperses waste. Ecological footprints reflect the ecological assessment of an area.

In its purest form, sustainable development measures the ecological impacts of human beings and the ability of the earth's life system to absorb these impacts. Environmental sustainability is determined by the capacity of a system to absorb waste. Minerals, water, forests, and land are examples of natural resources consumed by economic activity.

Recent research on the relationship between energy consumption and the environment has been booming. US renewable energy consumption, economic growth, biomass capacity, and trade policies were examined for their impact on the environment in the US.

Our goal is to offer early childhood education as a solution to reduce the ecological footprint in Israel.

Previous studies have demonstrated the effectiveness of environmental education. Preventing children from picking delicate plants. Education has had a profound impact on the community, and its effects can still be felt today.

HIT Holon Institute of Technology offers an academic course called Green Ambassadors in the Community. As part of the course, Holon Institute of Technology students from the various faculties meet with pupils from elementary schools and teach them using workshops and experiential teaching methods how to be "Green Ambassadors" in their communities and environments.

There was excellent collaboration between the students and the HIT staff, as well as the pupils and school staff. It is important to remember that change begins in children, and great efforts must be made to promote green education as a means to reduce the environmental footprint.

***Keywords:*** Environmental Education; Elementary school; Renewable Energy; Ecological footprint

**References**

1. Friman, H., Matsliah, N., Sitbon, Y., Banner, I., Einav, Y., Shaked, N. (2022). Renewable Energy by Remote and Online Laboratories. In: Auer, M.E., Tsiatsos, T. (eds) New Realities, Mobile Systems and Applications. IMCL 2021. Lecture Notes in Networks and Systems, vol 411. Springer, Cham. <https://doi.org/10.1007/978-3-030-96296-8_75>
2. Friman H, Banner I, Sitbon Y, Einav Y, Shaked N. Preparing the Public Opinion in the Community to Accept Distributed Energy Systems and Renewable Energy. *Energies*. 2022; 15(12):4226. <https://doi.org/10.3390/en15124226>

**Biography**

Dr. Friman is research and lecturer at the Faculty of Engineering. He is currently the academic director at the Renewable Energy & Smart Grid Excellence Center at the HIT - Holon Institute of Technology.

Dr. Friman developed an innovative teaching method for a "paperless" laboratory in the field of solar, wind, and water energy. He also managed the "Energy Supervisor" training program at HIT.

He was part of the team responsible for developing "Pre-Project and Developing Soft Skills for Engineers" for the undergrad B.Sc. students. The purpose of the course is to define and improve the "toolbox courses" that will provide students with employability skills - Teamwork, effective management of time, risk and quality control, design excellence, and presentation excellence

Dr. Friman's research interests include renewable energy, fuel cells, microbial fuel cells, water and wastewater treatment, chemical engineering, ecological education, and academic collaboration.

