# UNIVERSITY OF HAIFA Driving Impact Towards the SDGs





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#### A PERSONAL NOTE FOLLOWING A CHALLENGING YEAR

One cannot write this annual report without considering the broader Israeli national picture. It has been an unprecedented year for the State of Israel and for our university.

The war that was forced on Israel on October 7th has affected every aspect of our lives and presented significant challenges to university operations. Many of our students and staff have been recruited to reserve duty, which meant being away months at a time. Our location in northern Israel created a situation where many of our students and faculty were evacuated from their homes. Although the 2023-2024 academic year finally opened in January 2024, the University was closed for prolonged periods in the months that followed due to rocket attacks and Homefront Command mandates. Moreover. the war has threatened to fracture the interfaith and intercultural bonds amongst members of our community, which we have so carefully nurtured. Despite these challenges, I am proud to state that we have managed to stay the course, continuing to conduct excellent research and provide our students with excellent teaching. Moreover, we have taken proactive measures to nurture our coexistence on campus, encouraging dialogue and discourse.

The University's commitment to driving academic impact towards the world's challenges has not diminished. First in the Israeli higher education system to place the UN's 17 Sustainable Development Goals (SDGs) as its roadmap, the faculty

and administration continue to extend the institution's commitment to human, societal, and environmental well-being. We have continued promoting impactful research, for example, through our 'Impact Project' grant program, which promotes the valorization of scholarly knowledge and the translation of research to societal and environmental solution. The winners of this year's competition – six multidisciplinary research projects, each leveraging crosssectorial partnerships for combining research with practical utility - are described in this report. Similarly, we have continued promoting relevant, meaningful and impactful educational offerings. For example, we fund 'Impactful Education' programs through a yearly campuswide competition, and this year's competition yielded five inspiring programs that blend quality education and public engagement.

We were pleased to see our efforts bear fruit, as reflected in the University of Haifa's performance in the 2023 Impact Ranking Competition. For the first time, we ranked among the Top 100 universities in the world by the Times Higher Education's Impact Rankings, maintaining our position as Israel's leader in sustainability. This competition is continually intensifying, with 2,100 universities participating this year (up from 1,700 last year). The rankings for each SDG reflect a university's achievements in terms of research, teaching, public engagement and internal operations. Among our standout achievements:

- SDG 4: Quality Education top 70 globally for the second consecutive year (this year: 68th place)
- SDG 5: Gender Equality: top 20 globally for the second consecutive year (this year: 17th place)
- SDG 8: Decent Work and Economic Growth top 100 globally for the second consecutive year (this year: 91st place)

- SDG 11: Sustainable cities and communities top 100 globally for the second consecutive year (this year: 97th place)
- SDG 14: Life under Water top 50 globally for the second consecutive year (this year: 42nd place)
- SDG 15: Life on Land top 100 globally for the second consecutive year (this year: 82nd place)
- SDG 16: Peace, Justice and Strong Institutions top 40 globally for the second consecutive year (this year: 32nd place)

I am exceedingly proud of this report and I invite you to explore vignettes from the University of Haifa's activities that promote the sustainable development goals through our research, teaching, public engagement and the management of our internal operations.

With hope,

op A

Prof. Ofer Arazy Director of Innovation & Sustainability



END POVERTY IN ALL ITS FORMS **FVFRYWHFRF** 

#### RESEARCH

Family Centers for Children with Disabilities: Navigating the **Covid-19 Pandemic** 

#### An article by Tali-Nov Hindi and

Itai Beeri, from the School of Political Sciences, examines how families of children with disabilities managed not only household responsibilities and distance learning, but also intensive care for their children during the COVID-19 pandemic. The pandemic shifted the therapeutic burden onto parents and families. The researchers illuminate the theory surrounding the development of policies in times of civilian-focused emergencies.

#### **BSF** Grant for Resilience to Heat Inequality: A Tale of Two Coastal Cities

University of Haifa scholars Prof. Tally Katz-Gerro, Prof. Maya Negev, and Dr. Asaf Levanon have been awarded a grant from the US-Israel Binational Science Foundation (BSF) for their project on Equitable Resilience to Heat. Their research aims to assess the impact of community coordination and policy in two coastal cities. To date, the effects of social diversity on



Student Meeting (Credit: Division for Diversity, Inclusion and Community)

heat exposure risks have not been thoroughly investigated, especially concerning households experiencing deprivation and poverty. The University of Haifa researchers plan to address this gap in the existing knowledge.

### COMMUNITY ENGAGEMENT

#### 'People's University' Program

The Community Engagement Unit of the Dean of Students Office held an emotional graduation ceremony for the 'Access for All' program. This initiative offers introductory courses of medicine, law, and psychology for marginalized populations from the north as a first opportunity to participate in higher education and gain

practical and essential knowledge in an academic environment. The program offers participants practical and essential knowledge within an academic setting, exposes them to the student experience, and fosters dialogue between population groups that rarely interact in Israel.

#### LEARNING AND STUDENTS NEW course for aspiring Social Workers

The school of Social Work offers a new course in Financial

Management in Families Living in Poverty. The course aims to

provide future social workers with essential skills and knowledge to add to their toolkit while working with families experiencing poverty and economic hardship.

#### Social Struggles and the Growth of the Modern Welfare State

A new course by Dr. Ami Vatouri will explore the development of the modern welfare state through labor struggles and other political conflicts that led to the formation of the Modern Welfare State. The course is taught as part of the Eshcolot program.



'Ahavat Olam' students visiting Jerusalem (Credit: University of Haifa).

#### **OPERATIONS**

#### 'Ahavat Olam' Memorable Weekend

Students participating in the 'Ahavat Olam' scholarship program, organized by the Scholarships Unit in the Dean of Students Office, spent a memorable weekend in Jerusalem as part of the scholarship's requirements. The students stayed at a hotel, toured the Western Wall and its tunnels, listened to fascinating lectures, and enjoyed the pleasures of a Shabbat experience.

#### Writing Marathon for Research Students

The Division for Diversity, Inclusion and Community, in collaboration with the Research Authority, the Bloom School of Graduate Studies, and the Interdisciplinary Center for the Study of Poverty and Social Exclusion, hosted a writing marathon for research students and early-career researchers who are first-generation academics. The writing marathon included time management workshops and sessions to overcome writing barriers, as well as personal consultations aimed at creating a quiet and distraction-free environment conducive to research.



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

#### RESEARCH

#### Impact Project: An Art Project for Raising Awareness About Food Rescue

Ms. Ruti Sela from the School of Arts will lead an innovative multidisciplinary course titled 'An Art Project for Raising Awareness About Food Rescue'. This course is designed to educate students and university visitors about food waste, and to enhance the accessibility of this knowledge to non-profit organizations and philanthropic groups, with the goal of driving meaningful change and impact.

#### Urbanizing Food: New Perspectives onFood Processing Tools in the Early Bronze Age

PhD student Karolina Hruby and Prof. Danny Rosenberg from the Department of Archaeology have published an article examining food access, provisioning strategies, and dietary patterns. Their research concludes that the shift in socio-economic priorities accompanying urbanization led to a decline in the basalt bowl industry and a reorganization of food processing practices within expanding settlements. The study seeks to understand the broad impacts of social complexity that arise with urban development.



Strawberry fields, Moshav Yanuv (Credit: Hilla Klor)

#### COMMUNITY ENGAGEMENT The risks to the autonomy of the National Food Security Council

A position paper written by Prof. Nissim Cohen, Dr. Asaf Levanon, Dr. Michal Koren, and Dr. Noam Tarshish from the Center for the Study of Poverty and Social Exclusion seeks to inform the public about the dangers inherent in the government's initiative to reduce the independence of the National Food Security Council. The cases described illustrate that under democratic retreat, the welfare state does not necessarily disappear but primarily changes its form. What is common to these programs is the creation of economic dependency of various groups on the government,

intended to ensure broad electoral support and thus perpetuate the party and its rule, while continuing to harm marginalized populations and weaken democratic mechanisms.

#### Food for All?

The National Food Security Council <u>released a report</u> marking two years since its reactivation. The report reveals that 30% of the adult population in Israel is experiencing food insecurity. Prof. Roni Strier, from the School of Social Work, serves as the Chair of the National Food Security Council.

#### LEARNING AND STUDENTS New Course: Food Security, an

Interdisciplinary Perspective The course, the first of its kind in Israel and led by Prof. Roni Strier from the School of Social Work, explores the phenomenon of food insecurity. This issue is characterized by limited food availability and the inability to access food through conventional means for basic, healthy, and balanced nutrition. Food insecurity has a significant impact on both the physical and mental health of individuals. Additionally, research shows that it impairs the ability of affected individuals to build healthy social and familial relationships and to integrate into social structures, including the labor market.



An Art Project for Raising Awareness About Food Rescue, a course of Ms. Ruti Sela, School of Arts.

and cultures.

#### The Seven Lean Years – Food Security in the Mediterranean

This course, offered by Prof. Gil Gambash and Prof. Guy Bar-Oz, will explore the production, preservation, and transportation of nutritional components in the ancient Mediterranean world. It will examine these issues across various economic, geographical, climatic, social, and political contexts, with a focus on mechanisms of adaptation and resilience. The course will include case studies representing diverse geographic areas, time periods,



Cherry tomatoes, Moshav Ahituv (Credit: Hilla Klor)



GOOD HEALTH AND Weilbeing

#### RESEARCH

#### Prof. Zisberg and Prof. Shadmi Receive 20 million Euro Grant

Prof. Anna Zisberg and Prof. Efrat Shadmi from the Chervl Spencer Department of Nursing in the Faculty of Welfare and Health Sciences, part of a 22-organization research group from 12 European countries, have received 20 million euros from the European HORIZON HEALTH grant program. Their research aims to reduce chronic diseases in the elderly. They will map existing policies and practices across Europe that address aging with multiple chronic conditions and use this data to develop pan-European policy recommendations for advancing health technologies and adapting care systems to mitigate the effects of chronic disease

ERC Consolidator Grant Awarded to Prof. Sigal Zilcha-Mano

accumulation.

Prof. Sigal Zilcha-Mano from the School of Psychological Sciences has been awarded a prestigious <u>ERC Consolidator</u> <u>Grant</u> for her project titled 'An Individual-Specific Understanding of How Synchrony Becomes



The Herta and Paul Amir School of Medicine (under establishment) (Credit: University of Haifa).

Curative'. This study aims to explore the therapeutic potential of interpersonal synchrony in psychotherapy. Building on Prof. Zilcha-Mano's theory of personalized therapeutic change mechanisms, the research investigates how synchronicity in interpersonal interactions contributes to the healing process.

## Understanding the Brain Language

A new study by Prof. Eran Stark from the Sagol School of Neurobiology, <u>published in</u> <u>Science</u>, reveals that encoding new information involves a complex mechanism in hippocampal neurons. The research demonstrates for the first time a clear causal relationship, showing that an increase in firing rate directly alters the precise timing of neuronal firing.

### Pathways to Better Understand PTSD

A study by researchers from the School of Psychological Sciences identified specific neural pathways responsible for exaggerated responses to perceived threats after a traumatic event. Current methods for treating traumatic memories struggle to extinguish the connections that trigger these memories due to their association with intense emotional experiences. Understanding the mechanisms and localization of the specific cells and synapses where these changes occur may one day assist in both diagnosing and developing techniques to reverse these brain changes.

#### COMMUNITY ENGAGEMENT

#### New Approach to Chronic Pain

Prof. Pavel Goldstein from the School of Public Health and the Ambassadors Program, along with the Integrative <u>Pain Research Lab</u> team, has produced <u>an animated video</u> that provides both knowledge and hope to those experiencing pain. The Pain Lab team is focused on gaining a deeper understanding of chronic pain conditions and developing innovative methods for measuring, preventing, and treating chronic pain.

#### A Suggested Ban on 'Scream'

The Israeli Speech-Language Pathologists Association, among them board member Dr. Limor Lavie from the Department of Communication Sciences and Disorders, issued a professional <u>statement</u> on the use of the 'Scream' (LARD) Device during protest dispersing. Given the serious potential risks associated with this system for dispersing protests, they recommended a complete ban on its use.

#### Age Friendly University

Two new projects are being launched, by <u>the Center for</u> <u>Research & Study of Aging</u>, to strengthen the connection between the university and the

elderly population in Haifa and its

surroundings. The first project, 'From Generation to Generation', focuses on age-friendly learning and aims to encourage students to volunteer with elderly individuals in the community. The second, 'Academic Tastings', involves open lectures to the public to foster connections with older audiences both in the community and at the UofH campus.

### LEARNING & STUDENTS

## The University Breaks Ground on New School of Medicine

In June 2024, the University of Haifa held a cornerstone-laving ceremony for the new School of Medicine, named after Herta and Paul Amir, set to open in 2025. Partnering with Carmel Medical Center, the school will offer a six-year program and feature an advanced simulation center with Al and virtual reality. The school aims to address Israel's severe doctor shortage, especially in the north, by enhancing healthcare through student training and scholarships to retain graduates in the region. This initiative was funded by a 200 million NIS generous donation from Herta Amir, with an additional 50 million NIS raised by the university.

#### A Healthy City for All: Challenges and Opportunities in Urban Policy

Healthy cities provide opportunities for a healthy lifestyle, especially for those lacking other health resources. A<u>new course</u> will explore how environmental impacts on health vary across different life stages and populations. It will review evidence-based research and policies for creating inclusive cities and discuss how healthy policies can reduce health disparities. The course, led by Dr. Mika Moran from the School of Public Health, addresses these key issues.

#### OPERATIONS

#### **Staying Active**

Free opportunities to get in shape! The Sports Center on campus offers free Pilates and karate classes. Additionally, the Department of Physiotherapy invites staff to join a running training program through a WhatsApp group.

## Donating Medications, Saving Lives

Approximately half of the inquiries received by the National Poison Center at Rambam Hospital are related to medication exposure. Improper disposal of medications can pose environmental and health risks, including contamination of water sources. To address this issue, the Faculty of Social Welfare and Health Sciences has launched a new initiative and placed bins for recycling and donating medications.

### 4 QUALITY EDUCATION



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALI

#### RESEARCH

#### ISF Grant for Innovative Educational Research

Prof. Yael Kali from the Department of Learning Sciences and Education has received an ISF grant through the Breakthrough Research Program (Mafatz). Her project stands out as the sole educationfocused study among the funded initiatives. With a grant of 4 million NIS. Prof. Kali will advance her pioneering research, Engaging Schools in Societal Advancement Endeavors (ESCALATE), which introduces a novel approach for expanding educational initiatives in the information society.

#### Citizen Science: High School Students in Sleep Research

A new impact project, winner of the CFP by the Division of Innovation and Sustainability, aims to enhance student health and quality of life, advance adolescent sleep research, and develop a national database for education policymakers. <u>The</u> <u>project is a collaboration among</u> <u>the TCSS Center</u>, led by Prof. Yael Kali, Prof. Tamar Shochat, Prof. Eran Tauber, and Prof. Danny Ben-Zvi, and is spearheaded by



Opening event of the International MA Program in Education and Development in Early Childhood (Credit: University of Haifa website).

Ms. Noam Malkinson, a TCSS member and PhD candidate at the University of Haifa and Shamir Institute.

#### COMMUNITY ENGAGEMENT

## SPARC: Connecting Research with Community Empowerment

SPARC was established with the vision and strong desire to integrate research and society, focusing on the needs of individuals with special needs and their families. <u>The center</u> promotes inclusion through diverse activities, partnering with various stakeholders to help these individuals explore new opportunities. Families also benefit by participating in an array of activities and seeing their loved ones integrate and engage in meaningful ways.

## Teaching Empathy to Future Doctors

Have you ever felt that your doctor didn't explain your condition clearly or empathetically? This often happens because doctors-intraining focus heavily on medical skills, neglecting essential abilities like communication and stress management. To address this, Prof. Dana Vashdi (a participant in the Ambassadors Lecture Series) and her team have led a six-year initiative, supported by the *Israeli Medical Association*, to revamp fellowship programs across Israel. Their <u>competency-based</u> <u>approach</u>, inspired by global models, is currently being piloted in a groundbreaking Neonatology program to foster well-rounded, emotionally attuned medical professionals.

#### Prof. Orkibi Elected President of Division 10 of APA

Prof. Hod Orkibi from the School of Art Therapy has <u>been elected</u> as the incoming President of Division 10 of the American Psychological Association (APA), the Society for the Psychology of Aesthetics, Creativity, and the Arts. Prof. Orkibi is the first art therapist from Israel to hold this position.

#### LEARNING AND STUDENTS

#### International MA Program in Early Childhood Education Launched

The International MA Program in Education and Development in Early Childhood recently launched with an event hosted by Ora and Eytan Stibbe, supported through the Anatta and Israeli Friends' Academic Forum. This program, led by Prof. Avi Sagi-Schwartz and Prof. Yair Ziv. offers interdisciplinary training to enhance child well-being in developing countries, following a holistic Tikkun Olam approach aligned with the UN's Sustainable Development Goals, Despite the ongoing War, the program welcomed 24 professionals from 20 countries, including China, Ethiopia, Germany, India, Kenya,

and Israel. Moreover, it received 50,000 NIS from the Division of Innovation and Sustainability for the students' final projects.

#### Excellent IDEA

Twenty-six gifted and outstanding youths in the humanities participated in the University of Haifa Youth Division's inaugural 'IDEA' Summer Program, in partnership with the Future Scientists Center and the Ministry of Education. For two weeks, they engaged with researchers, enjoyed activities such as bowling, and Qigong, and toured the Younes and Sorava Nazarian Library, the Hecht Museum, and archaeology labs. At the closing ceremony, students presented mini-research projects recognized by the Ministry of Education as part of their matriculation requirements.

#### International PME in Haifa

The 46th International PME (International Group for the Psychology of Mathematics Education), the most prestigious conference for mathematical education researchers, was held this year at the University of Haifa. The <u>theme of the conference</u> was 'Mathematical Education for Sustainability'.

#### OPERATIONS

#### Variety of Online Learning Opportunities

Established in August 2000 under the Office of the Rector, the <u>Online Learning Unit</u> aims to enhance academic instruction through the integration of computer technologies and innovative tools. Recently, it promoted teaching and e-learning at the University of Haifa, providing a range of tools and services for lecturers and students. The unit also offers a selection of free\_podcasts featuring members of the University of Haifa.

#### Post-Doctorate: First Steps

The Bloom Graduate School organized <u>a workshop</u> titled 'Post-Doctorate: First Steps', providing valuable insights and information on the next phase of graduate professional careers. Approximately 120 doctoral students attended the event.

## From Idea to Academic Publication

Recognizing the need for advanced information skills among research students, the library, in collaboration with the Online Learning Unit and academic advisors, has created an online course titled 'From Idea to Academic Publication -Information Skills for Research Students'. This course covers locating research, critical reading, academic writing, and navigating research journals, while also addressing the growing role of AI tools in academic research. The course is free and available to all grad students and researchers.





ACHIEVE GENDER EOUALITY AND EMPOWER ALL WOMEN AND GIRLS

#### RESEARCH

#### Impact Project: Research on Sexual Violence Against Men

Prof. Ateret Gewirtz-Meydan has been awarded a 50.000 NIS grant from the Division of Innovation and Sustainability for her research project on raising awareness of sexual violence against men. Alongside her team, Prof. Gewirtz-Meydan aims to use their findings to shape policy recommendations and develop a widely accessible online course. The project seeks to highlight the need for a tailored approach to supporting male victims and adapting therapeutic protocols accordingly.

#### Caught in the Crossfire

As women in the Israeli Defense Forces (IDF) assume more supportive and combat roles in war zones, they regularly encounter violence. Prof. Dana Amir of the Department of Counseling and Human Development and her colleague investigate how gendered inequality affects their military experiences and responses to excessive violence. This study explores women veterans' personal and retrospective views on their participation in and



'Together with Them' Program (Credit: Israeli Friends Association of the University of Haifa, website).

reactions to violence, aiming to advance theoretical and methodological insights into combat situations.

### COMMUNITY ENGAGEMENT

#### **Fighting Violence Against** Women During War

In collaboration with the Forum of Gender Equity Advisors at Israel's universities and colleges, an event was held to mark International Day for the Elimination of Violence Against Women 2023.

This year's focus was on violence against women in conflict zones, particularly in light of the October 2023 war. The speakers covered a range of fields, from medicine to history.

#### Joint International Research Project in Gender Equity

The Gender Equity Unit, led by Prof. Shulamit Almog, in partnership with the University of Lille, launched a two-part international research project

focusing on gender equity. The first meeting took place at the University of Haifa. and the second was held at Lille University (France). This collaborative project aims to offer diverse perspectives on gender equity and will culminate in international publications.

#### Barbie, Buses, and Gender: Insights into Multiculturalism and Women's Integration

The Forum on Gender Law and

Social Policy, in collaboration with Canadian Ambassador to Israel Ms. Lisa Stadelbauer, hosted an event on 'Women on the Margin: Gender Equality, Diversity, and Multiculturalism'. The evening explored the connections between the film Barbie and gender-segregated seating on public buses, and what Canadian multiculturalism can teach us about trends in Israeli society.

### LEARNING AND STUDENTS

#### 'Together with Them' Program

#### Together with Them Program

integrates Druze and Arab women aged 30-65 into a specialized curriculum with multidisciplinary support to overcome academic barriers. Its aim is to enhance women's status in Arab and

Druze communities by improving access to higher education. This initiative aligns with the University of Haifa's commitment to UN sustainable development goals, including reducing inequality, ensuring guality education, promoting lifelong learning, and advancing gender equality. It showcases academia's role in empowering marginalized groups and fostering a more equitable society in northern Israel.

#### Course: Law and Gender in the Bible

Based on the insight that law reflects societal values, this course, taught by Dr. Yitzhag Feder examines the values implicit in biblical law regarding issues of sex and gender. It explores the status of women in ancient Israeli society and how biblical law seeks to shape gender relations.

#### **OPERATIONS**

#### **Reducing Gender Bias in Writing**

Language shapes the future, so achieving gender equity requires using language that promotes equality. Languages vary in their focus on gender, and Hebrew is notably gendered, with all nouns, pronouns, and verbs inflected according to gender. The Gender Equity Unit aims to change the linguistic landscape at the University of Haifa, to that end they launched an innovative e-learning module on 'Gender-Neutral Writing'.

#### **Renovated Nursing Rooms**

The university has recently renovated the nursing rooms for students and administrative staff These rooms now feature childcare amenities and furniture designed for nursing mothers and their babies, including a refrigerator, changing table, nursing chairs, and toys.

#### **Daycare Supplement for Fathers**

Starting January 2024, male employees with children up to age 5yo receive a daycare supplement in their monthly salary. The supplement offers 341 NIS per month for the first child and 230 NIS per month for a second child, for up to two children. This benefit is made possible by the dedicated efforts of the University HR department.

### 6 CLEAN WATER AND SANITATION



ENSURE AVAILABILITY AND SUSTAINABLE Management of Water and Sanitation for all

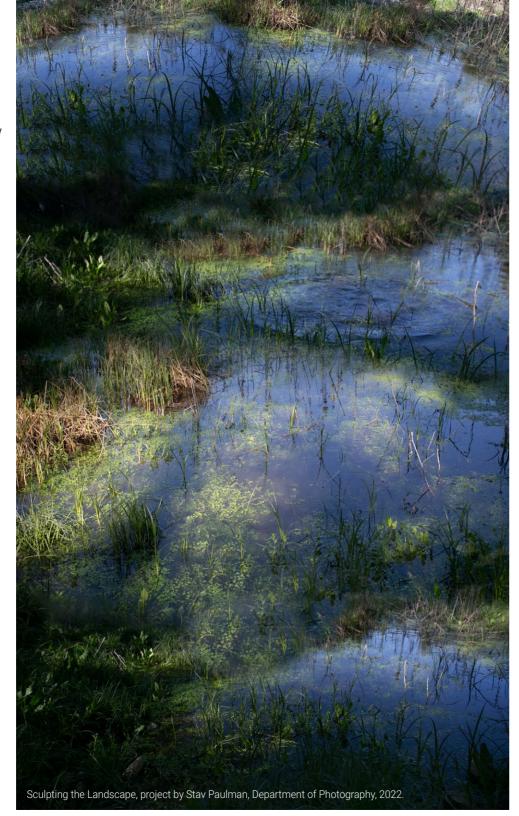
#### RESEARCH

## Microbial Community in Freshwater

A new study by Dr. Orna Schweitzer-Natan, a former student of Prof. Daniel Sher, reveals that the global rise of harmful cyanobacterial blooms (cyano-HABs) threatens water safety and sustainability, affecting both drinking water and agriculture. The study found that during the extensive 2016 winter bloom in Lake Kinneret, the Microcystis population remained uniform across the bloom area. Additionally, contrary to expectations, the microbial community structure was unaffected by the Microcystis biomass.

#### New Methodology in Water Management

Modern water management turns runoff into a resource through integrated approaches. Prof. Mashor Housh, of the Faculty of Social Sciences, and others propose in <u>an article</u> a methodology to help planners and stakeholders maximize flood mitigation benefits by combining hydrological and land-use planning models.



## Cyanobacteria-Phage Web of Interactions

Dr. Avrani and her team study the interactions between phages and their cyanobacterial hosts. They focus on how these interactions influence the evolution of both phages and hosts and examine the broader environmental impacts.

#### COMMUNITY ENGAGEMENT

#### Beads Against Pollution: Innovative Solutions for Cleaner Water

A new project, led by Ma'ayan Keiynan, Sustainability and Environment Manager at Philips, using chromatography methods (Size, Affinity) for removing contaminants or excess materials from water reservoirs. The application will be carried out by "loading" water reservoirs with beads that will allow for filtering materials based on the size of the bead network or based on the affinity to the molecules adsorbed onto the beads. The project is part of the SwitchMad program.

### LEARNING AND STUDENTS

Selected Chapters in Environmental Pollution and Treatment

Prof. Eyal Kurzbaum's online course provides students with fundamental tools and knowledge to understand environmental pollution processes and methods for pollution remediation, as well as basics in toxicology. The course will cover pollution sources, and the fate and impact of pollutants on the environment, including potential effects of heavy metals, pesticides, and fertilizers on animals and humans. It will review environmental remediation methods, from 'green' techniques using plants and bacteria to advanced technologies for pollution management.

## OPERATIONS

In August 2023, the university launched a pilot program to reduce disposable cup use by installing dishwashers in the kitchenettes of select units. Based on the positive results from employees many units opted to keep the dishwashers.



#### Mindful Water Consumption

To reduce water waste, water consumption during weekends is carefully monitored. Increased water consumption during weekends can be often attributed to leaks.

Over the past several months, this procedure enabled the detection and elimination of several considerable leaks, saving valuable drinking water.

#### Reducing Disposable Usage

Members of the Marine Chemical Ecology Lab (Credit: lab website).

### 7 AFFORDABLE AND CLEAN ENERGY



GOOD HEALTH AND WELLBEING

#### RESEARCH

#### Not All About the Money

One of the Impact Projects supported by the Division of Innovation & Sustainability has resulted in the research article, <u>'Not All About the Money:</u> The Role of Financial Information in Promoting Residential Rooftop Photovoltaics'. The research by Mr. David Boaz, M.A. student from the School of Environmental Sciences, under the supervision of Prof. Ofira Ayalon.

## Renewable Energy and the Centralization of Power

Hilah Segal-Klein, a PhD student from the Department of Natural Resources and Environmental Management, co-authored an article on the Lake Turkana Wind Power project in northern Kenya. The study explores the sociopolitical challenges faced by local pastoralists and their relations with the political center, offering insights into the political effects of renewable energy in developing countries. The authors conclude that SDG7 cannot be achieved in isolation and must be pursued alongside other SDGs.



Solar Roofs (Credit: Volta Solar)

#### COMMUNITY ENGAGEMENT Harnessing the Wind

Adv. Einav Aaron and Eng. Ori Keshet-Lan's initiative seeks to transform energy production by utilizing wind turbines as an eco-friendly alternative to conventional energy sources. By strategically installing wind turbines on marine infrastructure, they maximize wind speeds and minimize land usage, ensuring efficient energy generation. This groundbreaking approach not only addresses the urgent need to reduce carbon emissions but also promotes a sustainable future. Their wind turbines provide a clean, renewable energy solution that supports global environmental goals and

mitigates the effects of climate change.

#### Unlocking Safe, Eco-Friendly Hydrogen Storage Beneath Israel's Seas

Geological hydrogen storage is already in use globally, offering an eco-friendly and safe solution. In Israel, beneath the sea, an ideal salt layer exists for safe and ecological hydrogen storage. A project, led by Bogdan Plotnikov, will map and analyze these layers to ensure safe, environmentally friendly, and cost-effective storage for decarbonization without CO2 emissions. Data collected will guide decisions on the best storage locations and their verification.

#### LEARNING AND STUDENTS

'Renewable Energies' taught by Prof. Ofira Ayalon focuses on the principles of energy production from renewable sources such as solar, wind, water, geothermal, and biomass. It explores energy conservation, efficiency principles, and green



Prof. Ofira Ayalon (Credit: Ofer Hajayov).

construction. Additionally, the course delves into possible policy measures required to implement renewable energy in the economy. Prof. Ayalon also teaches the course 'Earth, Wind, and Fire: Environmental Challenges in the 21st Century'. Both courses provide valuable knowledge and insights into renewable energy sources and their sustainable utilization.

#### New! MA Program Specializing in Energy Policy Management

The new Energy Policy Management program offers a specialization designed to deepen and broaden the expertise of professionals in the energy sector, both nationally and internationally. The curriculum emphasizes social sciences and management, covering areas such as energy efficiency, the development and promotion of renewable energy, energy, and environmental economics, and the analysis of environmental, economic, and regulatory aspects of energy resource development. The program also aims to prepare students for leadership and policy-making roles in industry and to foster research in the field.

#### **Energy Economics**

A new course, 'Energy Economics', taught by Dr. Ruslana Rachel Palatnik from the Department of Natural Resources and Environmental Management, explores the role of energy in the economy and the key characteristics of energy supply and demand.

### OPERATIONS

#### **Photovoltaic Roof Panels**

The techno-economics of photovoltaic panels and electricity storage systems are being evaluated by the University to enhance clean energy use and reduce carbon emissions.





PROMOTE SUSTAINED. INCLUSIVE AND SUSTAINABI F ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

#### RESEARCH

#### **Employability and Vocational** Training

A major challenge in today's labor markets is improving workers' mobility and employability. This paper by Prof. Shlomo Mizrahi, explores how beliefs and attitudes towards training, influenced by perceptions of personal mobility, employability, and

prior education, affect attitudes towards employability-boosting mechanisms.

#### Ethiopian Immigrant and the Labor Market in the United States and Israel

#### Research article by Dr. Ameed

Saabneh, from the Department of Sociology and Anthropology, using data from Israel and the US shows that Ethiopian immigrants, despite having higher credentials in the US, do not earn significantly more there compared to Israel. The similarity in wages between Ethiopian immigrants and nativeborn individuals suggests that country context has a minimal impact on wage disparities, with discrimination and unobserved group differences playing a larger role.



HIL activity (Credit: HIL)

#### COMMUNITY ENGAGEMENT

#### SUPER: Paths to Employment Integration: Programs for At-Risk Youth

A career education program designed to support the transition from school to work for youth facing significant challenges. The <u>SUPER prog</u>ram incorporates principles from education, occupational therapy, and occupational science. It was thoroughly assessed by the Faculty of Social Welfare & Health Science and the Faculty of Education at the University of Haifa. The program aims to provide school graduates with a comprehensive career education that builds knowledge, skills, work experience, and a strong selfconcept as a worker, both now and in the future.

#### **Trust in War Times**

#### The public sector performance index, conducted since 2001 by Professors Eran Vigoda-Gadot and Shlomo Mizrahi from the School of Political Science, states that despite the intense public criticism at the outbreak of the war regarding security systems, about 70 percent of the public continues to believe in and trust these systems eight months after the war began.

### LEARNING AND STUDENTS NEW Undergraduate Practicum

At the School of Environmental Sciences within the Faculty of Social Sciences, a practicum course has been launched. allowing students to gain practical experience and specialization in two main areas: environmental consulting and GIS. Students will integrate into organizations' ongoing activities while working on a unique project. They will also receive professional training in their fields, along with workshops for personal and career development.

#### Career Development Center

The Career Development Center, under the Dean of Students Office, aims to build confidence and help students develop

their abilities and broaden their possibilities, through various career services for students, including internships and workshops on resume writing and job interview preparation.

#### New Course: The Diverse Labor Market

The course explores trends in the labor market, particularly the Israeli labor market, focusing on Arab employment. It provides essential knowledge about the world of work, practical experience in job coaching workshops, and handson experience in a relevant organization.

#### **OPERATIONS** A New and Unique Employment Program

The new employment program supports students and recent graduates with a recognized disability in finding jobs or



internships that align with their education and skills. Designed to equip both employees and employers with tools to overcome barriers, the program fosters equal and rewarding employment for individuals with disabilities, benefiting both parties and society as a whole.

#### HR Orientation Day

### The Human Resources

Department held an orientation day for new employees, which included workshops and discussions on topics such as creative thinking, understanding pay slips, pensions, and information for new employees, as well as an introduction to the activities of the administrative staff committee.

Employment fair at the university (Credit: University of Haifa).

### **9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

#### RESEARCH

## Technological Tools Aiding HealthCare

Dr. Ravit Alfandari from the School of Social Work, along with Dr. Yuval Barak-Koren from the Children's Hospital in Philadelphia, USA, has received a research grant from the Schusterman Foundation in the amount of NIS 1,857,000 for a project on technological identification tools in the healthcare system.

#### Al in Art

The latest developments in Al are raising important questions about visual arts and music. As the world evolves, fundamental inquiries like 'What is art?' and 'Who is an artist?' resurface, alongside concerns about intellectual property, censorship, and more. <u>The Sixth Finger</u> <u>conference</u> addresses these critical issues.

#### Adaption of IT Solutions

Prof. Doron Kliger, from the Economics Department, and colleagues published an article titled '<u>Adoption of IT Solutions:</u> A Data-Driven Analysis Approach' in *Information Systems*. The paper offers practical guidance



HIL activity (Credit: HIL)

for enterprise management when developing new IT solutions for business services or rationalizing similar services across different departments, such as after a merger or through unplanned growth.

#### Dr. Dolittle: The Al Version

Prof. Anna Zamansky, head of the Tech4Animals lab in the Department of Information Systems, recently discussed how her team is leveraging the AI revolution to enhance the health of pets and livestock. The lab is developing tools that utilize artificial intelligence to interpret animals' feelings through their facial expressions—determining if they are happy, stressed, or in pain. This innovation enables early disease detection in pets and helps identify which animals in a herd require medical attention.



Prof. Anna Zamansky (Credit: Ofer Hajayov).

#### COMMUNITY ENGAGEMENT

#### From Challenge to Entrepreneurship

A unique collaboration is underway between graduates of IDF 8200 Unit and the Center for Innovation & Entrepreneurship at the University of Haifa. This program brings together young researchers and professionals from welfare, health, and high-tech sectors to address climate, health, and welfare challenges in Haifa while training a new generation of social entrepreneurs. Key topics include managing expired medications to prevent water cycle contamination, promoting sustainable hospitals, preserving mature trees in urban areas, and reducing waste in public spaces and along coastlines.

#### Fourth Year Hackathon

The fourth hackathon in memory of Police Officer, Brigadier Lior Boker. For the first time, the <u>hackathon</u> was offered as an academic course.

#### LEARNING AND STUDENTS

#### Drones Save Lives: A Unique Course in Maritime Strategy

Graduate students in the Maritime Strategy program recently participated in a field exercise for the course '<u>Research</u> <u>Using Unmanned Tools</u>, <u>Photography, and Advanced</u> <u>Technologies'</u>, led by Dr. Gur Mizrahi. The exercise involved planning a complex mission and flying drones under challenging conditions with GPS disruptions, which the students successfully navigated. This course introduces students to drone technology, professional photography, and the integration of advanced technologies in emergencies, highlighting drones' potential as vital tools for maritime rescue and improving survival chances.

#### Data Science Summer Course

Over the last few years data science tools, and especially machine learning (ML) techniques, have become increasingly popular and are now widely used in both academia and industry. The Haifa Data Science Summer School provides an overview of the variety of tools employed in machine learning. The course is aimed at students from diverse disciplines, with no prior experience using machine learning, and programming. The course was open to graduate (MSc and PhD) students. postdocs and research scientists from the University of Haifa and affiliated institutes.

#### **Crisis-Driven Innovation**

A <u>new class</u> at Kayma Center deals with social Innovation in times of crisis. This refers to new strategies, concepts, ideas, and organizations addressing existing or emerging social needs and creating new mechanisms for action. Social innovation can generate solutions to existing systemic challenges or provide responses to new issues. In times of crisis, the role and need for social innovation becomes even more critical. This phenomenon is referred to as 'crisis-driven innovation'.

#### **OPERATIONS**

#### 'Accelerator' Program

Carmel, Ltd. the financial company of the university, launched a unique acceleration program for the academic staff. The <u>'Accelerator' program</u> aims to promote projects and transfer knowledge from the university to industry.

#### New VR Room

A <u>VR room</u> has been launched in the library, allowing for handson work and experimentation with virtual reality technologies. This service is a collaborative initiative between the Younes and Soraya Nazarian Library and the Online Learning Unit. This lab is expected to transform teaching and research at the university, providing students and researchers with innovative tools to deepen their knowledge and understanding in various fields.

#### Excellence in Online Learning

According to a report from the <u>Knesset Research Center</u>, the University of Haifa offers the most online learning courses (an achievement of the Online Learning Unit). Ms. Esti Levy, head of the unit, also participated in the university's Ambassadors program, where she showcased the extensive options available for professors to utilize.



**REDUCE INFOUALITY** WITHIN AND AMONG COUNTRIES

#### RESEARCH

#### Wage Discrimination Against Immigrants

A paper by Prof. Rebeca Raijman, from the Department of Sociology and colleagues examines how the Israeli Jewish public justifies wage gaps between immigrants and comparable non-immigrant workers in identical low-status jobs. The study found that prejudice and concerns about cultural homogeneity contribute to negative attitudes toward minority groups, irrespective of the specific religion of the outgroup.

#### Offering Assistance

The Haifa Center on the Politics of Inequality invites university researchers to make use of the center's research infrastructure and resources, which include support and guidance for submitting requests to access Central Bureau of Statistics (CBS) data, specifically research room data. The center also offers assistance with the management and processing of CBS data or other surveys.

#### **Minorities and Property Value**

Dr. Yael Elster and Mr. Noam Zussman published a study that



'Tanmiah' students (Credit: Division for Diversity, Inclusion and Community)

estimates, for the first time. individuals' valuation of living in a building with a minority member. Their analysis reveals that new immigrants significantly impact prices only during a major migration wave, with a decrease of 10%, while Israeli Arabs do not influence prices.

### COMMUNITY ENGAGEMENT

#### Clinic for Law and Education Policy

The clinic addresses issues related to budget transparency and justice in budget allocation. It seeks to examine the funding of the formal education system, given its distinctly unequal nature. This year, 13 students participated in a hotline that

addresses inquiries from parents and students on various topics. A total of 60 cases were handled during the year, along with approximately 60 more during the summer.

#### LEARNING AND STUDENTS Minding the Gap

#### This summer preparatory

program, 'Tanmiah', aims to address the significant gap in preparing Arab youth for their academic studies. It provides an intensive framework that emphasizes learning and practicing the Hebrew language and training in soft skills, alongside an introduction to Israeli society in all its diversity.

The goal of the 'Tanmiah' program is to nurture a cadre of outstanding Arab candidates who will gain admission to competitive programs at the University of Haifa upon completion, promoting social mobility and creating a quality leadership layer among the university's graduates.

#### New Course: Justice, Equality, and Discrimination

Equality among individuals is generally perceived as a morally desirable state and a distinctive feature of a just society. The aim of this course, offered by Prof. Daniel Statman, is to discuss the nature of this equality and how to understand violations of equality that fall under the category of discrimination.

#### **Delta Program to Advance Ethiopian Students**

Haifa University, in partnership with Delta Galil Industries, runs a unique program aimed at supporting students from the Ethiopian community. Each year, 15-20 selected students are provided with a supportive framework that includes a laptop, an annual living stipend of 4,500 NIS, and various enrichment workshops. Since its launch over 10 years ago, this program has become a significant social and educational initiative, showcasing a commendable collaboration between industry and academia.

#### **OPERATIONS**

#### Diversity, Inclusion, and Community Ambassadors

The Division for Diversity, Inclusion and Community, Human Resources Division, along with the Administrative Staff Organization and the Academic Staff Organization at the university, collaborated with the Accord Center and created a training program for Diversity Ambassadors. This group will serve as an active leadership team to promote positive relations among groups on our campus. The goal is to foster an active community that is diverse in terms of age, gender, religion, ethnicity, and background, enriching itself and, later on, the entire campus through diverse and multicultural initiatives.

#### **Ensuring Accessibility**

The SPARC Institute hosted an open day for adults with autism, introducing them to the university's academic programs and various support services.

#### Leveling the Field

The Dean of Students Office offers technological guidance services for students with recognized accommodations in the department (including those with learning disabilities, attention disorders, or medical conditions). These services are provided by the assistive technologies coordinator and cover various topics, such as: time management and organization, library resource searching, navigation in the Moodle system and more.







MAKE CITIES AND Human Settlements Inclusive, Safe, Resilient and Sustainable

#### RESEARCH

#### **Tel Shikmona Excavations**

Research indicates that Tel Shikmona, dating back to the Omride period, was an Israelicontrolled site for purple dye production—the largest of its kind in the Levant. It supplied this prestigious dye to regional kingdoms and likely to the Temple's curtain. The study is conducted by the Institute of Archaeology at the University of Haifa, with support from various organizations, including the President's Office at the University of Haifa and the Haifa Municipality. A new excavation has just concluded, with collaboration from several entities, including the Nature and Parks Authority and the Israel Antiquities Authority, aimed at restoring the site and enhancing public access.

#### The Lost City of Tel Kabri

In the latest episode of <u>National</u> <u>Geographic's 'Lost Cities'</u>, Albert Lin explores new discoveries at the ancient Canaanite palace of Tel Kabri. These findings reveal the civilization's resilience to climate change, both on land and at sea. Researchers from the School of Archaeology and



New Sculpture Garden at the Hecht Museum (Credit: Hilla Klor)

Maritime Cultures, led by Prof. Assaf Yasur-Landau, collaborated with top scientists, including Profs. Eric H. Cline, Alexandra Ratzlaff, and Tom Levy. Recent scientific volumes published by Brill and Equinox, co-edited by the team, further enhance our understanding of Tel Kabri's complex history.

#### COMMUNITY ENGAGEMENT Mysteries of the Cities

The Department of Israel Studies, in collaboration with the School of Tourism, hosted a day-long <u>seminar</u> for tour guides for the Ministry of Tourism. The course was led by Dr. Assaf Selzer, Dr. Nurit Shtober-Zisu, Dr. Judith Bronstein, Dr. Elia Etkin, and David Barak-Gorodetsky. During the seminar, faculty members of the program presented their research and new sources of information.

#### Human Rights Clinic

Following the Freedom of Information request by Attorney Reut Cohen, the instructor of the Human Rights Clinic in the Faculty of Law, data regarding the Enforcement and Collection Authority's committee for state debt write-offs <u>has been revealed</u> for the first time. The data indicates that the committee handles a very limited number of requests each year.

#### LEARNING AND STUDENTS Automated Learning Tools

Evgeny Shnyr, an MA student in the Department of Information Systems, supervised by Prof. Tzvi Koplik from the Department of Information Systems and Dr. Tzilla Eshel from the School of Archaeology and Maritime

Dr. Tzilla Eshel from the School of Archaeology and Maritime Cultures, examined the use of automated learning tools to identify metal sources based on their chemical composition. This involves the relative isotopic identification of lead and comparing it to existing samples from different geographical locations.

#### Sustainable Urban Development

A <u>new course</u> by Dr. Yardena Shaul: Sustainable Urban Development in the World and in Israel—Their Environmental, Economic, and Social Importance. This course addresses one of the key issues on the international, global, and local agendas.

#### OPERATIONS Sculpture Garden

The famous Sculpture Garden of Tefen has been relocated to the University of Haifa, situated behind the Hecht Museum, with a breathtaking view of Haifa Bay. Officially opened in June 2024, the garden features around 30 sculptures by prominent Israeli sculptors. It is positioned on the museum's lawn, overlooking the bay and the surrounding northern landscape.



New exhibit by Batia Shani, Honorary Doctorate Recipient (Credit: University of Haifa).

#### **Past and Future**

A <u>new podcast</u> from the School of Archaeology and Maritime Cultures was launched. The school is the only one in the country and among the few in the world that covers all areas of archaeology—on land, at sea, in the lab, and in conservation.

#### 'Embroidered in the Body'

Batia Shani, Honorary Doctorate Recipient, opens a <u>new exhibit</u> in the Art Gallery of the Younes & Soraya Nazarian Library. This captivating new exhibition, curated by Prof. Sharon Poliakine. The exhibition is set in our new gallery space, overlooking a serene sculpture garden.



ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

#### RESEARCH

#### Sustainable Management of Waste in Israel: From Research to Policy Design

Dr. Yaniv Reingewertz, from the School of Political Science, won a grant for creating a behavioraleconomic model for source separation of waste - Field Experiment in the City of Tamra. The winning groups represent the forefront of advancing the university's vision for social and environmental sustainability: conducting research or teaching on social and environmental issues, aiming to 'step out of the ivorv tower' of academia. foster multi-sector collaborations, and contribute directly to society and the environment.

#### COMMUNITY ENGAGEMENT

#### The Law, Technology, and Cyber Clinic

The 'Digital Accessibility for Seniors' project of the Law, Technology and Cyber Clinic, focuses on making online services, including government services and online shopping, accessible to the elderly.



BLUE SEA, by Maya Kassif, Department of Fashion Design, 2022.

#### LEARNING AND STUDENTS Call for Sustainability: 'White Repair' Studio

Dr. Rachel Getz-Salomon and Mr. David Veksler won a grant to teach a course on fashion production and creation with an environmental and social perspective. They will guide students in conducting in-depth research into historical methods of preservation and sustainability within human culture, focusing on various traditions of repair and patching. These traditions seem absent from the Western consumer landscape, where a culture of excess has reached a particularly dangerous point. Within the context of the fashion industry, such sustainable practices highlight ways to rethink production and creation through an environmental and social lens.

#### From Waste to Worth

Prof. Ofira Ayalon from the School of Environmental Studies hosted a conference titled 'From Waste to Worth: European Solutions for Israel's Waste Crisis'. Scholars examined various aspects of the issue and explored the applicability of European solutions to the Israeli context. The conference was free and open to all.

Sustainability and Environmentalism – Community Issues

This course provides an overview of theories and empirical data from current research on environmental and sustainability

issues, with an emphasis on global trends. It will highlight how consumer society and consumer culture shape individuals and communities, influencing their built, natural, and social environments, as well as various scenarios for what to expect in the future.

#### **OPERATIONS**

#### **New Service: Lockers**

Smart lockers have been installed on campus for the University community to receive, send, and store deliveries conveniently near their offices or classrooms. These lockers can also be rented by the hour for personal storage. Located at the end of Shopping Avenue next to the Main Building, the lockers will be accessible 24/7 for collecting deliveries.

#### **Thrifting for Free**

As part of the University's commitment to sustainable



consumption, a second-hand clothing stall continues to operate on campus this year. Employees are invited to 'sort out closets' and bring clothes in good condition to the dedicated corner on the 600th floor, and of course find 'new' garments for themselves and their family members. The stall is staffed, at times, with employees who assist in arranging and sorting the clothes. Clothing can be given and taken at any convenient time.

#### **Rebooks on Campus**

Hebrew Book Week is an annual celebration of Hebrew literature held every June in Israel. This vear, the Division of Innovation & Sustainability partnered with *Rebooks*, a social bookstore chain, to host a discounted book fair at the University of Haifa on. Rebooks serves as a rehabilitation and training center for individuals facing occupational barriers. providing vocational training and opportunities for integration into the labor market.





TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

#### RESEARCH

#### Vulnerable People During Wildfires

Climate change is increasing the risk of wildfires, and this risk is particularly acute and severe for people with disabilities. The purpose of the study, written by Dr. Carmit Rapaport, from the School of Environmental Sciences, and colleagues, was to understand the challenges people with hearing loss face when responding to wildfires. They conclude that individuals with hearing loss, especially Deaf people, constitute a vulnerable group during emergencies due to various communication deficiencies.

#### Vulnerability of Wild Barley

Climate warming and drought threaten crop production and worsen malnutrition, but data on plant genetic responses is scarce. This study by Prof. Emeritus Eviatar Nevo and colleagues examines 10 wild barley (WB) populations using landscape genomic and machine learning methods through whole-genome sequencing. Results reveal shifts in genetic diversity, selection, and mutation burden over 28 years, with analyses identifying adaptive genes and key environmental



Rewind's team (Credit: Science)

factors. Overall, wild barley populations showed decreased genetic diversity and increased selection pressure due to climate warming. Prof. Nevo is among the university's senior researchers.

#### **Underwater Climate Change**

Prof. Dror Angel, from the School of Archaeology and Maritime Cultures, seeks to combat climate change by adding waste wood to ancient shipwrecks at the bottom of the Black Sea, where low-oxygen conditions preserve them. Prof. Angel is a science lead for Rewind, an Israeli company focused on carbon capture technologies. By sinking terrestrial biomass, such as forestry and agricultural waste, carbon can be locked away for

centuries. This method is simpler and less likely to disrupt marine ecosystems compared to growing seaweed or phytoplankton for carbon capture. An article in Science tells their story.

#### COMMUNITY ENGAGEMENT Change of Direction: The **Resilience** Plan

The Climate and Environmental Sustainability Center at the University of Haifa, in collaboration with the Israeli Climate Forum, hosted a summer conference titled 'Change of Direction - The Resilience Plan'. Founded in January 2022 under President of Israel, Yitzhak Herzog, the Israeli Climate Forum is a not-for-profit NGO promoting

a diverse environmental movement. The conference brought together academics, political and media figures, local authorities, and religious leaders to address the climate crisis following October 7 and the ongoing societal challenges.

#### Climate and Environmental Sustainability Center

The lack of an integrative policy on health and the environment incurs significant costs. prompting the creation of 'The Initiative for Environment and Health Research and Policy',

which includes Prof. Maya Negev from the Health and Climate Resilience Lab. This joint project between the Forum for Health and Environment and the Taub Center for Social Policy Research aims to influence public policy through applied research and engagement with decision-makers. It will serve as a foundation for Israel's scientific community, hosting consultation meetings and conferences.

#### **COP29** Annual Summit

The University of Haifa has been admitted as an observer at the Conference of the Parties (COP) and the UN Framework Convention on Climate Change (UNFCCC). The 29th international annual summit, COP29, will be held in Baku, Azerbaijan in November 2024. The University of Haifa is the only Israeli university that received the status of Observer, alongside 9 other organizations from Israel. The university is represented by Prof.

Maya Negev, from the School of Public Health, Faculty of Social Welfare and Health Sciences at the University of Haifa.

#### I FARNING AND STUDENTS

#### **Ecological Crisis and Religions**

Prof. Yossi Hayut, Rabbi Micha Odenheimer, and international students from the Intercultural Religious Studies program participated in a summer workshop on climate change and religions.

#### History, Climate, and Environment

A Methodological Course for Master program Students, titled: 'History, Climate, and Environment' taught by Dr. Anna Gutgarts, from the History Department. The course will focus on the historiography of climate and environment and the changes that have occurred.

#### Tree Hugging Forum

The 'Tree Hugging Forum' operates within the Climate and Environmental Sustainability Center, which encompasses all



academic activities related to the climate crisis, the environment, and sustainability. This includes a series of online lectures for the public. The center brings together researchers and lecturers from various environmental fields, such as geography, natural resource management, biology, and marine sciences, while also incorporating insights from diverse disciplines that tackle broader environmental issues

#### **OPERATIONS**

#### Improving the Rabin Building Entrance

The School of Environmental Sciences has launched a project to enhance the entrance of the Rabin Building. Led by Prof. Leah Wittenberg, the team of volunteers started by removing a significant amount of waste and planting trees and plants in its place. Soon, the entrance will showcase greenery and shaded seating areas.

The Israeli Climate Forum (Credit: Amos Ben Gershom, Central Press Office).



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

#### RESEARCH

#### Ship Noise Impacts Dolphins

A new study by Prof. Roee Diamant, head of the Acoustics and Underwater Navigation Lab at the School of Marine Technologies, and Dr. Aviad Shainin, head of the Apex Predators division at the Morris Kahn Marine Research Station. has found, using artificial intelligence technology, that ship noise affects dolphins. The researchers, who monitored dolphins in the Gulf of Eilat, discovered that dolphins communicate differently and alter their vocal behavior when encountering ship noise, confirming their susceptibility to this disturbance.

#### Swarm Is All You Need

Dr. Oren Gal, a participant in this year's Ambassadors Program, delivered a lecture on his research utilizing swarms and artificial intelligence to benefit humanity. The adaptability and scalability of swarms make them well-suited for tasks that involve distributed sensing, acting, and processing. This opens exciting possibilities for addressing complex, largescale challenges. Applications range from nanorobots for cancer treatment to environmental



Dr. Tal Luzzatto Knaan (Credit: Rami Shlush, Haaretz).

monitoring and conservation in the ocean, as well as disaster response, traffic management, and logistics, showcasing the significant advantages swarm intelligence can offer.

#### COMMUNITY ENGAGEMENT World Oceans Day's Cleanup

The School of Marine Sciences marked World Oceans Day with a <u>beach cleanup</u> at Sdot Yam in collaboration with the Israeli Diving Federation. Researchers, students, and faculty joined forces to collect waste from the sea and shore. While this initiative is just a drop in the ocean, it serves as a reminder of our responsibility to keep the sea clean and healthy.

#### **Dangerous Journey**

In a <u>new study</u>, researchers from the Morris Kahn Marine Research Station, in collaboration with Greenpeace, documented the longest distance traveled by a sperm whale in the Mediterranean Sea. The distance between sighting locations represents the furthest recorded movement of this species in the region, indicating that the whale undertook a hazardous journey.

#### Autonomous Robot for Marine Research

A unique collaboration between Hugim Highschool and the School of Marine Sciences focuses on designing and producing a marine platform for studying the sea and climate

change. Guided by Dr. Itzik Klein, students engage in hands-on learning at various research sites, including the Institute for Sea and Lake Research and the University of Haifa. The project aims to inspire high school students to explore marine technology and its significance for environmental preservation.

#### LEARNING AND STUDENTS What To Do Next?

The School of Marine Sciences hosted a 'Careers in Science' workshop for master's and doctoral students to explore diverse career options postgraduation. Four guest scientists from various fields shared their personal stories and professional paths, offering insights into

careers in biotechnology, becoming an environmental consultant, opportunities in education (such as teaching, teacher training, and curriculum development), and transitioning from research to policy.

#### Award for Blue Economy **Training Program**

The training program for developing projects and innovation in marine fields. a collaboration between the School of Marine Sciences and the Center for Innovation and Entrepreneurship, has won an award from the University. The program promotes blue economy in Israel and was selected as an impactful project with a direct influence on society and the environment, advancing the university's vision of implementing the UN Sustainable Development Goals.

#### New MA Program - Maritime Strategy

The ocean, covering more than two-thirds of the Earth, is a central arena in the modern world. Climate change, the development of the blue economy, and increased migration from inland areas to coastal regions have made the marine environment more vital than ever in the 21st century. The unique master's program in maritime strategy aims to train the next generation of managers, entrepreneurs, and leaders in this domain.

#### **OPERATIONS**

#### Groundbreaking Approaches to **Autonomous Navigation**

Dr. Itzik Klein heads the Autonomous Navigation and Information Fusion Laboratory (ANSFL), which focuses on developing groundbreaking approaches to autonomous navigation using artificial intelligence. The lab is located within the Center for Marine Technologies on the shores of Haifa. Research conducted at the lab integrates artificial intelligence into navigation applications in areas such as robotics. autonomous vehicles, drones for building monitoring, and logistics.

#### **The Functional Metabolomics** and Natural Products Lab

Dr. Tal Luzzatto Knaan leads the Functional Metabolomics and Natural Products Lab in the Department of Marine Biology. This lab employs a cutting-edge, multidisciplinary approach to investigate the biological roles, regulation, diversity, and distribution of natural products in microbes and algae, as well as their potential biotechnological and medicinal applications. She also heads the new Interdisciplinary Center for Metabolomics and Natural Products at the University of Haifa and is actively involved in the "Homeward Bound" initiative for Women in STEMM Leadership.





PROTECT. RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS. SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HAIT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY 1055

#### RESEARCH

#### Boars on the Loose

In Haifa, wild boars have become an unofficial symbol of the city, but they pose significant challenges for local agriculture. Despite extensive hunting efforts to control their numbers, the wild boar population in Israel continues to grow annually. A new study, led by Prof. Dan Malkinson, suggests that hunting may not only fail to reduce their numbers but could actually increase them. This is due to hunting pressure affecting the hormonal systems of sows, leading to earlier fertility. As a result, the wild boar problem persists, raising concerns for both the environment and agricultural practices.

#### Al and Other Birds

Dr. Inbal Schekler, along with Prof. Nir Sapir and Prof. Ilan Shimshoni, received a grant from the Division of Innovation and Sustainability for groundbreaking research utilizing Artificial Intelligence in waterbird studies. The research team integrates expert knowledge on the nesting preferences of various species and data on the physical size of individual birds.



#### Birds as Natural Pest Controllers in the Wild

Dr. Muki Nagari and Dr. Motti Charter from the Shamir Research Institute and the University of Haifa conducted an experiment in Golan Heights, where they fed predatory birds

insect larvae. They discovered how maintaining ecosystem services can reduce the use of pesticides.

#### COMMUNITY ENGAGEMENT President of ISBCB

Prof. Sagi Snir has been elected President of the Israeli Society for Bioinformatics and Computational Biology. The main goals of the ISBCB are to promote research and

education in Bioinformatics and Computational Biology in Israel, facilitate connections between academic institutions. government agencies, and research institutes, and foster collaboration with related societies worldwide.

#### National Trail advancing

The National Trails Conference, a unique initiative by the Mediterranean Trails Research Center at the university, led by Prof. Noga Collins-Kreiner, opened on the summit of Tel Taninim, located on the coast of Jisr Az-Zarga. The event marked the inauguration of the fifth anchor of the Sea Trail. This anchor is one of approximately 50 planned along the route of the Sea Trail in the coming years.

#### Once Lost, Now Found

Two lost Egyptian Vultures IB9 and IB3, whose connection was lost while in the Yemen area



in 2021, arrived at the Carmel Nature Reserve. They were identified by volunteers watching the YouTube channel 'Birds Online - Charter Group', led by Dr. Motti Charter.

#### LEARNING AND STUDENTS This is My Earth

The TiMES organization, led by Prof. Uri Shanas, promotes a unique curriculum that brings together students from Israel, the USA, and Rwanda for joint lessons on sustainability and the environment. Students from G.S. Dihiro School in Rwanda and Rogozin School in Kirvat Ata meet every week or two to learn about cultures, geography, history, and action methods for environmental conservation through the

activities of TiME.

#### Human, Nature, Text

An intensive, unique, and collaborative course, taught by Dr. Einat Davidi and Prof. Dror Burstein, open for students from the Hebrew University and the University of Haifa. The course focuses on reading and writing as a space for engagement and dialogue with nature. In recent decades, a new trend has emerged in literary studies that explores the relationships between literature and the environment. This diverse and interdisciplinary approach emphasizes reading literary works within environmental contexts.

Prof. Noga Collins-Kreiner, the inauguration of the fifth anchor of the Sea Trail (Credit: Hila Gur, Israel Sea Trail Facebook page).

#### **OPERATIONS**

#### **Green Campus Project**

The goal of the project introduced by Dean of Students and conducted in collaboration with researchers from the Climate and Sustainability Center at the university, is to raise awareness among children and youth about the importance of environmental conservation and sustainability issues. As part of the project, a select group of students will receive relevant training from sustainability researchers, translate the content into engaging and educational activities for elementary schools, and conduct experiential workshops in schools in Haifa and the surrounding area to promote these objectives.

#### Between Carmel and Sea

A seminar and opening of the exhibition 'Between Carmel and Sea - The Nature Room Collection of Shimon Engres from Kibbutz Ma'ayan Zvi' took place at the Younes and Soraya Nazarian Library, University of Haifa. The event featured a series of lectures on the history of the collection. bird species, and 50 years of birdwatching in Israel.

#### **Renovation of the Sports Center**

Renovation of Basketball Hall at the university's sports center has been completed. As part of the renovation, the wooden floor was refurbished and repainted. to the enjoyment of students and faculty and the public.

Bnei Zion Hospital, the pediatric oncology department at Rambam Hospital, a soup kitchen. kindergartens, and tomato picking.

## LEARNING AND STUDENTS

A fellowship program in Haifa focused on interreliaious interactions. The program provides a framework for doctoral researchers from diverse disciplinary backgrounds whose studies center on interreligious issues. It aims to foster a dynamic and supportive community for researchers investigating various aspects of interreligious engagement across all academic fields.

#### World Debate Championship Runners-Up

Congratulations to the World Debate Championship runnersup: Amitai Wagner and Ramy Masalha, who secured second place at the World Universities Debate Championship. They represented the university's debate club, which operates under the Student Dean's Office.



הכלכלה בישראל בזמן המלחמה



SOCIFTIES FOR SUSTAINABI F DEVELOPMENT. PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE. ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL I FVFI S

PROMOTE PEACEFUL

AND INCLUSIVE

#### RESEARCH

PEACE, JUSTICE

AND STRONG

INSTITUTIONS

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#### Sharia and Judiciary

'Sharia and Judiciary' is an (כדת וקאדין الشريعة والقضاء) online journal, the first of its kind, focused on Sharia law in Israel. Founded by the Legal Aid Department of the Ministry of Justice and the Haifa Laboratory for Religious Studies at the University of Haifa, led by Dr. Ido Shahar and Prof. Karin Carmit Yefet, the journal provides selected family law rulings in Hebrew, analyzing the application of Islamic law in Israel through iudicial insights, opinion pieces, and editorials. Its primary goal is



HIGHFA Forum gathering (Credit: Guy Yechiely)

to create a dedicated platform for academic and legal discourse on Sharia law.

#### Like a Bridge Over Troubled Water

A paper by Prof. Eran Vigoda-Gadot and Prof. Zehavit Levitats examines the connection between citizen wellbeing and three forms of trust in governance: trust in political institutions, public administration, and enforcement agencies during the pandemic. The authors contend that public service can serve as a bridge linking citizens' wellbeing and political trust.

#### COMMUNITY ENGAGEMENT

NEXUS - New Journal

Dr. Pnina Shuker and Dr. Kobby Barda, are editors of the new journal NEXUS. This publication



President Isaac Herzog, accompanied by Rector Prof. Mouna Maroun and Prof. Uriel Simonsohn (Credit: University of Haifa)



is a new enterprise of the Haifa Laboratory for Religious Studies will showcase a mix of scholarly articles, research contributions. and semi-popular essays.

#### This Week in the Middle East

Dr. Yaron Friedman from the Department of Middle Eastern and Islamic Studies is offering a free, weekly, accessible newsletter featuring news on the Middle East.

#### New Volunteering Program

The International School has launched a new volunteer program in collaboration with 'Masa', which includes individual and group volunteering opportunities throughout the city of Haifa. Students are volunteering in places such as the rehabilitation department at

#### Interwoven Worlds Program

#### **OPERATIONS**

#### **HIGHFA** Forum

The Friends of the University of Haifa Association in Israel has launched the HIGHFA Forum – an elite network for alumni of the University of Haifa.

#### Making Legal Forms Accessible

Second-vear students in a typography course at the Department of Visual Communication, School of Design, worked to transform intimidating legal forms into more accessible and inviting documents.

#### 'Journey to Self' Program

The Social Engagement Unit at the Dean of Students Office hosted a scholarship award ceremony for the 'Journey to Self' program, in partnership with the Mofeed Amer Association, in memory of Salah Flah. This program seeks to bring together and empower Druze students at the university by establishing a framework for guided discussions on Druze identity and their challenges.

Debate Championship: Amitai Wagner and Ramy Masalha (Credit: University of Haifa website)







STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE **DEVELOPMENT** 

#### RESEARCH

#### Joint Israeli-German Research Team

A joint Israeli-German research team has launched the 'Eastern Mediterranean Sea Centre – An Early-Warning Model-System for our Future Ocean' project, in collaboration with the GEOMAR Helmholtz Centre for Ocean Research Kiel. This initiative focuses on climate change and pollution in the Eastern Mediterranean Sea, using it as a 'living lab' to develop predictive models. Led by Prof. Ilana Berman-Frank and Prof. Yitzhag Makovsky from the Charney School of Marine Sciences.

#### Historic Merger with the Haifa School of Design

The merger between the University of Haifa and the Neri Bloomfield School of Design represents a significant milestone, making it the first university in Israel to establish a dedicated design school. This change is set to take effect at the start of the 2024 Spring Semester. The new School of Design, led by Prof. Leah Peretz, a renowned figure in fashion design, will usher in a new era of education and innovation across



various design disciplines in Israel.

#### COMMUNITY ENGAGEMENT

#### New Center of the School of Public Health in Collaboration with WHO

A celebratory meeting was held to mark the opening of the collaboration center of the School of Public Health with the World Health Organization, in the Field of Occupational Health. Distinguished representatives from the WHO headquarters and the organization's regional office in Europe attended the meeting.

#### **Raising Awareness in Antartica**

Two marine biologists from the University of Haifa. Prof. Tali Mass and Dr. Tal Luzzatto Knaan, combined their Antarctic expedition with the 'Homeward Bound' program for women leaders to express a powerful act of solidarity. While raising the Israeli flag on the frozen continent, they seized the opportunity to raise awareness about the Israeli hostages and the broader Israel-Hamas conflict among their fellow expedition members from around the world.

#### Haifa University Joins the UN Network on Sustainability

The UN Sustainable Development Solutions Network (SDSN), operating under the auspices of the UN Secretary-General. aims to mobilize universities worldwide.

#### Chair of the Public Health Committee for the Study of the Liver

Prof. Shira Zalber-Shegi, Head of the School of Public Health, has been appointed Chair of the Public Health Committee at the European Association for the Study of the Liver.

### LEARNING AND STUDENTS Specialization Track in

### Sustainable Development A new program seeks to

understand and analyze the interconnected relationship between geography and the environment. By integrating sustainable development with environmental studies, it helps decision-makers find a balance

between conservation and development, urban and rural areas, as well as urban planning and open spaces. This approach ultimately fosters economic growth and human development while promoting environmental responsibility.

#### Sustainability & Architecture

The Department of Architecture at the School of Design held a series of lectures titled: SUSTAINABILITY & ARCHITECTURE, by various international lecturers connecting architecture and design to sustainability and the environment. This lecture focused on climate-responsive design.

#### Journey into the Depths of Submarine Systems and Technologies

#### An Exhibition has opened

simultaneously at the University of Haifa and the 'Tesla' Museum in Zagreb, Croatia. The exhibition highlights technological innovations and advanced research in robotics and underwater technologies. It features recording and transmission devices for underwater studies, as well as an interactive screen showcasing captivating content. Visitors can explore cutting-edge marine technology research, including computer learning for decoding whale communication, algorithms for detecting dolphins and sea turtles, signal processing for sonar target detection, and underwater acoustic communication studies.

#### **OPERATIONS**

#### Honoring Mahsa Amini and the Hijab Protests

A giant image in memory of Mahsa Amini, who was killed by Iranian authorities for not wearing a hijab and became a symbol of the 'hijab protests', has been displayed at the Hecht Museum. Measuring six by three meters, it consists of 1.000 small photos of victims of the Iranian regime over the past year. Hooman Khalili, who created the mosaic using AI technology, stated, 'This moment reminds us of the widespread injustice that Iranians face daily. I want to stand in solidarity with them'.

#### Filling the Gap

The Younes and Soraya Nazarian Library takes another important step in its support of the open information vision and contributes its Index to Hebrew Periodicals (IHP) thesaurus to all Alma Users Community. The move enriches the Community Zone and establishes the extensive Israeli librarian activity in Hebrew and Arabic, in the international arena.

#### **Our Champions!**

The women's volleyball team won the final match in the Friendship League, a national level competition. The Friendship League for volleyball is a social sports league with a vision of empowering women and fostering dialogue for a better and more tolerant society.

#### Driving Impact Towards the Sustainable Development Goals Division of Innovation & Sustainability and the Younes and Soraya Nazarian Library The University of Haifa, Mount Carmel, Haifa 31905, Israel



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Cover Photo: An olive tree overlooking Haifa Bay, Mount Carmel campus, University of Haifa (Credit: Roy Hermoni)

