

SUPPORTING THE LEON H. CHARNEY SCHOOL OF MARINE SCIENCES



**Protecting our Fragile Ecosystem. Advancing Regional Peace. Improving Quality of Life.
The Mediterranean Sea is our Gateway to a Better Future.**

It is now abundantly clear that the Mediterranean Sea stands at the nexus of regional cooperation, economic development, environmentalism, and scientific research. Exploring, safeguarding and harnessing the power of this unique treasure will enrich our lives and serve as a catalyst for advancing regional peace.

The Leon H. Charney School of Marine Sciences at the University of Haifa is ideally situated to play a critical role in shaping our nation's and region's future.

As Israel's only School of Marine Sciences, our researchers and students are setting the agenda in terms of marine research, new scientific discoveries, and conservation efforts.

We have only scratched the surface of this remarkable unexplored frontier. We invite you to join us as the University of Haifa shapes the future of marine sciences research.



The Leon H. Charney School of Marine Sciences

- Marine Geosciences
- Marine Biology
- Maritime Civilizations



What Makes the School of Marine Sciences Unique?

Leading Experts - Multidisciplinary Approach. The simultaneous discovery of major gas reserves just off of Israel's shoreline has focused unprecedented attention on the Mediterranean Sea. Maximizing this significant economic opportunity while minimizing the risk to marine ecosystems has become an urgent national priority. Drawing on researchers from a wide area of marine disciplines, interests and experiences, the Leon H. Charney School of Marine Sciences is uniquely prepared to meet this complex challenge. Our School is playing a strategic role in Israel and the global community - informing science driven economic and environmental policies.



Taking Environmental Sustainability Seriously.

Climate change and the disposal of industrial waste are two of the most significant challenges facing humanity. Heavy dependence on fossil fuels releases greenhouse gas emissions into the atmosphere - setting off a chain of devastating impacts. Our School of Marine Sciences is monitoring the impact that climate change and industrial waste are having on marine life to preserve our fragile ecosystem. Making smart decisions about environmental policies that affect the air we breathe, the water we drink and the

food we eat will require monitoring and input by the scientific community.

Tapping the Commercial Potential of the Sea. Photosynthesis – the process used by plants and algae to convert sunlight into organic material – and Deep Seeps – vents where methane gas seeps from below the sea floor feeding a community of deep sea organisms – are the foundation of all “green” fuels. Scientists at the University of Haifa are investigating the sophisticated way that deep-sea life produce energy with the goal of developing economically viable sources of clean, renewable fuels.

The Sea is a proven source of vast commercial and medical applications. Our marine researchers are developing ecologically-friendly foods that may one day feed the world's growing population; studying sponges and bacteria to yield novel antibiotics and anti-cancer drugs; and applying properties of microscopic algae to develop new cosmetic products that are ‘naturally’ UV-absorbing and anti-aging.

Marine Research: An Investment in Our Future

The seas and oceans cover 70% of the earth's surface. But all that the Sea provides – its wealth of resources, tourism, recreation, sustenance, and commerce – is under threat from industrial development, pollution, and climate change. Our marine scientists are at the forefront of monitoring the impact of climate change, oil and gas discoveries, changes in the shoreline, industrial pollution, and natural disasters, such as tsunamis, earthquakes and submarine slides.



The increased levels of toxic bacteria, depleted fishing stocks, and proliferation of jellyfish in our waters are outcomes of our distressed and fragile ecosystems. These profound challenges underscore the necessity for interdisciplinary marine research so that future generations may enjoy and benefit from this rich local resource.

Boasting the most significant marine discoveries made in the Mediterranean Sea in the last decade, University of Haifa researchers are uniquely positioned to influence major economic and environmental policy decisions for years to come.

Regional Cooperation: A Gateway to Peace



The eastern Mediterranean basin is the site of today's most complex geo-political challenges. Recent events have proven that developments in one country have a direct and immediate impact on all regional players. Within this often confrontational environment, scientific research has an important role to play in strengthening present alliances and initiating new relationships.

Israel's future prosperity and prospects for peace will depend on our ability to work in partnership with neighboring countries to develop creative solutions to the region's most pressing problems. Many of the solutions will be found through scientific advances and discoveries in the field of Marine Sciences. The University of Haifa, with the most diverse Faculty and student body in Israel, has the expertise and vision to be at the forefront of the exciting scientific opportunities that will pave the way to greater regional cooperation and peace.

Leadership



Professor Zvi Ben-Avraham

“The Sea is one of our most precious resources. Among the most pressing challenges of the 21st Century is to conserve it better while harnessing its power for humanity. The Leon H. Charney School of Marine Sciences will become a beacon of knowledge providing a forum for academics from a range of disciplines to engage and meet this challenge,” notes Professor Aaron Ben-Ze’ev, President of the University of Haifa.

We are proud of the fact that Professor Zvi Ben-Avraham is the founding director of the Leon H. Charney School of Marine Sciences. In 2003 Professor Ben-Avraham was awarded the prestigious Israel Prize for his work in the field of Geosciences. An outstanding scientist and a leading researcher in Israel with a world-class reputation, Professor Ben-Avraham has served as a scientific advisor to key Israeli policy-makers.

Partnership Opportunities

We are currently seeking additional partners to build a solid foundation and expand the opportunities for scientific advances in the myriad spheres of maritime studies. The School currently requires infrastructure support for laboratories, sea exploration machinery, and doctoral and post-doctoral fellowships.

About the University of Haifa

The University of Haifa is the largest research university in northern Israel. It supports a wide range of interdisciplinary programs and cooperative endeavors with academic institutes around the world. The University houses six faculties (55 departments and 60 research centers): Humanities; Social Sciences; Natural Sciences; Law; Social Welfare and Health Sciences and Education; and numerous Schools.



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