

Transnational
Red Sea
Center

Bridging Science
& Diplomacy for
the Future of Corals

PRESS RELEASE

The transnational scientific expedition
on Red Sea corals
will start along the coasts of Jordan and Sudan

The Swiss initiative bridging science and diplomacy to preserve the world's last coral "refuge" will set off from Aqaba in mid-July for a first season of research to better understand the resilience of Red Sea corals to climate change.

The expedition, which will be carried out every summer from 2021 to 2024, will bring together local and international scientists.

Lausanne/Aqaba, 24 June 2021 - The Transnational Red Sea Center at Ecole polytechnique fédérale in Lausanne (EPFL) will launch mid-July from Aqaba, Jordan, the first season of its 2021-2024 expedition bridging science and diplomacy for the future of corals. This inaugural season will see the start of four research programmes on:

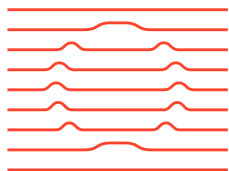
- a coral reef ecosystem survey;
- quantitative determination of the thermal resilience of key coral species;
- genetic analysis of coral and environmental DNA (eDNA);
- systematic sampling for water quality, including the presence of microplastic, trace metals, and persistent organic pollutants.

These programmes will be progressively extended to the entire Red Sea over the next few years. They will be implemented in partnership with several regional and international research institutions, including the Marine Science Station of the University of Jordan and Yarmuk University, the Institute of Marine Research of the Red Sea University in Port Sudan and the Inter-University Institute of Bar-Ilan University in Eilat. They will be carried out from the 33-meter Swiss sailing boat *Fleur de Passion* of the Geneva-based *fondation Pacifique*, the expedition's logistical partner.

At the same time, the first two pieces of equipment for continuous monitoring of the health of coral reefs will be deployed in Jordan. They are the first links in a vast network of high-tech sensors that the Transnational Red Sea Center intends to deploy at environmentally important locations in the Red Sea. Their purpose is to provide real-time data to governmental actors in charge of environmental management in each of the countries bordering the Red Sea.

This first expedition season will mark the start of the activities of the Transnational Red Sea Center, created at EPFL in 2019 with the support of the Swiss Confederation, which has made it one of the official axes of its "scientific diplomacy" in the Middle East. Building on Switzerland's neutrality, its long tradition of promoting dialogue and EPFL's reputation for scientific excellence, the Transnational Red Sea Center aims to promote a regional approach to the research and preservation of what is de facto the world's last coral « refuge ».

"We are very happy to launch from Aqaba the first season of our four-year expedition bridging science and diplomacy for the future of the Red Sea corals," said Prof. Anders Meibom, Director of the Transnational Red Sea Center at EPFL.



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"We are particularly grateful to the Jordanian authorities and the Aqaba Special Economic Zone for their hospitality and for having made it possible, with the support of the Swiss authorities, to give full meaning to this departure in the company of some of the regional partner institutions of this large-scale project", added Prof. Meibom, who is also one of the authors of the recent studies that revealed the extreme resistance of the corals in the northern Red Sea to climate change.

"Safeguarding the Red Sea as the world's last coral refuge requires working together across national, linguistic, religious and other boundaries. All of this is for the common good, not only on a regional but on a global scale," insisted the researcher, who is himself of Danish origin.

"The Transnational Red Sea Center directly echoes the Jordanian authorities' desire to promote the preservation of coral reefs in the country, on a regional scale and beyond. In this respect, we are delighted to collaborate with them and to be part of the concrete projects they are carrying out, such as the creation of a protected marine reserve that would be recognised by UNESCO," continued Prof. Meibom, who has just been appointed as a member of the project's International Advisory Board.

"The Aqaba Special Economic Zone Authority (ASEZA) has been working since its establishment to achieve a sustainable development through laws and regulations, and supports all efforts aiming to preserve the marine environment and coral reefs along the Jordanian Gulf of Aqaba," said His Excellency Engineer Nayef Bakheet," ASEZA's High Commissioner.

"In this context, our hosting of the Swiss initiative in their first exploratory research activity comes within our objectives to protect coral reefs from human activities and climate change, and to achieve an ecological balance that ensures continuity in the sustainability of natural resources, which are considered as one of the factors that attract investments in the region," added Eng Nayef Bakheet.

"The Aqaba Marine Science Station is very pleased to contribute to the research of the Transnational Red Sea Center as part of its own marine conservation activities in the Gulf of Aqaba," said its director Dr Ali Al-Sawalmih.

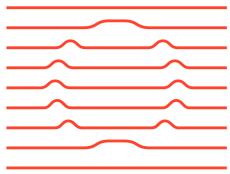
"Our partnership with TRSC will also strengthen our efforts to better preserve the coral reefs of the Red Sea and open up opportunities for cooperation between researchers, enabling them to obtain the data needed to better understand the characteristics of the coral reefs of the Red Sea," added Dr Al-Sawalmih.

"EPFL welcomes the start of a Swiss initiative in favor of the Red Sea corals and the invaluable environmental treasure they represent for the region itself and universally," said EPFL President Martin Vetterli.

"Our institution is happy to collaborate and share its values of scientific excellence with the academic institutions that are partners in this initiative, and to work towards solutions that are at once scientific, diplomatic and human, which will enable us to meet the environmental challenges of our time together," continued Mr Vetterli.

"I am delighted with this new stage in the Transnational Red Sea Center project," said Swiss Federal Council and Foreign Minister Ignazio Cassis. "The scientific expedition is essential to show the importance of protecting this unique ecosystem in the world. I am particularly grateful to Jordan for its support and for making Aqaba a haven for transnational research."

Over the past 30 years, 50% of the world's corals have disappeared due to global warming, pollution and other destructive human activities, and only 10% are expected to survive beyond 2050. Recently, however, there is a unique hope for the survival of at least one major reef ecosystem in the world. Recent studies have revealed that Red Sea corals are resistant to global warming because of their particular evolutionary history since the last Ice Age. Their survival is therefore possible, provided that the environmental pressure exerted by human activity in the countries bordering the Red Sea is mitigated.



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In total, from 2021 to 2024, the Transnational Red Sea Centre plans to carry out four expeditions of about three months each (July-September) along the entire length of the Red Sea, i.e. along its 4000 km of coastline.

Transnational Red Sea Center at EPLF

Media contact:

Email: samuel.gardaz@epfl.ch

Mobile: +41 76 563 65 43

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