



REPORT

Green Foundation Ireland

invites you to an evening online TALK

with **Mike Hynes**

Coral Reef Time Machine: Using past reefs to determine their future



Venue: by Zoom (*details given after registration*)

Wednesday 5 July 2023 – 19:00 to 20:00

Admission to this event is **FREE** but you **MUST** register beforehand.
You can do so through [our Eventbrite page here](#).

Coral Reef Time Machine:

Using past reefs to determine their future

THEME

Coral Reefs are home to over 25% of all ocean diversity. However, they are increasingly facing pressures from overfishing, climate change, sea level rise, and more environmental factors.

To better understand how reefs might fare in the coming century, we looked to understand how reefs have coped with ever changing environments over the last few thousand years.

ABOUT OUR SPEAKER

Mike Hynes



Mike is currently an Early Stage Researcher with 4D-REEF (EU Horizon 2020/Marie Sklodowska-Curie) and a PhD Candidate at the Universiteit van Amsterdam. Originally from Canada, he received a BSc in Geology in 2012 from the University of Calgary, followed by an MSc in Palaeobiology in 2019 from the University of Bristol.

Though his background is Palaeontology-based, Mike also worked for three years at the Smithsonian Tropical Research Institute in Panama on past and present reefs of the Caribbean, learning how they have changed over timescales from years to millennia. The same techniques now form the basis of his current research in the Indo-Pacific region, an area of very high coral diversity.

ABOUT OUR FACILITATOR

Ciaran Monahan

A Researcher and Events Co-Ordinator with Green Foundation Ireland, Ciaran is a postdoctoral researcher in University College Dublin, his research thus far focussing on antibiotic resistance development risks in the environment and the **resulting** human health risks. Having graduated in zoology from UCD, he has a particular interest in wildlife, creativity and education, and has completed a study for Green Foundation Ireland on sustainability assessment in the Leaving Certificate.



ABOUT OUR TALK

After welcoming everyone to our event, Ciaran introduced Mike Hynes who began by first familiarising us with the biology and life cycle of corals, and with the development and growth of reef systems as a whole. The role of sea level rise was shown, and how reef systems can either rise with the water levels which leads to new growth, or fall beneath. Mike explained the different types of corals and their part in reef building. The role that coral reefs play in biodiversity was emphasised, and pictures demonstrated the difference between healthy and damaged reef systems. Examples of reef systems in the real world were given.

Mike then brought up the subject matter of his research, which is how taking vertical cores of coral reef seabed can inform us about the historical health and development of the reef system. In a video, he demonstrated the tools and process through which cores are taken. Pictures showed the results of his investigation in the form of coral identification. Mike emphasised the importance of collaboration – as well as work integrating local people was of benefit for research, their understanding of the local ecosystem was a great advantage in his work.

Information was also given on threats to reef systems, such as bleaching, which, caused by temperature increase and increased stress of corals, brings about a breakdown in the symbiotic relationship between the coral and algae.

Questions from attendees were very engaged, relating primarily to successful conservation efforts for coral reefs throughout the world. However, one questioner asked if Mike ever meets dangerous sharks during the course of his work – he replied that he's seen loads and loads of sharks, but there are only two species that are aggressive, although all will be so if cornered.

You can [access our video of the talk here](#).

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21 July 2023