

As of 2016, DCO scientists have explored over 80 sites in more than 30 countries. These expeditions involved 250 scientists from numerous disciplines. To explore all these sites and read updates and publications from the scientists involved, visit deepcarbon.net.

For more information, contact Katie Pratt (katie_pratt@uri.edu | 401 874 6147)

A selection of ongoing DCO field studies:

THE OMAN DRILLING PROJECT

The Oman Drilling Project involves diamond coring at several sites in the southeast end of the Samail Ophiolite complex in Oman. Phase 1 drilling operations began in November 2016, and will continue until late March or early April 2017. Phase 2 will take place in 2018. The team is investigating many aspects of the deep carbon cycle, including quantities of carbon in the mantle and the extent of the subsurface biosphere.

More information: www.omandrilling.ac.uk



OMAN | KATIE PRATT

BIOLOGY MEETS SUBDUCTION: COSTA RICA

A team of DCO early career scientists is investigating several field sites in Costa Rica over the course of 12 days in mid-February 2017: Poás, Turrialba, and Arenal volcanoes and a minimum of three springs along the Nicoya and Osa peninsulas. The knowledge gained from this intensive, cross-disciplinary expedition will shed light on carbon movement between Earth's surface and interior and the biological and chemical changes that occur en route.

More information: <https://deepcarbon.net/page/biology-meets-subduction>



COSTA RICA | CARLOS RAMIREZ

DECADE: DEEP EARTH CARBON DEGASSING AND VOLCANO MONITORING WORLDWIDE

The DECADE (Deep Earth Carbon Degassing) initiative unites scientists with expertise in geochemistry, petrology and volcanology to determine constraints on the global volcanic carbon flux. To gather needed data, it is building a global monitoring network to continuously measure the volcanic carbon flux of 20 active volcanoes. Currently, eight volcanoes are outfitted with gas monitoring stations. Over the next three years, DECADE scientists will add more stations, and regularly maintain current stations.

More information: <https://deepcarbon.net/feature/exhaling-earth-scientists-closer-forecasting-volcanic-eruptions>



NICARAGUA | ALESSANDRO AIUPPA

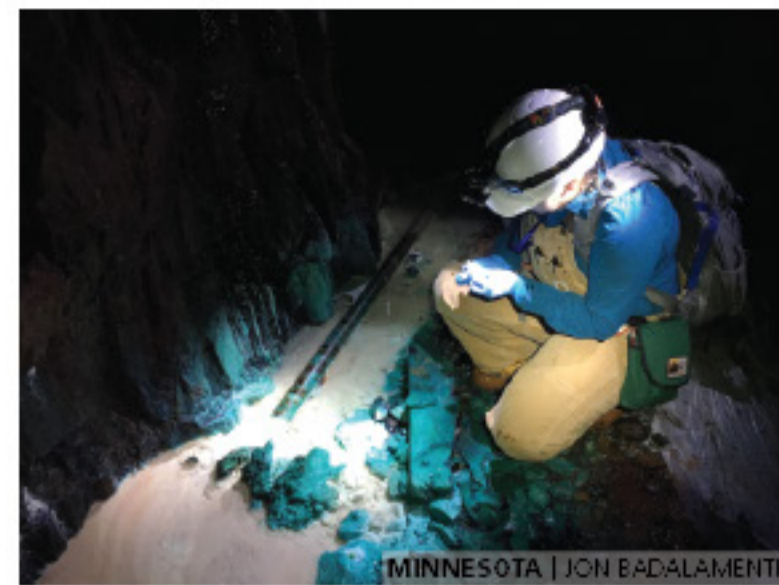
INVESTIGATING DEEP ENERGY AND DEEP LIFE IN MINES AROUND THE WORLD

Existing mines offer relatively easy access to deep environments on continents. Several expeditions to Sudbury and Kidd Creek nickel and copper ore mines in Ontario have already resulted in significant insights into global geologic hydrogen production in continental environments. Related research is also taking place in the deep gold mines of South Africa, where scientists have characterized diverse microbial ecosystems. And in Northern Minnesota, DCO scientists are investigating microbial life in the now abandoned Soudan iron mine. Studying these sites, and others both on land and beneath the ocean, are giving DCO deep life scientists a global picture of the deep biosphere.

Canada: <https://deepcarbon.net/feature/active-sulfur-recycling-billion-year-old-water-canadian-shield-rocks>

South Africa: <https://deepcarbon.net/feature/sulfur-and-nitrogen-metabolism-critical-deep-continental-ecosystems>

Minnesota: <https://deepcarbon.net/feature/deep-life-researchers-investigate-ecosystems-minnesota-iron-mine>



MULTI-WELL DEEP UNDERGROUND LABORATORY: EASTERN CHINA

In the Songliao Basin, China, DCO scientists are taking fluid samples from existing boreholes to investigate the origins of hydrocarbons in this region. A workshop in summer 2016 set the stage to initiate a proposal to the International Continental Drilling Program in early 2017 to expand this underground laboratory.

More information: <https://deepcarbon.net/feature/international-workshop-multi-well-deep-underground-laboratory-eastern-china>



T-LIMIT OF THE DEEP BIOSPHERE: JAPAN

International Ocean Discovery Program (IODP) Expedition 370, which took place in the fall of 2016, was the first of two proposed expeditions investigating the temperature limits of life. An international team of scientists on board the Japanese drilling vessel *Chikyu* collected precious core samples, which are currently undergoing analysis at the Kochi Core Center.

More information: <https://deepcarbon.net/feature/how-hot-is-too-hot>

