

# Surface Biology and Geology (SBG): future thermal and spectroscopic missions for Earth Science

The Centre for Environmental Studies at the University of Pretoria invite you to attend a Seminar by Dr Kerry Cawse-Nicholson

**DATE:**

17/05/2023



**TIME:**

11:00 – 12:00

**VENUE:**

Geo 1.2 (Geography Building)

**RSVP:**

[Prof Abel Ramoelo, Director: Centre of Environmental Studies at \[abel.ramoelo@up.ac.za\]\(mailto:abel.ramoelo@up.ac.za\) by no later than 15 May 2023](mailto:abel.ramoelo@up.ac.za)

At the end of 2017, the United States National Academies of Science, Engineering, and Medicine made recommendations to NASA and other agencies by outlining the most pressing science concerns for the decade. This Decadal Survey (DS), titled “Thriving on our Changing Planet”, called for a mission to map the Earth’s Surface, Biology, and Geology (SBG) in order to answer scientific questions in the fields of ecology, hydrology, climate, and solid earth. This mission will launch later this decade and will consist of a visible-to-shortwave infrared (VSWIR) spectrometer and a thermal infrared (TIR) radiometer on different platforms. This talk will describe the mission design and pathfinder missions of [ECOSTRESS](#) and [EMIT](#).

**Bio**

Formally from the CSIR, [Dr Kerry Cawse-Nicholson](#) is now a Scientist at the [NASA Jet Propulsion Laboratory in California USA](#). She serves as the assistant Section Manager for Earth Science at JPL, the ECOSTRESS science lead, and the Deputy Project Scientist for SBG-TIR. Her research interests include the study of biodiversity, wildfires, and drought, as well as uncertainty quantification and the mathematical optimization of spectroscopic mission design.



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