

The 58th ICTWS Annual Meeting: Workshop Announcement

Title: **Google Earth Engine for Ecologists**

Presenter: **Dr. Ramiro Daniel Crego**, Post-doctoral Research Fellow at Smithsonian Conservation Biology Institute, Conservation Ecology Center, and National Zoological Park

With global changes occurring so rapidly, new methods that allow managers and researchers to quickly analyze data and obtain results to inform the decision-making process are crucial. Google Earth Engine (GEE) is a free Web-based spatial analysis platform that requires only a web browser and an Internet connection to programmatically access and analyze data from its multi-petabyte catalog of regularly updated satellite imagery (e.g. MODIS, Landsat, Sentinel) and other geospatial datasets. The high computing capacity of GEE can make computationally demanding analyses more accessible to researchers and practitioners, especially those with limited access to advanced computational resources.

In this workshop, I will demonstrate the basics of JavaScript coding language, how to access spatial data, how to manipulate spatial data, and how to apply some of the new workflows I have developed to model [species habitat suitability](#).

While GEE is free, users are required to obtain an account. To sign up follow this [link](#). It can take several days for the account to be activated, so it is recommended that users that do not have a GEE account, sign up ahead of time.

Plan: 3 h workshop.

- Part 1 (40 min + 10 Q&A + 10 break): What is Google Earth Engine? Getting familiar with JavaScript and Earth Engine objects.
- Part 2 (40 min + 10 Q&A + 10 break): Accessing and manipulating data in Google Earth Engine.
- Part 3 (45 min + 15 Q&A): Species Distribution Models in Google Earth Engine.

Other publications of interest using GEE and R: <https://www.mdpi.com/2072-4292/13/20/4154>