FRB
FONDATION POUR LA RECHERCHE SUR LA BIODIVERSITÉ

CESAB
CENTRE FOR THE SYNTHESIS AND ANALYSIS OF BIODIVERSITY

PARSEC

Building New Tools for Data Sharing and Reuse through a Transnational Investigation of the Socioeconomic Impacts of Protected Areas

PRINCIPAL INVESTIGATORS:

N. MOUQUET, Marbec, CNRS Montpellier, FRB (FR) / M. MOUILLOT, Marbec, Université de Montpellier (FR) / A. SPECHT, University of Queensland (AU) / S. STALL, American Geophysical Union (US)

START AND FINISH:

2019 - 2023

CO-FUNDING: Belmont Forum

23 PARTICIPANTS:

A. CAMBON-THOMSEN, Université de Toulouse (FR) / T. CATRY, IRD (FR) / M. CHAUMONT, LIRMM, CNRS (FR) / J. CLAUDET, CRIOBE, CNRS (FR) / R. DAVID, MISTEA, INRAE (FR) / L. DURIEUX, Espace-Dev, INRAE (FR) / J. EVANS, The Nature Conservancy (US) / K. FERRAZ, University of São Paulo (BR) / O. HOLOGNE, INRAE (FR) / K. IMAI, National Institute of Information & Communications Technology (JP) / Y. KONDO, Research Institute for Humanity & Nature (JP) / M. O'BRIEN, University of California (US) / L. MABILE, University of Toulouse (FR) / J.-P. OMETTO, National Institute for Space Research (BR) / T. OSAWA, Tokyo Metropolitan University (JP) / S. REDDY, The Nature Conservancy (US) / S. SANTOS, University of São Paulo (BR) / F. SEYLER, Espace-Dev, INRAE (FR) / G. SUBSOL, LIRMM, CNRS (FR) / L. THIAULT, CRIOBE, CNRS (FR) / M. THOMSEN, INSERM (FR) / J. TRAMMELL, Southern Oregon University (US) / L. VELEZ, MARBEC, University of Montpellier (FR)

PARSEC is a trans-disciplinary and trans-national project working on **the use and re-use of environmental and socio-economic data to assess practices for data management and conservation.** The project provides a unique opportunity for data scientists and synthesis scientists to collaborate in real-time toward the goal of improving research outcomes and data sharing. The resulting tools and metrics will enable better prediction and mitigation of the effect of actions that disrupt historical land use practices and threaten local communities.

The project is composed of two teams: a **Synthesis Science team** and a **Data Science team.**

- The **Synthesis Science team** is employing artificial intelligence techniques to analyse satellite images and socio-economic information to better predict and mitigate the effect(s) of actions that potentially threaten the livelihoods and health of local (indigenous) communities. Like most researchers who investigate complex environmental problems, the team depends significantly on the availability of good, spatially dispersed, multidisciplinary, and time-series data.
- The **Data Science team**, composed of leading environmental data management professionals, data communities (RDA, ESIP), society journals (AGU), and representatives of e-infrastructures for data attribution (e.g., DataCite and ORCID), will develop leading practices on data citation, attribution, credit, and reuse. As part of the integrated work with the synthesis-science team, the data-science team will provide a review of best practices for data management and stewardship using this effort as a case study of the wider scientific community to optimise data access and reuse. The team will also develop and implement a new tool to better track data usage and reuse for researchers.

CESAB

CESAB (CEntre for the Synthesis and Analysis of Biodiversity) is FRB's flagship program and an internationally renowned research center whose objective is to implement innovative work to synthesize and analyze existing data sets in biodiversity research.