

Carbon budgets of TROPical coastal ECOSystems in the Anthropocene TROPECOS

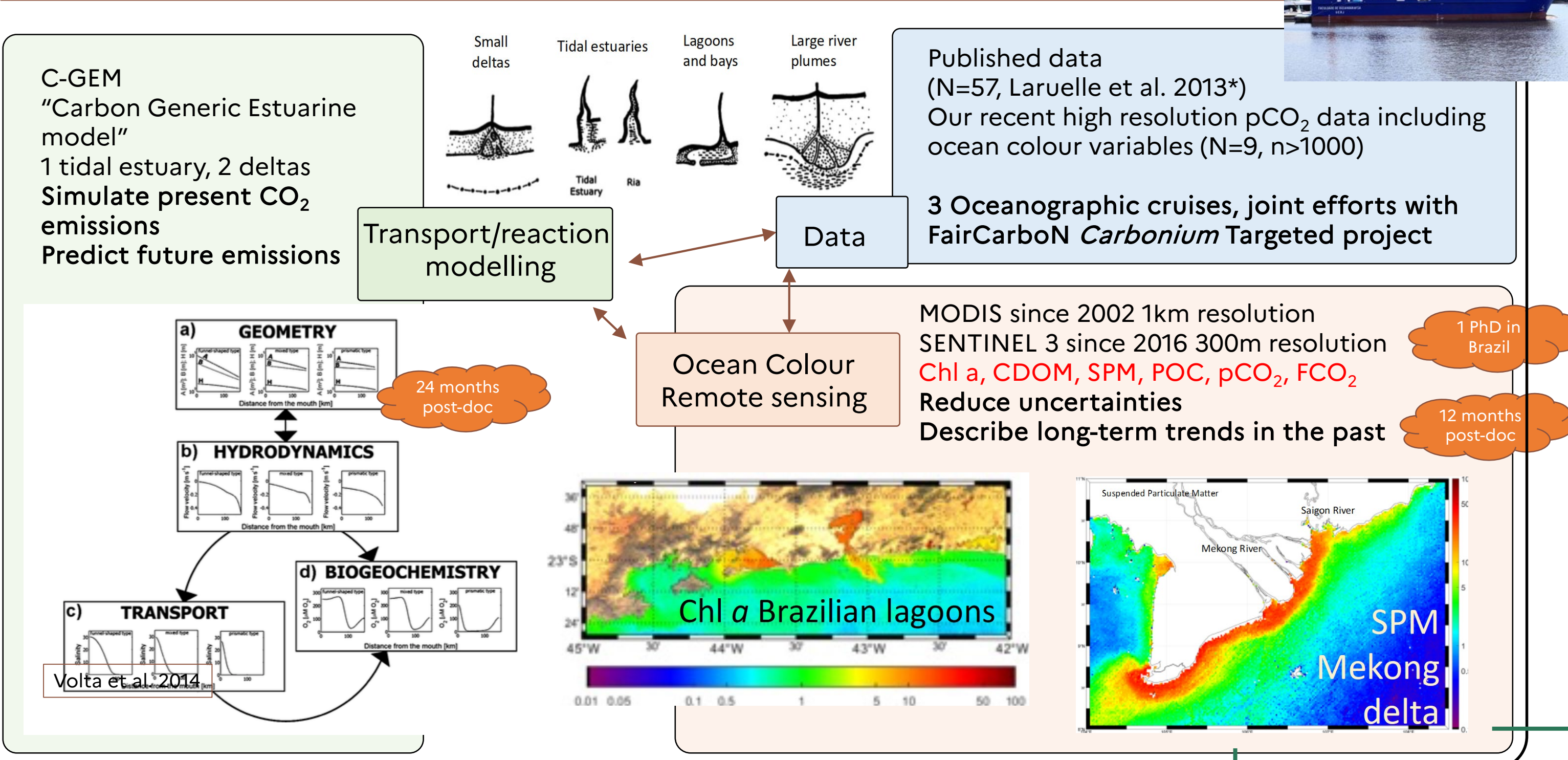


OBJECTIVES

- Revise global estimates of carbon emissions (CO₂ and CH₄) and OC storage in estuaries and mangroves
- Understand how and how much C circulates through ecosystems according to geomorphology > urgently needed for global C models
- Mangroves: disentangling mechanisms of carbon stabilisation on the long term and feedback loops in soils by building an unprecedented geochemical database
- Mangroves: vulnerability of the blue carbon reservoir to eutrophication. A nature-based solution for urban water treatment?

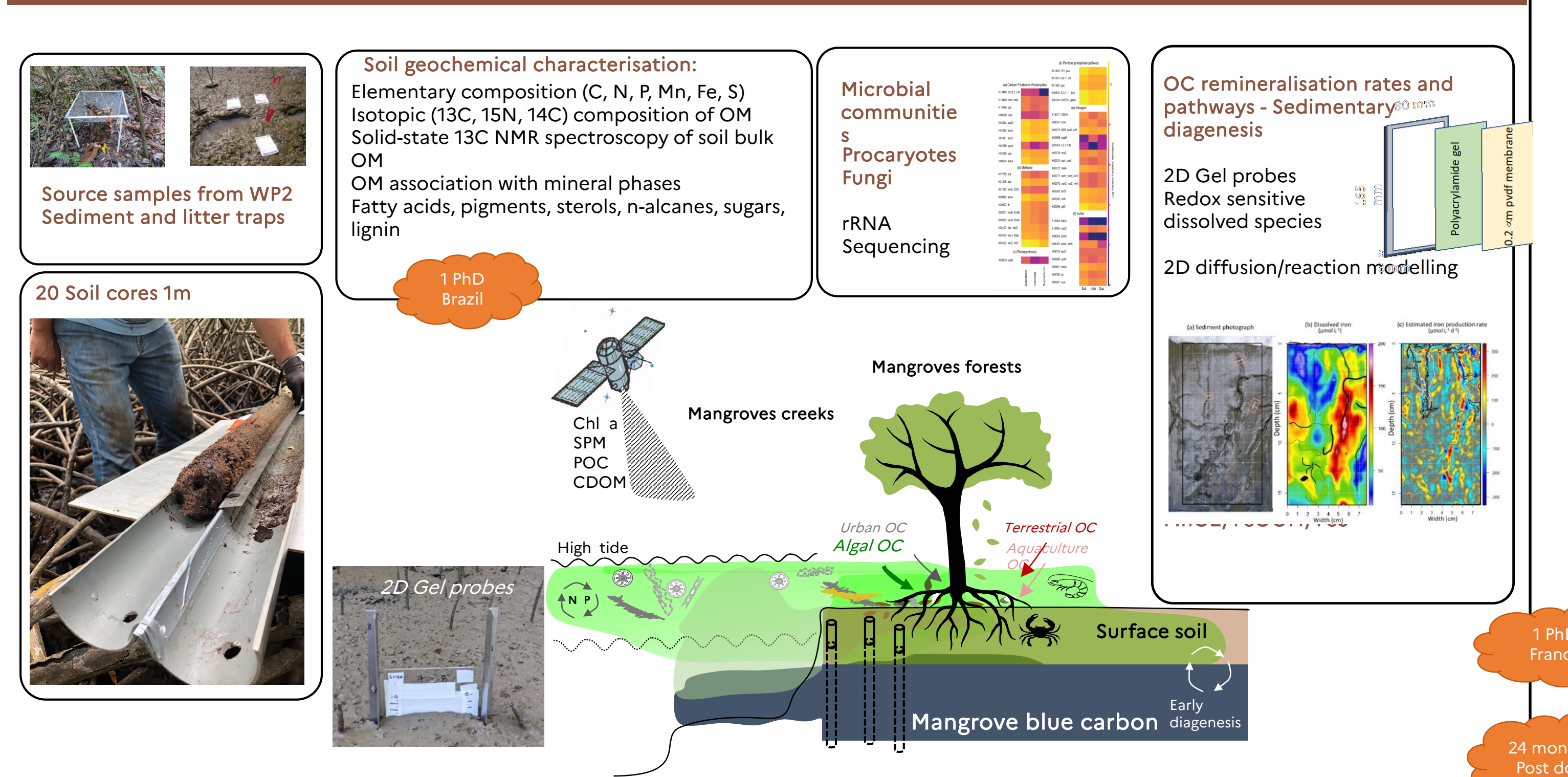
WP1: Past, present and future GHG budgets of tropical estuaries

Vincent Vantrepotte LOG, BOREA, IGE, UFF and UERJ (Brazil), HCMUT (Vietnam)



WP3: Origin, composition, remineralisation and preservation of organic matter in mangrove soils

Aurélia Mouret LPG, iEES, BOREA, ISEA, UFF, MPEG, HCMTU

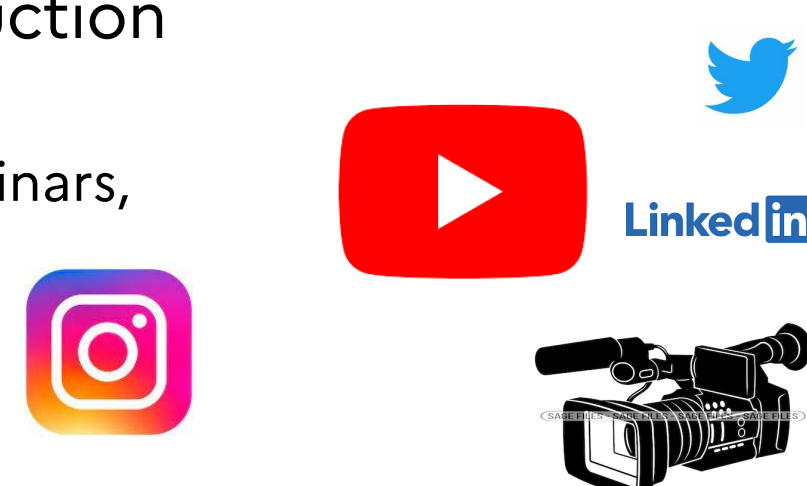


WP0: Project management and communication

Gwenaél Abril PI, Cyril Marchand Co-PI, WPs Leaders

Challenge : Geographic remoteness with strong time-lags and reduction of the carbon footprint

On line communication: Webpage, YouTube Channel, social medias, regular webinars, online technical meetings, field work planification, follow-up committees. Regional cruises planned regionally: Indo Pacific / Atlantic-Caribbean. Production of video tutorials, long field trips with training of local partners. Database management, workshop, publication groups, international conference



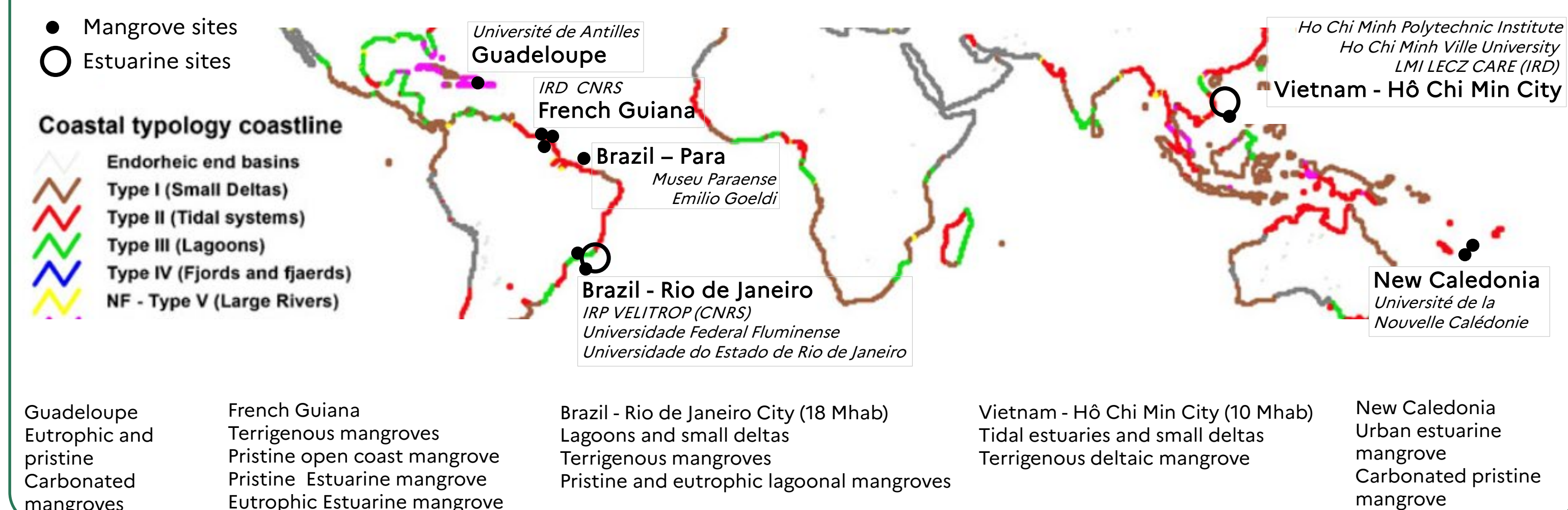
Partnership and study sites

Forest ecology, oceanography, biogeochemistry, sedimentology, hydrology, microbiology

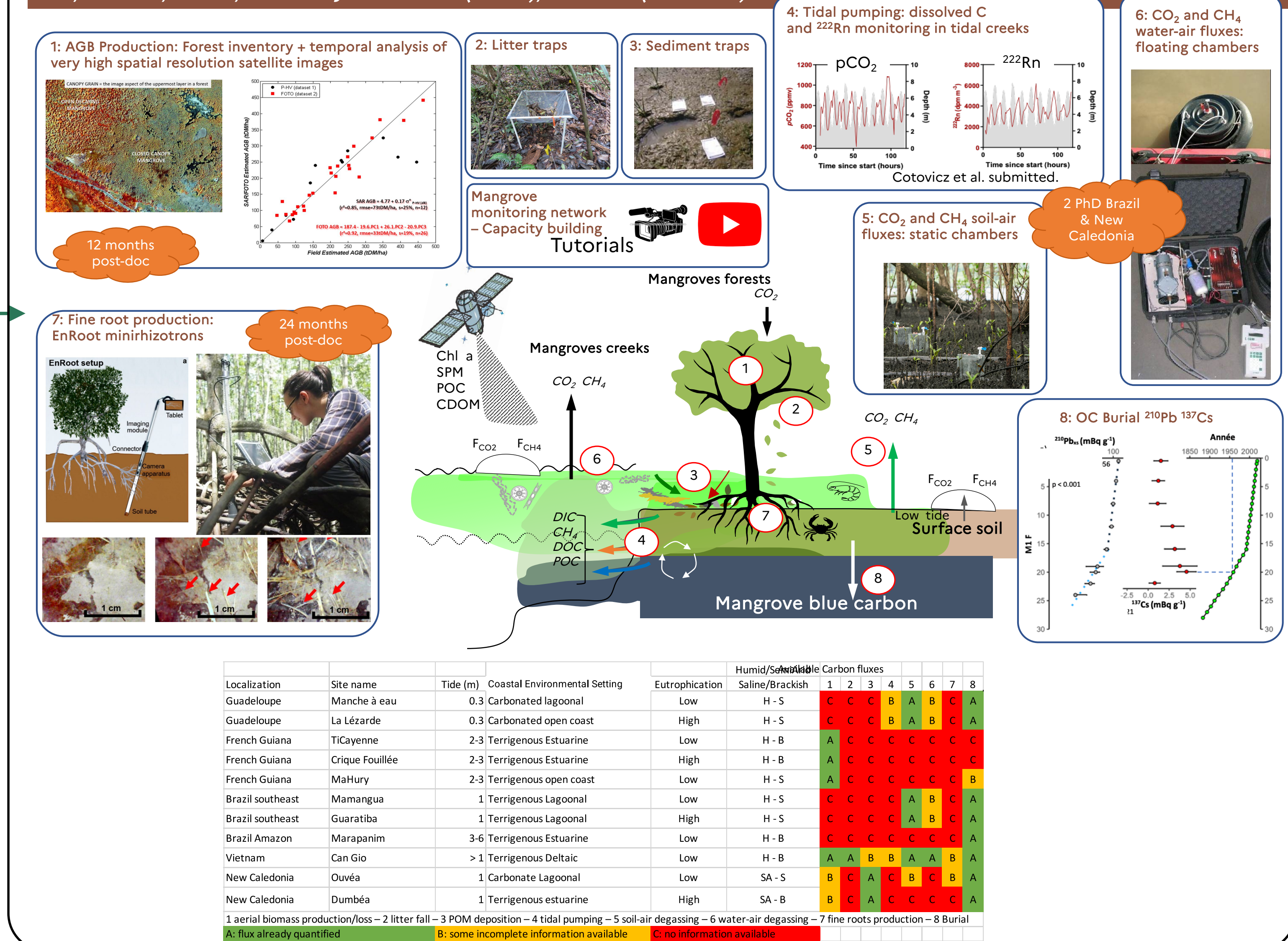
Two contrasted estuarine complexes with some data already available

- Vietnam : Saigon tidal estuary (highly eutrophic) and Mekong delta (moderately eutrophic)
- Brazil: 5 Lagoons and semi-enclosed bays and Paraíba do Sul delta with various degrees of eutrophication

10 mangrove sites covering all the geomorphological spectra with various degrees of eutrophication



WP2: Flux components of mangrove carbon budgets – Marie Arnaud iEES, ISEA, AMAP, IGE, BOREA, EPOC, UFF UERJ and MPEG (Brazil), HCMUT (Vietnam)



WP4: Experimental study of priming effects on mangrove soil carbon

Tarik Meziane BOREA, iEES, LPG

