

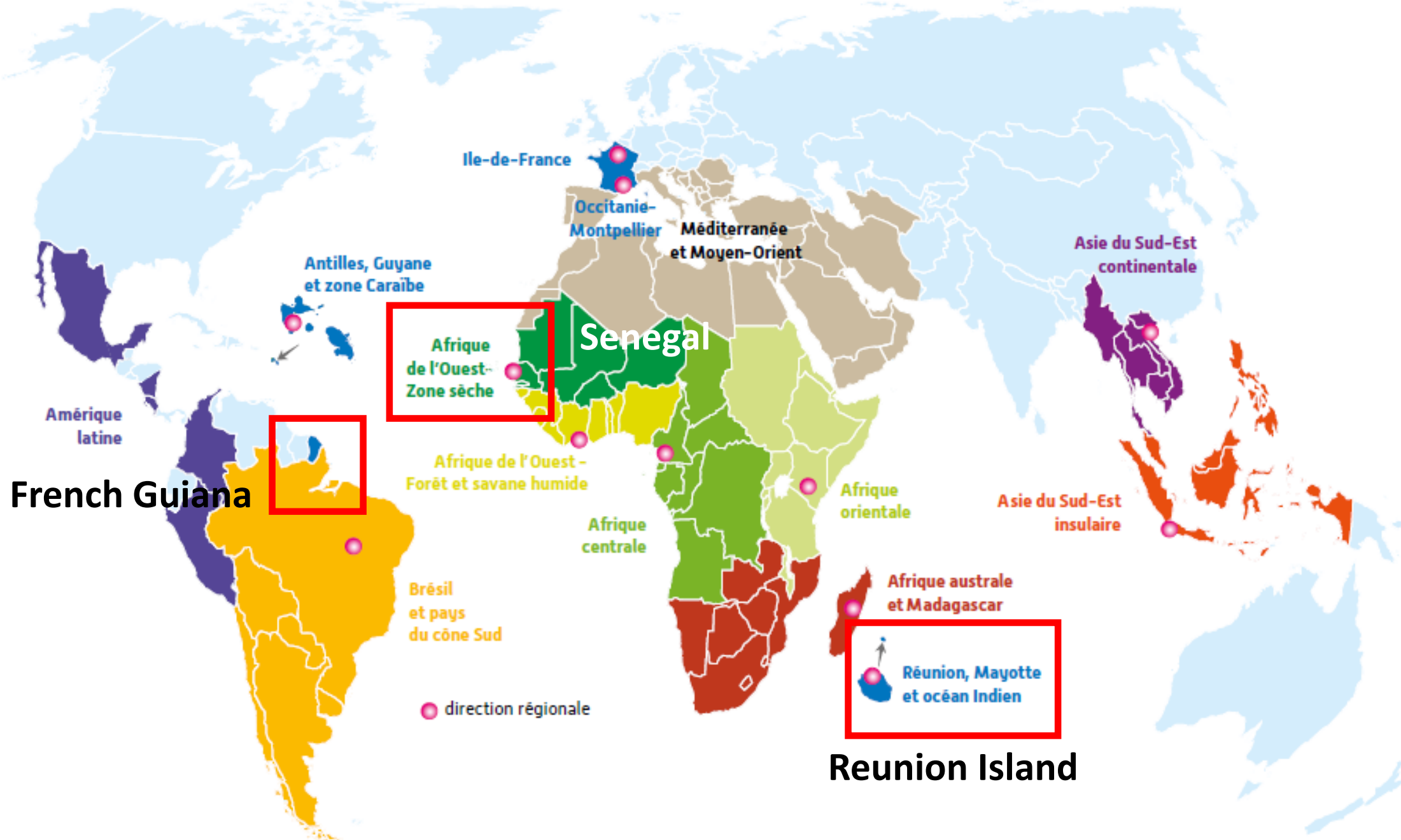


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LA RECHERCHE AGRONOMIQUE
POUR LE DÉVELOPPEMENT

**A glimpse at some GHG assessment experiments
in French Overseas regions
and in partnerships in the Tropics**

J. Demenois, V. Blanfort



Livestock grazing system and deforestation in humid tropics (Amazonia French Guiana / Brazil)

French Guiana

Eddy covariance flux measurements

- 2 flux towers on pastures
 - 1 flux tower in native forest of origin
- annual net C storage



Since 2003 and 2010

Chronosequence

Dynamics of soil C stock forest vs pasture (0-40 years)

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- GHG emissions
- Soil quality
- Sugar cane quality
- Water quality

Started in 2014

SORE-PRO

Experiments for assessing the impact of residual organic matter on sugar cane



June 2018

2017: installing a highly instrumented collaborative observatory for the monitoring of energy flows, C, H₂O & nutrients in a parkland of Western Africa + interactions with socio-economic practices and constraints

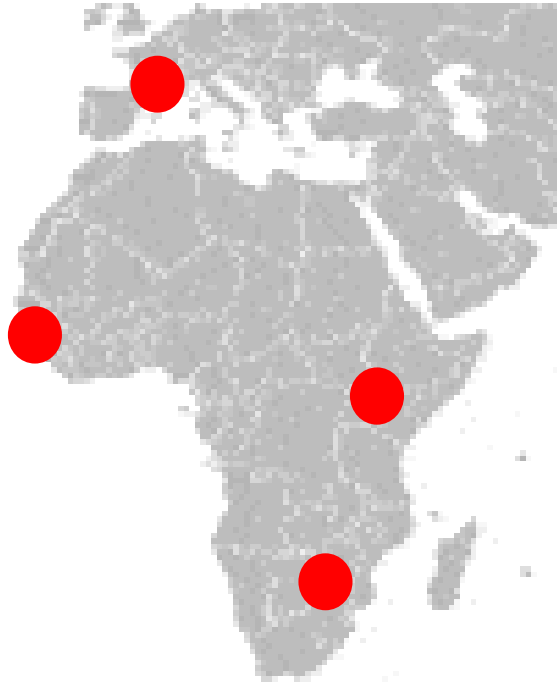
- Agro-sylvo-pastoralism: *Faidherbia albida* + millet, sorghum, cowpea, groundnut + livestock
- Water and salt stress
- Conservation of soil fertility

Attractiveness of *Faidherbia albida*:

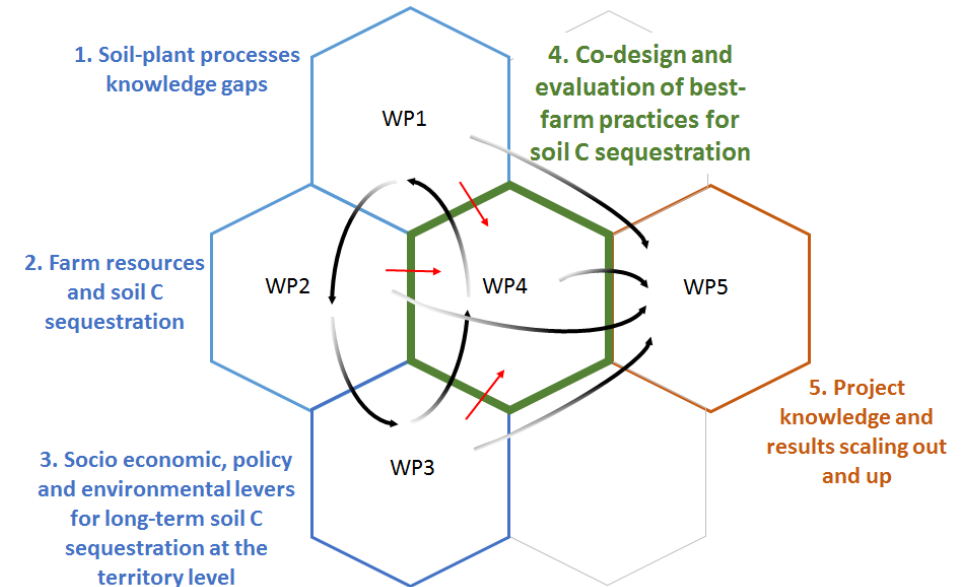
- > 30 yrs dynamic monitoring in this park
- Reverse Phenology
- N Fixing
- Phreatophytic (hydraulic redistributions and salt?)
- Forage for animals
- Microclimatic effect
- Interaction with termites?



Agricultural intensification and soil carbon sequestration in tropical and temperate farming systems (DSCaTT)



- Long term trials
- Interdisciplinary projects
- 1.6 M€
- 2019-2021



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Thank you for your attention !

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