

The background of the entire image is a close-up photograph of several ants. Some are reddish-brown and are clustered around a piece of bright green leaf. Others are black and are scattered across dark, rich soil. The lighting is natural, highlighting the textures of the ants' bodies, the leaf, and the soil.

PUR LAB

SOIL MACRO-BIODIVERSITY
IN TROPICAL AREA

CONTEXT

SOIL MACRO-BIODIVERSITY

- Major soil quality indicator
- Provider of ecosystem services: soil formation, decomposition and nutrient cycling, carbon and nitrogen fixation and sequestration, infiltration, purification and storage of water

OUR PARTNERS

- Universidad Nacional de Agricultura, Honduras (UNA)



STUDIED SPECIES



Name

Scolopendra sp

Function

Predation, regulation of soil food web and auxiliary pests system



Phyllophaga sp

Predation and organic matter decomposition



Lumbricus terrestris

Soil structure and aeration, organic matter decomposition

PROTOCOL

OBJECTIVE

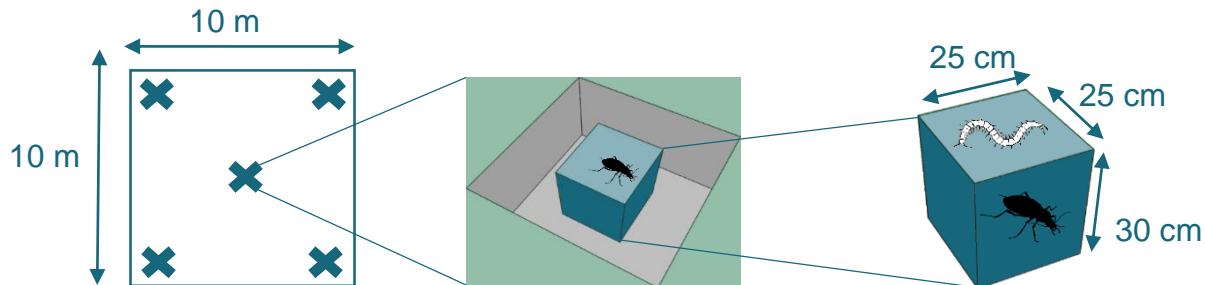
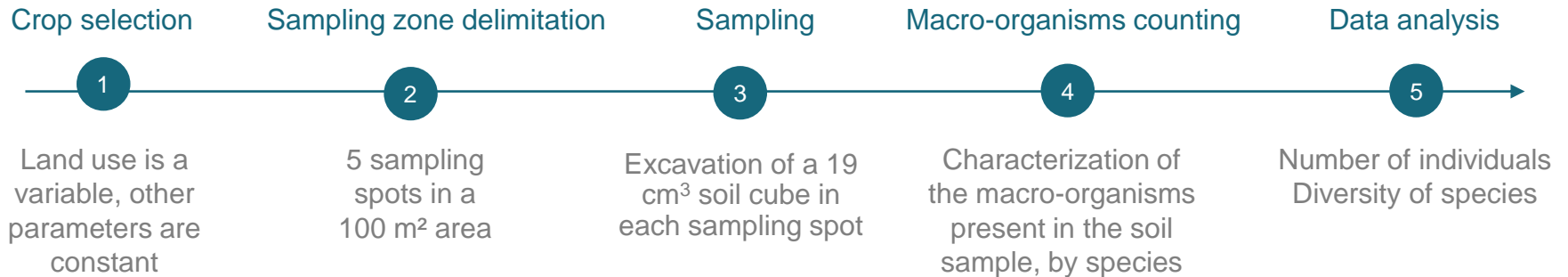
- To assess the impact of land use on macro-organisms biodiversity and quantity

TREATMENTS AND REPETITIONS

- 4 types of land use: full sun, agroforestry, reforested area, secondary forest
- 6 plots per land use, 5 samplings per plots

METHOD: TROPICAL SOIL BIOLOGY and FERTILITY

- An ISO normalized method (ISO 23611-5:2011)



RESULTS - APROSACAO, HONDURAS

Influence of land use on soil macro-biodiversity

CONTEXT

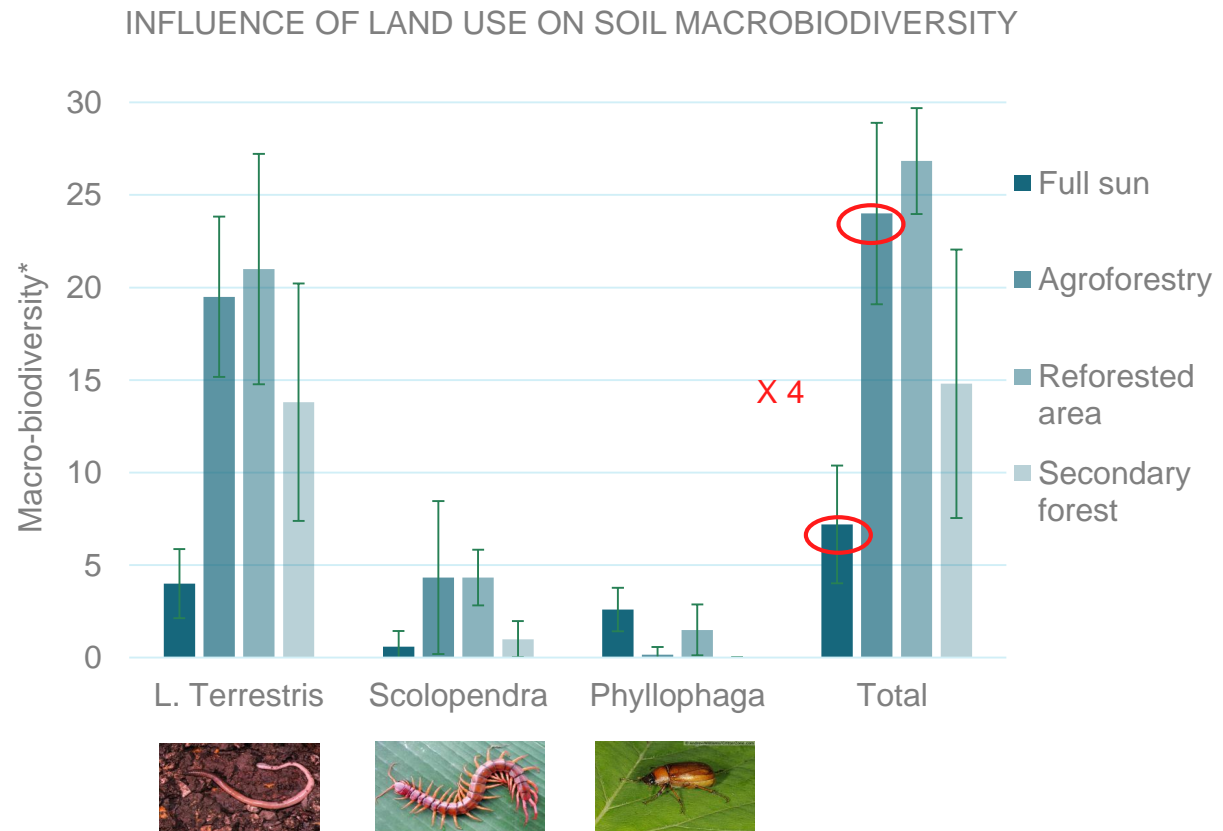
- Type of soil: Inceptisol, Alfisol (USDA classification)
- Climate: subtropical humid

FIRST RESULTS

- Agroforestry and reforested systems contains about **4 times more macro-organisms** than full sun systems

NEXT STEPS

- Doing more repetitions to accurate statistical analysis



*Average number of individuals per 0,19m3 sample over various measurements