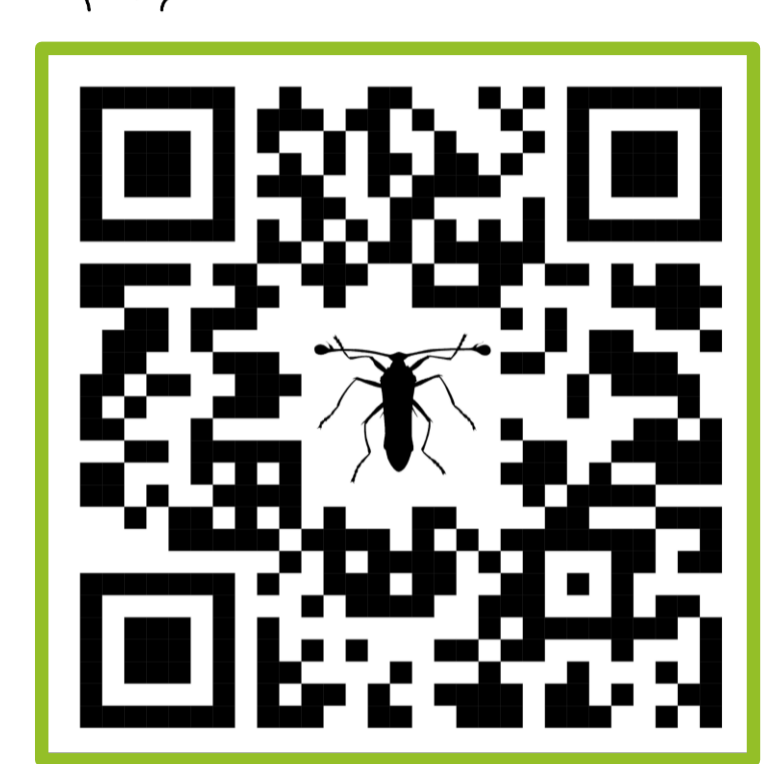


Top pests and diseases that affect mangrove rice productivity in Guinea Bissau: a morphological and molecular approach

Sofia Conde ¹, Filipa Monteiro ^{2,3}, Sónia Ferreira ^{4,5}, Marina Temudo ¹

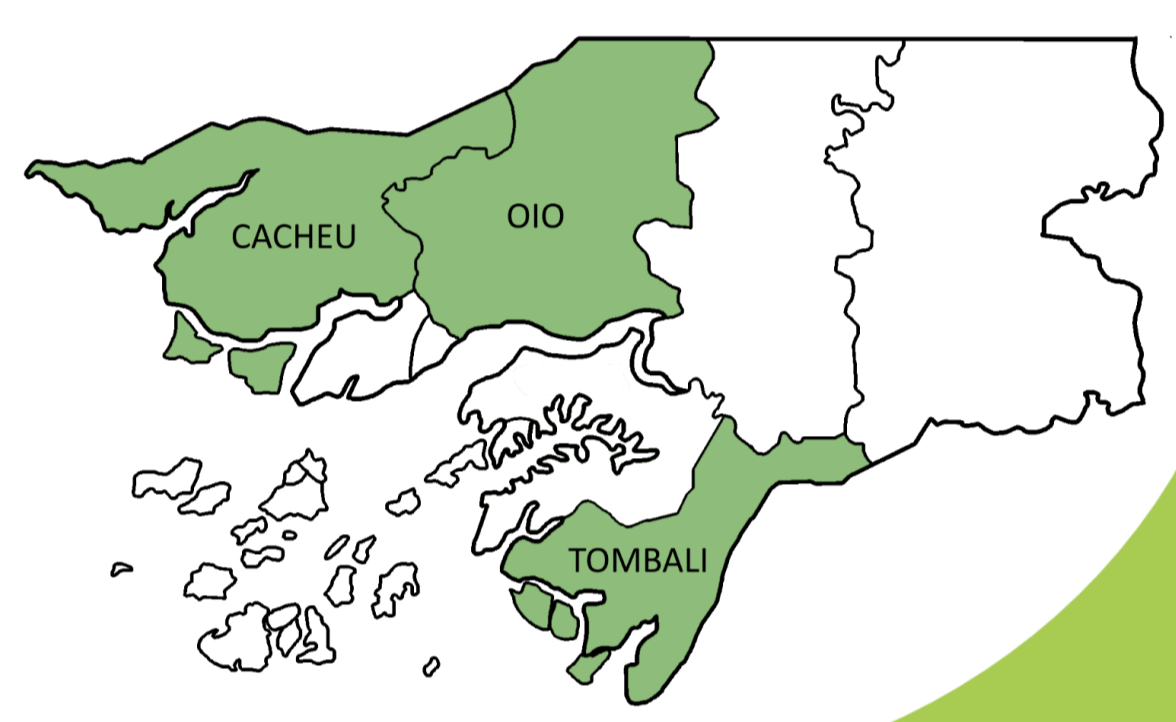
- ¹ CEF, Centro de Estudos Florestais, Instituto Superior de Agronomia, Universidade de Lisboa, 1349-017 Lisboa, Portugal;
- ² LEAF, Linking Landscape, Environment, Agriculture and Food, Instituto Superior de Agronomia, Universidade de Lisboa, 1349-017 Lisboa, Portugal;
- ³ Ce3C, Centre for Ecology, Evolution and Environmental Changes, Faculdade de Ciências, Universidade de Lisboa, 1749-017 Lisboa, Portugal;
- ⁴ CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, InBIO Laboratório Associado, Campus de Vairão, Universidade do Porto, 4485-661 Vairão, Portugal;
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AIM

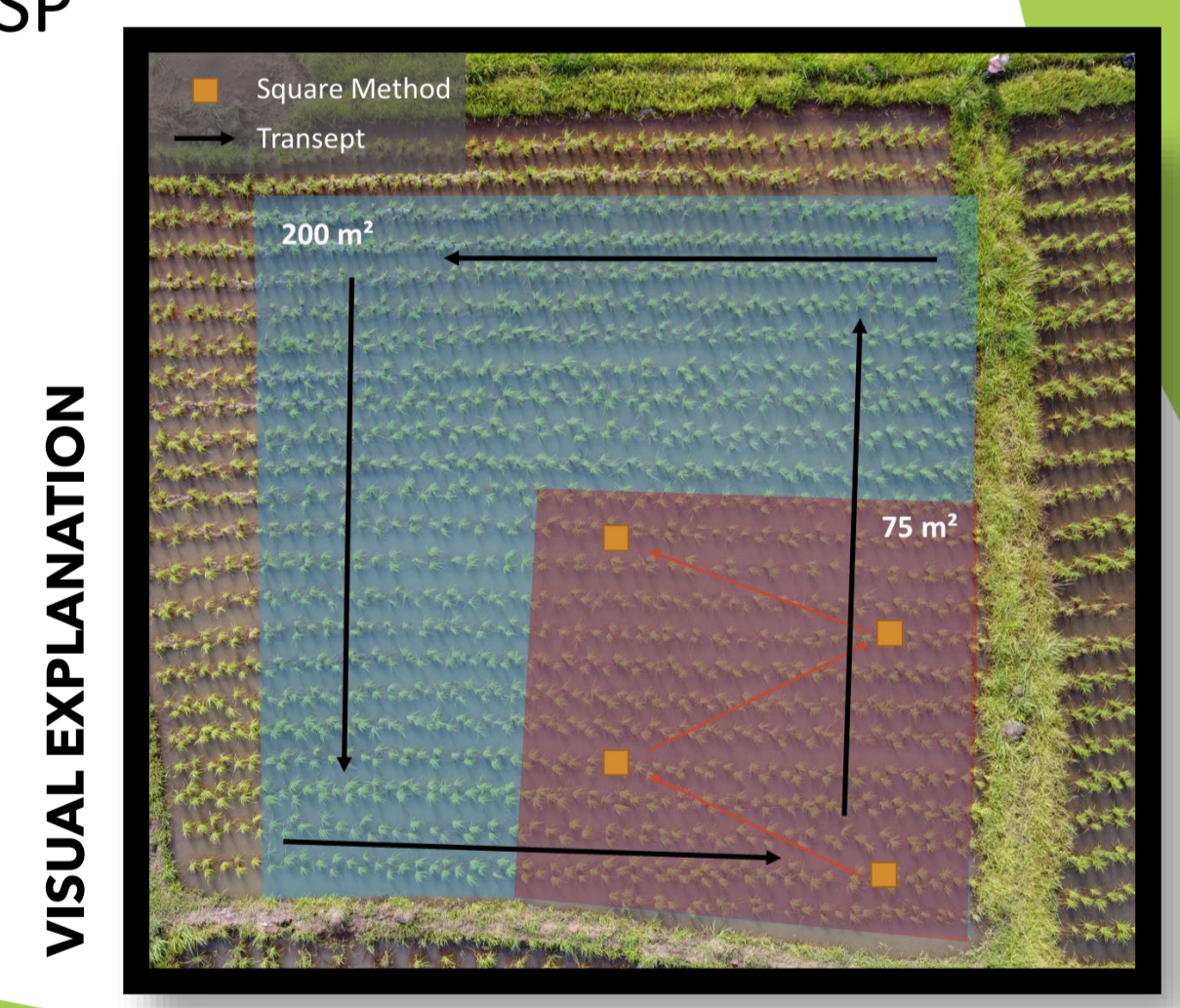
Identify and characterize the main pests and diseases that affect the production of mangrove rice fields using morphological and molecular approaches (DNA barcoding) in different rice fields of the 3 study regions.



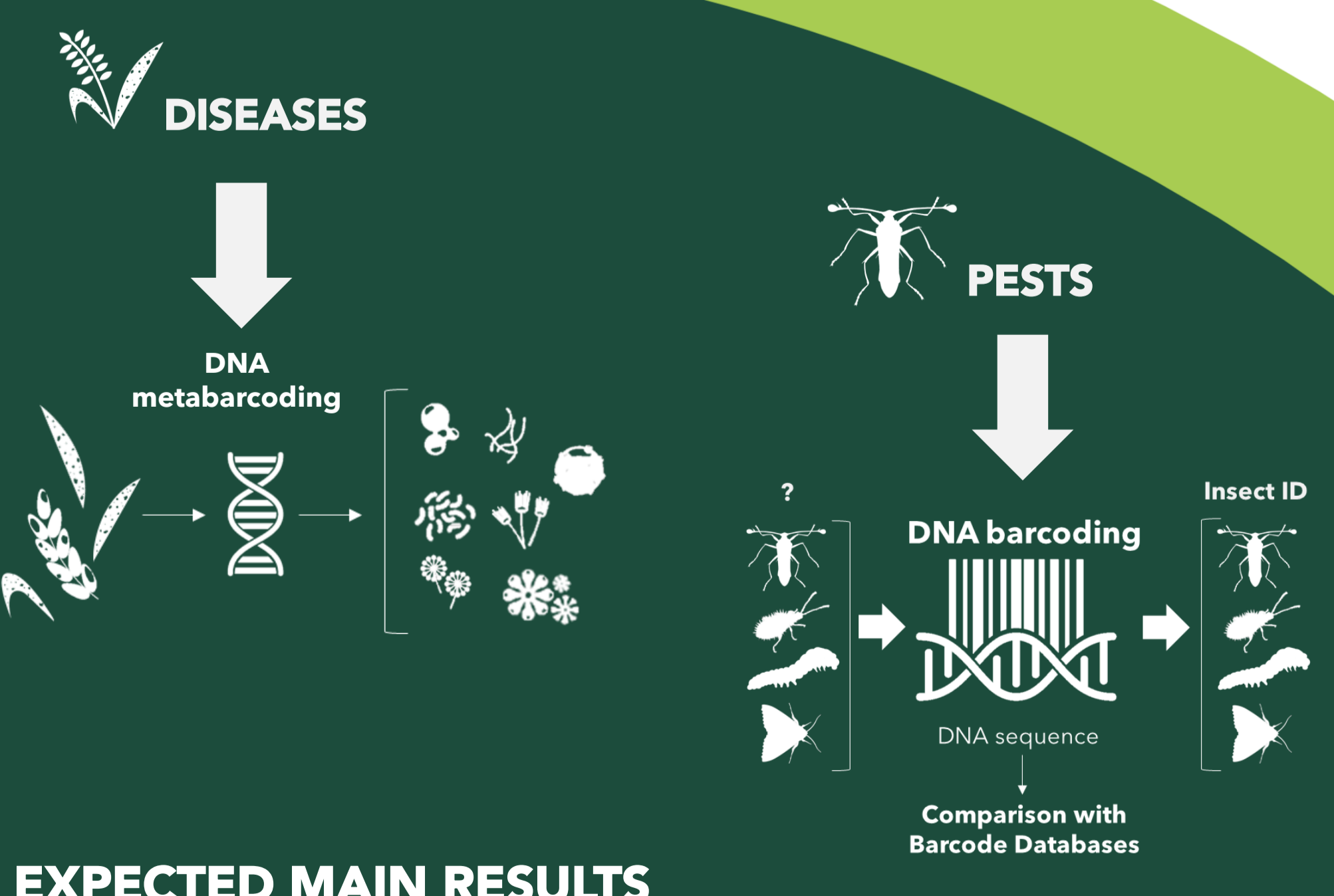
SAMPLING EFFORT

Number of Sampling Points (SP) calculated according to the area of each rice field in the different villages.

SQUARE METHOD (SM): 10% of the total area
TRANSEPTS (T): 27% of the total area
Area of SP: 75 m² (SM); 200 m² (T)
Minimum of SP: 3
Distribution of SP throughout the rice field: ZigZag
Number of replicas: 4/ SP



FUTURE DEVELOPMENT



EXPECTED MAIN RESULTS

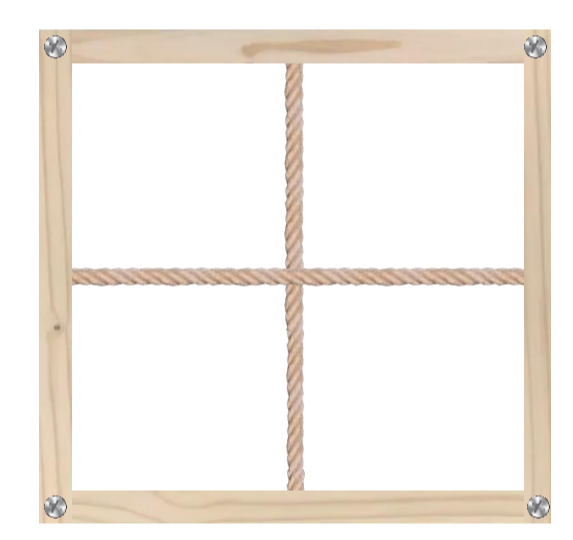
- Determination of the distribution patterns between regions and phases of the rice cycle (occurrence maps; incidence and severity levels / levels of damage)
- Identification of the DISEASES / PESTS present in the studied mangrove rice fields
- Characterization of the most important DISEASES / PESTS that might affect rice productivity

METHODOLOGY

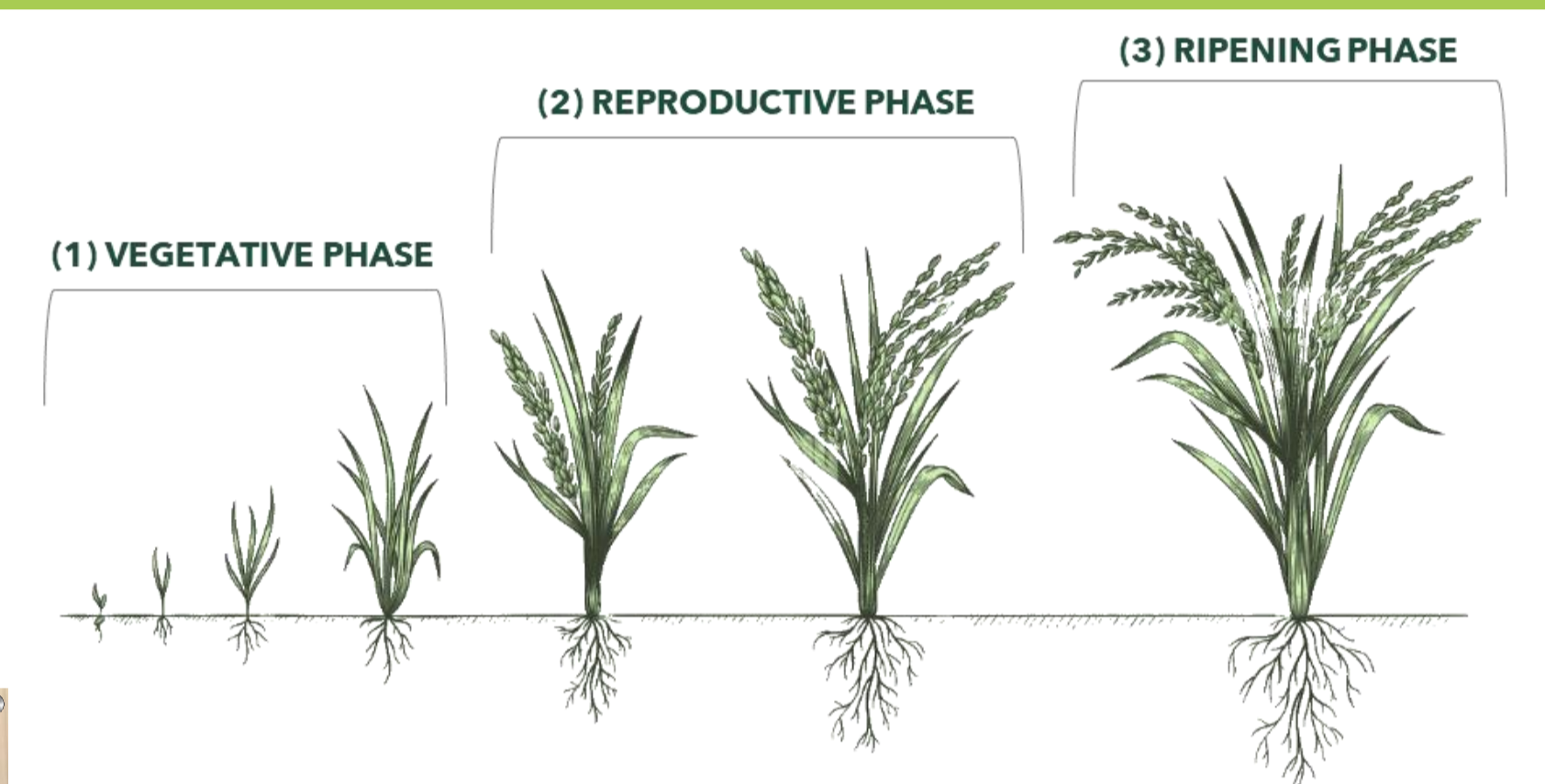
- 3 Regions | 3 Villages
- 3 Prospection Phases
- 2 Sampling Methods

SQUARE METHOD | Pests and Diseases sampling

- GENERAL**
- GPS, Phen. stage, N. hills, H₂O, photo
- PESTS**
- Insects with poor escape ability (stem borers; defoliating caterpillars; other larvae)
- Record and collection of present pests
 - Record of damage caused by pests and respective level of damage (+ / ++ / +++)
- DISEASES***
- Record, photo and collection of tissues with disease symptoms
 - Incidence and severity



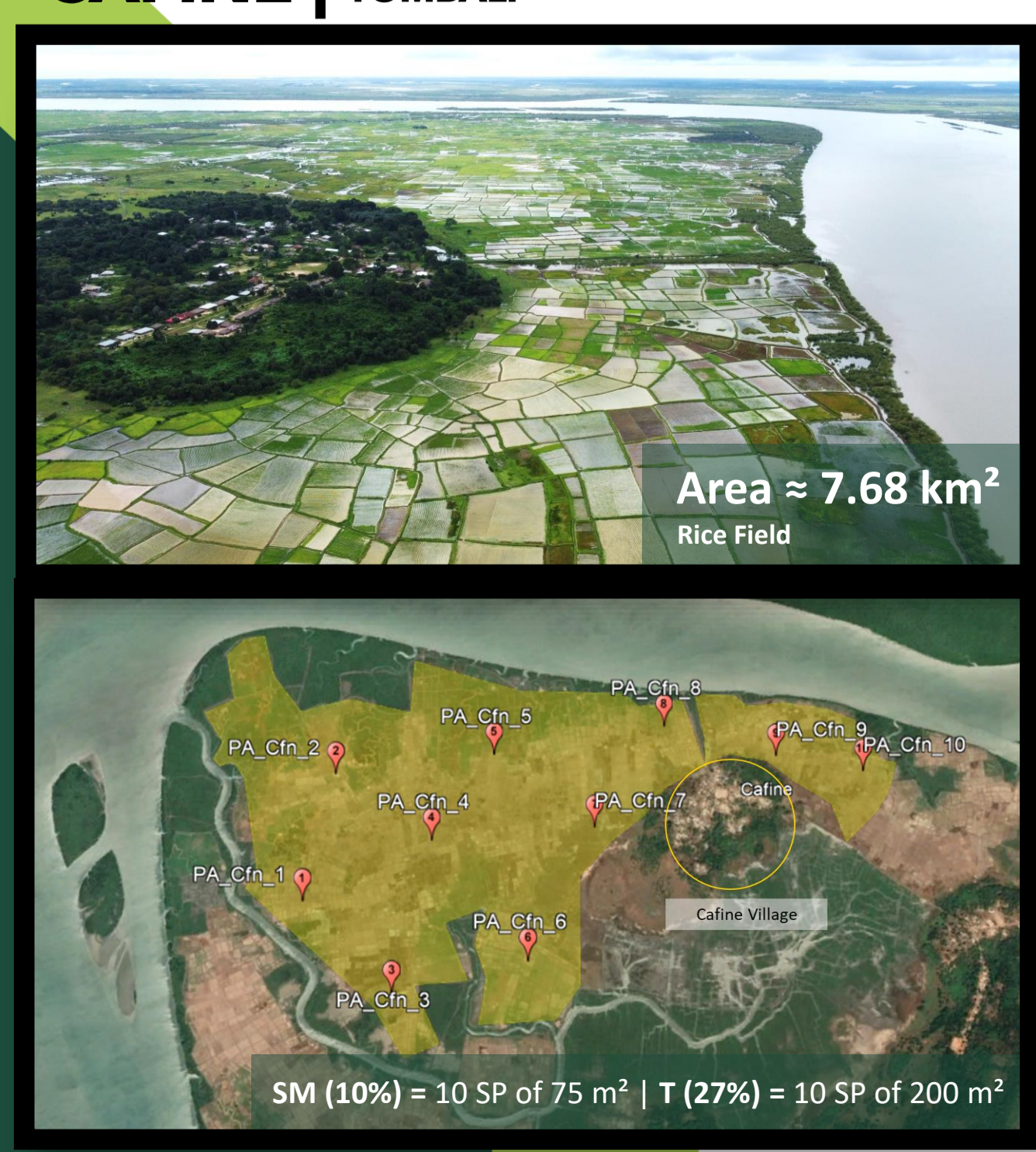
TRANSEPTS | Pests sampling



- PESTS**
- Insects with the ability to escape: winged
- Record and collection of the pests



CAFINE | TOMBALI



MALAFU | OIO



ELALAB | CACHEU

