

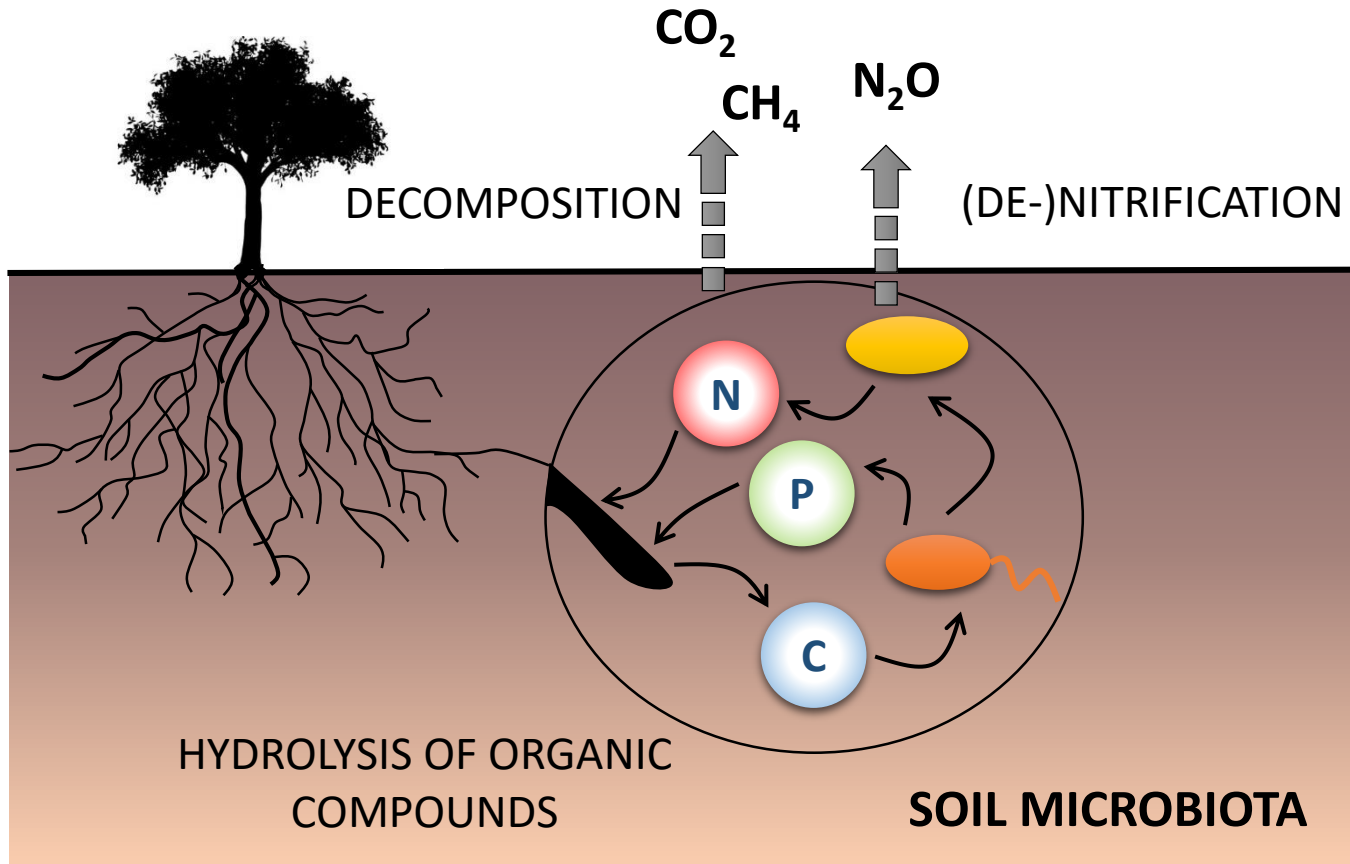


SPANISH INSTITUTE FOR AGRICULTURAL RESEARCH
DEPARTMENT OF ENVIRONMENT AND AGRONOMY

marta.goberna@inia.es

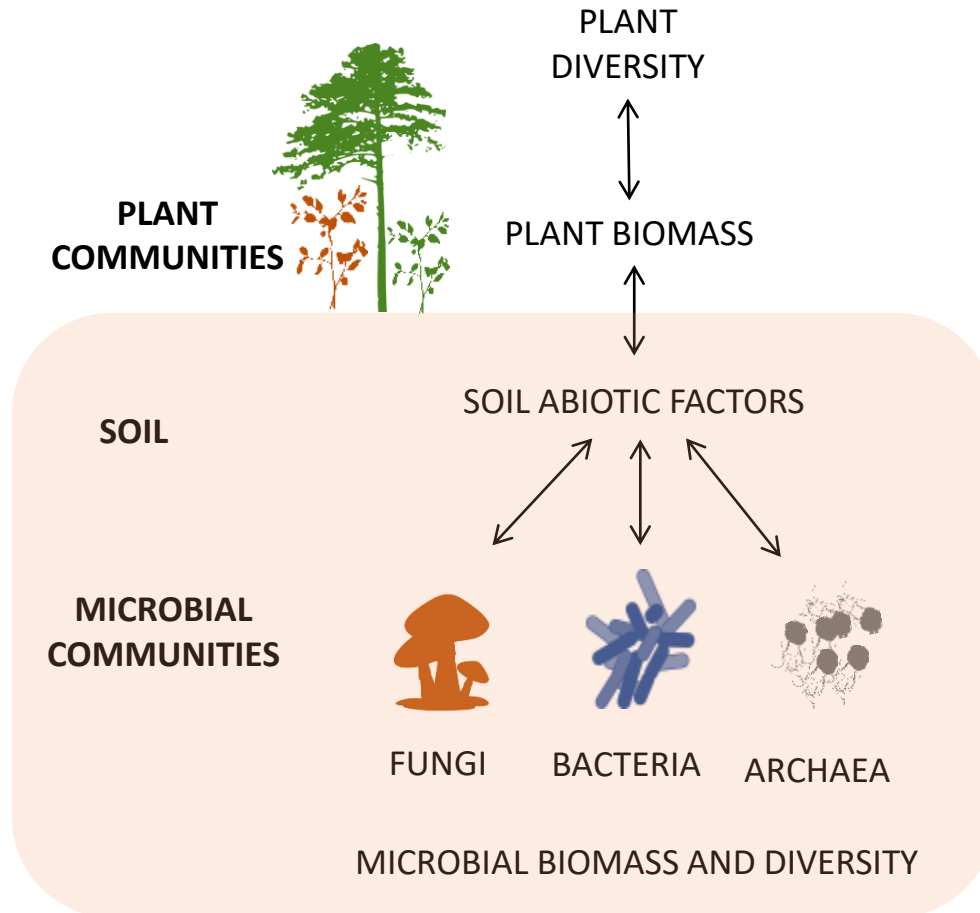


PROKARYOTES DELIVER ESSENTIAL ECOSYSTEM FUNCTIONS



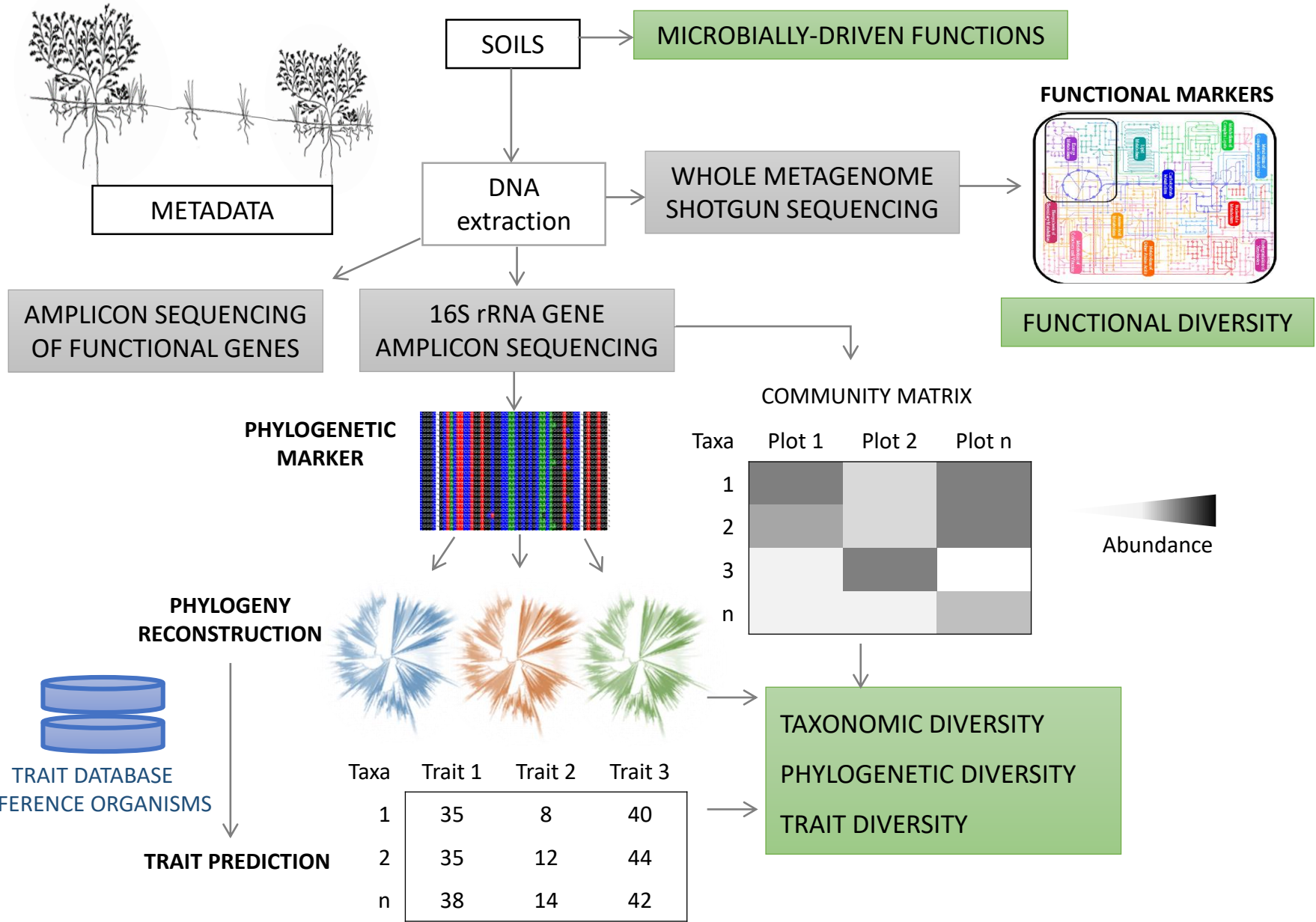


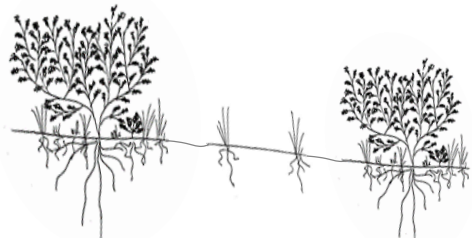
- MICROBIAL COMMUNITY ASSEMBLY
- MICROBIAL DIVERSITY - ECOSYSTEM FUNCTIONS





COMMON WORKFLOW





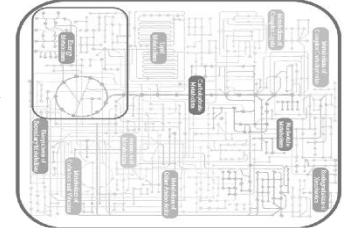
METADATA

SOILS

DNA extraction

MG-RAST
metagenomics analysis server

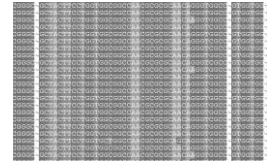
WHOLE METAGENOME SHOTGUN SEQUENCING



AMPLICON SEQUENCING OF FUNCTIONAL GENES

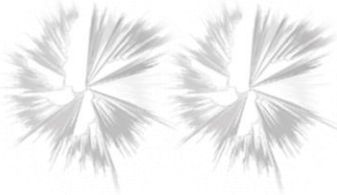
16S rRNA GENE AMPLICON SEQUENCING

FunGene
functional gene pipeline & repository



Quantitative Insights Into Microbial Ecology
qiime

CIPRES Cyberinfrastructure for Phylogenetic Research



TAXONOMIC DIVERSITY
PHYLOGENETIC DIVERSITY
TRAIT DIVERSITY

Taxa	Trait 1	Trait 2	Trait 3
1	35	8	40
2	35	12	44
n	38	14	42





- DATA LINKED TO EXTENSIVE METADATA
- FLEXIBILITY TO IMPORT / EXPORT DATA AT DIFFERENT STEPS OF THE ANALYSIS
- ABILITY TO TRACK DATA PROVENANCE AND ANALYSIS
- SHARING DATA WITH NON-SPECIALISED USERS
- PHYLOGENETIC INFERENCE OF LARGER NUMBERS OF LONGER READS