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11h00 – 11h40

Salle 201, Bâtiment PS2, CIRAD-UMR AMAP,
Boulevard de la Lironde

Hierarchical constraints in water availability shapes the functional structure of lowland tropical forest tree communities at regional and landscape scales in New Caledonia

presented by

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ABSTRACT (950 words max)

We explored how variations in water availability related to regional precipitation and local topography jointly shape the functional composition of tree communities in tropical forests of New Caledonia. First, we examined trait covariation to identify functional trade-offs across species. Second, we analysed how the functional composition of local communities varied with precipitation and topography using trait-based statistics. We identified two main ecological trade-offs driving trait variation across tree species: one related to a wood economic spectrum, and the other related to a leaf economic spectrum. At low precipitation, hydric constraints driven by topography entail strong environmental filtering along the wood economic spectrum. As higher precipitation relaxes hydric constraints, species selection along the topographic gradient rather relies on resource-use strategies along the leaf economic spectrum.

KEY WORDS (5 max)

Tree community, Water availability, Environmental filtering, Trait spectra

Invited and animated by:

Gregoire BLANCHARD (Insitut Agronomique Caledonien)

Type:

Research results

Oral language:

français

Language of PPT:

english

