

3rd IMBALANCE-P Annual Meeting

1-3 February 2017

Meeting venue

VENUE: Amphitheatre DURAND

**University Pierre and Marie Curie, at the Jussieu Campus,
4, Place Jussieu, Paris, France**

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It has been one year since our second encounter in Vienna, during the second Imbalance-P meeting. Since then, a lot of work has been done and some other still needs to be carried out. It is, therefore, time for us to meet again in a comfortable city such as Paris. The format will be similar to last time. Researchers will present some of their work/results/projects within the Imbalance-P in short talks of about 15 minutes allowing participants to ask some questions. It is also planned to have time to allow researchers to discuss within the different working groups (experimental, synthesis, modelling...) and among them.

The main aims of the Paris meeting are to:

- Present and discuss past, present and future work within the Imbalance-P project
- Share and discuss the results obtained by the different groups.
- Develop synergies amongst groups and researchers by increasing collaboration through sharing thoughts, ideas, objectives, experiments, observations and data.
- Create a venue where co-authors of different manuscripts can get together to forward their writing and possibilities for such activities to be initiated.

Agenda

Day 1 - Wednesday 1st February 2017: Some participants may have to arrive late on Tuesday, but the meeting starts officially at 09:00 AM on Wednesday.

Day 1 - Wednesday 1st February	
09:00-09:10	Arrival and informal pre-meeting among participants.
09:10-09:40	Philippe Ciais: Welcome and setting the stage. Josep Peñuelas: Revisiting Imbalance-P, first results.
Series of concise presentations (15 min + 5 min for discussion) presenting the main results obtained in various studies in Imbalance-P and beyond and/or the main research plans.	
Session 1 Observations and experiments. Moderator: Ivan Janssens	
09:40-10:00	Ifigenia Urbina: Plant-soil stoichiometry in terrestrial ecosystems. Advances in the Ph.D. project.
10:00-10:20	Dolores Asensio: Interpreting microbial C, N and P acquisition through the activities of extracellular enzymes
10:20-10:40	Leandro Van Langenhove: Free Living Nitrogen Fixation in French Guyanese Tropical Forests
10:40-11:00	Lei Liu: Drought history and priming effect on soil microbial communities and greenhouse gases (CO ₂ and CH ₄) flux in a Mediterranean forest
11:00-11:30	Coffee Break
11:30-11:50	Catherine Preece: Impacts of drought and nutrient addition on plant-soil interactions of Mediterranean trees
11:50-12:10	Erik Verbruggen: The curious case of P in driving mycorrhizal community composition
12:10-12:30	Jenny Soong: Drivers of soil organic matter dynamics in French Guiana
12:30-14:00	Lunch
14:00-14:20	Arne Ven: The role of mycorrhizal fungi in plant carbon allocation under different nutrient availabilities
14:20-14:40	Verlinden Melanie: Photosynthesis and respiration in a nutrient addition mesocosm experiment with maize
14:40-15:00	Tanguy Daufresne: The signature of large herbivores on N:P ratios in temperate forests
15:00-15:20	Oriol Grau: Functional traits in Imbalance-P plots in French Guiana
15:20-15:40	Romà Ogaya: The effects of nutrients and drought on canopy energy partitioning in tropical and Mediterranean forests.
15:40-16:00	Coffee break
16:00-16:20	Albert Gargallo: Phosphorous in ecometabolomics
16:20-16:40	Elodie Courtois: Greenhouse gases fluxes in tropical forest
16:40-17:00	Lore Verryckt: Spatial variation of photosynthesis in tropical pristine forests: saplings vs. adults
17:00-18:30	Implementing synergies: meetings among people with common or complementing interests and plans. Checking common previous research and planning of future research

Day 2 - Thursday 2nd February

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Session 2 Synthesis. Moderator: Josep Peñuelas	
09:00-09:20	Friederike Lang: Indicators for P nutrition strategies of forest ecosystems.
09:20-09:40	Marie Spohn: Phosphorus cycling in beech forests
09:40-10:00	Kiona Ogle: Bayesian synthesis of ecosystem responses from long-term, multi-factor experiments
10:00-10:20	Jerome Chave: Species determinants of elemental composition in tropical forest litterfall
10:20-10:40	Klaus Kaiser: Dissolved phosphorus in forest soils
Session 1 Observations and experiments. Moderator: Josep Peñuelas	
10:40-11:00	Joan Llusià: Responses of terpene content, emission, and gas interchange of Mediterranean and tropical vegetation to changes in nutrient availability
11:00-11:30	Coffee break
11:30-11:50	Adrià Barbeta: Relative contribution of groundwater to plant water uptake estimated with water stable isotopes
11:50-12:10	Daijun Liu: The application of niche theory into nutrient manipulations: learning from the results of long-term climatic experiment.
12:10-12:30	Guille Peguero: Effects of resource availability on litter-soil arthropod communities
12:30-14:00	Lunch time
14:00-14:20	Isabelle Bertrand: Eco-enzymatic stoichiometry of soil microbial biomass during litter decomposition along a land use gradient. Impact of litter quality
Session 2 Synthesis. Moderator: Josep Peñuelas	
14:20-14:40	Ana Bastos: The impact of land-abandonment during WWII on CO ₂ uptake in the Soviet Union
14:40-15:00	Matteo Campioli: Project LEAF-FALL: what makes leaves fall in autumn? A new process description for the timing of leaf senescence in temperate and boreal trees
Session 3 Earth System Models. Moderator: Philippe Ciais (Josep Peñuelas)	
15:00-15:20	Lester Kwiatkowski: Emergent constraints on projections of declining primary production in the tropical oceans
15:20-15:40	Oskar Franklin: The role of plant – soil feedbacks for nutrient cycling and C sequestration: hypotheses generated by an ecosystem model
15:40-16:00	Daniel Goll: ORCHIDEE-CNP: first applications
16:00-16:30	Chao Yue: Modeling gross land use change with ORCHIDEE model
16:30-16:50	Coffee break
16:50-17:10	Matthieu Guimberteau: Toward improved hydrology simulated by ORCHIDEE-MICT model in northern high-latitudes
17:10-17:30	Benjamin Stocker: Modelling soil nutrient effects on plant growth and allocation
17:30-18:30	Implementing synergies: meetings among people with common or complementing interests and plans. Checking common previous research and planning of future research
19:00-22:00	Cocktail Dinner Reception: La Bouteille D'or

Day 3 - Friday 3th February

Session 2 Synthesis. Moderator: Philippe Ciais	
09:00-09:20	Olga Margalef: Soil phosphatase activity responses to global change & soil mineralogy effects on P cycling and P availability
09:20-09:40	Xavier Domene: Database on phosphatases in agroecosystems: global patterns and driving forces
09:40-10:00	Marcos Fernández-Martínez: Nutrient rich plants emit less isoprenoids + previous and future work for Imbalance-P
10:00-10:20	Chao Zhang: Optical indices detecting photochemical efficiency under experimental drought and nutrient addition for Mediterranean trees
10:20-10:40	Coffee break
Session 2 Synthesis. Moderator: Michael Obersteiner	
10:40-11:00	Jordi Sardans: Advances in data mining
11:00-11:20	Jofre Carnicer: Phenotypic biomarkers of climatic impacts on declining insect populations indicate a key role for decadal drought, microhabitat thermal buffering effects and host plant
Session 4. Integrated Assessment Models. Moderator: Michael Obersteiner	
11:20-11:40	Folberth Christian: P consumption and recycling potential in global cities
12:00-12:20	Nikolay Khabarov: Modeling international trade of phosphate rock
12:20-14:00	Lunch
14:00-14:20	Ratislav Skalsky: IIASA HyperCube: a GGCM-based tool to estimate crop yields responses along N and P intensification gradients
14:20-14:40	Fluvio di Fluvio: Cost accounting in agriculture and forest operations
14:40-15:10	Thomas Gasser: The OSCAR model: update to version 2.2 and first results
15:10-15:30	Stephan A. Pietsch: Imbalance, sudden shifts and non-linearity
15:30-15:50	Michael Obersteiner: The SDGs (sustainable development goals) and the C/N/P imbalance.
15:50-16:20	Coffee break
16:20-16:40	Closing Imbalance-P meeting Philippe Ciais, Ivan Janssens, Michael Obersteiner and Josep Peñuelas
16:40-18:00	Implementing synergies: meetings among people with common or complementing interests and plans. Checking common previous research and planning of future research

List of articles published within the Imbalance-P project

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