**2nd IMBALANCE-P Annual Meeting**

**24-26 February 2016**

**IIASA, Vienna, Austria**

It has been one year since our first encounter in Barcelona, during the first 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 confortable city such as Vienna, albeit we may miss the sun of Barcelona! The format will be similar as 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 Vienna meeting are to:

* Present and discuss past and present work carried out 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 and objectives.
* 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 0 - Tuesday 23th February 2016:** Some participants may have to arrive late on Tuesday, but the meeting starts officially at 09:00 AM on Wednesday. Names in bold are those who have indicated that they will attend

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| **Day 1 - Wednesday 24th February** | |
| 09:00-09:20 | Arrival and informal pre-meeting for those already present. |
| 09:20-09:40 | **Josep Peñuelas and Michael Obersteiner.** Welcome and setting the stage.  Revisiting Imbalance-P, first results. |
| Series of concise presentations (usually 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:** Stoichiometry of leaves, litter and soil through gradients of nutrient availability: where we are and what we plan to do |
| 10:00-10:20 | **Dolores Asensio:** Soil microbial biomass and enzyme activity in Tropical soils |
| 10:20-10:40 | **Leandro Van Langenhoven:** Free Living Nitrogen Fixation in tropical forests in French Guiana: first results and trends |
| 10:40-11:00 | **Lei Liu:** Impact of drought and nitrogen fertilization on soil microbial community in a Mediterranean forest |
| 11:00-11:30 | Coffee Break |
| 11:30-11:50 | **Jenny Soong:** Soil carbon stocks and soil organic matter formation along the Guyafor network |
| 11:50-12:10 | **Erik Verbruggen:** Inventory of soil fungal communities across the Guyafor network and Imbalance-P plots |
| 12:10-12:30 | **Lore Verryckt:** Spatial and vertical variation of photosynthetic parameters Vcmax and Jmax in tropical forests of French Guiana |
| 12:30-14:00 | Lunch |
| 14:00-14:20 | **Joan Llusià:** Responses of terpene contents and emissions of Mediterranean and tropical vegetation to nitrogen fertilization and the feedback with the phosphorus cycle |
| 14:20-14:40 | **Romà Ogaya and Iolanda Filella:** Preliminary results on tree reflectance and fluorescence at different canopy heights |
| 14:40-15:00 | **Albert Gargallo:** Metabolomics in the tropical forest |
| 15:00-15:20 | **Oriol Grau:** The role of nutrient limitation in shaping: 1) tropical forest structure and dynamics 2) the interaction between fungal and shrub communities in arctic and alpine ecosystems |
| 15:20-15:40 | **Guille Peguero:** Effects of resource availability on soil/litter invertebrate communities: where we are and next steps |
| 15:40-16:00 | Coffee break |
| 16:00-16:20 | **Jofre Carnicer**: N, P and butterflies |
| 16:20-16:40 | **Clément Stahl:** Full GHG balance in two tropical forests in French Guiana |
| 16:40-17:00 | **Elodie Courtois:** Effect of soil type on full soil GHG exchange in French Guiana |
| 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 |

All non-locals are staying at the same hotel, so informal networking activities are easy.

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| **Day 2 - Thursday 25th February** | |
| **Session 2.** Synthesis. Moderator: Josep Peñuelas | |
| 09:00-09:20 | **Stephan Hättenschwiler:** Litter decomposition and nutrient cycle |
| 09:20-09:40 | **Andreas Richter:** Microbial N and P processing (French Guayana) |
| 09:40-10:00 | **Olga Margalef:** Global patterns of phosphatase activity in natural soils |
| 10:00-10:20 | **Jordi Sardans:** The relationships of global change drivers on N and P and N:P ratios in Plant-soil system: preliminary results |
| 10:20-10:40 | **Marcos Fernández-Martínez:** On the role of nutrients and climate on forest fruit production & future work within Imbalance-P |
| 10:40-11:00 | **Matteo Campioli:** Easy and accurate global estimations of ecosystem biomass production: dream or reality? |
| 11:00-11:30 | Coffee break |
| 11:30-11:50 | **Rong Wang:** Global atmospheric budget of nitrogen and phosphorus over terrestrial and marine ecosystems from 1997 to 2013 |
| 11:50-12:10 | **Philippe Hinsinger:** Root traits determining P acquisition efficiency in maize: plant-soil interaction challenges for field-phenotyping and numerical modelling |
| 12:10-12:30 | **Oskar Franklin:** Carbon bonus of organic nitrogen enhances nitrogen use efficiency of plants |
| 12:30-14:00 | Lunch time |
| **Session 3.** Earth System Models. Moderator: Philippe Ciais | |
| 14:00-14:20 | **Albert Jornet:** ORCHIDEE code management for the IMBALANCE-P project: organization, achievements and next steps |
| 14:20-14:40 | **Matthieu Guimberteau:** Global-scale evaluation of the hydrology simulated by the model ORCHIDEE before the phase of phosphorus inclusion in the code |
| 14:40-15:00 | **Aurelie Violette:** Constraining the long-term inorganic Phosphorus cycle: weathering and occlusion processes modelled with P-WITCH on the 4,100 kyr Hawaii chronosequence |
| 15:00-15:20 | **Aurelie Violette:** Toward a global modelling of the minerals weathering: assessing the soils mineralogical composition around the globe at a half-degree scale |
| 15:20-15:40 | **Daniel Goll:** The P cycle in ORCHIDEE |
| 15:40-16:00 | **Ye:** Permafrost feedback on atmospheric CO2 based on coupling of IMOGEN and ORCHIDEE |
| 16:00-16:20 | **Ye:** A new conceptual soil microbial model based on microbial functional type (MFT) |
| 16:20-16:50 | Coffee break |
| 16:50-17:10 | **Yi Yin:** Modelling soil resistance for root P uptake in ORCHIDEE |
| 17:10-18:30 | **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 | **Informal dinner: Restaurant *Gallo Rosso*, Laxenburg –hosted by IIASA** |

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| **Day 3 - Friday 26th February** | |
| **Session 4.** Integrated Assessment Models. Moderator: Michael Obersteiner | |
| 09:00-09:20 | **Ligia B. Azevedo:** Multi-objective optimization of agricultural intensification in Mato Grosso, Brazil |
| 09:20-09:40 | **Nikolay Khabarov:** India and the P-fertilizer Price Peak in 2008 |
| 09:40-10:00 | **Juraj Balkovic:** Hypercubes of yields as a function of N and P |
| 10:00-10:20 | **Sophie Bundle:** Costing methods of agricultural intensification practices |
| 10:20-10:40 | **Michael Obersteiner:** Phosphorous and Globiom |
| 10:40-11:00 | Coffee break |
| 11:00-11:20 | **Brian Walsh:** New feed sources key to ambitious climate targets |
| 11:20-11:40 | **Closing Imbalance-P meeting** |
| 11:40-12:10 | **Implementing synergies:** meetings among people with common or complementing interests and plans. Checking common previous research and planning of future research |
| 12:10 | Lunch |

**Meeting venue, transport from/to the airport and hotel**

**VENUE: GVISHIANI ROOM**

**IIASA, SCHLOSSPLATZ 1, A-2361 LAXENBURG, AUSTRIA**

**Scientific contact: Michael Obersteiner, oberstei@iiasa.ac.at, +43-2236-807-460**

**Administrative Contact: Cynthia Festin, festin@iiasa.ac.at +43-2236-807-492**

**Website:** [**www.iiasa.ac.at**](http://www.iiasa.ac.at)

**Logistics Information:**

**HOTEL ACCOMMODATION**

Participants are required to book their own accommodation. Participants are encouraged to book as soon as possible to ensure room availability. A block booking at a discounted rate for all participants has been made at the Hotel Prinz Eugen. Cut-off date for reservation: 5th February 2016. After the cut-off date the room rate can only be offered based on availability.

**HOTEL PRINZ EUGEN**

*This hotel is south of Vienna but very convenient for the bus terminal to IIASA. To the center of Vienna it’s 10 minutes or 3 stops on the U1 (red line).*

Wiedner Gürtel 14, 1040 Vienna

Tel. +43 01 5051741

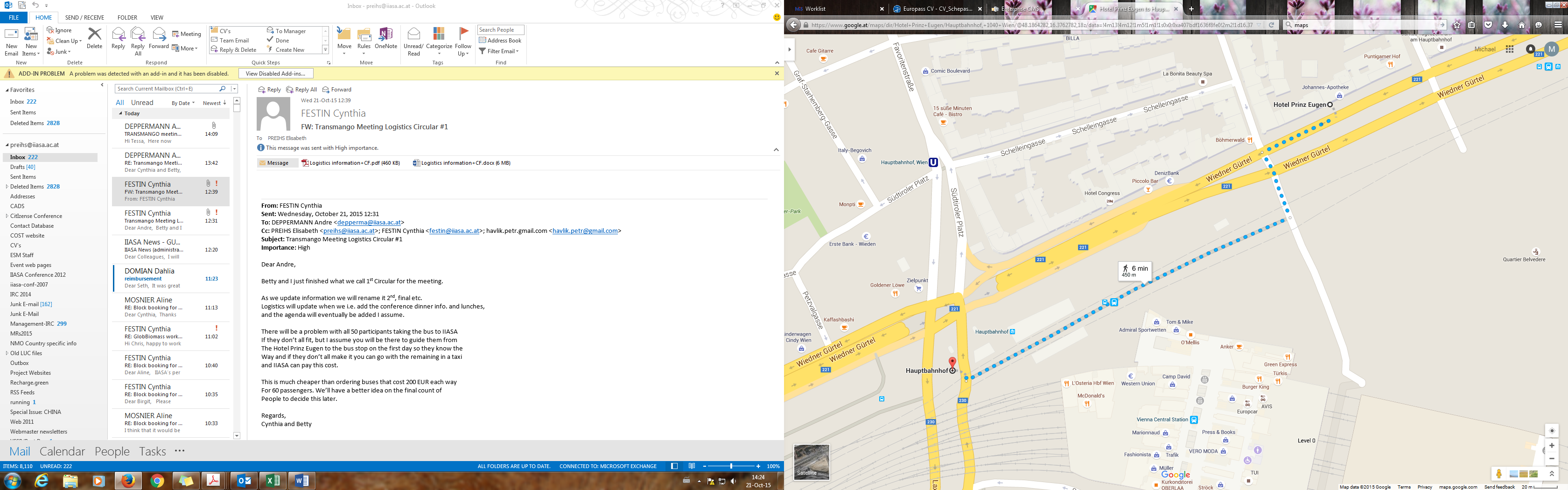
Website: www.private-hotels.at

Contact Birgit Pawel (prinzeugen@private-hotels.at)

Room rate per night (block booking): 63 single/ 73 double (includes internet and breakfast)

Use keyword **“IMBALANCEP”** when making reservation.

6 minute walking distance to the bus stop located directly under the bridge.

**TRANSPORTATION**

U1 Hauptbahnhof main entrance to walk to hotel

U1 Hauptbahnhof bus terminal to IIASA

**From the Vienna Airport to your hotel we recommend 3 options:**

http://www.cityairporttrain.com/App_Themes/CATPortal/images/Content/header/cat_logo.png There are signs to the CAT train in the airport arrivals hall, (<http://www.cityairporttrain.com/Infos/Fahrplan.aspx>) which takes 16 minutes to Wien Mitte Station and costs 17 EUR roundtrip, 11 one way.

1. The CAT will take you to the Wien Mitte station in Vienna from which you can either:

* Take a taxi that costs ca. 10 EUR to your hotel (to Prinz Eugen) – 5 minutes, or
* Take the U4 (green line) at Wien Mitte station changing at Karlsplatz to the U1 (red line) 2 stops and get off at Hauptbahnhof. The Hotel Prinz Eugen is 50 meters from the station. See map.
* Take the U3 (orange line) at the Wien Mitte two stops exiting at Stephansplatz and walk 5 minutes to hotel – see Hotel Wandl map.

1. There is also an **InterCity (IC) or railjet train from Vienna airport** (Flughafen Wien) with a direct connection to Vienna Central Station (Wien Hbf) which takes 18 min and departs every 30 minutes, there are signs showing the way to the trains in the arrivals hall. The price is 4.40 EUR one way, red ticket machines can be found on the platforms.

* Check the link to search for travel times from “Flughafen Wien” to “Wien Hbf”.

In the link note that the IC/Railjet trains depart every 30 mins at 7:03, 7:33, 8:03, 8:33….., last train, 23:03 and are the ones with 0 changes.

<http://fahrplan.oebb.at/bin/query.exe/en?ld=21&seqnr=2&ident=nu.014516178.1455029832&REQ0HafasScrollDir=1>

1. Or take a taxi from Vienna airport to your hotel which costs between 45-50 EUR. This takes about 25-30 minutes depending on traffic.

**Participants should take the bus from Vienna to IIASA in Laxenburg:**

**\*\* Every day of the workshop (Wednesday-Friday) we have specially organized a 2nd public bus #200 – description below – that will depart at 08:10 a.m. from the Hauptbahnhof. Someone from IIASA will meet you at the hotel lobby on Wednesday morning at 07:50 a.m. to guide you to the bus stop on the first day. You will not have to pay to ride this bus as it will be paid by IIASA. \*\***

General bus information:

At the *Bus Terminal (Stand N2)* at the Hauptbahnhof (from the U1/red line stop follow the signs to the bus terminal) take the [#200](http://www.iiasa.ac.at/web/home/about/whatisiiasa/location/Bus200_schedule_2016_Laxenburg_Wien.pdf) bus to *Laxenburg* (sometimes the bus destination may indicate Eisenstadt) see map.

The bus ticket costs €2.20 one way and departs roughly every 30 minutes (7:40, 8:10, 8:40, 9:10…). The trip takes 35 minutes. The buses will indicate either *Laxenburg* or *Eisenstadt* as their destination, but check with the driver whether the bus you are boarding is going to Laxenburg.

You should get off in [Laxenburg](http://webarchive.iiasa.ac.at/images/Laxenburg.png" \t "_self) at the stop called ***Franz-Josefs-Platz***. See map.

(When viewing the above linked map of Laxenburg, the bus stop is located in the upper left hand corner near the S*chloss Restaurant* (marked by a bus symbol). The main entrance of the IIASA Schloss is indicated on the center of the map and is about a 2-minute walk from the bus stop.)

* **INTERNET FACILITIES**

Wireless Internet connection is available throughout the venue.