



Third Meeting Focuses on Node Products

The Global TraPs team would like to welcome all participants, new and returning, to Zurich on August 29-30 for the third Global TraPs meeting,

Setting the Stage for P Research:

Identifying guiding questions, critical issues and case studies.

New participants, including the United Nations' Food and Agriculture Organization (FAO), United Nations Environment Programme (UNEP), Mosaic, Syngenta Foundation, etc. will bring unique perspectives into the Global TraPs conversation. The overall aim of the meeting is to finalize the preparatory phase of the five-year Global TraPs effort (2010–2015). Each Node Working Group can refine a guiding question, related critical aspects and generate a list of case studies.

The meeting partially overlaps with the [EAAE 2011 Congress: Change and Uncertainty – Challenges for Agriculture, Food and Natural Resources](#) (August 30–September 3) which takes place in Zurich. Zurich is a wonderful summer destination and if you plan to make a longer visit check the [Events in Zurich website](#).

Goals of the Third Meeting

The goals of the Third Global TraPs workshop require consideration of the critical aspects of sustainable phosphorus use along each segment of the supply chain through a transdisciplinary (Td) approach that promotes the sharing of information between all stakeholders.

The importance of sustainable P use is underestimated: P is an essential element for all living organisms and a critical element of food security. Thus, equal access and sustainable use of P is central to the Global TraPs strategy. Current discussions about an eventual scarcity of P has drawn the attention of those concerned about sustainable development. Based on recent information, it is clear that the current ways of using P must be critically analyzed. While the amount and life span of phosphate rock deposits that supply P may be disputed, one cannot dispute that natural resources are finite and that economically feasible efforts to reduce P losses and maximize recycling must be pursued. While other forms of energy may be substituted for fossil energy, no other element can substitute for P in its various roles and functions in the animal and plant kingdoms.



General view of the medieval part of Zurich with Lake Zurich and the Alps in the background.

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Many important questions have not been adequately answered. Prevailing questions, which will be dealt with in the Global TraPs project consider both the mid- and long-term perspectives and include: What are the predicted trends in minable rock phosphate from geological, technological and economic perspectives? What improvements in the P supply chain are possible and how and when should they be implemented? What processes in food production and industrial-technical use can become more efficient and which ones are important for reducing P losses in agriculture, industry and wastewater? What role may key actors along the supply chain (e.g. traders, mining companies, P-processing companies, feed and food companies, users, recyclers and key societal agents such as governmental agencies and research institutes), play in the adaptation process? What can be done regarding differential access to P? How can the small-resource farmer in developing countries gain access to the P fertilizers (organic or inorganic) required to improve soil fertility and increase crop productivity? Some of these questions have not received adequate attention or have been ignored. Other questions, such as those related to estimates of the life span of P availability, received incomplete or poor answers, due to use of inadequate models or lack of data. The goal of Global TraPs is to identify knowledge gaps and to show how these questions may be reliably answered.

The third Global TraPs meeting will define questions on critical aspects of sustainable P use for all nodes of the supply chain – Exploration and Mining, Processing, Use, Recycling, Trade and Finance. The questions will serve as a foundation for launching transdisciplinary case studies and research.

To help prepare a meaningful and efficient set of questions, all participants will receive a project document prior to the meeting. This document will include a first draft description of what issues are included in the nodes and an initial list of questions which have been suggested by the project leaders and managers, the science and practice leaders as well as the transdisciplinary coordinators of all seven nodes. As mentioned, these questions will direct the work of Global TraPs.

What is the framework of engagement for the workshop? Transdisciplinarity means that all participants (science and practice representatives) cooperate on an equal footing and consider only scientifically sound information. Global TraPs generates added value by linking knowledge from science and key agents from society. At the project's current stage, participants will elaborate which aspects are primary and

should be investigated and which ones are considered to be of secondary importance. This will be done in seven node workshops on Monday, August 29th. The most important questions will be presented and discussed in the Tuesday morning plenary. On Tuesday afternoon there will be a meeting of the Steering Board (supplemented by some members of the Advisory Board), a meeting of the Knowledge Integration Unit (whose core are the Td-coordinators), and Workshops on selected methodological, theoretical or practical questions (topics to be announced soon).

To implement a successful project, we need your commitment to the goal of creating a sustainable phosphorus management outcome. The Global Traps workshops are designed to stimulate an open exchange of ideas from all invited participants without fear of being misquoted or intimidated. To ensure a constructive and productive discussion, we will follow the basic rules of transdisciplinary processes, as outlined in various Global TraPs documents. This means that leaders and participants work together to make sure that collaboration and research produce information that is evidence-based and non-political. This is necessary for an efficient use of knowledge, an open, subject-oriented discourse, an efficient research program and development of robust ideas for sustainable P management. We look forward to being with you in Zurich on August 29-30.

Recent P Events

- During the first week of July, 33 European researchers attended the Designing Phosphorus Cycle at the Country Scale. Presentations of material flow analyses (MFAs) from Austria, France, Great Britain, Switzerland and The Netherlands were at different stages of refinement. Participants discussed MFA standardization, data gaps, different rules for sewage sludge re-use among countries, the need for modeling of P dynamics in soil, policy and funding related to P management in the EU, and opportunities for collaboration among researchers in various European countries.
- From August 17-20, Arizona State University's Phosphorus, Food, and Our Future Editorial Board will host a meeting with all lead chapter authors in Tempe, Arizona. Goals of the meeting are to: 1) resolve book content issues that our internal review process picks up; 2) work together to focus and coordinate the overall scope of the text; and 3) end the meeting with a working final draft.

Recent P Research from Global TraPs Members

New articles on P highlight the various research dimensions related to more sustainable P use and management. Help us track the latest P projects and research with which Global TraPs participants are involved: email information to Global TraPs newsletter coordinator [Rebecca Cors](#).

A number of articles written by Global TraPs participants recently appeared in *Chemosphere*. "The Phosphorus Cycle," edited by David A. Vaccari: Volume 84, Issue 6 (2011), pages 735-854.

- Dumas, M., Frossard, E., & Scholz, R. (2011). Modeling biogeochemical processes of phosphorus for global food supply. *Chemosphere* 84(6), 798-805. [doi:10.1016/j.chemosphere.2011.02.039](https://doi.org/10.1016/j.chemosphere.2011.02.039).
- Ekardt, F., Holzapfel, N., Ulrich, A. E., Schnug, E., & Haneklaus, S. (2011). Legal perspectives on regulating phosphorus fertilization. *Landbauforschung – vTI Agriculture and Forestry Research* 61(2), 83–92.
- Lamprecht, H., Lang, D. J., Binder, C. R., & Scholz, R. W. (2011). The Trade-Off between Phosphorus Recycling and Health Protection during the BSE Crisis in Switzerland: A "Disposal Dilemma". *GAIA*, 20(2), 112–121. » [PDF \(376 kb\)](#)
http://www.oekom.de/fileadmin/zeitschriften/gaia_leseproben/GAIA_2011_2_Lang.pdf

Global TraPs Team Update

The Global TraPs Team welcomes IFDC's Dr. Deborah T. Helms, who joins the team as Practice Manager. She replaces Dr. Marjatta Eilittä, who will remain with the team in an advisory capacity.

Reflecting on Terminology for "Science" Actors and "Practice" Actors

When referring to project participants and their roles, Global TraPs language will refer to participants in either a 'science' or a 'practice' role. While this science-practice terminology is commonly used in transdisciplinary processes, it has both limitations and strengths. Other terminology sometimes used during transdisciplinary projects is described in the box to the right. None of the term pairs is exact, and each has its disadvantages and advantages.

Reflection on the Terminology for the Two Actor Groups in Transdisciplinarity

A specific strength of transdisciplinarity is that it integrates knowledge from those who practice discipline-based science in the academic system and those who have practical knowledge about real world systems. Here, "science" represents the body of knowledge available in different scientific disciplines and in institutions established for research and the production of scientific knowledge. In contrast, "practice" denotes the professional organizations and the knowledge and actions produced by them, such as industry, business, agricultural organizations and non-governmental organizations (NGOs) in Global TraPs.

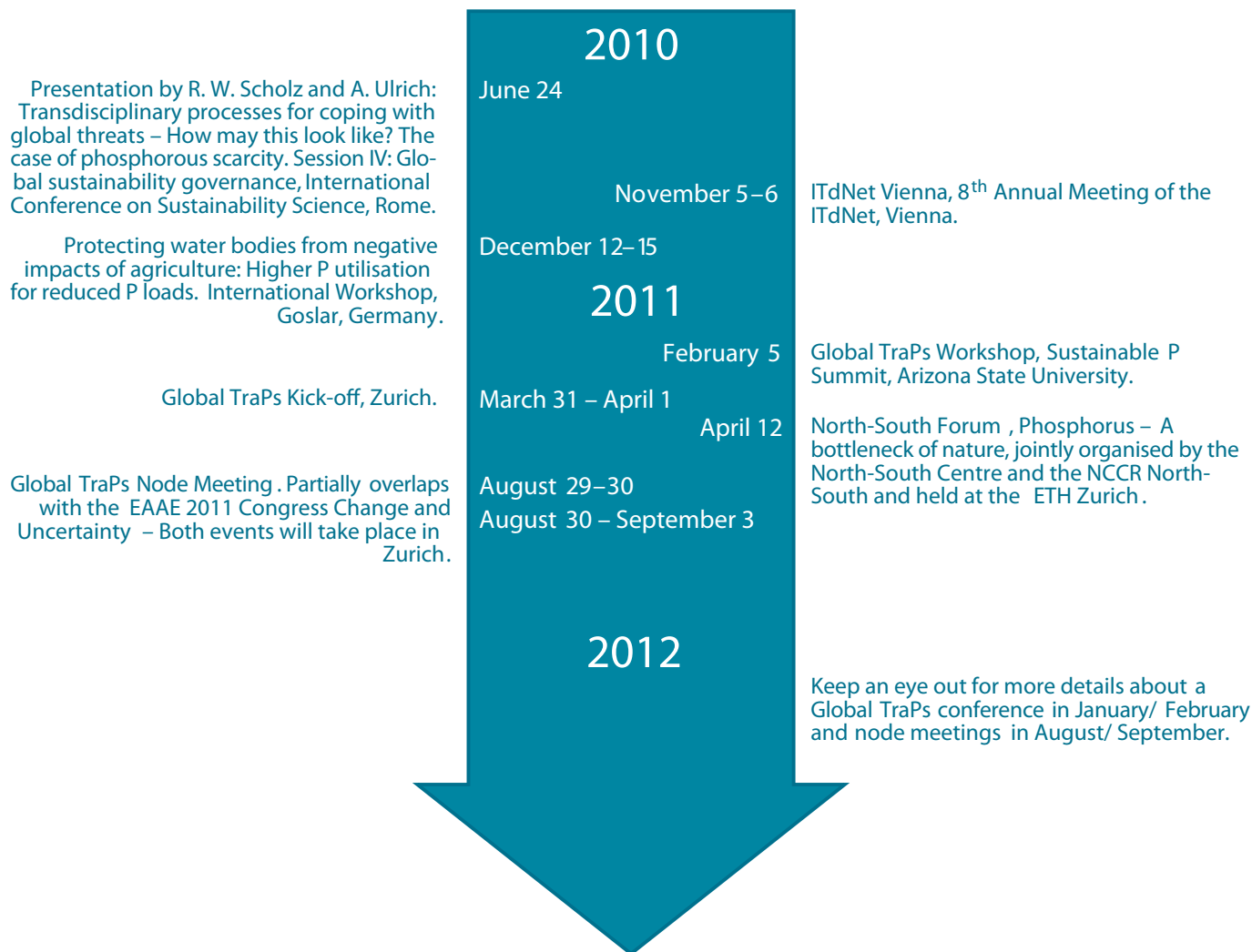
Science-practice: A strength of the "science-practice" terminology is that it delineates scientists as members of academic institutions whose primary reference system is the production of knowledge and theories, published in scientific publications. A limitation is that it may seem to imply that practice is not based on science. This is definitely not true as there is a great deal of research done by "practice" organizations such as industry and governmental agencies. Research outside academia is generally more focused on industrial products and is not conducted within the public domain, as is usually the case for knowledge originating in academic institutions.

Science-society: The "science-society" terminology distinguishes "science" from "(the rest of) society." Here science comprises the people and institutions whose primary task is research and the production of knowledge, which can be used by other groups of society. This terminology has the advantage that the term "society" clearly represents the wider society, rather than only stakeholder groups, and allows that applied scientists are also involved in practical activities. A disadvantage of this terminology is that it may give the misperception that the academic community is not part of society.

Theory-practice: The "theory-practice" terminology identifies the theorists, who are oriented towards ideas, concepts, models and theories, and the practitioners who are oriented towards putting those ideas into action. A disadvantage of this terminology is that it would seem to imply that the first group is only focused on theories – in contrast, much of research is done with "practice" in mind. Likewise, much effective real-world work is based on some theory.

Global TraPs – Timeline

Here is a summary of Global TraPs events to date. All events will be posted on the [Global TraPs website](#).



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For updates about the Global TraPs effort, visit our website: »» <http://www.uns.ethz.ch/gt>