



# EUROPEAN NUTRIENT EVENT

## Programme

Nutrient recycling R&D projects and technologies  
meeting including technology fair

18th – 20th October 2017

Parterre Rialto, Birsigstrasse 45, 4054 Basel / CH

# PROGRAMME

## European nutrient event

### DAY 1, 18<sup>TH</sup> OCTOBER

Conference language: German, English translation

Knowledge exchange for European stakeholders on phosphorus recycling legislation and implementation in Switzerland and Germany / Launch of Phosphorus Network Switzerland

Moderation: Daniel Frank, German Phosphorus-Platform DPP

**07:30 – 08:30 Set up of fair and poster exhibition**

#### Registration

**08:30 – 09:00 Registration and networking**

#### Opening

**09:00 – 09:15 Welcome in Basel**

State Councillor Christoph Brutschin, Head of the Department of Economic, Social and Environmental Affairs of the Canton of Basel-Stadt

Falko Schlottig, Director of the School of Life Science FHNW

#### State of the art and regulatory framework

**09:15 – 09:40 Phosphorus recycling in Switzerland: How to go on?**

Kaarina Schenk, Federal Environment Agency BAFU

**09:40 – 10:00 Regulatory requirements for Phosphorus recovery in Germany – consequences**

Hans-Walter Schneichel, Environment Ministry Rhineland-Palatinate MUEEF

**10:00 – 10:25 Sewage sludge disposal and Phosphorus recovery, Options in Switzerland and Europe**

Anders Nättorp, School of Life Sciences FHNW

**10:25 – 10:55 Coffee break and networking at technology fair / poster exhibition**

#### Sewage sludge disposal

**10:55 – 11:15 Concept for sewage sludge disposal in Northwestern Switzerland**

Alain Zaessinger, ProRheno / Peter Müller, ARA Rhein / Pascal Hubmann, AIB

**11:15 – 11:35 Sewage sludge drying as starting point for disposal and recovery, results from alkaline pyrolysis**

Christoph Egli, AVA Altenrhein

**11:35 – 12:00 Mono-incineration plants – a starting point for Phosphorus recovery**

Claudio Bianculli, Association for waste recycling Bazenheid, ZAB

**12:00 – 13:15 Lunch break at technology fair / poster exhibition**

#### Phosphorus recovery technologies

**13:15 – 13:35 Phosphorus mining from sewage sludge – the Phos4life process as option for the Swiss Phosphorus strategy**

Stefan Schlumberger, Center for sustainable management of recyclable waste and resources ZAR

**13:35 – 13:55 Ash leaching: The Remondis TetraPhos® process, results from pilot trials and perspectives**

Patrick Herr, Remondis Aqua

**13:55 – 14:15 Mephrec: sewage sludge disposal and Phosphorus recovery in one, results from pilot trials**

Burkard Hagspiel & Otto Schwarzmann, SUN Nürnberg

**14:15 – 14:35 The Kubota furnace and its potential for Phosphorus recovery**

Matthias Mann, Küttner GmbH & Co.KG

**14:35 – 14:55 Technology demonstrations in Phos4You – options for Switzerland?**

Marie-Edith Ploteau, Lippeverband

**14:55 – 15:25 Coffee break and networking**

**15:25 – 15:45 Plant availability of Phosphorus in recycling fertilizer**

Else Bünemann - König, Research institute for organic agriculture, FiBL

**15:45 – 15:55 Phosphorus Network Switzerland – information across sectors and networking for implementation**

Maurice Jutz, Anders Nättorp, Jan Stemann, School of Life Science, FHNW

#### Technology fair and poster exhibition

Phosphorus recovery technology suppliers stands. Posters of nutrient recycling R&D projects.

Run parallel to sessions on day 1 and 2

# PROGRAMME

## European nutrient event

### Wrap up

**15:55 – 16:35 Options and financing: Panel discussion**  
Representatives from Federal Environment Agency, Environment Ministry Rhineland-Palatinate, Hauert fertilizer industry, Association for waste recycling Bazenheid and VSA und AVA Altenrhein

Moderated by Thomas Wintgens, School of Life Science, FHNW

**16:35 – 16:45 Summary and perspective**  
Ludwig Herrmann, European Sustainable Phosphorus Platform ESPP / Sébastien Meunier, BaselArea.swiss

**16:45 – 18:00 Get together**

**19:00 Networking dinner at Markthalle, Steinentorberg 20, Basel for participants of both Day 1 and Day 2 (at participant's own costs)**

## DAY 2, 19<sup>TH</sup> OCTOBER

Conference language: English

Networking of leading nutrient recycling projects across Europe (EU H2020, LIFE, INTERREG, national and other projects), with technology suppliers and users / Launch of Phos4You project.

Moderation: Christopher Thornton, European Sustainable Phosphorus Platform ESPP

**08:30 – 09:00 Registration and networking**

### State of the art of nutrient recycling R&D and perspectives for implementation

**09:00 – 09:40 Welcome and keynote: Reasons to engage in nutrient recovery for a public water board**  
Burkhard Teichgräber, Lippeverband, Lead Partner Phos4You

**Environmental challenges as drivers for innovation and prosperity**  
Eric Jakob, Ambassador, Swiss State Secretariat for Economic Affairs

**EU policies and challenges and this event's objectives and programme**  
Christopher Thornton, European Sustainable Phosphorus Platform

**09:40 – 10:10 EU Research and Development activities: HORIZON2020, LIFE, SME instrument**  
Stefania Rocca, Executive Agency for Small and Medium-Sized Enterprises, European Commission / Unit B2 H2020 Environment and Resources

**10:10 – 10:30 Nutrients Recycling under the EIP AGRI and Horizon2020**  
Gaëtan Dubois, Research & Innovation Unit – DG AGRI, European Commission

**Conclusions of the EIP AGRI – Focus Group on nutrient recycling**  
Erik Meers, Gent University

**10:30 – 11:00 Coffee break and networking at technology fair / poster exhibition**

### Current Research and development projects

**11:00 – 12:30 Leading nutrient recycling R&D Projects**  
Speed-Date presentations of current EU and nationally funded projects (H2020, LIFE, INTERREG, industry ...), see extra page A

**12:30 – 14:00 Lunch break at technology fair / poster exhibition**

### Thematic workshops on common challenges

Parallel discussion sessions co-led by Phos4You and projects such as BIOREFINE Cluster Europe, SYSTEMIC, INCOVER, SMART-Plant and organisations such as Flanders VCM.

**14:00 – 15:30 Workshop 1 – 5 see extra pages „A and B“**

**15:30 – 15:50 Coffee break**

**15:50 – 16:20 Industry operational assessment of manure processing and nutrient recycling technologies – widening the Newtrient process and suppliers catalogue to Europe?**  
via Skype: Steven Rowe, CEO Newtrient, USA (technology innovation company, members represent half of US dairy)

**16:20 – 17:30 Reporting of workshops and panel discussion: Future actions and R&D needs Panel:**

- Andrea Lanuzza, Operations Director, Gruppo CAP water utility Milan region
- Claire McCamphil, European Commission DG Research & Innovation, Unit I.2 Eco-Innovation
- Marja-Liisa Tapio-Biström, Finland Ministry of Agriculture and Forestry
- Silvia Lopez Palau, Suez / Cetaqua

# PROGRAMME & INFO

## European nutrient event

### DAY 3, 20<sup>TH</sup> OCTOBER

Conference language: English

Consequences for the Phos4You project.

**09:00 – 15:30 Internal Phos4You meeting (Steering Group and Working Groups)  
Closed meeting only for Phos4You partners and associated partners.**

#### Event location

Parterre Rialto, Birsigstrasse 45, 4054 Basel / CH

#### Registration

Please register bindingly on:  
[www.nweurope.eu/phos4you](http://www.nweurope.eu/phos4you)  
Places are limited. First registrations will be accepted first.

#### Conference fee

There are no fees for the conference. Cost for travel, hotel and dinner at day 1 (price subject to your choice) will have to be paid individually.

#### Poster exhibition

If you are interested in displaying a poster, please indicate in registration form.

#### Technology fair

Price for having a stand will be 1.500 EUR incl. VAT, if you are interested, please contact: [anders.naetorp@fhnw.ch](mailto:anders.naetorp@fhnw.ch)

#### Participants

**Day 1** Swiss, German and Austrian nutrient recovery stakeholders, Phos4You partners and associated partners, R&D stakeholders, P-recovery technology providers

**Day 2** Participants covering main EU and national R&D projects, selected representatives of user industries (water industry, fertilizer sector, farmers), EU and national project funders and innovation investment companies.

Also for Day 1 and 2: P-recovery technology suppliers (with stands), New / ongoing and recently completed R&D projects posters

**Day 3** Phos4You partners and associated partners

#### Hotel accomodation

Recommended rooms for individual booking are available at:

Hotel Victoria  
Centralbahnplatz 3–4  
4002 Basel

Stay at Basel  
Gempenstrasse 62  
4053 Basel

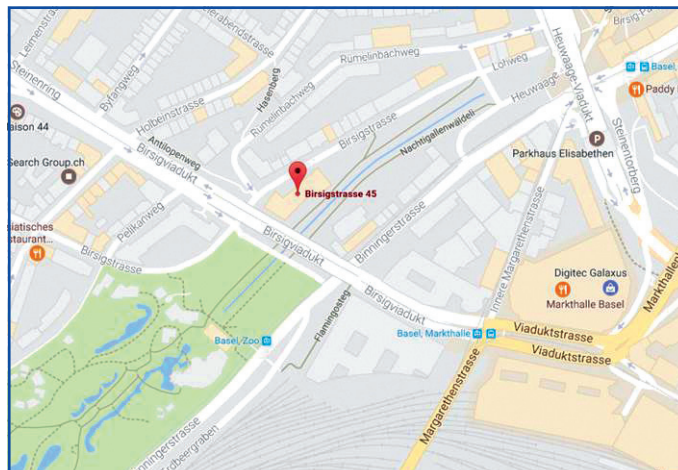
ibis Basel Bahnhof  
Margarethenstrasse 33-35  
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#### Contact

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The event is supported by the European Regional Development Fund in the framework of the INTERREG V B NWE programme.



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# DETAILS

Day 2, 19th October

## PROJECTS

to be presented, amongst others:

AgroCycle	ALGAECAN	ASHES	Biorefine
Bonus Promise	DECISIVE	DOP	ENRICH
IMPROVE-P	INCOVER	Newfert	Nurec4org
Phos4You	Phorwärts	QUB Phosphorus from Wastewater	RAVITA
The Resource Container	RichWater	Run4Life	SMART-Plant
SABANA	SYSTEMIC	Water2Return	3R2020+

Stands of

EasyMining Sweden AB, Kubota, TerraNova Energy GmbH, Paques bv

## WORKSHOPS

### 1. Recycled nutrient product qualities and standard

- Objectives:**
- Articulate evidence-based options to reduce the uncertainties in quality and use efficiency of recycled nutrient products;
  - Pinpoint the available expertise, competences and demonstrations towards a new EU standard for the quality assessment of recycled nutrients products.
  - Link to the work of the TWG Strubias

**Moderator:** Erik Meers, University of Gent

**Rapporteur:** Oscar Schoumans, Wageningen Environmental Research

- Introductions:**
- Minna Sarvi, LUKE Natural Resources Institute Finland / BONUS PROMISE
  - Oscar Schoumans, Wageningen Environmental Research / SYSTEMIC
  - Mark Taggart, Environmental Research Institute of the University of Highlands and Islands - North Highland College / Phos4You
  - Erik Meers, Ghent University / BioRefine Cluster Europe

### 2. Nutrient recovery in the sewage works of the future

- Objectives:**
- Anticipate future wastewater treatment enabling a better nutrient recycling;
  - Appraise the integration of nutrient recovery technologies in innovative wastewater treatment systems as Anammox, Membrane Bio Reactor, etc.;
  - Shape the research agenda for the implementation and validation of the nutrient recovery technologies in advanced sewage at large scale.

# DETAILS

Day 2, 19th October

**Moderator:** Juan Antonio Alvarez Rodriguez, AIMEN Technology Centre

**Rapporteur:** Frank Rogalla, FCC AQUALIA

**Introductions:**

- Silvia López, CETAQUA Water technology Centre / Necovery
- Frank Rogalla, FCC AQUALIA / Run4Life
- Carlos Alberto Arias, Aarhus University / Incover
- Stéphane Troesch, Ecobird

## 3. Life Cycle – Analysis (LCA) and – Costing (LCC) of recovery processes

**Objectives:**

- Share the methodologies used during different projects to perform LCA and LCC associated to nutrient recycling, focusing on phosphorus;
- Elaborate criteria for choosing the appropriated modelling software. Debate the definition of the functional unit, the allocation procedures, and the definition of basis or reference cases.

**Moderator:** Angélique Léonard, Liège University

**Rapporteur:** Charlotte Scheutz, Denmark Technical University

**Introductions:**

- Fabian Kraus, KWB - Berlin Centre of Competence for Water / PHORWÄRTS
- Charlotte Scheutz, Denmark Technical University / Emission factors for biofertilizer applications
- Anders Nättorp, University of Applied Sciences and Arts Northwestern Switzerland / P-REX
- Laurent Fraikin, Liège University / Phos4You
- Arabel Amann, Vienna University of Technology / Focus on LCA recovery processes

## 4. Technology transfer from municipal sewage to/from manures and other streams

**Objectives:**

- Identify current best practise and potential for transferring technology for phosphorus recovery and reuse;
- Discuss the tools (regulation / incentive / infrastructure) required to facilitate this transfer;
- Define the research requirements needed to encourage industry and regulators to adopt more sustainable practise in rural areas.

**Moderator:** Barbara Bremner, Environmental Research Institute of University of Highlands and Islands – North Highland College

**Rapporteur:** Emilie Snauwaert, Flemish Coordination Centre for Manure Processing

**Introductions:**

- Katrina Macintosh, Queen's University Belfast
- Tom Curran, University College Dublin - Institute of Food and Health / AGROCYCLE
- Emilie Snauwaert, Flemish Coordination Centre for ManureProcessing

## 5. Nutrient recovery: how to move from R&D to implementation

**Objectives:**

- Highlight success stories of nutrient recovery technologies implemented at existing wastewater treatment plants;
- Set up the key factors for innovative nutrient recovery technologies to move from lab scale to full scale.

**Moderator:** Maelenn Poitrenaud, SEDE Environnement

**Rapporteur:** Francesco Fatone, Marche Polytechnic University

**Introductions:**

- Francesco Fatone, Marche Polytechnic University / SMART-Plant
- Javier Brañas Lasala, Fertiberia / Newfert
- Cedric Mebarki, Véolia / Phos4You