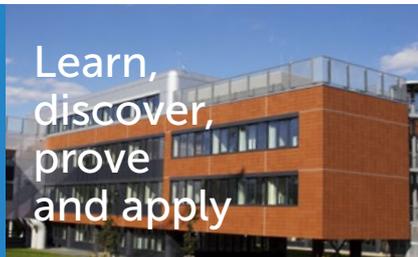




# RECETOX NEWSLETTER

The RECETOX Newsletter is a quarterly newsletter by the Research Centre for Toxic Compounds in the Environment (RECETOX), Brno, Czech Republic.

Learn,  
discover,  
prove  
and apply



RECETOX is an independent REsearch Centre for TOXic Compounds in the Environment operating within the Faculty of Science, Masaryk University, Brno, Czech Republic. The Centre fulfils three roles: an academic institution providing university education, a research institution working on transformation of research into practical applications and a body supporting implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) and sound chemicals management in general, nationally and internationally.

## In this issue

- New OP VVV Projects
- International Meetings
- Activities of the Stockholm Convention Regional Centre



## Editorial

Dear readers of this quarterly newsletter,

The fifth volume of our newsletter starts right now and we would like to share with you the latest news from the world of science, research and international meetings in the field of chemicals. This time we arrive with news about a series of meetings and new projects. There were five calls for projects within the Operational Programme Research, Development and Innovation (OP VVV) over the last year. We submitted project proposals to all of them; two calls have already been evaluated. Now we know that we received a six-year project CETOCOEN PLUS and another project to build a biobank. In addition, we acquired another project, RISE in the Horizon 2020 programme, which will enable the international mobility of our researchers and we will provide a project overview in another newsletter.

This time we are presenting HBM4EU project from the set of our new Horizon 2020 project. This one was launched in January 2017 and a consortium of national partners is involved in its implementation in the Czech Republic: Masaryk University, Charles University, University of Chemistry and Technology Prague, Institute of Experimental Medicine, Academy of Sciences, Czech University of Agriculture, St. Anne's University Hospital in Brno, Institute of Health Information and Statistics, and National Institute of Public Health in Prague as a contractor.

We wish you pleasant reading and a warm and joyful spring approaching soon.

Katka Šebková

PS - The RECETOX newsletter is also available automatically if registered through [newsletter@recetox.muni.cz](mailto:newsletter@recetox.muni.cz). It is published in English and Czech. The next issue will be released in June 2017.



## Calendar of Events

- 1-2 February 2017 *International conference 25 Years of Soil Monitoring in the Czech Republic*, Brno, Czech Republic
- 22 February 2017 *Workshop: Reduction of PCDD/Fs Releases from Metallurgical Industries*, Safranbolu and Kardemir, Turkey
- 3-5 March 2017 *7th N-trophy contest finals*, Masaryk University, Brno, Czech Republic
- 9 March 2017 *23rd Meeting of Council of National Centre for Toxic Compounds*, Ministry of Environment, Prague, Czech Republic
- 9 March 2017 *4th Meeting of the Czech Panel on European Initiative for Human Biomonitoring*, Ministry of Environment, Prague, Czech Republic
- 21-23 March 2017 *Central and Eastern Europe regional consultations prior joint meeting of three conferences*, Riga, Latvia
- 24 March 2017 *Central and Eastern Europe regional consultations on mercury*, Riga, Latvia
- 10-12 April 2017 *13th meeting of Czech-Slovak conference AIR 2017*, hotel Santon, Brno, Czech Republic
- 24 April - 5 May 2017 *Joint meeting of Basel, Rotterdam and Stockholm Conventions*, Geneva, Switzerland
- 7-11 May 2017 *SETAC Europe, 27th international conference*, Brussels, Belgium
- June 2017 *Summer school on environmental protection in Ukraine*, Kiev, Ukraine
- 13-15 June 2017 *6th Ministerial Conference on Environment and Health*, Ostrava, Czech Republic
- 25-30 June 2017 *13th International Summer School on Toxic Compounds*, RECETOX, Brno, Czech Republic
- July 2017 TBC *Central and Eastern Europe and Central Asia consultations prior COP1 Minamata Convention on Mercury*, RECETOX, Brno, Czech Republic
- 20-25 August 2017 *37th meeting of international conference Dioxin 2017*, Vancouver, Canada
- 26-30 September 2017 *COP1, Minamata Convention on Mercury*, Geneva, Switzerland

## Our Cooperation

### Horizon 2020 Projects at RECETOX

RECETOX has been quite successful in bidding for new projects in the Horizon 2020 framework. There are seven projects currently at RECETOX (ELIXIR, ERA-Planet, HBM4EU, ICARUS, NaToxAq, OBESOGENS (Marie Skłodowska-Curie Action)) and RISE, which will provide international mobility to our researchers. We are gradually introducing each project in our newsletters, and this time we turn to the HBM4EU project.

#### HBM4EU project

The implementation of the European Human Biomonitoring Initiative, HBM4EU project started in January 2017. The project involves 26 countries (22 EU member states including the Czech Republic) and the European Commission. The aim of the project, supported by the Horizon 2020 framework programme, is to create a joint and coordinated European platform for human biomonitoring. At the same time, it will make use of available expertise and data in the EU at international and national levels for acquiring and linking information about external exposure with data on bioaccumulation in human tissues and the potential health impacts into a common European information and knowledge database about the exposure of the EU population to chemicals and their health impacts. The Information Platform for Chemical Monitoring Data (IPChem platform) was created by the EU Joint Research Centre. The project outcomes will provide the basis for establishment or amendment of relevant EU policies. The project was officially launched in Brussels on 8 December 2016 (photo).

**Nine chemicals** or groups of chemicals were selected in the preparatory phase in 2015 that would be **targeted by HBM4EU**. Two of the target chemicals relate to the Stockholm Convention – **novel flame retardants**, NFR (including brominated flame retardants, BFRs and PBDEs) and **polyfluorinated compounds** (PFCs, including PFOA and PFOS). Other target chemicals/groups are **phthalates and their substitutes, bisphenols, chromium and cadmium,**



**polyaromates in relation to atmospheric contamination, emerging substances, toxic mixtures, and anilines.**

#### The situation in the Czech Republic

There is a considerable amount of capacity and knowledge that the Czech Republic can make available for use of the HBM4EU. In many cases, these are long-term and unique (as instrumentation, sample and data).

The Czech project consortium comprises the following partners: Masaryk University, Charles University, the University of Chemistry and Technology, Prague (ICT), Institute of Experimental Medicine, Academy of Sciences, Czech University of Agriculture, St. Anne's University Hospital in Brno (FNUSA), Institute of Health Information and Statistics (IHIS), and the National Institute of Public Health (NIPH) in Prague.

In October 2015, the **National Human Biomonitoring Panel (HBM4CZ)** was established as a subsidiary body to the Council of the National Centre for Toxic Compounds, the main national coordinating mechanism on chemicals management. The panel is the national expert and institutional structure for the long term and sustainable involvement of the Czech Republic into the HBM4EU project. In addition, the Panel provides regular information transfer from science to policy and vice versa. The establishment of such a platform and its linkage to a national inter-ministerial body was a condition for participation in the HBM4EU.



## Cooperation in the Soil Protection

### Conference

The auditorium of the Bohunice University Campus in Brno hosted an international conference on soil monitoring on 1 and 2 February 2017. The meeting was organized by the Central Institute for Supervising and Testing in Agriculture (CISTA) in the Czech Republic under the auspices of the Czech Minister of Agriculture, Marian Jurečka, and in cooperation with the Czech national focal point with the European Food Safety Agency (EFSA).

The conference 25 years of soil monitoring in the Czech Republic was attended by more than 220 delegates from national and international institutions, including the European Commission, and representatives from many European countries. Delegates from Slovakia, Austria, Switzerland, Hungary, Germany, Bulgaria and Poland presented their systems of the soil monitoring and their results.

Representatives of two Czech Ministries (of Agriculture and of Environment) presented, among others, the sustainable land use strategy 2030 and legislative measures being taken at the national level. CISTA experts lectured on the history, status and results of national long-term soil monitoring, including the levels of contaminants and metabolites (metals, pesticides and other substances including persistent organic pollutants) identified in soils and crops.

RECETOX also took part in the conference through its expert Milan Sánka who was invited to lecture on the International soil monitoring systems and importance of soil protection in the European context at the opening session of the conference. Sánka, one of the forefathers of Czech soil monitoring and proposer of national methodologies concluded: "To achieve the Czech objectives in soil protection, continued mapping of soil quality status and continued long-term monitoring are needed, as well as further expansion of monitoring to new focal/topic areas."

### What is the soil status in the Czech Republic?

The results of long-term monitoring of soil contaminants reveal increased concentrations of certain risk elements and of persistent organic pollutants in the surface layer of agricultural land. Preventive limits set by Decree no. 153/2016 Coll. are most often exceeded in the case of arsenic, lead, cadmi-



um and zinc, and for DDT and polycyclic aromatic hydrocarbons (PAHs). While there is a slight downward trend for PAHs, reference sites in protected areas show increases in PAH concentrations.

In addition, monitoring of the environmental burden by active biomonitors is an important component of the soil monitoring. Exposed plants reveal levels of toxic substances in the environment and potential sources are identified. In 1997–1999, RECETOX staff were involved in development and validation of such active biomonitors methods.

### Soil protection in RECETOX

RECETOX is closely involved in the soil protection. The SOILETOX group led by Associate Professor Jakub Hofman has a long-term cooperation with CISTA, not only on monitoring but also in the field of chemical analyses, soil microbiology, soil contamination, pesticide assessment and in other topics. Furthermore, the GENASIS environmental database ([www.genasis.cz](http://www.genasis.cz)) contains and provides open access to the entire set of soil monitoring data in the Czech Republic. Based on this information, RECETOX staff prepared the technical background for the Decree on the Protection of Agricultural Land, which sets concentration limits for elements and hazardous substances in soil. Moreover, RECETOX also closely works with the Ministry of Environment and Milan Sánka is secretary of the Czech Pedological Society and Czech representative in the European organization Common forum for contaminated land.

## Ministers Meet in Ostrava

Dolní Vítkovice (Gong and Hlubina) in Ostrava, Czech Republic, will host the **Sixth Ministerial Conference on Environment and Health** in the WHO European Region (54 countries) of the World Health Organization (WHO) on 13 to 15 June 2017. Health and environment ministers, high-level representatives of the United Nations Environment Programme, partner organizations, academia, and civil society are expected to discuss the impacts of the contami-

nated environment on health and adopt a ministerial declaration and workplan for remediation. RECETOX will participate in the conference and will present some of our activities and projects.

The Fifth Ministerial Conference was held in Parma, Italy, in 2010, attended by about 800 delegates, including 50 ministers of health or environment.

## RECETOX News

### Invitation to Ovzduší 2017 Conference

This is an invitation to the 13th session of the traditional **Czech-Slovak Conference Ovzduší (Air) 2017** which will be held in Santon Hotel in Brno from 10 to 12 April 2017. The conference focuses on air pollution and its consequences. The meeting enables regular and in-depth exchange of information among civil servants working in the field of environmental protection, experts in the field from industry, universities, research institutes, students as well as managers and all other stakeholders. All interested in the meeting can register through our website (Czech only – Odborné akce).

### RECETOX Summer School

We invite all interested to register for the 13th session of the International Summer School on Toxic Substances in the Environment that RECETOX has been organizing in Brno since 2005. This summer school is organized by the RECETOX Research Infrastructure in cooperation with the Stockholm Convention Regional Centre in the Czech Republic and the Research Centre for Toxic Compounds in the Environment in the RECETOX premises in Brno, Czech Republic from 26 to 30 June 2017. The meeting provides both theoretical and practical training to its participants and also awards ECTS credits. The key topic of 2017 is toxic substances in the aquatic environment. Early bird registration ends on 30 April 2017 and the end of registration is 10 June 2017. Details can be found on our website (see Events).



### Student Awards

The South Moravian Centre for International Mobility (JCMM) organized the 6th round of **Brno PhD Talent** contest for talented students of science and engineering who are at the start (1st year) of their doctoral studies at four Brno universities (Masaryk University, the Technical University in Brno, the Veterinary and Pharmaceutical University and Mendel University). We are proudly announcing that there are three RECETOX doctoral students among this year winners – two from the protein engineering programme and one from the supramolecular chemistry team. Congratulations!



The awards were granted to:

- **Gabriela Daňková** for *Structural analysis and engineering of fibroblast growth factors* (supervised by Radka Chaloupková, protein engineering)
- **Antonín Kunka** for *Structural and thermodynamic basis of protein stabilization* (supervised by Associated Professor Zbyněk Prokop, protein engineering) and
- **Jan Sokolov** for *Chiral bambus[n]urils* (supervised by Professor Vladimír Šindelář, supramolecular chemistry)

There were 133 projects registered for the contest and 20 awardees were selected after the finals before the international jury. Each awardee will receive a scholarship of 300,000 CZK worth paid out over three years to support the completion of the degree. More about the contest is available online (Czech only):

<http://www.jcmm.cz/cz/vice-o-soutezi.html>

### Apply for Cooperation at RECETOX

RECETOX Research Infrastructure provides **open access (free of charge)** to Czech and international researchers and experts to work on their projects and use the expertise and instrumentation available in our centre.

Please note the following deadlines for submitting application forms or project proposals in 2017:

**31 March, 30 June, 30 September and 31 December.**

Visit [www.recetox.muni.cz/RI](http://www.recetox.muni.cz/RI) for the application procedure and further relevant details.

For more information or clarifications, please contact Dr Petra Růžičková, RECETOX research infrastructure coordinator ([ruzickova@recetox.muni.cz](mailto:ruzickova@recetox.muni.cz)).



RECETOX  
Research Infrastructure



## RECETOX Publications

In 2016, RECETOX scientists published almost 120 articles. Below find a selection of articles that were published in prestigious international journals before end of 2016. There are also two articles published in Nature and we will feature an interview with authors in the next issue:

- Bronson, P. G., Chang, D., Bhangale, T., Seldin, M. F., Ortmann, W., Ferreira, R. C., Urcelay, E., Pereira, L. F., Martin, J., Plebani, A., Lougaris, V., Friman, V., Freiburger, T., Litzman, J., Thon, V., Pan-Hammarström, Q., Hammarström, L., Graham, R. R., Behrens, T. W. Common variants at PVT1, ATG13-AMBRA1, AH11 and CLEC16A are associated with selective IgA deficiency. *Nature Genetics* (2016), in press.
- Annette T. Byrne, Denis G. Alférez, Frédéric Amant, Daniela Annibali, Joaquín Arribas, Andrew V. Biankin, Alejandra Bruna, Eva Budinská, Carlos Caldas, David K. Chang, Robert B. Clarke, Hans Clevers, George Coukos, Virginie Dangles-Marie, S. Gail Eckhardt, Eva Gonzalez-Suarez, Els Hermans, Manuel Hidalgo, Monika A. Jarzabek, Steven de Jong, Jos Jonkers, Kristel Kemper, Luisa Lanfrancone, Gunhild Mari Mælandsmo, Elisabetta Marangoni et al. Interrogating open issues in cancer precision medicine with patient-derived xenografts, *Nature Reviews Cancer*. doi:10.1038/nrc.2016.140
- Jusko, T. A., De Ross, A., Lee, S. Y., Thevent-Morisson, K., Schwartz, S. M., Verner, M., Palkovicova Murinova, L., Drobna, B., Kocan, A., Fabisikova, A., Conka, K., Trnovec, T., Hertz-Picciotto, I., Lawrence, B. P. A birth cohort study of maternal and infant serum PCB-153 and DDE concentrations and responses to infant tuberculosis vaccination. *Environmental Health Perspectives* (2016), 124, 813-821.
- Karaskova, P., Venier, M., Melymuk, L., Becanova, J., Vojta, S., Prokes, R., Diamond, L. M., Klanova, J. Perfluorinated alkyl substances (PFASs) in household dust in Central Europe and North America. *Environmental International* (2016), 94, 315-324.
- Rajasarkka, J., Pernica, M., Kuta, J., Lacnak, J., Simek, Z., Bláha, L. Drinking water contaminants from epoxy resin-coated pipes: A field study. *Water Research* (2016), 103, 133-140.

## RECETOX in Brief

We are happily announcing that a number of young researchers recently extended their families. Congratulations to Eva Budinská to her daughter Anička, Ivona and Martin Chybovi had their first son Matěj, Jarka Večerková gave birth to son Samuel and Soňa Smetanová welcomed her second son Matěj.

## New PR Materials

A new information brochure on RECETOX as well as our new website will be released in Czech and English in March 2017.

## Traditional Christmas Charity Collections

At the end of 2016, RECETOX organized a Christmas party connected with two charity collections. One of them contributed 14,700 CZK to the association Klara pomáhá (<http://www.klarapomaha.cz>), providing help for carers and assistance to survivors, where CZK 4,700 came from a traditional auction of small gift items produced by Klara pomáhá and the other 10,000 CZK were provided by individual RECETOX donors. The second collection supported Medecins Sans Frontiers, international medical relief organization, with 6,000 CZK. To everyone who auctioned, contributed and helped, thank you very much!

## Open Call for Trans-National Access

...to research infrastructure Košetice – Křešín u Pacova, Czech Republic within ACTRIS-2 and ACTRIS CZ projects. The ACTRIS RI offers access to several types of measurements (aerosols, vertical gradient of GHGs, air quality, meteorology and precipitation).

Detailed information is available at [http://cas.icpf.cas.cz/Actris/TNA\\_ACTRIS\\_Kosetice.pdf](http://cas.icpf.cas.cz/Actris/TNA_ACTRIS_Kosetice.pdf), or by e-mail with Adéla Holubová Šmejkalová, e-mail: [adela.holubova@chmi.cz](mailto:adela.holubova@chmi.cz).

Application procedure for interested users is described at <http://www.actris.eu/DataServices/ObservationalFacilities/ApplyforTNA.aspx>.



## RECETOX on the Move

RECETOX has almost 30% international staff and that is why there is a “chapter” in our newsletter where we wish to regularly showcase our new colleagues and give space to those who leave RECETOX for other institutions in other countries. This time we introduce Brij Mohan Sharma as full-time researcher and provide a space to Mariëlle Mulder to look at her time among chemists before while moving on to Vienna. Other researchers joining or leaving RECETOX in 2017 will be showcased in the next issues.

### Brij Mohan Sharma Joins Us



Brij Mohan Sharma comes from a small town in northern India, 90 km south-east of the national capital Delhi. Brij told us: “My PhD research at TERI University (The Energy and Resources Institute) in New Delhi focused on occurrence and behaviour of legacy and emerging organic pollutants in the environment and their implication on human population in a large river basin of the Ganges

River in India. Prior to PhD, I worked on fate of major ions in glacial environment and of trace metals in Indian coastal region and estuaries at National Institute of Oceanography (NIO) as a Summer Research Fellow, an opportunity offered by Indian Academy of Sciences (IAS). I also provided environmental consultation to international financial institution such as The World Bank and various State Governments in India for Clean India Mission.

### Mariëlle Mulder on Her Way to Vienna



Mariëlle Mulder came to RECETOX in 2011 after her Masters in Meteorology and Air Quality obtained at Wageningen University in the Netherlands. She told us: “I had the desire to continue in air quality, but unfortunately very few positions are available in this field. RECETOX attracted me because of the multi-disciplinary approach to pollution research when I replied to a call to advance the understanding of the

atmospheric and multi-compartmental cycling of POPs by numerical modelling. I started working for Professor Gerhard Lammel, first setting up models and starting data processing and I decided to start the paper work to register as a PhD student one year later.”

When pondering on her new life, Mariëlle shares these words with us: “The time to move has come for me. I will continue my slow transition to Vienna and start working there from April. I write ‘slow’ because since I live in Brno, I travelled often to Vienna. First, to soften the culture and spiritual shock of living in a former communist country, later to meet with my second supervisor (Gerhard Wotowa, ZAMG – Central Institute for Meteorology and Geodynamics) and also for museums and architecture, and now since a year also: to see my boyfriend and build up relationships with churches there. Start of my time at RECETOX felt like pioneering. When I

During my PhD, which was within the frame of a Norwegian Research Council funded project, I worked closely in collaboration with researchers from Norway, India, and Czech Republic. I was hosted at RECETOX for two short research stays of total four months (during 2013 and 2014). Within this short period of time at RECETOX, I was exposed to enormous research possibilities and facilities available at the institute to support young researchers. This, to an extent inclined my decision to be associated with RECETOX in future.

I joined RECETOX as a researcher in June 2016. At present, I am working with Professor Martin Scherlinger on a large EU-funded project, the European Human BioMonitoring Initiative, HBM4EU. Within this project, I will work on physiologically based pharmacokinetic models (PBPK) to understand the external and internal human exposure to a range of organic and inorganic pollutants and their fate within the human body. Furthermore, I will also consider to assist Master’s and Bachelor’s students who will be enthusiastic to learn the methods, models and approaches adopted in this project.”

came, there was no server, no models installed or contacts to get meteorological data and assistance to run them. Also learning how to work with data from the laboratories according to the rules and understand the language of chemists was often demanding. My passion for solving puzzles and facing challenges made that I persisted in my work. I learned from the POPs to be persistent, organic and am now proud of what I have built up. I enjoyed the freedom and independence but often missed to talk with people about my work. People that are longer around than a few days a month or only reachable by phone, skype or travelling to them. I’m thankful for the opportunity I had to work as a meteorologist within the chemistry community, to learn about the (unfortunately often depressing) ways how synthetic chemicals are used and challenging ways how to contribute to a cleaner world. Although my thesis is not completely finished, I got the offer to work at ZAMG. I will continue with atmospheric dispersion models, not simulating POPs but mostly ash, and not by myself but in a group. I will contribute to the source apportionment work package from the project H2020 EUNADICS-AV. I will keep coming to Brno to see friends, people from the RCX family and from Gods family in different churches. I will keep praying for Brno, show Jesus’ love to its people and enjoy the hiking and climbing around Brno. I thank all RECETOX people for helping with translations and paper work, helping me understand the world of chemists and ecotoxicologists, for the beer drinking, talks and climbing sessions.”



## Activities of the Stockholm Convention Regional Centre

The Stockholm Convention Regional Centre in the Czech Republic hosted at RECETOX continues to provide support to other countries and regions, in particular in relation to monitoring, sampling and analyses of toxic chemicals in the environment. In doing so we support the implementation of the Global Implementation Plan of the Stockholm Convention. Our current activities comprise operation of RECETOX's own monitoring program, MONET. Check out its new website at <http://monet.recetox.muni.cz>; it provides a good overview of the work undertaken in all 50 countries where we have worked since 2003.



Stockholm Convention  
Regional Centre



monet

### Biannual Activity Report

At end of December 2016, SCRC prepared a regular report on its activities for biennium 2015–2016. The 44-page report is available on the websites of the SCRC and that of the Stockholm Convention. As brief information for you, we selected the following: RECETOX staff are members of five expert bodies on global chemicals management. Persistent Organic Pollutants Review Committee, BAT/BEP group, Effectiveness Evaluation Committee, Global Monitoring Plan Coordination Group and UNEP advisory group on endocrine disruptors. RECETOX organized at least 16 meetings and eight trainings for international experts on its premises and participated in another 25 international meetings and training courses worldwide. Besides operating the POP monitoring networks (MONET) in 13 African countries and 28 countries in Europe, RECETOX performed annual monitoring campaigns in the Seychelles and in Kazakhstan.

**And what is SCRC doing now?** In addition to our regular monitoring and training activities in the CEE region, we participate in a large PCB inventory project in Ukraine (in cooperation with Dekonta a.s.), we trained an expert in sampling for releases of unintentional POPs in Armenia in addition to analyses of samples collected at a landfill and organized a workshop for experts to reduce dioxin emissions in metallurgical industries.

### Upcoming Conference of the Parties

A two-week long Joint Meeting of Conferences of the Parties to the three conventions – the Basel, Rotterdam and Stockholm – will be organized in Geneva, Switzerland from 25 April 2017. The majority of the meeting documents are already available on the website <http://www.brsmeas.org>. The eighth meeting of the Stockholm Convention will consider the listing of short chain chlorinated paraffins (SCCPs) and decabromodiphenyl ether (decaBDE) and reconsider the hexachlorobutadiene inclusion in Annex C. In addition, the effectiveness evaluation report will be discussed as well as the compliance mechanism. This is, however just a part of the program of this demanding decision-making marathon with a high-level segment. A Technology Fair themed **“For the Future Detoxified”** and many side-events will accompany the meeting. We look forward to seeing you in Geneva as well as in the preparatory meetings of Central and Eastern European Region in Riga, Latvia in late March 2017.



### Visit GENASIS, Environmental Database Portal

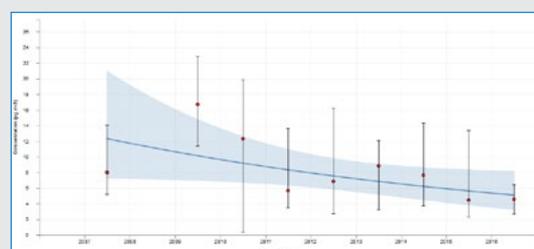
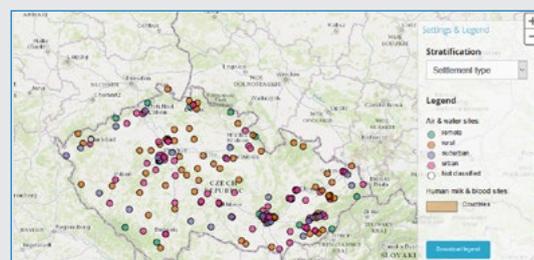


...and use its data browser at [www.genasis.cz](http://www.genasis.cz) to find out more about levels of toxic chemicals around us!

The GENASIS (Global ENvironmental ASsessment Information System) created in cooperation of RECETOX with IBA MU – institutes of Masaryk University, Brno, Czech Republic – provides comprehensive information on chemical contamination of the environment, namely on persistent organic pollutants (POPs).

The system combines expertise, validated data from partner institutions, and input from regular environmental monitoring programmes. Users and data providers get secure data repository, sophisticated analytical tools, and comfortable data management and visualization.

A sister database is used globally under the Stockholm Convention and showcases an overview of global levels of POPs at [www.pops-gmp.org](http://www.pops-gmp.org).





## RECETOX in Malaysia

The SCRC has recently participated in an expert mission to Malaysia supported by the EU and their pilot project **TAIEF** (Environmental Technical Assistance and Information Exchange Facility, ENV-TAIEF, [http://ec.europa.eu/environment/international\\_issues/taief/index\\_en.htm](http://ec.europa.eu/environment/international_issues/taief/index_en.htm)). The TAIEF aims to build professional networks and improve knowledge transfer globally and some 15 countries are eligible for support. One of the TAIEF's roles is offering short-term, peer-to-peer assistance to support environmental policy development and implementation in partner countries. Kateřina Šebková, director of the SCRC in the Czech Republic, and Jaromír Manhart, director of the Waste Management Department, Czech Ministry of Environment participated in a week long mission to Malaysia (28 November to 2 December 2016) entitled "Identification of gaps in Malaysia towards the ratification of Stockholm Convention".

Kateřina told us: "We had a series of meetings and consultations in Putrajaya, Malaysia with a very dedicated team from the Department of Environment (DoE), Ministry of Natural Resources and Environment (NRE) of Malaysia who is in charge of the ratification process and coordination of chemicals management in the country and with other institutions involved in the process. There were two larger meetings of all relevant decision-making stakeholders on 28 November



and 1 December where presentations of the country situation and POPs management experience sharing from the EU experience with legislation and enforcement including case studies took place. The December meeting was in fact an outcome of our visit where we presented findings from the expert analysis, proposals for action and their timeline that could in our opinion support the sound chemicals management and the Stockholm Convention ratification in Malaysia. We concluded that available expertise and institutional arrangements are sufficient to take the move very soon. Finally, we are currently discussing options and timeline for a study visit of the Malaysian delegation in the Czech Republic in 2017 to further foster their experience from the expert analysis meeting and share with them practical examples of the implementation of proposed steps by various actors in reality."

## Trace Analyses Laboratories (TAL) at RECETOX

Use the **accredited laboratories (EN ISO/IEC 17025:2005)** and their expert team and infrastructure for the following services:

- Speciation **analyses** of toxic and essential elements in the environment (soil, sediments, water and air) and biota
- QA/QC system, validated analytical methods, professional team
- Modern equipment for extractions, fractionations and purification of samples
- State of the art instrumentation for analyses of endocrine disrupting chemicals, persistent organic pollutants, dioxins, furans, brominated flame retardants, steroids, explosives, and heavy metals
- High quality results with very low detection limits
- **Long-term monitoring** – air, precipitation, soil, water, sediments, needles, mosses and lichens
- Air monitoring networks – MONET in Europe, Africa and Asia
- **Sampling** by active and passive samplers
- Sampling of precipitation and surface waters, sediments, soils and biotic materials
- **Capacity building** – made-to-measure training for researchers and laboratory experts on various instrumentation and in development of new analytical methods

Contact head of TAL, Dr Petra Příbylová, for more information ([pribylova@recetox.muni.cz](mailto:pribylova@recetox.muni.cz)).



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