

n.3

Editorial



In this issue:

- Editorial
- Examination and inventory of endpoints, data and models available for hazard and exposure assessment
- Focus on HEROIC partners INERIS and BPI
- Events
- Next Issues

Dear friends of HEROIC,

In the previous newsletter we shared with you some outcomes of our first year of work. In particular, we provided an overview of the analysis of existing gaps and needs of current risk assessment (RA) processes and we also introduced the Tox-Hub platform through which HEROIC intends to close some of the gaps and remove impediments linked to the accessibility of the data.

In this issue we provide some information on the work done on the evaluation of data and models available for the two main pillars of RA, i.e. hazard and exposure assessment, respectively

The aims of this work were to examine the relevant toxicological endpoints for human and environmental hazard assessment and to identify whether or not they might be applicable across disciplines, to examine data and models currently used in human and environmental hazard and exposure assessment and identify upcoming technologies with a potential impact.

Most importantly, we would like once again to encourage all interested parties to support us in our endeavour and to constructively collaborate in achieving our objective for the benefit of society as a whole.

We hope that you find this information useful, and we are looking forward to hearing your feedback.

Prof Martin F Wilks
Project Coordinator

n.3

Examination and inventory of endpoints, data and models available for hazard and exposure assessment.



The main objectives of HEROIC Work Package 3 (WP3), led by INERIS, is both the inventory of existing data and models in hazard and exposure assessment and discussions relative to integrated risk assessment.

These objectives were addressed in the first expert meeting within the HEROIC project organized at INERIS (Verneuil-en-Halatte, FRANCE) the 12th and 13th of April 2012. In the months following the meeting, a paper relative to integrated risk assessment has been written by participants

Inventory of data and methods in hazard assessment

An inventory was done of the endpoints considered in toxicological and ecotoxicological hazard assessment for the different classes of chemicals (industrial chemicals, biocides, plant protection products, pharmaceuticals, food additives, and cosmetics) that are

- deemed mandatory in regard to European legislation,
- optional/indicative in regard to European legislation
- and the endpoints that are not identified as mandatory nor optional, in regard to European regulation (but which are most likely to be included in the coming years)

It was also tried to figure out what endpoints would be considered in future risk assessment. We pointed the increasing interest for adverse outcome pathways (AOPs) concept, that provides a consistent structure and terminology for organizing toxicological or ecotoxicological information obtained at different levels of biological or ecological organization.

In parallel was produced an inventory of

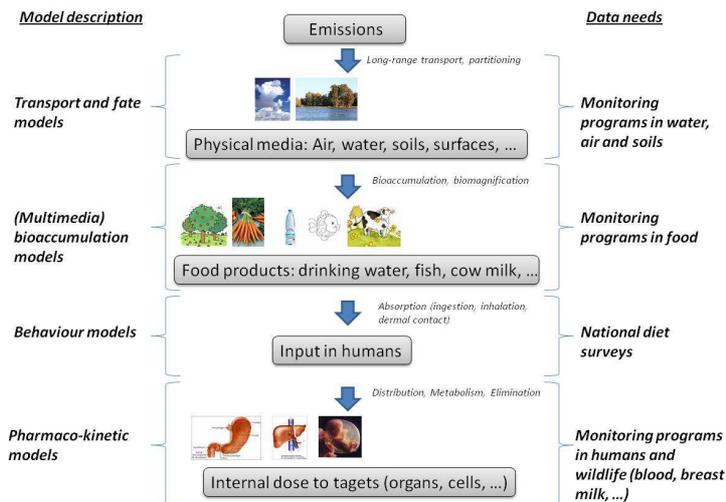
- the main freely and publicly available hazard database (DB) of diverse substances, e.g. chemicals, pesticides, biocides, pharmaceuticals, food additives and cosmetics
- alternative methods in animal testing in ecotoxicology and toxicology.

n.3

The produced data base “table-inventory” includes associated general information such as a descriptive of the DB, whom it is hosted by, at which scale it was originally created, if it was created for a regulatory purpose or not, the type of substances addressed by these DB and which type of hazard assessment data are available (e.g. addressing human health only, mammalian, or ecotoxicological data).

Inventory of data and methods in exposure assessment

An inventory of potential models and databases able to cover one or more steps involved in the exposure assessment process described in the picture below, together with a review and analysis of criteria that are explicitly or implicitly taken into account when evaluating the ‘quality’ of an exposure model in respect to the assessment context was performed.



For further and more detailed information please contact Alexandre Péry (alexander.perly@ineris.fr).

Focus On Heroic Partners

Our newsletter also gives us the opportunity to introduce the HEROIC partners.

We started in the first issue with the Swiss Centre for Applied Human Toxicology which coordinates the HEROIC project. The second issue gave us the opportunity to introduce the Catholic University of Sacred Heart (UCSC) and the CSIC, the Spanish Council for Scientific Research.

In this issue we introduce the Institut National de l'Environnement et des RISques (INERIS) and the Benaki Phytopathological Institute (BPI)

	<p>Founded in 1990, INERIS (Institut National de l'Environnement et des RISques) is a large public research institute whose mission is to provide scientific and technical assistance to the French Ministry for the Environment, with a staff of 588 persons.</p> <p>Located at Verneuil-en-Halatte (Oise), in the Picardy Region (at about 60 km from Paris), INERIS (www.ineris.fr) is equipped with physicochemical analysis laboratories and testing and computing facilities that rank among the best in France.</p> <p>INERIS has extensive facilities and competence in ecotoxicology and toxicology in vitro, in vivo, and in silico and experience in participating and managing large international projects.</p>
<p><i>maîtriser le risque pour un développement durable</i></p>	

INERIS, leader of WP3, is involved in WP1, WP4, WP5, WP6 and its main objectives are

- to examine and evaluate the scope of non-test and test methods for the exposure and hazard assessment of chemical substances in the regulatory context;
- to provide guidance for the mutual exploitation of mechanism-based ecotoxicological and toxicological information toward a harmonized environmental and human risk assessment

n.3

	<p>Benaki Phytopathological Institute (BPI), legal entity of public sector, was founded in 1929 in Athens, Greece. The mission of BPI is the effective protection of agricultural production with simultaneous minimization of any adverse effect of agriculture on environment, wildlife and human health. The BPI personnel consists of 45 permanent full-time experts and about 70 scientists with temporary contracts. The Institute acts as the competent authority for the evaluation and risk assessment of plant protection products in the frames of the Regulation 1107/2009, as well as for biocides. BPI (www.bpi.gr) maintains a P2/P3 containment greenhouse and 13 well-equipped laboratories covering a wide spectrum of different disciplines, such as chemical analysis of various types of samples, ecotoxicological/ toxicological assays and rapid molecular techniques for plant pathogen detection. In addition, the Institute actively participates in research projects and publishes books, manuals and handbooks as well as the biannual scientific Journal entitled 'Hellenic Plant Protection Journal'.</p>
<p>BENAKI PHYTOPATHOLOGICAL INSTITUTE</p>	

BPI, involved in all WPs of HEROIC and mainly in WP2, WP3 and WP4, participates with the Laboratory of Pesticides Toxicology (LPT) of the Department of Pesticides Control & Phytopharmacy.

The key areas of the scientific activity of the LPT are the toxicological assessment of Plant Protection and Biocidal Products as well as research activities. Research studies are conducted in LPT to identify adverse effects on non-target organisms, to monitor exposure levels of operators and rural population, to improve the standard of personal protective equipment, to develop tools suitable for reliable risk assessment and to develop and monitor biomarkers for the early diagnosis of adverse effects on humans, aquatic organisms and beneficial insects.

n.3

News

HEROIC ToxHub and the Dixia's eChemPortal - a meeting with EU JRC in Ispra

Driven by the purpose of identifying potential synergies between Dixia and HEROIC projects, UNIBAS and CSIC organized a meeting with EU JRC in Ispra, Italy on March 13, 2013. Both the HEROIC ToxHub and the Dixia's eChemPortal were thoroughly exposed and subsequently discussed. Whereas the eChemPortal emphasizes on single chemicals search the ToxHub has a more open language user friendly (google-like) approach. We came to the conclusion that both approaches are complementary and therefore some specific opportunities for present and future collaboration actually exist. Some of the suggested interactions, among other possibilities, were direct link from ToxHub to eChemPortal once a chemical is identified, the inclusion of ToxHub as a source of information in eChem Portal or the organization of joint training sessions

Events

3th HEROIC Consortium and Scientific Advisory Board meetings

The 3th HEROIC Consortium and Scientific Advisory Board meeting will take place in Glasgow on 13th May 2013 in occasion of the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC Europe). The purpose of this joint meeting will be the analysis on the progress of the project, the evaluation of the results of each WP and to discuss the upcoming challenges with the input of the Scientific Advisory Board

Potential socio-behaviour factors influencing the effectiveness of the actual risk analysis procedure roundtable

A web-based stakeholders survey to identify how socio-behavioural factors impact risk analysis procedure will be launched soon.

The HEROIC team will consolidate and evaluate all contributions to prepare for a roundtable discussion with selected experts. The insights gained from this process will help to improve existing integrated risk assessment frameworks and the results will be eventually presented in a scientific opinion.

n.3

SETAC meeting

 <p>23rd SETAC Europe Annual Meeting 12-16 May 2013 • Glasgow.setac.eu</p>	<p>23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC Europe) “Building a better future: Responsible innovation and environmental protection” that will be held in Glasgow on 12th - 16th May 2013 .</p> <p>The meeting will also be the occasion for the next Consortium and Scientific Advisory Board meetings.</p> <p>More info at: glasgow.setac.eu/</p>
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EUROTOX 2013

 <p>euotox 2013 Interlaken Switzerland</p> <p>49th Congress of the European Societies of Toxicology</p>	<p>HEROIC will participate in a symposium at the 49th congress of the European Societies of toxicology (EUROTOX) on ‘Integration of human and environmental risk assessment – is it the future?’ that will be held in Interlaken, Switzerland from September 1 to 4, 2013</p> <p>Visit : http://www.eurotox2013.com/</p>
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Publication

A position paper on the identification of the opportunities in integrated human and environmental risk assessment and synergies with socio-economic analysis is submitted for publication.

Next Issue

The next issue will feature other news and documents developed by the HEROIC Consortium.

Contact us

For more info

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