



GMOS-Train Human health workshop and the Project meeting IFREMER, Nantes

18. – 20. September, 2023

Venue: IFREMER

Zoom link: <https://us06web.zoom.us/j/87839060315?pwd=VWpPYjJpaTRwakRQTzNRdHU1YmNXZz09>

Meeting ID: 878 3906 0315

Passcode: 319365

Day 1, Monday, 18. September 2023

- 9:00 – 9:15 Introduction (*Local organizer, Coordinator*)
- 9:15 – 9:45 GMOS-Train in progress (*M. Horvat, coordinator*)
- 9:45 – 10:30 Project presentations (stage 2 of the Project writing training)
- 10:30 – 11:00 Coffee break*
- 11:00 – 12:30 Project presentations (stage 2 of the project writing training)
- 12:30 – 13.30 Lunch*
- 13:30 – 15:00 Human health workshop (lectures and discussion)
Human exposure to Hg and Hg compounds (*M. Horvat*)
Our evolved understanding of the human health risks of mercury (*N. Basu*)
Q&A
- 15:00 – 15:30 Coffee break*
- 15:30 – 17:00 Novel approaches in risk assessment based on exposome (*D. Sarigiannis*)
Example: Case control study: tuna experiment (*A. Alilović*)
Q&A
- 19:00 Reception with some food and drinks at "le Berlin 1989-" see: <https://www.bigcitylife.fr/actu/le-nouveau-berlin-1989-republik-vient-de-sinstaller-sur-lile-de-nantes/>
If the weather is nice, at another venue is possible see ("Pépé Guinguette", <https://pepe-guinguette-restaurant-nantes.eatbu.com/?lang=fr>)*





Day 2, Tuesday, 19th September, 2023

- 9:00 – 10:00 WP1 – Atmospheric dynamics (UGA, A. Dommergue)
Chairs: Koketso Michelle Molepo and Sonja Gindorf
Presenters: Alkuin Maximilian Koenig, Sreekanth V. Nair
- 10:00 – 11:00 WP2 – Aquatic dynamics (MIO, L.-E. Heimbürger)
Chairs: Saeed Waqar Ali and Charlotte Haugk
Presenters: Luisa Malberti, Natalia Torres Rodriguez
- 11:00 – 11:30 *Coffee break*
- 11:30 – 13:00 WP2 – Aquatic dynamics (MIO, L.-E. Heimbürger)
Chairs: Saeed Waqar Ali and Charlotte Haugk
Presenters: Alina Kleindienst, Isabel García Arévalo, Sonja Gindorf
- 13:00 – 14:00 *Lunch*
- 14:00 – 15:00 WP3 – Terrestrial dynamics (SU, S. Jonsson)
Chairs: Teodor-Daniel Andron and Allwin Mabes Raj
Presenters: Charlotte Haugk, Saeed Waqar Ali
- 15:00 – 16:00 WP4 - Metrology & sensors (IOS, A.Lobnik)
Chairs: Alina Kleindienst, Isabel García Arévalo
Presenters: Teodor-Daniel Andron, Allwin Mabes Raj
- 16:00 – 16:30 *Coffee break*
- 16:30 - 17:00 WP5 – Multimedia modelling (HEREON, J. Bieser)
Chairs: Natalia Torres Rodriguez and Sreekanth V. Nair
Presenter: David Amptmeijer
- 20:00 *Project dinner : Magmaa restaurants. See <https://www.magmaa-nantes.fr/>*





Day 3, Wednesday, 20. September, 2023

- 9:00 - 10:00 WP6 – Long-term changes & policy scenarios (CNR-IIA, N. Pirrone/I. Hedgecock)
 Chairs: Alkuin Maximilian Koenig and Luisa Ma. Malberti
 Presenters: *Koketso Michelle Molepo, Charikleia Gournia*
- 10:00 – 11:00 WP7 - Training
 WP8 - Dissemination, Communication, outreach
 WP9 - Management
- 11:00 – 11:30 Coffee break*
- 11:30 – 12:30 In parallel: ESRC meeting
 SB meeting
- 12:30 – 13:30 Lunch*
- 13:30 – 17:00 Stakeholder event with the local fisheries organized by IFREMER (V. HOSSEN, French General Directorate for Food, and S. LITMAN, French Union of producers of prepared foods)
- 17:00 – 17:30 Conclusions & End of the meeting





About the invited speakers

Prof. Nil Basu, McGill University

Professor Nil Basu holds a Canada Research Chair (CRC) in Environmental Health Sciences at McGill University where he is jointly appointed in the Department of Natural Resource Sciences and the School of Human Nutrition. Professor Basu also holds appointments in McGill's School of the Environment and the Department of Epidemiology, Biostatistics and Occupational Health, as well as an adjunct professorship at the University of Michigan School of Public Health. The goal of Professor Basu's research is to design, validate, and apply innovative and sustainable approaches to address the most pressing societal concerns over toxic chemicals in our environment. Professor Basu's research is multidisciplinary (bridges environmental quality and human health), inter-sectoral (most projects driven by stakeholder needs, notably government and communities), and driven by environmental justice concerns. Professor Basu has assumed national and international leadership positions to bring together diverse teams to tackle grand challenges in the field (e.g., chemicals management, mercury pollution, electronic waste). Professor Basu's research activities are situated at the interface of science and policy with notable involvements with the UN Minamata Convention, Canada's Chemicals Management Plan, and the Lancet Commission on Pollution and Health. His team's work has been supported by more than \$40M in research funding, resulted in >200 peer-reviewed papers, and afforded training opportunities to over 100 students including 18 postdoctoral fellows and 12 PhD students.



Prof. Denis Sarigiannis

Dimosthenis Sarigiannis is Director and President of the Board of the National Hellenic Research Foundation. He is also Professor of Environmental Engineering and Director of the Environmental Engineering Laboratory and the General Chemical Technology Laboratory of the Department of Chemical Engineering and of the Research Group on the Exposome and Health at the Center for Interdisciplinary Research and Innovation of Aristotle University of Thessaloniki in Greece. Moreover, he is Associate Professor of Environmental Health Engineering at the Institute for Advanced Study (IUSS) in Pavia, Italy, Director of the Research Center on Complex Risk and Data Analysis and member of the coordination team of the nationwide PhD program on Sustainable Development and Climate at the Institute for Advanced Study (IUSS) of Pavia in Italy and visiting Professor at the University of Paris.





He is President of the Mediterranean Scientific Association for Environmental Protection, Vice-President of the Hellenic Society of Toxicology, member of the Expert Committee on Air Pollution of the Greek Ministry of Health and advisor to the WHO European Centre for Environment and Health.

In 2015 he received the Bo Holmstedt award from EUROTOX and the Bo Holmstedt Foundation for his contributions to the safety of pharmaceuticals and chemicals.

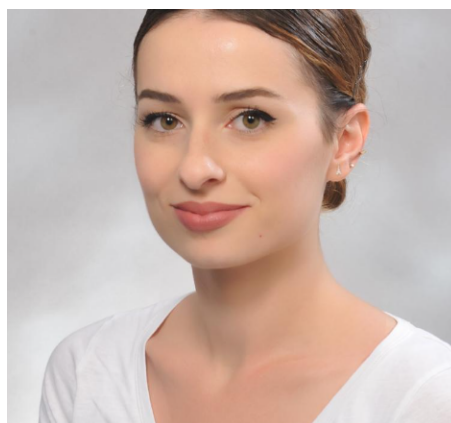
His research focuses:

(a) on the unraveling of the human exposome to improve the health risk assessment of industrial and environmental toxicants and to evaluate the effects of climate change and of climate change adaptation and mitigation policies and

(b) on internalizing health aspects into circular economy strategies towards the implementation of safe-and-sustainable-by-design approaches to chemicals, materials and products. He is the author or co-author of over 160 scientific papers published in the peer-reviewed literature and 26 chapters in international books and monographs and has led or contributed to 40 international research projects in the above areas.

Adna Alilović, Jožef Stefan Insititue

Adna Alilović earned her Master's degree in Pharmacy from the Faculty of Pharmacy in Sarajevo in 2020. Following her graduation, she started her Ph.D. in Ecotechnologies at the International Postgraduate School Jožef Stefan in Ljubljana, Slovenia. Currently, she is working at the Department of Environmental Sciences at the Jožef Stefan Institute, where she is part of the groups for human biomonitoring and for mercury research. Her research is aimed at improving human health risk assessment due to exposure to toxic chemicals in our environment, with a current focus on exposure to mercury.





About the stakeholder event with the local fisheries

Day 2: 19 September 2023, from 14:00 to 17:30

The stakeholder meeting will be animated by Prof. Joel Knoery, Ms. Virginie HOSSEN (Anses, Agence nationale de sécurité sanitaire), and Sonia LITMAN (Adépale, Association Des Entreprises de Produits Alimentaires Elaborés).

The event will be a dialogue between 2 links of the long chain between the ocean (sea-food producers) and the human consumers (regulatory entities), and the ESR's whose job will be to inform them of up-to-date mercury knowledge.

It is hoped that the actors and ESR's of the GMOS-Train project can observe through the scope of their favorite contaminant, how a country is organized to minimize its impregnation by mercury-containing seafood.

The presentations of the three organizations (GMOS-Train, Anses, Adepale) will serve as a starting point and framework for the following guided discussion. At the end of the afternoon, and based on GMOS-Train and the French example with which we are now familiar, we can imagine having addressed:

- Presentation of the French seafood industry/economy.
 - Scope, financial / mass volumes, geographical origins of products, history and trends.
 - How is this part of the sector segmented (what are the stages and professional intermediates in the journey of a seafood product, from the producer (=fisherman) to its consumer?)
 - By what means is ensured the food-health of these products (or of a product), and at what point in its journey from the ocean to the consumer plate?
 - What are general food-health criteria? What are those for mercury? Do they ever change? What happens if a mercury measurement exceeds a threshold? Who verifies that the official thresholds are accurately observed by the actors in the sector?
 - For marketing by the French sector, what are the impacts (e.g. financial, mass, %) compared between the most restrictive thresholds for contaminants and those of mercury? (i.e. is mercury a problem? if so, a small or big problem for the industrial food sector?).
- General presentation of the organization in charge of the safety of French food (=ANSES): goals, history, organization in France.
 - Comparison(s) with that of one or another EU or non-EU country (e.g. Canada, Japan, USA, etc.).
 - Taking the example of dietary mercury, how were the thresholds determined 100, 50, 20 years ago? How is the threshold currently drawn up? Are there several and according to what parameters?
 - How is it determined that a production area or a producer meets the threshold? : determination of a sampling plan, analyses, reliability of analysts, statistics, etc.
 - How are the various operations above carried out and checked? (samples, checks, etc.)
- The global and local dynamics of mercury: where does it come from for which regions of the globe, what are the mechanisms leading to its bioaccumulation in seafood products, what are the factors favoring its bioamplification.
- Does mercury help link environmental and human health?
- What are the interactions of the « Professional/industrial » and "Administrative" sector with (young) Doctors of Science? Are there gaps and where (results, positions etc..)?

