

Promoting recognition and implementation of exposure science in Europe: First elements of a European Exposure Science Strategy 2020–2030

von Goetz, Natalie; Fantke, Peter

Published in: Journal of Exposure Science and Environmental Epidemiology

Link to article, DOI: 10.1038/s41370-022-00458-1

Publication date: 2022

Document Version Peer reviewed version

Link back to DTU Orbit

Citation (APA):

von Goetz, Ń., & Fantke, P. (2022). Promoting recognition and implementation of exposure science in Europe: First elements of a European Exposure Science Strategy 2020–2030. *Journal of Exposure Science and Environmental Epidemiology*, *3*2, 497-498. https://doi.org/10.1038/s41370-022-00458-1

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.

- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

1	Editorial
2	
3	Promoting recognition and implementation of exposure science in Europe: First
4	elements of a European Exposure Science Strategy 2020–2030
5	
6	Natalie von Goetz ^{1,2*} , Peter Fantke ³
7	
8	¹ Federal Office of Public Health (FOPH), Schwarzenburgstrasse 157, 3003 Berne,
9	Switzerland
10	² Swiss Federal Institute of Technology (ETH), Rämistrasse 101, 8092 Zurich, Switzerland,
11	nvgoetz@ethz.ch
12	³ Quantitative Sustainability Assessment, Department of Environmental and Resource
13	Engineering, Technical University of Denmark, 2800 Kgs. Lyngby, Denmark
14	
15	* Corresponding author
16	
17	
18	Exposure science is one of the key disciplines needed to evaluate chemical and biological
19	risks as part of human and environmental health assessments, in support of a transition to
20	sustainable societies in Europe and worldwide. In an effort to identify the needs, challenges
21	and opportunities for advancing recognition, policy uptake and funding of exposure science
22	in Europe, the Europe Regional Chapter of the International Society of Exposure Science
23	(ISES Europe), newly-founded in 2017, started a bottom-up process to identify key priority
24	areas for a European Exposure Science Strategy [1]. By involving experts from occupational,
25	consumer, general population and environmental exposure assessment, this strategic effort is
26	based on a broad understanding of exposure scientists across the whole landscape and across
27	various sectors. This includes experts and stakeholders from academia, the private sector and
28	regulatory authorities, such as the European Chemicals Agency (ECHA), the European Food
29	Safety Authority (EFSA), and the European Commission's Joint Research Centre (JRC), as
30	well as international institutions, such as the United Nations Environment Programme (UN
31	Environment). Such cross-sector involvement assures a broad stakeholder support and
32	implementation of the different strategy elements and their proposed action plans.
33	

34 Dedicated working groups were formed under the auspices of ISES Europe for the identified 35 key priority areas on education and terminology, policy uptake, exposure models, exposure 36 data and human biomonitoring [1]. These working groups reviewed the state-of-science, 37 discussed critical elements for advancing the field, and developed a concrete action plan for 38 each respective key priority area. In this ongoing process, ISES Europe acted as both a motor 39 and a catalyst for the dialogue between different sectors that in Europe are still separated by 40 regulatory silos and a lack of adequate knowledge exchange platforms around exposure 41 science [1].

42

43 The present Special Topic introduces the first elements as output of developing an

44 overarching European Exposure Science Strategy, and includes the finalized specific

45 strategies and proposed action plans for the two key priority areas on policy uptake [2] and

46 exposure models [3]. The Special Topic is complemented by a glossary on exposure-related

47 terminology as one of the corner stones of consolidating exposure science as a scientific field

48 [4]. Specific strategies and concrete action plans for all other key priority areas are currently

49 being finalized and will be published in scientific journals.

50

51 The role of ISES Europe in the ongoing development of the strategy shows the utmost 52 importance of scientific societies for promoting recognition and identity of a scientific field. 53 By furthering the identity of the field, scientific and political recognition will be achieved, 54 which is key to develop sustainable funding mechanisms for exposure science research and 55 development. Thus, the European Exposure Science Strategy will help to promote and advance exposure science in Europe, and may serve as blueprint for establishing strategies on 56 57 exposure science worldwide, fully aligned with the global ambitions for a sustainable 58 development.

- 59
- 60 Acknowledgements:

61 The authors would like to thank the ISES Europe board past and present, the working group
62 chairs and working group members for their contributions to the European Exposure Science
63 Strategy.

64

65 Data Availability Statement

- 66 Not applicable
- 67

68			
69	Author Contribution Statement		
70	NvG provided a first draft, PF and NvG finalized together		
71			
72	Conflict of interest		
73	The authors declare that they have no conflict of interest.		
74			
75	References		
76 77 78	(1)	Fantke P, von Goetz N, Schlüter U, Bessems J, Connolly A, Dudzina T et al. Building a European exposure science strategy. J. Expo. Sci. Environ. Epidemiol. 2020; 30: 917-924. DOI:10.1038/s41370-019-0193-7	
79 80 81 82	(2)	Bruinen de Bruin Y, Franco A, Ahrens A, Morris A, Verhagen H, Kephalopoulos S et al. Enhancing the use of exposure science across EU chemical policies as part of the European Exposure Science Strategy 2020–2030. J. Expo. Sci. Environ. Epidemiol. 2022. DOI:10.1038/s41370-021-00388-4	
83 84 85 86	(3)	Schlüter U, Meyer J, Ahrens A, Borghi F, Clerc F, Delmaar C et al. Exposure modelling in Europe: How to pave the road for the future as part of the European Exposure Science Strategy 2020–2030. J. Expo. Sci. Environ. Epidemiol. 2022. (<i>in revision</i>)	
87 88 89	(4)	Heinemeyer G, Connolly A, von Goetz N, Bessems J, Bruinen de Bruin Y, Coggins MA et al. Towards further harmonization of a glossary for exposure science – an ISES Europe statement. J. Expo. Sci. Environ. Epidemiol. 2022. DOI:10.1038/s41370-021-	

90

00390-w

91