

Capacity Building by Advancing Exposure Science Education and Training

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Councillor 'Exposure Science Capacity Building, Training & Education'



Background

- Chair of the Education, Training & Communication WG since 2018
- Published the framework
- Ambitions for developing exposure science curriculums






Environment International

Volume 168, October 2022, 107477



Framework for developing an exposure science curriculum as part of the European Exposure Science Strategy 2020–2030

[Alison Connolly](#)^a  , [Paul T.J. Scheepers](#)^b, [Marie A. Coggins](#)^a, [Theo Vermeire](#)^c,
[Martie van Tongeren](#)^d, [Gerhard Heinemeyer](#)^e, [James W. Bridges](#)^f, [Susanne Bredendiek-Kämper](#)^g,
[Yuri Bruinen de Bruin](#)^{h 1}, [Anne Clayson](#)^d, [Johannes Gerding](#)ⁱ, [Josephine McCourt](#)^j, [Jan Urbanus](#)^k,
[Susana Viegas](#)^l, [Natalie von Goetz](#)^{m n}, [Maryam Zare-Jeddi](#)^c, [Peter Fantke](#)^o  

Exposure Science Field Study Manager

Product Safety

Greensboro, NC

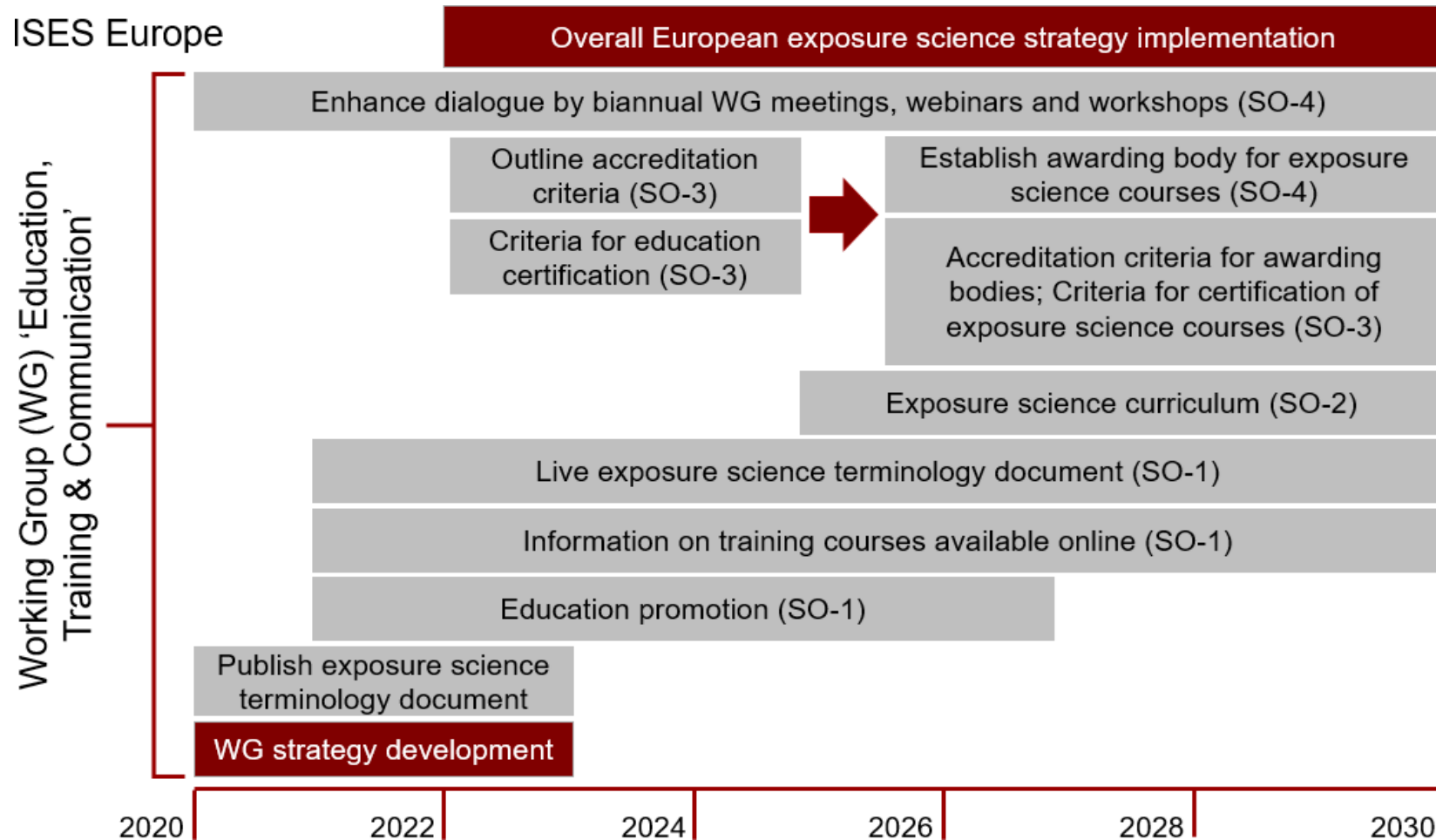
Syngenta Crop Protection

Job description

BAuA a
safety a

Job Description

: field of



Strategic Objectives for Advancing Education, Training and Communication in Exposure Science in Europe

SO 1 *Exposure Science promotion*

- Formal acknowledgement and recognition of Exposure Scientists

SO 2 *Exposure science Curriculum*

- Formal Education and Training

SO 3 *Recognition for exposure science courses*

- Accreditation
- Certification

SO 4 *To enhance dialogue among exposure scientists*

- In person meetings
- Webinars/workshops



ISES Europe (Europe Regional Chapter of the International Society of Exposure Science)

Together, we build a European Exposure Science Strategy

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Exposure Platform

Interested in learning more or further your education in the field of exposure science? [Check out these courses](#) that are offered in the Europe region.

Exposure platform

[Data & Information Sharing](#)[Funding and Jobs](#)[Exposure science training courses](#)

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Towards further harmonization of a glossary for exposure science—an ISES Europe statement

[Gerhard Heinemeyer](#) , [Alison Connolly](#), [Natalie von Goetz](#) , [Jos Bessems](#), [Yuri Bruinen de Bruin](#), [Marie A. Coggins](#), [Peter Fantke](#), [Karen S. Galea](#), [Johannes Gerding](#), [John D. Hader](#), [Henri Heussen](#), [Stylianos Kephelopoulos](#), [Josephine McCourt](#), [Paul T. J. Scheepers](#), [Urs Schlueter](#), [Martie van Tongeren](#), [Susana Viegas](#), [Maryam Zare Jeddi](#) & [Theo Vermeire](#)

Journal of Exposure Science & Environmental Epidemiology **32**, 526–529 (2022) | [Cite this article](#)

1627 Accesses | **7** Citations | **14** Altmetric | [Metrics](#)



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Learning Outcomes

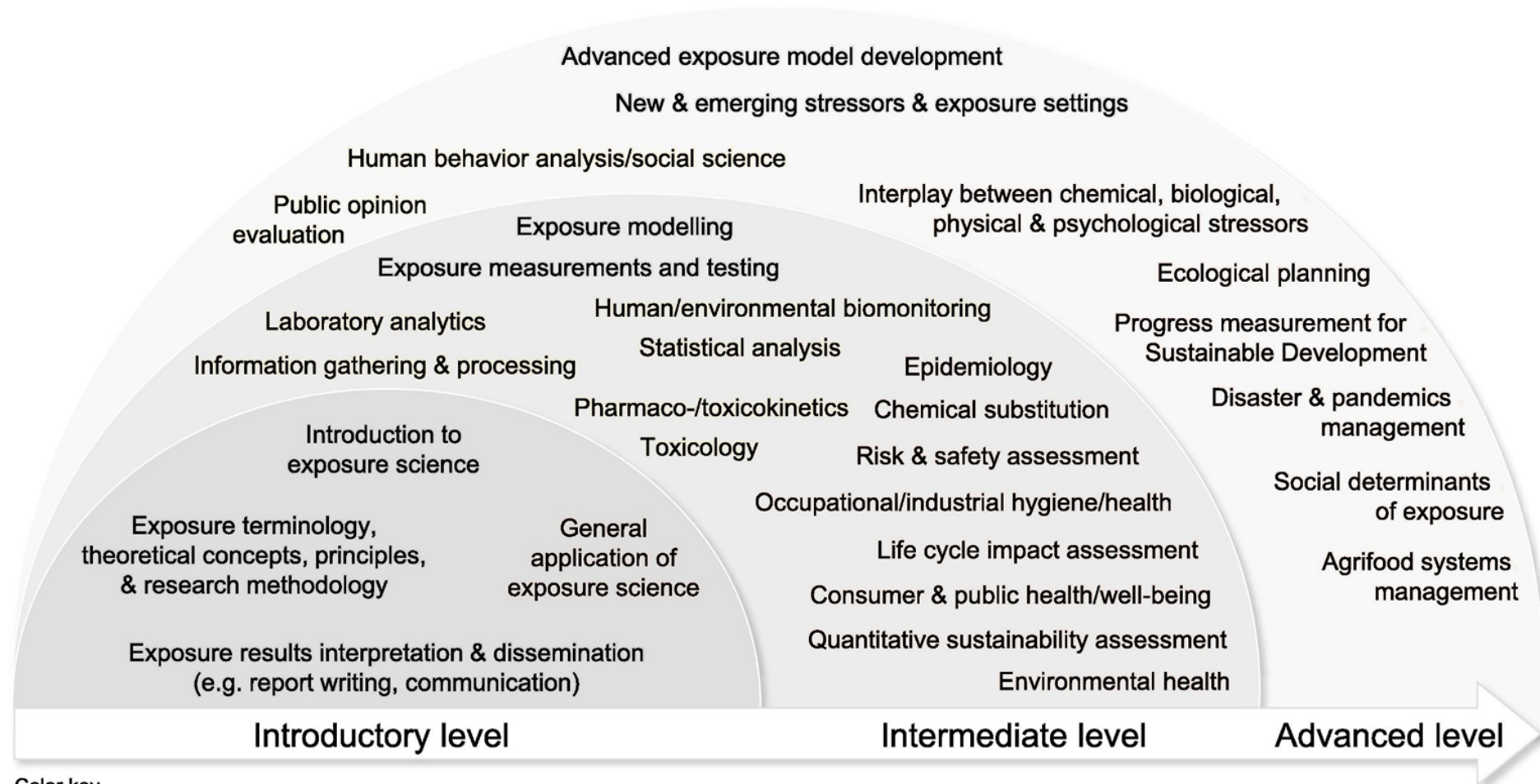
A. Connolly et al.

Environment International 168 (2022) 107477

Table 1
Learning outcomes for exposure science curricula at each qualification level are defined by the European qualifications framework (EQF). I: introductory or general short courses. P: specialised short courses or continual professional development courses.

	Levels as per the European Qualification Framework (EQF)					
	1–4: I	1–4: P	5	6	7	8
Expected career pathways	Various	Specialised professional qualifications ⁽¹⁾	Technician	Supervisory role	Junior management role/early stage researcher	Academia/Post-doctoral researcher/ Senior management

- 1. Knowledge
- 2. Skills
- 3. Competence



Color key

Skills: Generic exposure science theory & analysis | Methodologies relevant for exposure science | Specific contexts & practical exposure application fields

Future ambitions



Outline a Master's level curriculum



Adoption of the courses within higher education institutions in Europe

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Exposure Science Certification



Support awareness



Support creation of an (ES) identity



Establish a recognized profession



Improve the competency of Exposure Scientists



Introduce a quality control system

Define the domain expertise for Exposure Science

Professional qualification program

*Establish a training repository
(self-study course)*

Professional portfolio

MCQ Exam

Accreditation of Exposure Science courses

*Develop an example
curriculum*

Graduates obtain professional qualification

Continuous recertification

Future ambitions

Develop
professional
accreditation

- Acknowledgement for exposure scientists

Develop
certification for
exposure science
courses

- Ensure harmonisation and minimum standard

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Save the Date

ISES Europe Workshop 2024

March 19 – 21, 2024

Location: German Federal Institute for Risk Assessment
Diedersdorfer Weg 1, 12277 Berlin

ises-europe.org/events/ises-europe-2024



Future Strategic Objectives

Masters in Exposure Science Curriculum

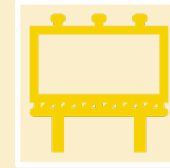
Certification of exposure science courses

Accreditation of exposure scientists

Discussions



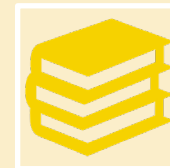
Skills/knowledge and competencies required?



Marketing – is the demand there?



What courses are you seeking (i.e. part-time/full-time)



Graduates with defined career pathways

Developing Educational Programmes



Market Research / Identify Programme Potential



Develop a Programme Proposal (Micro Credential / Professional Diploma) to commence the suite of programmes



University Approval Process



Develop the learning materials



Make available for Student Registration and Run the Micro Credential / Professional Diploma



Depending on the success of the Micro Credential / Professional Diploma, consider taking the next step to repeat the process but for a Masters Level Programme

Possible First Steps

Micro-Credential Embedded in a Professional Diploma

Develop a 10 ECTS online module 'Introduction to Exposure Science' – a stand-alone Micro-Credential at Level 9 (NFQ)(Autumn Trimester).

A stand-alone micro-credential or can be included in a Professional Diploma.

Develop a 10 ECTS blended online module 'Occupational & Environmental Exposure' (Spring Trimester).

Both modules together are a recognised Professional Diploma at the Postgraduate (NFQ)

Example Programme

UCD Certificate in Safety and Health at Work

Introducing workers from all working backgrounds to the core principles of OSH at Level 7 (NFQ)

20 ECTS – across 3 modules (2 trimesters – Sep' to April)

~ 70 – 90 students per year

Delivered via Virtual Learning Environment

2-3 Hours of Learning per Week plus time for assessment

Synchronous and Asynchronous Online Learning with optional in-person full-day workshops (4 days across the whole 8-month programme)

Building Relationships

Developed relationships with key organisations – public & private sector
e.g. Health & Safety Authority, ESB, Irish Defence Forces, Irish Rail, Irish Prison Service

Each year, send 5 – 10 employees to undertake our Certificate

These organisations also contributed to guest lecturing on our programmes to demonstrate the impact OSH education can have in their sector while also providing practical professional expertise and experience to our students.

Supporting the Development of Programmes



Input from Industry – What Are Your Needs



Commitment to sending Employees to undertake the programme so that the University sees the potential and the financial viability



When the Programme is Available for student registration – directing employees to undertake the programme as part of their CPD



Industry showcases how employees they have sent to the programme shaped and enabled their industries potential – advertise the programme through their networks

Thank you! Questions?

Want to know more or
become ISES Europe member?

X: @ISES4EU

Website: <http://iseseurope.org>

Facebook:

<http://facebook.com/ISESEUROPE>

