



UK Health
Security
Agency

Human environmental health in the UK: Five strategic questions

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General Comments - not focused on flame retardants



Weight of Evidence (Q2 & 4)

- New methods
- Screening
- Work with Chem Industry
- UK REACH



SSbD (Q1)

- What & why?
- Life cycle
- Innovation
- UK REACH



Prioritisation (Q3)

- Strategy in silos!
- Criteria
- UK Stakeholders



Public Awareness (Q5)

- Constant effort
- Strategies in many areas of work
- UKHSA website

Strengthening the Human Environmental Health Research and Policy Interface in the UK

- Training programs in environmental health research and policy need to be established both in British universities and through regulatory agencies in the UK
- Science continuously evolves, both as to methodologies and understanding. 21st century science needs to be utilized as well as guidelines studies if we are going to protect the public from environmental harms.
- A weight of evidence approach needs to be utilized in policy decisions including balancing of the hazards and risks with the benefits.

Linda S. Birnbaum, PhD
Scientist Emeritus and Former Director,
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Scholar in Residence, Duke University

Three Bullet Point Reactions to Challenges for 13th June Workshop

Andy Stirling, Science Policy Research Unit, University of Sussex

1: Do not succumb to fragmentation and 'divide and rule'

Given that the only rationale responses involve substitution, the most strategically and tactically effective ways to address any particular chemical hazard (like FRs) is in the context of a regulatory framework that more comprehensively addresses all hazards.

2: Hard-won achievements on precaution need defending

By highlighting inadequacy of risk-based approaches under uncertainty, many forms of the Precautionary Principle are the most important bulwark against (Brexit-reinforced) industry-driven efforts to weaken chemical protection. This needs explicit defence.

3: Progress relies on alliances around integrative approaches

Against backdrop of globalising industry pressures, post economic crash, post Brexit, post covid, (post) Ukraine war pressures make environmental health protection position more difficult than ever, requiring broad alliances environment / health / consumer around integrative themes like precaution across different product sectors.

HEH Roundtable

Andreas Kortenkamp
Brunel University London



Questions and (some) answers

- 40,000 chemicals – chemical-by-chemical evaluation unsustainable:
Group-wise approaches to assessment (QSAR, read-across, analogue-approach, category-approach etc.)
- Exploit mixture risk assessments for prioritisations: **Drivers of mixture risks**
- **Ring-fenced, targeted funding for research**

Delyth Fetherston-Dilke

1. Aim to change the UK furniture fire regs to a smouldering cigarette test (as in US/EU)
2. How? Open letter to MP....petition.....TV news.....BSI group.... need a figurehead.
3. Need from today? A UK Scientific Consensus signed by UK scientists on flame retardants and their health, environmental and fire safety concerns.

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Open letter at: www.delythupholstery.com/sustainability



MRC response

- Understand the interactions with human physiology → links/risks to human disease → solution/policy
- Environmental exposures – human health at the forefront
- Environment and health research in the UK – more researchers or better networking?

Key Strategic Questions – Frank Kelly

1. How do we encourage products to be designed in a way that minimises the use of chemicals that pose, or may turn out to pose, risks to human health?

Encouragement (legisilisation), that leads to the use of sustainable, low toxicity materials and chemicals, should provide an economic benefit to the manufacturer (penalise the bad and encourage the good).

2. How do we efficiently keep abreast of the changing evidence base for human health risks posed by chemical substances?

4. How do we ensure the full breadth of evidence is given proportionate weight in identifying chemical substances that may present risks to human health?

This cannot be brokered by any one group, or even country – the size of the challenge (number of chemicals) is too large. Generating accurate, transparent, timely summaries of the current state of, and changes to, the evidence relating to any given substance can only be achieved by an overarching international body (under UNEP or WHO). Importantly, it needs to have an inclusive scope that covers all chemical and waste and with this approach, consistency of evidence relating to any given substance can be achieved.

5. How do we promote a general, robust culture of human environmental health awareness and research in the UK?

A key underlying problem in the UK is that academics working at the science-policy interface are undervalued, in that, their work is under-recognised and rewarded, in comparison too if they use their time to publish papers or write another successful grant application (i.e. as typified by REF metrics).

Evidence & evidence synthesis

- Stages of development and use at which evidence needs to be collated and mapping robust evidence standards
- Guidance for study conduct and reporting
- Role of registries, and AI/automation in collating relevant research literature

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Reaction to general themes:

- **Funding** for academic research on chemical exposures, which looks at “real-life” exposure is notoriously difficult to obtain, need a better approach to make sure evidence is balanced
- **Current toxicity assessment-** can this be improved? Is it relevant to the complexities of long term human exposure?
- Increase **public awareness** without causing panic

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Roundtable on Human Environmental Health Research

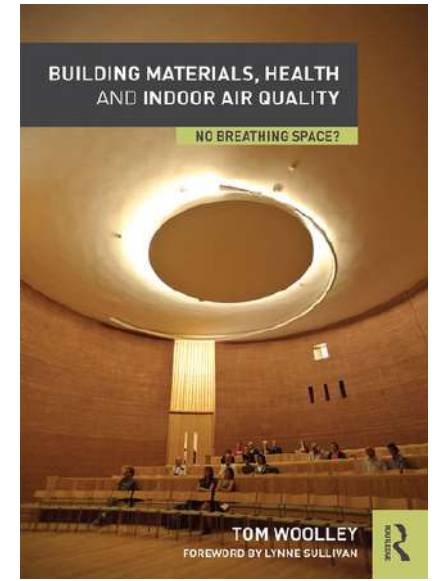
Tom Woolley June 2022 tom.woolley@btconnect.com

June 14 2022 , 5 years since the Grenfell fire

Fires are becoming more common and do not seem to be constrained by flame retardants. Smoke toxicity is not regulated. Natural non-flammable materials are not supported in mainstream building. The profits of plastic foam insulation manufacturers have gone up since Grenfell. We can build with non-toxic non flammable materials such as hempcrete that survive fires.



Study to evaluate the need to regulate within the Framework of Regulation (EU) 305/2011 on the toxicity of smoke produced by construction products in fires
Final Report



The Crowood Press

NEW BOOK



As the need to respond to climate change becomes a serious requirement for all building projects, so too does our understanding of how these bio-based and renewable materials can help to reduce carbon emissions. With convincing evidence that natural materials work as well as, if not better than, conventional materials, this helpful guide offers an outline of many of the materials, products and methods of construction that are available, equipping readers with confidence to create healthy, ecological homes.

With 200 colour photos, this comprehensive book will be of interest to self-builders, home-owners, architects, environmentalists who want to reduce the impact of construction on the planet

Tom Woolley is an architect, educator and builder who has campaigned for the wider use of green and low impact building materials since editing the Green Building Digest in the 1990s. Having taught in the UK and worldwide, he helped develop the sustainable architecture Masters course at the Centre for Alternative Technology in Wales. Working with Rachel Bevan Architects, Tom has helped to establish hempcrete construction, and is Chair of the UK Clean Air Steering Committee and a consultant to ECOS, the Environmental Coalition on Standards.

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www.crowood.com

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#1 Improved Product Design - Will Safe and Sustainable by Design chemicals be sufficient to support better product design? What about essential use?

2-4 Keeping on top of evidence - Harnessing the power of machine learning for systematic literature search, screening and annotation; Adverse Outcome Networks as organizing frameworks to deal with groups of chemicals; recognize the dynamic nature of evidence (e.g. in LCA tools)

5 Culture - Build (transdisciplinary) capacity, multi-stakeholder cooperation, recognise social inequalities (distributional nature of risks and impacts). Fund it and they will come!



Ways forward

- ▶ **Addressing the lack of adequate information on the chemical content of products and minimising the content of certain chemicals in products**
- ▶ **Enhancing regulatory environment as to allow for better compilation of evidence and use of new approach methodologies**
- ▶ **More efficient grouping of chemicals in risk assessment**