

Hazardous Substances Advisory Committee

Minutes of 27th meeting: 10th November 2020

1. Welcome and approval of the draft agenda

- 1.1 The Chair, Professor Chris Collins, welcomed all attendees to the meeting (see annex A).
- 1.2 The draft agenda was approved with no additional items added under any other business.

2. Policy updates for HSAC

- 2.1 Stavros Georgiou (HSE) provided an update on the transition period following EU Exit indicating that industrial chemicals will now be regulated under UK REACH which replaces EU REACH and a UK Agency operated by HSE will be responsible for regulation. The UK agency is developing equivalent functions of the EU REACH Risk Assessment Committee and Socioeconomic Assessment Committee. They will set up independent scientific advice via the 'REACH scientific expert call', to access a broad range of experts to help form its recommendations and to provide targeted advice. Experts may be drafted as necessary into a case team to help the UK agencies draft their positions. Experts will also sit on a 'challenge panel' who will review agency opinions and provide recommendations and endorsements.
- 2.1. Keith Bailey (Defra) provided an update on the Environment Bill where provisions have been put into the bill to allow us to continue to amend REACH. Safeguards have been incorporated allowing any amendments to REACH being consistent with overarching aims and principles of the Bill.
- 2.2 Simon Johnson (Defra) provided an update relating to EU Exit and REACH where EU legislation is currently being transferred into UK law using three statutory instruments coming into force on 1st January 2021. There will be a phased approach for substances within the UK market depending on tonnage used and hazardous nature of the substance. The IT system for registration has been highly tested and will be ready for use at the end of the transition period.
- 2.3 Nick Cartwright (EA) provided an update on the Water Framework Directive. This will continue to be implemented and the data management plan is being updated. He reported that the Environment Bill has narrow powers to enable the Secretary of State to update the future list of substances which are identified as priority substances based on the latest scientific evidence. Consultation will be required with experts and other stakeholders who may be affected before changes are made. This is a necessary requirement to enable standard and substances to be updated in the light of new

science. 2.3 Kay Williams (Defra) gave an update on the Beyond 2020 Framework for Chemicals and Waste and provided updates on several related conventions. The covid-19 pandemic has caused delays in negotiations as key meetings have been postponed. Face to face meetings of the UN Environment Assembly, Basel Convention and Convention on Biological Diversity have been postponed. However, there have been successes with virtual meetings. The UK is co-chairing a virtual working group for the Beyond 2020 Framework. The OECD's Environment, Health and Safety Programme on chemical safety has been the exemplar for working virtually.

3. Chemicals Strategy: Update and Call for Evidence

3.1 Chloe Meacher and Gintare Masiulyte presented on the Chemical Strategy Call for Evidence where their commitment stands to develop a Chemical Strategy as highlighted in the 25 Year Environment Plan. To ensure they are focusing on the right policies, they will release a call for evidence to agree on UK and Devolved Administrations priorities. The Call for Evidence aims to understand what role various stakeholders should play in managing chemical safety.

3.2 HSAC were commissioned to provide a review of the draft Call for Evidence to help the Chemicals Strategy team produce the final version for publication (HSAC/2020-11-02).

ACTION: HSAC to provide written feedback on the Call for Evidence by mid- December, followed by a possible ad hoc meeting to discuss the feedback.

4. Report from OECD Advanced Materials meetings

4.1 Gary Hutchinson recently attended two conferences held by the OECD focusing on grouping of Advanced Materials. He provided a summary and presented recent findings from the conferences.

4.2 Gary highlighted the eight clusters of Advanced Materials that have been developed, highlighting that some Advanced Materials may belong to more than one group. The discussions were used to build a foundation on how to structure the field of Advanced Materials considering the incredible complexity of these materials. The next step will focus on which Advanced Materials need to be prioritized and the OECD have discussed dimensions of relevance to prioritize these materials. These materials are also being considered in terms of circularity and how they can be created safely and with sustainable by design in mind.

4.3 The committee posed the following questions, which were further discussed:

- Are we considering the process that the materials go through to be produced which can lead to unintentionally added compounds?
- Should we identify which advanced materials are used in agriculture and which are deposited in wastewater effluents to determine which ones will be discharged into the environment as a first stage of prioritisation?

- Should we shift our focus away from “knowledge gaps to be filled” to “uncertainties to be managed”?

4.4 It was noted that the same questions on advanced materials were also raised by the Royal Commission on Environmental Pollution during their discussion of nanomaterials

ACTION: An HSAC member is requested attend the next Advanced Materials conference in May 2021 and report back to the committee.

5. A UK National Action Plan for Pesticides update

5.1 Caroline Nicholls (Defra) provided an update on the UK National Action Plan for Pesticides (NAP). This was developed by Defra and the Devolved Administrations and sets how the government will support all users of pesticides in developing sustainable methods of plant protection over the next five years and This will place integrated pest management at the heart of a more holistic approach. Defra has a legal obligation to consult on the drafted action plan under the Plant Protection Products Sustainable Use Directive Regulations.

5.2 The draft NAP aims to minimize the impacts of pesticides to human and environmental health and has been submitted for ministerial approval. After approval, a stakeholder consultation period will begin, lasting for 12 weeks. The team is interested to hear feedback on research and evidence gaps and also feedback on improving metrics and indicators on reducing risks of pesticides.

5.3 HSAC were commissioned to provide a response to the NAP consultation (HSAC/2020-11-03)

ACTION: HSAC are requested to provide a coordinated response to the NAP consultation for submission to the Defra team.

6. Scoping collaborative work on copper between the Expert Committee on Pesticides and HSAC

6.1 Following discussion with the Expert Committee on Pesticides (ECP), copper has been identified as an area for collaboration with HSAC.

6.2 David Williams presented the current regulatory context for the use of copper as a plant protection product where there have been a number of applications for emergency authorisations.

6.3 Mick Whelan (ECP) presented a summary of UK risk assessment for copper based plant protection products which includes Copper based products used as fungicides. Copper based pesticides are not currently authorised in the UK except in emergency authorizations as there are unacceptable risks of use. These include risks to groundwater, bees, birds and mammals. It was highlighted that levels of copper will

accumulate with regular use which could increase risk and that authorizations are not usually granted.

6.4 Andrew Johnson (HSAC) presented on the relative risks of copper in UK rivers and trends over time in copper concentrations and biodiversity. He indicated that focusing work on Copper as an element has good rationale.

6.5 The committee had an in-depth discussion of the impacts of copper in rivers and soils on wildlife. It was noted that copper is a data rich chemical, it has been linked to wildlife impacts in some areas and that the issue is complicated by multiple sources, including from mining and industrial emissions. There was particular concern about its bioavailability. It was also appreciated that copper concentrations are reducing in rivers in many areas and it was questioned whether we have already won the battle with this contaminant. However, changing risk in the future due to climate change should be considered. The links to human health were also discussed and it was questioned whether the committees could link up with the Committee on Toxicology to investigate copper intake from drinking water and food/crops and their toxicity.

6.6 It was agreed by the committee that copper is a priority chemical for further consideration and there should be further investigation of copper concentrations in the environment.

Action: The HSAC and ECP Chairs will exchange emails with the Defra team to consider on how to take this item forward. They will then draft ideas to be sent to both committees.
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7. Prioritisation and Early Warning System for chemicals in the environment

7.1 Lorraine Hutt (Environment Agency) provided an update on the Prioritization and Early Warning System (PEWS) for Chemicals in the Environment as the goal is to capture impacts of emerging substances.

7.2 The 25 Year Environment plan includes a commitment to explore options to consolidate monitoring and horizon scanning data. EA has developed and tested a system to better understand our monitoring data and inform future priorities for evaluation and substance control so that the UK can make the most effective use of information and identify emerging issues and chemicals.

7.3 An overview of PEWS was provided showing the steps that are involved, the decision making taking place, and which signalling data is used. Nominations are collected and fed into the system, with over 600 signals currently being used as a part of this system. Once signals are collected, they are sifted and prioritized based on their level of concern (exposure, hazard, risk, confidence in risk, all contributes to priority).

7.4 HSAC were requested to comment on the PEWS concept and provide advice for where the EA can source credible data and how the committee can routinely be engaged with PEWS to provide nominations for chemicals of emerging concern.

- 7.5 The committee welcomed and strongly supported the work conducted so far on this initiative focusing on the evaluation of individual substances. It was considered an important tool for the Environment Agency to help protect the environment from adverse impacts of chemicals. The methods required for prioritisation and early warning are different in that prioritisation may occur with a large pool of data, whilst early warning would potentially work with less. It was noted that there has been a history of early warnings being ignored and attempts made to discredit the data of those who have raised the issues. There may be roles for the use of bioassays, particularly of wastewater, and non-targeted screening methods within PEWS.
- 7.6 The committee also suggested to monitor high ranking journals in the field as the issue of early warning is a hot topic in environmental science. Monitoring the publications of a few scientists that are active in this field will also provide insight on emerging chemicals.
- 7.7 One issue that was raised by HSAC was that PEWS used a screening method filtering out if the chemical was used in the UK. Global “use” of chemicals should be considered as chemicals can travel to the UK via environmental processes or illegal importation.
- 7.8 The committee asked that the EA seek further input on PEWS from multiple stakeholders including health and environmental NGO’s, academics, research councils and other government departments and agencies.
- 7.9. The success of the application of the Delphi Method to conduct horizon scanning for emerging threats to biodiversity by Prof Bill Sutherland of the University of Cambridge was discussed. It was felt that this could be applied to chemicals.
- 7.10 The committee highlighted that new policies and the development of new processes may lead to unintended consequences and new emerging risks. Examples included the shift to biodegradable plastics containing unintentionally added substances and the rise of advanced materials.

Action: HSAC will produce a short paper of recommendations for the Environment Agency team.

8. HSAC Horizon Scanning: Discussion of the publication “Ice Core Record of Persistent Short-Chain Fluorinated Alkyl Acids: Evidence of the Impact from Global Environmental Regulations”.

- 8.1 Mike Depledge raised this new publication as a topic for discussion. The paper was identified short chain per-fluoroalkylcarboxylic acids (PFCAs) in two Arctic ice cores. These chemicals are highly persistent and toxic and are produced in the atmosphere from the oxidation of the chemicals manufactured to replace chlorofluorocarbons (CFCs) as a result of the Montreal Protocol. As such they are an example of “regrettable substitution” and an unanticipated consequence of regulatory action.
- 8.2 The committee queried how we test materials that change in the environment and break down into or are converted into more problematic compounds. Acute toxicity tests are

limiting, so how do we re-create a test to artificially reproduce results and what tests would be useful for regulators?

- 8.3 The committee also indicated that per-fluorinated compounds have a history of causing environmental issues and there are still derivatives that escape regulation. There is a need to consider when a chemical is replaced if the replacement is equally or more disadvantageous. It was considered that regulators are behind the curve of industry innovation and some committee members questioned why the use of these per-fluorinated chemicals is being granted by regulators at all given the history of problems and the persistence association with the strong carbon-fluorine bond.
- 8.4 It was discussed whether there are any statistics on the use of per-fluorinated compounds, if they are being used regularly and in what quantities. It may be difficult to obtain toxicology data on these materials as data could be confidential.
- 8.5 Per-fluorinated compounds should be looked at from a national/international level and REACH has made considerable progress. From a regulatory perspective, a substance-by-substance assessment is not feasible and there is a need to incorporate New Approach Methodologies (NAMs) and grouping or read across methods. The concept of Essentiality i.e. what is necessary for or critical for functioning of society, was considered important when thinking about the application of these chemicals.
- 8.6 It was felt that per-fluorinated chemicals should be kept on the HSAC agenda. It was suggested that the Chair contact Derek Muir of the Canadian Environment Agency as a leading expert on these chemicals to consider what work the committee could do that would be beneficial. An industry body or association should also be engaged.

Action: HSAC Chair to contact Derek Muir to discuss if there is anything HSAC can do regarding these chemicals from a regulatory or scientific point of view. A Trade Association will also be contacted.

9. AOB and Secretariat updates

Previous HSAC Chair Prof Stephen Holgate was recently knighted. Chris Collins will draft letter of congratulations on behalf of HSAC to recognise this achievement.

Annex A

List of attendees:

HSAC Members

Professor Christopher Collins (Chair)

Professor Michael Depledge

Professor John Sumpter
Professor Andrew Johnson
Professor Susan Owens
Professor Gary Hutchison
Professor Peter Matthiessen
Professor Tamara Galloway
Professor Richard Murphy

HSAC Secretariat

Chris Green	Defra – Chemicals, Pesticides and Hazardous Waste Team
Fatima Nasser	Defra – Chemicals, Pesticides and Hazardous Waste Team
Robert Jones	Defra – Chemicals, Pesticides and Hazardous Waste Team

Officials

Ruth Coward	Defra – Chemicals, Pesticides and Hazardous Waste Team
Gintare Masiulyte	Defra – Chemicals, Pesticides and Hazardous Waste Team
Kay Williams	Defra – Chemicals, Pesticides and Hazardous Waste Team
Chloe Meacher	Defra – Chemicals, Pesticides and Hazardous Waste Team
Caroline Nicholls	Defra – Chemicals, Pesticides and Hazardous Waste Team
Keith Bailey	Defra – Chemicals, Pesticides and Hazardous Waste Team
David Williams	Defra – Chemicals, Pesticides and Hazardous Waste Team
Simon Johnson	Defra – Chemicals, Pesticides and Hazardous Waste Team
Lorraine Hutt	Environment Agency
Mark Sinton	Environment Agency
Nick Cartwright	Environment Agency
Pippa Curtis-Jackson	Environment Agency
Helen Wilkinson	Environment Agency
Ovnair Sepai	Public Health England
Emily Butcher	Public Health England
Olivia Osborne	Food Standards Agency
Martin Williams	Welsh Government
Janet Sheridan	Department of Agriculture, Environment and Rural Affairs, Northern Ireland

Observers

Camilla Alexander-White	Royal Society of Chemistry
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William Cushley	Chair, Expert Committee on Pesticides
Dave Spurgeon	Expert Committee on Pesticides
Mick Whelan	Expert Committee on Pesticides
Geoff Brighty	ReNew ELP