

Supplementary information:

## An academic researcher's guide to increased impact on regulatory assessment of chemicals

Marlene Ågerstrand<sup>1\*</sup>, Anna Sobek<sup>1</sup>, Karl Lilja<sup>2</sup>, Maria Linderoth<sup>2</sup>, Lina Wendt-Rasch<sup>3</sup>, Ann-Sofie Wernerson<sup>4</sup>, Christina Rudén<sup>1</sup>

<sup>1</sup> Department of Environmental Science and Analytical Chemistry (ACES), Stockholm University, SE-106 91 Stockholm, Sweden.

<sup>2</sup> Swedish Environmental Protection Agency, SE-106 48 Stockholm, Sweden.

<sup>3</sup> Swedish Chemicals Agency (KemI), SE-172 13 Sundbyberg, Sweden.

<sup>4</sup> Swedish Agency for Marine and Water Management (SwAM), SE-404 39 Göteborg, Sweden.

\* Corresponding author: [marlene.agerstrand@aces.su.se](mailto:marlene.agerstrand@aces.su.se), +46 8 16 40 21.

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- **Table S1.** Examples of chemical legislations with publicly available assessment information.
- **Table S2:** Examples of scientific committees, chemical assessment institutions, and open public consultations for chemicals regulation.
- **Table S3:** Examples of publically available databases relevant for assessments of chemicals.

**Table S1.** Examples of chemical legislations with publicly available assessment information.

Scope	Legislation	Guidance document	Regulatory decisions	Examples of information publicly available	Link to publicly available information
<b>Industrial chemicals and pesticides (human health and environmental effects)</b>	Classification, Labelling and Packaging (CLP) Regulation (EG) 1272/2008	E.g. Guidance on the Application of the CLP Criteria Guidance to Regulation (EC) No 1272/2008 on classification, labelling and packaging (CLP) of substances and mixtures.	Harmonized classification and labelling for physical, human health, environmental and additional hazards.	Classification and labelling information. Dossiers for harmonized classifications and labelling.	<a href="http://echa.europa.eu/information-on-chemicals">http://echa.europa.eu/information-on-chemicals</a>
<b>Industrial and consumer chemicals (human health and environmental effects) Cosmetic substances (environmental effects)</b>	REACH Regulation (EC) 1907/2006	E.g. Guidance on information requirements and chemical safety assessment. Part A: Introduction to the Guidance document.	Identification of Substances of Very High Concern (SVHC), restriction and authorization of substances.	Assessment information, management decisions, scientific opinions, summaries of studies, etc.	<a href="http://echa.europa.eu/information-on-chemicals">http://echa.europa.eu/information-on-chemicals</a>
<b>Biocidal products (human health and environmental effects)</b>	The Biocidal Product Regulation (BPR) (EU) 528/2012	E.g. Guidance on the Biocidal Products Regulation Volume IV: Environment Part A: Information Requirements.	Market EU approvals or non-approvals of active ingredients.	List of approved active substances.	<a href="http://echa.europa.eu/information-on-chemicals">http://echa.europa.eu/information-on-chemicals</a> <a href="https://circabc.europa.eu/">https://circabc.europa.eu/</a>
<b>Plant Protection Products (human health and environmental effects)</b>	Plant Protection Products (PPP) Regulation (EC) 1107/2009	E.g. Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products.	Market EU approvals or non-approvals of active ingredients. Products approved nationally.	EU Pesticide database, Assessment information, EFSA scientific opinions, summaries of studies, risk assessment, decisions etc.	<a href="http://ec.europa.eu/food/plant/pesticides">http://ec.europa.eu/food/plant/pesticides</a> <a href="http://dar.efsa.europa.eu/dar-web/provision">http://dar.efsa.europa.eu/dar-web/provision</a>
<b>Human pharmaceuticals (environmental effects)</b>	Community code relating to medicinal products for human use. Directive 2001/83/EC	Guideline on the ERA of medicinal products for human use (EMA/CHMP/SWP/4447/00)	Approved environmental risk assessment.	Summary of ERA in the European public assessment reports for products.	<a href="http://www.ema.europa.eu/ema/index.jsp?curl=pages/medicines/landing/epar_search.jsp&amp;mid=WC0b01ac058001d124">http://www.ema.europa.eu/ema/index.jsp?curl=pages/medicines/landing/epar_search.jsp&amp;mid=WC0b01ac058001d124</a>
<b>Veterinary</b>	Community code relating to	Environmental impact	Market approval.	Summary of ERA in the	<a href="http://www.ema.europa.eu/e">http://www.ema.europa.eu/e</a>

<b>pharmaceuticals (environmental effects)</b>	veterinary medicinal products. Directive 2001/82/EC	assessment (EIAS) for veterinary medicinal products — Phase I & II (CVMP/VICH/592/1998 CVMP/VICH/790/2003)		European public assessment reports for products.	<a href="http://ma/index.jsp?curl=pages/medicines/landing/vet_epar_search.jsp&amp;mid=WC0b01ac058001fa1c">ma/index.jsp?curl=pages/medicines/landing/vet_epar_search.jsp&amp;mid=WC0b01ac058001fa1c</a>
<b>Cosmetics ingredients (human health effects)</b>	Cosmetics Regulation (EC) 1223/2009	The SCCS'S notes of guidance for testing of cosmetic ingredients and their safety evaluation.	Market approval. Lists of banned and restricted chemicals.	Scientific opinions. Lists of banned and restricted chemicals.	<a href="http://ec.europa.eu/growth/sectors/cosmetics_en">http://ec.europa.eu/growth/sectors/cosmetics_en</a>
<b>Persistent Organic Pollutants (human health and environmental effects)</b>	The Stockholm Convention on Persistent Organic Pollutants	E.g. Handbook for effective participation in the work of the Committee.	Listing of chemicals of which the parties are required to prohibit and/or eliminate production and use, import and export.	Reports and decisions.	<a href="http://chm.pops.int/TheConvention/POPsReviewCommittee/ReportsandDecisions/tabid/3309/Default.aspx">http://chm.pops.int/TheConvention/POPsReviewCommittee/ReportsandDecisions/tabid/3309/Default.aspx</a>
<b>Airborne pollutants (human health and environmental effects)</b>	The Convention on Long-range Transboundary Air Pollution	E.g. guidance documents on best available techniques to control emissions.	Listing of chemicals.	Reports and decisions.	<a href="http://www.unece.org/env/lrtap/welcome.html">http://www.unece.org/env/lrtap/welcome.html</a>
<b>The receiving environment (human health via the aquatic environment and environmental effects)</b>	The Water Framework Directive 2000/60/EC and The Marine Strategy Framework Directive 2008/506/EC	Technical guidance for deriving environmental quality standards.	Environmental Quality Standards (WFD) and Threshold Values (MSFD).	Substance dossiers established on European and national levels (WFD) and fact sheets and threshold values on regional sea convention levels (MSFD).	<a href="http://ec.europa.eu/environment/water/water-framework/index_en.html">http://ec.europa.eu/environment/water/water-framework/index_en.html</a> <a href="http://ec.europa.eu/environment/water/water-dangersub/lib_pri_substances.htm">http://ec.europa.eu/environment/water/water-dangersub/lib_pri_substances.htm</a> <a href="http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm">http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm</a>

**Table S2:** Examples of scientific committees, chemical assessment institutions, and open public consultations for chemicals regulation.

Scientific Committee /Platform	Responsible authority	Description	Link to publicly available information, open consultations, and call for data
Scientific Committee on Consumer Safety (SCCS)	DG SANTE <sup>1</sup> , European Commission.	Provides opinions and statements on health and safety risks of non-food consumer products and services.	<a href="http://ec.europa.eu/health/scientific_commitees_en">http://ec.europa.eu/health/scientific_commitees_en</a>
Scientific Committee on Health, Environment and Environmental Risks (SCHEER) Former committee: Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR)	DG SANTE <sup>1</sup> , European Commission.	Provides opinions and statements on health and environmental risks related to pollutants in the environmental media and other biological and physical factors or changing physical conditions. It also provides opinions on life cycle environmental assessment. It shall also address health and safety issues related to the toxicity and eco-toxicity of biocides.	<a href="http://ec.europa.eu/health/scientific_commitees_en">http://ec.europa.eu/health/scientific_commitees_en</a>
Scientific Committee on Occupational Exposure Level (SCOEL)	DG EMPL <sup>2</sup> , European Commission.	Provides recommendations on occupational exposure limits for chemicals in the workplace.	<a href="http://ec.europa.eu/social/main.jsp?catId=148&amp;intPageId=684&amp;langId=en">http://ec.europa.eu/social/main.jsp?catId=148&amp;intPageId=684&amp;langId=en</a>
European Commissions public consultations	European Commission	The European Commission's access point to consultations and feedback opportunities.	<a href="https://ec.europa.eu/info/consultations_en?field_consultation_status_value=open&amp;field_core_policy_areas_target_id_selective=All">https://ec.europa.eu/info/consultations_en?field_consultation_status_value=open&amp;field_core_policy_areas_target_id_selective=All</a>
Working Group Chemicals under the Common Implementation Strategy for the Water Framework Directive	DG Environment <sup>3</sup> , European Commission.	Prioritize and derive Environmental Quality Standards under the Water Framework Directive.	<a href="http://ec.europa.eu/environment/water/water-dangersub/lib_pri_substances.htm">http://ec.europa.eu/environment/water/water-dangersub/lib_pri_substances.htm</a>
Committee for Risk Assessment (RAC)	European Chemicals Agency	Prepares opinions related to the risks of chemicals to human health and the environment in the REACH and CLP processes.	<a href="https://echa.europa.eu/about-us">https://echa.europa.eu/about-us</a> <a href="https://echa.europa.eu/web/guest#portlet_publicconsultations_WAR_echarevsubstanceportlet">https://echa.europa.eu/web/guest#portlet_publicconsultations_WAR_echarevsubstanceportlet</a>
Committee for Socio-economic Analysis (SEAC)	European Chemicals Agency	Prepares the opinions related to the socio-economic impact of possible legislative actions on chemicals in the following REACH processes.	<a href="https://echa.europa.eu/about-us">https://echa.europa.eu/about-us</a> <a href="https://echa.europa.eu/web/guest#portlet_publicconsultations_WAR_echarevsubstanceportlet">https://echa.europa.eu/web/guest#portlet_publicconsultations_WAR_echarevsubstanceportlet</a>
Biocidal Products Committee (BPC)	European Chemicals Agency	Prepares the opinions related to several Biocidal Product Regulation processes.	<a href="https://echa.europa.eu/about-us">https://echa.europa.eu/about-us</a> <a href="https://echa.europa.eu/web/guest#portlet_publicconsultations_WAR_echarevsubstanceportlet">https://echa.europa.eu/web/guest#portlet_publicconsultations_WAR_echarevsubstanceportlet</a>

EFSA Scientific Committee and Panels	European Food Safety Authority	The committee develop harmonized risk assessment methodologies. The panels perform scientific assessments related to pesticides, food additives and food contact materials.	<a href="http://www.efsa.europa.eu/en/science/scientific-committee-and-panels">http://www.efsa.europa.eu/en/science/scientific-committee-and-panels</a> <a href="http://www.efsa.europa.eu/en/calls/consultations">www.efsa.europa.eu/en/calls/consultations</a>
Persistent Organic Pollutants Review Committee (POPRC)	Secretariat of the Stockholm Convention	Reviews proposal for listing of chemicals in the Stockholm Convention.	<a href="http://chm.pops.int/TheConvention/POPsReviewCommittee/OverviewandMandate/tabid/2806/Default.aspx">http://chm.pops.int/TheConvention/POPsReviewCommittee/OverviewandMandate/tabid/2806/Default.aspx</a>
Expert groups at the European Medicines Agency	European Medicines Agency	Proposals for new guidelines for ERA of pharmaceuticals	<a href="http://www.ema.europa.eu/ema/">www.ema.europa.eu/ema/</a>
International Agency for Research on Cancer (IARC) Monographs Working group	World Health Organization.	Identify environmental factors that can increase the risk of human cancer.	<a href="http://www.iarc.fr/">http://www.iarc.fr/</a>
Integrated Risk Information System (IRIS)	US Environmental Protection Agency	Identify and characterize health hazards of chemicals found in the environment.	<a href="https://cfpub.epa.gov/ncea/iris2/atoz.cfm">https://cfpub.epa.gov/ncea/iris2/atoz.cfm</a>

<sup>1</sup> The Directorate-General for Health and Food Safety. <sup>2</sup> The Directorate-General for Employment, Social Affairs and Inclusion. <sup>3</sup> The Directorate-General for Environment.

**Table S3:** Examples of publically available databases relevant for assessments of chemicals.

Database	Description	Link
Adverse Outcome Pathway Wiki	Contains information about different Adverse Outcome Pathways. Developed by European Commission and U.S. Environmental Protection Agency.	<a href="https://aopwiki.org/wiki/index.php/Main_Page">https://aopwiki.org/wiki/index.php/Main_Page</a>
EMPODAT	Contains geo-referenced monitoring and bio-monitoring data on emerging chemicals. Developed by the NORMAN network.	<a href="http://www.norman-network.net/empodat/">www.norman-network.net/empodat/</a>
EASIS	Contain information for 428 substances suspected of having the potential for endocrine disruption. Developed by the European Commission.	<a href="https://eurl-ecvam.jrc.ec.europa.eu/databases/eas_database">https://eurl-ecvam.jrc.ec.europa.eu/databases/eas_database</a>
ECOTOX	Contain ecotoxicity data. Developed by the US Environmental Protection Agency.	<a href="https://cfpub.epa.gov/ecotox/">https://cfpub.epa.gov/ecotox/</a>
ETOX	Contains aquatic and terrestrial ecotoxicity data, and guidance-/limit values. Developed by the German Environmental Agency.	<a href="http://webetox.uba.de/webETOX/public/search/test/open.do">http://webetox.uba.de/webETOX/public/search/test/open.do</a>
IPChem	Contains chemical monitoring data. Developed by the European Commission.	<a href="https://ipchem.jrc.ec.europa.eu/RDSIdiscovery/ipchem/index.html">https://ipchem.jrc.ec.europa.eu/RDSIdiscovery/ipchem/index.html</a>
NORMAN Massbank	Contains mass spectra of unknown or provisionally identified chemicals. Developed by the NORMAN network.	<a href="http://massbank.eu/MassBank/">http://massbank.eu/MassBank/</a>
Pharmaceuticals in the environment	Contains Measured Environmental Concentrations (MEC) of human and veterinary pharmaceuticals. Developed by the German Environmental Agency.	<a href="http://www.umweltbundesamt.de/en/database-pharmaceuticals-in-the-environment-0">www.umweltbundesamt.de/en/database-pharmaceuticals-in-the-environment-0</a>
TOXNET	Several databases containing data on toxicology, hazardous chemicals, environmental health, and toxic releases. Developed by the US National Institutes of Health, Health & Human Services.	<a href="https://toxnet.nlm.nih.gov/">https://toxnet.nlm.nih.gov/</a>
WikiPharma	Contains ecotoxicity data for human pharmaceuticals. Developed by the MistraPharma research programme.	<a href="http://www.wikipharma.org">www.wikipharma.org</a>