



<https://www.globalchemicaltransparency.org/>

Global minimum transparency standard for chemicals of concern in materials and products

- a keystone tool for achieving sustainable natural resource management and achieving the Sustainable Development Goals

Chemicals in the value chains of materials/products – systemic challenges

- Chemicals play a key role for production/extraction of natural resources and in turning them into higher value products.
- Global consumption of materials, is expected to double over the next four decades, with annual waste generation projected to increase 70% by 2050.
- Approximately half of total greenhouse gas emissions come from resource extraction and processing.
- Value chains are often multi-national and covered by multiple national legislations/jurisdictions.

Chemicals in the value chains of materials/products – solutions to the systemic challenges

- Chemicals that are safe by design
- Substitutions to harmless or least harmful chemicals for all stages of the life cycles of materials/products
- Improve material resource efficiency + reduce consumption
- Global harmonization of standards



Mercury are in many types of products

- Batteries
- Switches and relays
- Fluorescent lamps
- Other electronic and non-electronic products
- Plastic
- Toys

} Transparency ?

- **Cosmetics**
- **Pesticides and paints**

} GHS + ingredient list

Chemicals in the value chains of materials/products – supply chain transparency



- Identify products with hazardous chemicals.
- Pinpoint product components with hazardous chemicals.
- Support safe substitution work.
- Support decisions for non-toxic sustainable design.
- Support informed decisions for reuse and recycling of waste into toxic-free secondary raw materials.

Initiatives for providing supply chain transparency and safer products



- Inter-governmental systems, e.g. the voluntary UNEP Chemicals in Products Programme (<https://www.unep.org/explore-topics/chemicals-waste/at-whwe-do/emerging-issues/chemicals-products>)
- Legislative systems, e.g. the EU SCIP database for Substances of Very High Concern (<https://echa.europa.eu/sv/scip>).
- Industry internal transparency schemes, e.g. in the automotive International Materials Data System (IMDS) (<https://www.mdsystem.com/>)
- Design for Environment - governmental certification system <https://www.epa.gov/saferchoic...>
- BASTA certification system <http://www.bastaonline.se/sear...>
- The auto sector has the Global Automotive Declarable Substances List sets threshold limits of 0.1% (or lower in certain cases) (see www.mdsystem.com/index.jsp ; GADSL-Guidance- Document.pdf);
- The Cradle-to-Cradle Product Innovation Institute sets the reporting threshold at 1000 ppm (0.1%) for chemicals banned for use in Cradle-to-Cradle certified products (see www.c2ccertified.org);

Challenges for establishing transparency for chemical content



CHALLENGES

- No clear impetus for companies to join the voluntary UNEP Chemicals in Products Programme.
- The SCIP database is only regional to the EU.
- Industry transparency systems are usually only within supply chain.
- Certifications are based on multiple parallel standards and the information on the chemical composition of materials/products stays with the certifier.
- SMCs weak in resources are at disadvantage.
- For chemicals, the requirements may vary whether they are in new articles, in articles already in use or in waste. Also, requirements in different sectors, countries and regions may vary.
- Challenges from Internet trade.



Regulation and transparency of mercury containing products

- Inter-governmental systems, e.g. the Minamata Convention
- Regional legislation:

EU RoHs Directive

https://ec.europa.eu/environment/topics/waste-and-recycling/rohs-directive_en

EU Toys Directive: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02009L0048-20191118>

- Enforcement depends on countries abilities to make spot checks.
- Few companies have their own resources or impetus to make spot checks.



Advantages of a globally harmonized minimum transparency standard

- It will help countries and companies request clear information from suppliers;
- It will ensure **equality** before the law and eliminate double standards;
- It will facilitate safe recycling as waste managers will know the chemical composition of waste and thus what will be in secondary raw materials;
- It will inspire innovation and safe product design;
- It will level the playing field for companies and simplify trade.
- a step towards progressive ban of hazardous chemicals in products;
- An essential contribution to address biodiversity loss and reduce carbon footprint

What chemicals should be included in the standard?

Begin with already regulated/recognized chemicals of concern – no CBI claims should be justified

- a) Chemicals regulated in global treaties.
- b) Regulated in progressive regional legislation.
- c) Internationally recognized lists of chemicals.

What chemicals are we talking about first of all? Substances already included in global/regional agreements and internationally recognised documents

Stockholm Convention

- All flame retardants
- Additives to paints, plastic, paper, cardboard etc
- Heat exchange fluids
- Dioxins and furans
- All solvents

Basel Convention

- Inorganic and organic toxic and ecotoxic chemicals (Annex I and VIII)
- Proposed list of hazardous plastic additives.

Minamata Convention

- Native mercury
- Mercury compounds

Montreal Protocol

- 114 chlorinated and brominated compounds that have phase out plans

EU Substances of Very High Concern (SVHC)

- PBT
- vPvB
- CMR
- Chemicals of other concern, e.g. EDCs, neurotoxicants and immunotoxicants

EU RoHS Directive

- 6 hazardous substances in electrical and electronic equipment

IARC Chemicals

- Carcinogenic chemicals

Use of the
standard -
binding actions

Management of Chemicals of Global Concern should have mandatory obligations

- a) "Soft" approach: mandatory information disclosure globally on their presence in materials/products.
- b) "Hard" approach: global restrictions or bans.



Development and management

Ideally the standard should be binding from the beginning

- Following a UNEA decision, it could be investigated if any of the existing conventions would allow for the inclusion of the standard, e.g. as a protocol.
- If necessary, a dedicated multilateral instrument could be developed for the standard.
- Another option would be to create a global standard like the GHS, which is voluntary, but becomes binding once adopted into national legislation.

Milestones in a CiP work plan

- a) Milestone 1: Development of a global minimum transparency standard for chemicals of global concern.
- b) Milestone 2: Countries that include work with the global minimum transparency standard in national action plans on CiP, report materials/products for which the chemical content is disclosed in line with the standard to the Secretariat.
- c) Milestone 3: The Secretariat, or another suitable host, construct a global transparency database.

A decision from ICCM5 necessary.

Use of the
standard –
voluntary actions

For both the binding and the voluntary approach, we need

A multi-stakeholder committee:

- free from the influence of commercial interests;
- coordinated by the Inter-Organization Programme for the Sound Management of Chemicals (IOMC);
- tasked with the development of a transparency standard

Development
and management

Format of the standard

- The most stringent disclosure thresholds should be considered.
- Cross-sectoral approach.
- The standard has a living nature, updated when the underlying conventions, regional legislations and lists are updated.
- With the option to develop complementary criteria for chemicals of global concern, using a chemical group approach to respect the precautionary principle and speed up the listing of hazardous chemicals.

Data administration and distribution

- Centralized data administration in a secretariat for the multi-lateral instrument hosting the standard, similar to the arrangement for the SCIP database with the EU Chemicals Agency EHCA.
- We suggest that the information is distributed to the stakeholders that need it in the form of an electronic system, e.g. similar to the idea for an electronic “product passport” now under development in the EU. Should be a simple electronic system that, e.g., can be accessed by a cell phone so that it also works in many low and middle income countries.

How to support GMTS idea?

Parties to the global MEAs and other stakeholders should:

- recognise the link between the lifecycle management of materials and products with the sound management of chemicals inherent to materials;
- send clear and strong signals to UNEP of the importance of the GMTS idea as a keystone tool for the transformation of the economy, necessary to meet the systemic challenges causing pollution, loss of biodiversity, and contributing to climate change;
- propose resolutions to the UNEA 6 with a call for the development of a binding GMTS;
- The scientific bodies of the MEAs, progressive and responsible companies and industry associations should repeatedly highlight the benefits of the GMTS idea for addressing the systemic challenges behind pollution, biodiversity loss, and climate change.





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Webpage for the GMTS idea: <https://www.globalchemicaltransparency.org/>

Global Minimum
Transparency
Standard for hazardous
chemicals in products:
Wishful thinking or close to
reality?

Bob Diderich, OECD, 28 February 2022

Information on chemicals: we have come a long way

- Hazard and exposure
- Releases from installations
- Presence in mixtures



The next frontier: information on chemicals in articles

- Circular economy

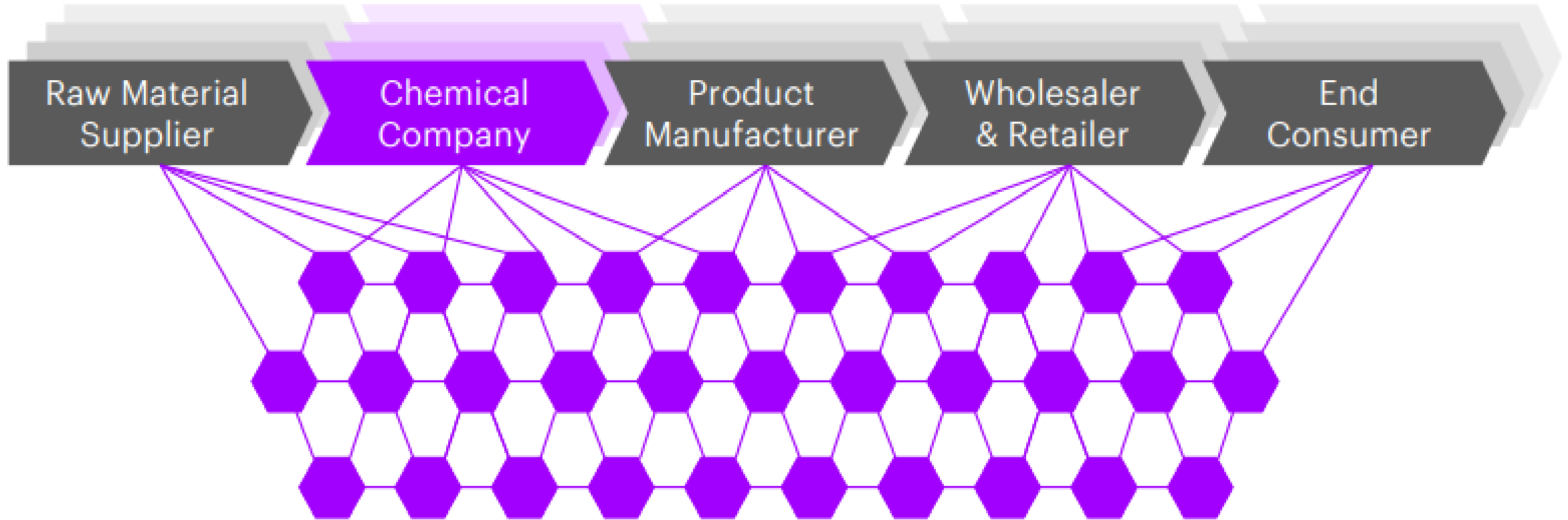


- Consumer and worker protection, e.g. firefighters



Technical feasibility

Figure 11: Blockchain network across the chemical company value chain



Hurdles

- Confidentiality claims
 - Heterogeneous sectors
 - Complex and dynamic supply chains
 - (lack of) pressure on the supply chain
 - Highly complex articles
-
- Legislative reforms

An idea whose time has come?

- Possible role of IGOs
 - Development and maintenance of electronic data transfer standard
 - Develop and maintain list of substances covered
 - Trusted third partner for data (collection, storage and) dissemination

Global Minimum Transparency Standard for Hazardous Chemicals in Materials and Products:

Building the Case

Michael Stanley-Jones
Programme Management Officer
Ecosystems Integration Branch
United Nations Environment Programme

Minamata Convention Conference of the Parties
Geneva, 10 March 2022

WHICH PRODUCTS REQUIRE CALIFORNIA PROPOSITION 65 WARNING LABELS?

California Proposition 65 Warning

WARNING: This product contains chemicals known to the State of California to cause cancer and/or reproductive harm, and birth defects or other reproductive harm.

ADVERTENCIA: Este producto contiene productos químicos reconocidos por el estado de California que provocan cáncer o daños reproductivo, defectos de nacimiento u otros daños reproductivos.

For more information: www.P65Warnings.ca.gov

California Proposition 65

- Safe Drinking Water and Toxic Enforcement Act of 1986
- List is available on-line.
- contains a wide range of naturally occurring and synthetic chemicals that are known to cause cancer or birth defects or other reproductive harm.
- These chemicals include additives or ingredients in pesticides, common household products, food, drugs, dyes, or solvents.
- Listed chemicals may also be used in manufacturing and construction, or they may be byproducts of chemical processes, such as motor vehicle exhaust.

Public perceptions

A **Eurobarometer survey on chemical safety** carried out from 26 November to 5 December **2016**, consisting of face-to-face interviews with **27 929 citizens** from all **EU Member States**:

- Two in three respondents said that if they asked whether a product contains particularly hazardous chemicals, the seller was required by law to provide them with this information
- Almost half of respondents thought that chemical products were safe for human health and the environment
- NGOs considered that **REACH*** could deliver a higher level of protection of human health and environment, but that its **potential had not been fully developed**
- In particular, they pointed at “**poor quality of registration dossiers and insufficient information on safe use of chemicals** flowing through the supply chain and for consumers”
 - – *Synopsis report summarising the feedback received in the context of the Chemicals Strategy for Sustainability* – European Commission Staff Working Document 14.10.2020
- **90% Europeans are worried about the impact of chemicals on the environment;**
- **84% Europeans are worried about the impact of chemicals present in everyday products on their health**

* Registration, Evaluation, Authorization and Restriction of Chemicals

UNEP Chemicals in Products (CiP) Programme

- UNEP Chemicals in Products (CiP) Programme welcomed by the SAICM Governing Body in 2015 (at the International Conference on Chemicals Management – ICCM4) as a **SAICM Emerging Policy Issue**
- CiP is an ongoing activity at UN Environment Programme (UNEP) on the policy and practical facets of access to information on the chemicals contained in everyday products.
- The activities focus on increasing the availability and access to the information actors need – throughout the life-cycle of products – so that they can properly manage those products and the chemicals in them

HazMix Regulations Repository

The UNEP Chemicals in Products (CiP) Programme facilitates multi-stakeholders' access to worldwide information on regulations, through a link to the database of Global Chemical Regulations developed by Chemreg.net – <https://chemreg.net/un-landing-page/>

ChemReg.net is a resource available to the chemicals' regulatory community. Known as the **HazMix Regulations Repository**, "This database is provided free of charge and supported by the chemical industry community."

At the time of its launch, ChemReg.net database included over 16,000 global regulations from 122 countries covering a wide range of scope. This grew to a database of over **26,000 global regulations from 133 countries**

EU Circular Economy Action Plan (2015)

EU revised [action plan for circular economy](#)

#EUGreenDeal

54 actions were adopted or implemented by 2019

SUSTAINABLE PRODUCT POLICY FRAMEWORK

- Designing sustainable product, incl. enabling remanufacturing and high-quality recycling
- Empowering consumers and product buyers
- mobilizing the potential of digitalization of product information...
- Circularity in production processes

3.5 Textiles

“make products fit for a climate-neutral, resource-efficient and circular economy”

- applying the new sustainable product framework ... to textiles, including developing ecodesign measures to ensure that textile products are fit for circularity, **ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals**, and empowering business and private consumers to choose sustainable textiles and have easy access to re-use and repair services
- boosting the sorting, **re-use and recycling of textiles**, including through innovation, encouraging industrial applications and regulatory measures such as extended producer responsibility
- Priority will be given to addressing **product groups identified in the context of the value chains** featuring in this Action Plan, such as electronics, ICT and textiles but also furniture and **high impact intermediary products** such as steel, cement and **chemicals**

4.2. Enhancing circularity in a toxic-free environment

- EU chemicals policy and legislation, in particular REACH, encourage a shift to 'safe-by-design chemicals' through the **progressive substitution of hazardous substances** to better protect citizens and the environment
- Co-operate with industry to progressively develop **harmonised systems to track and manage information on substances** identified as being of very high concern and other relevant substances, in particular those with chronic effects, and substances posing technical problems for recovery operations present along supply chains

Chemicals in Clothing



UN ALLIANCE
FOR SUSTAINABLE
FASHION

- Pesticides of concern in agriculture (e.g. cotton)
- **Chemicals in fabrics** (e.g. Heavy metals (e.g lead, chromium VI, cadmium, antimony...), Brominated Flame Retardants)
- Toxic chemicals inhibit Circularity and Recyclability, foster Waste Dumping

8000 synthetic chemicals are used in the fashion manufacturing process, this includes carcinogens and hormone disruptors

UN Alliance for Sustainable Fashion (2019)
<https://unfashionalliance.org>

SUSTAINABILITY AND CIRCULARITY IN THE TEXTILE VALUE CHAIN: GLOBAL STOCKTAKING
United Nations Environment Programme (2020)

Public Consultation on the Options to Address the Interface between Chemicals, Products and Waste

An open public consultation run from 23 July to 29 October 2018 and in total 461 replies and 40 position papers were received

Feedback on four main issues identified by the European Commission were sought and summarised in a **report published in March 2019**

- Issue 2: Substances of concern in recycled products
 - Stakeholders raised concerns regarding the issue of legacy substances

Chemicals Strategy for Sustainability

Towards a toxic-free environment (2020)

The European Commission published a chemicals strategy for sustainability on 14 October 2020

#ChemicalsStrategy #EUGreenDeal

European Commission launches **public consultation on REACH*** Regulation revision in all EU languages

[Open public consultation](#) 22 January 2022 to **15 April 2022**

* Registration, Evaluation, Authorization and Restriction of Chemicals

Among the 7 Key actions

- Banning the most harmful chemicals in consumer products - allowing their use only where essential
- Promote EU's resilience of supply and sustainability of critical chemicals
- Play a **leading role globally** by championing and promoting high standards and not exporting chemicals banned in the EU

What benefits would GMTS provide?

Advocates of GMTS would address the **problem of transparency**

- Transparency of the most hazardous chemicals contents in materials and products irrespective of country through **harmonized global disclosure**
- along the **whole product lifecycle**
- by defining a **minimum level of information disclosure**
- should ideally be **legally binding**

Pathways

- Voluntary vs. Legally binding is not Either/OR, but Both

- GMTS as implementation of Coalition for Digital Environmental Sustainability (CODES) Action Plan

Accelerating Action towards A Sustainable Planet in the Digital Age
to align the digital revolution with the sustainability transformation

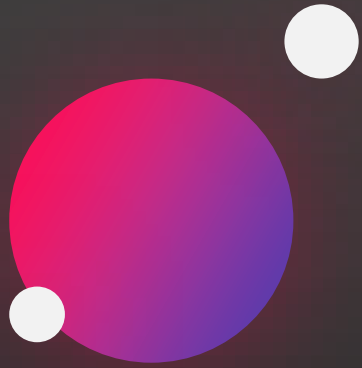


Thank you!

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Disclaimer: The views expressed here are those of the author and do not represent those of the Centre for Sustainability Standards and Education (CeSSE), Circular Research Foundation or the United Nations Environment Programme



Global Minimum Transparency Standard: Mercury and Mercury in Products

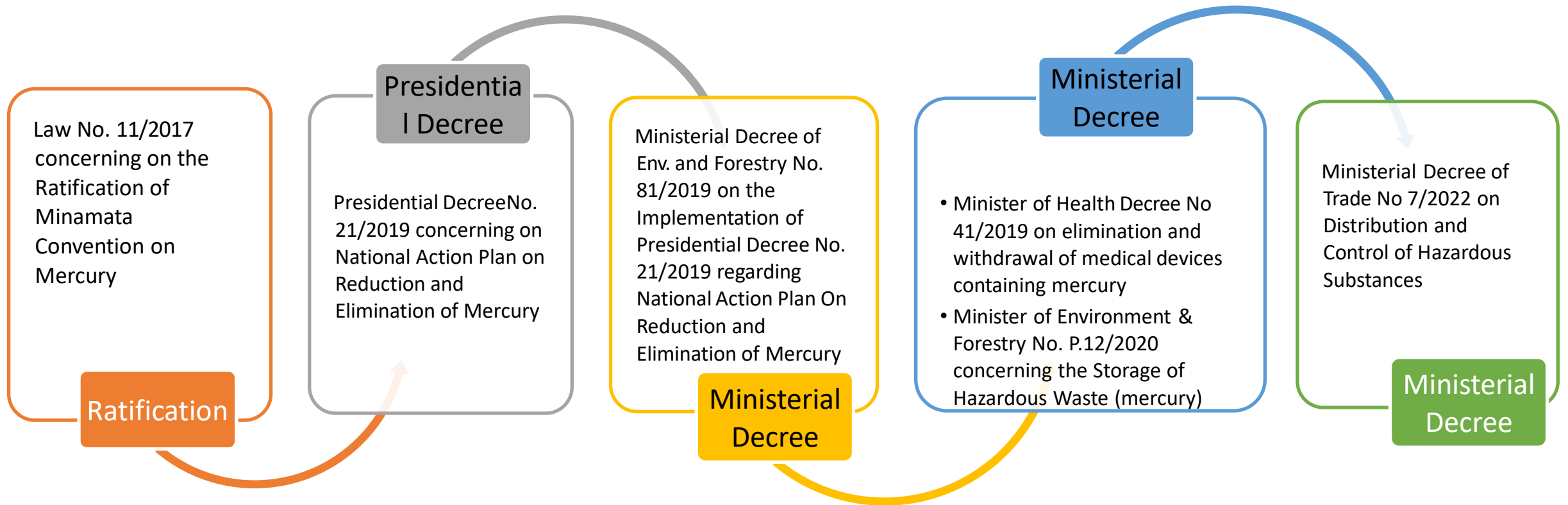
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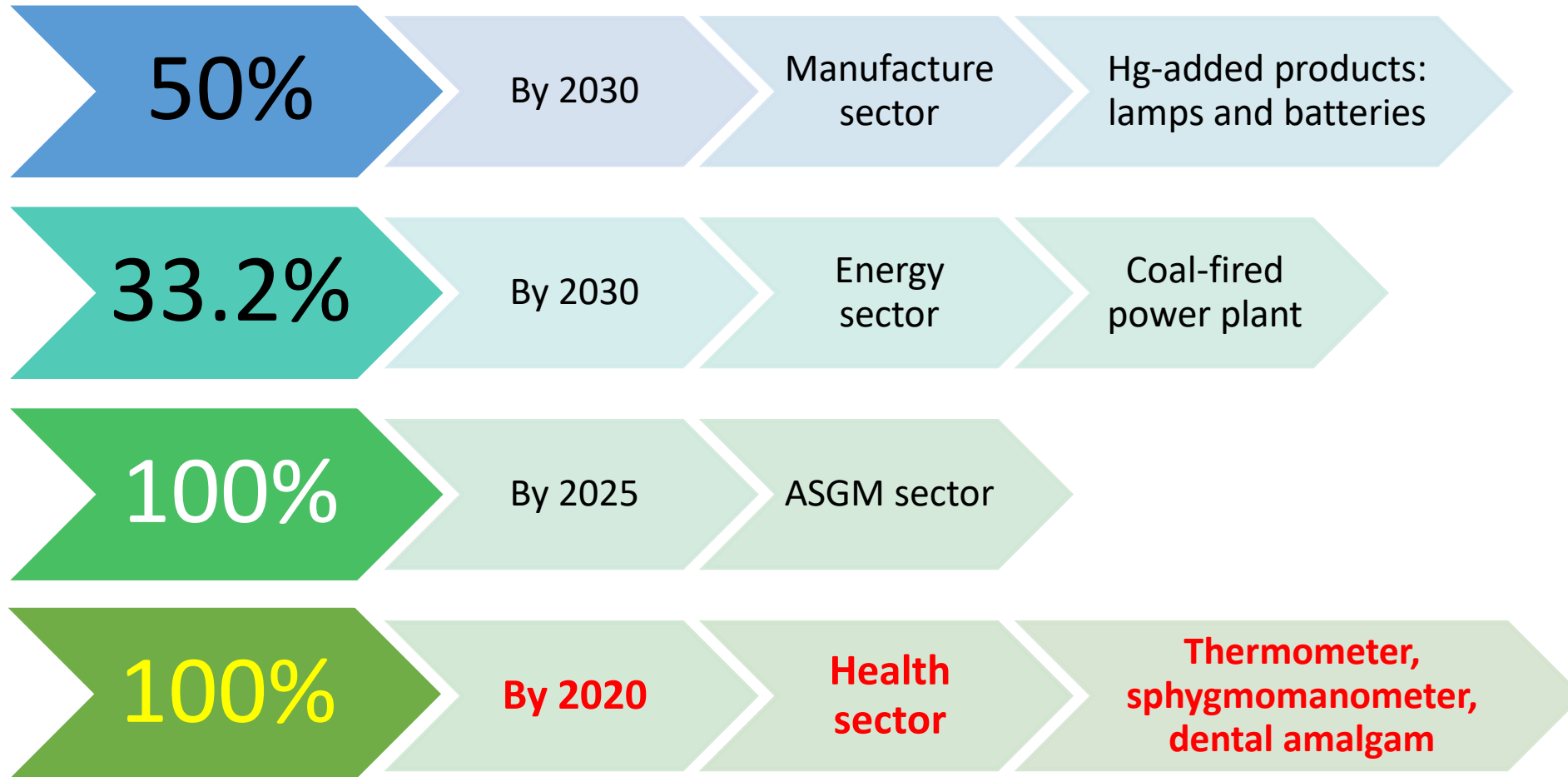


Regulations of Mercury Management in Indonesia



National Action Plan to Reduce and Eliminate Mercury

Baseline: 2018



Supply chain transparency of mercury

- Identify the source of mercury production (mines, smelters, commercial platforms)
- Regulatory framework to prohibit:
 - cinnabar mining
 - smelting process, and
 - sale (incl. export) of elemental mercury in products



National standards



The Indonesian National Standard or SNI is applicable mainly for NEW products (no SNIs for products made from recycled materials) and some SNIs are available for design or methodology.

The voluntary standards usually valid for 4-5 years.

After that could be mandatory, depending on the enforcement issued by a relevant Ministry/Department.

For essential products, the standards will be available since the beginning of the product launched or introduced nationwide.

Labelling: can be done by self-declare, certification by a government institution or by a third party

Challenges

- Laboratory to test toxic chemicals content in products made from recycled materials
- Capacity of certification agency/third party
- Verification of self-declare labelling need to be checked regularly





Thank you

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