

Guidance to the Template Framework to

Self-Reflect and Assess the main impacts of the CSS measures

The template and following template example include a numbering system (first column), that provides explanations hereunder.

1. **Identification:** please identify the **METAL** covered (**incl. its compounds**). At least one sheet needs to be completed for the metal and the metal compounds. Although in many cases it may be recommended to complete a template for the metal and one for metal compounds.
2. **Properties of concern:** please list here the properties of concern related to the metal and/or compounds. Only those presumed as coming under the scope of the CSS require listing: Substances classified as Carcinogens, Mutagens or toxic to Reproduction (CMR) (Cat.1), Endocrine Disruptors (ED), Persistent, Bio-accumulative and Toxic Chemicals (PBT), Very Mobile, Specific Target Organ Toxicity (STOT), Chronic Human Health (HH) or Environment (ENV). Please note that not all of those correspond with classification entries under the Classification Labelling and Packaging Regulation (CLP).

Important ! : expected future classifications may cause an immediate effect when covering an endpoint and use on which a generic ban via a restriction was adopted.

3. **Market band in the EU:** the collective volume of the metal put on the market in the EU (manufacturing and import) is most relevant information to assess the impact in a qualitative way. Either this can be listed as a relative precise volume (1.200.000 t/y) or as a tonnage band (between 1 and 2 mio t/y).
4. **SVHC eligible properties:** the CSS measures for “SVHC eligible properties” are different than for other hazard endpoints of concern. Identifying the relevant hazard criteria is therefore critical as a first step to estimate the impact of the CSS measures. Please list here the SVHC eligible hazard properties for the metal and its inorganic compounds: CMR (Cat.1) or respiratory sensitizer, based on the present SVHC criteria in REACH.
5. **Essential use assessment:** essential uses for an MHC can be exempted from the general ban (by a restriction) for their use in consumer products. The Commission has proposed to use the Montreal protocol definition for that purpose which indicates that such chemicals *are only allowed if their use is necessary for health, safety or is critical for the functioning of society and if there are no alternatives that are acceptable from the standpoint of environment and health*. This definition is different from the present “technical and economic feasibility” used under the Authorisation scheme, given it does not include any economic considerations, nor does it allow a use that is non-essential under this definition. It is therefore useful to critically define what sub-uses from a use are essential or non-essential cfr. the Montreal protocol definition. This should help us to define a collective view on a strategy in response to the ‘essential use concept’, i.e. whether to advocate on the definition and/or on limiting the areas of application of the concept.”
6. **Essential – non-essential use:** you are invited in the first column to list your *main user applications* for the metal and/or compounds, whereby it is recommended to remain sufficiently broad in the categories. In the second (green) and third (orange) columns indicate essential and non-essential sub-uses. The 4th column contains a drop-down whereby you can select the reason why you consider (a) sub-use(s) essential.



Please recognise that a *generic ban is proposed for a MHC unless the use is essential and there is no feasible alternative available*. The last column therefore solicits your medium to longer term perspectives on (an) alternative(s) that can be generally applied (e.g. substitution of Cr6+ by Cr3+ for plating in 5 to 10 years).

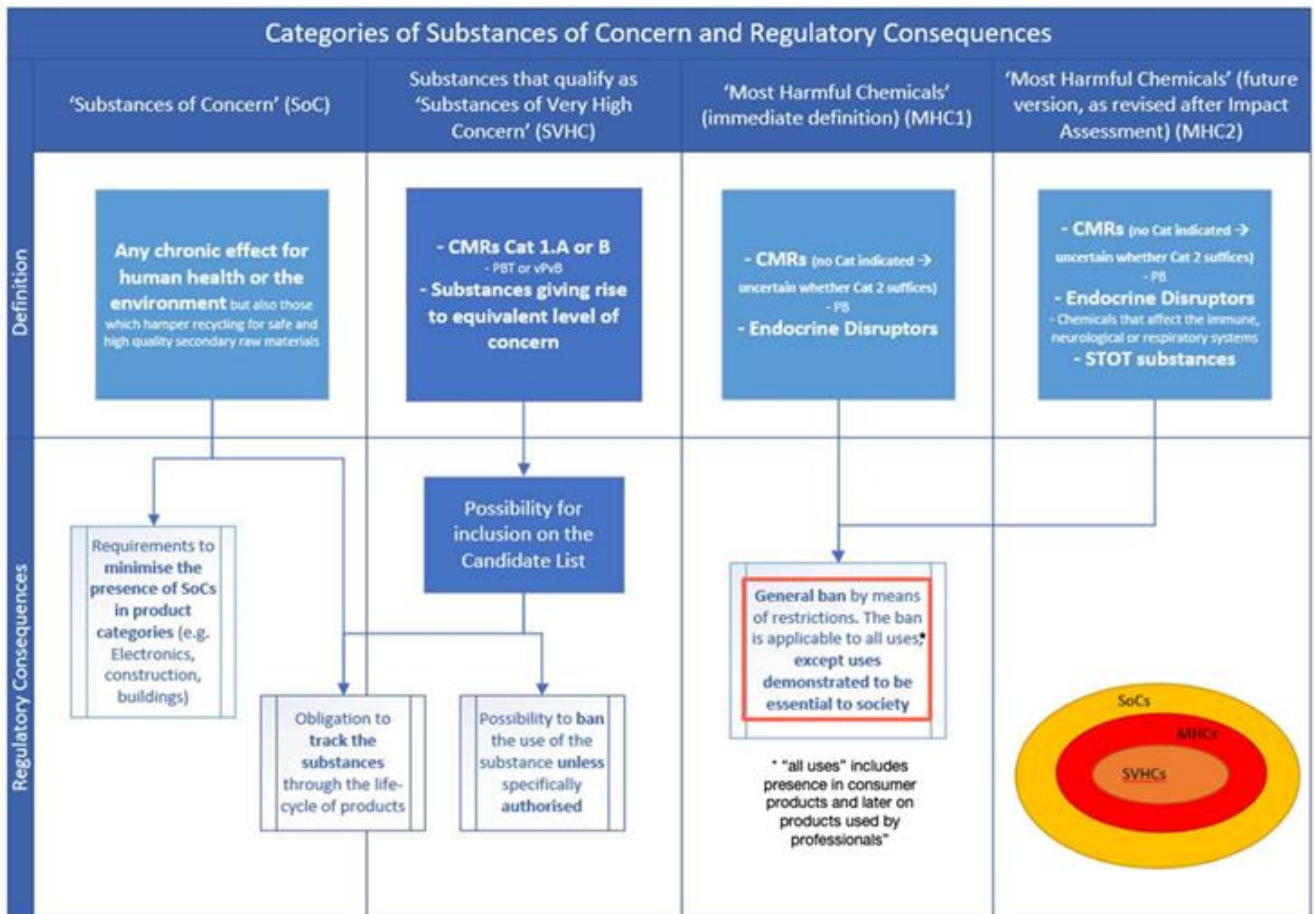
7. **CSS impact areas: “estimated impact” versus “business as usual “scenario:** recognising the selected hazards, this section helps you to reflect on the relative impact of the different CSS measures. It is suggested to complete this based on a proper understanding of the market segments (main uses) for the metal and its compounds and especially the trends for the coming years (“upwards” due to expected business increase, “stable” or “downwards” due to lower expected demand). The table should be completed using the Business as Usual (BaU) scenario as a reference by assessing the impact of the CSS measures on top of the BaU. This prevents that an expected market trend “would be seen” or “would mask” as an impact of the CSS. For example, *the market for Lead batteries may level off, becoming stable in the years to come and slowly decrease by the next decade due to lower demand. The CSS may further impact the use of Lead by the SoC’s requirement to minimise the use in product categories, or by substituting non-essential uses for an MHC*. It is this additional positive or negative impact that should be considered at a macro-economic scale for the EU.
8. **CSS impact areas:** 5 specific types of the CSS measures are selected as probably the most relevant to evaluate the impact they will have on the metals and inorganics sectors:
 - a. The consequences of the implementation of a *MAF for unintended mixture exposure* may be a challenge for certain Exposure Scenarios. While refinement options may help reducing the RCRs to < 0,1, for some uses this could prove to be neither feasible nor cost-effective (e.g. professional uses, or in case of a large natural background)
 - b. The CSS proposes that the uses of substances of concern (SoCs) are minimised and substituted as much as possible. SoCs would include substances that have a chronic effect for human health or the environment or those that hamper recycling for safe and high quality secondary raw materials (e.g. Bi in alloys).
 - c. Restrictions for professional use for metals (or compounds) with CMR, respiratory sensitizer or STOT properties: the CSS proposes to increase the protection level for professional users of such substances by handling and assessing professional use in the same way as the risk management for consumer uses. This means that, in principle, CMR (Cat.1) substances cannot be used unless exempted by a restriction.
 - d. Most harmful chemicals (MHCs) are candidates for a *general ban by means of a horizontal restriction*, unless they are an “essential use”. The Commission proposed that the Montreal definition should be used to consider if the (sub)-use is essential: *Ensure that the most harmful chemicals are only allowed if their use is necessary for health, safety or are critical for the functioning of society and if there are no alternatives that are acceptable from the standpoint of environment and health*. At present for metals CMRs (Cat.1), and ED substances would qualify as MHCs in the first phase (MHC1) but over the years this category will be extended to STOT and chemicals that affect the immune, neurological or respiratory system (MHC2)
 - e. Environmental footprint: The CSS proposes that general environmental footprint considerations (GWP, toxicity, water consumption, ...) for manufacturing of a substance will be considered in comparing different alternatives. Please note that the proposal *only includes the MANUFACTURING step* and not the use or end of life or recovery step.

For b, c, and d, hereabove: the scheme below helps you to estimate the overall regulatory consequences of the different categories of substances of concern.



Compendium of abbreviations:

- BaU Business as usual scenario
- CMR (cat 1): Carcinogenic, Mutagenic and reprotoxic substances of category 1 (see CLP)
- CSS: Chemical Strategy for Sustainability
- ED: Endocrine Disruptors
- GWP: Global Warming Potential
- MAF: Mixture Assessment Factor
- MHC: Most Hazardous Substances
- PBT: Persistent Bio-accumulative and Toxic substances
- RcR: Risk Characterisation Ratio
- SoCs: Substances of Concern
- STOT: Specific Target Organ Toxicity



9. **Use types:** to complete this table you should: repeat in the first column the same uses as under the table on the essential use assessment.

For each of the use types it is proposed in the second column to include a *generic tonnage indication* as a relative percentage to the total tonnage in the EU for the metal and/or compounds. Such information can probably be best obtained from the materials flow assessment for your metal and its compounds. It can be helpful to indicate the BaU scenario for the next 5 to 10 ys (e.g. increase).



In the 3rd-7th column you are invited to indicate *the % of the tonnage for that use that could be at risk because of the specific CSS measure (e.g. Cr6+ -100 % of the tonnage used for decorative plating to be affected by SVHC and MHC1 in the next 10 years due to substitution)*. That estimate should be made with as reference the BaU scenario. A further example: *for professional uses it may often not be worthwhile to spend the effort to demonstrate safe use for unintentional combined exposure, using a MAF of 10, given the high cost of the additional risk reduction measures needed. It may consequently wipe out those uses.*

For the last column on the Environmental footprint (EF) we suggest you indicate a qualitative impact from +++ (very positive: substance has a high EF performance benefit compared to other substances competing for equal uses) to --- (very negative: substance has a very bad EF performance benefit compared to other substances competing for equal uses) probably resulting in the withdrawal of the substance from the EU market if this footprint would be emphasised). Measures to consider include: actual recyclability, GWP, water use,

Compiling this table requires quite some reflection and consideration but could help you to compare and estimate in a qualitative way what sections could be affected and what volumes/use could be at stake for a given CSS measure. This way of assessing and presenting will probably not be new for several Commodities given it is a classical technique used by management consultants like PWC.

10. **Market parts potentially at risk:** this line sums up the impact by CSS measure to estimate and compare the different impacts. It allows you to reflect in general on what issue would be the *most relevant to focus on in advocacy* to improve the regulatory setting. A horizontal summing up by use is not relevant, so not conducted, given that would lead to extensive double counting because several measures may/will affect the same market share.
11. Please be aware that the excel includes formulas that multiply the % volume affected with the total volume to calculate a weighted impact by CSS measure (see point 8).
12. **Conclusions:** you are invited to define with your own words what you believe is the conclusion of the impact assessment of the CSS for your metal and compounds using either the “*use perspective*” (see 12) or the “*CSS measures perspective*”. The combination of the two sets of conclusions allows commodities and consortia to identify the most critical impacts of the CSS as well as the areas for advocacy. The same would apply to Eurometaux, being it at a collective level for metals and inorganics.
13. **Conclusions by use:** describe here in a concise way your conclusions on the impact assessment of the CSS measures all together, from the perspective of the use. You may emphasise what sub-use would be the most impacted and for what reason (e.g. metal X in alloy Y for consumer use would be banned given a non-harmful substitute exists)
14. **Conclusions by CSS measure:** describe here in a concise way your conclusions of the impact assessment of the CSS measures all together, from the perspective of the measure. You may emphasise what measure would impact the most and for what reason (e.g. it would not be feasible to demonstrate a safe use under the MAF approach given the RCR assessment is already fully defined.)
15. **Questions:** here you can leave questions for the CSS-team. They will contact you with a reply.



Template Framework EXAMPLE for a Self-reflection and assessment of the main impacts of CSS measures

TEMPLATE FRAMEWORK TO SELF REFLECT AND ASSESS THE MAIN IMPACTS OF THE CSS MEASURES									
when completed please submit to CSS-team@eurometaux.be									
1	Metal XX and compounds		Properties of concern			CMR cat 2 for massive			
2						Chronic ENV tox 1 for powder and soluble salts only			
3	Market band in the EU 125.000 t								
4			SVHC eligible properties			Cat 1B for salts and powder			
5 Essential Use assessment									
6 Use type		What sub-uses of your use would you consider* as				Type of essential use		Expected Alternatives in the future	
		Essential		Non-Essential					
in batteries for mobility		All uses in batteries				Env. Goal/Green Deal		Expected non hazardous alternatives > 10y	
Industrial Surface treatment		for non-decorative uses		for decorative uses		Health benefits no altern.		Substitution by coatings for some markets	
Professional surface treatment		None		All					
in alloys		Highly durable materials in sanity applications		All others		ENV Footprint/GD		Possible > 20 y?	
in catalysts		For clean air fuel applications				Env Objectives/Green Deal		None expected	
in pigments		None							
Others		None							
* essential or non-essential from the perspective of the definition presently used for this (based on Montreal protocol): MHC chemicals are only allowed if their use is necessary for health, safety or is critical for the functioning of society and if there are no alternatives that are acceptable from the standpoint of environment and health									
7 CSS impact areas : estimated impact versus business as usual scenario									
8, 9 & 10	Use type	Business as Usual trend	% of total EU market (2020)	MAF of 10	Minimisation of SoCs	Restrictions for Professional uses for SVCH eligible subst.	Non-essential use for MHC substances		Environmental footprint for Manufacturing phase only
							MHC1	MHC2	
	in batteries for mobility		10	0%	0%	0%	0%	0%	+++
	Industrial Surface treatment		15	20%	50%	0%	50%	25%	-
	Professional surface treatment		0,001	100%	100%	100%	100%	50%	--
	in alloys		60	0%	0%	0%	0%	25%	+/-
	in catalysts		10	10%	0%	0%	0%	0%	+/-
	in pigments		1	0%	50%	0%	100%	100%	+/-
	Others		4	100%	100%	100%	100%	100%	+/-
11	% SUM of market at risk		100	8	12	4	13	24	
12 CONCLUSIONS: describe with your own words how the CSS would impact by use type and by CSS measure									
13	By use type	Conclusion							
	in batteries for mobility	Increased use expected due to lowering other metals and increased use of batteries. In the longer run, substitution potential run due to workers concern							
	Industrial Surface treatment	Remaining use for durable, high value use but STOT classification may put serious pressure on market substitution							
	Professional surface treatment	Will be substituted ; professional uses not recommended							
	in alloys	Remaining use for durable, high value use but STOT classification may put serious pressure on market substitution							
	in catalysts	Specific benefits for clean fuel production will remain, CSS impact expected to be very low							
	in pigments	Impact CSS depends on how strict the SOCs will be applied for matrix applications							
	Others	Mostly substitutable							
14	By CSS measure	Conclusion							
	MAF of 10	May wipe other uses and professional use out + impact due to water cleaning RMM for IND surface treatment and catalysts							
	Minimisation of SoCs	May impact surface coated articles when used by consumers to some extend							
	Restrictions on prof. Uses	High risk for complete wipe out given alternatives may exist							
	Non-essential use MHC1	May seriously impact surface treatment salts for decorative plating, use of compounds in pigments and others							
	Non-essential use MHC2	Idem as for MHC2 + impact of STOT on alloys							
	ENV footprint	Positive footprint for battery applications but negative one for professional use and pigments							
15 Questions : Please formulate hereunder the questions you would have for the Eurometaux CSS-team									
Could you clarify if STOT SE or RE will be handled equally for MHC?									

