Economic Analysis of the Impacts of the Chemicals Strategy for Sustainability

Phase I report commissioned by the European Chemical Industry Council (Cefic)

2 December 2021

Explainer

This Q&A is based on the Economic Analysis of the Impacts of the Chemicals Strategy for Sustainability, which is available here

What is the EU Chemicals Strategy for Sustainability?

The EU Chemicals Strategy for Sustainability (CSS) was launched in October 2020, to provide a new long-term strategy for chemicals policy, in line with the aims of the EU Green Deal. The Strategy strives for a toxic-free environment, where chemicals are produced and used in a way that maximises their contribution to society including achieving the green and digital transition, while avoiding harm to the planet and to current and future generations.

It envisages the EU industry as a globally competitive player in the production and use of safe and sustainable chemicals. The Strategy proposes a roadmap and timeline for the transformation of industry with the aim of attracting investment into safe and sustainable products and production methods.

Why did Cefic commission this assessment?

Cefic commissioned this Economic Analysis to provide industry's input to the European Commission's own impact assessments on the changes to Classification, Labelling and Packaging (CLP) and REACH. Assessing costs and benefit of a new policy through an impact assessment is in line with the European Commission's own Better Regulation Guidelines.

The purpose of the study was to assess the business impacts to the EU chemicals industry as a result of selected actions from the Chemical Strategy for Sustainability. The EU chemicals industry is a major supplier of all manufacturing industries and essential and strategic value chains, so the impacts on value chains was considered too as intended policy changes could create a significant "ripple effect" across many value chains relying on chemicals.

What does the overall assessment consist of?

The report released on 2 December 2021 presents the findings of Phase 1 analysis of the economic impacts of:

- The addition of hazards to the CLP Regulation (EC) No. 1272/2008
- The extension of the Generic Risk Approach (GRA)
- Introduction of a Mixture Assessment Factor (MAF). This part is not covered in this report and is expected to be published Q1 2022.

Phase 2 research modules foreseen for Q1 and Q2 2022 include:

- Requirements for polymers registration
- REACH restriction of PFAS for non-essential uses

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- The application of an export ban
- Extending REACH registration requirements to chemicals produced in low tonnage bands.

This is expected to be published in Q2 2022.

What are CLP and GRA?

Hazard communication in the EU is regulated by the Classification, Labelling and Packaging (CLP) Regulation through harmonised criteria for classification of substances and mixtures, and rules on labelling and packaging for hazardous substances and mixtures. CLP is based on the United Nations' Globally Harmonised System (UN GHS). It requires manufacturers, importers or downstream users of substances or mixtures to classify, label and package their hazardous chemicals appropriately before placing them on the market. A 'flammable' pictogram that you see on aerosols, for example, is regulated by CLP. Adding more classes and categories to CLP means more products may have to bear a pictogram or display other warnings to users of this product, for example, a 'hazard statement' indicating that the product is "extremely flammable".

In the EU chemicals acquis, traditionally there have been two main approaches to risk management; one based on Specific Risk Assessment (SRA) and the other based on generic risk considerations, also known as the generic approach to risk management or Generic Risk Approach (GRA). Both risk assessment methods aim to ensure a high level of protection to human health and the environment, but they differ in their approach to achieve this goal.

'Generic approach to risk management' is an automatic trigger of pre-determined risk management measures (e.g. packaging requirements, restrictions, bans, etc.) based on the hazardous properties of the chemical and generic considerations of their exposure.

'Specific risk assessments' consider the hazard, the use of the substances and related specific exposure scenarios for humans and the environment, and risk management measures are triggered based on their outcomes.

Why were changes to CLP and GRA selected for this assessment?

This longlist of measures was screened to identify which measures or action points from the CSS are likely to be most impactful, following an approach inspired by Tools #57 and #63 of the Better Regulation Guidelines.

This screening process resulted in a selection of the most impactful policy options for consideration, that is, the shortlist of policy options. This shortlist was further refined so that selected policy options could be assessed in more depth, for example, the extension to the GRA and addition of hazards to CLP.

How many companies provided data to the study?

These consultation exercises engaged more than 100 business respondents that represent a significant proportion of the EU-27 chemicals sector output (67%). This sample would, therefore, broadly represent the sector's mean with a 95% confidence interval.

Who performed the assessment?

An experienced and independent economic research consultancy Ricardo Energy & Environment with a track record of preparing similar assessments for the European Commission and that is familiar with the sector.

What is the methodology behind this assessment?

The assessment has been developed, to the extent possible, in accordance with the European Commission's Better Regulation Guidelines. The methodologies employed have been adapted based on the aforementioned scope and time available and building on the project team's practical experience in delivering impact assessments for private and public sector organisations. These methodologies are summarised in six steps.

- Step 1: Define and characterise the baseline scenario against which to assess options.
- Step 2: Specify the policy options considered.
- Step 3: Map and screen the business and economic impact Categories.
- Step 4: Stakeholder consultation and evidence gathering.
- Step 5: Assess the business and economic impacts of the policy options.
- Step 6: Conclusions.

How many substances were analysed in the context of this report?

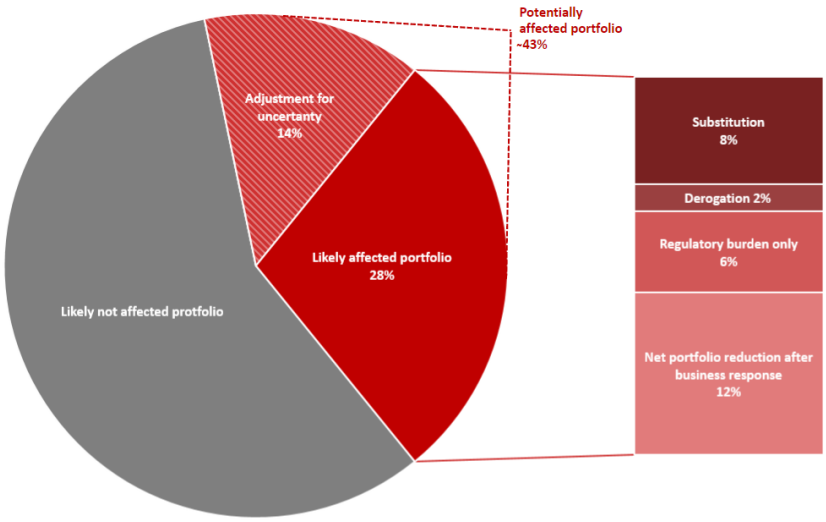
Ricardo created a working list of substances that, according to current information, may be regulated to help companies screen their product portfolios. The list is based on the information from the CSS and was developed with the use of publicly available information on chemicals from multiple third-party sources, including databases from EU and non-EU authorities, integrating different levels of uncertainty. The list which was drawn independently by Ricardo and their subcontractor ToxMinds for the purpose of the assessment, was built after screening more than 25.000 substances and identifying that over 12,000 substances could be regulated in the future as a result of changes to CLP or inclusion in GRA restrictions.

Does this report also quantify the benefits of the Chemicals Strategy on health and environment?

The work has followed the EU Commission's Better Regulation Guidelines where possible, although as this is an analysis of business impacts only, costs and benefits to human health and the environment have not been considered. It is expected that the impacts to human health and the environment will be considered in the European Commission's Impact Assessments related to the CSS.

What is the size of the industry's product portfolio affected by potential changes to CLP and GRA?

Chart 1: Industry's portfolio in scope of being affected by the policy changes and potential responses from businesses (in percent of baseline turnover)



The consultant has identified around 12,000 substances that may be in scope of the proposed measures under the CSS according to the text of the Strategy and reasonable assumptions as to what kind of substances could be covered by upcoming legislation.

Around 100 chemical companies were asked to consider the products in their 2019 product portfolio that could be affected, if the policy options would be fully adopted with immediate effect (i.e., in 2023). In this case, the size of the potentially affected product portfolio was estimated to be around 43% of sectoral turnover (**Potential Affected Portfolio** on the pie chart), which would be equivalent to more than €240 billion of the 2019 market.

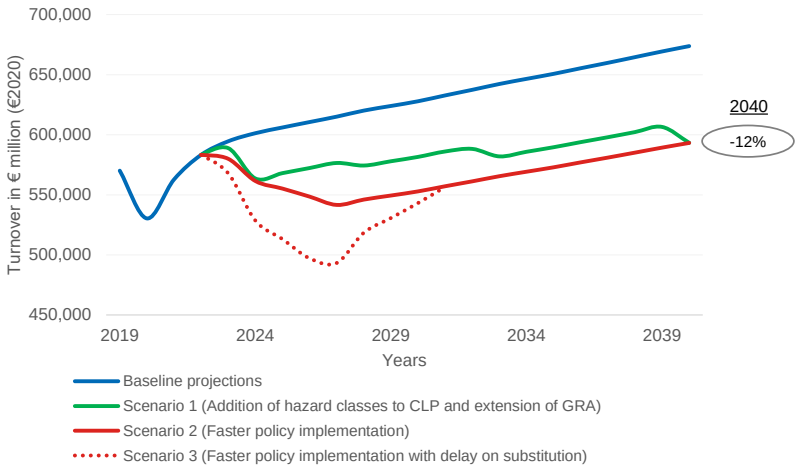
As this is not a realistic scenario, this figure was adjusted for a more realistic timeline and assumption that not all of the 12,000 substances would eventually face a regulatory action (**Adjustment for Uncertainty – 14%**). The difference between Potential Affected Portfolio and Adjustment represents the **Likely Affected Portfolio**, which is equivalent to 28% of the industry's baseline turnover.

Around 8% of this market will likely be substituted/reformulated, and 2% will not be discontinued due to derogations. In addition, around 6% of the market will not face pressures for market withdrawal and will only be affected by increased regulatory burden.

This means that changes to CLP and GRA, when accounting for potential business responses, could lead to a net reduction in product portfolio/business (in turnover terms) of around 12% or equivalent to €70 billion in 2040.

What are the key findings of the study?

Chart 2: Estimated impacts on the turnover of the EU chemicals sector against the baseline scenario (€ 2020)



- The changes to CLP Regulation and the extension of a GRA as proposed under the CSS **will most likely impact 28% of the total industry portfolio.**
- **About one third of those 28% might be potentially substituted and/or reformulated, although there is uncertainty**. Business expectations are affected not only by what might be technically and economically feasible but also how their customers may react to the substitutes and/or reformulated products.
- Changes to CLP and GRA, when accounting for potential business responses, could lead to a **reduction in product portfolio and business (in turnover terms) of around 12%** or equivalent to €70 billion of the 2019 market.

What does the study say about effects on downstream industries?

The impact on downstream users warrants further exploration. The analysis has shown **that 74% of products in scope** to be impacted by the addition of hazards to CLP and the extension of the GRA are **professional or consumer products.** The impacts on these products have been estimated and the results suggest that the downstream user sectors that could be most significantly impacted are:

- Polymer preparations and compounds, paper and board products, inks and toners, all of which may be used for food contact materials;
- Paints and coatings;
- Washing and cleaning products;
- Adhesives and sealants;
- Cosmetics and personal care products;
- Lubricants and greases;
- Biocidal products and plant protection products**.**

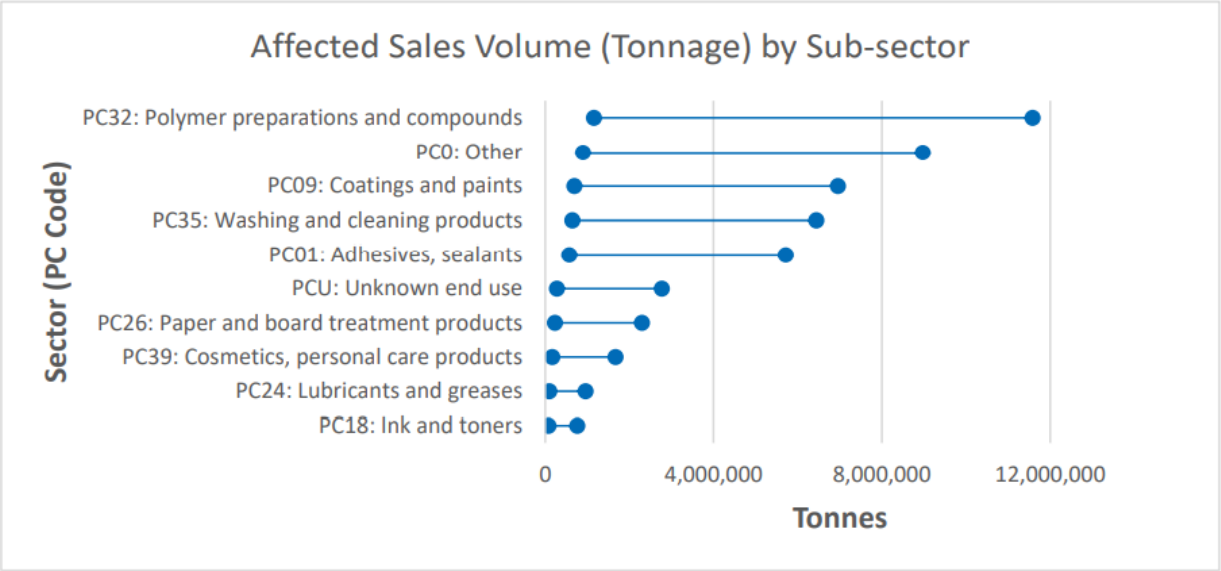


Chart 3: Figure 4-5 Top 10 sub-sectors most impacted by the addition of hazards to CLP and the extension of the GRA: Affected Sales Volume by Sub-sector (tonnage)

What does the report say about the industry's ability to mitigate the impacts by substituting some of the affected chemicals?

Businesses surveyed suggest that they would be able to substitute and/or reformulate around one third of the Likely Affected Product Portfolio (in terms of turnover), although this would depend on many factors. The ability of businesses to substitute are affected not only by what might be technically and economically feasible but also how their customers may react to the substitutes and/or reformulated products.

Businesses may also need time to adjust their operations and establish a final substitute and/or reformulated product that can be placed in the market. In some cases, businesses may already have a readily marketable alternative to place in the market upon adoption of policy changes. In others, businesses may require years of research and development along with product approval before an alternative can be brought to the market.

What are you going to do next with this data?

This report will be used as an input to the European Commission's impact assessments on the changes to CLP and REACH. We will engage with the European institutions and EU Member States' governments to discuss the report's findings.