REACHLAW

STUDY ON

THE IMPACT OF **REACH AND CLP EUROPEAN CHEMICAL REGULATIONS** ON THE DEFENCE SECTOR

EXECUTIVE SUMMARY OF FINAL REPORT

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COMMISSIONED BY:
European Defence Agency (EDA)
Rue des Drapiers 17-23, B-1050 Brussels, Belgium
www.eda.europa.eu
EDA reference: 16.ESI.OP.038

CONTRACTOR:
REACHLaw Ltd.
Vänrikinkuja 3 JK 21, FI-02600 Espoo, Finland
www.reachlaw.fi
REACHLaw reference: RL-QV-2016-12-5

DISCLAIMER

This study was commissioned by the European Defence Agency. The study does not, however, express the Agency's official views.

While the study has been conducted in close collaboration with the EDA, which was supported at technical level by the EDA REACH Task Force (comprised of EDA participating Member States' Ministries of Defence REACH experts) and considering also input from the consultation of various stakeholders, the views expressed and all recommendations made are those of the authors, unless stakeholder opinions are explicitly quoted.

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With special regard to proposals submitted in the study, they do not imply that the stakeholders that are identified as proposal addressees are in any way committed to accept or act upon them, but merely to utilise them as basis for further consideration.

EXECUTIVE SUMMARY

BACKGROUND AND OBJECTIVES

The REACH[1] and CLP[2] Regulations (and the processes involved e.g. authorisation, restrictions) may have a significant impact on European defence capabilities during the whole life cycle of defence equipment (design, manufacturing, in-service use and maintenance, disposal) and therefore on the European Defence Technological and Industrial Base (EDTIB). EU Ministries of Defence (MoDs) and their suppliers, namely defence industry, may not be able to implement all technological changes needed in order to be REACH compliant at a reasonable cost while maintaining the required performance level. In addition to REACH and CLP, other European Regulations on chemicals (e.g. BPR, ODS, POP[3]) also have an impact on European defence capabilities.

Among the aforementioned chemical Regulations, REACH, and the associated CLP Regulation, may have the greatest impact on defence capabilities, primarily due to the extended lifecycle of military equipment. A REACH Regulation review is planned by the European Commission (EC) to take place in 2017, to prepare the future of the Regulation beyond 2018.

Against this background, the European Defence Agency (EDA) commissioned REACHLaw Ltd. to conduct a *"Study on the Impact of REACH and CLP European Chemical Regulations on the Defence Sector"*.

[1] Registration, Evaluation, Authorisation and Restriction of Chemicals according to Regulation (EC) No 1907/2006.

[2] Classification, Labelling and Packaging according to Regulation (EC) No 1272/2008.

[3] Biocidal Products Regulation (Regulation (EC) No 528/2012); Ozone Depleting Substances (Regulation (EC) No 1005/2009); Persistent Organic Pollutants (Regulation (EC) No 850/2004).

The **objectives** of this study were:

1. Impact analysis of REACH and CLP on EU defence sector, both industry and governments;
2. Practical proposals on improvements for REACH and CLP and their current implementation regime, to serve as a basis for EDA, and its participating Member States' (pMS), input to the EC for the next REACH review and as suggestions for REACH evolutions beyond 2018;
3. Synthesis of information on impacts of other chemical regulations on EU Member States MoDs and the defence sector (especially BPR, ODS, POP), their interaction with REACH and CLP, and a strategy (draft as a minimum) with proposals for improvements.

It is important to see these study objectives in the light of the overarching goal to ensure the proper development of the EDTIB for the benefit of EU MoDs as EDA shareholders, as well as the preservation of capabilities, including sustainability of defence equipment maintenance processes performed by EU MoDs and related to equipment of EU or non-EU origin. Therefore, the analysis of impacts and proposals for their mitigation in relation to the defence industry is not to be seen in isolation as they are intrinsically linked to the role of the defence industry to support Member States in retaining existing and/or developing new, critical defence capabilities in the future.

This is in line with the current highest political discussions related to the EU Global Strategy and its implementation plan for defence and security as recently agreed by Member States at the level of the Council of the European Union[4] which among others called for measures to strengthen the EDTIB *"…..In line with the European Council Conclusions of December 2013 on security and defence, the Council reiterates the need to enhance the effectiveness of CSDP and the development and maintenance of Member States' capabilities,* ***supported by a more integrated, sustainable, innovative and competitive European Defence Technological and Industrial Base (EDTIB), which also contributes to jobs, growth and innovation across the EU and can enhance Europe's strategic autonomy, strengthening its ability to act with partners****. The Council recalls that these efforts should be inclusive, with equal opportunities for defence industry in the EU, balanced and in full compliance with EU law."*

METHODOLOGY

Targeted Stakeholders: With the support of the EDA and the EDA REACH Task Force experts, different key stakeholder groups were targeted in the study consultation, thus ensuring thorough coverage of the stakeholder issues:

- **All EU MoDs**;
- **Defence Industry**, including the ASD REACH Implementation Working Group, all EU National Defence Industry Associations (NDIAs), selected individual EU companies (comprising both large system integrators and SMEs) as well as major non-EU companies with EU operations;
- **The European Commission, European Chemicals Agency (ECHA) and REACH Member State Competent Authorities (MSCAs)**.

[4] COUNCIL CONCLUSIONS ON IMPLEMENTING THE EU GLOBAL STRATEGY IN THE AREA OF SECURITY AND DEFENCE, Foreign Affairs Council, 14 November 2016.

Stakeholders' Responses: In total, responses have been received from over 100 stakeholder organisations in 20 EU Member States and the United States (US), providing a solid evidence base for the study impact assessment which, in turn, gave rise to the improvement proposals.

Stakeholder Responses to the Study Consultation						
Defence Industry			Public bodies			Other (e.g. upstream suppliers, trade union)
EU Associations	EU companies	Non-EU companies	EU MoDs + EDA	REACH MSCAs	EC, ECHA	
4	27	5	13[5] + 1	17	2	33

KEY FINDINGS

The study has confirmed that the impact of REACH on the European defence sector is fundamentally determined by the combination of characteristics relating to the manufacture, import or through life use of their products, especially:

- Customers are mainly governments, i.e. the EU MoDs and Armed Forces;
- Products are a variety of highly complex and performance-driven defence systems (such as military aircraft, ships, tanks, munitions) and components (such as electronics and sensors);
- There are complex multi-tier, international product supply chains, that are often shared with other sectors that represent a larger market share (military as a niche use);
- Military equipment has very long and controlled lifecycles (typically for decades) for design, production and in-service phases, generating the need for Maintenance, Repair and Overhaul (MRO) activities;
- Typically a low volume use of chemicals because defence systems are produced in very small series and are sometimes tailor-made.

Against this background, the following key findings have been derived on the impact of REACH and CLP on EU defence sector based on the study consultation[6]:

[5] The MoDs that responded represent 90.5 % of the European defence expenditure, according to 2014 EDA defence data (https://www.eda.europa.eu/info-hub/defence-data-portal) and SIPRI database (https://www.sipri.org/sites/default/files/Milex-local-currency.pdf). In terms of defence industry annual turnover they represent 91.3 % of the European defence industry, according to EDA 2015 Study on Defence Industry Data Figures, Final Report. Greece is excluded from the defence industry turnover percentage, due to a lack of available data.

[6] **Important Note**: All percentages and comparative terms (e.g. majority of) mentioned in the key conclusions are **in reference to the overall number of stakeholders that responded to the study consultation**, and not the overall number of stakeholders that were targeted for consultation.

1. REACH authorisation timelines are strongly mismatched to the defence sector

There is a strong mismatch between the timelines of REACH authorisation (sunset dates of typically 3 years after Annex XIV inclusion and review periods for granted authorisations ranging from 4, 7 to 12 years) for Substances of Very High Concern (SVHCs) and the very long equipment lifecycles in the defence sector, which often requires the use of particular SVHC substances (up to several decades) for production and maintenance. This is causing defence companies in some instances, to implement quick substitutes of mostly lower technical performance (short term substitution) to avoid the double resource-intensive effort of authorisation and replacement, dependence on a shrinking number of suppliers and uncertainties associated with the possible need for several authorisation renewals even if prospects to obtain authorisation may be good, if the argumentation is robust. This negatively affects the defence companies' competitiveness and innovation potential.

2. Insufficient Research and Development (R&D) funding for SVHC substitution

There is insufficient R&D funding for substitution at all levels: industry, Member States and EU. R&D policy makers at national (Member State, defence industry) or EU level often consider REACH related substitution as a regulatory cost issue and not as innovative R&D. At the same time there is a strong willingness, both within industry and MoDs, to perform substitution R&D in a collaborative approach, at least at low Technology Readiness Levels (TRL).

A large majority of defence industry stakeholders (78.6%) have confirmed that substitution R&D activities have increased in their organisation or supply chain as a result of REACH. About half of MoDs (45.5%) are performing, financing or promoting R&D activities for SVHC substitution, including through the EDA and NATO. However, the budgets of both defence industry and MoDs have not increased and the R&D for substitution is performed to the detriment of other R&D activities.

Diminished innovative R&D could, therefore, potentially lead to a loss of future competitiveness. A large majority of the defence industry (70%) foresee a specific threat in this regard, while only 13% consider that REACH has already led to a gain on the company's global competitiveness.

3. REACH obsolescence causes risks to Security of Supply (SoS)

Obsolescence / SoS are a major concern for industry and MoDs, given the limited visibility towards chemicals and processes upstream in their very complex supply chains. The issue is expected to worsen with REACH Registration in 2018 (1 - <100 tonnes / year) and the further evolution of Annex XIV. Supply chain communication to anticipate such risks is very challenging due to complexity, confidentiality and intellectual property considerations and differences in information quality.

A significant majority (77.5%) of the defence industry have already been impacted by REACH related obsolescence (unavailability for supply of substances, mixtures or articles) from upstream suppliers. According to 69% of the defence industry this has also resulted in some own process/product obsolescence. While in the majority of such obsolescence cases this has not resulted in loss of business to date (73%), the required mitigation activities always come at a cost. This effect is further exacerbated by the cumulative nature of the obsolescence impact at the end user level.

In line with this finding, the majority of the MoDs responding believe that REACH is a challenge to maintain Security of Supply. Obsolescence is seen as the main REACH related challenge to Security of Supply. MoDs have already reported occurrences of shrinking supplier base, monopoly situations or

complete cessation of production by single source suppliers due to costly REACH compliance requirements (especially authorisation).

4. Unpredictability of REACH SVHC regulation

The unpredictability surrounding the regulatory fate of SVHCs (i.e. whether, when and in which process(es) it will be further regulated under REACH) creates substantial uncertainties and risks for the defence industry and – as a consequence – the MoDs as the customer. The visibility of the authorisation listing process is not in line with the defence industries' development cycle; difficulties arise in anticipating what action will be taken against a substance and when. Substance-level tracking is, consequently, difficult. There is the further risk that one SVHC is substituted with an alternative substance which could transpire to be equally as harmful and subsequently be targeted by REACH during the long product service life (regrettable substitution).

5. Possible EU policy conflicts with regard to SVHC regulation

REACH impacts the military uses of many inorganic substances, including those linked to Critical Raw Materials which, according to the EC's related policy, are very hard to substitute (e.g. beryllium, borates, cobalt salts). New Occupational Exposure Limits (OELs) under the EU workplace legislation (e.g. beryllium, hydrazine, refractory ceramic fibres) and Circular Economy are emerging as additional requirements, on top of existing ones (e.g. for lead and its compounds). The link between these EU laws and policies and REACH risk management options such as authorisation is not very clear today, leading to possible EU policy inconsistency. The case of chromates raises questions about the appropriateness of authorisation as a blanket risk management instrument for certain substances (like the above illustrative examples), which cannot be easily replaced; are broadly used in various sectors including high tech domains such as defence; and are also addressed by other EU policies.

6. Are MoDs/Armed Forces addressees of REACH? – Legal uncertainty

It is not clear today whether government bodies/MoDs/Armed Forces may themselves have direct obligations according to REACH. According to a legal analysis by representatives of the German MoD this is not the case. However, some MoDs have submitted pre-registrations and PPORD[7] notification to ECHA. In one case defence exemptions have been granted to the benefit of national Armed Forces. With a view to the upcoming final registration deadline, and possible further Annex XIV inclusions, this legal uncertainty should be addressed. The EC has been asked for and is in the process of developing an official answer as an important first step.

7. Article 33 compliance for complex defence equipment poses major challenges

Questions of proportionality were also raised unanimously with regard to REACH Article 33 (Duty to communicate information on substances in articles) compliance by producers of very complex articles such as military aircraft, ships or weapon systems, especially when imported from outside the EU and further re-supplied downstream.

According to the defence industry Article 33 Compliance is very difficult for complex defence products. The efforts required to comply with it are considered by the defence industry as an excessive burden with regard to the added value to safe use of the article, especially by importers. It

[7] Product and Process Orientated Research and Development.

is feared that the situation will further deteriorate soon due to the "Complex Article" judgment of the Court of Justice of the European Union (CJEU) of 10 September 2015 in case C-106/14 and the updated ECHA Guidance for Articles.[8]

Different views persist about the minimum information to be provided, especially whether it should normally include the component article where the reportable SVHC is located (view of most MoDs).

8. Military Application for Authorisation (AfA) not fully fit for purpose

Based on the defence industry survey and a dedicated analysis of applications for authorisation (AfAs) by the Contractor the defence sector has already been strongly affected by the AfA process, e.g. phthalates, lead sulfochromate yellow, lead chromate and severely for Cr(VI) compounds.

While the allowance of defence exemptions under REACH Article 2(3) is reserved for specific cases, and does not cover civil applications of dual use substances, the AfA for military uses is often seen by defence industry stakeholders, but also some MoDs as customers and supporting the AfA, as disproportionate and not fully fit for purpose.

Evidence of the large socio-economic benefit to European society and the control of the risks in using SVHC substances within the defence sector can be seen from past AfAs. Of the AfAs that supplied Socio-Economic Analysis information that were analysed as part of this study in which military uses are identified, a simple average cost benefit analysis ratio for military specific or dual use, downstream user applications is approximately 1.77 million : 1.[9] This raises questions of proportionality when having to go through such a burdensome process while the business case is generally clear, given the limited scope for substitution in defence equipment.

There is currently no dedicated defence sector-approach to authorisation. Non-air domains tend to be overlooked and a number of issues relating to military AfAs are unclear, such as the sufficiency of qualitative arguments (e.g. non-quantifiable impacts on the operational capabilities of the military and the ability to comply with international obligations as partner nations at EU level and wider field, e.g. with NATO) in lieu of economic quantification.

Authorisation costs, and through life maintenance activities using chemicals, are a particular concern, with the likely need for repeated renewals in high reliability sectors such as defence. Chemical supplier interest in supporting continued authorisation is also likely to diminish.

Decision uncertainty (review period/conditions) is a general concern, especially for upstream AfAs. However, generally, at the level of downstream user AfAs, ECHA considered that the applicants have been able to make their case.

9. Challenges for REACH defence exemption implementation across national borders

The so-called "defence exemption" in REACH Article 2(3) provides an important tool for EU Member States to mitigate negative impacts from the standard application of the REACH requirements in specific cases (only), in order to maintain a military capability. Most Member States consulted have

[8] The judgment clarified that the calculation of the 0.1% threshold in complex articles for the application of REACH Article 33 should be done based on each single constituent article (component article) instead of the complex article as a whole ("Once an article - Always an article"). The updated ECHA Guidance for Articles should reflect this judgment.

[9] The present ratio was derived from military specific or dual use, downstream user applications. This means that for every €1 society benefits from not using the SVHC substances it loses €1.77 million.

set up a system for granting defence exemptions, but only 6[10] of the 27 EDA participating Member States are known to have granted defence exemptions to date. Based on national implementation of the EDA Code of Conduct (CoC) 2015[11] by Member States, there is a gradual improvement in the overall harmonisation at European level with regard to defence exemptions. A major limitation of the REACH defence exemption is that it cannot cover the common civil applications of dual use substances. Also, national policies frequently foresee a conservative use of exemptions from health and environmental regulations.

Furthermore the REACH defence exemption process is often no option, or very difficult to manage, in cases in which defence industries in more than one Member State are involved in a transnational supply chain. This is especially true under the current, widely accepted restrictive (national only) interpretation of REACH Article 2(3). Given the challenges to apply REACH Article 2(3) across national borders, a clear majority of MoDs (73%) and defence industry (90%) responding would be in favour of an exclusion of defence from the REACH scope (fully or partly), whatever its form.

10. Emerging security issues: Unclear relationship with defence - Possible regulatory gap

It is not clear whether REACH Article 2(3) may apply in the interest of Security. Several MoDs have raised this question. There is an increasingly blurred borderline between "defence" and "security" given the current global situation, especially with respect to newly emerging potential security (asymmetric) threats in the interior of the EU/Member States, to which MoDs may be called to play a supporting role at national level.

11. High or hidden costs vs. limited health and environmental benefits of REACH to date

Costs of REACH may be significant for both the defence industry and MoDs (as customer and end user), but could not always be quantified beyond direct compliance costs, due in part to the difficulties in determining indirect REACH related costs (e.g. price increases related to substitution and overall lifecycle cost; complexity of military procurement programmes; shorter maintenance intervals due to lower performing substitutes). Whether measurable or not, they are ultimately borne by the MoDs and, hence, the tax payer. Compliance costs for REACH (e.g. Article 33 and authorisation applications) are often considered as disproportionately high by industry when compared to the benefit. The largest cost occurs for SVHC substitution R&D and requalification tasks. Further cost analysis by industry and MoDs would be required for better quantification of the impact.

On the *benefits* of REACH, the better knowledge about chemical hazards, data quality and supply chain communication were frequently acknowledged. Risk management measures at the workplace have also improved as a result of REACH with a majority of MoDs, but less than half of the defence industry. However, this was explained by the fact that in a large number of cases the already existing strict national measures predating REACH, such as workplace safety laws, are considered as

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[10] Plus Norway, which participates as non-EU (EEA) Member State in EDA activities based on an Administrative Arrangement of 2006.

[11] https://www.eda.europa.eu/docs/default-source/documents/eda-code-of-conduct-on-reach-defence-exemptions.pdf. The EDA Code of Conduct 2015 states that the subscribing Member States fully support the objectives of REACH. If foresees a last-resort approach, according to which the granting of REACH defence exemptions should be considered only after the following alternative methods have been examined: Complying with the requirements of the REACH Regulation; substitution of hazardous substance(s) with more benign alternatives.

sufficient.[12] The actual benefits to human health and the environment have been relatively limited, in cases when the use of substances is typically in low volumes and already well controlled and presents a low risk to users. It is largely felt by the defence industry that because of the Risk Management Measures already implemented, and monitored nationally, coupled with highly trained professional workers, these benefits are not commensurate with the efforts and costs.

12. Cumulative impacts of REACH and CLP processes on the defence sector

As an end user sector, the defence industry is potentially affected by a high number of candidate list proposals. It "has all the issues" given also the plethora and sophistication of systems and components upon which defence relies, thus resulting in a multiplication of impacts. However, when comparing the different REACH processes, the largest impacts on the defence sector are caused by REACH authorisation (due to dependence on AfAs and resource-intensive substitution activities in parallel) and – for industry – REACH Article 33 compliance for very complex articles, while REACH registration is causing possible obsolescence and resulting in Security of Supply issues. Only the impact of REACH restrictions has been relatively limited and mostly indirect (commercial obsolescence, some issues for non-aerospace systems), because derogations are often foreseen for critical aerospace and defence applications (e.g. for cadmium and now also for decaBDE).

For CLP the labelling of ammunition (as "explosive articles"; currently no EU harmonised approach by EU MoDs) and the import of mixtures (lack of component info) have been identified as main issues.

13. Future impacts expected to be significantly higher

Some MoDs and defence industry expect the future impact of REACH to be significantly higher than the impact that has been realised so far, particularly if REACH (and CLP) implementation continues as is. The main reasons given include: REACH Registration in 2018 for the 1 to <100 tonnage band, REACH Article 33 compliance after the latest CJEU judgment, Cr(VI) authorisation decisions and sunset date in 2017, further additions to the candidate list and Annex XIV. The defence sector is already strongly impacted by the current authorisation list of only 31 SVHCs. The situation could become unmanageable if the addition of defence critical substances to Annex XIV would accelerate, causing a cumulative impact on the entire defence supply chain.

14. Relocation risks are a threat to Security of Supply; more leeway for non-EU companies

REACH challenges the competitive position (level playing field) of EU defence companies in export markets and causes industry to consider relocation to avoid the REACH constraints for SVHCs used in article production and manufacturing processes. This is especially true for component suppliers (e.g. connectors) and surface treatment shops. Such relocation risks are seen as a major risk to Security of Supply by most MoDs. This is because supply chains that reside outside the EU, resulting in the need for imports of products into the EU, are more difficult to control, manage and monitor (e.g. due to design restrictions as well as regulatory restrictions e.g. due to ITAR[13], if the production is moved to the US).

[12] EU MoDs state that they take Occupational Safety and Health (OSH) within their organisations very seriously – not only during missions but also for the day-to-day operations like maintenance of defence materiel.

[13] The International Traffic in Arms Regulations, see https://www.pmddtc.state.gov/regulations_laws/itar.html.

The impact for non-EU headquartered defence companies with operations in Europe is more or less similar to their EU competitors. However, the flexibility to move some hard-to-substitute processes or even the complete production out of the EU (e.g. to their home country) could be higher for non-EU companies. Some EU companies with existing operations outside EU may also have the option to relocate, but it is limited - for strategic and political reasons - to non-strategic components.

15. Inconsistent EU regulatory approach impacting defence

In addition to REACH and CLP, other EU regulations (e.g. BPR, ODS, POP) may each separately force substitution steps in rapid succession on military applications or upstream uses, leading to regrettable substitution – hence unnecessary cost and effort in wasted R&D activities – and possible EU policy inconsistency, as some cases suggest. Furthermore, there is an inconsistent approach among the different EU regulations on how defence issues are handled (exemptions, exclusions, disapplications, etc.). These should be addressed in a forward-looking way as, currently, limitations on the use of one set of problematic substances often simply lead to a substantial increase in the use of another set of problematic substances. Overall, the stakeholder input on non-REACH related issues has been limited. However, it has been sufficient to show that there is a need for further clarification and work on overall regulatory consistency.

16. Stakeholder calls for more EDA REACH/CLP support

Several MoDs and defence industry stakeholders have called for more EDA support on REACH/CLP or referred to the benefit of EDA's prior engagement (e.g. EDA/ECHA communication in 2015 has ensured decaBDE restriction tolerating use by civil aircraft has now been extended to military aircraft). Consultations with non-defence industry stakeholders also underlined the benefit of further clarifying the EDA's possible role with regard to REACH/CLP support in relation to the defence industry.

The cumulative impacts described above create a significant risk to maintaining cost effective military capabilities. The increased through life cost is unavoidable. Defence exemptions will not guarantee the availability of chemicals necessary to maintain defence equipment. The import of chemicals and articles also poses a risk due to insecurities that a global supply chain may bring. As a result, some MoDs strongly believe that REACH may impact the actual operability of the Armed Forces.

More specifically, they see a strong risk of EU defence system development and maintenance becoming unsustainable because of the timeframe difference between REACH cycles and defence product lifecycles. Furthermore, reducing the European Defence Technological and Industrial Base (EDTIB) in favour of more imported equipment and maintenance outside of the EU to avoid REACH constraints could jeopardise independence and reliance on the EU economy as vital pillars of EU MoDs' defence strategies.

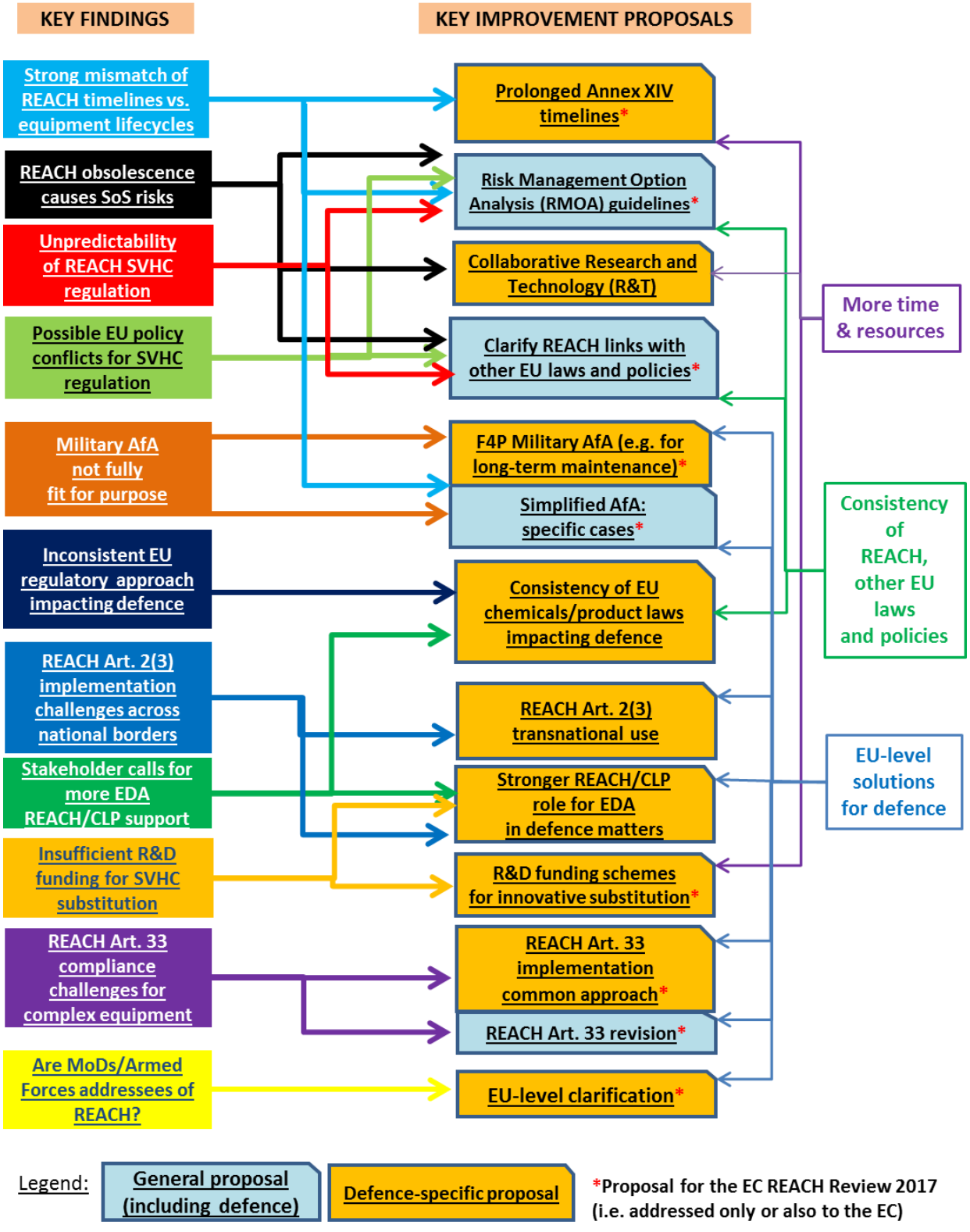
In a nutshell, the key findings from the REACH & CLP impact analysis are summarised in the table below.[14]

Actor		Defence industry	MoDs/Armed Forces
	Main concern due to REACH	Competitiveness	Guarantee of military capabilities
General impacts	Protection of human health and the environment	Some improvements confirmed by a minority, in addition to strict pre-REACH measures	Some improvements confirmed by a majority, in addition to strict pre-REACH measures
	Innovation potential (i.e. better performance)	Negatively affected: timeline mismatch; lack of R&D funding for SVHC substitution	Possible future negative impact on capability due to less performing substitutes
	Costs	Actor-specific: often considered as disproportionate, especially for REACH Article 33, authorisation compliance and substitution R&D work; hidden costs (to be clarified)	Mainly as customer (final payer of REACH costs). Some MoDs do substitution funding; possible shorter maintenance intervals due to substitutes and hidden costs (to be clarified)
	Obsolescence/SoS	Major issue, especially with regard to registration (2018 deadline) and authorisation	
	Certainty and predictability	Major issue, especially for REACH SVHC regulation and authorisation. Possible EU policy conflicts, e.g. with EU Workplace Legislation, Critical Raw Materials Policy and Circular Economy	
Process-specific impacts	Registration	Mostly indirect (obsolescence); some own registration needs (e.g. for ammunition)	As final customer and capability guarantor (MoDs for their Armed Forces); to be clarified: Are MoDs/Armed Forces REACH addressees?
	REACH Article 33	Major issue for complex defence materiel, especially imports; impact of "Complex Article" judgment (CJEU, C-106/14)	
	Authorisation	Major issue, especially for long-term maintenance; process not fully fit for purpose (no dedicated defence sector approach)	
	Restrictions	Limited impact due to derogations	
	CLP	Main issues: Labelling of ammunition ("explosive articles"); mixtures import (lack of info)	As final customer and capability guarantor; currently no harmonised approach to CLP
Impact mitigation	REACH Article 2(3) ("defence exemption")	Overall limited experience (Note: exemption is applied by Member States in "specific cases" only, to maintain a military capability)	Increased impact for procedures and harmonisation work (EDA CoC 2015); to be clarified: Article 2(3) transnational use; Are MoDs/Armed Forces REACH addressees?
	Relocation	Limited possibility for EU headquartered companies (non-strategic activities)	As final customer and capability guarantor: reduced control over imported products

[14] Note: This table strictly reflects a summarised version of the impacts (key findings 1-14) elaborated in the Study Report, on the basis of stakeholder responses to the study survey. As such, any impact on MoDs/Armed Forces reflected does not in any way pre-empt the outcome of the examination of the issue "Are MoDs/Armed Forces addressees of REACH?" mentioned previously under Key Finding 6, proposed to take place by EDA and Member States after the study is concluded, as described under Recommendations/EU-LEVEL SOLUTIONS FOR DEFENCE UNDER REACH/proposal e) below.

RECOMMENDATIONS

Based on the key findings from the impact analysis it was possible to derive the key recommendations for the improvement of REACH and its current implementation regime. The figure below illustrates their link schematically.



As shown in the figure, the key improvement proposals may be broadly grouped into **three main improvement areas**:

- **More time and resources**
- **Consistency of REACH, other EU laws and policies**
- **EU-level solutions for defence under REACH**

The key improvement proposals are detailed hereafter.[15]

MORE TIME AND RESOURCES

The mismatch of timelines and insufficient R&D funding are key findings of this study. The defence sector, having products with long lifecycles, stringent performance standards and high reliability requirements, needs more time and resources for innovative SVHC substitution, ideally through an approach to "innovate first – regulate later":

a) **R&D funding schemes for innovative substitution (EC, MoDs)**:*[16] Promote innovative substitution of SVHCs in defence applications through dedicated funding on an EU and national level.

b) **Collaborative Research and Technology (R&T) (EDA with MoDs)**: Promote innovative substitution of substances critical for defence which are impacted by REACH (SVHCs), through enhanced collaborative R&T projects within EDA Capability Technology Groups (CapTechs).

c) **Prolonged Annex XIV timelines (EC)**:* Clarify prerequisites for military use specific sunset dates in Annex XIV based on REACH Article 58(1)(c) ("production cycle specified for that use"), especially whether it may apply to maintenance activities.

CONSISTENCY OF REACH, OTHER EU LAWS AND POLICIES

It is important to see REACH and Risk Management Option Analysis (RMOA) in the context of other EU regulations and policies, in order for risk management approaches to be aligned and fitting in the global picture of the EU activities. To this end, a number of improvements are recommended in the interest of regulatory consistency, predictability and certainty.

a) **Risk Management Option Analysis (RMOA) guidelines (EC)**:* Adopt EU-level guidelines for a Risk Management Option Analysis, especially regarding technical and socio-economic issues to be considered, stakeholder participation, Risk Management Options (RMOs)/regulations, RMO selection criteria and deliverables, voluntary replacement and other "phased" approaches to enable fit-for-purpose REACH and related risk management. Enhanced assessment to conclude on candidate list for subsequent authorisation.

[15] The main addressee(s) is (are) given in brackets next to each proposal heareafter. However, it is **important to note** that there is often more than one addressee for a given proposal (or part of it). The complete list of addressees for each proposal/part is detailed in the Study Report.

[16] Proposals with an asterisk (*) are those for the EC REACH Review 2017, i.e. addressed to the EC, ECHA and/or the REACH MSCAs or necessitating their input for the proposal implementation.

b) **Consistency of EU chemicals/product laws impacting defence (EDA with MoDs)**: Consistent approach in EU legislation for chemicals and products to address defence specificities (exemptions/exclusions/etc.) and to avoid undesired regulatory outcomes impacting defence in multiregulation situations (e.g. regrettable substitution).

c) **Clarify REACH links with other EU laws and policies (EC)**:* Clarify REACH links and relationship with key relevant EU policies, especially EU Occupational Health and Safety (OSH) legislation (Occupational Exposure Limits), Critical Raw Materials policy and Circular Economy.

EU-LEVEL SOLUTIONS FOR DEFENCE UNDER REACH

REACH calls for EU-level solutions to ensure efficient implementation and a level playing field for industry. The defence sector, like many other sectors today, is highly reliant on cross-border activities. The EDA Code of Conduct (CoC) 2015 has been an important first step towards a harmonised approach to REACH implementation in this sector. The impact analysis has shown that further work is recommended to address key challenges for defence due to REACH – preferably on an EU level.

a) **Fit-for-purpose (F4P) military AfA (e.g. for long-term maintenance) (EDA with MoDs and defence industry, supported by the AfA Task Force)**:* Discuss a fit-for-purpose application for authorisation (template/modules) for military uses, taking into account their frequent dual use nature and identifying special cases, e.g. maintenance and ammunition.

b) **Simplified AfA: Specific cases (EC)**:* Explore further specific cases for simplified AfA, e.g. if compliance with a binding EU-wide Occupational Exposure Limit can be demonstrated.

c) **REACH Art. 33 implementation: Common approach (EDA with MoDs and defence industry)**:* Work together towards the practical implementation of REACH Article 33 communication, possibly through a sector-level approach, based on the latest ECHA Guidance for Articles and considering specific proposals made by some MoDs.

d) **REACH Art. 33 revision (EC)**:* *Should REACH be opened following the 2017 review*: Revise REACH Article 33 to address (very) complex articles, review its objective, usefulness (return of experience), requirements and feasibility.

e) **EU-level clarification: Are MoDs/Armed Forces addressees of REACH? (EC and EDA with MoDs)**:* Obtaining the EC legal view would be an important first step.

f) **REACH Art. 2(3) transnational use (EDA with MoDs)**: Legal clarification of REACH Article 2(3) is required on whether the exemptions *"from the REACH Regulation"* granted by individual Member States *"in the interests of defence"* apply automatically in other EU Member States (thus rendering the need for reciprocal acknowledgment redundant). Moreover, the possibilities of establishing a joint defence exemption process have to be examined. For the success of both the aforementioned cases, enhanced information exchange between Member States' interested parties (MoDs and defence industry) is of paramount importance.

g) **Stronger REACH/CLP role for EDA in defence matters (EDA with MoDs)**: EDA to assume stronger role for EU-level REACH & CLP support in defence matters.

In addition to the key proposals listed above, the following improvement proposals for different addressees complete the picture. They are not necessarily less important but some of them – other than proposals to the EC and ECHA - may address issues of a more limited scope.

ADDITIONAL IMPROVEMENT PROPOSALS FOR THE EC, ECHA AND MSCAs

a) **"Super" Downstream User (DU) platform (EC)**:* Establish a dedicated communication platform for "super" downstream users (such as the aerospace, defence and electronics industries) to discuss REACH, CLP and related regulatory issues.

b) **Substance tracking tool (ECHA)**:* Provide a practical tool for industry to facilitate monitoring of substances in the "pipeline" for regulatory risk management under REACH and CLP "from cradle to grave" (e.g. from RMOA to Annex XIV).

c) **EC REACH/CLP single web hub (EC)**:* A single webpage ("hub") and regular newsletter for easy access by industry to Commission activities on REACH and CLP.

d) **Authorisation exemption guidance (ECHA)**:* An ECHA Guidance / practical guide on exemptions from authorisation.

ADDITIONAL IMPROVEMENT PROPOSALS FOR EU MODS, EDA AND DEFENCE INDUSTRY

a) **Transparency of REACH Art. 2(3) procedures and decisions (EDA with MoDs)**: Publish national defence exemption application forms (in English), categorise REACH (and possibly CLP) defence exemptions and complete information on defence exemption procedures for remaining MoDs on the EDA REACH Portal.

b) **Collaboration within Member States on REACH/CLP defence matters (MoDs with MSCAs and National Enforcement Authorities)**: Strengthen collaboration among Member State administrations on defence and REACH/CLP.

c) **Align procurement contract terms with REACH (MoDs)**: Standardise to align with REACH.

d) **REACH cost analysis (MoDs, defence industry)**: Implement internal mechanisms to track REACH-related costs and (after 2018) analyse economic impact of REACH on EU MoDs and defence industry.

e) **Ammunition REACH status (EDA with MoDs)**: Finalise ongoing work.

f) **Ammunition CLP labelling (MoDs, EDA)**: National examination and position on the approach; further discussion on the overall picture, including on potential inconsistencies, aiming at a common understanding of MoDs on how to apply CLP to ammunition (or use of CLP defence exemption).

g) **EDA Code of Conduct (CoC) evolutions (EDA with MoDs)**: Discuss REACH/CLP update needs for EDA CoC 2015, especially with regard to EU-transnational use of REACH defence exemptions and addition of CLP.

h) **Exclusion for defence (MoDs, in consultation with their MSCAs and defence industries):** Examine the necessity to include an exclusion (from the REACH Regulation) for defence – whatever its form – in the legal text, *should REACH be opened following the 2017 review*.

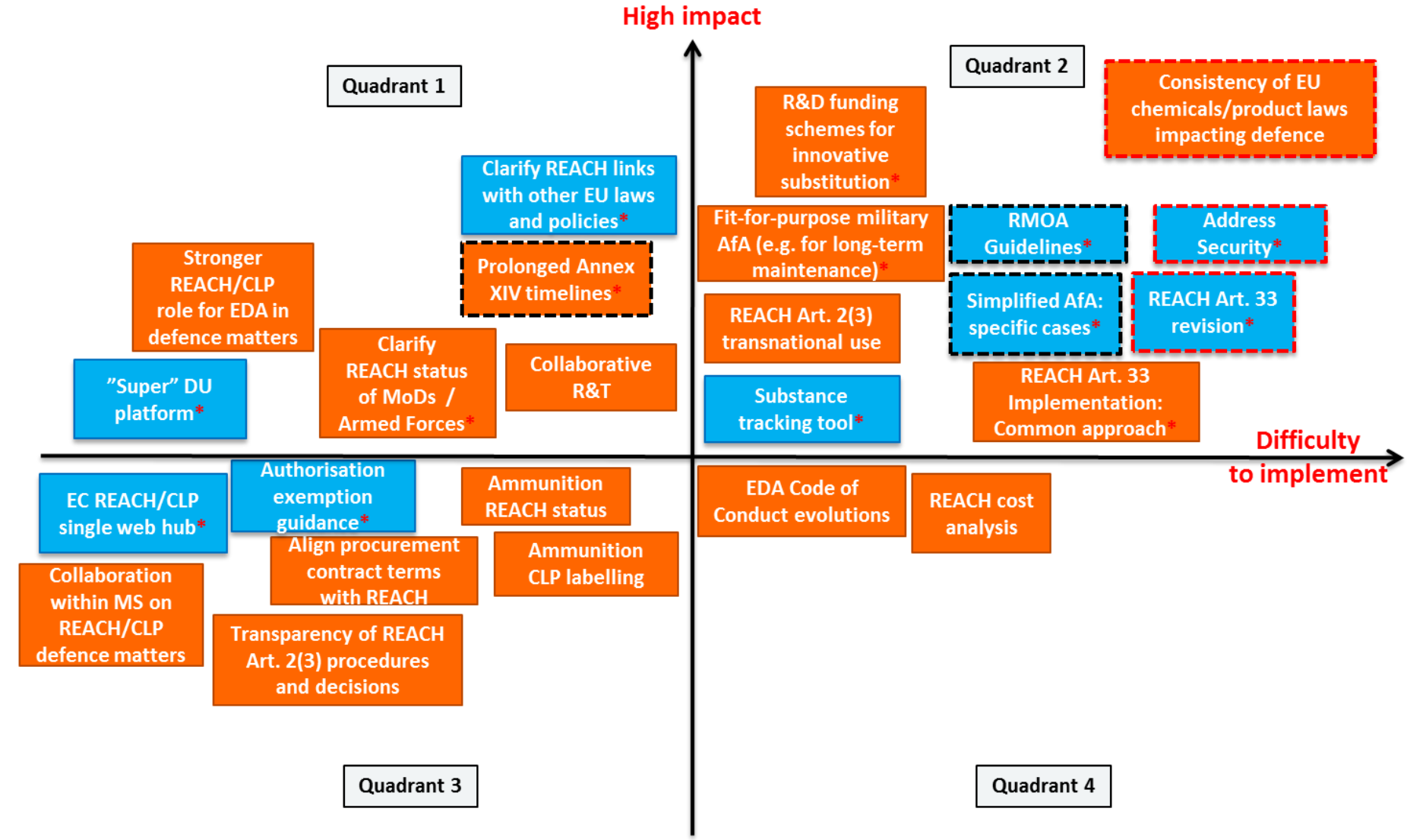
ADDRESS SECURITY: FOR AUTHORITIES IN CHARGE OF INTERNAL AFFAIRS

- **Consider national security issues vs. REACH (Member State authorities for internal affairs and EC DG Home)*** – Discuss the way forward in the Member States (including with MoDs).

The **priority** of the aforementioned improvement proposals is determined as a function of their implementation feasibility (difficulty) vs. the expected benefit (impact) for the European defence sector, as illustrated in a merely indicative way in the summary figure on the following page.[17] It shows that most proposals could be implemented without a change of the REACH legal text, a REACH Annex or implementing measure.

For the full details of the findings and improvement proposals outlined above, reference is made to the Study Report and the related Annexes. The detailed elaboration of improvement proposals contains the description of their rationale, which is (are) the addressee(s) and a possible implementation roadmap.

[17] The proposal related to an "exclusion for defence" is not displayed as it will require further examination to evaluate the necessity.



Legend: Defence specific proposal | General proposal (including defence) | Possibly requiring change of REACH legal text | Possibly requiring change of REACH Annex or implementing measure

*Proposal for the EC REACH Review 2017

REACHLAW

REACHLaw Ltd.
Vänrikinkuja 3 JK 21, FI-02600 Espoo, Finland
Tel: +358 (0) 9 412 3055
Fax: +358 (0) 9 412 3049
Email: info@reachlaw.fi

www.reachlaw.fi