

## SERVICE REQUEST – ANNEX “Specific Terms of Reference”

### Review of the monitoring system under the Seveso-III-Directive, including the development of indicators

#### 1. INTRODUCTION

With this service request, the Commission aims to get support on the review of the current monitoring system established under Directive 2012/18/EU<sup>1</sup> (Seveso-III-Directive) primarily, but not exclusively, vis-à-vis the Better Regulation Guidelines<sup>2</sup> and considering also the Commission report on actions to streamline environmental reporting<sup>3</sup>.

This analysis shall result in clear recommendations for short-term improvements and an action plan towards further improving the monitoring system in the long-term. The task includes the identification and where necessary the development of suitable indicators. The work conducted shall build upon earlier work conducted on reporting and indicators.

The outcome of this work will feed into new Commission Implementing Decisions on reporting and where relevant the update of electronic reporting tools. Furthermore, it will feed into the Commission Report due under Article 29 of Directive 2012/18/EU<sup>4</sup> in 2020.

#### 2. GENERAL POLICY INFORMATION

Major industrial accidents involving dangerous chemicals pose a significant threat to humans and the environment. Furthermore, such accidents cause huge economic losses and disrupt sustainable growth. However, the use of large amounts of dangerous chemicals is unavoidable in some industry sectors which are vital for a modern industrialised society. To minimise the associated risks, measures are necessary to

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<sup>1</sup> Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC, OJ L 197, 24.7.2012, <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1456909234840&uri=CELEX:32012L0018>

<sup>2</sup> Commission Staff Working Document Better Regulation Guidelines, of 7 July 2017, SWD/2017/350 final, [https://myintracomm.ec.europa.eu/sg/better\\_regulation/Pages/guidelines-toolbox.aspx](https://myintracomm.ec.europa.eu/sg/better_regulation/Pages/guidelines-toolbox.aspx)

<sup>3</sup> Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Actions to Streamline Environmental Reporting – COM(2017) 312 final of 9 June 2017, [http://ec.europa.eu/environment/legal/reporting/fc\\_overview\\_en.htm](http://ec.europa.eu/environment/legal/reporting/fc_overview_en.htm)

<sup>4</sup> Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC, OJ L 197, 24.7.2012, <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1456909234840&uri=CELEX:32012L0018>

prevent major accidents and to ensure appropriate preparedness and response should such accidents nevertheless happen.

In Europe, the catastrophic accident in the Italian town of Seveso in 1976 prompted the adoption of legislation on the prevention and control of such accidents. The initial Seveso-I-Directive 82/501/EEC<sup>5</sup> was later amended in view of the lessons learned from later accidents such as Bhopal, Toulouse or Enschede resulting into the Seveso-II-Directive 96/82/EC<sup>6</sup>. In 2012 Seveso-III-Directive 2012/18/EU was adopted taking into account, amongst others, the changes in the Union legislation on the classification of chemicals and increased rights for citizens to access information and justice. It replaces the previous Seveso-II-Directive.

The Seveso-III-Directive now applies to around 12 000 establishments in the European Union where dangerous substances are used or stored in large quantities, mainly in the chemical, petrochemical, logistics and metal refining sectors.

Considering the very high rate of industrialisation in the European Union the Seveso Directive has contributed to achieving a low frequency of major accidents. The Seveso-III-Directive is widely considered as a benchmark for industrial accident policy and has been a role model for legislation in many countries world-wide.

### **3. CURRENT MONITORING SYSTEM**

The current monitoring system under the Seveso-III-Directive is primarily based on several reporting obligations that Member States have.

Under Article 21(1) of the Seveso-III-Directive Member States and the Commission shall exchange information about the prevention of major accidents and the limitation of their consequences. This information shall concern, in particular, the functioning of the measures provided for in the Seveso-III-Directive.

Member States have three principle reporting obligations:

- (1) To report on major accidents (Article 18);
- (2) To report on the implementation of the Seveso-III-Directive (Article 21(2)) by 30 September 2019 and every four years thereafter, and
- (3) To report establishments covered by the Directive (Article 21(3)).

Commission Implementing Decisions have been adopted to specify the details of those reporting obligations.

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<sup>5</sup> Council Directive 82/501/EEC of 24 June 1982 on the major-accident hazards of certain industrial activities, OJ L 230, 5.8.1982, <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1456909111251&uri=CELEX:31982L0501>

<sup>6</sup> Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances, OJ L 10, 14.1.1997, (latest consolidated version available online at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1440078276220&uri=CELEX:01996L0082-20120813>)

The reporting obligations that are specific to the Seveso-III-Directive, are complemented by generic reporting obligations such as notification of transposition, or the monitoring of ongoing infringement cases.

So far, following the submission of the reports on the implementation, the Commission analyses the information provided therein, whilst also considering the information provided by Member States on major accidents and establishments. The outcome of this analysis is published in a Commission report. The following chapters provide more details about those steps.

### **3.1. Reporting on major accidents (Article 18)**

Under Article 18 of the Seveso-III-Directive, Member States shall inform the Commission of major accidents meeting the criteria of Annex VI which have occurred within their territory. This information shall be provided as soon as practicable and at the latest within one year of the date of the accident.

Article 24(4) requires the Commission to set up and keep at the disposal of the Member States a register and information system containing the details of the major accidents reported by Member States. This database is known as the electronic Major Accident Reporting System (eMARS)<sup>7</sup> and operated by the Joint Research Centre (JRC).

A Commission Decision<sup>8</sup> has been taken in 2008 to specify the details to be reported. This Commission Decision has not yet been updated in accordance with the requirements of the Seveso-III-Directive as the changes would only be minor and it was considered important to first conduct a more holistic review of the monitoring system.

The information is made publically available online in the eMARS database once all information has been verified.

### **3.2. Reporting on implementation (Article 21(2))**

Article 21(2) requires Member States to submit by 30 September 2019 and thereafter every four years a report on the implementation of the Seveso-III-Directive. The information to be provided is based on a Commission Implementing Decision<sup>9</sup> adopted in 2014 to cover the reporting period 2015-2018.

A subsequent Commission Implementing Decision for the next reporting period 2019-2022 should ideally be adopted before 31 December 2018. It would be desirable to integrate some outcomes of this contract already in this Decision. More significant

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<sup>7</sup> <https://emars.jrc.ec.europa.eu>

<sup>8</sup> 2009/10/EC: Commission Decision of 2 December 2008 establishing a major accident report form pursuant to Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances (notified under document number C(2008) 7530), OJ L 6, 10.1.2009, p. 64–78, [http://data.europa.eu/eli/dec/2009/10\(1\)/oj](http://data.europa.eu/eli/dec/2009/10(1)/oj)

<sup>9</sup> 2014/896/EU: Commission Implementing Decision of 10 December 2014 establishing the format for communicating information from Member States on the implementation of Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (notified under document C(2014) 9335), OJ L 355, 12.12.2014, p. 55–58, [http://data.europa.eu/eli/dec\\_impl/2014/896/oj](http://data.europa.eu/eli/dec_impl/2014/896/oj)

changes would have to be discussed and subsequently deployed in the following Commission Implementing Decision for the reporting period 2023-2026 in 2022.

The questionnaires which had to be used for earlier reporting periods under the Seveso-I-Directive and the Seveso-II-Directive as well as the replies provided by Member States are available online in CIRCABC <https://circabc.europa.eu/w/browse/83b2c9d6-011a-433e-b57a-7e2ef8a38b24>.

### **3.3. Reporting on establishments (Article 21(3))**

Under Article 21(3) Member States shall provide information on the establishments covered by the Seveso-III-Directive, which the Commission shall include in a database. This database is known as the electronic Seveso Plants Information Retrieval System (eSPIRS) and is operated by the Joint Research Centre. The eSPIRS database is available online (registration required) at: <https://minerva.jrc.ec.europa.eu/en/espairs/content>.

The reporting to eSPIRS is based on a Commission Implementing Decision<sup>10</sup> which was adopted in 2014 and aligned the earlier Decision with the requirements and changes in the Seveso-III-Directive. This Decision has no particular end-date and a new updated Decision could in principle be agreed anytime.

### **3.4. Commission Report**

Article 29 tasks the Commission to provide a report to the European Parliament and the Council on the implementation and efficient functioning of the Directive. This report is to be based on the information provided under Articles 18 and 21.

The first Commission report under the Seveso-III-Directive is due by 30 September 2019. Past reports related to the Seveso-I-Directive and the Seveso-II-Directive are publicly available online at: <https://circabc.europa.eu/w/browse/4cc9ca17-0920-4d8a-8796-6ffa170612b7>.

## **4. DRIVERS FOR CHANGE**

### **4.1. Better Regulation Guidelines**

Since the adoption of the Seveso-III-Directive, the Commission has adopted a Commission Staff Working Document on Better Regulation Guidelines<sup>11</sup>. In its chapter V and the associated toolbox tool #41<sup>12</sup>, guidelines on monitoring are provided.

Monitoring generates evidence on an intervention's activities and impacts over time in a continuous and systematic way. A monitoring system is a necessary and integral part of Better Regulation helping to:

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<sup>10</sup> 2014/895/EU: Commission Implementing Decision of 10 December 2014 establishing the format for communicating the information referred to in Article 21(3) of Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (notified under document C(2014) 9334), OJ L 355, 12.12.2014, p. 51–54, [http://data.europa.eu/eli/dec\\_impl/2014/895/oj](http://data.europa.eu/eli/dec_impl/2014/895/oj)

<sup>11</sup> Commission Staff Working Document Better Regulation Guidelines, of 7 July 2017, SWD/2017/350 final, [https://myintracomm.ec.europa.eu/sg/better\\_regulation/Pages/guidelines-toolbox.aspx](https://myintracomm.ec.europa.eu/sg/better_regulation/Pages/guidelines-toolbox.aspx)

<sup>12</sup> [https://myintracomm.ec.europa.eu/sg/better\\_regulation/Documents/tool\\_41.pdf](https://myintracomm.ec.europa.eu/sg/better_regulation/Documents/tool_41.pdf)

- Identify whether a policy is being applied on the ground as expected;
- Addressing any implementation problems of an intervention; and/or
- Identifying whether further action is required to ensure that it can achieve its intended objectives.

Good monitoring generates factual data to improve the quality of future evaluation and impact assessment. It provides time series data that, under normal circumstances, will be more reliable in explaining behaviour than one-off data collection exercises.

## **4.2. Fitness check on reporting and monitoring of environmental legislation**

On 9 June 2017 the European Commission has published a report on actions to streamline environmental reporting<sup>13</sup>. The fitness check found reporting to be largely efficient and the associated administrative burden (estimated cost of EUR 22 million annually) to be moderate, justified and proportionate. The benefits, such as improved and more targeted implementation and better public information, greatly outweigh the costs. Moreover, solid progress has also been made in the recent past in many areas. However, the fitness check also identified problems that need to be tackled further. The report includes a roadmap with cross-cutting actions grouped in five areas:

- (1) Getting the right information in the right form at the right time including through changing or repealing reporting obligations.
- (2) Streamlining the reporting process by using new technologies to provide rapid and geographically specific evidence.
- (3) Promoting active dissemination<sup>13</sup> of environmental information so that citizens can better understand the state of the environment they live in.
- (4) Exploiting other data sources and alternative approaches, such as from the EU earth observation programme Copernicus.
- (5) Improving cooperation to make sure that data reported to the Commission is used as widely as possible.

## **4.3. Already identified weaknesses of the current monitoring system**

Previous rounds of implementation monitoring under the Seveso-II-Directive have already identified some shortcomings of the current monitoring system which remain valid also under the Seveso-III-Directive. The following chapters provide a non-exhaustive set of examples for such shortcomings.

### *4.3.1. Late availability of accident information*

Member States should provide information on major accidents as soon as practicable and at the latest within one year at least preliminary information shall be provided. However, even if this preliminary information is provided within the deadline, it can take several

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<sup>13</sup> Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Actions to Streamline Environmental Reporting – COM(2017) 312 final of 9 June 2017, [http://ec.europa.eu/environment/legal/reporting/fc\\_overview\\_en.htm](http://ec.europa.eu/environment/legal/reporting/fc_overview_en.htm)

years until the information is finally validated and approved for publication by the competent authority. For example, in early 2017 there were still numerous accidents that occurred in 2013 or 2014 that remained to be published.

While it needs to be acknowledged that there are legal constraints preventing the publication of information before all investigations are completed and court rulings took place, this undermines the objective of rapid dissemination of information and lesson learning. Furthermore, this does not allow the Commission to understand systematically and in short delay whether there are developments in industrial safety that need to be addressed.

#### *4.3.2. Outdated establishment data in eSPIRS*

The Seveso-III-Directive requires Member States to provide information on establishments. However, the Directive does not indicate a deadline for providing this information and there is no indication how often the information is to be reviewed and/or updated. For many Member States this has resulted into the situation that information on new establishments is provided only with long delays and that information on earlier reported establishments is not reviewed for many years. While Member States' experts agreed that it would be meaningful to update the information regularly, in practice this is only happening for a limited number of Member States.

This situation undermines the objectives of having the information available in eSPIRS and thus limits amongst others the possibility of Member States to assess transboundary risks they may be exposed to. Furthermore, this has the potential to weaken eSPIRS as reliable source of information for the sake of monitoring implementation or to understand systematically and in short delay whether there are developments that might need to be addressed.

#### *4.3.3. Double reporting on establishments*

Linked to the issue outlined in chapter 4.3.2, Member States are currently obliged to report twice on establishments<sup>14</sup>. Firstly, as outlined above, to eSPIRS and secondly (less detailed) every four years as part of their reports on the implementation of the Seveso-III-Directive (Article 21(2)). The data generated by the two reporting streams does not always match. Currently only the latter provides the Commission with the necessary information to monitor implementation and progress. However, the establishment information included in the report on implementation is limited (e.g. only total number of establishments) and cannot be re-used to populate eSPIRS. This double reporting could possibly be abolished if reporting to eSPIRS was more frequent. This would also contribute to the objective to increase electronic reporting as outlined in the Commission report on actions to streamline environmental reporting.

#### *4.3.4. Lack of relevant information to assess performance*

Under the Better Regulation Guidelines, monitoring systems should provide the necessary data to facilitate the assessment of the performance of the intervention, i.e. in this instance the Seveso-III-Directive. Under the current monitoring system a number of key data is collected such as the number of major accidents or the number of establishments. However, it has turned out that the number of major accidents and other

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<sup>14</sup> Actually thrice when considering the reporting obligations under the Convention on Transboundary Effects of Industrial Accidents

collected information is insufficient to assess the performance of the Seveso-III-Directive.

For example, since 1991 (i.e. since reliable information is available) the number of major accidents reported in the European Union has remained relatively stable with on average 30 major accidents per year. This would suggest that the Directive was not effective. At the same time, however, the number of establishments covered by the Directive has increased significantly, not at least as a result of several enlargements of the European Union during this time. So, when looking instead at the rate of accidents per number of establishments, it becomes clear that there actually was improvement.

Another example: it is currently impossible to tell whether citizens are more or less at risk of being affected by a major accident. While the number of establishments has increased and population grew, better practices, for example in land-use planning, might have resulted in lowering the risk.

Furthermore, the Seveso-III-Directive does not only have the objective of preventing major accidents but also of limiting their consequences. However, as outlined further in chapter 4.3.8, also for this purpose insufficient information is available to assess performance.

#### *4.3.5. Lack of relevant information to establish causal links*

While Member States report information on how they implement and enforce the risk management measures under the Seveso-III-Directive (e.g. emergency plans, inspections) it is not possible to establish whether e.g. an increase in the compliance with those requirements also results into a reduced risk. While there is general agreement among stakeholders that the risk management measures are appropriate, it is not possible to validate this or to understand which measure brings the largest benefits.

#### *4.3.6. Limited ability for real-time monitoring*

As outlined above, reporting on implementation currently happens in four year intervals, although eMARS and eSPIRS would in principle be capable of delivering a more continuous monitoring of key data. While it needs to be acknowledged that the current legislative framework is well established and widely accepted as delivering good results, the long monitoring cycle does not allow reacting to short term developments and it also does not allow for sector specific monitoring. For example, there is anecdotal information that recently there is an increase in the number of establishments due to the increased use of biofuels, which is often produced in smaller enterprises such as farms. Another example could be the increase of the number of establishments as a result of a stricter classification of a particular substance. It could also be useful to identify if a particular industry sector is significantly improving its safety performance. The current monitoring system does not facilitate understanding of such trends.

#### *4.3.7. Missed opportunities to learn lessons and understand emerging risks*

Annex VI to the Seveso-III-Directive indicates that Member States shall report accidents or near misses which are of particular technical interest for preventing major accidents and limiting their consequences, even if they are not meeting any of the other criteria in Annex VI. However, only very few such events are being reported although vital lessons can be learned from near misses, i.e. how accidents were prevented or what weak links may exist.

#### 4.3.8. *Limited ability to understand the socio-economic impact of major accidents*

The current reporting framework for major accidents is focussed on the objective of lesson learning and primarily on the prevention of major accidents. While this appears to work well, the Seveso-III-Directive also has the objective of limiting the impact of major accident should they nevertheless occur.

Therefore, it would also constitute significant progress if the impact of major accidents was reduced over time even if their total number remained stable. However, currently the accident reports often include only limited information and typically only information about immediate impacts (e.g. fatalities, insured damage). The number of fatalities and casualties which is currently used as a proxy provides only a partial picture. Where additional information such as environmental damage or socio-economic impact is provided, it is not necessarily included in a structured manner which hampers relevant analysis.

The lack of information apparently has various reasons. One reason is that no agreed methodologies exist to measure e.g. environmental impacts. Long-term socio-economic impacts on affected communities, e.g. job losses or long-term health cost, are often not monitored. With regard to economic impacts, often only insured losses are indicated but other economic impact such as image loss are not quantified. At the same time it needs to be acknowledged, that there is also a target conflict between a full assessment of the impacts and rapid reporting, as impacts may become apparent only after many years.

The absence of the data hampers assessing the effectiveness and efficiency of the Seveso-III-Directive.

#### **4.4. Increasing coherence across policies**

When investigating the monitoring under the Seveso-III-Directive it is necessary to consider that its objectives also feed into other policies or are influenced by them. This concerns in particular but is not limited to:

- The Convention on Transboundary Effects of Industrial Accidents (TEIA)<sup>15</sup>
- The 2030 Agenda for Sustainable Development<sup>16</sup>
- The Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030<sup>17</sup>
- The European Agenda on Security<sup>18</sup>, including also the CBRN-E Action Plan<sup>19</sup> and the policy on Critical Infrastructure Protection<sup>20</sup>

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<sup>15</sup> <http://www.unece.org/env/teia.html>

<sup>16</sup> [http://ec.europa.eu/environment/sustainable-development/index\\_en.htm](http://ec.europa.eu/environment/sustainable-development/index_en.htm), and <http://www.un.org/sustainabledevelopment/development-agenda/>

<sup>17</sup> [http://ec.europa.eu/echo/sites/echo-site/files/1\\_en\\_document\\_travail\\_service\\_part1\\_v2.pdf](http://ec.europa.eu/echo/sites/echo-site/files/1_en_document_travail_service_part1_v2.pdf)

<sup>18</sup> [http://europa.eu/rapid/press-release\\_IP-16-1445\\_en.htm](http://europa.eu/rapid/press-release_IP-16-1445_en.htm)

<sup>19</sup> [https://ec.europa.eu/home-affairs/what-we-do/policies/crisis-and-terrorism/securing-dangerous-material\\_en](https://ec.europa.eu/home-affairs/what-we-do/policies/crisis-and-terrorism/securing-dangerous-material_en)

- The Industrial Emission Directive<sup>21</sup>
- The INSPIRE Directive<sup>22</sup>
- The Extractive Waste Directive<sup>23</sup>

It is thus necessary to streamline the monitoring under the Seveso-III-Directive to the extent possible with related policies and to ensure the re-use of existing tools, mechanisms or indicators wherever possible, and to avoid duplication of reporting thus reducing administrative burden. It would also be of benefit if the data produced under the monitoring of the Seveso-III-Directive was easily re-usable by the related policy areas.

This is also related to the request for exploiting other data sources and alternative approaches as listed in section 4.2.

## 5. SUBJECT OF THE SERVICE REQUEST

With this service request, the Commission aims to get support on the analysis of the current monitoring system established under the Seveso-III-Directive primarily, but not exclusively, vis-à-vis the Better Regulation Guidelines.

Overall, the current monitoring system has served the Commission well. Therefore, the objective is not to create an entirely different system but to complement and improve the current monitoring system so that it delivers even better and more in line with the latest standards e.g. as defined by the Better Regulation Guidelines and takes into consideration the actions outlined in the Commission report on actions to streamline environmental reporting. This concerns in particular but not exclusively the transition from a compliance oriented monitoring to a system that covers the monitoring of all four aspects listed in tool #41 of the Better Regulation Guidelines, namely:

- (1) Implementation
- (2) Application
- (3) Compliance and enforcement
- (4) Contextual information

The Commission acknowledges that such a transition may not be feasible in a single step.

It is necessary to understand that the context of this service request is the monitoring of the Seveso-III-Directive, as outlined in the Better Regulation Guidelines. Albeit not unrelated, this shall not be confused with the development of Safety Performance Indicators.

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<sup>20</sup> [https://ec.europa.eu/home-affairs/what-we-do/policies/crisis-and-terrorism/critical-infrastructure\\_en](https://ec.europa.eu/home-affairs/what-we-do/policies/crisis-and-terrorism/critical-infrastructure_en)

<sup>21</sup> <http://ec.europa.eu/environment/industry/stationary/index.htm>

<sup>22</sup> <http://inspire.ec.europa.eu/>

<sup>23</sup> <http://ec.europa.eu/environment/waste/mining/index.htm>

Moreover, the focus of this request is the overall monitoring system and not the related operational aspects. This excludes, in particular, the operational and technical aspects of the eSPIRS and eMARS databases operated by the Joint Research Centre, which are not part of this contract.

Overall the service request consists of three aspects which are outlined in the following chapters.

### **5.1. Understanding the monitoring system**

The first step towards improvement is obtaining a clear understanding of monitoring needs and objectives as well as the related requirements and expectations. This also includes an analysis of the strengths and weaknesses of the current monitoring system. While it is certainly important to get the basics right, the Commission would like to clarify that the retrospective aspects shall not be the main focus of the work but serve as means to identify improvements (→ task 1-3 in chapters 6.2.1 to 6.2.3).

### **5.2. Closing gaps and suitable policy indicators**

Once there is a solid understanding of what the monitoring system is expected to deliver and how to fill the gaps, it will be necessary to establish a meaningful set of indicators that would support proper monitoring in line with the Better Regulation Guidelines and policy needs. This would also include identifying new information sources beyond the current monitoring systems such as existing indicators, readily available statistics or economic data (→ task 4-7 in chapters 6.2.4 to 6.2.7).

### **5.3. Deploying change**

After the design of an ideal monitoring system it would be necessary to conduct a feasibility check and get a clear understanding of the obstacles that may be encountered in obtaining the relevant data for indicators or deploying the proposed improvements to the monitoring system. The work should then result in recommendations for improvements that can be achieved in the short-term and an action plan towards long-term improvement (→ tasks 8-10 in chapters 6.2.8 to 6.2.10).

## **6. TASKS**

### **6.1. General task information**

Each tenderer is invited to set out in its offer the specific methodology that is proposed to deliver the work necessary to complete this service request. In general terms, the Commission anticipates that the work will entail at least the elements listed in this chapter and in chapter 6.2. The tenderer is invited to describe a proposal on how to fit the tasks together both in terms of timing and substance. Should it be necessary, the tenderers are also invited to provide suggestions on how to complement the task descriptions or on how to simplify the process whilst achieving the same objective.

All tasks described in these specifications are the responsibility of the contractor but must be carried out in close co-operation with the Directorate General for the Environment of the European Commission, in particular with Unit C4 'Industrial Emissions and Safety'. The contractor will also need to consult with other Directorates General of the European Commission, competent authorities in Member States and other stakeholders.

In addition to the other documents referenced in these Specific Terms of Reference, the tenderer is invited to look into previous work conducted on monitoring and indicators. This concerns in particular:

- (1) The work conducted in the context of the last assessment of the implementation of the Seveso-II-Directive<sup>24</sup>.
- (2) The past Commission reports on the implementation of the Seveso-II-Directive<sup>25</sup>.
- (3) The relevant studies<sup>26, 27</sup> leading to the impact assessment<sup>28</sup> accompanying the Commission proposal for the Seveso-III-Directive.
- (4) Related work that may already have been conducted (e.g. by the Joint Research Centre or other research bodies) more generally in the area of reducing major accident risks, indicators, socio-economic impacts or benchmarking.

An overview of the expected deliverables and the deadlines is available in chapter 9.3 below.

Depending on the most suitable methodology identified by the contractor to respond to the task, the contractor is requested to conduct desk research, stakeholder interviews and literature research, as well as any other means to fulfil the tasks, as appropriate. The Commission considers that there may be different options to obtain the information necessary to respond to the task. Therefore, the tasks are deliberately not indicating a particular method.

## **6.2. Tasks to be performed**

### *6.2.1. Task 1: Preparing the intervention logic*

In accordance with the Better Regulation Guidelines the intervention logic is the logical link between the problem that needs to be tackled (or the objective that needs to be pursued), the underlying drivers of the problem, and the available policy options (or the EU actions actually taken) to address the problem or achieve the objective.

For the purpose of the current contract, it would be beneficial to already develop intervention logic for the Seveso-III-Directive as a tool for clearly identifying for which aspects of the Directive monitoring and indicators would be most effective and efficient.

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<sup>24</sup> Amec Foster Wheeler et al, 2017, <http://publications.europa.eu/en/publication-detail/-/publication/26c9aa63-523e-11e7-a5ca-01aa75ed71a1>

<sup>25</sup> <https://circabc.europa.eu/w/browse/4cc9ca17-0920-4d8a-8796-6ffa170612b7>

<sup>26</sup> Seveso II Directive – Study on the Effectiveness of the Requirement Imposed on Public Authorities, Environmental Resources Management Ltd, 2009, <https://circabc.europa.eu/w/browse/ecf14502-e886-48d6-9f81-969f9c48144e>

<sup>27</sup> Impact assessment study into possible option for amending the Seveso II Directive, COWI A/S, 2010, <https://circabc.europa.eu/w/browse/ecf14502-e886-48d6-9f81-969f9c48144e>

<sup>28</sup> Commission Staff Working Paper Impact Assessment accompanying document to the proposal for a Directive of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances, SEC(2010)1590 final of 21 December 2010, <http://eur-lex.europa.eu/legal-content/EN/HIS/?uri=CELEX:32012L0018&qid=1501238553967>

The intervention logic will ensure that there is a thorough overview of the associated objectives, actions, consequences, expected impacts and external factors.

For the sake of identifying external factors relevant to be mentioned in the intervention logic, this task also includes a basic mapping of the Seveso-III-Directive and all the related policy areas (EU and international), legal instruments and programmes which may be linked or interact with the Seveso-III-Directive. This is of particular interest for instruments and programmes that might offer synergies on monitoring and indicators

Similarly, this task also includes a basic mapping of the stakeholders (i.e. institutions, not persons).

Subsequently, the intervention logic can act as reference point throughout the project.

The tenderer is invited to include in its offer a first draft of the intervention logic.

#### *6.2.2. Task 2: Identifying needs and requirements for monitoring*

Under this task the contractor shall identify, analyse and depict the needs, requirements and stakeholder expectations that a suitable monitoring system under the Seveso-III-Directive would have to respond to. In principle this shall be irrespective of the current monitoring systems and shall not only be limited to the relevant rules on monitoring in the Better Regulation Guidelines but, where relevant and meaningful, also depict relevant needs of other policies or stakeholder expectations as well as general policy communication needs. When considering such extended needs or expectations, the contractor should be mindful of the overall limitations and competences of the European Commission. The work under this task also needs to consider the Commission report on actions to streamline environmental reporting.

#### *6.2.3. Task 3: Analysis of the current monitoring system*

Based on the outcome of task 2 (see chapter 6.2.2) an analysis of the current monitoring system shall be conducted against the identified needs, requirements and expectations. This assessment shall assess in particular but not exclusively the following:

- What are the strengths and weaknesses of the current monitoring system?
- To what extent does the current monitoring system comply with the Better Regulation Guidelines?
- Are actions necessary as a result of the roadmap for action included in the report by the Commission on Actions to Streamline Environmental Reporting?
- To what extent does the current monitoring system comply with other horizontal legislation or guidance on environmental reporting (e.g. INSPIRE Directive).
- To what extent does the current monitoring system comply with other relevant guidelines on monitoring and indicators (e.g. OECD<sup>29</sup>)?
- To what extent does the current monitoring systems address other identified policy and communication needs (including those identified under task 2), not explicitly

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<sup>29</sup> <http://www.oecd.org/env/ehs/chemical-accidents/guidanceonsafetyperformanceindicators.htm>

specified in the Seveso-III-Directive and subsequent Commission Implementing Decisions?

- Is there double-reporting, overlap or other unnecessary administrative burden? Does the current monitoring system collect information which is eventually not used? Can information available from other sources be used for the purposes of the monitoring system under the Seveso-III-Directive and vice-versa?
- What is the perception of stakeholders towards the current monitoring system? What suggestions exist for its improvement?
- If identified during the performance of the task: what good practices exist in Member States and in other policy areas?

With regard to the already identified weakness of the current monitoring system outlined in chapter 4.3 the contractor is requested to identify the key obstacles preventing the better functioning of the current monitoring system. This shall also include an assessment of which accident and establishment data is considered sensitive thus preventing more rapid reporting.

In the context of this task, the contractor is also expected to consider readily available information existing outside the current monitoring system. Is external information supporting or contradicting the information collected by the Commission? Are there options to harvest readily available information that can complement or replace data currently collected in the monitoring framework? For this aspect it would be vital to consider data gathered under other policies (see chapter 4.4), including the data generated in the monitoring framework of the Convention on Transboundary Effects of Industrial Accidents.

For the reporting on establishments to eSPIRS, it should be considered that the European Commission and the European Environment Agency are currently working on streamlining of reporting under the Industrial Emissions Directive and E-PRTR which includes the concept of establishing a common repository of industrial sites and which could in principle be expandable to include Seveso establishments.

#### *6.2.4. Task 4: Understanding key drivers for performance*

The risk management framework under the Seveso-III-Directive is widely accepted as appropriate to manage major accident hazards. However, it is unclear which measures are considered to be most effective and efficient and which ones contribute but are less vital. The Commission acknowledges that in the framework of the current contract it would be impossible to analyse this in depths. However, a better understanding of this connection would be important to select suitable indicators and to make sure that data is weighted properly for the use in indicators. Furthermore, in case on non-compliances, such knowledge would allow assessing where corrective actions by the Commission would be most effective.

The contractor is expected to assess in this context in particular but not exclusively:

- Operator's obligations (notification, major accident prevention policy, safety management systems, safety plans, internal emergency plans);

- Competent Authority's obligations (external emergency plans, inspection, land-use planning);
- Citizen's rights (public information, participation in decision making, access to justice).

It should also be investigated whether there are other drivers, not included in the Seveso-III-Directive, that play a noteworthy role.

Where it turns out that it is currently not possible to fully understand the drivers, solid proposals are expected on how to close knowledge gaps.

#### *6.2.5. Task 5: Better understanding the socio-economic impact of major accidents*

Further to the work conducted already under an earlier contract<sup>24</sup>, the contractor is expected to investigate in more depth what information is available on the socio-economic impact of major accidents and how reporting of such impacts can be improved without noteworthy additional administrative burden. In this context, the contractor is explicitly expected to look beyond the current monitoring framework and explore for example alternative data sources, research or literature.

Moreover, and further to the work already conducted under the earlier contract<sup>24</sup> the contractor is also expected to investigate in more depth the model used by the ARIA database which is based on the European Scale of Industrial Accidents<sup>30</sup>. Given that this scale was initially agreed to facilitate the implementation of the Seveso-I-Directive, it would be informative to what extent this scale is also used by other Member States or what prevents its widespread use. Where relevant, the contractor should also briefly describe other scales that are in use and how they relate to the European Scale of Industrial Accidents.

Furthermore, the contractor should engage with the French authorities to explore the possibility of extracting from the ARIA database those accidents that meet the criteria of Annex VI to the Seveso-III-Directive and thereby provide a snapshot of the economic impact of major accidents in France. Where similar databases are used in other Member States the same exercise should be conducted if technically feasible and where it would be possible to align the data with the criteria of Annex VI to the Seveso-III-Directive or the European Scale of Industrial Accidents.

#### *6.2.6. Task 6: Establishing monitoring indicators*

Taking into account the information gathered, and considering the work already conducted under an earlier contract<sup>24</sup>, under this task the contractor is expected to identify suitable indicators that allow suitable monitoring and assessing the performance of the Seveso-III-Directive in line with the identified needs and requirements and the Better Regulation Guidelines. Where such indicators do not exist, the contractor is requested to develop those.

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<sup>30</sup> <https://www.aria.developpement-durable.gouv.fr/en-cas-daccident/echelle-europeenne-des-accidents-industriels/>

For each proposed indicator, the contractor is expected to indicate the relevant data sources, the relevance of the indicator to monitor implementation and/or assess performance, and – where applicable - the relevance of the indicator for other policies.

For this task the contractor is explicitly requested to consider readily available data sources beyond the current monitoring framework. Furthermore, the contractor is expected to investigate relevant existing indicators used by competent authorities or industry sectors. While a wide variety of indicator systems exist, the following are indispensable to fulfil the task:

- OECD Guidance on Safety Performance Indicators<sup>31</sup>;
- Work conducted by the Disaster Risk Reduction Management Knowledge Centre on Sendai indicators and disaster loss data<sup>32</sup>;
- Sustainable Development Goals Indicators<sup>33</sup>.

As regards the industry sectors, particular attention should be given to the chemical, petrochemical (incl. refineries) and storage sectors, as those account for the largest number of establishments and accidents. In this context it would also be necessary to consider the specific situation of small and medium-sized enterprises.

Wherever possible and meaningful, the selected indicators should allow for a geographic breakdown (i.e. at least per Member State). It would be of added value if relevant indicators would also allow for a breakdown per industry sector or hazard (i.e. chemical classification) involved.

When proposing indicators, the contractor should consider potential issues related to different safety cultures in the Member States or industry sectors. For example, there is anecdotal experience from the application of indicators that they resulted in less voluntary reporting (e.g. on near misses) out of the fear of being rated negatively.

#### *6.2.7. Task 7: Flagship indicators for communication*

Based on the set of indicators proposed under task 6 (see chapter 6.2.6), in addition a small number (not more than 5) of flagship indicators need to be established that allow rapid communication of the state of play to non-informed stakeholders and the general public. If feasible, those should ideally depict:

- The overall degree of compliance (over all requirements);
- The progress made in preventing major accidents and limiting their impact;
- The average risk of a citizen to be exposed to a major accident.

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<sup>31</sup> <http://www.oecd.org/env/ehs/chemical-accidents/guidanceonsafetyperformanceindicators.htm>

<sup>32</sup> <http://drmkc.jrc.ec.europa.eu/>

<sup>33</sup> <https://unstats.un.org/sdgs/indicators/indicators-list/>

Ideally, a flagship indicator should not be dependent on the four-year reporting cycle as to allow a more continuous assessment, although it is acknowledged that this may not be feasible in all cases.

When suggesting flagship indicators, a balance needs to be found between the need of communicating in a simple and comprehensive manner to a non-informed audience and the risk of serious over-simplification.

#### *6.2.8. Task 8: Analysing benefits and obstacles*

The objective of this task is to conduct a reality check and test the outcome of the other tasks. Before making a final proposal, the contractor should outline clearly the benefits and obstacles associated with the identified areas of improvements and indicators.

Wherever possible and meaningful, the contractor should demonstrate the feasibility and added value of an indicator by applying it to past data.

This exercise will determine which of the proposed improvements and indicators are feasible in practice and in what time-frame they can be deployed.

#### *6.2.9. Task 9: Recommendations for short-term improvements*

Under this task the contractor shall provide a set of justified recommendations that can be implemented quickly and without the need for extensive consultation with stakeholders, changing the current legal framework or that only require minor modifications in the next Commission Implementing Decision (see chapter 3.2) compared to the current one.

#### *6.2.10. Task 10: Action plan for long-term improvements*

Based on the work conducted under the other tasks, the contractor is expected to provide a realistic long-term plan to deploy justified recommendations for improvements that may require: time-consuming discussions with stakeholders, changes in the legal framework or that can for other reasons not be deployed in the short-term. This plan should in particular consider the necessary legislative cycle to establish relevant Commission Implementing Decisions (see chapters 3.1 to 3.3 for the relevant cycles). Considering those cycles, it is acknowledged that the long-term planning may, but depending on the suggested improvement not necessarily must, cover a time-frame of up to 10 years.

## **7. ESTIMATED EXPERTISE REQUIREMENT**

The project manager is expected to have a very good record of projects which have been managed successfully, including projects with the European Commission. The experts involved are expected to have a very good understanding and/or experience in the relevant legislation, data collection, evaluation, analysis and implementation.

In assembling the team, the project manager should consider language competence of the team members to accommodate as many official EU languages as feasible but at least English, French and German.

## 8. MEETINGS

The working language at all meetings will be English. The contractor shall submit minutes of any meeting, video- and phone-conferences within 5 working days<sup>34</sup> (10 working days for the stakeholder workshop) for approval by the Commission.

### 8.1. Kick-off meeting

A kick-off meeting shall be organised in the Commission's premises in Brussels between the contractor and the Commission Services within 15 working days<sup>35</sup> after signature of the contract. The contractor shall present at this meeting a draft methodology to perform the contract.

### 8.2. Co-ordination meetings

In addition to the kick-off meeting and the presentation of work, the contractor shall be available, upon request of the Commission, to organise on demand videoconference meetings and be available to attend one meeting<sup>36</sup> in the Commission's premises in Brussels to discuss the progress made and the various reports. The contractor shall organise phone-conferences throughout the duration of the contract as necessary to discuss questions but at least once a month to report on progress. Where the contractor should be present in Brussels, the contractor should consider using the opportunity, where easily feasible without noteworthy budgetary implications and where necessary, for additional co-ordination meetings to enhance communication flow thus improving the quality of the work.

### 8.3. Stakeholder workshop

On the basis of the interim report, the contractor shall organise a one-day stakeholder workshop in Brussels to validate the findings and obtain additional input. If the timeframe of the project allows, the workshop should take place back-to-back to a meeting of the Seveso Expert Group<sup>37</sup> or a similar setup. The workshop shall be held in the Commission's premises and foresee the participation of 40-60 participants.

The contractor will be responsible for:

- Preparing, in close consultation with the Commission, the workshop agenda;
- The administrative preparations (registration, invitation, secretariat, technical support and meeting materials, including participant badges, reception of the participants),

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<sup>34</sup> The term 'working days' refers to working days of the Commission, i.e. excluding weekends and the days included in the relevant Commission Decision on public holidays for the given calendar year (for 2017: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32015D1202%2801%29> and for 2018: [http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017D0217\(01\)](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017D0217(01)))

<sup>35</sup> The timeframe may be adjusted up to 15 working days in view of availability of relevant Commission staff or if the Contractor can demonstrate that travel costs involved would be prohibitive expensive due to the short notice.

<sup>36</sup> This would most likely be to present the interim report.

<sup>37</sup> The Seveso Expert Group typically meets in autumn.

where there are limitations in executing these tasks e.g. due to Commission security rules, the Commission will provide the relevant support;

- Chairing the workshop;
- Presentations during the workshop, including where relevant the invitation of additional speakers; and
- Preparing the workshop report.

This contract does not cover any reimbursements for participants, catering or translation.

## **9. DELIVERABLES**

Throughout the contract duration the contractor shall regularly inform the Commission of the progress of the work and any important issues that may arise.

### **9.1. Expected reports**

The Contractor is expected to deliver the following reports in accordance with the deadlines indicated in chapter 9.3:

- Inception report: This report is expected to include the final methodology and the plan for the stakeholder consultation, including the relevant questionnaires. It should already propose a structure for the final report. Furthermore, it should include the outcome of task 1 and for the other tasks it should include any outcome of work already conducted.
- Draft interim report: This report is expected to include the outcome of the work conducted up to the delivery date. It should in particular include the conclusions from the stakeholder consultations and the discussions with the authorities under tasks 2 through 5. It is in particular expected that by the time of the interim report work on tasks 2 through 4 will be largely completed<sup>38</sup>. Related aspects of tasks 8 and 9 should also be reasonably developed. For tasks which are not yet completed, the interim report should include in all chapters a clear indication on the state of play and what is still missing. As the interim report will be the basis for the stakeholder workshop, the objective of the draft interim report is to verify that the quality of the interim report is sufficient for release.
- Interim report: This report is expected to include the content of the draft interim report taking into account the comments provided by the Commission. The interim report will be made publically available.
- Draft final report: This report is expected to include the outcome of all tasks for the purpose of review by the Commission and where relevant, identify necessary

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<sup>38</sup> There is currently an option that a meeting of the Seveso Expert Group may take place in May 2018. Should this materialise and should the timeframe of this contract allow doing so, the information from tasks 2 through 4 could be of value for this meeting and relevant parts of the draft might be disseminated to the participants. It is pointed out that this is not a contractual requirement as it cannot be safely foreseen at this stage. It is mentioned solely for information and as background to explain the request.

corrective actions to achieve the objectives of the contract. The Commission may make the draft final report publically available to seek input also from stakeholders.

- Final report: This report is expected to include the final outcome of all tasks, including addressing the Comments provided to the draft final report. The final report must fulfil all specifications as outlined in chapter 9.2.

## **9.2. Report specifications**

The overall content and format requirements are outlined in chapter 4 of the framework contract. This chapter only provides additional specifications.

### *9.2.1. General requirements for all reports*

The language of the reports and all documentation produced in the context of this contract must be English. All documents have to be written in clear, understandable and correct British English. Reports need to follow the relevant parts of the Interinstitutional Style Guide<sup>39</sup>. The documents should be concise, straightforward and easy to follow, with a clear layout and structure, appropriate contents page, glossary, abbreviations and executive summary. Apart from the actual findings the report shall also include a chapter on the methodology.

All reports shall be provided electronically both in a PDF and Microsoft Office 2010 compatible format.

Where colours are used to depict information (e.g. in graphs) the formatting should be chosen in a manner that allows identifying the information also in black and white prints.

### *9.2.2. Additional requirements for the final report*

All the information compiled in the framework of the drafting of the report shall be made available with the final report in an electronic format.

For the final report, all graphs used in the final report need to be provided in a Microsoft Office 2010 compatible format and including all underlying data, either embedded in the report or as separate files, so that they can be easily modified (e.g. for the purpose of translation). Attention must be paid to the fact that Microsoft Office 2010 does not support all layout options for graphs that later versions may offer.

3 colour-print paper copies of the final report shall be provided.

Electronic versions of the final report must be provided unprotected to facilitate their publication.

All studies produced for the European Commission and Executive Agencies shall conform to the corporate visual identity of the European Commission by applying the graphic rules set out in the European Commission's Visual Identity Manual, including its logo<sup>40</sup>.

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<sup>39</sup> <http://publications.europa.eu/code/en/en-000100.htm>

<sup>40</sup> The Visual Identity Manual of the European Commission is available upon request. Requests should be made to the following e-mail address: [comm-visual-identity@ec.europa.eu](mailto:comm-visual-identity@ec.europa.eu)

The final report will be published by the Commission in the EU Bookshop<sup>41</sup>.

### 9.3. Deadlines for deliverables

The timetable for the deliverables is the following<sup>42</sup>:

No	Timing	Description	Indicative date <sup>43</sup>
1	D <sup>44</sup> +15 working days	Kick-off meeting	Mid November 2017
2	D+1,5 month	Inception report	Mid December 2017
3	D+6 months	Draft interim report	May 2018
4	D+7 months	Interim report	June 2018
5	D+8 months	Stakeholder workshop	July 2018
6	D+11 months	Draft final report	October 2018
7	D+13 months	Final report	November 2018

### 10. DURATION OF THE TASKS

The tasks should be completed within 13 months of the signature of the contract. The execution of the task may not start before the contract has been signed.

### 11. PLACE OF PERFORMANCE

The place of performance of the tasks shall be the contractor's premises or any other place indicated in the tender, with the exception of the Commission's premises.

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<sup>41</sup> <https://bookshop.europa.eu>

<sup>42</sup> When mutually agreed between the Commission and the contractor individual deadlines may be slightly adjusted during the project, e.g. in view of absences of staff or public holidays, as long as this does not put the overall timeframe at risk. Such agreement needs to be formlessly documented in written form (e.g. by e-mail).

<sup>43</sup> The column 'indicative date' provides an illustrative example for the deadlines assuming a signature date of 1 November 2017. The actual delivery dates are defined by the signature date plus the periods indicated in the column 'timing'

<sup>44</sup> D = contract signature date