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EVALUATION

of

**COUNCIL DIRECTIVE 2008/114 ON THE IDENTIFICATION AND DESIGNATION
OF EUROPEAN CRITICAL INFRASTRUCTURES AND THE ASSESSMENT OF
THE NEED TO IMPROVE THEIR PROTECTION**

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GLOSSARY

Abbreviation	Definition
CI	Critical infrastructure
CIP	Critical infrastructure protection
CIP PoC	Critical Infrastructure Protection Point-of-Contact
CIPS	EU Programme on Prevention, Preparedness and Consequence Management of Terrorism and other Security-Related Risks
CIWIN	Critical Infrastructure Warning Information Network
ECI	European critical infrastructure
ECIP	European Critical Infrastructure Protection
EEAS	European External Action Service
EPCIP	European Programme for Critical Infrastructure Protection
ERNCIP	European Reference Network for Critical Infrastructure Protection
ICT	Information and communications technology
ISF	Internal Security Fund
MFF	Multiannual Financial Framework
NCI	National critical infrastructure
NIS	Network and information system
OSP	Operator Security Plan
PPP	Public-private partnership
SLO	Security Liaison Officer

1. INTRODUCTION

1.1 CONTEXT, PURPOSE AND SCOPE OF THE EVALUATION

Council Directive 2008/114/EC of 8 December 2008 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection (hereafter referred to as the European Critical Infrastructure (ECI) Directive or simply the Directive) aims to enhance the protection of critical infrastructure in the European Union, the disruption or destruction of which would have significant cross-border impacts. The Directive achieves this through the creation of a procedure for the identification and designation of ECIs, and a common approach to the assessment of the need to improve the protection of such infrastructure. The Directive: sets out a number of key definitions; provides procedures for the identification and designation of critical infrastructure that may be designated as European critical infrastructure (ECI); puts in place certain requirements for ECI owners/operators and Member States; creates national points-of-contact; and extends various kinds of Commission support to Member States. The Directive is part of the European Programme for Critical Infrastructure Protection (EPCIP, hereafter referred to as the Programme), which was established in 2006 and which sets out an overall policy approach and framework for critical infrastructure protection (CIP) activities in the EU.¹

The Directive was subject to review in 2012 in accordance with Article 11.² The review found that although the Directive was quickly transposed in the national laws of all Member States, its application was limited, with only a few potential ECI having been identified and even fewer ultimately designated. There were also considerable discrepancies in the application of the Directive by different Member States and few indications that it had actually improved security in the transport and energy sectors. Furthermore, the evaluation found that the Directive's sector-focused approach posed a challenge to some Member States that approached the task of analysing criticalities on a cross-sectoral rather than sector-specific basis. Finally, the review found that the Directive primarily fostered bilateral rather than pan-European cooperation on CIP-related matters, but also that insufficient consideration had been given to the links between critical infrastructures (CIs) in different sectors or across national boundaries.³ The results of the review prompted the Commission to pilot a new approach to the implementation of the Programme in 2013 in order to emphasise the interdependencies that exist both between different sectors and between CIs, industry, and state actors, and that threats to one type of CI can have a significant impact on a broad range of actors involved in the operation of other CIs but more widely as well.⁴

In the meantime, the threat picture facing CI was changing. For instance, the 2017 Comprehensive Assessment of EU Security Policy⁵ underlined the new and evolving challenges faced by the European Union, including from terrorism, emerging technologies (e.g. unmanned aerial vehicles), insiders, etc. The Comprehensive Assessment pointed to the need to take a broad view on the protection of CI in the EU, starting with the evaluation of the Directive. Preparations for the evaluation began in early 2018.

¹ The Directive defines critical infrastructure as 'an asset, system or part thereof located in Member States which is essential for the maintenance of vital societal functions, health, safety, security, economic or social well-being of people, and the disruption or destruction of which would have a significant impact in a Member State as a result of the failure to maintain those functions.' Critical infrastructure protection (CIP) describes those measures that are taken in order to protect critical infrastructure from disruption/destruction and, where these efforts fail, to ensure that they quickly be brought back online, i.e. are resilient.

² Article 11 of the Directive states that 'a review of [the] Directive shall begin on 12 January 2012.'

³ Staff Working Document (2012) 190.

⁴ Staff Working Document (2013) 318.

⁵ Staff Working Document (2017) 278.

In late August 2018, the European Commission launched the evaluation of the Directive, which aimed to analyse its implementation and application in each EU Member State according to a number of specific criteria set out in the Commission's Better Regulation Guidelines, namely relevance, coherence, effectiveness, efficiency, EU added value and sustainability.⁶ The evaluation would also: analyse the scope and content of the Directive; the organisation of work at the national and EU level aimed at implementing the Directive; and the state of implementation of the Directive's provisions. The evaluation was in part informed by an external study of the Directive's implementation.

The overall purpose of the evaluation was to provide the Commission with a qualitative and quantitative analysis of the Directive as well as recommendations as to how to further strengthen the protection and resilience of CI. While the evaluation was not focused on other non-legislative elements of the Programme, certain elements of the Programme were accounted for as appropriate.

The evaluation considered the implementation of the Directive from its entry into force in January 2009 to the start of the evaluation in August 2018. A wide range of stakeholders were consulted as part of the evaluation. These included: competent authorities at the Member State level; CI operators and other industry stakeholders in the transport and energy sectors; academia and think tanks; the general public; and the relevant Directorate-Generals within the Commission, the European External Action Service (EEAS), and EU Agencies.

The evaluation accounted for the aforementioned 2012 review of the Directive. It also took into account other relevant EU instruments that entered into force since 2008 and that deal either directly or indirectly with the protection and resilience of CI.⁷ The evaluation assessed the extent to which these instruments can be considered to be redundant, complementary, or obstacles to the effective implementation of the Directive, and whether there were any evident gaps.

This staff working document describes the evaluation, how it was carried out, and what it found. It is accompanied by four annexes that contain procedural information, a summary of the consultations, an overview of the methodology, and a detailed description of the evaluation criteria.

2. BACKGROUND TO THE INTERVENTION

2.1 CONTEXT

In June 2004, the European Council called for the preparation of an overall strategy to protect critical infrastructure in Europe.⁸ On 20 October 2004, the Commission adopted a Communication on Critical Infrastructure Protection in the Fight against Terrorism.⁹ This put forward suggestions on how to enhance European efforts to prevent, prepare for and respond to terrorist attacks involving CI. In December 2004, the Council endorsed the intention of the Commission to propose a European Programme for Critical Infrastructure Protection. In

⁶ Staff Working Document (2017) 350.

⁷ A non-exhaustive list of examples of EU instruments that have been introduced in the years since the Directive in 2008 and that are relevant in a CIP context include: Directive 2016/1148 concerning measures for a high common level of security of network and information systems across the Union (the NIS Directive); Regulation 2017/1938 concerning measures to safeguard the security of gas supply; Regulation 994/2010 concerning measures to safeguard security of gas supply; Regulation 1285/2013 on the implementation and exploitation of European satellite navigation systems (the Galileo Regulation); Directive 2009/119 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products; and Regulation 2015/1998 laying down detailed measures for the implementation of the common basic standards on aviation security.

⁸ Council of the European Union. (2004). EU Solidarity Programme on the consequences of terrorist threats and attacks. 15480/04.

⁹ COM (2004) 702.

November 2019, the Commission published a Green Paper on a European Programme for Critical Infrastructure Protection.¹⁰

In December 2006, the Commission issued a Communication on a European Programme for Critical Infrastructure Protection.¹¹ This set out an overall policy approach and framework for CIP activities in the EU. The Programme's four main pillars would be:

- A procedure for the identification and designation of European critical infrastructure (ECI) and for the assessment of the need to improve their protection (provided for in the ECI Directive adopted in 2008);
- Measures designed to facilitate the implementation of the Programme, including an Action Plan, the Critical Infrastructure Warning Information Network (CIWIN), the use of a CIP expert group at EU level, a CIP information-sharing process, and the identification and analysis of interdependencies;
- Funding for CIP-related measures and projects focusing on 'Prevention, Preparedness and Consequence Management of Terrorism and other Security-Related Risks' for the period 2007-2013; and
- The development of an external dimension in recognition of the interconnected and interdependent nature of societies both within and beyond the EU. The external dimension would entail cooperation with third countries outside the EU through measures such as sector-specific memoranda of understanding and encouraging the raising of CIP standards outside of the EU.

Following the creation of the Programme in 2006, CIWIN and the CIP expert group were established. The CIPS funding also came available and the Programme's external dimension was activated. At the same time, the Commission was developing the proposal for a mechanism that would provide a procedure for ECI identification and designation. In December 2006, the Commission published a Proposal for a Directive of the Council on the identification and designation of European Critical Infrastructure and the assessment of the need to improve their protection.¹²

2.2 KEY ELEMENTS OF THE INTERVENTION

The Directive that was adopted in 2008 establishes a procedure for identifying and designating European critical infrastructure and a common approach for assessing the need to improve their protection. The Directive has a sectoral scope, applying only to the energy and transport sectors. However, provisions were made for the possible expansion of the Directive to apply to other sectors.¹³

Under the Directive, each Member State on whose territory a potential ECI is located should inform and engage in bilateral and/or multilateral discussions with those Member States most likely to be significantly affected by the disruption/destruction of potential ECI. While the Directive allows for the Commission to participate in these discussions, it does not grant the Commission access to detailed information that could allow for the unequivocal identification of infrastructures that Member States have identified as potential ECIs.

¹⁰ Green Paper on a European Programme for Critical Infrastructure Protection. COM (2005) 576.

¹¹ Communication from the Commission on a European Programme for Critical Infrastructure Protection (COM(2006) 786).

¹² COM (2006) 787.

¹³ Article 3 of the Directive.

Under the Directive, the Member State on whose territory a potential ECI is located designates it as an ECI following an agreement between that Member State and other Member States that risk being significantly affected. The Directive also requires owners/operators of designated ECI to prepare Operator Security Plans (OSP) (i.e. advanced business continuity plans) and to designate Security Liaison Officers (SLO), the task of which is to serve as a link between the owner/operator and the competent authority responsible for CIP at national level.

The OSP should contain a procedure enabling ECI owners/operators to identify CI assets and which security solutions exist and/or are being implemented for their protection. Within one year of designating CI as ECI, the Member State shall check that an OSP or equivalent is in place and that it is reviewed regularly. The Directive stipulates that appropriate action must be taken by the Member State where ECI owners/operators do not fulfil the OSP requirement.

The SLO function is intended to serve as a point-of-contact between the ECI owner/operator and the competent authority on issues relating to security. According to the Directive, each Member State should assess whether any designated ECI on its territory has an SLO or equivalent, and take steps where this is not the case. Each Member State shall ensure that an appropriate communication mechanism exists between the SLO and the competent national authority by which relevant security-related information (e.g. threats/risks to designated ECI) can be exchanged).

Finally, each Member State must designate a European Critical Infrastructure Protection (ECIP) contact point responsible for coordinating CIP issues with European relevance at Member State level, with other Member States, and vis-à-vis the Commission.

2.3 EVOLUTION OF THE CONTEXT

The evaluation at hand was launched in light of a significantly changed context compared with when the Directive was adopted in 2008. First of all, a number of CIP-relevant sectoral initiatives in the energy and transport sectors have been taken at EU level in recent years. Besides these, the Network and Information Security (NIS) Directive was adopted in 2016. This aims to achieve a high level of security of network and information systems on the part of essential service providers in a total of seven sectors including transport and energy.¹⁴

Furthermore, the threat picture facing CI in Europe has evolved, as has European thinking on how best to manage threats. Although the nature of the antagonistic, accidental man-made and natural threats to CI have changed little since the mid-2000s, the *risk* for certain types of incidents (e.g. hybrid threats, insiders, cyberattacks) has increased. All the while, digital infrastructure has grown in importance, both as a basis for the operation of CI and as CI in its own right. While recent technological innovations like 5G, unmanned aircraft systems, and artificial intelligence are likely to bring further efficiencies to CI operations, they may also pose serious threats in the hands of malicious actors interested in disrupting CI operations. Finally, CIs, both in Europe and further afield, are increasingly interconnected and reliant upon one another. The more complex these interdependencies, the more infrastructure in disparate (and at first glance seemingly peripheral) sectors might be considered critical. As such, there is increasing interest on the part of Member States and CI owners/operators in ensuring that infrastructures are resilient, meaning that they are equipped to ‘bounce back’ from disruption as quickly as possible.

¹⁴ Besides transport and energy (which are covered by the ECI Directive), the Network Information System (NIS) Directive concerns the banking, financial market infrastructure, health, drinking water supply and distribution, and digital infrastructure sectors (see Annex II of the Directive).

2.4 INTERVENTION LOGIC AND BASELINE

2.4.1 INTERVENTION LOGIC

The intervention logic presented below has been prepared by the contractor responsible for carrying out the external study. This tool serves to depict the chain of expected effects associated with the Directive.

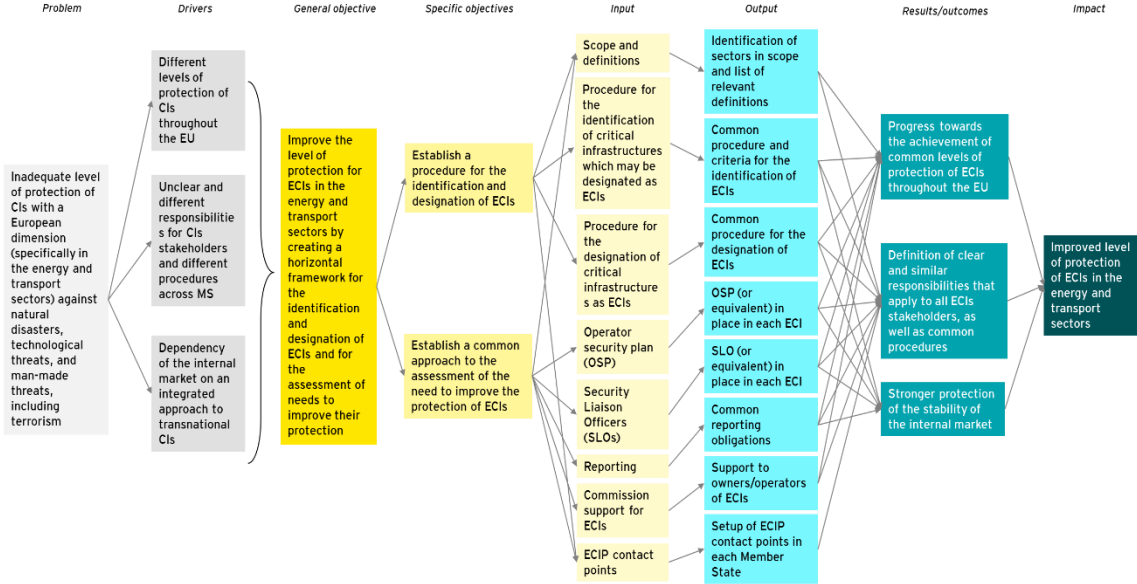


Figure 1: The ECI Directive’s intervention logic¹⁵

The intervention logic helps in visualising the *problem* that the Directive was intended to address when it was first adopted, namely an inadequate level of protection of CIs with a European dimension in the energy and transport sectors in the face of natural disasters, technological threats, and man-made threats, including terrorism.

Three primary *drivers* prompted the Commission to put forward its proposal for a Directive.¹⁶ The first related to the existence of different levels of protection of CIs in different parts of the Union. This was of concern given the fact that the damage or loss of CI in one Member State could have adverse effects on CI in other Member States, but also potentially at a more regional or even pan-European level (with the potential to impact the entire European economy) as well. In parallel with the development of ever-deeper interdependencies between CIs in different Member States, the early 2000s was a period of increasing market liberalization (e.g. in electricity and gas supply) and the introduction of many new technologies that facilitated CI operations and made them more efficient. Taken together, these developments had the combined effect of drawing CI in different parts of the EU together into larger, more interconnected networks.

At the same time, the responsibilities of CI owners/operators varied or were unclear across the Union. This was in part due to the decentralisation of control over CI as a result of market

¹⁵ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 2-5. It is the view of staff that ‘stronger protection of the stability of the internal market,’ which appears as a ‘result/outcome’ in the intervention logic developed by the external contractor should instead be seen as an ‘impact’.

¹⁶ Proposal for a Directive of the Council on the identification and designation of European Critical Infrastructure and the assessment of the need to improve their protection (COM (2006) 787).

liberalization and the privatization of CI. The absence of a clear, harmonised regulatory framework across the Union risked creating uncertainty on the part of CI operators, especially in instances where they sought to operate CI in different Member States with different standards/requirements.

The fragmentation of CI operations across Europe also meant that CI owners/operators were subject to different obligations/requirements depending on where within the Union they worked. This had the effect of creating an uneven playing field within the internal market. Variation as to how different Member States regulated/oversaw different CI sectors had certain economic implications for CI owners/operators.¹⁷

In recognition of the *problem* and the various imperatives to act (the *drivers*), the Commission saw the need for action with the *objective* of improving the level of protection for European critical infrastructures by creating a horizontal framework for the identification and designation of ECIs and for the assessment of the needs to improve their protection. The Commission's proposal for the Directive emphasised the need to account for particular experience, expertise and requirements concerning CIP in different sectors, and that any new EU approach to CIP should be developed and implemented taking into account sectoral specificities and existing measures. Annex I of the Commission's proposal identified 11 'critical infrastructure sectors,' of which the transport and energy sectors were deemed to be immediate priorities for action.¹⁸ In the ECI Directive as it was adopted, the focus was on these two sectors, though provisions were made for the possible expansion of the Directive to apply to other sectors, of which the ICT sector was to be given priority.¹⁹ The *specific objectives* of the Directive were twofold: to establish a procedure for the identification and designation of ECIs; and to establish a common approach to the assessment of the need to improve the protection of ECIs.

The Directive's general and specific objectives were to be achieved through a number of provisions included in the legislation that provided the Member States with common definitions related to CIP that would enable them to more easily carry out discussions over Member State lines in order to jointly identify CIs with potentially serious cross-border implications if disrupted in one way or another. Through these discussions, the Commission aimed to enable the Member States to formally designate such CIs as 'European' in nature and ensure that enhanced protective measures were subsequently taken. The Commission also saw the need to support ECI owners/operators as necessary, to stimulate EU-wide exchange on CIP-relevant issues, and to maintain a general overview of the threats, risks and vulnerabilities facing specific sectors in which CIs with European implications operated. The provisions in the Directive addressing these imperatives are referred to as *inputs* in the intervention logic and include: the provision of scope (limited to the transport and energy sectors) and definitions (e.g. 'critical infrastructure,' 'European critical infrastructure'); a procedure for the identification of CI which may be designated as ECI; a corresponding procedure for the designation of critical infrastructure as ECI; specific requirements for designated ECI owners/operators (e.g. to develop and maintain an OSP, to create an SLO function); and reporting requirements for both competent authorities and ECI owners/operators. It also creates an ECIP contact point group, and obligates the Commission to provide support to ECIs upon request (for instance by providing access to available best practices and methodologies, supporting training and the exchange of information on relevant

¹⁷ Ramboll (2012). Study into the potential impacts of options amending council Directive 2008/114/EC.

¹⁸ Proposal for a Directive of the Council on the identification and designation of European Critical Infrastructure and the assessment of the need to improve their protection (COM (2006) 787).

¹⁹ Article 3 of the Directive.

technical developments related to CIP, etc.). Through these provisions (inputs), the Directive should yield an equal number of corresponding *outputs* (see Figure 1, above).

The intervention logic makes clear that where these *outputs* are met, the Directive should generate a number of *results/outcomes* that address both the general problem and drivers that prompted the Commission to take the initiative in the first place. The expected results/outcomes include: progress towards the achievement of common levels of protection of ECIs throughout the EU; the definition of clear and similar responsibilities and common procedures applying to all ECI stakeholders; and enhanced protection of the stability of the internal market. Assuming these results/outcomes are achieved, the Directive should ultimately lead to an improved level of protection of ECIs in the energy and transport sectors, but also stronger protection of the stability of the European internal market, thereby resolving the initial identified problem.

2.4.2 BASELINE

The amount of information concerning national-level CIP measures prior to the Directive coming into force (and that was needed in order to establish a baseline for comparison) was found to be limited. The evaluation addressed this by using information provided by the Member States’ CIP points-of-contact (CIP PoCs) to partially reconstruct the pre-Directive situation at national level. This information was then combined with other sources of information, allowing for an investigation as to whether the key elements introduced by the Directive were present at Member State level prior to 2008. By analysing the information provided by the CIP PoCs via the online survey and the feedback gathered as part of the case studies included in the external study with information contained in the implementation tables, it was possible to describe the general nature of national CIP measures before 2008, depicted in the figure below.

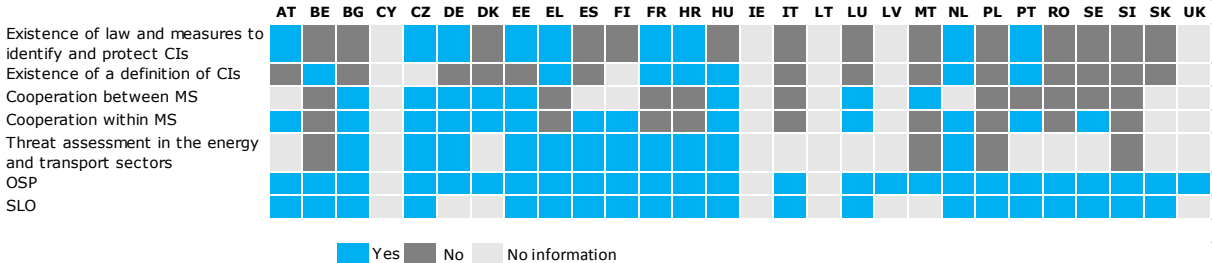


Figure 2: National CIP measures before 2008²⁰

The findings show that in half of the Member States (14), there was no definition as to what exactly constitutes a critical infrastructure before 2008. There were no specific laws/measures in place intended to identify/protect CI in 14 Member States. Meanwhile, 10 Member States did not have any formalised cooperative arrangements with other Member States in order to exchange CIP-relevant information.

On the other hand, the analysis revealed that most Member States performed threat assessments in the energy and transport sectors, and that many had developed national-level cooperation mechanisms regarding CIP. Meanwhile, most Member States (25) had in place OSP-equivalent requirements before the introduction of the Directive, and a majority of Member States (20) already required functions similar to the SLO provision at key CI facilities.

²⁰ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 8.

It is important to point out that the baseline situation described above is by no means intended to describe the maturity or effectiveness of the different Member States' CIP frameworks before 2008. For instance, the absence of elements mandated by the Directive from certain national frameworks prior to 2008 is by no means to suggest that these national approaches were any less effective than those in Member States where such elements were present.

3. IMPLEMENTATION STATE OF PLAY

3.1 IMPLEMENTING AND TRANSPOSING MEASURES

The Directive was adopted in December 2008, and entered into force the following month (January 2009). Member States were given until 12 January 2011 to transpose the Directive into national law. The Member States' approaches to transposition took three general forms, namely: 1) transposition of the Directive as part of broader national CIP frameworks; 2) the introduction of ECI-specific measures (i.e. national legislation focusing exclusively/almost entirely on ECI); and, 3) the introduction of sector-specific (energy and/or transport) legislation.

The majority of Member States (18) opted to transpose the Directive within the fold of national CIP legislation. This was done either through amendments to existing national legislation (in most cases aimed at providing clarification in view of the contents of the Directive) or through new legislation. The remaining Member States transposed the Directive either through ECI-specific measures or sector-specific legislation (four and six Member States, respectively). No matter which path the Member States chose, most of the work associated with transposition was carried out during the first few years after the Directive was adopted, the main exception being Croatia, which passed a comprehensive law on CI in 2013 (the same year that it joined the EU) and subsequently began transposing the Directive.

3.2 DEFINITIONS AND SCOPE

National transposition efforts have primarily focused on the definitions of CI and ECI, respectively. While several Member States (12) opted to introduce the same (or quite similar) definitions as those proposed in the Directive, others (four, all of which made amendments to administrative provisions) opted not to include definitions when transposing the Directive.²¹

Generally speaking, there is a certain degree of variation as to how different Member States understand the notion of CI. This is clearly reflected in how the term has been defined at national level. For 10 Member States, CI consists of both assets and systems, which puts their definitions in line with the definition provided in the Directive. In other Member States, the CI definition focuses solely on their systemic character, while in others still, an asset-focused definition is applied. Differences in how the Member States define CI is more than a matter of semantics; the decision to define CI as assets indicates a focus on the protection of specific components, while ones emphasising the systems that they comprise point to a broader approach where CIs are the means by which the continuity of certain vital services is assured.

The different definitions used by the Member States also revealed different perspectives as to what reliable CI functionality is expected to ensure on a societal basis. For instance, the definitions used by most Member States associated CI with things like 'vital societal functions', 'health', 'safety', 'security', and 'economic or social well-being' (all of which are mentioned in the Directive). Six Member States linked CI with economic stability as well, while another three Member States associate the protection of CI with continuity of government and/or the continued existence of the nation.

²¹ Information was unavailable in the case of Ireland.

Less variance was observed in terms of the definition of ECI. Most Member States adopted the same definition of ECI as in the Directive. Some Member States opted not to introduce the definition, or introduced an abridged definition of ECI. Other definitions included in the Directive (e.g. ‘protection’ of CI, ‘sensitive information’, ‘risk analysis’, ‘owners/operators of ECI’) were in some cases directly transposed. A total of 11 Member States introduced additional definitions, including ‘cross-cutting and sectoral criteria’, ‘competent authorities/stakeholders’, ‘critical zones’, ‘emergency’, ‘essential service’, ‘cybersecurity’, and ‘negative effect/spill-over’.

In implementing the Directive, most Member States included provisions pertaining to the energy and transport sectors and the related sub-sectors listed in the Directive, with some of these providing additional sectoral specificity.

With regard to the energy sector, a significant majority of the Member States (24) specified the sub-sectors that fell within the scope of national-level measures. In most cases, the three energy sub-sectors named in the Directive (electricity, oil and gas) were all deemed to be in scope. In the case of three Member States, the transposition legislation made clear that the energy sector was in scope, though no specific sub-sectors were indicated. More variation was observed within the transport sector, with the air transport sub-sector most often cited in national transposition legislation (19), followed by inland waterways (14), sea transport (16), and rail transport (17). For obvious reasons, the type of transport infrastructure in scope generally followed the geographical characteristics and/or transport needs/profile of specific Member States. For instance, one landlocked Member State excluded the sea shipping sub-sector. Finally, it is worth noting that CIP measures in 22 Member States have a wider sectoral scope than that of the Directive, and consider sectors such as banking and finance, healthcare, drinking water supply, and digital infrastructure to contain vital CI. The fact that different Member States made different determinations concerning the sub-sectoral scope in the process of transposing the Directive may depend on if the Member States approached the task on a sectoral or cross-sectoral basis.

3.3 IDENTIFICATION OF ECI

There is evidence of different starting points and approaches concerning the identification of potential ECI, which involves a four-step process described in the Directive. While some Member States already had a list of designated national CI prior to the adoption of the Directive, others viewed saw the adoption of the Directive as an opportunity to list existing infrastructure located on their territory for the first time. Specific findings regarding how the Member States approached the different stages of the identification process are presented below:

- In considering the *first step* of the identification process (the application of sectoral criteria), all Member States for which data was available (25 in total) apply sectoral criteria as indicated in the Directive;
- The *second step* (the application of the definition of CI), has been, generally speaking, transposed *verbatim* in national transposition legislation. The thresholds for the cross-cutting criteria described in the Directive are typically defined on a case-by-case basis and are confidential. Nevertheless, the evaluation found that the cross-cutting criteria are interpreted and implemented in many different ways across Member States, suggesting that the thresholds themselves can vary significantly, making cross-border comparison difficult. Furthermore, the process stipulates that ‘for infrastructure providing an essential service, the availability of alternatives, and the duration of disruption/recovery will be taken into account’. The ‘availability of alternatives’

specifically was interpreted differently by Member States due to divergent views concerning how the notion of ‘alternatives’ to disrupted/destroyed CI should be understood;

- The *third step* (the application of the transboundary element of the definition of ECI²²) was transposed in similar fashion across the Member States, which typically re-stated the definition of European critical infrastructure provided in the Directive without providing any additional detail;
- The *final step* in the ECI designation process calls for each Member State to apply the cross-cutting criteria to any potential ECIs still under consideration. These cross-cutting criteria shall take into account the severity of impact and, for infrastructure providing an essential service, the availability of alternatives and the duration of disruption/recovery. The identities of any CI that meet these criteria are then communicated to other Member States deemed to be significantly affected in the event of disruption/destruction.

While it appears that the identification process was initiated by all Member States, only a limited number (11) ultimately identified at least one potential ECI in dialogue with neighbouring Member States. In most cases, those CI that were initially identified at national level did not pass through every stage of the four-step process, meaning that they were not assessed to be CI that could potentially be designated as ECI.

3.4 DESIGNATION OF ECI

Aside from the requirement to designate a responsible competent authority (often indicated in national transposition legislation), the process of cross-border designation of ECI tends to be less formalised than the identification process. For instance, Member States typically do not specify how bilateral/multilateral discussions on designation should take place. This can be attributed to the fact that such discussions pertain to traditionally sensitive policy areas (e.g. national security, inter-state diplomacy). Nevertheless, the information that was provided by the Member States as part of the evaluation suggests that the discussions that take place as part of the designation process are conducted through different channels and with different degrees of formality (e.g. formal meetings/visits, exchanges of emails/informal letters, formal letters, working groups, telephone calls).

The final step in the designation procedure (informing CI operators that they have been designated as ECI) is often described in some detail in national transposition legislation, which typically stipulates the maximum amount of time permitted between designation and notification of operators, the form that this notification should take, and, in at least one case, by what means said notification should be communicated.

Around half of the Member States (six) that launched the designation process ended up with the designation of all, most, or half of the total number of potential ECI that were identified during the identification phase.

As of August 2018, the Member States had designated 93 ECIs, the identities of which are not public information. Of these, 88 were in the energy sector, with the remaining five in the transport sector. There is a strong geographical component to the distribution of ECI, with

²² The definition of ECI provided in Article 2 of the Directive contains a transboundary element insofar as it focuses on ‘critical infrastructure located in Member States the disruption or destruction of which would have a significant impact on at least two Member States’.

almost all designations in Member States in Central and Eastern Europe (with approximately 60% of the total number of designations in just two Member States).

It could be argued that, since the Directive has a focus on transboundary externalities and on the concept of ‘affected Member States’, Member States with long and/or a comparatively large number of shared borders may have engaged/been engaged in more bilateral ECI designation discussions than Member States with shorter borders and/or fewer immediate Member State neighbours. Geographical considerations may also explain a higher number of designations in Member States with a strategic position within the Union in terms of energy transmission, or in relation to energy distribution networks linking the EU with third countries.

Moreover, there appears to be a correlation between the number of designated ECI in different Member States and the type of transposition measures that were adopted at national level. For instance, the Member States that opted to embed the ECI identification and designation process within a wider CIP framework by means of legislative measures were more likely to have designated ECI on their territory. On the other hand, none of the Member States that chose to transpose the Directive through ECI-specific legislation/regulation ultimately designated any ECI. The same is true of most Member States that took administrative measures in implementing the Directive. In view of this finding, it would appear that norms relating to the identification and designation of ECI must ‘find a place’ within a broader national CIP context in order for the ECI identification/designation process to go forward. Where this process is addressed within the context of sectoral legislation or isolated within ad hoc transposition norms, the likelihood for an ultimately successful ECI designation process decreases significantly.

3.5 SPECIFIC PROVISIONS IN THE DIRECTIVE

The Directive contains a number of specific provisions that were addressed in-depth as part of the study. Among other things, the Directive requires that designated ECI have both an Operator Security Plan (OSP) and a Security Liaison Officer (SLO) function. In addition, the Member States are required to report certain types of information to the Commission on a regular basis, and to nominate a European CIP (ECIP) contact point.

3.5.1 OPERATOR SECURITY PLAN (OSP)

The description of the OSP requirement in the Directive is very general. In some Member States, national transposition legislation stipulates that the content of the OSP must include the same level of detail as that provided by the Directive, while other Member States have imposed no such requirement. Like the identity of individual ECIs, the Commission does not have access to information concerning the content of ECI-specific OSPs; this is confidential information that was not made available during the evaluation and thus made comparison between OSPs impossible. Nevertheless, the evidence that was gathered during the field research phase of the evaluation via the CIP PoCs and CI owners/operators in the context of online and workshop-based consultations was sufficient to confirm that each Member State adopted the OSP provision using their own individual interpretations as to what needed to be done in light of what was already being done. In many cases, Member States had a pre-existing OSP-equivalent requirement in place at the time that the Directive was adopted. Rather than harmonise the OSP requirement across the Member States, the Directive in many instances simply served to formalise and bring under a legal framework efforts that were already being made at an operational level.

The Directive recommends performing OSP reviews on a regular basis. Only nine Member States indicated in their respective transposition legislation when reviews should be carried out. The remaining Member States for which data was available (11) required only that it is carried out regularly without indicating any specific time interval. The Member States opted for one of two general approaches in verifying that designated ECI owners/operators in fact have an OSP in place. The first, an enforcement approach, permits Member States to regularly conduct formal OSP reviews and spot checks, while the second involves close collaboration between government and operators (e.g. through structured CIP forums, public-private partnership (PPP) arrangements). With the latter approach, formalised ‘enforcement’ measures were not seen as being particularly necessary.

3.5.2 SECURITY LIAISON OFFICER (SLO)

Transposition measures at Member State level typically did not involve the articulation of specific SLO requirements (e.g. role, key responsibilities, security clearance). This could be because the Directive does not clearly define the SLO function. While some Member States set out stringent criteria, others simply restated in their transposition measures the wording contained in the Directive. Any more refined articulation of SLO requirements at national level is usually provided for in resolutions and/or administrative decisions. As a result, the competencies, responsibilities and backgrounds of the individuals that are assigned the SLO role vary significantly from one Member State to another (and potentially even from one ECI to another in one and the same Member State).

One of the SLO’s primary responsibilities is to be a link between the ECI and the national competent authority. However, in the majority of Member States, there is no explicit indication as to how in practical terms communication between the ECI and the national government should take place. This might be due to the fact that such information is confidential, but also to a lack of procedures, especially in Member States that had not designated ECI as of September 2018.

3.5.3 REPORTING

Article 7 of the Directive puts in place certain reporting requirements on Member States with designated ECI, i.e. to every two years provide the Commission with generic data summarising the types of risks, threats and vulnerabilities encountered in those sectors where an ECI has been designated. These risks, threats and vulnerabilities should be identified through a confidential threat assessment process carried out by the Member States. The evaluation finds that these national threat assessments are typically focused on sector-specific issues and risks, and may include proposals for the implementation of organisational and technical measures aimed at building capacities to prevent, react to, and mitigate the possible consequences of different threat scenarios.

As for the biannual report on risks, threats and vulnerabilities to the Commission, a large majority of Member States adopted this provision at national level without making any further specifications; most Member States have simply identified the competent body (typically the CIP PoC/coordinating ministry) responsible for sending the necessary documentation to the Commission on a regular basis.

All Member States that designated at least one ECI submitted these reports to the Commission. However, the information contained in these reports was limited, making it difficult for the Commission to generate an overview at EU level concerning, for instance, threats/risks to CI. Without such information, it is difficult to synthesize the situational pictures at the Member State level in order to draw conclusions concerning CI vulnerabilities

on a pan-European basis. For this reason, these reports have been of limited utility to the Commission.

Article 7 also stipulates that the Commission and Member States shall assess on a sectoral basis whether further protection measures at Community level should be considered for ECIs. This process was undertaken in conjunction with the 2012 review of the Directive, and fed into the formulation of a new approach to the implementation of the Programme emphasising the interdependencies existing between CI in different sectors. This involved the launch of four pilot studies examining different examples CI with a European dimension through which tools for risk assessment and risk management were developed.²³ Furthermore, the Directive stipulated that common methodological guidelines for carrying out risk analyses in respect to ECIs could be developed by the Commission in cooperation with the Member States. This work was headed up by the Joint Research Centre (JRC) and resulted in a number of methodological support tools that were offered to the Member States for use on a voluntary basis.²⁴

3.5.4 EUROPEAN CIP (ECIP) CONTACT POINT

Article 10 of the Directive stipulates that each Member State should designate a European CIP (ECIP) contact point charged with coordinating all issues concerning the protection of ECI at national and international level. This includes managing relations and interactions with other Member States and the Commission. The Directive leaves room for each Member State to allow other competent authorities, in addition to the one officially identified as the ECIP contact point, to be involved in CIP-related issues.

It is worth noting that a similar such function (a ‘CIP contact point who would coordinate CIP issues within the Member State and with other Member States’) was created in 2006 as part of the Programme. In practice, the ECIP contact points (required by the Directive) and the CIP contact points (recommended by the Programme) have de facto been merged into what is currently referred to as the CIP point-of-contact (CIP PoC), which has responsibilities concerning both CIP- and ECI-related issues.

The contact point functions’ institutional situation varies across the EU. While many Member States have designated CIP PoCs within the ministry of interior, others are organised within offices of the prime minister, ministries of defence, dedicated CIP or civil protection agencies, or sectoral regulators/oversight authorities. Given the range of entities with responsibility for nominating CIP PoCs, there is considerable variation in the level of specialisation of the CIP PoCs. While some CIP PoCs represent agencies or directorates within the competent ministries focused solely/primarily on CIP, others come from bodies that deal with a wide spectrum of matters of which CIP is one.

²³ Staff Working Document (2013) 318.

²⁴ For instance, the JRC published in 2012 a ‘Technical Note’ entitled ‘Risk assessment methodologies for Critical Infrastructure Protection’ (ref EUR 25286 EN – 2012).

3.6 ORGANISATIONAL ARRANGEMENTS AT MEMBER STATE LEVEL

In order to fully appreciate the role of the CIP PoCs, it is important to acknowledge that the national-level organisational arrangements that have been put in place in order to implement the Directive (i.e. through the identification and designation of ECI, fulfilling specific obligations, reporting, etc.) vary significantly from one Member State to another in terms of both type and number of actors involved, as the figure below illustrates.

	Prime Minister	Ministry of Interior	Sectoral Ministries	Ministry of Economy	CIP Agency	Government	Other
Identification	7	11	21	6	3	0	7
Designation	7	15	15	5	4	8	11
Communication with EC and CI operators	7	10	11	3	3	2	8
Reporting and threat assessment	6	10	16	3	4	2	11

Figure 3: Number of Member States that involve different types of actors in the Directive's main implementation steps²⁵

Depending on the Member State, the *ECI identification process* is initiated by different types of stakeholders, though sectoral ministries and regulators are clearly most typical (in 23 Member States). In most instances, these bodies act in coordination with a central authority (typically the ministry of interior). The type of authority that is responsible for ECI identification depends on the type of transposition strategy adopted by the Member States. For instance, the responsible authority tends to be a sectoral ministry/regulator in cases where transposition served to amend relevant sectoral legislation. Meanwhile, in cases where national-level transposition involves ECI-specific legislation, the use of inter-ministerial working groups is more common.

While there is considerable variation as to how Member States organise the work of identifying potential ECI, the outcomes of the external suggest that the *ECI designation process* tends to be elevated to the highest political level, and in some cases involves collective government decision-making. Elsewhere, designation decisions are made by the relevant sectoral ministry and/or the ministry of interior.²⁶ There is considerable heterogeneity concerning responsibility for reporting to the Commission and conducting threat assessments, though in most cases (18 Member States) there is strong involvement by sectoral ministries.

The range of actors involved in implementing key elements of the Directive²⁷ illustrates the extent to which national-level work pertaining to the Directive is fragmented. Indeed, the evaluation shows that the ECI identification and designation process and the fulfilment of

²⁵ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 24.

²⁶ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 24.

²⁷ These include: offices of the prime minister; ministries or sectoral regulators involved in the energy and transport sectors; ministries of the interior; ministries of defence; ministries of economy/economic development; dedicated CIP agencies and other agencies with CIP responsibilities.

related obligations (e.g. reporting, participation in CIP PoC-related activities) involve an average of three actors per Member State, as the figure below demonstrates.

	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
Number of types of actors involved	2	3	2	3	3	4	2	3	1	4	3	3	3	3	NA	6	3	2	5	2	4	4	1	3	2	6	2	3

Figure 4: Number of types of actors involved in the ECI identification/designation process²⁸

4. METHOD

4.1 SHORT DESCRIPTION OF METHODOLOGY

The evaluation aimed to analyse the implementation and application of the Directive in each Member State according to a number of specific criteria set out in the Commission’s Better Regulation Guidelines (relevance, coherence, effectiveness, efficiency, EU added value and sustainability).²⁹ The evaluation covered all 28 EU Member States and their implementation of the Directive from its entry into force in January 2009 to the start of the evaluation in August 2018.

A wide range of stakeholders were consulted as part of the evaluation. These included: the competent authorities at the Member State level; CI operators and other industry stakeholders in the transport and energy sectors; academia and think tanks; the general public; the European External Action Service (EEAS); and EU Agencies. A more detailed description of the consultations is described in the Synopsis Report in Annex II.

An analytical framework consisting of three distinct phases (desk research, field research and analysis) was developed in order to carry out the external study. Within each phase, a range of methodological tools and techniques were used. These included: more than 40 interviews; targeted consultations with different stakeholders using online surveys; two workshops involving the Member States and CI owners/operators; and four case studies at Member State level, which involved on average six interviews per case. In addition, the Commission conducted a public consultation between 19 November 2018 and 11 February 2019, the results of which were made available to the contractor carrying out the external study. A more elaborate description of the methodologies applied and the stakeholder consultations are provided in Annexes II and III.

4.2 DEVIATIONS FROM THE EVALUATION ROADMAP

While the Evaluation Roadmap that was published in March 2018 indicated that the evaluation should have been completed in the last quarter of 2018, the actual completion date was in the second quarter of 2019. This was due to the fact that the public consultation was launched later than initially anticipated. In order to allow enough time to process and analyse the outcomes, the Commission opted to extend the evaluation timeframe into 2019. This had the added benefit of allowing for additional consultations with the Member States on the draft final outcomes of the evaluation, which took place over approximately two weeks in February-March 2019.

²⁸ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 25.

²⁹ SWD (2017) 350.

4.3 LIMITATIONS AND ROBUSTNESS OF FINDINGS

Certain limitations were either identified at the outset of the evaluation or only became apparent once the evaluation had commenced. An overview of these limitations and a description of how they were addressed follows:

- The baseline situation before 2008 was not fully known. While some information concerning national-level CIP measures was available prior to the Directive coming into force, it did not permit a systematic comparison between the pre-2008 situation and the situation at the point at which the evaluation was launched. This was addressed by using information provided by the CIP PoCs to partially reconstruct the pre-Directive situation, which was then triangulated with other sources of information. In doing so, it was possible to identify elements in specific national CIP frameworks prior to 2008 that would also become part of the Directive.
- Information at the national level was fragmented, while in other instances, national measures related to the implementation of the Directive were not immediately available or obvious. This issue was resolved by drawing on data on implementation at national level contained in the aforementioned 2012 review of the Directive.³⁰ This data was complemented with other information provided through other sources in order to provide a more complete picture of the situation at national level. The CIP PoCs played an important role in providing access to some of this data, while the case studies provided additional granularity concerning implementation in the selected Member States.
- The current level of CIP is the result of the co-existence of several instruments, which made it difficult to isolate the effects of the Directive specifically. This challenge was mitigated by the decision to widen the scope of the analysis of the coherence of the Directive in order to better understand the relationship between the Directive and other existing measures. At EU level, this entailed focusing on different pieces of sectoral EU legislation with elements relevant in a CIP context in order to identify areas of overlap, duplication and/or potential synergy. The outcomes of this analysis were useful in developing a framework for subsequent consultations with national-level stakeholders in the context of the evaluation. The case studies in particular were useful in exploring any suspected causal linkages that existed between the provisions contained in the Directive and levels of CI protection.
- The identities of specific ECI are not known, as this information is considered by the Member States to be sensitive. This fact made it impossible to distinguish between operators of national CI and operators of designated ECI. As such, the analysis of the results and costs associated with Directive implementation was a complex undertaking. Not knowing the identities of the ECI also limited the utility of triangulating different forms of information, some of which appeared to be based on stakeholders' opinions alone. A number of steps aimed at minimising the extent to which this would influence the robustness of the findings were taken at the outset of the external study.

Despite these limitations, many of which stemmed from the sensitive nature of the subject matter, the design of the analytical framework was such that the data that was collected was adequate in terms of quality and breadth of representation from different categories of

³⁰ Booz & Company GmbH. (2012). Study to support the preparation of the review of the Council Directive 2008/114/EC on the identification and designation of European critical infrastructures (ECI) and the assessment of the need to improve their protection.

stakeholders. This allowed for methodologically robust conclusions which were subsequently validated by the CIP PoCs.

5. ANALYSIS AND ANSWERS TO THE EVALUATION QUESTIONS

Evaluation question: To what extent is the Directive relevant in view of current and future needs/challenges?

Main findings:

- The Directive appears to have partial relevance in view of recent technological, economic, social, policy/political and environmental developments, and the challenges they entail.
- The Directive continues to be relevant in the context of the EU's CIP policy approach, but does not reflect the new approach to the Programme (2013), which emphasises interdependencies and resilience thinking.
- The objectives of the Directive remain relevant considering that the threats to CI (from natural hazards, terrorism, cyberattacks, hybrid actions, insider threats, etc.) persist. However, there is room to clarify what the 'common approach' described in the Directive entails in practical terms.
- The definitions and procedures contained in the Directive are generally relevant, but due to a lack of detail, are subject to different interpretations and means of implementation at Member State level.
- The limited sectoral scope of the Directive means that it does not fully account for growing cross-sectoral interdependencies.
- The Directive's relevance in relation to stakeholder needs is mixed. While the Directive provides CI owners/operators, Member States and the Commission with an overarching framework for CIP, the generality of definitions and procedures leaves room for different degrees/forms of implementation that have the potential to generate costs.

By comparing the baseline situation (described in Section 2.4.2) with the implementation state of play (described in Section 3), it is possible to study to what extent the *outputs* and *outcomes* that can be observed (see the intervention logic in Section 2.4.1) correspond to the expectations concerning what the Directive should achieve, i.e. an increase in CIP capabilities in Europe and a reduction of CI vulnerabilities. The sections that follow describe the results of this analysis in relation to the six evaluation criteria, namely relevance, coherence, effectiveness, efficiency, EU added value and sustainability. (For an overview of the evaluation questions and sub-questions related to each criteria, see Annex IV.)

5.1 RELEVANCE

The external study found that the increased interconnectedness of and interdependencies between sectors, along with the transboundary nature of threats and the potential cross-border consequences of the disruption/destruction of CI, demonstrate the continued need for the EU to be involved in CIP. This would seem to confirm the continued relevance of the concept of ECI, i.e. CI with particular pan-European significance and thus worthy of additional protective measures. While the specific objectives of the Directive (to create a procedure for the identification and designation of ECIs, and a common approach to the assessment of the need to improve the protection of such infrastructure) remain relevant, the Directive generally

has only partial relevance. This finding takes into account the limited sectoral scope of the Directive, the definitions that it contains, how it has been implemented by the Member States, and its relevance to different stakeholders, including Member States and (E)CI owners/operators. This finding also accounts for and reflects the many technological, economic, social, policy/political and environmental developments that have taken place since the Directive was adopted in 2008.

The Directive is one element of the EU's overall CIP approach, which is described in the European Programme for Critical Infrastructure Protection. However, the Directive does not reflect the new approach to the implementation of the Programme adopted by the Commission in 2013, which, for instance, emphasised the need for greater recognition of cross-sectoral interdependencies (some of which are not necessarily confined to the energy and transport sectors) and resilience thinking in the context of CIP. The fact that the Directive has not kept pace with more recent policy developments such as this are significant in the context of assessing its current relevance at EU level.

At a general level, the definitions contained in the Directive ('critical infrastructure', 'European critical infrastructure') are relevant insofar as they provide a foundation for a common CIP framework and support the identification of both CI and ECI. On the one hand, these definitions can be adapted to particular CIP-related goals that are articulated in specific CI sectors. The flexibility of these definitions reflects the Directive itself, which gives the Member States a significant amount of leeway in how they implement its provisions. On the other hand, the evaluation finds that these definitions lack the detail necessary for implementation and, as a result, are subject to different interpretations at Member State level. This in turn has limited their ability to achieve the EU-wide 'common approach' to ECI identification and designation that the Directive was intended to generate. The Directive does not define terms such as 'assets', 'systems', 'critical', and 'protection'. A more thorough articulation of such terms might increase the likelihood that Member States conceive of them in similar ways.³¹ Finally, in focusing on 'CI located in Member States', the ECI definition fails to take into account CI that have a clear pan-European dimension and which provide an EU-wide service (e.g. Eurocontrol, Galileo).³² This and all subsequent findings on relevance in this section were supported through the interviews, surveys and workshops that the external contractor carried out with Member States, CI owners/operators and other relevant stakeholders as part of the external study. (The relevant sections in the external contractor's report containing supporting data from the stakeholder consultations are cited in the footnotes throughout the remainder of this document.)

The narrow scope of the Directive, which is limited to the energy and transport sectors, does not fully account for the nature and extent of the cross-sectoral interdependencies that currently exist as compared to when the Directive was adopted. For instance, CI operations increasingly rely on services offered by the information and communications technology (ICT) and space sectors, though neither sector is covered by the Directive.³³

The 'means of implementation' called for in the Directive include: the identification and designation of ECI and the relevant criteria; the development of an Operator Security Plan (OSP) for each ECI; the designation of a Security Liaison Officer (SLO) for each ECI; and

³¹ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 15-16 and 27-30.

³² EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 30-32.

³³ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 30-32.

regular reporting requirements.³⁴ The evaluation finds that the descriptions of these implementation measures is very general, and is not well aligned with arrangements and practice at Member State level. For instance, the bilateral and/or multilateral discussion format initiated by one Member State to designate an ECI was found to inadequately represent the most relevant configuration for discussing cross-border CI issues, given that it does not make explicit provisions for private sector involvement, for instance.³⁵ Furthermore, the descriptions of the OSP and SLO requirements lack detail, thereby limiting their relevance from an operational perspective. For instance, while the Directive makes clear that an OSP or ‘equivalent measures’ should be put in place for each ECI and provides a general description of its content in an accompanying annex, it does not include any specific requirements as to content or what ‘equivalent measures’ might entail. In any case, this issue is largely moot, as most designated ECI owners/operators already had security plans in place that they considered to OSP equivalents.³⁶

Finally, the Directive stipulates that all Member States with ECI provide regular reports on risks, threats and vulnerabilities for the designated ECI sectors to the Commission. However, the data that the Commission receives is limited, meaning that it is difficult to generate an overview at EU level on threats and risks. Without such an overview, it is difficult to assess the effects of the Directive and other EU policy initiatives on the protection of ECI, let alone the possible need for additional EU action in this respect.³⁷

The Directive’s relevance in relation to stakeholders’ needs is mixed. While the external study found that the Directive provides CI owners/operators, Member States and the Commission with an overarching framework for CIP, it currently leaves room for differences in application that have the potential to generate different costs for different stakeholders in different Member States.³⁸ (For a related discussion on costs in the context of effectiveness, see Section 5.2 below). For instance, the exact nature of the OSP requirements imposed by competent national authorities on ECI owners/operators may vary from one Member State to another.³⁹

The Directive lacks relevance insofar as it does not address the need for certain Member States to have exchange with third countries. This need was found to be most apparent in the case of Member States with immediate cross-border interdependencies with CI in neighbouring non-EU third countries.⁴⁰ In a related vein, the external study found that the Directive has limited relevance in facilitating engagement with non-state stakeholders in the process of identifying and designating ECI. As mentioned earlier, there are no provisions in the Directive for private CI owners/operators to feed into the work of identifying ECI, be it in the host country or in a neighbouring Member State.⁴¹

While none of the provisions contained in the Directive are considered altogether obsolete, certain definitions and the description of some means of implementation (i.e. the ECI

³⁴ Articles 3-10 of the Directive.

³⁵ Ramboll. (2012). Study into the potential impacts of options amending council Directive 2008/114/EC.

³⁶ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 32-34.

³⁷ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 32-34.

³⁸ This finding is supported by consultations with the Member States and CI owners/operators, as well as the responses to the Public Consultation and a published book. See EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 51, and Lazari, A. (2014). *European Critical Infrastructure Protection*. Springer.

³⁹ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 21.

⁴⁰ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 35.

⁴¹ Ramboll. (2012). Study into the potential impacts of options amending council Directive 2008/114/EC.

identification/designation process, the OSP, the SLO function, reporting) could be more specific and better articulated. Furthermore, the relevance of the ECI concept in relation to the Member States' conceptualisations of national CI (some of which are presumably also designated ECI) could be improved. Finally, the Directive might better account for other types of requirements that designated ECIs are subject to, including other EU measures, international guidelines/standards, and national initiatives, but also voluntary actions on the part of CI operators themselves.⁴²

5.2 COHERENCE

Evaluation question: To what extent is the Directive coherent and complementary to other relevant policy interventions at Member States, EU, and international level?

Main findings:

- The Directive appears to be broadly consistent with relevant sectoral legislation, with no conflicting objectives or obligations. However, its coherence is limited by the existence of certain overlaps with other pieces of European legislation/policy initiatives.
- At the EU level, the Directive is partially coherent but overlaps with the main policy interventions in the energy and transport sectors that are relevant in a CIP context.
- There are complementarities and to a certain extent overlaps between the ECI Directive and the Network and Information Security (NIS) Directive.
- The observed overlaps between different pieces of EU legislation do not appear to be particularly onerous on the part of public authorities and CI owners/operators at Member State level.
- At the international level, there is no comprehensive policy on CIP, though there are international standards and initiatives that apply to CI. Generally speaking, the Directive is coherent with these.
- There is room for better exploitation of the synergies that exist between the Directive and other sectoral initiatives and cross-sectoral initiatives at EU level.

The Directive appears to be broadly consistent with relevant sectoral legislation in the energy and transport sectors. However, the existence of several overlaps with these and other pieces of legislation as well as related policy documents limits the ECI Directive's coherence to some extent. While acknowledging that it has not been possible to determine conclusively whether these overlaps resulted in duplications or instead served to mutually reinforce one another, their very existence suggests that there is room to streamline the EU's overarching CIP legislative framework.

At EU level, the Directive is partially coherent with the main CIP policy interventions in the energy and transport sectors insofar as they are partially complementary but also overlap in certain ways.⁴³ The overlaps that have been identified by the external contractor pertain to

⁴² EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 54-55.

⁴³ Some examples of related EU legislation include: Regulation 2017/1938 concerning measures to safeguard the security of gas supply (the Gas Supply Regulation); Directive 2009/119/EC imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products; Regulation 2320/2002 establishing common rules in the field of civil aviation security; and Regulation 2015/1998 laying down detailed measures for the implementation of the common basic standards on aviation security.

things such as objectives, the object to be protected, as well as specific requirements (e.g. regular threat/risk assessments/analyses, risk management capability, incident response capability). With regard to the energy sector specifically, the Directive partially complements with and overlaps the relevant European legislation, and particularly in relation to what they aim to achieve (their stated objectives). For instance, the external study found that the objectives of the ECI Directive are complementary to those of energy sectoral legislation (insofar as the ECI Directive is focused on ECI protection while the energy sectoral legislation aims to ensure resilience in the face of disruptions). However, the external contractor found that the respective protective and resilience-oriented objectives of these measures were not clear-cut, leading to a risk for overlaps. The extent of overlaps appears to be more significant in the case of legislation in the transport sector, and especially in the aviation and maritime sub-sectors, and to some degree concerning measures on rail safety and security as well.⁴⁴

The evaluation also revealed complementarities and to some extent overlaps between the ECI Directive and the Network and Information Security (NIS) Directive (2016/1148) in terms of both objectives and objects to be protected. The objective of the ECI Directive is to improve the protection of ECIs defined as assets or systems. The NIS Directive aims to ensure the security of network and information systems on which operators depend for the provision of essential services. The NIS Directive applies to seven sectors where operators of essential services meeting certain criteria shall be identified. These sectors include: transport; energy; banking; financial market infrastructure; health; drinking water supply and distribution; and digital infrastructure. The evaluation finds that the two Directives are complementary insofar as the ECI Directive acts to enhance the protection of systems and assets that are not ICT-based. On the other hand, the NIS Directive overlaps with the ECI Directive in any instances where designated ECIs in the transport and/or energy sectors depend on network and information systems for the provision of essential services.⁴⁵

The external study was useful in depicting how different Member States and groups of Member States approach CIP and how these different approaches affect the implementation of the Directive at national level (see Section 2 and Section 3).⁴⁶ At the national level, evidence provided by the Member States' CIP PoCs and in carrying out the four case studies suggests that the observed similarities and, in some cases, overlaps between different pieces of relevant EU legislation did not generate significant duplications of effort or confusion on the part of public authorities and CI owners/operators. This was the case regardless of national CIP approaches and arrangements, which, as discussed earlier, vary from one Member State to another. This might be because the Directive defines obligations in general terms making them easily adaptable in different national contexts. That being said, the fact that national authorities have created mechanisms in order to deal with CIP in different sectors enables them to more systematically analyse and account for any overlaps that they might perceive to exist between different EU initiatives. For these reasons, the evaluation finds that the Directive is coherent with national CIP policy interventions in the energy and transport sectors.⁴⁷ While the evaluation clearly demonstrates the ways in which the ECI and NIS

⁴⁴ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 38-43.

⁴⁵ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 38-43.

⁴⁶ For instance, the external study provides, for instance, a detailed description of CIP coordination arrangements in different Member States, as well as a general overview of the Nordic CIP approach and the extent to which it is consistent with the ECI Directive. See EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 44-45 and 46-47.

⁴⁷ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 43-47.

Directives complement one another but also overlap, it is too early to assess how the inter-relationship between the two related measures has been dealt with by the Member States as part of the NIS transposition process (the deadline for which was May 2018).⁴⁸

With regard to more operational aspects of the Directive, the evaluation found that both the risk management measures included in the OSP and the threat assessment/risk analysis to be carried out by national authorities overlap with sectoral EU legislation. For instance, obligations on operators to draft an OSP including a risk analysis and to define risk management measures are very similar to specific measures contained in aviation, maritime, and rail safety legislation, as well as rail security measures and the NIS Directive. Furthermore, the obligation imposed by the ECI Directive on national authorities to conduct a threat assessment/risk analysis mirrors similar obligations contained in European energy, aviation, maritime, and rail security legislation as well as with obligations contained in the NIS Directive.⁴⁹

At the international level, there is no single comprehensive policy on CIP. That being said, there are a number of international initiatives and standards that are directly or indirectly relevant in a CIP context.⁵⁰ Generally speaking, the Directive is coherent with these insofar as it emphasises the same general challenges (e.g. a range of natural and man-made accidental and antagonistic threats, deep interdependencies between and among CI in different sectors) and puts forward similar policy prescriptions (e.g. transboundary/cross-border cooperation, the development of specific preparedness capacities, risk/threat analysis/assessment mechanisms). However, there are also cases of overlap, for instance between the Directive and various Recommendations put forward by the Organisation for Economic Co-operation and Development (OECD).⁵¹

The EU's legislative framework on CIP, which consists of the Directive and other sectoral legislation with CIP relevance, appears to be coherent based on the findings of the external study. However, as noted above, certain similarities and, in some cases, overlaps have been identified. For instance, the ECI Directive overlaps with or is at least very similar to various energy sectoral initiatives as regards their stated objectives, the object that should be protected, and the requirements for threat assessment/risk analysis. The situation is similar with regard to aviation, maritime and rail initiatives in the transport sector, and in relation to the NIS Directive.⁵² This suggests that there is room for better exploitation of the synergies that exist between the Directive, specific sectoral initiatives, and cross-sectoral initiatives like

⁴⁸ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 69-71.

⁴⁹ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 38-43.

⁵⁰ Several international organisations/associations have launched different cross-sectoral and/or sector-specific initiatives with relevance in the context of CIP. These include: The United Nations (UN); the Organisation for Economic Co-operation and Development (OECD); the Organisation for Security and Co-operation in Europe (OSCE); and the North Atlantic Treaty Organisation (NATO). Furthermore, the International Organisation for Standardisation (ISO) has issued a range of relevant international standards.

⁵¹ The OECD has in recent years issued a number of non-binding CIP-relevant recommendations. These include: the *Recommendation on the Protection of Critical Information Infrastructures* (2008); the *Recommendation on the Governance of Critical Risks* (2014); and the *Recommendation on Digital Security Risk Management for economic and social prosperity* (2015). Unlike the ECI Directive, this Recommendation does not define a specific object to protect but adopts a more general approach. CI and transboundary effects of risks are however part of this general approach. Like the ECI Directive, the Recommendation addresses all types of hazards and underlines the role of the private sector and operators. It complements the Directive in recommending the development of national strategies and in focusing on preparedness and resilience, including crisis management actions. As for risk analysis and risk management, the Directive and the Recommendation overlap, and, provided their different legal status, both focus on the need of Member States to ensure operators have in place risk prevention measures, including business continuity plans. EY (2019). See Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 43.

⁵² For a discussion concerning the coherence of the Directive in relation to other EU initiatives, see EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 38-43.

the NIS Directive. Generally speaking, the Directive complements other initiatives, and few overlaps can be found in relation to the specific obligations on Member State authorities and ECI owners/operators imposed by the Directive. That being said, the Directive tends to be managed in parallel with other CIP-relevant initiatives that have been taken since 2008. This is true, for instance, in the context of the Union’s work on the countering the hybrid threat⁵³ and with regard to the space sector, where the obligation concerning protection for the ground component of Galileo currently presupposes that it is treated as ECI at national level.⁵⁴ The external study finds that examples such as this point to the need for a more closely aligned and holistic CIP approach at EU level in order to encourage better coordination of all CIP-relevant activities and to mitigate against the risk for misalignments between and among different distinct but related work streams that in one way or another serve to enhance CI protection and resilience.⁵⁵

Limited integration between CIP measures at EU level does not seem to be reflected at the national level according to a considerable majority of CIP PoCs (89%) that responded to an online survey as part of the external study. At national level, protection measures applied in different sectors co-exist and are coordinated in ways that contribute to the overall coherence of national CIP frameworks and reduce the likelihood for duplication. As mentioned elsewhere, this may be explained by both the ability of Member States to account for the similarities and overlaps that exist between different measures, but also the generality of the obligations deriving from the ECI Directive specifically.⁵⁶

5.3 EFFECTIVENESS

Evaluation question: To what extent has the Directive been effective in delivering intended results?

Main findings:

- The Directive has been partially effective in achieving its stated objective, i.e. the establishment of a common ECI identification and designation procedure. While the Directive introduced elements of a common CIP framework and established a procedure for the identification/designation of ECI, it has not succeeded in ensuring that these are fully aligned across all Member States.
- Internal and external obstacles to the implementation of the Directive impacted the progress towards achieving its objectives. For instance, in many Member States, the Directive had to find its place within national CIP frameworks that were already partially or fully formed, thereby limiting the uptake of the Directive.
- The Directive generated effects that went beyond its intended objectives, i.e. spill-over effects in the CIP realm.

The Commission sought to address an inadequate level of protection of CIs with a European dimension in the energy and transport sectors against natural disasters, technological threats, and man-made threats, including terrorism, when it put forward its proposal for an ECI

⁵³ See for example the 2016 Joint Framework on Countering Hybrid Threats – a European Union response, JOIN (2016) 18 final, which contains a number of actions in the field of CIP.

⁵⁴ Regulation (EU) No 1285/2013 on the implementation and exploitation of European satellite navigation systems (the Galileo Regulation).

⁵⁵ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 69-71.

⁵⁶ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 43-47.

Directive. As it was adopted, the Directive aimed to address this problem through the establishment of a procedure for the identification and designation of ECIs and a common approach to the assessment of the need to improve the protection of ECIs (the two specific objectives of the Directive according to the intervention logic presented in Section 2.4.1 of the external study).

The Directive included a number of provisions (or inputs) which were to be used to achieve its stated objectives. These provisions provided the Member States with common definitions that would enable them to more easily carry out discussions over Member State lines with the aim of jointly identifying CIs with potentially serious cross-border implications if disrupted in one way or another. These same Member States would then jointly designate CIs with ‘European’ implications and take additional mandated protective measures (i.e. the development of OSPs and designation of SLOs). The Directive also contained provisions allowing the Commission to support ECI owners/operators as necessary, to stimulate EU-wide exchange on CIP-relevant issues (through the points-of-contact group), and to maintain a general overview of the threats, risks and vulnerabilities facing specific sectors in which CIs with European implications operated through regular reporting by the Member States.

The evaluation finds that the Directive has been somewhat effective in achieving its stated general and specific objectives through the provisions described above and in Section 2.4.1. This can in part be explained by the fact that some of the provisions contained in the Directive have been only partially achieved. For instance, the relevant definitions contained in the Directive (e.g. ‘critical infrastructure’, ‘assets’, ‘systems’) are vaguely formulated, thereby leaving room for different interpretations and limiting the Directive’s harmonising power. Furthermore, the external study found that, on the basis of responses by Member States and CI owners/operators and the outcomes of the case studies, while the Directive includes a common procedure for the identification and designation of ECI, the contours of the procedure vary from one Member State to another. In other words, the procedure is by no means common or harmonised across the Union.⁵⁷

In other respects, however, the Directive has achieved progress in relation to the stated objectives, though this has been limited by certain factors and circumstances. For instance, the Directive stipulates that all Member States with designated ECI provide regular reports on risks, threats and vulnerabilities for the designated ECI sectors to the Commission. However, the generality of the common reporting template that Member States should use, combined with reluctance of the Member States to share sensitive information, has limited the utility of the reports that are submitted.⁵⁸ Were the content of the reporting provided by the Member States more elaborated, it might be used by the Commission to gain a more precise understanding of the threats, risks and vulnerabilities facing ECIs across the Union, which could be useful both for the Commission and individual Member States.

The Directive also imposes OSP and SLO requirements on ECI owners/operators. However, ECI owners/operators in most Member States already had SLO- and/or OSP-equivalent measures in place prior to the adoption of the Directive. As such, the impact of the Directive vis-à-vis this specific output has been mainly in formalizing already existing measures.⁵⁹

⁵⁷ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 50-51.

⁵⁸ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 22.

⁵⁹ Booz & Company GmbH. (2012). Study to support the preparation of the review of the Council Directive 2008/114/EC on the ‘identification and designation of European critical infrastructures (ECI) and the assessment of the need to improve their protection’.

Finally, the Commission has offered various forms of support to CI owners/operators in helping them fulfil the Directive's provisions. Examples include the facilitation of cooperation, the sharing of good practices and methodologies (some of which were developed by the JRC⁶⁰), training, and funding through, for instance, the EU Programme on Prevention, Preparedness and Consequence Management of Terrorism and other Security-Related Risks (CIPS). Meanwhile, delegates to the points-of-contact group stipulated in the Directive have been designated by the Member States and meet on an approximately twice-yearly basis.

However, the full achievement of the Directive's general objective has been hampered by certain obstacles, some of which are related to the design of the Directive itself, while others are of an external nature. For instance, the Directive does not include a monitoring and evaluation framework that could be used by the Commission in order to effectively track its implementation by the Member States (even in absence of information concerning the identities of specific ECIs). Furthermore, there is currently no dedicated funding associated with the Directive that could be used to support competent authorities or CI owners/operators (though EU funding for various kinds of CIP programmes, projects and workshops was available before the Directive was adopted (e.g. starting in 2007 through CIPS). Funding has since been made available through the Internal Security Fund (ISF) as part of the current Multiannual Financial Framework (MFF) and the Horizon 2020 research programme. In every instance, efforts have been made to share the results of funded projects and studies via the Critical Infrastructure Warning Information Network (CIWIN) and in the context of regular meetings of the CIP PoCs.⁶¹

Other obstacles are external to the Directive. In almost half of the Member States, the Directive had to find its place within national CIP frameworks that were already partially or fully formed. In some instances, this served to limit the extent to which Member States availed themselves of some of the voluntary provisions contained in the Directive. One explanation that the external study provides is that in many cases existing national mechanisms/programmes could be used to support the implementation of the Directive on the part of designated ECIs. On the other hand, a substantial number of Member States lacked fully-fledged CIP frameworks prior to the adoption of the Directive. In such cases, the Directive proved, generally speaking, to be a catalysing factor in designating ECI. Even so, this has not led to a wide-ranging effort across the Union to identify and designate ECIs. As an example, almost half of the Member States that lacked well-developed CIP frameworks prior to 2008 have yet to designate any ECI. This might suggest that enthusiasm for EU action in this policy area was lacking in some Member States, and, where this was the case, served to limit the implementation of the Directive. Finally, the reluctance of Member States to share sensitive information has created challenges for the Commission in monitoring the implementation of the Directive. As such, the Commission has limited access to indicators beyond how many ECI per Member State have been designated. This makes it difficult if not impossible for the Commission to see *whether* and *how* the Member States have in fact complied with the Directive's provisions, let alone if the Directive has led to an increase in the protection of designated ECIs.⁶²

Despite the obstacles to implementation described above, the Directive has been found to be effective in generating spill-over effects beyond its intended objectives. For instance,

⁶⁰ For instance, the JRC developed methodological guidelines for carrying out risk analyses in respect to ECIs. These were offered to the Member States for use on a voluntary basis.

⁶¹ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 71-74.

⁶² EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 71-74.

according to a majority of the CIP PoCs (65%) who were surveyed as part of the external study, the Directive generated awareness of and political momentum around the protection of CI in general, and not just in relation to ECI in the energy and transport sectors. Furthermore, in the case of Member States that either had no pre-existing CIP framework or where the existing framework was only partially developed prior to 2008, the Directive spurred efforts aimed at creating dedicated national-level CIP legislation, common national definitions of critical infrastructure, and/or obligations to carry out threat assessments.⁶³

Finally, in considering the overall impact of the Directive in improving the level of protection of CI with EU relevance (the Directive's primary aim), the results of the evaluation are inconclusive. On one hand, the creation and/or further strengthening of national CIP frameworks in half of the Member States, as well as similarities between European and national requirements concerning the protection of ECI and CI, respectively, seems to suggest that CI with European relevance are protected equally, no matter if they are designated as ECI or not. On the other hand, the available evidence demonstrates that national requirements for both CI and ECI protection vary from one Member State to another (and perhaps even from one ECI owner/operator to another). Therefore, the possibility that actual levels of protection vary as well cannot be excluded. An in-depth assessment of the measures included in the OSPs used by individual ECIs (the identities of which are not known) would be needed in order to generate more insights on this and other related questions.⁶⁴

5.4 EFFICIENCY

Evaluation question: To what extent has the Directive achieved intended results in the most efficient manner?

Main findings:

- While there is no conclusive evidence that the results attributed to the Directive have been achieved at a reasonable cost, the scale of the costs brought about by the Directive appears to be limited.
- The lack of quantifiable data prevents making a sound assessment of the regulatory burden brought by the Directive.
- The overall efficiency of the Directive has been limited by a number of factors, many of which stem from the generality of the Directive's provisions.

Due to the sensitivities associated with CIP generally and ECI designations specifically, the external contractor had only partial access to relevant empirical data in carrying out the analysis of the Directive's efficiency. This made it impossible to definitively quantify the costs incurred as a result of the Directive. Moreover, as Member States are not obligated to communicate the identities of ECIs, it was not possible to distinguish between operators of national CI and ECI. This made the analysis of specifically the costs associated with Directive implementation complex. Due to a lack of certain types of data, the external study was focused on gauging the incidence of these costs in those Member States that might be affected by the specific obligations introduced by the Directive. This was used as a proxy for assessing the scale of the costs that can be attributed to the Directive under the assumption that the

⁶³ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 55-57.

⁶⁴ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, pages 71-74.

higher the number of obligations involving significant costs, the wider the scale of the overall costs incurred on account of the Directive.

There is no conclusive evidence that the results attributed to the Directive have been achieved at a reasonable cost. The introduction of the Directive put in place a set of obligations for Member State authorities and ECI owners/operators to meet. For instance, competent national authorities were obligated to identify and, where appropriate, designate ECI within their jurisdictions, while ECI owners/operators were required to develop OSPs and designate SLOs (or equivalents). Fulfilling these obligations entailed certain compliance and administrative costs for both competent Member State authorities and CI operators/owners, and, to a lesser extent, enforcement costs for competent authorities.

The scale of the costs brought about on account of the Directive appears to be limited. Firstly, incurred costs seem to have had a limited incidence. This is due to the fact that most of the obligations introduced by the Directive (e.g. the OSP and SLO functions) were already in place in several Member States. Furthermore, specific pieces of sectoral legislation contain similar requirements that had already been met by the affected stakeholders. Likewise, the requirement to designate contact points had *de facto* already been met by the Member States as part of the implementation of the Programme launched in 2006. For these reasons, the only new costs incurred as a result of the Directive were in relation to the obligation to inform the Commission about the designation of ECI and then provide regular reporting.

Most of the costs associated with implementation are only incurred once an ECI has been formally designated, which only occurred in a limited number of cases in a relatively small number of Member States. The competent authorities at Member State level and CI owners/operators that were consulted as part of the external study tended to agree on the fact that the costs associated with designation (e.g. development of an OSP, designation of an SLO, regular reporting) represented a minor share of the overall budget allocated to the protection of CI. In other words, the costs brought about by the Directive, and the fact that only a limited number of Member States had to bear most of them appears to be proportionate to the limited results achieved by the Directive. That being said, the lack of quantifiable data concerning actual costs incurred by specific Member States concerning specific ECIs made it difficult to make a sound assessment of the regulatory burden brought about on account of the Directive.⁶⁵

Besides questions of cost, a number of other factors also affected the overall efficiency of the Directive. Some of these factors stem from or are inherently related to the scope and design of the Directive itself while others are external to it. For instance, the generality of the provisions contained in the Directive allowed Member States to adapt existing national approaches without needing to create completely new procedures. At the same time, these choices at the national level created additional costs for operators that varied from one Member State to another. Additional limiting factors included: differences in how the OSP was operationalised on the part of ECI owners/operators in different Member States; fragmentation in the organisational arrangement of CIP policy (making it difficult for Member States to identify counterparts to discuss ECI identification and designation on a cross-border basis); and differences in national data protection and privacy laws.⁶⁶

⁶⁵ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 74.

⁶⁶ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 74.

5.5 EU ADDED VALUE

Evaluation question: To what extent has the Directive achieved EU added value as opposed to what could have been achieved at either the national or the international level?

Main findings:

- The Directive generated some EU added value insofar as it achieved results that national or other EU initiatives would not otherwise have achieved. Where national or other EU initiatives might have been able to achieve the same or at least similar results, this would only have been achieved through longer, costlier and less well-articulated processes.
- The Directive created political momentum at both European and national level concerning CIP. The Directive also served to underscore the fact that CIP was a priority at EU level.
- The Directive paved the way for the creation of a common framework for the protection of ECI, and provided a common vocabulary. However, the potential EU added value that could be derived from this achievement was limited by considerable heterogeneity in how different Member States interpreted the Directive's provisions.
- The perceived EU added value of the Directive, especially in contributing to the creation of a common European ECI identification and designation framework, varies from one Member State to the next. Specifically, the OSP, SLO and reporting requirements generated limited EU added value due to the fact that the Directive provided insufficient detail concerning their contents.
- The Directive triggered cross-border dialogue and operational co-operation in a field (CIP) that was considered to be the exclusive competence of the Member States prior to 2008.

The evaluation found that the Directive generated some EU added value insofar as it achieved results that national or other EU initiatives would not otherwise have achieved. It also created value in producing results that national or other EU initiatives could arguably have achieved in the absence of the Directive, albeit through longer, costlier and less well-defined processes. This assessment is based both on the outcomes of the external study and certain conclusions presented earlier in this document (e.g. that the Directive is partially relevant in light of the current threat picture and policy landscape and somewhat effective in relation to its stated general and specific objectives).

Specifically, the Directive contributed EU added value by paving the way for the creation of a shared framework for the protection of ECI. In a context of highly diversified approaches to CIP and different degrees of national programme maturity, the Directive managed, for instance, to introduce a common European vocabulary, an essential step in facilitating effective cross-border dialogue on CIP-related issues. However, the potential EU added value that could be derived from this achievement was limited by the high degree of heterogeneity in how different Member States interpreted these definitions and the procedures provided by the Directive.

Moreover, the EU added value of the Directive, especially in terms of its contribution in creating a common framework, is perceived differently by different Member States. While some Member States saw in the Directive an opportunity to develop a more comprehensive

CIP framework, others considered the Directive as being a weaker measure than the CIP frameworks that they already had in place. It is particularly in the latter case that Member States struggled to discern between the requirements of the Directive and pre-existing obligations at national level.

Practically speaking, the OSP, SLO and reporting requirements proved to have limited EU added value. For instance, the evaluation found the OSP and SLO functions to be under-developed in terms of detail, which made them difficult to apply in practice. Meanwhile, again, many Member States already obligated operators to take very similar measures, the contours for which were much better articulated. The EU added value related to the reporting obligation is limited by the fact that the reports submitted to the Commission typically lack the data necessary to generate an overview at EU level on threats and risks. Such information would arguably be useful in informing future policy decisions related to CIP.

The Directive acted as a catalyst for change by generating political momentum on matters related to CIP. This was reflected by both the CIP PoCs and CI owners/operators that were consulted via online surveys and in the context of several consultative workshops in Brussels. Specifically, the Directive served to convey the importance of CIP at EU level, and framed CIP in a wider EU context by giving considerable visibility to specific threats (e.g. terrorism) and stressing the importance of cooperation with operators and across borders. The need for transposition of the Directive ensured that CIP achieved new attention at national level as well. Some Member States that had limited or no CIP framework prior to 2008 introduced specific legislation on CIP; in at least one case, a dedicated national CIP agency was created. Meanwhile, the Directive prompted other Member States to make changes to pre-existing CIP practices, for instance by embracing an all-hazards approach over more threat-specific approaches. While such effects at national level could conceivably have been achieved through other pillars of the Programme, the existence of EU legislation on CIP arguably made implementing such changes easier. It also served to speed up national decision-making processes and to encourage cooperation between Member States (not least through the cross-border ECI identification and designation process and the creation of CIP national contact points).

The Directive also served to underscore the fact that CIP was a priority at EU level. Simply put, the Directive ‘elevated’ the discourse at the EU level, and made the argument that CI disruptions/failures in one Member States could have cross-border implications. This heightened interest in CIP trickled down to the national level both in those Member States where there were no or only partial CIP frameworks in place and in Member States where more robust CIP programmes already existed.

Moreover, the Directive triggered the creation of cross-border dialogue and operational cooperation in a field that had traditionally been viewed as the exclusive competence of the Member States. Numerous provisions in the Directive (e.g. the procedures for discussing cross-cutting criteria in the identification process, the appointment of CIP PoCs, the organisation of regular meetings) contributed to processes that created additional mutual understanding and trust between Member States (much of which was already being fostered through the Programme).

5.6 SUSTAINABILITY

Evaluation question: Are the effects already achieved on account of the Directive likely to be long-lasting, if the Directive were repealed?

Main findings:

- Several effects generated by the Directive are likely to be long-lasting and would continue to exist in the event that the Directive was repealed and not replaced.
- On the other hand, some of the direct effects achieved by the implementation of the Directive would likely cease to be felt.

The Directive was part of a trust-building exercise that began with the Programme in 2006 and continued via a number of incremental steps. The Directive has been the impetus for a range of activities, many of which have become more consolidated over the years. At the same time, new initiatives, sectoral and more broad-based, have been developed. In the process, the effects of the Directive have become less reliant on the Directive itself.

Several effects generated by the Directive are likely to be long-lasting and would continue to exist in the event that the Directive was repealed and not replaced with another legislative instrument. For instance, certain spill-over effects brought about as a result of the Directive are likely to persist. These include, for instance, regular CIP PoC meetings, sectoral initiatives, discussions related to the implementation of the NIS Directive and various activities and programmes administered by the JRC, one example being the European Reference Network for Critical Infrastructure Protection (ERN-CIP). Furthermore, many of the coordinative structures and entities (including at least one national CIP agency) that were created at national level in certain Member States in order to implement the ECI Directive could also be leveraged in implementing the 2016 NIS Directive. In one way or another, these spin-off effects provide different forms of platforms for discussion, cooperation, awareness-raising and continued trust-building on issues related to CIP. Some of the effects stemming from the implementation of the Directive on the part of the Member States and ECI owners/operators are now deeply rooted in national practices and not likely to be subject to significant change were the Directive to be repealed. However, other direct effects would likely cease to be felt. This might include certain forms of operational cooperation and exchange of information between Member States.

The negative effects resulting from a hypothetical repeal would likely outweigh any benefits. Repealing the Directive would send the signal that the protection of ECI is no longer an EU priority, and might engender actions at Member States level that could reduce the sustainability of the results achieved.

6. CONCLUSIONS

The overall objective of the external evaluation was to evaluate the implementation of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection. The evaluation considered the implementation of the Directive in light of six evaluation questions informed by criteria provided in the Commission's Better Regulation Guidelines (relevance, coherence, effectiveness, efficiency, EU added value and sustainability).

The analytical framework that was developed in order to evaluate the Directive was able to overcome a number of limitations, including: an unclear pre-2008 baseline situation as a point

of comparison; the limited availability of information concerning relevant national measures; not knowing the identities of designated ECIs; and challenges in distinguishing the effects of the Directive from other national- and European-level measures. The solutions that were devised in order to overcome these limitations ensured that the data that was collected from a wide range of consulted stakeholders was of sound quality and provided a solid basis from which to answer the evaluation questions.

On the basis of the comparison that was made between the baseline situation (described in Section 2), the implementation state of play (in Section 3), and feedback from stakeholders, the evaluation found that:

- The context in which CI are operated has changed considerably since the Directive entered into force. In view of recent technological, economic, social, policy/political and environmental developments and the new and evolving challenges that they pose in protecting CI, the Directive has partial relevance;
- The Directive appears to be broadly consistent with relevant European sectoral legislation as well as policy at international level. Several complementarities and overlaps with other pieces of European sectoral legislation/policy documents in the energy, transport and ICT sectors exist;
- The Directive has been partially effective in achieving its stated objectives, i.e. to improve the level of protection for ECIs in the energy and transport sectors by creating a common framework for the identification and designation of ECI. Meanwhile, because the generality of some of the Directive's provisions left room for different interpretations by Member States, it has only to a limited degree achieved the objective of establishing a common approach to the assessment of the need to improve the protection of ECI. That being said, the Directive has generated certain spill-over effects (e.g. increased awareness about CIP, political momentum, national-level legislations/definitions/obligations in Member States with no pre-existing CIP framework). The evaluation was ultimately inconclusive as to the contribution of the Directive to the overall objective of an improved level of protection of CI with EU relevance;
- The evaluation found no conclusive evidence that the results attributed to the Directive have been achieved at a reasonable cost. While the extent of the costs associated with implementation of the Directive appear to be limited, a lack of available quantifiable data from the Member States and ECI owners/operators makes it difficult to carry out a sound assessment of the Directive's regulatory burden on stakeholders; stakeholders' views on the proportionality of the costs in relation to observable results is mixed. Besides certain incurred costs, a number of other factors have affected the overall efficiency of the Directive, some which stem from the nature and substance of the Directive itself (e.g. the generality of key provisions and definitions, the absence of a strong monitoring and evaluation framework) and others that are external to it (e.g. the existence/level of maturity of national-level CIP frameworks prior to the adoption of the Directive);
- The Directive generated EU added value insofar as it achieved results that national or other EU initiatives would not otherwise have achieved, or that national or other EU initiatives would have achieved anyway, albeit through longer, costlier and less well-defined processes. One example is a common framework for the protection of ECI (although different Member States interpret the 'commonality' of this approach

differently). On the other hand, certain specific provisions, like the Operator Security Plan, the Security Liaison Officer function and reporting requirements, proved to have limited added value for many Member States.

- Several effects generated by the Directive are likely to be long-lasting and would continue to exist in the event that the Directive was repealed and not replaced. On the other hand, some of the direct effects achieved through the implementation of the Directive (e.g. cross-border CIP discussions, reporting requirements) would likely cease to be felt.

The evaluation makes clear that the Directive, a central pillar of the European Programme for Critical Infrastructure Protection, initially played an important role in bringing attention to bear on CIP and, in the case of those Member States that were undertaking limited CIP activity at the time, sparked a considerable amount of new work aimed at enhancing critical infrastructure protection and resilience at national level. After the Directive's entry into force, an evolving threat picture involving a combination of natural and (sometimes antagonistic) man-made threats, but also the increasingly intertwined, transboundary and 'wired' nature of Europe's critical infrastructure and the services that they together provide would gradually reduce the Directive's relevance. In many instances, the interdependencies between CIs in different sectors are considerable, extend beyond Europe's boundaries, and need to be accounted for in addressing the security of European CI in the years to come.

The preponderance of evidence collected during the evaluation indicates that while some elements of the Directive remain useful, others are of limited value today and could be revisited in order to better achieve the Directive's stated overall objective (an improved level of protection of ECIs in the energy and transport sectors). This could mean shifting the focus away from asset protection to one that is more systemic in nature and which recognises interdependencies across a range of different sectors (much like the NIS Directive does in the ICT realm). Meanwhile, the evaluation provides a reminder that many Member States have incorporated resilience thinking into their national CIP frameworks. This means ensuring that CI are both well protected *and* capable of quickly recovering from disruptions in those instances where protective measures are inadequate.

The consultations with stakeholders that were carried out as part of the evaluation suggest that there is continued support on the part of Member States for EU involvement in CIP policy. While opinions on the matter varied, the outright repeal of the Directive was seen by many Member States and CI owners/operators as likely to have negative effects.⁶⁷ That being said, a number of Member States argued during the consultations that CIP is primarily a national responsibility and, as such, suggested that the EU's engagement both now and in future should respect the principle of subsidiarity and demonstrate clear EU added value, both in supporting Member States' CIP work at national level and in facilitating cross-border cooperation, including with third countries outside the Union.

Based on the findings of the evaluation, there is clearly room for further reflection at EU level as to how best further improve the protection of CI in Europe, including the 93 ECIs that have been designated thus far. This should include focused consideration of how the EU can most effectively provide support to the Member States and CI owners/operators that host, oversee and/or run vital infrastructure. This conclusion has been borne out through discussions with

⁶⁷ An online survey that was carried out as part of the external study revealed that 39% of participating CIP PoCs and 70% of responding CI owners/operators considered that repealing the Directive would have either a 'negative' or 'moderately negative' effect on the protection of ECI in their country. For more information, see EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, page 65.

the Member States, CI operators and operator associations, as well as other partners, including international organisations and third countries that have taken place in recent years, including in the context of the evaluation. The findings of the external study that informed the evaluation are in line with the Commission staff's own analysis concerning the Directive.

As mentioned earlier, closer alignment of the EU's CIP policy with the essential services approach described in the NIS Directive might better reflect how issues related to critical infrastructure protection and resilience are currently being addressed at Member State level. Further work would be needed in order to assess the potential advantages of aligning CIP and NIS policy so as to ensure enhanced complementarity between cyber and physical protection measures relating to CI in different sectors. Any such deeper analysis would necessarily explore how any further action might build on and strengthen ongoing work related to the implementation of the NIS Directive. However, going from an asset-focused CIP approach to one that is more systems-focused in nature and that emphasises interdependencies between different CI in different sectors cannot be achieved using the Directive as it is articulated today.

The external study provides the Commission with a range of recommendations that could be useful in enhancing the utility of the Directive as it stands today.⁶⁸ For instance, the study suggests that the Commission strengthen elements of the monitoring and evaluation framework, and maintain and make available to the Member States an overview of available EU funding and EU-funded CIP-relevant research/projects. While such recommendations could be acted on in relatively short order, others, like the suggestion to further develop key definitions and provisions or to extend the Directive's sectoral scope, would require more reflection informed by additional consultations with the Member States and other stakeholders in a wide range of sectors.⁶⁹

The consultations that were carried out during the evaluation reinforce the need for any further action on CIP to account for the far-reaching interdependencies that exist across many different sectors besides energy and transport. As this evaluation suggests and the NIS Directive demonstrates, there are additional sectors that the Member States consider worthy of additional protective action at European level.⁷⁰ This is as much due to the important services that they provide individually as for the interdependencies that exist between them. While the 2013 revision of the Programme included a better accounting for CI interdependencies, the Directive itself was left unchanged. Based on the evaluation's findings, there are grounds to examine the scope of the EU's CIP policy framework to encompass additional sectors, and to develop strategies for identifying and addressing those vulnerabilities that result from the interdependencies that exist between them.

The study serves as a reminder that several legislative initiatives have been adopted since 2008, and that many of these overlap with the Directive in different ways. Any further action on EU-level CIP policy would need to be coherent with existing and foreseeable future

⁶⁸ The external study carried out by EY includes a number of recommendations to the Commission, namely to: further define key terms and provisions contained in the Directive in the interest of more ready operationalisation at national level; assess the need to extend the Directive's sectoral scope; strengthen the Directive's monitoring and evaluation framework; and review the roles and responsibilities of the different stakeholders involved in the identification and designation of ECI, which might include giving operators a more explicit role. Certain recommendations address specific issues that are external to the Directive (e.g. CIP governance, national practices, EU funding, EU legislative framework and relationship with third countries).

⁶⁹ One specific sector that should be consulted is defence. As an example of a CIP-related initiative in this sector, the European Defence Agency (EDA), through the 'Consultation Forum for Sustainable Energy in the Defence and Security Sector, recently conducted a survey of Member States concerning the implementation of and awareness regarding the ECI Directive in the context of defence-related critical energy infrastructure protection.

⁷⁰ Besides energy and transport, the NIS Directive covers banking and financial infrastructure, health, space, information and communications technology (ICT), and drinking water supply and distribution.

legislation so as to increase its EU added value and to reduce the risk of undue burdens being placed on Member States and CI owners/operators. In this context, it is necessary to fully understand the relationships that exist between the ECI Directive and more recent pieces of legislation and other related measures on, for instance, security of energy supply.⁷¹

Furthermore, the evaluation shows an evolution in the nature of the threats facing Europe, some of which are longstanding while others are either arguably new (like unmanned aerial vehicles or artificial intelligence) or evolving (insider threats). While the introduction of improved capabilities (like 5G) will improve efficiencies, they may also generate new or exacerbate existing vulnerabilities. Furthermore, the implications of third-country ownership/control of CI in Europe require careful monitoring. For these reasons, the EU's approach to CIP must be a flexible, risk-based one that corresponds to the spectrum of current and future threats and vulnerabilities facing Europe's critical infrastructures.

Finally, the Directive has not kept up with the Member States' thinking on resilience, i.e. the ability for CI to recover quickly from adverse events, antagonistic or otherwise. Obviously, protection is an essential element to the defence of infrastructure (in its own right or as a generator of essential services). However, these measures go only so far in ensuring that CI that has been adversely affected by events is able to quickly bounce back in order to continue delivering the services that European society relies on for a certain quality of life. This again points to the need for further reflection on a more explicit resilience dimension to EU-level CIP policy that would support related ongoing work at Member State level, and at the same time bring it more closely in line with EU policy in the field of civil protection and security of supply, for instance.

⁷¹ These include Regulation 2017/1938 concerning measures to safeguard the security of gas supply (the Gas Supply Regulation) and Regulation 2019/941 on risk preparedness in the electricity sector (the latter of which was adopted in 2019 and thus fell beyond the scope of the evaluation).

ANNEX I: PROCEDURAL INFORMATION

1. LEAD DG AND DECIDE PLANNING

The Evaluation Roadmap for the initiative was published by DG Migration and Home Affairs (DG HOME) on the Commission's 'Have your say' webpage⁷² in March 2018. The Terms of Reference for engaging a contractor to carry out the external study as part of the evaluation were drawn up starting later in the spring of the same year. A request for service was issued on 13 June 2018, and a contractor selected by an evaluation committee consisting of staff from DG HOME and DG Energy (ENER) later during the summer.⁷³ The study commenced on 28 August 2018 and ended on 2 April 2019. The agenda planning (Decide) reference assigned to the evaluation is PLAN/2018/2389.

2. ORGANISATION AND TIMING

As per the Better Regulation Guidelines, an inter-service steering group was set up within the Commission to oversee the evaluation. Several Directorates-General (DGs) within the Commission⁷⁴ and the European External Action Service (EEAS) were invited to nominate representatives to the steering group.

The meetings of the steering group were chaired by DG Migration and Home Affairs (HOME). The steering group was regularly consulted over the course of the evaluation, typically in conjunction with the submission of specific draft reports by the contractor responsible for carrying out the external study. These consultations took place both in the context of regular meetings, via email and telephone. The following list provides an overview of the steering group's work over the course of the evaluation:

- The inter-service steering group was convened for the first time on 24 May 2018 in order to receive initial information about and provide feedback on draft versions of the Terms of Reference for the external study and the Stakeholder Consultation Strategy, which described how the Commission intended to consult with different stakeholder groups in the context of the evaluation;
- In late September / early October 2018, the steering group was consulted via email on the draft questionnaire that was to be used during the public consultation hosted on the Commission's web platform;
- On 4 October 2018, the steering group received from the contractor a presentation of its draft Inception Report. This report was revised on the basis of the steering group's feedback and subsequently accepted by the steering group. The meeting also served as an opportunity to provide feedback on the draft questionnaire for the public consultation, and to collect suggestions from the steering group as to possible

⁷² The Roadmap is published via the following link: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-1378074_en.

⁷³ The call for service was issued via framework contract HOME/2015/EVAL/02. Four contractors submitted bids to carry out the evaluation. The evaluation committee considered a number of criteria in selecting a winning bid, namely: compliance with the technical specifications described in the Terms of Reference; demonstrated understanding of the objectives and tasks; the quality of the preliminary assessment of difficulties and expected results; the quality of the proposed methodology; and the quality of the project management and team organisation. The Commission ultimately awarded the contract to EY.

⁷⁴ The DGs invited to participate in the steering group included: the Secretariat-General of the Commission (SG); Legal Service (LS); Energy (ENER); European Civil Protection and Humanitarian Aid Operations (ECHO); Justice and Consumers (JUST); International Cooperation and Development (DEVCO); Environment (ENV); Mobility and Transport (MOVE); Internal Market, Industry, Entrepreneurship and SMEs (GROW); Taxation and Customs Union (TAXUD); Health and Food Safety (SANTE); Financial Stability, Financial Services and Capital Markets Union (FISMA); Communications Networks, Content and Technology (CONNECT); Regional and Urban Policy (REGIO); and the Joint Research Centre (JRC). DG Energy, Climate Change, Environment (CLIMA) also participated in the steering group's work.

stakeholders to invite to the consultative workshop targeting CI owners/operators (see below);

- On 13-14 November, consultative workshops with the Member States and CI owners/operators were held in Brussels. Several members of the steering group were present during the workshops;⁷⁵
- On 29 November 2018, the steering group met again, this time to receive a presentation of the contractor's draft Interim Report. The report was subsequently accepted after revisions were made to reflect the comments of the steering group;
- On 28 February 2019, the steering group convened to receive and provided feedback on the basis of a presentation of the contractor's draft Final Report. The participants were invited to provide additional written feedback after the meeting;
- On 27 March 2019, a revised draft of the Final Report was circulated by email to the members of the steering group for final review. On 29 March 2019, DG HOME provided the contractor with the steering group's comments;
- On 2 April 2019, the Final Report was re-submitted by the contractor to DG HOME and subsequently accepted;
- The steering group was invited to attend a meeting of the CIP PoCs on 4 April 2019, where the contractor presented the findings contained in the Final Report; and,
- The steering group was consulted during the drafting of this staff working document.

The evaluation was extended by approximately one month, given the fact that the public consultation was launched later than initially anticipated. This decision was made out of respect for the Better Regulation Guidelines and in order to allow the contractor adequate time to account for all responses to the Consultation (which ended on 11 February 2019) and feedback from certain consulted Member States. In practical terms, this led to the postponement of the delivery of the contractor's draft Final Report (see above) by approximately one month (from 15 January 2019 to 22 February 2019).

3. EXCEPTIONS TO THE BETTER REGULATION GUIDELINES

In conducting the evaluation, no exceptions from the usual procedural requirements described in the Better Regulation Guidelines were required.

4. EVIDENCE, SOURCES AND QUALITY

The evaluation drew on different types of documents at EU, international and national level, respectively. Documents at the EU level provided indications as to the nature and scope of EU policy in the field of CIP. Particular attention was paid to relevant legislation and other initiatives in the sectors covered by the Directive (energy and transport) as well as other sectors beyond the scope of the Directive but which were mentioned by stakeholders as being relevant for one reason or another. At international level, the contractor reviewed documents describing international standards and initiatives relating to the protection of CI.⁷⁶ Finally, at the national level, national legislative measures, strategies, administrative procedures and guidelines that in one way or another were relevant in transposing and implementing the

⁷⁵ The workshops were attended by DGs ECHO, GROW, HOME, and REGIO.

⁷⁶ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I provides an overview of the documents consulted at the EU and international level as part of the desk research.

provisions contained in the Directive were of particular relevance. Drawing on evidence from the 2012 review of the Directive,⁷⁷ the contractor conducted an in-depth analysis of national implementation measures with the aim of filling existing gaps in the empirical record and updating the 2012 overview with any new information describing developments between 2012 and when the evaluation at hand was launched. More information on sources is provided in Annex III.

Besides a review of the relevant documents, the evaluation also relied on extensive consultations with a wide range of stakeholders. These consultations served as opportunities to collect new data or to confirm the validity of already collected data. Additional information concerning the stakeholder consultations is provided in Annex II.

5. EXTERNAL EXPERTISE

The evaluation drew on a number of external experts. Besides subject matter experts at Member State level, including CIP PoCs, members of academia, including academics affiliated with think tanks, were consulted. Some of the respondents to the public consultation also possessed expert competence.

⁷⁷ Booz & Company GmbH. (2012). Study to support the preparation of the review of the Council Directive 2008/114/EC on the identification and designation of European critical infrastructures (ECI) and the assessment of the need to improve their protection.

ANNEX II: SYNOPSIS REPORT OF THE STAKEHOLDER CONSULTATION

1. INTRODUCTION

1.1 OVERVIEW OF STAKEHOLDER CONSULTATIONS

A broad range of stakeholder consultations were carried out as part of the evaluation of the Directive. The aim of the consultations was to gather different views that could be useful in answering the evaluation questions concerning the relevance, coherence, effectiveness, efficiency, EU added value and sustainability of the Directive.

The Synopsis Report aims to describe and summarise all formal consultation work, any *ad hoc* contributions directly linked to the preparation of the evaluation, as well as any relevant input received through the feedback mechanism provided through the Evaluation Roadmap that was issued in March 2018.

1.2 METHODOLOGY

The evaluation involved a number of different types of broad-based and targeted consultations on both the Evaluation Roadmap and on the implementation of the ECI Directive as part of the evaluation itself.

The nature and scope of the consultations were guided by a Stakeholder Consultation Strategy, which was approved by an inter-service steering group established to oversee the evaluation. This document served to identify key stakeholder groups. An appropriate consultation methodology was developed in order to most effectively reach these different groups. The Consultation Strategy also provided details concerning how the Commission would work to raise awareness about the evaluation amongst key stakeholder groups.⁷⁸

Specific details concerning the methodology used in consulting different stakeholders at different points during the evaluation are provided in subsequent sections, along with the results and findings.

1.3 CONSULTED STAKEHOLDER GROUPS

The key stakeholder groups identified in the Stakeholder Consultation Strategy include: competent authorities at the Member State level; owners/operators of critical infrastructure and other industry stakeholders in the transport and energy sectors; academia and think tanks; the general public; and the relevant Directorates-General within the Commission, the European External Action Service (EEAS), and any other EU services/agencies that are deemed relevant (i.e. Europol and the European Union Agency for Network and Information Security (ENISA).

2. CONSULTATIONS ON THE ROADMAP

The Evaluation Roadmap for the initiative was published by DG Migration and Home Affairs (DG HOME) in March 2018. The purpose of the Roadmap was to inform citizens and stakeholders about the Commission's work related to CIP, to allow them to provide feedback on the planned evaluation, and to inform them on future opportunities where they could be consulted (e.g. in the context of the targeted stakeholder consultations, through the public consultation). Over the course of the consultation period, six responses were received, all of

⁷⁸ For instance, the Stakeholder Consultation Strategy explained that the CIP PoCs would be requested to forward relevant information within their respective networks, and that other relevant groups would be provided with information related to the evaluation. In order to reach other stakeholder groups, the document explained that DG HOME would issue press information as appropriate and set up a dedicated page on the Commission's website (https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-1378074_en) where relevant information concerning the evaluation could be published.

which will be published on a dedicated page on the Commission's website.⁷⁹ The respondents included three European associations of CI owners/operators, one national association of CI owners/operators, one private company based outside the EU, and one EU citizen.

With the exception of the EU citizen, whose submission was not pertinent to the Roadmap, the respondents all offered views on the focus and scope of the study. Among other things, the Commission was encouraged to account for other European initiatives, including on rail security and information and communications technology (ICT) (the NIS Directive), and the fact that national-level approaches to CIP vary from one Member States to another. Multiple respondents offered views as to possible options regarding the further development of EU-level CIP policy. These fall beyond the scope of both the study and the staff working document and are thus not mentioned here. However, these views were taken into account in drafting the Terms of Reference for the external study that was launched as part of the evaluation.

3. TARGETED STAKEHOLDER CONSULTATIONS

3.1 CONSULTATION METHODS/TOOLS, RESULTS AND FINDINGS

The targeted consultations that took place within the framework of the evaluation involved a range of stakeholder groups, including: different Directorates-General within the European Commission, the European External Action Service (EEAS), and EU Agencies; academia/think tanks; the Member States; and European associations of CI owners/operators. Different tools (e.g. interviews, online surveys, workshops, case studies) were used in consulting the different stakeholder groups.

In total, 147 stakeholders were consulted as part of the targeted stakeholder consultations. An overview of the targeted consultations, including information concerning the specific stakeholders involved, the relevant consultation tools that were used, and the type of information that was extracted as a result is available in Annex I of the external study.⁸⁰ A detailed description of the methodological approach used in carrying out the different targeted consultations for each relevant stakeholder group and the findings that came as a result is provided below.

3.1.1 THE EUROPEAN COMMISSION, THE EUROPEAN EXTERNAL ACTION SERVICE, AND EU AGENCIES

Methods/tools and results: A total of 18 stakeholders representing different Directorates-General (DGs) within the European Commission,⁸¹ the European External Action Service (EEAS) and two EU Agencies (Europol and the European Union Agency for Network and Information Security (ENISA)) were interviewed as part of the external study.

Findings: In general, these stakeholders emphasised the need to focus on new threats, particularly involving cyberattacks. For instance, certain stakeholders mentioned that disruptions to Galileo services due to cyberattacks can result in spill-over effects affecting other CI. The importance of developing trust both at EU and Member States level in the context of information-sharing was also raised.

⁷⁹ A webpage dedicated to the Directive evaluation (https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-1378074_en) was set up on the Commission's website.

⁸⁰ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

⁸¹ Specifically, the contractor interviewed the following DGs within the Commission (number of interviews per DG indicated in parentheses): HOME (5, including one with Commissioner Julian King's Cabinet); ECHO (1); ENER (1); GROW (2); FISMA (1); MOVE (1); JRC (2); SANTE (1); and CNECT (1).

3.1.2 ACADEMIA AND THINK TANKS

Methods/tools and results: A total of ten interviews were conducted with representatives of academia and think tanks. These interviews were primarily intended to investigate current and future needs and challenges within CIP, but also recent policy developments in the field vis-à-vis the objectives of the Directive. (Certain representatives from academia/think tanks also participated in the public consultation, described in more detail below.)

Findings: Stakeholders in academia tended to stress the fact that there are significant differences in how individual Member States apply the provisions of the Directive. Particular mention was made of the definitions included in the Directive, but also the fact that the sectoral scope of the Directive (energy and transport) might be too limiting. On the other hand, some interviewees suggested that the Directive also possesses some important elements (e.g. making mention of vital societal functions, thereby focusing attention on CI outputs instead of the ‘technicalities’ of the infrastructure itself and how it should be protected).

3.1.3 MEMBER STATES

Stakeholders at the Member State level were consulted through a variety of means over the course of the study. The three main groups at Member State level that were the subject of targeted consultations included: ECIP contact points (otherwise referred to as CIP points-of-contact (PoCs)); competent authorities; and CI owners/operators. Ultimately, all but four Member States (CY, IE, LT and UK) opted to participate in these consultations.

The table below provides an overview of the total number of stakeholders engaged through the online survey, the workshops and the case studies, as well as which Member States they represented.

Country	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU
PoCs	1	1	1		1	1	1	1	1	1	1	1	1	1
Other competent authorities	2		1		2		3	1	3	3		2		
CI owners/operators	5	2	2		2	2	2	1	5	3	1	2		
Total	8	3	4		5	3	6	3	9	7	2	5	1	1
Country	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
PoCs		1		1	1	1	1	1	1	1	1	1	1	
Other competent authorities		2						2			2	1	2	
CI owners/operators		1				1		13	6	3			8	
Total		4		1	1	2	1	16	7	4	3	2	11	

Figure 1: Total number of stakeholders per Member States consulted via the online survey, workshops and/or case studies⁸²

The consultation tools used as part of the external study were tailored to the different stakeholder groups. These tools included: 1) an online survey targeting CIP PoCs and other competent national authorities and CI owners/operators; 2) two workshops (one with CIP PoCs/competent authorities and one with CI owners/operators) organised with the support of the Commission in Brussels on 13-14 November 2018; and 3) four case studies concerning a small number of selectively chosen Member States (DK, ES, FR, SK). The sections that follow describe each tool, the results that were achieved, and the findings that these results generated.

⁸² EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

3.1.3.1 ONLINE SURVEY

Methods/tools and results: The online survey targeted CIP PoCs, other competent authorities, and CI owners/operators in the energy and transport sectors, and aimed at collecting specific types of information on procedures and rules applied at national level in order to implement the Directive. This information was used to gain a better understanding of the relationship between the Directive and other relevant measures within the field of CIP. The survey contained a tailored questionnaire for each stakeholder category (CIP PoC, competent national authority, CI owner/operator).

On 12 October 2018, a web link to the online survey was distributed to a single point-of-contact (typically the CIP PoC) within each Member State who was responsible for sharing the link with other relevant competent authorities and CI owners/operators. The decision to use the CIP PoCs as a single channel for the dissemination of the link to the survey to other stakeholders at national level made it impossible to determine which other stakeholders at the Member State level, including CI owners/operators, subsequently received information concerning the survey. This made it difficult to determine the response rate amongst the other stakeholder categories besides the CIP PoCs.

The online survey was available until 9 November 2018 (slightly less than one month). During this period of time, a total of 87 responses were received. The responses came from 23 CIP PoCs (an 82% response rate), 17 national authorities (representing 10 Member States), and 47 CI owners/operators (representing 15 Member States). Of the CI owners/operators that responded, 31 were in the energy sector and 12 in the transport sector. In the remaining four cases, no sector was specified. The results of the survey were useful in, among other things, completing the implementation tables depicting implementation within each Member State and during the analytical phase of the external study.

Findings: The survey responses generated a data set that could be used to develop findings related to the various evaluation questions related to different evaluation criteria:

- *Relevance:* Generally speaking, the survey results suggest that stakeholders ascribe only limited relevance to the Directive. CI owners/operators that participated in the survey were particularly negative, and especially where protection against specific threats is concerned.
- *Effectiveness:* The results of the survey suggest that the Directive was effectively transposed in Member States. However, the overall effectiveness in fostering a common approach across Member States was not clear.
- *Efficiency:* Generally speaking, the Directive does not appear to have caused significant costs to those stakeholders most likely to have been directly involved in implementation, namely CI owners/operators. However, there is no consensus amongst CIP PoCs on this question.
- *Coherence:* The survey found, that based on the responses of the CIP PoCs, there is little evidence of regulatory overlap between the Directive and existing legislation at the national level. On the other hand, 50% of CI owners/operators mentioned a high degree of overlap. For their part, CIP PoCs (60%) were more concerned with perceived overlaps between the ECI Directive and other pieces of EU legislation (mostly in relation to the NIS Directive). The responses to the open elements of the survey suggested that both the ECI Directive and the NIS Directive require Member

States to identify CI, either European or national. This would suggest that there is at least some risk of duplication of effort on the part of Member States.

- *EU added value:* The CIP PoCs reported that the Directive facilitated the development and exchange of good practices, guidelines and standards, created common CIP-relevant terms of reference across the EU, and supported the emergence of a European forum for CIP-related issues. Operators on the other hand found that the Directive supported the framing of national policy, measures and initiatives, thus fostering the creation of a harmonised framework, approach, and common terms of reference concerning CIP within Europe.
- *Sustainability:* The majority of CI owners/operators (70%) indicated that the repeal of the Directive would have a negative impact on the level of protection of ECI; a smaller share of CIP PoCs (40%) were of the same opinion, with about 15% unprepared to provide a view.

3.1.3.2 WORKSHOPS

Methods/tools and results: The survey results provided data that was useful in preparing for two consultative workshops in Brussels on 13-14 November 2018. The workshops were both organised by the Commission, with the external contractor leading the discussions. The workshop on 13 November involved authorities at Member State level, including CIP PoCs, while the workshop on 14 November involved CI owners/operators and other industry stakeholders that were nominated by competent authorities at Member State level.

Each workshop included several plenary sessions where the participants were provided with an opportunity to discuss the interim findings of the evaluation of the Directive, as well as the results of the aforementioned online survey. Smaller group break-out sessions were organised in order to examine particular aspects of the implementation of the Directive, namely the process of identifying and designating ECIs, and cooperation between authorities and operators.

Findings: The workshop provided an opportunity to capture stakeholders' views on the implementation of the Directive:

- Generally speaking, the stakeholders agreed that there is significant heterogeneity in the approaches followed by competent authorities at national level to identify ECI, and this appears to be linked to different levels of maturity and institutionalisation of national CIP frameworks. The CIP PoCs reported notable differences concerning how CI is defined and understood by the Member States, as well as the involvement of operators themselves in the ECI identification/designation process;
- CI owners/operators described two different general approaches to cooperation with authorities, one in which cooperation is centred around authorities (centre-led), and one in which cooperation is pushed mainly by operators (decentralised) with limited involvement of public authorities.

Specific findings related to the evaluation questions are described below:

- *Relevance:* While the Directive was considered to be an important contribution to the protection of CI, stakeholders saw the need for it to be updated so as to reflect recent policy/security developments, but also in order to clarify to what extent the legislation such as this is to be used by the Member States as an operational tool or simply as strategic guidance. Member States felt that having a common European approach to

CIP is indeed important, but that this need not necessarily entail the harmonisation of procedures at the Member States level, where approaches vary considerably. Furthermore, CI owners/operators pointed out that the focus of the Directive is on the protection of assets, while in the energy sector, the focus is on systemic redundancies in the interest of ensuring continuous service delivery;

- *Effectiveness*: Stakeholders found it generally quite difficult to distinguish the effects directly attributable to the Directive from those related to other national and EU initiatives. There was agreement on the limited effects of the Directive on the protection of ECI (due in large part to variance in how different Member States conduct risk assessments and a lack of operational guidance). While some Member States reported having high levels of security for national CI prior to the Directive, others instead saw the Directive as an important impetus for CIP work at national level. Regardless of how developed their programmes were prior to 2008, Member States described certain difficulties in identifying and designating ECI. Member States acknowledged that the Directive fostered an increase in the level of CIP awareness and expertise; there was general agreement on the usefulness of the CIP PoC role;

Efficiency: Stakeholders found it difficult to distinguish between costs related to the protection of national CI and those related to the protection of ECI. CI owners/operators raised the issue of funding in this context; while the Directive created pressures for operators to invest in security, it lacks sufficient detail to ‘justify’ specific security-related budget requests;

- *Coherence*: With the exception of the NIS Directive and certain legislation in the rail sector, the coherence of the Directive with other legislation was not raised as an issue by CIP PoCs and CI owners/operators. Several stakeholders put forward that the NIS Directive represented a shift from an asset-oriented approach to a service-oriented approach, and that this was more in line with many national-level approaches. While acknowledging the existence of many sectoral measures that had bearing on CIP, no specific inconsistencies were identified;
- *EU added value*: While stakeholders acknowledged that the Directive had EU added value when it was first introduced in 2008, this has since decreased. The only instrument as part of the Directive that retains its original value was the CIP PoC group, which would not have been possible without the Directive. Stakeholders underscored that EU added value within the field of CIP derives primarily from the Programme rather than from the Directive itself;
- *Sustainability*: The provisions of the Directive have now been fully integrated into national CIP programmes, meaning that many of its effects are likely to persist in the event of a hypothetical repeal.

3.1.3.3 CASE STUDIES

Methods/tools and results: Four case studies involving DK, ES, FR and SK were carried out as part of the evaluation. The case studies allowed for in-depth analysis of key issues linked to the implementation of the Directive through a series of approximately six interviews with key stakeholders (e.g. CIP PoC, other national competent authorities, CI owners/operators), the analysis of relevant documents, and other information collected during the evaluation. Member States were selected on the basis of certain specific criteria, including: the degree of CIP development prior to the Directive’s entry into force; the dependence on CIs located in other Member States; exposure to risks; and geographical representation.

Findings: The case studies served to illustrate the extent to which national approaches to CIP vary, and how such variation impacted the implementation of the Directive at national level. They also demonstrated how the Directive affected national-level CIP policy work, but also how different Member States engaged in the ECI identification/designation process.

3.1.3.4 OTHER FORMS OF AD HOC CONSULTATION

Besides the formal consultation activities that were initially envisioned at the outset of the study, a round of ad hoc validation of the implementation tables containing information describing how each Member State had implemented the Directive was carried out by the contractor. As part of this process, the CIP PoCs were asked to review the tables' contents, fill in any gaps, and, where applicable, resolve instances of conflicting information from different sources.

3.1.4 EUROPEAN ASSOCIATIONS OF CI OWNERS/OPERATORS

Methods/tools and results: Nine interviews with representatives from different European associations of CI owners/operators, mainly in the energy and transport sectors, were carried out, the purpose being to gain a perspective on the Directive from a European-level CI owner/operator perspective. The selection of European associations was made in agreement with the Commission.

Findings: The consulted associations tended to provide inputs that were much in line with those of the CI owners/operators that took part in the workshops. They stressed that there is currently no uniform pan-European approach to security and CIP at national level. This, taken together with the increased interconnectedness of CI in different Member States, renders the overall system less secure. Seen in this light, some stakeholders felt that the Directive and other similar such measures, while welcome initiatives, are practically difficult to implement. Moreover, the European associations stressed that the large number of actors involved in CIP at national and EU level tends to create confusion and slows down the process by which important CIP decisions are made.

4. PUBLIC CONSULTATION

Methods/tools and results: In addition to the targeted stakeholder consultations, the Commission organised an internet-based public consultation concerning the Directive. The consultation targeted all citizens (in their personal or professional capacities), as well as all non-government/public/private organisations/entities with an interest in the Directive specifically and the field of critical infrastructure protection more generally. Interested parties included competent government authorities at state, regional and local level, critical infrastructure operators and other relevant industry stakeholders.

The public consultation was launched on 19 November 2018 on the European Commission's website⁸³ and lasted for 12 weeks, ending on 11 February 2019. The questionnaire for the public consultation consisted of 12 mainly closed questions along with a limited number of open questions to allow for clarifying remarks and/or remarks of a more general nature.⁸⁴

Information concerning the public consultation was published on the Commission's website in all official EU languages. While the questionnaire itself was only available in English,

⁸³ The public consultation was published at this address: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-1378074/public-consultation_en.

⁸⁴ The questionnaire can be found in EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

French and German, respondents were free to complete the ‘open’ elements of the questionnaire using any recognised EU language.

The Commission took a number of steps to promote the public consultation. These included providing the CIP PoCs, other relevant European networks of Member States (e.g. in the energy sector), and European associations of CI owners/operators with information both in the lead-up to and at the point of publication of the Consultation. These contacts were encouraged to disseminate information about the consultation to stakeholders at national level, including CI owners/operators, who might have an interest in contributing. Besides updating the evaluation’s page on the Commission’s website, the public consultation was also promoted by the Commission in social media (Twitter).

As of 11 February, 69 submissions had been made to the Commission by a range of respondents representing academics/research institutions (8), businesses (31), EU citizens (14), non-governmental organisations (NGOs) (3), public authorities (9) and non-specified (4).⁸⁵ Only one submission was made by a respondent outside the EU.⁸⁶ Almost half of responses (45%) came from business representatives, followed by individual EU citizens (20%), public authorities (13%) and academia (12%). The overall results are presented in the figure below.

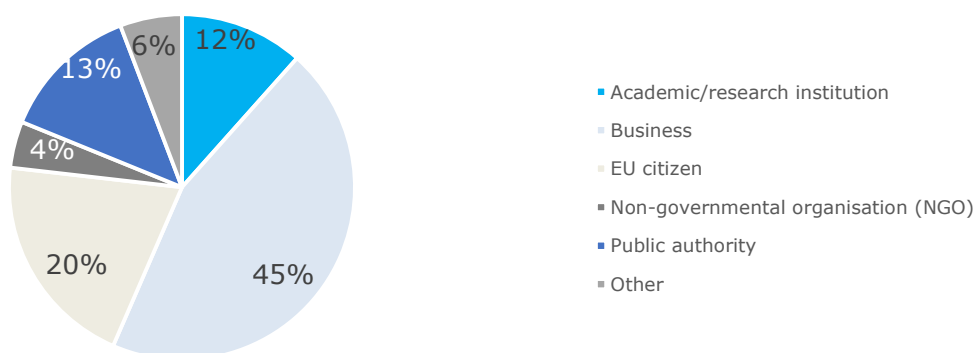


Figure 2: Responses to the public consultation by stakeholder type⁸⁷

Besides the submissions made electronically via the Commission’s web platform, two ad hoc responses in the form of position papers were provided to the Commission via email. These represented the views of one ministry at Member State level and a European association of private security operators.⁸⁸

All submissions to the public consultation, including the individual replies that can be published, have been made available online.⁸⁹

An analysis of the responses as part of the public consultation is presented below.

Findings: The respondents identified cyber-attacks and energy supply risks as the areas posing the most serious threats to CI in the EU, followed by natural disasters, attacks from state-sponsored actors and terrorist attacks (see Figure 3, below).

⁸⁵ The respondents were geographically distributed in the following way: AT (12); BE (8); BG (1); CZ (7); DE (8); DK (2); EE (2); EL (1); ES (7); FR (2); IE (1); IT (9); LU (1); LV (2); PL (1); RO (2); SK (1); UK (1); and Turkey (1).

⁸⁶ Turkey.

⁸⁷ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

⁸⁸ The ad hoc submissions were from the Estonian Ministry of the Interior and the European Organisation for Security (EOS).

⁸⁹ The responses to the Public Consultation are published at the following location: https://ec.europa.eu/home-affairs/what-is-new/work-in-progress/initiatives/evaluation-council-directive-2008-114_en.

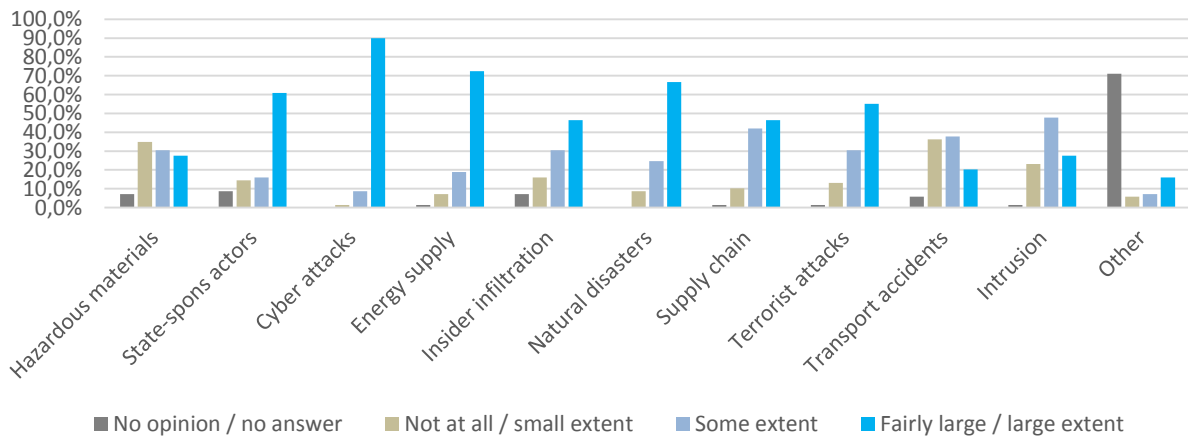


Figure 3: Incident types posing a serious threat to CI in the EU⁹⁰

As for the effects of the Directive (see Figure 4, below), stakeholders largely viewed the Directive as a means to assign clear responsibilities to different actors in the CIP sector and a tool for enhancing cooperation between and among Member States. Some stakeholders also saw the Directive bringing about actual operational changes to the way CI are protected. That being said, respondents considered the exclusion of the ICT sector as limiting the effectiveness of the Directive. The evaluation also raises questions as to whether the sectoral scope of the Directive is appropriate given the stated aims of the Directive. Moreover, there was a lack of consensus concerning whether the Directive has in fact achieved its overall aims, namely the achievement of a higher level of protection of CIs across Member States.

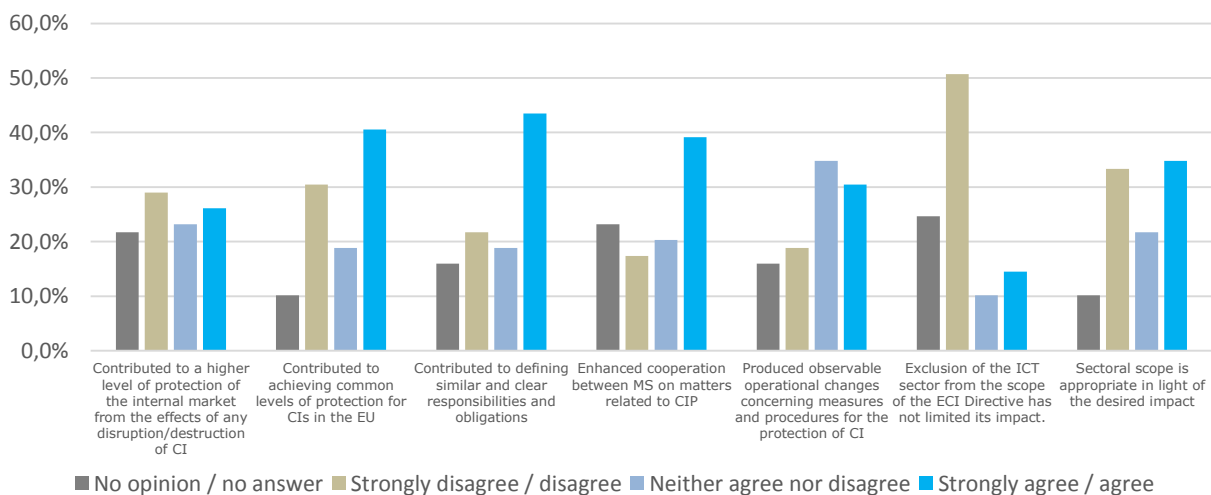


Figure 4: Effects of the ECI Directive⁹¹

In gauging perceptions concerning the relevance of the Directive, the respondents were asked to what extent the provisions of the Directive are still relevant and needed in order to ensure a common level of protection of energy and transport CI across the EU. The responses (in the figure below) reveal a range of divergent views between different stakeholder groups. While EU citizens tended to consider the Directive relevant in both the energy and transport sectors, public authorities saw it being more relevant in the energy sector than the transport sector.

⁹⁰ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

⁹¹ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

This sentiment also prevailed amongst industry stakeholders and academic/think tank representatives. Non-governmental organisations, meanwhile, tended to take a more balanced view of the relevance of the Directive in relation to the two sectors.

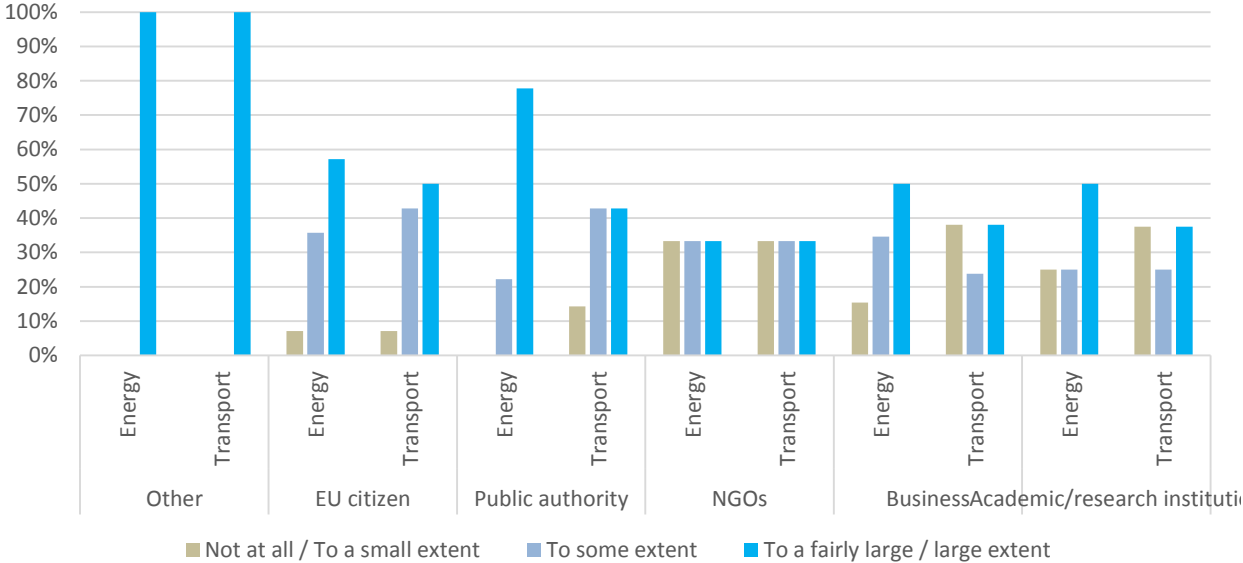


Figure 5: Continued relevance of the ECI Directive⁹²

As for the coherence of the Directive with other sectoral legislation, the results of the public consultation revealed that the majority of respondents did not have particularly strong views one way or the other. Generally speaking, stakeholders saw the greatest level of coherence with other pieces of legislation in the energy sector, and less coherence with measures in the banking, healthcare, drinking water/food supply, space and land-based digital infrastructure sectors. In the case of the transport sector specifically, more stakeholders responded that the Directive is not coherent with other sectoral legislation than responded that it is at least somewhat coherent.

⁹² EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

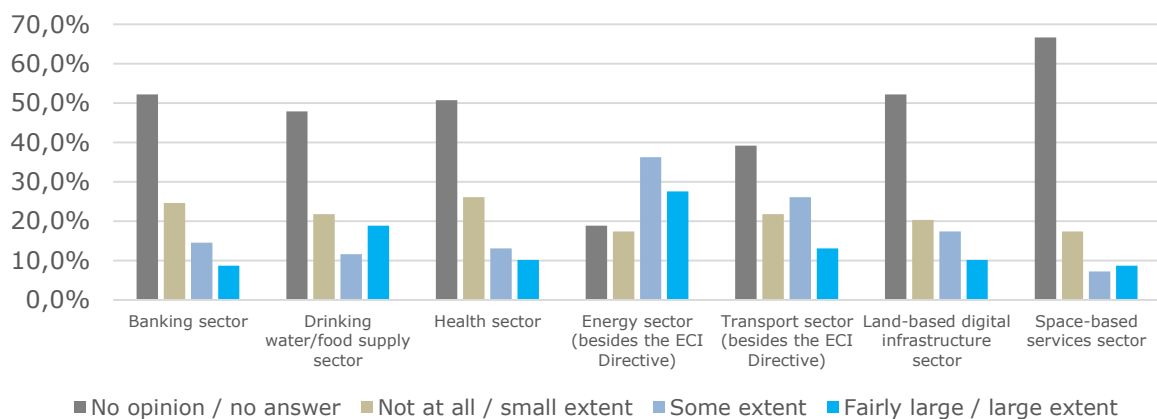


Figure 6: Coherence of the ECI Directive⁹³

As mentioned earlier, two ad hoc submissions were made to the public consultation, one by a ministry at Member States level and the other by a European association of private security operators. In both instances, the focus was largely forward-looking and not on the implementation of the Directive between 2008 and the present day. In brief, the analysis of these submissions revealed that at least one Member State holds that the current scope of the Directive (limited to ECI) is appropriate and any expansion of the scope to include national critical infrastructure would not be warranted. This view is in contrast to that of the European association, which sees a need for further integration and harmonisation of CIP standards and practices across the Union.

5. CONCLUSIONS BASED ON THE OUTCOMES OF THE CONSULTATIONS

The overall objective of the study was to evaluate the implementation of Council Directive 2008/114 on the identification and designation of ECIs and the assessment of the need to improve their protection. The consultation processes described above revealed a wide range of stakeholder views regarding the implementation of the Directive in terms of what has worked well and what has worked less well.

The preponderance of evidence indicates that there is a need to update the Directive, making it more streamlined and more system-focused rather than asset-focused (in the spirit of the NIS Directive). Meanwhile, the focus should be one that includes elements of both protection and resilience in order to ensure that CI are able to quickly ‘bounce back’ in the face of disruption. The consultations with stakeholders clearly indicate that the option to revise the Directive is preferable to other solutions, including repealing the Directive and replacing it solely with regional cooperation or other ‘soft law’ approaches.

6. FEEDBACK TO STAKEHOLDERS

The Commission is involved in a number of activities aimed at providing feedback to the stakeholders that were consulted as part of the evaluation. One of the primary target groups is the CIP PoC group, which convened on 4 April 2019. During the meeting, the contractor responsible for carrying out the external study provided a summary of their findings, to which the Member States were offered the opportunity to respond. Similar presentations may be made for other contact groups organised by other Directorates-General within the

⁹³ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

Commission, as well as the relevant European associations. Furthermore, a Summary Report of the responses to the public consultation will be published on the Commission's website.

ANNEX III: METHODS AND ANALYTICAL TOOLS

In this annex, the methods and sources that were drawn upon in carrying out the evaluation are described, as well as the limitations that were encountered.

1. METHODS AND SOURCES

The stated aim of the Directive is to increase the critical infrastructure protection capability in Europe and to help reduce vulnerabilities to critical infrastructure. In order to determine whether the outputs and outcomes as part of the intervention logic in fact correspond to the stated aim, the baseline situation prior to 2008 was compared with the implementation state of play at the time that the evaluation was carried out.

A range of methodological tools and techniques were included in the analytical framework that was developed during the preparatory phase of the study. This contained both desk and field research involving interviews, online surveys, workshops, and case studies targeting a wide range of stakeholders. The contractor also made use of the results of the public consultation, which was open from 19 November 2018 until 11 February 2019, and which is described in particular detail in the Synopsis Report in Annex II.

1.1 DESK RESEARCH

The evaluation drew on different types of documents at EU, international and national level, respectively, that were reviewed during the desk research phase of the external study. Documents at the EU level provided indications as to the nature and scope of EU policy in the field of CIP. Particular attention was paid to relevant legislation and other initiatives in the sectors covered by the Directive (energy and transport) as well as other sectors beyond the scope of the Directive but which were mentioned by stakeholders as salient for one reason or another. At international level, the contractor reviewed documents describing international standards and initiatives relating to the protection of CI.⁹⁴ Finally, at the national level, national legislative measures, strategies, administrative procedures and guidelines that in one way or another were relevant in transposing and implementing the provisions of the Directive were of particular relevance. Drawing on evidence from the 2012 review of the Directive,⁹⁵ the contractor conducted an in-depth analysis of national implementation measures with the aim of filling existing gaps in the empirical record and updating the 2012 overview with any new information describing developments between 2012 and when the evaluation at hand was launched.

Information concerning implementation of the Directive and that state of existing CIP frameworks at the national level was collated in a set of so-called implementation tables, one per Member State (available in Annex II of the external study). Upon completion by the contractor, the implementation tables were subject to a round of validation involving the CIP PoCs, of which 24 responded. This additional validation exercise was carried out in order to mitigate the effects of some of the limitations encountered in the study and was not initially planned. In the case of those Member States that did not respond to the contractor's request for validation support, the implementation tables solely reflect the results of the contractor's desk research.

⁹⁴ EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I provides an overview of the documents consulted at the EU and international level.

⁹⁵ Booz & Company GmbH. (2012). Study to support the preparation of the review of the Council Directive 2008/114/EC on the identification and designation of European critical infrastructures (ECI) and the assessment of the need to improve their protection.

The implementation tables made it possible to assess how and to what extent the Member States had implemented the Directive and, where possible, the degree to which these measures led to an improvement of the protection of CIs. The subsequent analysis entailed the in-depth study of national implementation measures reported by the Member States to the Commission (available via the EUR-Lex portal⁹⁶).

In a slight deviation from the analytical framework that was initially proposed to the Commission, the scope of the analysis (and thus the contours of the desk research) was extended to include normative changes after 2012 that affected the implementation of the Directive at national level. Specifically, the analysis took into account any additional CIP-relevant actions (revisions to existing measures, new measures, the publication of guidelines, etc.) that might provide indications as how the Directive was implemented in the interim years (2012-2018).

1.2 FIELD RESEARCH

Generally speaking, much of the desk research described above was completed prior to the start of the field research, and, indeed, served to inform the refinement of the scope and specific content of the questions that were posed in the context of a range of consultation activities, which included interviews, online surveys, workshops and case studies. In total, 147 stakeholders at EU and Member State level⁹⁷ were consulted using these instruments. An additional 69 stakeholders took part in the public consultation, which the Commission organised on its web platform.⁹⁸

At the EU level, 27 interviews with representatives from Commission, the European External Action Service (EEAS) and EU Agencies, as well as European associations of CI owners/operators were carried out.

All but four Member States⁹⁹ opted to be consulted as part of the study. Consultations with participating Member States were carried out in a number of ways, including through an online survey targeting CIP PoCs, other national competent authorities and CI owners/operators. This survey was used to collect information on the implementation of the Directive. Consultations were also carried out in the context of workshops (one with CIP PoCs/competent authorities and one with CI owners/operators) organised in Brussels on 13-14 November 2018. Furthermore, four case studies were carried out with the purpose of collecting first-hand information on the implementation of the Directive in different Member States (DK, ES, FR, SK). Each case study consisted of approximately six interviews per Member State and involved the CIP PoC, other national competent authorities and CI owners/operators. The CIP PoC were consulted during February-March 2019 in order to validate the draft findings of the external study.

Moreover, ten experts working in academia and/or think tanks were interviewed.

As mentioned above, the Commission organised an internet-based public consultation on the Directive. The consultation targeted all citizens in their personal or professional capacities, as well as all non-government/public/private organisations/entities with an interest in the Directive specifically and the field of critical infrastructure protection more generally. The Commission suggested at the time that particularly interested parties might include competent

⁹⁶ <https://eur-lex.europa.eu>

⁹⁷ This number does not include the individuals/organisations that participated in the public consultation.

⁹⁸ This included two ad hoc submissions, one by Estonian Ministry of the Interior and the other by the European Organisation for Security (EOS).

⁹⁹ CY, IE, LT and UK.

government authorities at state, regional and local level, critical infrastructure operators and other relevant industry stakeholders.

The public consultation was launched on 19 November 2018 on the European Commission's website¹⁰⁰ and lasted for 12 weeks, ending on 11 February 2019. The questionnaire consisted of 12 mainly closed questions related to the current and future threats facing CI, the Directive, and its implementation by the Member States. A limited number of open questions were also included in order to allow respondents the opportunity to clarify their answers or to make comments of a more general nature.¹⁰¹

Additional information concerning the stakeholder consultation process using the various data collection tools described above is provided in Annex II.

2. LIMITATIONS

2.1 LIMITATIONS RELATED TO THE BASELINE SITUATION

The baseline situation before 2008 was not fully known. While some information concerning national-level CIP measures was available prior to the Directive coming into force, it was not possible to identify any single comprehensive analysis that would have permitted a systematic comparison between the pre-2008 situation and the situation at the point at which the evaluation was launched. In order to address this limitation, efforts were made to partially reconstruct the pre-Directive situation based on the CIP PoCs' responses to certain questions included in the online survey. These responses were then triangulated with information collected through both the desk research and the case studies, thereby allowing for the identification of the existence of the elements included in the Directive in specific national CIP frameworks prior to its adoption.

2.2 OTHER LIMITATIONS

The list that follows provides an overview of other limitations that were identified over the course of the study, accompanied by a description of the solutions that were devised in order to mitigate them:

- *Fragmentation of information/difficulties identifying specific national measures related to the implementation of the Directive.* It is clear that the different Member States pursued different approaches in implementing the Directive. In some instances, national legislatures adopted new legislation or amended existing legislation in order to bring national CIP frameworks in line with the requirements of the Directive. In other instances, Member States chose to implement the Directive through administrative measures. In both cases, however, the transposition notifications provided by the Member States to the Commission did not always clearly indicate how Directive transposition has been accomplished. This made it difficult to identify all relevant information within the time and budget constraints of the external study.

Solution: The overview of implementation at national level contained in the 2012 review of the Directive¹⁰² was used as an initial source of information describing transposition in the different Member States. This overview was updated on the basis

¹⁰⁰ The public consultation was published at the following web address: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-1378074/public-consultation_en.

¹⁰¹ The questionnaire that was used is provided in full in EY (2019). Evaluation study of Council Directive 2008/114 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection, Annex I.

¹⁰² Booz & Company GmbH. (2012). Study to support the preparation of the review of the Council Directive 2008/114/EC on the identification and designation of European critical infrastructures (ECI) and the assessment of the need to improve their protection.

of data collected over the course of the evaluation. Moreover, sources that were identified through the desk research were triangulated and integrated with sources and inputs gathered from the national CIP PoCs via the online survey and ad hoc queries facilitated by the Commission.

- *Some information relating to the implementation of the Directive was not available through desk research.* Such information, which is typically not compiled in available documentation, included: criteria and related thresholds used by Member States to assess the risks associated with the disruption/destruction of CI; channels used by Member States to conduct bilateral/multilateral discussions on ECI identification/designation; the content of the OSPs maintained by CI operators; and/or the nature of the inspections/controls performed by national competent authorities. Without access to this type of information, the analysis of the implementation of the Directive's provisions relied chiefly on stakeholder feedback, thus leaving limited scope for triangulation of evidence.

Solution: The results of the desk research were summarised in the implementation tables that were shared with all PoCs for validation (see above). A total of 24 Member States¹⁰³ responded to this request. All additional data that was received through this validation exercise was integrated into the finalised tables so as to provide a more complete picture of implementation at national level. The subsequent case studies made it possible to achieve an even greater level of detail concerning implementation in a smaller number of Member States. Though the Member States were precluded from sharing sensitive information, the interviews that took place within the context of the case studies provided a better understanding of national implementation practices in different national contexts.

- *The current level of CIP is the result of the co-existence of several instruments.* At the EU level, these include the Directive, other pillars of the Programme, and other sectoral and cross-sectoral security measures. At the national level, these include measures aimed at implementing EU instruments as well as other national initiatives relevant in a CIP context. The co-existence of EU and national-level instruments made it difficult to isolate the contribution of the Directive specifically. Furthermore, the external study found that there is comparatively little documentation concerning the results achieved by other measures in relation to the protection of CI (e.g. evaluations, fitness checks of sectoral legislation); the little information that could be found is fragmented in nature. Finally, the implementation of the Directive on the part of the Member States is in large part determined by the nature of national arrangements. However, the narrow scope of the study, which was limited to the implementation of the Directive specifically, meant that information on national CIP frameworks was not collected on a systematic basis as part of either the desk research or field research components of the external study.

Solution: The scope of the analysis of specifically the coherence of the Directive was widened in order to better understand the relationship between the Directive and other existing measures. At EU level, this entailed focusing on various pieces of sectoral EU legislation with CIP-relevant elements, the aim being to identify areas of overlap, duplication and/or potential synergy. At the national level, the analysis relied exclusively on stakeholder feedback collected through the online survey and the case studies. The findings from the analysis at EU level were used to guide the

¹⁰³ AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, EL, HR, HU, IT, LU, LV, MT, NL, PL, PT, RO, SI, SK, SE.

consultations with national-level stakeholders. In so doing, it was possible to identify areas of particular overlap between different European measures and to what extent they were of concern to national stakeholders. In so doing, it was possible to conduct a qualitative assessment as to any causal linkages that exist between the implementation of the Directive and the current level of protection of CI vis-à-vis the Member States.

- *The identities of specific ECI are not known, as this information is sensitive.* The fact that this information is classified made it impossible to distinguish between operators of national CI and operators of designated ECI. As a result, the analysis of the results and costs associated with the Directive's implementation was a complex undertaking. For instance, the consultations with operators were carried out without knowing whether their responses were based on actual experiences in operating ECI or rather simply informed opinions on the matter more generally. The inability to identify ECI also limited the usefulness of triangulating different forms of information, some of which were likely only based on stakeholders' opinions.

Solution: This challenge was recognised at an early stage, and the contractor took immediate steps to minimise the potential methodological consequences it could have for the study. For instance, the relevant survey/interview questions developed by the contractor were centred around a number of hypothetical scenarios involving ECI that the respondents were asked to provide views on. Moreover, evidence from Member States with a large number of designated ECI was compared with evidence from Member States with a small number of (or no) designated ECI in order to understand to what extent the Directive was implemented differently in different Member States with different levels of ECI representation. Both the workshops and case studies provided opportunities to confirm the existence and nature of the costs related to the Directive that were identified during other phases of the evaluation.

Despite these limitations, many of which stemmed from the sensitive nature of the subject matter, different solutions were devised that ensured that the data that was collected was satisfactory in terms of quality, quantity and breadth of representation from different categories of stakeholders and, thus, could be used to draw methodologically robust conclusions. Besides a number of methodological workarounds that were described above, different stakeholders (but especially the CIP PoCs) were engaged in validating certain data that was collected over the course of the study (e.g. the implementation tables).

ANNEX IV: EVALUATION CRITERIA AND QUESTIONS

In accordance with the Commission's Better Regulation Guidelines, the evaluation's overall objective was to assess the relevance, coherence, effectiveness, efficiency, EU added value and sustainability of the Directive as applied in all 28 Member States. In achieving this objective, a number of specific evaluation questions and sub-questions related to the different evaluation criteria were developed and appear below.

Evaluation Question 1 on relevance: *To what extent is the Directive relevant in view of current and future needs/challenges?*

- To what extent are the definitions set out in the Directive still deemed to be suitable and fit for purpose?
 - To what extent is the notion of critical infrastructure/European critical infrastructure as defined in the Directive appropriate in light of contextual changes and the needs of stakeholders?
 - To what extent does the definition of critical infrastructure provided in the Directive fit with the sectors that is applied to?
- To what extent do the scope, set of objectives, but also the formal means of implementation set out in the Directive correspond to the current and possible future threats facing critical infrastructure?
- Is the Directive suitable to the needs/interests of the relevant industries and other stakeholders?
- To what extent does the Directive contribute to stated EU priorities?
- Are there provisions contained in the Directive that might be considered obsolete?
- How well-adapted is the Directive to the various technological/scientific, economic, social, political and environmental advances that have occurred since it was passed?

Evaluation Question 2 on coherence: *To what extent the Directive is coherent and complementary to other relevant policy interventions at Member State, EU, and international level?*

- To what extent the Directive is coherent and complementary to other policy interventions with similar objectives at Member State level?
- To what extent the Directive is coherent and complementary to other policy interventions with similar objectives at EU and international levels?
- To what extent are there synergies, inconsistencies, gaps or overlaps between existing EU legislative framework and the respective legislative frameworks that exist at the Member State level?

Evaluation Question 3 on effectiveness: *To what extent has the Directive been effective in delivering intended results?*

- To what extent has the Directive achieved the stated objectives?
- To what extent can any observable achievements regarding the enhanced security of CI be attributed directly to the Directive, or rather to other developments (i.e. the introduction of other instruments, actions at the Member State level, on the part of operators, etc.), linked to, or independent, from the Directive?
- To what extent, if at all, has the Directive impacted on the protection of CI at the Member State level that was not designated as ECI during the reference period?
- Are there any factors that limit the effectiveness of the Directive? If so, what are these, where do they stem from, and which stakeholders do they involve?

Evaluation Question 4 on efficiency: *To what extent the Directive has achieved intended results in the most efficient manner?*

- Have the results that can be attributed to the Directive been achieved at a reasonable cost? Is the regulatory burden on Member States, industry and other relevant stakeholders created by the implementation of the Directive (i.e. specific requirements/procedures) commensurate with observable results?
- What factors have influenced the efficiency of the Directive? To what extent?

Evaluation Question 5 on EU added value: *To what extent has the Directive achieved EU added value as opposed to what could have been achieved at either the national or the international level?*

Evaluation Question 6 on sustainability: *Are the effects already achieved on account of the Directive likely to be long-lasting, if the Directive were repealed?*