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# Public consultation on draft BEREC Report on the authorisation-related framework for international connectivity infrastructures

Practical details of the public consultation
The public consultation will run from **14 December 2023** until **31 January 2024**.
All stakeholders are invited to submit their contributions here below or to ***PC_authorisation_ICI@distro.berec.europa.eu*** (in case you are facing any difficulties with the platform).
Contributions should be sent preferably in English and, in order to facilitate processing of the responses, the comments provided should clearly refer to the certain paragraphs/guideline of the document.
We strongly encourage all stakeholders to submit their contributions as early as possible. Contributions received after the above mentioned deadline will not be taken into account.
In accordance with the BEREC policy on public consultations, BEREC will publish a summary of all received contributions, respecting confidentiality requests. Any such requests should clearly indicate which information is considered confidential and be accompanied by a non-confidential version.

## Draft BEREC Report on the general authorisation and related frameworks for international submarine connectivity

**Executive summary**
a) Submarine cable systems
Submarine cable systems depend on a composite value chain involving a number of different activities, including, in addition to the operation itself and in a sequential order, the prior survey of the deployment route, the supply of the cable, its installation between landing points and, once in service, its maintenance.
Traditionally, submarine cable systems have been mostly owned and operated by electronic communications networks and services (ECNS) providers, which manage their investments to ensure the international capacity needed to support their retail national businesses and to sell capacity to third parties at wholesale and/or retail level, including to content and application providers.
In the last decade, however, content and application providers became major submarine cable owners. In addition to buying capacity from ECNS providers, content and application providers are increasingly investing in their own submarine cable systems, focusing not on the traditional city-to-city connections, but instead on connecting their own data centres.
The growth of investments in international submarine cable systems has been accompanied by important technological advancements, which enabled the emergence of open submarine cables and open landing stations, allowing the choice of submarine cable, of landing terminal equipment and of backhaul connection from multiple providers and the independent operation of each fibre pair through its exclusive landing terminal equipment, which can be located at the landing station or in a data centre or a point of presence inland.

As a result of these recent trends, the ownership structures of submarine cable systems have undergone a profound transformation, where the single ownership structures are becoming predominant, also as a result of the emergence of content and application providers as major investors.

b) The electronic communications regulatory framework

The scope of application of the ECNS regulatory framework, as established at the European Union level by the national legislations transposing the European Electronic Communications Code (EECC), is essentially determined by the definitions of electronic communications networks (ECN) and electronic communications services (ECS). National regulatory frameworks must be applicable whenever any given activity is deemed as a provision of an ECN or an ECS.

The definitions of public ECN and publicly available ECS are crucial for determining the regime applicable to each network or service, as most of the rights and obligations set out in the EECC apply solely to public ECN and to publicly available ECS. However, and despite its relevance, the EECC does not provide a definition of publicly available ECS and, at national level, there is currently no robust harmonisation in the definition – where it exists – and the interpretation of what qualifies as a publicly available ECS.

In this context and without prejudice to a case-by-case analysis, the following preliminary conclusions can be drawn:

Any undertaking providing services exclusively related to survey, to production and supply or to installation of cables, in that quality, is not directly subject to the ECNS regulatory framework; Any undertaking providing services exclusively related to cable maintenance, in that quality, is also not directly subject to the ECNS regulatory framework; Considering that the ownership of an ECN is merely an indication but not a requirement in determining the provision of such a network, there can be an undertaking providing ECNS without owning the network itself.

Starting from these preliminary conclusions, the focus is, in what concerns a given submarine cable system, on assessing the activities that may be classified as the provision of an ECN or an ECS, on identifying the undertaking responsible for that provision and on determining whether or not the ECS is to be classified as publicly available and, subsequently, whether the ECN is to be classified as public, in order to determine to what extent ECNS national legislations apply to such a provision.

The majority of the NRAs responding to a survey carried out for the purpose of this report (Survey) would consider that there is a provision of ECNS when a submarine cable with a landing point in the country is operated to provide capacity to users in that country, including to undertakings that subsequently provide ECNS based on that capacity to other users in the country.

This would probably encompass the traditional business models in which submarine cable systems are operated by ECNS providers to ensure the international capacity needed to support their retail national business and to sell capacity to third parties at wholesale and/or retail level. Without prejudice to a case-by-case analysis, these cases would probably be qualified as public ECN and/or publicly available ECS.

However, submarine cable systems operated by content and application providers connecting their data centres to exploit the capacity exclusively for their own use, without prejudice to a case-by-case analysis, could be qualified as non-public ECN and/or a non-publicly available ECS.

Some responding NRAs do not consider the ECNS national legislation applicable to the mere transit of traffic exclusively within the landing station or with resource to backhaul services for the purposes of providing capacity to users outside the country, based on the understanding that such an activity, even if classified as a provision of ECNS, does not occur within their own national territory.

According to the results of the Survey, most of the responding NRAs from non-landlocked countries confirmed they have no overall experience in submarine cable systems, while only a few have some specific experience arising from prior notification and registry and the fields of installation of facilities, access and interconnection, security of networks and services and fees and charges.

However, according to the results of the Survey, responding NRAs confirmed that the majority of the provisions in their national legislations on these topics do not apply to undertakings providing non-public ECN and non-publicly available ECS.

c) Related authorisation administrative procedures

Notwithstanding the fact that Europe is considered by private stakeholders as a global reference for regulatory issues, the deployment of submarine cable systems depends on the compliance with a significant number of national authorisation administrative procedures, in fields beyond the ECNS sector, including environmental protection, cultural heritage protection, maritime resources planning and management and urban and territory planning and management.

According to the results of the Survey, the total average duration of all related authorisation administrative procedures required for a new international submarine cable with a landing point varies extensively and can exceed one year.

d) European and national measures

The European institutions have been developing a range of strategies and programmes to increase their commitment to critical infrastructures and to mobilise funding for digital networks not only in the European Union, but also across the globe. Among those, the EU Global Gateway, the Connecting Europe Facility and the European Data Gateways should be highlighted.

Regarding authorisation administrative procedures, no evidence has been found for international mechanisms or services, including points of contact at European level, available for stakeholders interested in landing a submarine cable system in more than one country.

National measures to promote the development of international submarine connectivity have included: The adoption of legal and administrative measures, such as launching public consultations, adopting national strategies, developing online portals for interested parties, laying down adapted and simplified licensing regimes and opening sea and land corridors for the installation of cables; The improvement of the institutional capacity in relation to authorisation administrative procedures on the deployment of submarine cable systems by means of the creation of single points of contact for any interested parties and/or of national cooperation mechanisms between competent authorities; The granting of public financial support for the introduction of new international submarine cable systems.

In the field of security and apart from designing specific legal requirements and ensuring compliance by operators of submarine cable systems, countries may implement additional measures for the purposes of reinforcing their protection and security, such as those identified by ENISA as a good practice in its July 2023 report “Subsea cables – What is at stake?”:

Ensure the geographic diversity of routes and landings, to avoid single points of failure; Ensure spatial separation of submarine cable systems from other maritime activities, regularly update nautical maps and charts and designate submarine cable protection zones, to avoid cable incidents; Establish annual pre-clearance procedures, avoid cabotage or crewing restrictions and establish a single point of contact for permitting and handling any issue arising around submarine cable installation, repair and maintenance, to avoid delays; Establish surface surveillance of civil maritime activities and enhance submarine surveillance, to enhance prevention and to gain threat intelligence.

**Please comment:**

Amazon Web Services (AWS) thanks BEREC for the opportunity to provide input to this consultation.

As of January 2024, AWS cloud infrastructure in the EU includes 18 Availability Zones within 6 AWS Regions, 4 Local Zones, 3 Wavelength Zones for ultralow latency applications and more than 120 points of presence of AWS content distribution network. AWS has also announced plans to launch the AWS European Sovereign Cloud, a new, independent cloud for Europe, designed to help public sector organizations and customers in highly regulated industries meet their evolving sovereignty needs.

Between 2017 and 2022, AWS alone invested in Europe more than €21 billion in cloud and edge infrastructure (direct capital and operational). This figure does not include investments in research and development, and marketing and sales expenses.

AWS relies on subsea and terrestrial systems to maintain connectivity between AWS Regions, and between AWS data centres within a Region. AWS regularly invests in new subsea routes to ensure our customers' experience is stable, and to ensure a low latency and high availability connectivity when using the AWS backbone network.

**1. Introduction**

The Ministerial European Data Gateways Declaration, adopted by most European Union Member States in March 2021, highlights the fact that Europe's digital sovereignty and global competitiveness depend on strong and secure internal and external connectivity and that leveraging both dimensions is a precondition for the European Union to become «the most attractive, most secure and most dynamic data-agile economy in the world».
With this report, BEREC aims to clarify the general authorisation and related frameworks applicable to international submarine connectivity and to identify possible solutions to promote investment in this sector and to strengthen the European Union's geostrategic position.
For this purpose, this report:
Briefly describes the activities involved in the deployment and operation of submarine cable systems (Part 2); Outlines the applicability of the electronic communications regulatory framework to international submarine cable systems and the powers and experience of national regulatory authorities in this field (Part 3); Identifies other national administrative authorisation procedures applicable to international submarine cable systems (Part 4); Gathers information on initiatives taken at European and national level to promote international submarine connectivity (Part 5).
For the purposes of this report, BEREC circulated two questionnaires among its members on 5 April and 9 October 2023 («Survey») and received responses from a total of 24 members. It should be noted, however, that some countries did not respond to all questions and therefore the figures presented in this report regarding the results of the Survey vary from topic to topic.
BEREC also organised:
On 21 September 2023, a virtual workshop on international submarine connectivity in the European Union, where private stakeholders shared their views on the current state of play of the international submarine connectivity business in the European Union, with a focus on the dynamics following the entry of new actors, the challenges faced in the installation and operation of submarine cables and the expectations regarding the evolution of the European and national regulatory framework, institutional organisation and public policies in this area[1]; On 4 October 2023, in Funchal (Madeira), Portugal, an internal workshop on international connectivity during the biennial four-lateral summit between BEREC, the Eastern Partnership Electronic Communications Regulators Network (EaPeReg), the European Mediterranean Regulators Group (EMERG) and the Latin American Forum of Telecommunications Regulators (REGULATEL)[2].As recently emphasized in BERECs Action Plan 2030[3] BEREC continues to put an emphasis on the promotion of national and international connectivity to reach the objectives of Europe's Digital Decade by 2030. This report therefore is part of BEREC's continued effort to contribute to a better understanding of all issues involved in the international connectivity field, including BEREC Report on the Internet Ecosystem, published in 2022[4]. Related workstreams include, in 2024, a report on the entry of large content and application providers into the markets for electronic communications networks and services[5], a report on the IP interconnection ecosystem[6], a report on BEREC's support in reinforcing European Union's

cybersecurity capabilities[7] and an external workshop about the usage of satellite technologies in mobile communications[8].

[1] See the news published here.
[2] See the news published here.
[3] BEREC Action Plan for 2030 (BoR (23) 48), of 9 March 2023, available here.
[4] BEREC Report on Internet Ecosystem (BoR (22) 167), of 8 December 2022, available here.
[5] See Section 2.5 of the Draft BEREC Work Programme 2024 (BoR (23) 176), of 5 October 2023 available here.
[6] See Section 2.4 of the Draft BEREC Work Programme 2024 (BoR (23) 176), of 5 October 2023 available here.
[7] See Section 1.8 of the BEREC Work Programme 2023 (BoR (22) 193), of 12 December 2022 available here.
[8] See Section 1.12 of the Draft BEREC Work Programme 2024 (BoR (23) 176), of 5 October 2023 available here.

**Please comment:**

## 2. Submarine cable systems

### 2.1. Activities

Submarine cable systems depend on a composite value chain involving a number of different activities, including, in addition to the operation itself and in a sequential order, the prior survey of the deployment route (Subsection 2.1.1), the supply of the cable (Subsection 2.1.2), its installation between landing points (Subsection 2.1.3) and, once in service, its maintenance (Subsection 2.1.4).

#### 2.1.1. Survey

Prior to the installation of submarine cables, surveyors provide services related to an assessment of the proposed route and the feasibility of the cable installation, by evaluating the seabed conditions, the depth profiles, any existing infrastructure or potential hazards and risks of cable damage during installation and throughout the cable's lifespan, to ensure the cable can be safely deployed on the best route between its landing locations.

The number of surveyors acting globally is small. According to SubTel Forum, between 2019 and 2023, Alcatel Submarine Networks (ASN), EGS Group, Fugro and Elettra were the major players in the market, the four combined being responsible for the provision of surveying services in around 82% of new systems [1].

#### 2.1.2. Supply

Cable suppliers produce submarine fibre-optic cables and provide them to installers.

The number of cable suppliers is also small. According to SubTel Forum, the major global players in terms of number of systems are ASN, SubCom, NEC Corporation and HMN Technologies. Together, these four major players represented around 72% of new systems between 2019 and 2023 and are expected to supply around 73% of planned systems between 2024 and 2027. In terms of kilometres of cable produced between 2019 and 2023, these four players have been joined by Elettra, which is also part of the top five suppliers by number of planned systems between 2024 and 2027[2].

#### 2.1.3. Installation

Cable installers deploy submarine cables from a cable-laying vessel onto the seabed, along the route predetermined by surveyors, and implement measures to protect the installed cable from potential risks and hazards.
The global fleet of cable ships amounts to 69 units, around 54% of which are owned by five major market players: SubCom, Orange Marine, ASN, Global Marine Systems Limited and Optic Marine[3]. In terms of installations between 2019 and 2023, ASN, Orange, SubCom, HMN Technologies, NEC Corporation and Elettra were responsible for around 68% of new systems installed[4].

#### 2.1.4. Maintenance

Maintenance of submarine cables is provided through dedicated vessels and includes routine inspections to identify any damage, repair tasks to restore the cable's functionality and, when necessary, ensure cable replacement and its decommission when it becomes materially, functionally or economically obsolete.
Maintenance services are provided under private agreements (on a bilateral basis between the cable owner and the service provider) or club agreements (between the service provider and all participating cable owners)[5]. The major maintenance service providers globally are Orange Marine, SubCom and ASN[6].

### 2.2. Ownership and operation

#### 2.2.1. Recent business trends

Traditionally, submarine cable systems have been mostly owned and operated by electronic communications networks and services (ECNS) providers, which manage their investments to ensure the international capacity needed to support their retail national businesses and to sell capacity to third parties at wholesale and/or retail level, including to content and application providers.
In the last decade, however, content and application providers became major submarine cable owners[7]. In addition to buying capacity from electronic communications networks and services providers, content and application providers are increasingly investing in their own submarine cable systems for the following main reasons:
The increase in the use of data intensive applications, services and technologies, which rely on data centres located in various parts of the world to store and manage the massive amount of data; The growing need for additional bandwidth to ensure consistent connectivity and quality-of-service, which made content and application providers the largest users of international capacity and outstripped the available supply; The need to ensure a greater control over the assets, to minimize the risks associated with relying on shared or public networks, such as congestion or disruptions in service, and to allow them to easily increase capacity by activation of additional bandwidth.
As owners of submarine cable systems, content and application providers are not focused on the traditional city-to-city connections, but instead on connecting their own data centres, prioritising locations that minimize their operational expenses[8] and reducing their dependency on terrestrial connectivity[9].
Between 2019 and 2023, hyperscalers were the driving force behind 23,5% of the total number of submarine cable systems that went into service[10]. Between 2024 and 2028, 14% of planned systems are expected to be driven by hyperscalers, a figure that may rise considering that systems backed by these actors have a significantly higher likelihood of reaching implementation[11].
In 2020 and among the 61 owners of all European Union connected active cables, the seven major owners already included two content and application providers: in order, Tata Communications, Telxius, Google, Meta, Verizon, Telecom Egypt and Global Cloud Xchange[12].

#### 2.2.2. Recent technological trends

The growth of investments in international submarine cable systems, mostly by content and application providers, has been accompanied by important technological advancements, which enabled the emergence of:
Open submarine cables, which allow the choice of different landing terminal equipment for each fibre pair, unlike previous end-to-end systems; Open landing stations, which allow the choice of submarine cable, of landing terminal equipment and of backhaul connection from multiple providers.

Through these advancements, each fibre pair in a submarine cable system can now be operated independently through its exclusive landing terminal equipment, which can be located at the landing station or in a data centre or a point of presence inland.
Also as a result of technological advancements, the design capacity of submarine cables has grown, reaching capacities 25 times higher in 2020 than in 2005 and including an increasing number of fibre pairs in a single cable, which reached an average of 18 pairs in 2021[13].
Apart from the outstanding growth in capacity, some innovative solutions are being tested that may add new functionalities in addition to the traditional communications purpose, particularly allowing the collection and transmission of real-time oceanic data and providing early warnings in case of earthquakes and tsunamis, resulting in the now called SMART (Scientific Monitoring And Reliable Telecommunication) cables.

**2.2.3. Ownership and operation structures**

In a general overview, ownership and operation structures fall into the following main categories:
Single ownership; Single ownership with partnerships; Multiple ownership, based on capacity sharing or on fibre pairs repartition.
As a result of the recent trends described in Subsection 2.2.1, the ownership structures of submarine cable systems have undergone a profound transformation, where the single ownership structures are becoming predominant, also as a result of the emergence of content and application providers as major investors[14].

[1] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 73 et seq., available here.
[2] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 68 et seq., available here.
[3] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 92 et seq., available here.
[4] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 71 et seq., available here.
[5] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 86 et seq., available here.
[6] European Commission, Study to Monitor Connectivity – Connecting the EU to its partners through submarine cables, 2022, page 58, available here.
[7] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 14 and 104 et seq., available here.
[8] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), page 104, available here.
[9] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), page 108, available here.
[10] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), page 104, available here.
[11] Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), page 105, available here.
[12] European Commission, Study to Monitor Connectivity – Connecting the EU to its partners through submarine cables, 2022, page 67, available here.
[13] European Commission, Study to Monitor Connectivity – Connecting the EU to its partners through submarine cables, 2022, page 46, available here.
[14] Submarine Telecoms Forum, 2022/2023 Industry Report, Issue 11 (23 October 2022), page 33, and Submarine Telecoms Forum, 2023/2024 Industry Report, Issue 12 (25 October 2023), pages 14 and 104 et seq., both available here.

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**3. The electronic communications regulatory framework**

The scope of application of the ECNS regulatory framework, as established at the European Union level by the national legislations transposing the European Electronic Communications Code (EECC)[1], is essentially determined by the definitions of «electronic communications networks» (ECN) and «electronic communications services» (ECS). In other words, ECNS national regulatory frameworks must be applicable whenever any given activity is deemed as a provision of an ECN or an ECS.

**3.1. The definition of electronic communications network**

Under Article 2(1) of the EECC, an ECN is defined as follows:

«Transmission systems, whether or not based on a permanent infrastructure or centralised administration capacity, and, where applicable, switching or routing equipment and other resources, including network elements which are not active, which permit the conveyance of signals by wire, radio, optical or other electromagnetic means, including satellite networks, fixed (circuit- and packet-switched, including internet) and mobile networks, electricity cable systems, to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed».

This complex definition comprises two components: one material – a set of resources, which necessarily includes a transmission system – and one functional – a set of resources that permits, and is therefore an essential condition for, the conveyance of signals.

Closely linked is the definition of «provision of an electronic communications network», which, under article 2 (16) of the EECC, means:

«The establishment, operation, control or making available of such a network».

Based on this definition, it may be concluded that the ownership of the network is merely an indication but not a requirement in determining the provision of an ECN, as further confirmed by recital 142 of the EECC, which mentions that «an operator may own the underlying network or facilities or may rent some or all of them».

**3.2. The definition of electronic communications service**

Under Article 2(4) of the EECC, an ECS is defined as follows:

«A service normally provided for remuneration via electronic communications networks, which encompasses, with the exception of services providing, or exercising editorial control over, content transmitted using electronic communications networks and services, the following types of services: (a) ‘internet access service’ as defined in point (2) of the second paragraph of Article 2 of Regulation (EU) 2015 /2120; (b) interpersonal communications service; and (c) services consisting wholly or mainly in the conveyance of signals such as transmission services used for the provision of machine-to-machine services and for broadcasting».

This definition is based on three common components:

A service normally provided for remuneration; A service provided via electronic communications networks; A service that does not include the provision of, nor the exercise of editorial control over content transmitted using electronic communications networks and services.

In what concerns the first component, the term «remuneration» must be interpreted broadly in accordance with the jurisprudence of the European Court of Justice, including any benefit that constitutes consideration for the service, which may or may not be provided by the user to the provider of the service.
Based on these three common components, the definition of electronic communications service then encompasses three types of services:
Internet access service, defined by article 2 of Regulation (EU) 2015/2120 as «a publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used»;
Interpersonal communications service, defined by article 2(5) of EECC as «a service normally provided for remuneration that enables direct interpersonal and interactive exchange of information via electronic communications networks between a finite number of persons, whereby the persons initiating or participating in the communication determine its recipient(s) and does not include services which enable interpersonal and interactive communication merely as a minor ancillary feature that is intrinsically linked to another service»; Services consisting wholly or mainly in the conveyance of signals.
With these three types of services, the EECC has now adopted a hybrid definition of an ECS, which, while maintaining its traditional technical approach – covering «services consisting wholly or mainly in the conveyance of signals», including an Internet access service –, now comprises a new functional approach – covering any service that enables interpersonal communication, whether or not it consists wholly or mainly in the conveyance of signals, as explained in recital 15 of the EECC:
«In order to ensure that end-users and their rights are effectively and equally protected when using functionally equivalent services, a future-oriented definition of electronic communications services should not be purely based on technical parameters but rather build on a functional approach. The scope of necessary regulation should be appropriate to achieve its public interest objectives. While ‘conveyance of signals’ remains an important parameter for determining the services falling into the scope of this Directive, the definition should cover also other services that enable communication. From an end-user’s perspective it is not relevant whether a provider conveys signals itself or whether the communication is delivered via an internet access service».

**3.3. The definitions of public electronic communications network and publicly available electronic communications service**

The definitions of «public electronic communications network» and «publicly available electronic communications service» are crucial for determining the regime applicable to each network or service, as most of the rights and obligations set out in the EECC apply solely to public ECN and to publicly available ECS. In fact, as mentioned in recital 50, «in the case of electronic communications networks and services not provided to the public it is appropriate to impose fewer and lighter conditions, if any, than are justified for electronic communications networks and services provided to the public».
Under article 2(8) of the EECC, a «public electronic communications network» is defined as follows:
«An electronic communications network used wholly or mainly for the provision of publicly available electronic communications services which support the transfer of information between network termination points.»
However, and despite its relevance, including for the definition of public ECN, the EECC does not provide a definition of «publicly available electronic communication service», even if some of its provisions clarify that these are services made available «to the public» (recitals 49, 50, 125, 141, 143, 256 and 281 and articles 15(2) and 43(1)).
According to the BEREC Guidelines on the Implementation of the Open Internet Regulation[2]:
On the one hand (with emphasis added), «electronic communication services or networks that are offered not only to a predetermined group of end-users but in principle to any customer who wants to subscribe to

the service or network should be considered to be publicly available»; On the other hand, «electronic communication services or networks that are offered only to a predetermined group of end-users could be considered to be not publicly available».
At a national level and according to the results of the Survey, 12 (out of 20) responding NRAs confirmed that their national legislations adopted a definition of publicly available ECS. However, the definition is not harmonised: while 4 countries limit that definition, with variations in the phrasing, to the availability to the public, 2 countries add a reference to the market and 3 countries adopt the element of non-restriction of users. In a broader perspective, 3 countries appear to extend the definition of public availability to the provision of services to a third party.
Regarding the 8 (out of 20) responding NRAs that confirmed that their countries have not defined publicly available ECS, the interpretation is not consistent either: while 1 country refers to the BEREC Guidelines on the Implementation of the Open Internet Regulation, 3 countries adopt the element of non-restriction of users. Also in a possibly broader perspective, 1 country tends to extend the definition of public availability to the provision of services to a third party and another only excludes private networks and services, defined as provided exclusively for the own use or interest of their holder.
From another perspective and when asked about the types of services considered as not publicly available, most NRAs refer to self-provision or to private or user-restricted networks and services, while 1 NRA appears to consider as such any network or service that can be adapted to the needs of individual users. Concrete examples provided vary from a company's or a public service's private network to services provided by a taxi association to its drivers and within a community of homeowners.
In conclusion, there is currently no robust harmonisation in the definition – where it exists – and the interpretation of what qualifies as a publicly available ECS.

**3.4. Scope of application**

Given the above, ECNS national legislations should therefore be applicable:
Objectively, to the provision of ECNS, as defined in Chapters 1 and 3.2, within the limits of the territory of each Member State; Subjectively, to the undertaking that is responsible for such provision vis-à-vis its users.
In this regard and among others, the Judgement of the European Court of Justice of 30 April 2014, concerning Case C-475/12 (UPC DTH Sàrl v. Nemzeti Média- és Hírközlési Hatóság Elnökhelyettese) states as follows (with emphasis added):
«(43) In that regard, it must be noted that the fact that the transmission of signals is by means of an infrastructure that does not belong to UPC is of no relevance to the classification of the nature of the service. All that matters in that regard is that UPC is responsible vis-à-vis the end-users for transmission of the signal which ensures that they are supplied with the service to which they have subscribe.
(…)
(100) It must be noted, therefore, that the obligation for undertakings which supply electronic communications services to register those services with the regulatory authorities of the Member State in whose territory those services are supplied is expressly laid down in the Authorisation Directive. Consequently, Article 56 TFEU does not preclude Member States from imposing such an obligation, provided that they act in compliance with the requirements set out in Article 3 of the Authorisation Directive.»

**3.5. Applicability to submarine cable systems**

Based on the definitions described above and without prejudice to a case-by-case analysis, the following preliminary conclusions can be drawn:
First and assuming ECNS national legislations are applicable to the provision of ECNS, in the context of the establishment of a given submarine cable system, any undertaking providing services exclusively related to survey, to production and supply or to installation of cables, in that quality, is not directly subject to that regulatory framework; Second and based on the same assumption, in the context of the establishment and the operation of a given submarine cable system, any undertaking providing services exclusively related to

cable maintenance, in that quality, is also not directly subject to that regulatory framework; Third and considering that the ownership of an ECN is merely an indication but not a requirement in determining the provision of such a network, in the context of the establishment and operation of a given submarine cable system, there can be an undertaking providing ECNS without owning the network itself.
Starting from these preliminary conclusions, the focus is:
First and in what concerns a given submarine cable system, on assessing the activities that may be classified as the provision of an ECN or an ECS, particularly: A provision of an ECN, as defined in article 2 (1) and (16) of the EECC, in particular «the establishment, operation, control or making available» of «transmission systems (…) and other resources, including network elements which are not active, which permit the conveyance of signals by (…) optical (…) means (…)»; A provision of an ECS, as defined in article 2(4)(c) of the EECC, in particular a service « (…) consisting wholly or mainly in the conveyance of signals (…)»; Second and in what concerns each of those activities classified as the provision of an ECN or an ECS, on identifying the undertaking responsible for that provision; Third, on determining whether or not the ECS is to be classified as publicly available and, subsequently, whether the ECN is to be classified as public, in order to determine to what extent ECNS national legislations apply to such a provision.
According to the results of the Survey, the majority of the 20 responding NRAs would consider that there is a provision of ECNS when a submarine cable with a landing point in the country is operated to provide capacity to users in that country, including to undertakings that subsequently provide ECNS based on that capacity to other users in the country.
This would probably encompass the traditional business models in which submarine cable systems are operated by ECNS providers to ensure the international capacity needed to support their retail national business and to sell capacity to third parties at wholesale and/or retail level. Without prejudice to a case-by-case analysis, these cases would probably be qualified as public ECN and/or publicly available ECS, according to the results of the Survey mentioned in Section 3.3.
However, looking back at the recent trends described above in Subsection 2.2.1, submarine cable systems operated by content and application providers connecting their data centres to exploit the capacity exclusively for their own use, without prejudice to a case-by-case analysis, could be qualified as non-public ECN and/or a non-publicly available ECS, also according to the results of the Survey summarised in Section 3.3.
Also, looking back at the ownership and operation structures described in Subsection 2.2.3, it should be noted that, in all scenarios, all activities should be analysed individually, activity by activity, regardless of ownership.
Last, according to the results of the Survey, some NRAs do not consider the ECNS national legislation applicable to the mere transit of traffic exclusively within the landing station or with resource to backhaul services for the purposes of providing capacity to users outside the country, based on the understanding that such an activity, even if classified as a provision of ECNS, does not occur within their own national territory.

**3.6. General authorisation regime: rights and obligations**

According to article 2(22) of the EECC, the general authorisation means (with emphasis added) «a legal framework established by a Member State ensuring rights for the provision of electronic communications networks or services and laying down sector-specific obligations that may apply to all or to specific types of electronic communications networks and services, in accordance with this Directive».
In what concerns the rights and according to article 15(1) and to the other applicable provisions of the EECC, all undertakings subject to the general authorisation regime shall have:
The right to provide ECNS; The right to have their application for the necessary rights to install facilities considered; The right to use radio spectrum in relation to ECNS; The right to have their application for the necessary rights of use for numbering resources considered.

Where such undertakings provide public ECN or publicly available ECS and in accordance with article 15(2) and with the other applicable provisions of the EECC, those undertakings shall have:
The right to negotiate interconnection with and, where applicable, obtain access to, or interconnection from, other providers of public electronic communications networks or publicly available electronic communications services; The right to be given an opportunity to be designated to provide different elements of the universal service or to cover different parts of the national territory.
In what concerns the obligations and according to article 13(1) and (2) and to the other applicable provisions of the EECC, the provision of ECNS and the rights of use for radio spectrum and for numbering resources may be subject only to the conditions listed in Annex I, without prejudice to the specific obligations imposed on undertakings in the subjects of access and interconnection and universal service.
Among these rights and obligations, it is worth to take a closer look at those relating to prior notification and registry, installation of facilities, access and interconnection, security of networks and services and fees and charges to the extent they may be considered applicable to submarine cable systems.
It should be noted that, according to the results of the Survey, 11 (out of 18) responding NRAs from non-landlocked countries confirmed they have no overall experience in submarine cable systems, while only 7 NRAs replied they have some specific experience arising not only from the above mentioned fields, but also from the strategic advice to the Government and the cooperation with competent authorities and other entities.

**3.6.1. Prior notification and registry**

Where national legislation on ECNS applies to submarine cable systems, the provider of ECNS may be subject to prior notification to a competent authority and subsequently be included in a national list of providers.
Article 12(1) of the EECC provides that «Member States shall ensure the freedom to provide electronic communications networks and services» and, «to this end, (…) shall not prevent an undertaking from providing electronic communications networks or services». However, according to its article 12(3) and «where a Member State considers that a notification requirement is justified for undertakings subject to a general authorisation, that Member State may require such undertakings only to submit a notification to the national regulatory or other competent authority. The Member State shall not require such undertakings to obtain an explicit decision or any other administrative act by such authority or by any other authority before exercising the rights derived from the general authorisation. Upon notification, when required, an undertaking may start the activity (…)».
Under this framework and where Member States require notification by providers of ECNS prior the commencement of their activities, such procedural requirement shall be limited to a declaratory notification including nothing more than the information set out in article 12(4) of the EECC, taking into consideration the BEREC Guidelines for the notification template[3]. The collected minimal information allows the competent national authority to keep a national registry of providers of ECNS.
This is despite the requirements for the installation and operation of submarine cable systems set out by national legislation in other sectors different from the ECNS sector, such as environmental protection, cultural heritage protection, maritime resources planning and management and urban and territory planning and management, as described below (Part 4).
According to the results of the Survey, all 19 responding NRAs whose countries have adopted a general authorisation regime require a notification for the provision of public ECN and publicly available ECS, all of them prior to starting any activity with one exception, which allows an ex-post notification. Regarding non-public ECN and non-publicly available ECS, however, only 4 NRAs require prior notification.
As for the competent authority responsible for receiving prior notifications and for maintaining the registry of providers of ECNS, all 19 responses received confirm that NRAs hold that responsibility, with 1 exception, where the Ministry maintains the registry and the NRA manages an additional list to ensure pluralism and transparency.

### 3.6.2. Installation of facilities

Where national legislation on ECNS applies to submarine cable systems, the provider of ECNS may be granted rights in the field of the installation of facilities.

Following article 15(1)(b), article 43(1) of the EECC provides that «Member States shall ensure that, when a competent authority considers an application for the granting of rights to install facilities on, over or under public or private property to an undertaking authorised to provide public electronic communications networks, or (…) to an undertaking authorised to provide electronic communications networks other than to the public, that competent authority: (a) acts on the basis of simple, efficient, transparent and publicly available procedures, applied without discrimination and without delay, and in any event makes its decision within six months of the application, except in the case of expropriation; and (b) follows the principles of transparency and non-discrimination in attaching conditions to any such rights».

The same article 43(1) further provides, however, that «the procedures referred to in points (a) and (b) may differ depending on whether the applicant is providing public electronic communications networks or not».

According to the results of the Survey, only 8 (out of 16) responding NRAs confirmed that their national legislation on rights of way and rights to install facilities apply to undertakings providing non-public ECN and non-publicly available ECS.

### 3.6.3. Access and interconnection

Where national legislation on ECNS applies to submarine cable systems, the provider of ECNS may be granted rights and subject to obligations in the field of the access and interconnection.

According to article 15(2)(a) of the EECC, undertakings providing public ECN or publicly available ECS shall have the right to «negotiate interconnection with and, where applicable, obtain access to, or interconnection from, other providers of public electronic communications networks or publicly available electronic communications services».

Pursuant to article 59(1) of the EECC and now regarding all undertakings providing ECNS, «Member States shall ensure that there are no restrictions which prevent undertakings in the same Member State or in different Member States from negotiating between themselves agreements on technical and commercial arrangements for access or interconnection».

As provided in Title II of the EECC, competent authorities may impose obligations to undertakings designated as having significant market power on a specific market and, under certain conditions, to other undertakings providing ECNS.

According to the results of the Survey, 16 (out of 18) responding NRAs confirmed that their national legislations on access and interconnection do not apply to non-public ECN and non-publicly available ECS.

### 3.6.4. Security of networks and services

Where national legislation on ECNS applies to submarine cable systems, the provider of ECNS may be subject to obligations in the field of security of networks and services.

Article 40(1) and (2) of the EECC provide that «Member States shall ensure that providers of public electronic communications networks or of publicly available electronic communications services take appropriate and proportionate technical and organisational measures to appropriately manage the risks posed to the security of networks and services» and also «that providers of public electronic communications networks or of publicly available electronic communications services notify without undue delay the competent authority of a security incident that has had a significant impact on the operation of networks or services».

These provisions have been deleted with effect from 18 October 2024, the deadline for all Member States to transpose into their national legislations the Second Directive on Security of Network and Information Systems (NIS2 Directive)[4], whose articles 21 and 23 are broadly meant to replace article 40(1) and (2) of the EECC. Until that happens in each Member State, the national legislations transposing article 40 of the EECC are in force; afterwards, providers of ECNS will be subject to the national legislations transposing NIS2 Directive.

The NIS2 Directive lays down measures with a view to achieving a high common level of security of network and information systems by imposing security and incident reporting requirements and a risk management approach.
According to articles 2(2)(a)(i), 6(36) and (37), this directive is applicable, among other sectors, to a list of types of entities within the digital infrastructures and services sector, which includes:
Providers of public ECN or publicly available ECS, regardless of their size and as defined by the EECC;
Other types, including providers of Internet exchange points, cloud computing services, data centre services, content delivery networks, online marketplaces, online search engines and social networking services platforms, if they qualify, at least, as a medium-sized enterprise or if they meet any of the specific requirements set at article 6(2) to (4).
Recital 97 of the NIS2 Directive stresses the importance of submarine cable systems, as follows:
«The internal market is more reliant on the functioning of the internet than ever. The services of almost all essential and important entities are dependent on services provided over the internet. In order to ensure the smooth provision of services provided by essential and important entities, it is important that all providers of public electronic communications networks have appropriate cybersecurity risk-management measures in place and report significant incidents in relation thereto. Member States should ensure that the security of the public electronic communications networks is maintained and that their vital security interests are protected from sabotage and espionage. Since international connectivity enhances and accelerates the competitive digitalisation of the Union and its economy, incidents affecting undersea communications cables should be reported to the CSIRT[[5]] or, where applicable, the competent authority. The national cybersecurity strategy should, where relevant, take into account the cybersecurity of undersea communications cables and include a mapping of potential cybersecurity risks and mitigation measures to secure the highest level of their protection».
Also relevant in this field is the Critical Entities Resilience Directive (CER Directive)[6], which lays down measures with a view to achieving a high level of resilience of critical entities to ensure the provision of essential services and which must be transposed by Member States by 17 October 2024.
According to articles 2(1)(5) and 6(1), each Member State shall identify critical entities for the digital infrastructures sector, within the following types of entities:
Providers of public ECN and of publicly available ECS, as defined by the EECC; Other types, including providers of Internet exchange points, cloud computing services, data centre services and content delivery networks.
Under article 6(2), these providers shall be identified as critical entities when:
They provide one or more essential services, defined as «a service which is crucial for the maintenance of vital societal functions, economic activities, public health and safety, or the environment»; They operate, and its critical infrastructure – defined as «an asset, a facility, equipment, a network or a system, or a part of an asset, a facility, equipment, a network or a system, which is necessary for the provision of an essential service» – is located, on the territory of the Member State; An incident would have significant disruptive effects on the provision by them of one or more essential services or on the provision of other essential services in the other relevant sectors set out in the Annex that depend on that or those essential services.
According to the results of the Survey, 13 (out of 18) responding NRAs confirmed that their national legislations transposing the EECC on security of networks and services do not apply to undertakings providing non-public ECN and non-publicly available ECS.

**3.6.5. Administrative charges and fees**

Where national legislation on ECNS applies to submarine cable systems, the provider of ECNS may be subject to administrative charges and fees.
Article 16(1)(a) of the EECC provides the basis for administrative charges for undertakings providing ECNS. Member States may decide to impose administrative charges on these undertakings to «cover, in total, only the administrative costs incurred in the management, control and enforcement of the general

authorisation system and of the rights of use and of specific obligations as referred to in Article 13(2), which may include costs for international cooperation, harmonisation and standardisation, market analysis, monitoring compliance and other market control, as well as regulatory work involving preparation and enforcement of secondary legislation and administrative decisions, such as decisions on access and interconnection».
Another potential legal basis for fees in the context of submarine cable systems, particularly in what concerns supporting facilities in their land segment, is article 42 of the EECC, which states that «Member States may allow the competent authority to impose fees for the (…) rights to install facilities on, over or under public or private property that are used for the provision of electronic communications networks or services and associated facilities which ensure the optimal use of those resources».
The majority of Member States have imposed administrative charges on undertakings providing ECNS following article 16 of the EECC[7]. These administrative charges differ in their national legal design and they can be fixed annual contributions by the undertakings and/or dependant on the turnover that each undertaking must notify. In addition to these charges, some competent authorities apply a one-off administrative charge upon registration.
However, according to the results of the Survey, 14 (out of 19) responding NRAs confirmed that their national legislation on administrative charges do not apply to undertakings providing non-public ECN and non-publicly available ECS.
Also, according to the results of the Survey, 11 (out of 16) responding NRAs confirmed that their national legislation imposes fees for the rights to install facilities. Of these, the majority indicated that such fees are either applicable to the entities that install a network and/or infrastructure or to all undertakings providing ECNS, and are collected by the municipalities, by other public authorities or by the owners of the properties themselves.
There could not be found any specific administrative charges or fees applying only to the operators of submarine cable systems within the scope of the national ECNS frameworks. Rather – as for any ECNS provider – the national administrative charges (annually or at the start of operation) may also apply to the operators of submarine cable systems if the classification of their activity as a provision of an ECN or an ECS under the respective national legislation is met.

[1] Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communications Code, available here.
[2] BEREC Guidelines on the Implementation of the Open Internet Regulation (BoR (22) 81), of 9 June 2022, available here.
[3] BEREC Guidelines for the notification template (BoR (19) 259), of 6 December 2019, available here.
[4] Directive (EU) 2022/2555 of the European Parliament and of the Council of 14 December 2022 on measures for a high common level of cybersecurity across the Union, amending Regulation (EU) No 910 /2014 and Directive (EU) 2018/1972, and repealing Directive (EU) 2016/1148, available here.
[5] Computer Security Incident Response Team, as defined by article 1(2)(a) of the NIS2 Directive.
[6] Directive (EU) 2022/2557 of the European Parliament and of the Council of 14 December 2022 on the resilience of critical entities and repealing Council Directive 2008/114/EC, available here.
[7] See also the information on sources of financing of NRAs in Subsection 5.3.2, page 80, of BEREC Study on the NRA independence (BoR(22)189), of December 2022, available here, which showed that 21 responding NRAs obtain funding via fees paid by regulated entities.

**Please comment:**

AWS welcomes the focus on increasing the cybersecurity and resilience of electronic communications networks and services. At AWS, security is already our highest priority. Our core infrastructure is built to satisfy the security requirements for the military, global banks, and other high-sensitivity organizations. This

is backed by a deep set of cloud security tools, with over 300 security, compliance, and governance services and features, as well as support for 143 security standards and compliance certifications. This includes international standards such as ISO 27001, ISO 27017, SOC 1, 2 and 3, and European standards such as C5, ENS High, HDS, and Pinakes to name a few. All data leaving AWS facilities is encrypted. ECNS providers can leverage the capabilities of AWS to increase their security posture.

We note that harmonizing security regulations at the EU level enables scalable security. One-off security practices introduce risks as processes are unpredictable, less mature, and security-value limited. It is best to align certifications with existing internationally recognized frameworks and standards and add to it only if there are specific unmet needs.

**4. Related authorisation administrative procedures**

Notwithstanding the fact that Europe is considered by private stakeholders as a global reference for regulatory issues[1], the deployment of submarine cable systems, in all its activities as described in Part 0, depends on the compliance with a significant number of national (including regional and local) authorisation administrative procedures.

According to the results of the Survey, only 10 (out of 18) responding NRAs from non-landlocked countries could confirm the total average duration of all related authorisation administrative procedures required for a new international submarine cable with a landing point in their country, and their answers vary extensively: 2 countries set that average duration at less than six months, 5 countries between six months and one year, and 3 countries at more than one year.

The fields in which these authorisation administrative procedures are required at national level include: Environmental protection, namely a requirement for an environmental authorisation procedure covering the activities related to the deployment and maintenance of a submarine cable system, that may involve the gathering of information regarding the project and also an environmental impact assessment study or opinion and is generally under the responsibility of the ministry or the agency responsible for the environment and/or of regional and/or local authorities; Cultural heritage protection, namely a requirement for an authorisation procedure aiming at the protection of underwater or land cultural heritage that may be affected by the deployment of a submarine cable system, that should involve the gathering of information regarding the proposed route and the installation methodology and is generally under the responsibility of the ministry or the agency responsible for culture and cultural assets; Maritime resources planning and management, namely a requirement for an authorisation procedure aiming at: The protection of maritime resources, such as water, minerals, fossil fuels and marine organisms, including nature and species conservation, and The safeguard of interactions between maritime activities, including, along the operation of submarine cables, the activities of fishing, harvesting, aquaculture, extraction, transport, energy production, scientific research and military training,

that is generally under the responsibility of the ministry or the agency responsible for maritime resources and/or of regional and/or local authorities;

Urban and territory planning and management, namely a requirement for authorisation and building permit procedures regarding all land installations, including manholes, landing stations and backhaul connections, that should involve the gathering of information regarding the planned construction and the location of structures and is generally under the responsibility of national, regional and local authorities with powers in this field, and also, if necessary, procedures for the granting of rights of way to install facilities on, over or under public or private property.

According to the results of the Survey, there is a significant variety between national authorisation administrative procedures, including in what concerns the sequence that needs to be followed by an interested party and the articulation between all procedures and authorities involved.

[1] As told by several speakers in the BEREC Workshop on international submarine connectivity in the EU, on 21 September 2023.

**Please comment:**

AWS agrees with BEREC's assessment that the timelines related to authorisation and administrative procedures required for a new international submarine cable with a landing point, vary extensively and can exceed one year. Permitting timelines for maintenance and repair also vary greatly.

Cable developers need predictable and committed permitting timelines to plan and secure the supply constrained marine resources needed for installation and maintenance activities. AWS would welcome 1) efforts to make these timelines more consistent across the EU; 2) mechanisms to expedite the timeline to secure permits for cable route surveys, for cable installation permits and for maintenance permits.

## 5. European and national measures

### 5.1. European measures

The European institutions have been developing a range of strategies and programmes to increase their commitment to critical infrastructures and to mobilise funding for digital networks not only in the European Union, but also across the globe. Among those, the EU Global Gateway (Subsection 5.1.1), the Connecting Europe Facility (Subsection 5.1.2) and the European Data Gateways (Subsection 5.1.3) should be highlighted.

Regarding authorisation administrative procedures, no evidence has been found for international mechanisms or services, including points of contact at European level, available for stakeholders interested in landing a submarine cable system in more than one country.

#### 5.1.1. EU Global Gateway

The EU Global Gateway is a strategy set up by the European Commission and the High Representative to boost smart, clean and secure links in digital, energy and transport sectors and to strengthen health, education and research systems across the world, with plans to mobilise € 300 billion of investments.

The Medusa Optical Fibre Cable project is funded under the Global Gateway strategy, involving the construction of a 7100 km cable in the Mediterranean to connect Northern African countries with PT, ES, FR, IT and CY, with the aim to increase by 200 times the speed of internet in Northern African universities and integrating 500 universities and research centres from Algeria, Egypt, Morocco and Tunisia, into the European Union essential terabit research and development network[1].

#### 5.1.2. Connecting Europe Facility

Connecting Europe Facility (CEF) is a European Union funding instrument to support the development of high performing, sustainable and efficiently interconnected trans-European networks, in the fields of transport, energy and digital services.

One of the main actions supported by CEF in the field of digital services (CEF Digital) is the deployment of new or a significant upgrade of existing backbone networks, including submarine cables, within and between Member States and between the European Union and third countries.

Three calls were already launched under the framework of CEF Digital. Within the first call, 13 projects related to submarine cable systems were financed in a total amount of around € 73 Million in grants[2]. The second call was closed in March 2023 – projects are being evaluated at the time of writing this report – and the third call was opened in October 2023, with deadline on 20 February 2024[3].

#### 5.1.3. European Data Gateways Declaration

In March 2021, most Member States adopted the Ministerial European Data Gateways Declaration[4], which is a key element of the European Union Digital Decade strategy.

The declaration highlights the facts that Europe's digital sovereignty and global competitiveness depend on strong and secure internal and external connectivity and that leveraging internal and external connectivity is a precondition for the European Union to become «the most attractive, most secure and most dynamic data-agile economy in the world».
The subscribing Member States called on the European Commission to address several initiatives, including:
Conducting a study to map digital public and private connectivity infrastructures (terrestrial, submarine and space) outside the European Union; Designating electronic communications submarine cables as part of the European Union's critical infrastructure, which subsequently would require supporting actions such as improving cybersecurity, licensing, authorisation and registration of submarine cables and guidelines for sharing and colocation of terrestrial network connectivity to submarine landing stations.

### 5.2. National measures

National measures to promote the development of international submarine connectivity may include the adoption of legal and/or administrative measures (Subsection 5.2.1), the strengthening of its institutional capacity (Subsection 5.2.2), the adoption of policies to improve cable security (Subsection 5.2.3) and the granting of public financial support (Subsection 5.2.4).

#### 5.2.1. Legal or administrative measures

According to the results of the Survey, some countries introduced legal or administrative measures to promote the deployment of submarine cable systems and to ensure international submarine connectivity, such as:
Launching public consultations; Adopting national strategies; Developing online portals for interested parties; Laying down adapted and simplified licensing regimes; Opening sea and land corridors for the installation of cables.
In IE, the Chief Technology Office within the Communications area in the Department of the Environment, Climate & Communications launched a public consultation on international connectivity for telecommunications on 19 October 2020[5]. The purpose of this consultation was to seek the views of interested parties on the status of international connectivity in the country. This allowed the Department to gather information and consider views from relevant stakeholders to support policy development and decision making.
Also in IE, the Maritime Area Planning Act 2021 (MAP Act) was adopted, which establishes a new marine planning system and is guided by the National Marine Planning Framework. MAP Act constitutes of a new licensing and development management regime from the high-water mark to the outer limit of the State's continental shelf, administered by An Bord Pleanála[6] (the National Planning Authority), the coastal local authorities and a new Maritime Area Regulatory Authority (MARA). It provides a single consent principle, or Maritime Area Consent (MAC), which will enable development consent, or planning permission, with one environmental assessment.
In NO, the Government adopted the National strategy on data centres (to be revised), which highlights the importance of broadband connectivity and facilitates its market-based expansion, as well as continuation of the government grants for broadband expansion in rural areas[7].
In PT, the Government is in the process of adopting a national strategy for the promotion of investment in international submarine connectivity and in data centres, including the opening of specific sea and land corridors for the installation of cables, the creation of a streamlined authorisation administrative procedure, the development of a single online portal for the authorisation of submarine cables and the formal designation of the Directorate-General for Natural Resources, Safety and Maritime Resources (DGRM) as single point of contact[8].

#### 5.2.2. Institutional measures

According to the results of the Survey, some countries improved their institutional capacity in relation to authorisation administrative procedures on the deployment of submarine cable systems by means of the creation of single points of contact for any interested parties and/or of national cooperation mechanisms between competent authorities.
In CY, the Submarine Cable Committee, which consists of representatives of various line ministries, plays the role of single point of contact. The Committee examines the content of the application for the laying, use or operation of cables in the Exclusive Economic Zone common to the Republic's Continental Shelf.
In GR, the Ministry of Finance plays the role of single point of contact.
In IE, the new Maritime Area Regulatory Authority (MARA) has been established in July 2023 under the Department of Housing, Local Government and Heritage. Accordingly, new procedures came into effect under the Maritime Area Planning Act, 2021 (MAPA). The single consent principle has been introduced, i.e. one state consent (Maritime Area Consent – MAC) to enable occupation of the maritime area and one development consent (Planning Permission), with a single environmental assessment. Under this regime a MAC, which is issued by MARA, and subsequent Planning Permission will be required by any developer proposing to lay and install a subsea cable in Ireland’s waters. Development consent must be obtained within 2 years of the granting of a MAC or else the MAC becomes invalid. MACs are required before applicants/developers can make a planning application to local coastal planning authorities (CPAs) or to the National Planning Authority (An Bord Pleanála – ABP) depending on the size of the project, including environmental assessments (if the development is not going to extend beyond 3 nautical miles, the planning application is made to the relevant local CPA e.g. for a slipway or a marina, and if the development will extend beyond 3 nautical miles – as a subsea cable would – then the application is to the ABP, or if the planned development involves more than one CPA, then the application is for decision by ABP). ABP is an independent body that decides on appeals from planning decisions made by local CPAs in the Republic of Ireland.
In NL, the Ministry of Economic Affairs and Climate Policy initiated the formation of a Dutch subsea cable coalition, bringing together public and private stakeholders in the submarine cable domain. The coalition aims to promote the Netherlands as a landing point for international submarine cable systems and explore possibilities to establish such landing points.
In NO, the Ministry of Local Government and Regional Development (responsible for information and communication technologies, electronic communications, and – together with OCA – data protection policy) and the Norwegian Coastal Administration are the single points of contact, depending on the scale of the projected submarine cables. If the cable (all of it) is located within 12 nautical miles from the baseline, the Norwegian Coastal Administration (subject to the Ministry of Trade, Industry and Fisheries) is the single point of contact. Otherwise, if the cable lies in part within and in part beyond 12 nautical miles from the baseline, or entirely beyond 12 nautical miles, the Ministry of Local Government and Regional Development acts as the single point of contact, which is mostly the case for undersea cables for electronic communications. They provide information on all administrative procedures and allow contact with all competent authorities.
In PT, the Directorate-General for Natural Resources, Safety and Maritime Services (DGRM) plays the role of single point of contact, receiving the request, initiating the process, which also involves other entities, including the Portuguese Environment Agency (APA), the National Maritime Authority (AMN), the Nature Conservation and Forestry Institute (ICNF), the municipalities and others, as applicable, and gathering the necessary approvals.

**5.2.3. Security measures**

Apart from designing specific legal requirements in the field of security and ensuring compliance by operators of submarine cable systems (see Subsection 3.6.4), countries may implement additional measures for the purposes of reinforcing their protection and security.
According to ENISA[9], these measures may involve as a good practice:

Ensure the geographic diversity of routes and landings, to avoid single points of failure; Ensure spatial separation of submarine cable systems from other maritime activities, regularly update nautical maps and charts and designate submarine cable protection zones, to avoid cable incidents; Establish annual pre-clearance procedures, avoid cabotage or crewing restrictions and establish a single point of contact for permitting and handling any issue arising around submarine cable installation, repair and maintenance, to avoid delays; Establish surface surveillance of civil maritime activities and enhance submarine surveillance, to enhance prevention and to gain threat intelligence.

In MT, the legal provisions that have been adopted place a symmetric requirement on an 'international gateway operator' (i.e. an undertaking providing or authorised to provide a public electronic communications network and, or publicly available electronic communications services which includes a submarine connection between the Maltese islands and, or includes an international connection between Malta and other countries) to offer and, in turn, acquire capacity on other international links belonging to other operators. Such an agreement is in place to provide sufficient resiliency to guarantee the continuation for the provision of international connectivity services in case where an ECNS submarine cable is damaged. This symmetric requirement was first introduced by the Maltese NRA through specific regulations in 2009 and remains applicable with the legal provisions that entered into force following the transposition of the EECC as from 1 October 2021[10].

**5.2.4. Financial measures**

According to the results of the Survey, some countries have adopted financial measures to support the introduction of new international submarine cable systems.

In IS, three cables (FARICE-1, DANICE and IRIS) that carry almost all traffic to and from the country are owned by a State-owned company. All cables are operated by Farice, selected by the Icelandic Government to own, operate and oversee their construction. IS has opted to support the investment of the last project, IRIS, through a share capital increase in Farice. The rationale for State intervention is that IS is a very geographically remote country, and therefore effective and secure international connections are a prerequisite for the development of a modern technology-based society. A serious disruption in international connectivity would cause major damage to the IS economy, and society as a whole. Farice is the only operator of submarine cables connecting IS to Europe, and no private party plans for a submarine cable system have ever materialised; hence, the IS authorities have concluded that market failure requires State participation.

As for NO, in 2019 ESA approved state aid for the construction of a new subsea cable and, in 2020, following a tender process, the Norwegian Communications Authority has chosen Telia Carrier to establish a new secure route for electronic communication running from Oslo via Kristiansand to Esbjerg, Denmark, where it connects into the wider Telia Carrier pan-European network.

In PT, the Government has recently mandated Infraestruturas de Portugal, S.A. (IP), a public infrastructure operator, with the promotion of activities relevant to the conception, installation, maintenance, exploitation and operation of a new submarine cable domestic interconnection between the Continent and the autonomous regions of Azores and Madeira, designated as the Atlantic CAM, with the purpose of creating an Atlantic platform, including new landing stations, for the future landing of international cables connecting Europe to other continents[11].

[1] See here.
[2] See here.
[3] See here.
[4] Available here.
[5] See here.
[6] Ireland's national independent planning body that decides appeals on planning decisions made by local authorities as well as direct applications.

[7] Available here.
[8] See the news published here.
[9] ENISA, Subsea cables – what is at stake?, July 2023, pages 23 and 24, available here.
[10] Electronic Communications Networks and Services (General) Regulations, Subsidiary Legislation 399.48, under articles 27-30, under Part VII SECURITY, available here.
[11] See Decree 9333/2020 by the Deputy Secretary of State for Communications, published on 30 September 2020, available here.

**Please comment:**

AWS requires multiple geographically separate, fully redundant, highly scalable submarine cable systems connecting its Regions and Edge locations to provide high network availability. Facilitating multiple landings in EU countries in strategically significant locations for new cable systems will aid efficient investment while also ensuring security of supply.

**6. Conclusions**

1) ECNS national legislations are applicable to the provision of an ECN or an ECS within the limits of the territory of each Member State. The extent to which they are applicable depends on the definitions of public ECN and publicly available ECS. These definitions are crucial for determining the regime applicable to each ECN or ECS, as most of the rights and obligations are applied solely to public ECN and to publicly available ECS.
2) Despite its relevance, the EECC does not provide a definition of publicly available ECS and, at national level, there is currently no robust harmonisation in the definition – where it exists – and the interpretation of what qualifies as a publicly available ECS.
3) Without prejudice to a case-by-case analysis, the traditional business models in which submarine cable systems are operated by ECNS providers to ensure the international capacity needed to support their retail national business and to sell capacity to third parties at wholesale and/or retail level would probably be qualified as public ECN and/or publicly available ECS.
4) However, submarine cable systems operated by content and application providers connecting their data centres to exploit the capacity exclusively for their own use, without prejudice to a case-by-case analysis, could be qualified as non-public ECN and/or a non-publicly available ECS.
5) Notwithstanding the fact that Europe is considered by private stakeholders as a global reference for regulatory issues, the deployment of submarine cable systems depends on the compliance with a significant number of national authorisation administrative procedures in fields beyond the ECNS sector, including environmental protection, cultural heritage protection, maritime resources planning and management and urban and territory planning and management, involving a total average duration that can exceed one year.
6) Even if some countries have already created single points of contact and/or national cooperation mechanisms between competent authorities, this is still not a generalised policy across Europe, which also lacks international mechanisms or services, including points of contact at European level, available for stakeholders interested in landing a submarine cable system in more than one European country.
7) Existing measures to promote the development of international submarine connectivity include, at European level, mostly financial support, and, at national level, a varied and fragmented set of legal, administrative, institutional, security and financial measures.

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