Subsea Cables

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

Introduction

ESCA (the European Subsea Cables Association) represents national and international companies which own, operate or service submarine telecommunications and power cables throughout Europe. Submarine cables play an increasingly important role in modern living and the social and economic value of the subsea cables sector is growing rapidly as a response to this.

Global and national reliance on connectivity continues to grow, and there has been an increased focus on the resilience of these vital underwater links.

Demand for capacity remains on an upward trajectory and will continue to increase and to ensure that data moves efficiently and rapidly using secure and resilient infrastructure. Connectivity worldwide is critical to economic growth and for sustainable communication.

- Subsea cables carry more than **99%** of global intercontinental communications/data[1].
- Subsea telecoms cables carry **well in excess** of **US$10 Trillion** in financial transactions per day[2].
- Latest technology – **250-500 terrabits per second**[3] for a single cable.
- It is more difficult to put a monetary value on social global connectivity – but they facilitate social communications and information exchange within Europe and across the planet.
- **What about satellites…?** Satellite networks have a significantly smaller capacity, and rely upon terrestrial and subsea physical links for data transfer. Both serve a vital role.
- **Cables to islands** provide essential services (emergency services, healthcare, business, social etc.) and lifeline connectivity for island communities.
- Submarine cables are vital to almost every aspect of modern life.

[1] Telegeography – SubOptic 2023

[2] Telegeography – SubOptic 2023

[3] 250TBs equates to approximately 21.9 years of scrolling through Tik Tok videos – transferred per second (doubled for 500TBp/s)

BEREC Report

ESCA welcomes the opportunity to review the draft report published by BEREC. It is encouraging that there is a focus amongst the NRA community in Europe on submarine cables and it is noted and appreciated that key messages in the report reflect some of the recommendations of the cable industry on best practices to promote cable protection and resilience of subsea cables.

The changing model of ownership structures of subsea cables is well recognised within the industry, however there are some nuances to highlight as the report does not quite reflect the reality in all cases. OTTs have often become major system investors and leaders of new build projects, rather than single owner entities which could be concluded upon reading the report. Generally there are partnerships to facilitate the complex ownership structure and operation within countries where cables land.

The international nature of submarine cables also means that there are multiple complex considerations in relation to permitting and licensing which are referred to throughout the report, with some good recommendations such as the provision of single POCs (Points of Contact) for subsea cable policy which is currently not available within most countries across the EU and geographic Europe.

Best practices and ENISA recommendations

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> 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?":
>
> a) Ensure the geographic diversity of routes and landings, to avoid single points of failure;
>
> b) 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;
>
> c) 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;
>
> d) Establish surface surveillance of civil maritime activities and enhance submarine surveillance, to enhance prevention and to gain threat intelligence.

ESCA generally supports the measures proposed by ENISA as good practices in the report "Subsea Cables – What is at Stake?". These measures reflect good practice advice advocated by the industry.

Point a) is strongly supported and geographic diversity can be a vital component of cable resilience though it should not be mandated through regulation.
Point b) is generally managed through coordination between industries directly and does not require government involvement. ESCA has technical guidelines relating to interactions between marine industries and contributes to wider stakeholder forums across Europe.

ICPC (The International Cable Protection Committee) publishes Recommendations which are good practices for the industry, as well as promoting good practices for national governments on supporting and enhancing the resilience of submarine cables. Cable charting as noted in the ENISA report is a vital aspect of resilience as the predominant cause of cable damage is through inadvertent human interaction such as demersal fishing and ships' anchors.

Other regional CPCs (Cable Protection Committees) such as NASCA (North American Submarine Cable Association) and DKCPC Danish Cable Protection Committee, OSCA (Oceania Submarine Cable Association) also provide regional focus on topics relating to submarine cables in different areas of the world and provide valuable resources and points of coordination with the submarine cable industry. The ICPC then represents the global submarine cable community.

Whilst cable protection zones can be an option for improved resilience, they should be non-mandatory and developed in coordination with industry expertise to avoid reducing geographic diversity.

All and any proposed measures for surveillance and monitoring should be developed alongside and with consultation with industry bodies such as the ICPC, ESCA, NASCA and DKCPC to ensure that they are technically and practically feasible and do not create unintended consequences.

Coordination – international and domestic

Page 4:

> 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.

Also on page 4, it is noted that one of the national measures listed to promote the development of international submarine connectivity has included "*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*"

ESCA strongly supports the improvement of institutional capacity and creation of such single points of contact to cover submarine cable policy improvement and streamlining. This could be through responsibility for overall subsea cable policy coordination rather than specific licencing coordination responsibility – as policy responsibility should logically lead to streamlining within governance processes.

On consultation with members of ESCA, the practical reality of licensing regimes in some of the countries noted as having established single POCs does not yet appear to have simplified any processes involved in obtaining licence approvals. Some countries have reported the establishment of single POCs later in the document, but it is understood that there remains a complex multi-agency and at time overlapping consenting process within some of these countries which suggests there are still improvements to be made.

It is recommended that streamlining and promotion of lead personnel or departments within national governments with specific responsibility on subsea cable policy areas will be beneficial to promote

deployment of such vital infrastructure and ensure that efficient and rapid repair capability is encouraged - and importantly – repairs are not hindered or delayed.

Direction across the EU on topics such as coordination of the approach to streamlined and rapid submarine cable repair activities, and taking away regulatory barriers for repair vessels to undertake repairs would be a strong measure of success of the implementation of an EU POC for submarine cable policy.

Permitting and licensing

Page 4:

> **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.

Page 25:

> 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.

Section 4 (starting page 24) lays out some of the related authorisation administrative procedures. The licence acquisition timescales noted by NRA survey respondents vary significantly, and some state permitting lead times of more than one year.

Uncertain and prolonged or complex permitting processes can hinder and delay projects in many instances and factor as a potential significant disincentive for investment. Subsea cable projects need to be able to be competitive and viable. Regulatory burden or especially uncertainty can make investment decisions more problematic.

Supporting streamlined, harmonised and coordinated permitting can be an encouragement towards better regulation and reducing barriers to investment – while also promoting better cable security and resilience through more rapid deployment of new subsea cable systems.

Section 4 a) notes that there are authorisations relating to environmental protections in all countries. ESCA strongly supports sustainable development, and assessment and understanding of any environmental impacts of installation is necessary. The impacts relating to submarine cables are by

their nature small scale, temporary and take place during installation – therefore while Environmental Statements and reports are prepared, cables do not meet the thresholds for Environmental Impact Assessment within the regulations in Europe.
However this section also refers to maintenance. It should be strongly noted that rapid repair response in emergency situations is critical (e.g. when a cable is damaged by fishing activity, anchor drag, or natural hazards). Repair activities should be exempt from permitting/licensing requirements to enable it to take place within hours/days of the fault occurring – and this is the case in many countries, but specific exemptions for cable repair are recommended by the industry to ensure that this is explicit and is not overlapped by other policy areas (e.g shipping, cabotage or importation policies).

There are many examples of good practice and also poor practice in relation to permitting and associated exemptions for cable repair worldwide. Where exemptions are specifically included in legislation, this enables countries to repair damaged cables very quickly and minimise any associated disruption.

> 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.

Generally section 4 provides some useful background and context, though it is recognised that it is intentionally simplistic as it is not possible to reflect the wide diversity of regimes across the EU. This does however highlight that harmonisation of proportionate approaches to licensing/permitting of submarine cables across the EU developed in consultation with the industry will be beneficial and can support encouragement of balanced investment to support a level playing field for investment decisions.

European Measures

> 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.

In 5.1 the section above notes that there are no European level POCs or mechanisms or services for stakeholders wishing to land a cable system across jurisdictions. Such a POC or policy lead at EU level with specific responsibility for subsea cable policy would be highly beneficial. Such a point of contact should also participate in submarine cable forums such as the ICPC Plenary annually and the twice yearly ESCA Plenary as well as other non-commercial events to ensure high level of knowledge and industry engagement.

5.1.3 (See box below) European Data Gateways Declaration provides for a request by Member States on the European Commission to designate submarine cables as part of the EU's critical infrastructure. CNI designation is a complex topic and should be done in consultation with submarine cable owners/operators who are responsible for protecting and repairing assets. The 'supporting actions'

noted that are intended to result from CNI designation such as improved licensing and authorisation are currently lacking in some areas as highlighted in other parts of this document.

> The subscribing Member States called on the European Commission to address several initiatives, including:
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> a) Conducting a study to map digital public and private connectivity infrastructures (terrestrial, submarine and space) outside the European Union;
>
> b) 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.

National Measures

> ## 5.2. National measures
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> 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).

It is noted that some of the recommendations on national measures discuss the adoption of policies to improve cable security. This is an important subject – however it is vital to address the common causes of cable damage such as demersal fishing and anchor drag, as well as understanding and protecting where possible against the impact of natural hazards (submarine landslides etc). Such subjects also cannot only be understood in a national context due to the international nature of submarine cables passing through multiple jurisdictions, EEZ and high seas.

The provisions of UNCLOS in protecting the freedoms of submarine cables in EEZ are vital to ensure that regulation does not impede communications between countries, across continents and around the EU and the world. As the seas become busier, it becomes more critical to protect the rights of submarine cables within international law to be installed and repaired in EEZ and high seas without impediment or restrictions in licensing or legislation.

Legal and Administrative Measures

> **5.2.1. Legal or administrative measures**
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> 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:
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> a) Launching public consultations;
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> b) Adopting national strategies;
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> c) Developing online portals for interested parties;
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> d) Laying down adapted and simplified licensing regimes;
>
> e) Opening sea and land corridors for the installation of cables.

It is noted that some countries provided information on measures taken on the above areas a) → e). It should be noted that some of the measures listed were not all developed with subsea cable technical knowledge and were introduced for other policy reasons and in some cases could hinder development across the EU and globally.

The intention to streamline, improve and support better regulation is strongly supported by ESCA, but it is vital to ensure that licensing regimes fully understand the requirements and unique characteristics of submarine cables – including the context of international law. There are regulatory measures introduced in recent years that have been beneficial, and others that could have a significant detrimental effect, and it is important to understand these in detail when considering any harmonisation or improvement to regulation.

The processes highlighted in Norway, Netherlands, Portugal, Ireland are useful summaries, but it should also be highlighted that there are some complexities associated with some of the processes involved. These are important to understand when considering any good practice recommendations as a result – and companies who have installed cables in accordance with these regimes can advise on the practical reality 'on the ground'.

Technical knowledge and capacity building

Page 4:

> 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.

An important point that must be highlighted is that within this section above, most of the NRA respondents to the survey from non-landlocked countries stated that they have "no overall experience

in submarine cable systems". This is despite the fact that almost all of the coastal nations listed on page 6 in the Country Abbreviations have submarine cables landing and they rely upon the connectivity that they provide.

This highlights that where any additional regulatory measures are proposed, they need to be done in conjunction with the industry bodies who represent submarine cables to ensure that they are implemented with full technical knowledge and understanding of national governments. This can support the development of effective single Points of Contact within governments who may take the lead on national subsea cable policy.

The industry bodies ESCA and ICPC accept participation from governments, and already have government and regulator members, observers and contributors. Participating in non-commercial industry forums assist governments to build capacity and technical understanding of the complex topics relating to subsea cables and can support the development of effective and proportionate regulation.

Technical considerations and Market Analysis

Within section 2 there are high level summaries of some aspects of cable planning, route survey and installation. It is recognised that this is high level, but the earlier project planning (prior to marine survey activities), feasibility, and Desk Top Study phases can also be taken into account when looking at better regulation and policy development relating to submarine cables.

The establishment of single POCs or looking at strategic support of geographic diversity of routing can be supported through well informed policy resource and capacity within government departments.

Decisions on route planning, feasibility and incentive/disincentive to land or route a cable are taken at an early stage before survey activities are planned, and this could be supported through well-coordinated agencies to engage with directly early in project planning. Throughout the industry this is often known to be an uncoordinated exercise involving multiple agencies many of which have no direct involvement or knowledge of submarine cables.

In 2.1.1 and 2.1.2, 2.1.3 and 2.1.4 it is recognised that the market analysis is very high level – and it must be noted that there are also some errors due to the reliance on single source/reference. Therefore it should not be considered as complete or exhaustive.

2.2.1 provides commentary on recent business trends and the changing ownership models. It should be noted that there are more nuanced complexities in ownership, management and operation of submarine cable systems – the major system investors and leaders in new build projects are not usually sole owners, and the structure and partnerships involved in cable systems are complex, particularly where systems span multiple nations and jurisdictional regimes.

2.2.2 refers to some technological trends and advancements, and as above, the assessment is limited somewhat and could be enhanced to cover fibre sensing, and other future capacity building technologies.

2.2.3 relating to ownership structures seems to be somewhat simplistic and does not accurately reflect the picture of the current submarine cable industry and evolving ownership structures.

3.6.4 (box below) notes that Article 40(1) and (2) of the EECC stated that the provider of ECNS may be subject to obligations in the field of security of networks and services, it noted that any such measures must be appropriate and proportionate.

ESCA recognises that these provisions have been deleted which will be effective 18 October 2024. Therefore ESCA recommends that any such provisions that arise in NIS2 Directive are discussed with the industry directly, to understand pragmatic and reasonable approaches towards supporting resilient submarine cables, and ensuring they remain appropriate and proportionate.

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[28] 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».

3.6.5 discusses administrative charges and fees. Any fees should be transparent and published clearly. It should be noted that excessive fees could be a disincentive to investment and development. It is noted that fee structures which currently exist are generally not harmonised or linked to subsea cable policies directly. Coordination of policy to support streamlined permitting and clear and well understood regulation could be a way to improve any such implementation and reduce the potential for disincentive.

BEREC Activities

Page 7:

BEREC also organised:

a) 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[2];

b) On 4 October 2023, in Funchal (Madeira), Portugal, an internal workshop on international connectivity during the biennial four-lateral summit between BEREC, the

For the workshop on 21 September, unfortunately the industry groups were unavailable to participate. However on 4th October, ICPC and ESCA participated in the four-lateral summit between BEREC, EaPeReg, EMERG and REGULATEL. The Chairman of ICPC delivered a keynote speech, and a representative for ESCA and ICPC was present at the event to answer questions and connect with the delegates at the summit. This provided an opportunity for closer engagement and build links between NRAs and non-commercial industry groups for information exchange and technical sharing.

To conclude the keynote speech, four points were noted for regulators to consider in decision making in relation to submarine cables which are included below:

1. All cable damage can be disruptive – and it is important to consider overall resilience of cables against all types of threat – and the ICPC publish Best Practices for Governments to highlight how this can be achieved.
2. Demand on the seabed increases, and so it becomes increasingly important to ensure that telecommunications and data cables can be installed using diverse routes and can also be easily repaired if damaged.
3. Cables are well recognised to have minimal impact to the marine environment, and permitting and licensing should be streamlined where possible to ensure easy deployment and no barriers to repair.
4. Regulators should engage with industry, engage with ICPC and ESCA, and speak to the owners of these vital cables which underpin every aspect of modern life and facilitate global communications.

Conclusions

Section 6 – conclusions bring together many of the points, and touches on some of the key technical and regulatory challenges faced by submarine cables across the EU – and globally. There are unique considerations for submarine cables, which will benefit from a specifically focussed harmonised approach.

It is welcome that BEREC recognise the varied and fragmented nature of some of the regulatory approaches and supports the development of more effective policy and single POCs for subsea cable policy at national and EU level.

It is noted that 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. To do this, it is vital to understand the other policy areas and decision-making processes that could hinder these objectives, and permitting and licensing regulatory barriers can form part of this in creating disincentives to development.

Industry knowledge and expertise is readily available to support confident decision making and better regulation that achieves NRA goals and is aligned with industry needs to promote development. ESCA and the ICPC convene key industry participants several times throughout the year and encourage governments to join and participate, and the organisations regularly engage with governments on policy development, regulation or decision making in relation to subsea cables and continue to encourage outreach and engagement on this vital topic.