ESCA Guideline No.1

ESCA Fishing Liaison Best Practices - Linear Subsea Cables (Telecommunications and Power)

These guidelines have been produced in collaboration with fishing stakeholders including the NFFO, SFF, and Seafish. The work to produce the document has also been supported by Defra, The Crown Estate, Crown Estate Scotland, DSIT, DESNZ

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Abbreviation	Description
AIS	Automatic Identification System
COLREGS	Convention on the International Regulation for Preventing Collisions at Sea, 1972
CES	Crown Estate Scotland
Defra	Department for Environment, Food & Rural Affairs
DESNZ	Department for Energy Security and Net Zero
DSIT	Department for Science, Innovation and Technology
ECDIS	Electronic chart display and information system
ESCA	European Subsea Cables Association
FIR	Fishing Industry Representative
FLM	Fisheries Liaison Manager
FLO	Fishing Liaison Officer
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables
IMO	International Maritime Organisation
iVMS	Inshore Vessel Monitoring System
KIS-ORCA	Kingfisher Information Service- Offshore Renewable & Cable Awareness project
MAIB	Maritime Accident Investigation Branch
MMO	Marine Management Organisation
MSG	Maritime Sub-Group
NDA	Non-Disclosure Agreement
NFFO	National Federation of Fishermen's Organisations
NtMs	Notices to Mariners
OFLO	Offshore Fishing Liaison Officer
OREI	Offshore Renewable Energy Installations
PLN	Port Letter Number
SFF	Scottish Fishermen's Federation
SOLAS	International Convention for the Safety of Life at Sea

TCE	The Crown Estate
UKHO	UK Hydrographic Office
VHF	Very High Frequency (working channel)
VMS	Vessel Monitoring System

A Glossary of Terms is available as Annex 5 of this document for reference.

Document History

Issue No.	Name	Comments	Date
Issue 1	ESCA MSG	Issue first draft	08/11/24
Issue 2	ESCA MSG	Issue Final Draft	24/04/25
Issue 3	ESCA MSG	Issue Final Draft	17/09/25
Issue 4	ESCA MSG	Final issued for publication	06/05/26
Issue 5			
Issue 6			
Issue 7			
Issue 8			

1. Executive Summary

These Guidelines have been developed to support consistent, constructive, and positive engagement between the subsea cable industry and the fishing industry throughout all stages of a linear cable project. They recognise the importance of both sectors and aim to minimise disruption to fishing activities and cable operations through early dialogue, open information sharing, and agreed good practice.

The document outlines the key differences between cable types and fishing gears, and highlights how an understanding of regional fishing activity and seabed conditions can improve project planning. It sets out the roles and responsibilities of asset owners, Fisheries Liaison Managers (FLMs), Fishing Liaison Officers (FLOs), and fishing organisations, with a focus on maintaining regular communication, building trust, and ensuring that relevant information is provided in an accessible and timely manner.

Engagement is encouraged from the earliest concept stages of a project, continuing through route design, survey, installation, operations, maintenance, and decommissioning. The Guidelines describe opportunities for liaison at each stage and provide examples of the types of information that should be exchanged. They also reinforce the need to follow recognised communication channels, including KIS-ORCA, the Kingfisher Bulletin, and Notices to Mariners.

Where interaction between fishing activity and cable work cannot be avoided, the Guidelines promote the use of reasonable mitigation measures and guidance around practical steps to work together. Established emergency procedures for snagging incidents are also referenced to support safety at sea.

Overall, these Guidelines provide a practical framework to help cable owners, fishers, and other stakeholders work together, reduce the risk of conflict, and support coexistence in shared marine space.

2. Introduction to the guideline

The European Subsea Cables Association (ESCA) recognises the importance of early, collaborative constructive and positive engagement with the fishing industry at all stages of cable development and operations. The aim of this industry guideline is to minimise the potential for disruption to activities both for cable works and fishing activities.

The subsea cable industry strives to establish and maintain good working relations with fishing interests and all other marine users. In recognition of the importance of a good working relationship between marine sectors, the need for a liaison guideline for linear cables has emerged.

This guideline has been produced in collaboration with fishing stakeholders, Department for Environment, Food & Rural Affairs (Defra), The Crown Estate (TCE), Crown Estate Scotland, Scottish Government, Department for Science, Innovation and Technology (DSIT), Department for Energy Security and Net Zero (DESNZ) and other stakeholders in order to ensure that it highlights recognised and agreed good practices in fishing liaison for subsea cable projects and to provide a consistent approach to liaison between the sectors to maximise opportunities for coexistence.

Guideline mission statement

Collaborators on this guideline commit to early, constructive and positive engagement through the whole life cycle of a subsea cable including route design, survey, installation, operation & maintenance, decommissioning & recovery.

The guidelines support a consistent approach for: engagement, data sharing, communication, notification of activities, and management of expectations of cable owners and the fishing community.

Established good practices produced through cooperation between sectors maximises the opportunities for positive engagement.

These guidelines could be broadly applied to all relevant fishing vessels regardless of nationality and could be applied where appropriate in European and surrounding waters or even worldwide in the absence of local guidance.

3. Scope of the guideline

This guide aims to cover the entire project lifecycle including route design, survey, installation, maintenance and decommissioning activities for linear cables.

The term linear cables refers to subsea cables not within a designated offshore zone such as Offshore Renewable Energy Installations (OREI) and broadly covers the following types of cables: telecoms, power interconnectors and export power cables. Inter array cables are not considered linear cables. Please note, the portion of an export power cable which lies within a windfarm area may be subject to differing guidelines such as FLOWW.

For the purpose of this document, fishery liaison and engagement should follow the same principles for all linear cables. Where there are differences there will be two sections covering the categories 'telecoms' and 'power' and how those differences may impact liaison and engagement.

In addition to adherence to the guidelines, individuals should satisfy themselves of the legal position regarding any associated regulatory requirements. Adherence to the guidelines does not alter the application of any regulatory requirements, for example in relation to marine licence applications.

4. Introduction to the sectors

Telecommunications cables facilitate global communications, financial transactions, cloud services, remote work and tele-based applications like e-learning and tele-medicine. Recent studies assess that approximately 99% of global intercontinental communications are carried by subsea cables, connecting continents and island communities contributing to, and facilitating almost all aspects of modern society.

Power cables allow energy transmission between countries via interconnectors, balancing energy production and demand across continents, as well as bringing energy ashore from offshore renewable installations. They also distribute energy between areas within the country for example, to and between island communities.

The fishing industry encompasses all activities including catching, processing, storing, transporting and selling seafood products. Fishing provides employment to around 7,000 direct FTE roles and many more shoreside. Fishing provides a protein source for human consumption and is critical for food security. The fishing industry involves a diverse range of operations from small-scale local fishing activity to large international/nomadic corporations. Approximately 79% of the UK fleet is represented by vessels under 10 metres in length.

4.1 Cable types and distinctions

Annex 1 contains further details on sectoral differences such as the differences in physical characteristics and Section 6 contains high level information on planning timescales, installation durations and notification periods, illustrated by Figure 1.

This information can support fishers in understanding the type of project proposed, uses of the cable once installed, and general understanding of the type and scale of proposed activity. There are key differences between telecommunications and power cable activities which can change the type of engagement that is needed prior to and during project activities.

4.2 Fishing gear types and distinctions.

Annex 2 contains information on fishing gear types including sizes and expected penetration depths. These guidelines describe practices that are applicable to all fishing types. Liaison and engagement should be tailored to the type of fishing taking place in specific areas along a cable route.

This information can support the subsea cable industry in understanding the diversity of fishing gears and activities that may take place in a region. This can allow the subsea cable industry to meaningfully engage with the fishing sector and help inform decision making. Regional variations in fisheries can be significant, and an understanding of the diversity is critical to ensuring engagement with the correct audience at the appropriate level.

5. The importance of engagement and information sharing

Engagement should be established at the earliest opportunity for effective communication and to maximise reduced impact between industries. This section outlines the general principles of engagement.

5.1 Engagement Principles

It is important for both the fishing industry and linear cable owners to recognise the need to protect fishing interests and the need to supply telecommunications and power links.

This can only be achieved through timely and meaningful engagement between the sectors. Effective engagement relies upon mutual respect, understanding, and recognition of the importance of both industries to facilitate reasonable endeavours to reach agreement.

Both parties should be mindful of the following when engaging with each other:

Ways of working

- Early engagement is vital to constructive dialogue between sectors and most effective for building working relations through the lifecycle of a project, leading to positive outcomes. The exchange of data must be done in a collaborative manner and in good faith, for both industries to build and maintain trust in the process. See Figure 1 for examples of where and how early engagement can take place.
- Engagement activities will vary through a project's lifecycle. Figure 1 summarises the stages and type of engagement
- Encourage the principle that the fishing and cables industries can work side-by-side and co-exist in a manner that respectfully shares the marine space.
- Projects are dynamic, with various contractors involved. When there are changes in personnel and/or roles, or between project phases, then the fishery liaison needs to be handed over to ensure continuity for fishing stakeholders.

Sharing data and information

- Commit to open sharing of information that is relevant to the intended recipient and communicate with each other honestly, openly and transparently.
- Provide evidence-based data/information in a way that is easily understood and accessible. Each party will treat shared data confidentially. This can include the of use of Non-Disclosure Agreements (NDAs) if appropriate to support sharing of sensitive information (e.g. early route planning, or sensitive fishing grounds).

- Parties involved must ensure they comply with applicable legal requirements on handling personal data and the sharing of information and data. These guidelines are not a substitute for considering relevant legal obligations (and seeking independent legal advice if necessary), and adherence to these guidelines should not be understood as satisfying the relevant legal obligations and requirements.
- The fisheries data received should be interpreted in the correct way and external expertise engaged to do so if necessary. There is a risk that if fisheries data is not interpreted correctly that subsequent fisheries assessment and statements may be refuted by the fishing industry. Similarly, cable route planning data, burial risk assessments etc. all require an understanding of cable engineering to interpret appropriately.

Meeting conduct

- Regular engagement is encouraged, however, meetings should be planned efficiently and consider the limited time and resource availability to both parties.
- For critical project phases and more significant feedback from either party, face to face meetings are preferable and encourage better cooperation, however these should not be required frequently and may not be possible to arrange for all parties.
- By mutual agreement, consideration should be given to providing more regular bi-directional engagement by e-mail/WhatsApp etc. especially during the operational phases of a project
- Avoid arranging meetings without being able to provide any notable update – ensure meetings are well planned with clear updates and expected outcomes.
- Communicate the purpose and need for a meeting, recognising that fishers will need to find time to participate which takes them away from their business.
- Be considerate of when meetings are scheduled relative to stakeholders' availability to ensure the opportunity for participation. For example, individual fishers may not be available during the day-time and are often restricted by tides.

General principles

Developers and fishers will inevitably mostly engage where, at least initially, there are opposing interests i.e. requirement to install a subsea cable through an area of seabed utilised for fishing. As such the below escalation steps can be followed to find suitable resolutions.

- **Avoid.** Developers should aim to avoid negative impacts from development activities on regional fishing activity.
- **Minimise.** Where avoidance is not possible, every reasonable effort will be made to minimise the potential impact.

- **Mitigate.** Where residual impacts exist, mitigation measures should be considered to reduce the impacts on the stakeholder, for example being considerate to fishers activities when planning surveys, cable installation & maintenance operations, employment of an FLO etc.
- **Evidence**. Where residual impacts still exist on an individual, when all other appropriate and reasonable mitigation measures have been exhausted, co-operation payments may be considered. These should only be agreed on the basis of factually accurate and justifiable claims, supported by the necessary evidence and formalised in written agreements.
- **Compensate**. Where in combination residual impacts are considered significant, there may be a requirement for mitigation or compensation at an industry wide level to offset any impacts to the fishing industry, as opposed to individual financial compensation payments.

6. Roles and responsibilities

Good engagement will involve a number of different roles with various responsibilities across both the subsea cable and fisheries sectors. The below is a non-exhaustive list of recommendations of what should be included within the parameters of some of these roles.

6.1 Asset owner and/or representative

The asset owner is the organisation or group of organisations who do, or will ultimately, own and/or operate the subsea cable once it is installed. For the sake of ease this term is to be used for the lifecycle of the cable.

An asset owner/representative should:

- Appoint a dedicated in-house manager responsible for fisheries liaison, often referred to as a 'Fisheries Liaison Manager' (FLM) (see below section).
- Endeavour to liaise with other projects in the area to ensure they are aware of potential cumulative impacts on the fishing industry (as well as other users of the marine space) and seek opportunities to cooperate with other projects in the region to minimise impacts.

6.2 Fisheries Liaison Manager (FLM)

Some cable owners/installers may have a dedicated in-house manager responsible for fisheries liaison, who represents their company on all fisheries related issues. Other companies may appoint a nominated individual to manage fishing engagement alongside separate responsibilities. For the purposes of this document, this role is referred to as a Fisheries Liaison Manager (FLM). It should be noted that companies may have individuals undertaking this role with different titles or terminology. Telecommunication cables are unlikely to have a dedicated FLM and it is likely that an FLO (see below) would report directly to the asset owner/representative.

This is an example where there may be key differences between subsea cable sectors. During engagement all parties should be mindful of the sector they are engaging with.

Other cable owners may outsource the representation and engagement functions to a specialised third-party contractor/consultant, or a cable owner may decide to handle fisheries liaison on a project-by-project basis.

Where external Fishing Liaison Officers (FLO) are contracted (see below section) the Fishing Liaison Manager (FLM) should be their interface with the asset owner/rep, to ensure that there

is a person responsible for representing the asset owner/rep when meeting the fishing industry, and also manage the day-to-day activities of the FLO.

In general, the duties of the FLM should comprise as a minimum the following:

- Management of FLO activities and liaison between fishing organisations and their company;
- Be the point of contact for the company to support engagement with the relevant government departments and fishing organisations such as national federations, associations, inshore fisheries groups or individuals (directly or via FLO/FLM);
- It should be noted that for confidentiality it may not be possible to disclose the asset owner during the early project planning stages – therefore engagement via an FLO/FLM can facilitate earlier meaningful engagement.
- Be responsible for taking up, with their company, problems or suggestions raised by the fishing organisations;
- Be responsible for informing all relevant fishing organisations, individuals and government departments, giving reasonable notice prior to the commencement of any operations; and
- Arrange for the relevant government departments and fishing organisations to be kept well informed (in general terms, on a mutually agreed regular basis) during all phases of an installation/maintenance project;
- Ensure a 'live' and up to date list of stakeholders (fishing organisations such as national federations, associations, inshore fisheries groups or individuals) for a project and regularly review the list. This is fundamental to effective engagement and information exchange.

To ensure that these duties are carried out effectively the FLM or appointed FLO should:

- Have an awareness of the fishing industry specific to the region and its possible interaction with the cable installer/owner;
- Initiate and maintain good relations with the fishing organisations such as national federations, associations, inshore fisheries groups or individuals, and relevant government departments;
- Progress any matters referred to by these bodies and ensure, where necessary, a co-ordinated response;
- Act as a point of contact directly or via an FLO for the provision of advice on fisheries matters;
- Remain in contact with project managers and marine operations to keep up to date with timing and activities due to take place in order to inform fisheries stakeholders in a timely manner.

6.3 Fishing Liaison Officer (FLO)

The FLO is one of the representatives of the cable project who will engage with fishing stakeholders regularly. The FLO is usually a consultancy, rather than a point of contact within the cable owner company, whereas the FLM has a different role (see above FLM). They should be the conduit for information exchange between the asset owner/rep and the fishing interests who target the area. The general duties of the FLO include:

- Establish a strong positive working relationship between the fishing industry and asset owner through regular, quayside engagement.
- Facilitate co-operation and seek ways to assist coexistence between the fishing industry and linear cables.
- Have a detailed understanding and awareness of the fishing industry within the region/area of project development.
- Have a detailed understanding of the potential impacts of the development on fishing activities.
- Ensure timely provision of relevant and accurate information to appropriate stakeholders. Figure 1 includes more information on recommended timeframes.
- Work with stakeholders to resolve any issues, or conflicts arising, where practicable.
- Prepare and maintain a project specific register of local key contacts and stakeholders.
- Liaise with fishing vessel skippers with the objective of relaying their concerns regarding site sensitivities and any other issues back to the FLM (e.g. to inform project assessments (e.g. EIA) or route planning).
- Promote methods of work which minimise disturbance to both the fishing industry and linear cable owner.
- Monitor fishing activities in the area.
- Ensure that data provided by the fishing industry is fed back to the project developer in a timely manner so that it can be considered appropriately in the design and implementation of the project.
- In certain circumstances, and generally more for power cables or renewables activities an Offshore FLO (OFLO) may be considered as a mitigation onboard vessels. Further detail can be found in Annex 3 Mitigation Measures.

6.4 Fishing Industry Association's & individual representatives

The fishing industry representatives are responsible for meaningful engagement with developers to ensure both industries observe minimal disruption during activities. Fisheries associations, national or regional, can act as a single point of contact for many vessels in an area. However, in the absence of associations,

individual vessel skippers/owner need to represent their interests with the developer.

The fishing industry and their representatives should:

- Encourage the use and awareness of these best practice guidelines to ensure fishers are aware of industry recognised protocols and processes for fishing liaison.
- Associations should endeavour to provide high level details of who targets the area and for what species.
- All should cooperate with engagement and consultation in a timely manner.
- Avoid any obstruction of survey and cable installation & maintenance operations.
- Provide timely and accurate information, on an agreed basis, required to facilitate the development of a survey strategy so as to minimise impacts. (Confidentiality of information must be regarded).
- Take heed of all Notices to Mariners (NtMs), respecting safe working distances that are requested.
- Clearly mark static fishing gear, using easily visible buoys and with Port Letter Number (PLN), or other identifier.
- Communicate proactively with offshore personnel, informing them of fishing gear locations within cable asset areas so that they can make best endeavours to work around fishing gear.
- Inform cable owners of other operators/developments in the vicinity of the project if they become aware of new/upcoming projects to support information sharing.

6.5 Other roles

There may be a number of other fishing representative roles involved through the lifecycle of a cable which besides those detailed above, a number of which are briefly mentioned throughout this document and also included in the glossary of terms.

- Offshore Fisheries Liaison Officer (OFLO)

7. Engagement throughout the lifecycle of a project

This section outlines the general project lifecycle, timing of opportunities for engagement, information sharing and feedback between sectors and a summary diagram can be found at the end of the chapter.

Understanding the various stages of a project enables stakeholders to see how activities may be affected at different times and helps asset owners to know when to engage the fishing community.

The below diagram (which is also available as a stand-alone document) provides a high-level over-view of the recommended interfaces throughout the lifecycle of a subsea cable. For more detailed information at each stage of the lifecycle, please continue to read this chapter.

7.1 Concept design and business case

WHO: Cable developer and/or representative for the project.

Fisheries Liaison Manager (FLM) / Fisheries Liaison Officer (FLO)

Fishing industry associations and/or representatives.

WHAT: During early route design, asset owners should engage with fishing organisations to seek advice on fishing activity in a particular area. This can facilitate the sharing of data between both parties on potential locations for cable installation and known areas of high level or sensitive fishing activity and seasonality of fishing activities. Fishers may also have local insight and knowledge on seabed hazards and conditions that could be shared to support route planning.

HOW: Cable developer or their representative to make contact with the national fisheries representatives such as NFFO, SFF to seek advice on the best way to engage and gain insight in a regional or local area. The national bodies can assist to provide local points of contact and may be able to give high level advice on the types of fishing in the area.

Where possible, meet fishers on the quayside to discuss and explain the project and build trust. If an external FLO is engaged on a project at this stage then it can be beneficial for an external FLO to be accompanied by an asset owner or asset representative.

The use of Non-Disclosure-Agreements (NDAs) may be considered to facilitate sharing of sensitive information.

A questionnaire can be shared with fishers to obtain data/ information on fishing activities within the area of search. An example questionnaire is in Annex 4.

DATA: Data that can be provided by fishers:

- Details and locations of important fishing grounds.
- Seasonality and types of fishing operations.
- Fisheries limitations in the region
- Inform asset owner and/or rep of other operators/developments in the vicinity of the project if they become aware of new/upcoming projects to support information sharing (within the parameters of any confidentiality arrangements).
- General information that may be useful to cable developers that would enhance burial (i.e. local seabed knowledge, current knowledge)

Data that can be provided by cable developers:

- Project background/justification.
- Charts of potential cable route options.
- Provisional dates and details of the project activities.
- Installation methods / specifications, if known

BENEFIT: Cable owners may benefit from local fisheries knowledge at an early stage which may be incorporated into early routing decisions. Good engagement often leads to strong relationships (i.e. knowledge of seabed conditions) and opportunity to deconflict early. Setting positive working relationships from the outset.

Fishers will benefit from early insight into new cables being proposed and give an opportunity to share data at an early stage to feed into the route design process.

TO NOTE: The project is still in concept stage during this phase. The routing will need to account for the base needs of the project (latency/reliability/diversity) primarily and may still have a lot of undecided factors. Engagement should be held in good faith but many projects remain in this phase over many years with several design iterations and many do not progress. Dialogue without prejudice at this very early stage can be beneficial in project planning. Where projects do not go forwards or are postponed then asset owners should make best efforts to communicate this with the fishers they have been in communication with. This feedback loop is important for maintaining positive relations.

7.2 Cable Route Study

WHO: Cable route study author (likely to be consultant, cable installer, or third party)

Fishing industry representatives

Asset owner representatives

WHAT: The Cable Route Study starts to collect and examine in detail all available information that may affect the cable project. Detailed, up to date and relevant fishing information should be used to feed into this part of the process and assist with decisions relating to cable routing and cable protection.

Developers should make efforts to ensure development activities do not negatively impact local and regional fishing activity using the avoid, minimise, mitigate model.

By the end of this stage the survey route will be finalised and communicated to stakeholders, including fisheries in the vicinity of the route. If fisheries data has not been considered, fisheries stakeholders need to be informed as to why (feedback loop).

Once the survey route is set, major changes cannot be accommodated.

HOW: Where possible, project developers/owners should disseminate information to their fisheries contacts database and meet fishers on the quayside to discuss to explain the project and build relations. It is beneficial for an external FLO to be accompanied by a representative from the company (see Fishing Liaison Manager Section 5.2).

The use of Non-Disclosure-Agreements (NDAs) may be considered to ensure trust and confidentiality of data and information shared by both parties.

DATA: Data that can be provided by fishers:

- Aggregated, or individual VMS, iVMS, AIS and plotter data from local vessels.
- Details of important fishing grounds.
- Seasonality of fishing operations and regional limitations.
- 3D seabed mapping if available.
- Inform asset owner and/or rep of other operators/developers in the vicinity of the project if they become aware of new/upcoming projects to support information sharing (within the parameters of any confidentiality arrangements).

Data that can be provided by cable developers or representatives:

- Share preliminary route information with fishing industry representatives.
- Project details and restrictions or routing constraints. It is useful for fishers in the region to know why a route has been chosen and what constraints a cable installer may be subject to.
- Installation methodologies and specifications
- Preliminary expectations of timing and details of survey and installation if available.

BENEFIT: Fishers will have sight of upcoming activity in the vicinity of their fishing grounds.

Asset owner/rep will be able to take into account fishing information in route design and planning.

Contributes to an accurate assessment of potential impacts of the cable on fisheries and any residual risk to the cable from fishing activities.

Build good working relations between project and fishing representatives.

TO NOTE: Whilst fishing activity is a key factor in routing, it is not always possible to incorporate every suggestion due to other constraints (shipping, other seabed assets, natural hazards, sensitive ecosystems etc).

It is important to note that accurate data on the location of vessels under 15 metres can be very difficult to obtain as currently VMS data is not published for under 15m vessels, hence it is important for the fishing industry to collaborate and share data and insight with the cable owner.

Individual vessel VMS and landings data can be requested from the MMO via a data release agreement under certain circumstances but it is often better to collect accurate data from the individual fishers via engagement – both for higher quality data, and also to build relationships and trust.

7.3 Cable route surveys

WHO: Fisheries Liaison Manager (FLM)

Survey contractor

Fishing Liaison Officer (FLO)

Fishing industry associations and/or representatives.

Asset owners

WHAT: Marine surveys to obtain detailed geophysical and geotechnical data of the seabed and its features. This information will be used to determine the exact route of the cable to be installed and burial depth of the cable.

With good engagement and sufficient prior notice, the route can be left clear of gear to avoid the need for requests for clearance of gear, or requirements to enter into cooperation agreements.

If mitigation measures are not sufficient there may be a requirement for static fishing gear to be relocated from the operational area during survey. In this case, cable owners may consider it necessary to enter into evidence-based cooperation agreements with demonstrably affected individual fishers. (For

more information on mitigation actions please see Annex 3: Mitigation Measures).

HOW: Fishers should be provided with a commencement date, corridor location and Notice to Mariners (NtMs) in advance of the operations.

Further quayside visits or virtual meetings could be arranged to help inform fishers of the upcoming works.

Notice to Mariners (NtMs)- see section 7.3 for more information and guidance.

DATA: **Fisheries to asset owner/rep**

Details of local fleet potentially impacted

If required, in conjunction with a cooperation agreement, supporting evidence of impacts of disruption.

Cable developer to fisheries

Detailed survey schedules

Details of survey equipment and methodology

Notice to Mariners (NtMs) – see section 7.3.

TO NOTE: Survey schedules will be flexible as working in the dynamic marine environment can lead to changes or delays at the last minute. Consistent communication through the right channels will help to ensure all parties are kept up to date.

Fishing gear must not be laid in front of vessels during operations or ahead of known operations.

Survey vessels will be restricted to their ability to manoeuvre and should be given the due space requested as part of the notice to mariners. All mariners are obliged to comply with COLREGS and applicable maritime safety regulations.

7.4 Cable route licensing

WHO: Cable developer and/or representative of the asset owner or licence applicant.

Fisheries Liaison Manager (FLM)

Principal system supplier

Fishing Liaison Officer (FLO)

Fishing industry associations and/or representatives.

Licensing bodies

WHAT: With a complete study and survey, the principal system supplier can now compile the full body of permitting documentation, which will include assessment of the cable's impacts on a variety of factors, for submission to regulatory bodies.

HOW: Interface will largely be with the statutory licensing body via formal consultation and should be through official channels.

DATA: All data would have been submitted to the statutory licensing body by the asset owner/representative for consideration and consultation. Details of liaison activities carried out should be included in the licensing application.

BENEFIT: If good engagement has taken place throughout the project lifecycle up until this point all stakeholders are likely to be fully informed of the project proposals and feedback already taken into account or remaining impacts discussed. This approach has the potential to reduce conflict in the application process significantly as details of the project should not be a surprise. It may be beneficial for engagement logs and use of fisheries data to be referenced in the application where appropriate to demonstrate that meaningful engagement has taken place during engagement ahead of the licence application.

TO NOTE: Regulatory processes may differ between different industries

7.5 Installation

WHO: Fisheries Liaison Manager (FLM)

Principal system supplier

Fishing Liaison Officer (FLO)

Fishing industry associations and/or representatives and individual fishers not represented by an association.

Asset owners

WHAT: Once all necessary licenses are in place, installation activities may commence. These activities cover pre and post installation works.

Fishers need to be made aware of all installation activities and be kept up to date through the operations.

With good engagement and prior notice, the route can be left clear of gear to avoid the need for requests for clearance or the need to enter into cooperation agreements.

If mitigation measures are not sufficient there may be a need for static fishing gear to be relocated from the operational area during survey. In this case, evidence to prove and demonstrate the need for relocation will be required.

Cable owners may consider it necessary to enter into evidence-based cooperation agreements with demonstrably affected individual fishers. (For more information on mitigation actions please see Annex 3: Mitigation Measures).

HOW: Advise fishers of planned activities in advance and endeavour to provide as much information as possible so all parties are aware of all aspects of the installation. Further quayside visits or virtual meetings could be arranged to help inform fishers of the upcoming works.

Submit Notice to Mariners (NtMs) through the appropriate channels including the Kingfisher Bulletin. See section 7.3 for more information and guidance on NtMs. Note that it is possible to submit proposed routes prior to installation that can be updated with As-Laid to ensure data is charted at the soonest possible opportunity.

Liaise with fishers in the field during vessel operations in compliance with COLREGs.

Following cable installation works, advise the as-laid position of the cable, via the UKHO & KIS-ORCA or cable awareness initiatives, as soon as it is known.

Once the operations are concluded, cable owners should rescind the active Notice to Mariners (NtMs) as soon as it is known there will be no further activities.

DATA: Principal System Supplier/FLO to fisheries

Notice to Mariners (NtMs) detailing any relevant safety zones – see section 7.3.

Detailed installation schedules including updates

Submit as-laid data to KIS-ORCA, UKHO or appropriate authorities. This is not typically available until some weeks following installation.

TO NOTE: As laid data may not be available until weeks after the completion of the work. An interim notification should be provided to communicate the presence of newly installed assets.

7.6 Operational life and maintenance

WHO: Fisheries Liaison Manager (FLM) or FLO

Fishing industry associations and/or representatives.

Marine maintenance authorities / service providers

WHAT: Business as usual operation of cable, which for power cables, may include routine surveys of the cable route and repair and maintenance activities. For telecommunications cables they typically will not have any further marine

activities except in the event of damage to a cable resulting in an emergency repair or possibly decommissioning activities at the end of the project lifecycle

HOW: Fisheries to be notified of any operations along the cable, either surveys, repair work or decommissioning activities

Cable awareness information should be compiled and distributed.

Notifications via Kingfisher Bulletin and directly to stakeholders if any hazards remain.

Cable positional data should be updated in KIS-ORCA if there is ever a change to cable position.

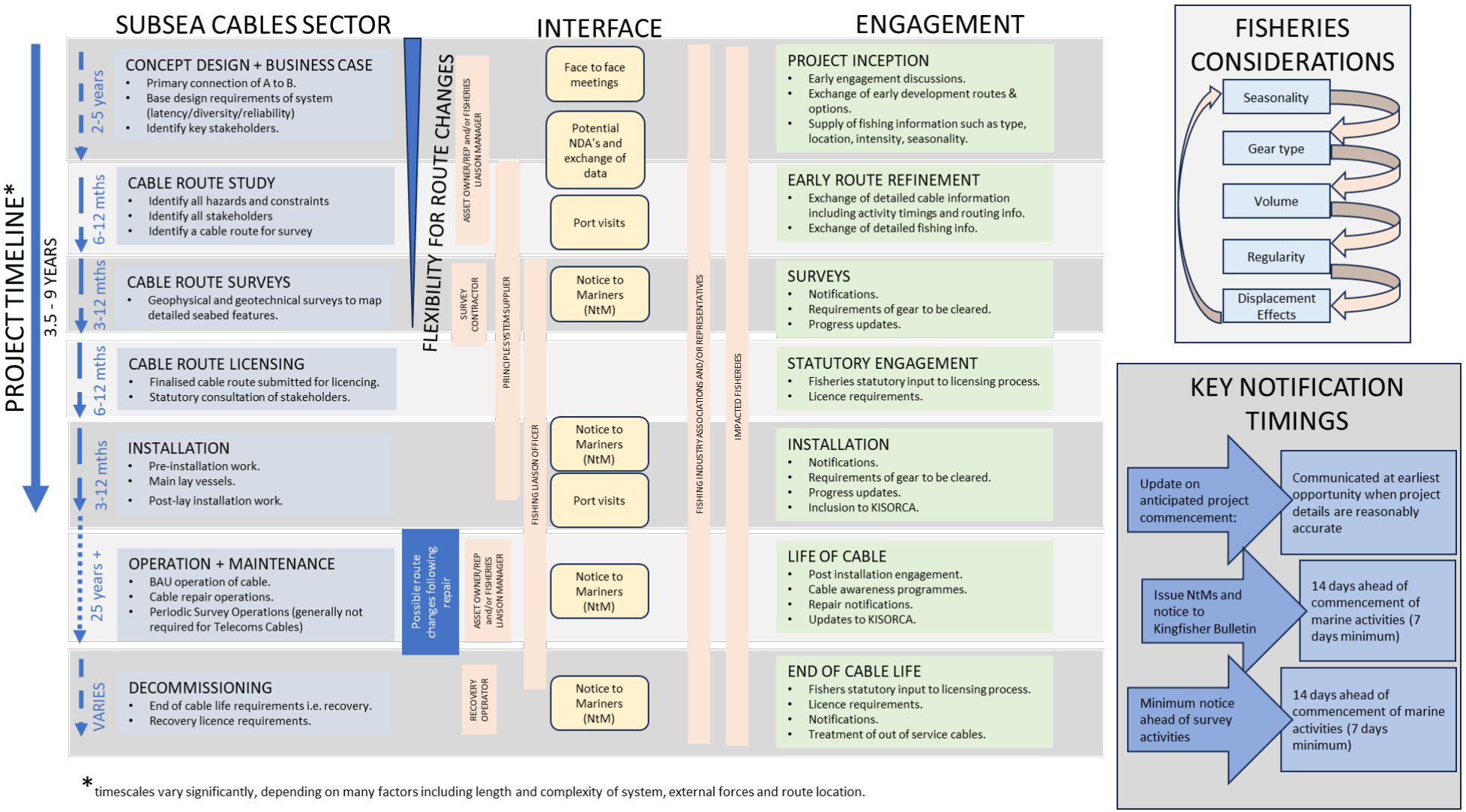
Fishers to report snagging or entanglement (See section 8 for Emergency Response Procedures)

DATA: Cable owner to fishers

A cable awareness chart showing the as-laid position of the cable once installed.
Information on any other activity that may change the nature of the seabed hazards in that location, for example, locations of any large boulders that have been moved during the installation process.
Notice to Mariners (NtMs) and notifications of any marine operations (routine surveys,cable repair or decommissioning activities).

TO NOTE: Repair operations and remedial works can lead to a change in cable position on the seabed.

Emergency repair activities are undertaken at short notice. In this event, endeavours are made to give as much notice as possible, but it may be 24 hours or less. This is unavoidable, as it is vital to urgently restore connections and critical services.



*timescales vary significantly, depending on many factors including length and complexity of system, external forces and route location.

Figure 1 1Recommended interfaces throughout the lifecycle of a subsea cable

8. KIS-ORCA, Kingfisher Bulletin, Notice to Mariners, Emergency Procedures

8.1 KIS-ORCA

It is strongly recommended that all cable owners actively promote cable awareness both to protect their assets and to support safety of other sea users.

Mariners are obliged to carry charts under SOLAS V Regulation 19 2.1.4 on official IMO recognised publications (paper charts) or ECDIS systems. Other systems are created to make safety information and cable locations more accessible to share with the fishing industry, and KIS-ORCA was developed (originally as KIS-CA) in response to maritime accidents involving snagging of fishing gear on subsurface infrastructure in discussion with the Marine Accident Investigation Branch (MAIB)..

Cable awareness data, covering the ESCA region, are produced by the KIS-ORCA project and are made freely available at no cost to the fishing industry. This includes: a frequently updated webmap; annually converted 'plotter files' for use on most fishing vessels; and regional awareness charts covering the ESCA region. More information is provided below.

ESCA and KIS-ORCA also offer guidance and emergency protocols in the event of a suspected interaction/snagging between fishing gear and subsea cables that can be found here https://www.escaeu.org/emergency-procedures/.
Marine Guidance Note 661 from the Maritime and Coastguard Agency (MCA) provides safety advice for anchoring and fishing in the vicinity of subsea cables:
https://www.gov.uk/government/publications/mgn-661-mf-navigation-safe-and-responsible-anchoring-and-fishing-practices

The Kingfisher Information Service – Offshore Renewable & Cable Awareness project (KIS-ORCA) is a joint initiative between the ESCA and the Kingfisher Information Service of Seafish.

The aim of the KIS-ORCA project is to provide fishers with accurate, up to date and free information relating to subsea cables and offshore renewable energy structures across Europe. It is a not-for-profit project focussed on maritime safety.

KIS-ORCA information is available to fishers in the following formats:

- Fishing plotter files - supplied on USB stick, all KIS-ORCA data is available in the most popular fishing plotter system formats and is updated annually. These files are also available to download from the website (https://kis-orca.org/downloads/).
- Awareness charts - produced A)regionally for key KIS-ORCA data areas and B) locally for each offshore wind farm. There are eight charts surrounding the UK and Europe and over 45 localised charts for each constructed offshore wind farm. These are available to download from (https://kis-orca.org/downloads/).
- www.KIS-ORCA.org - This interactive website allows fishers to view subsea cable and renewable energy structures on an interactive map (https://kis-orca.org/map/), download the latest data and ensure they are up to date with the very latest offshore activity news. The website has been produced primarily for fishing safety, although it also provides an insight into the offshore industries they share the seabed with.

Safety Notice:

It must be a priority of any subsea cable owner/operator to publish positional information for cable awareness e.g via KIS-ORCA and maintain the data to ensure it is accurate.

It is essential to be aware of the most up to date locations of subsea cables and renewable energy infrastructure, when fishing in the vicinity of such structures. It is essential fishers have all the information in relation to their positions available on board.

8.2 Kingfisher Bulletin

The Kingfisher Bulletin provides the fishing and marine industries with alerts of offshore hazards, activity notices and news, in the waters around the UK and Northern Europe.
It is free of charge and easy to access via a website, app and a personalised alerts service, the bulletin helps to:

- improve fishing safety
- protect lives
- prevent damage to structures/assets
- help offshore and fishing industries avoid conflict and share the seas

The Kingfisher Bulletin offers a simple web interface for operators to submit, update and manage their notices (https://kingfisherbulletin.org/submit-notice), with notices keeping the same sharable web link throughout the lifecycle of a project.

It is good practice for all subsea cable owner/operators to ensure that all offshore activity and potential seabed hazards are posted to the Kingfisher Bulletin. Similarly, all fishers should monitor the bulletin for notifications in their operational area.

8.3 Notice to Mariners (NtMs)

NtMs should be concise, to the point, contain essential information on what the upcoming activity is, and when and where it will be taking place. NtMs should not be used as the sole form of notification and should be supplementary information to already established communications with fishers. They form part of overall good engagement practices.

Good practice principles for formulating NtMs are:

- Using a short title which describes the location and main activity (or safety issue).
- Siting the most valuable information at the beginning (e.g. any information pertaining to navigational or fishing safety).
- Stating positional information in degrees and decimal minutes (DD° MM.MMM) to three decimal places (e.g., 53°45.786'N 000° 07.292'E). This should be in WGS 84 datum.
- Using an appropriate maritime chart to define the area where the activity will be taking place, or where the safety issue is located.
- Briefly describing the type of works to be undertaken, including whether equipment is to be left on the seabed and where buoys are moored.
- Ensuring appropriate dates, or a timescale of activities, are included. It should also state whether the proposed works will be 24 hours a day, and if not, the proposed working patterns.
- Stating the name and general details of vessel(s) engaged with the works (including the call sign, a VHF working channel, telephone number, and photograph of the vessels(s)).
- Including information on light sequences on anchor buoys, if works will be taking place during darkness.
- Stating contact details for the fishing representatives for the project, generally the appointed FLO.
- Providing 24/7 emergency contact details.

A NtMs template is available as Annex 5, and a standalone document can be requested from secreatary@escaeu.org

NtMs should be sent early enough to allow fishing vessels enough opportunity to relocate any gear deployed in the operational area in accordance with timescales noted in good practice advice in this document.

The nature of the installation of a linear cable means that work vessels operate continuously. This means that they are typically in any location only for relatively short periods of time and vessels will not typically be fixed in one location for prolonged periods. However, a work programme particularly for power cable installation may require a larger window of possible impact as installation activities of subsea cables can be highly dynamic therefore the anticipated timescales should be clearly communicated – and any reasons for potential deviation (e.g. weather, operational reasons) should also be communicated.

This can be a difficult balance when issuing NtMs to not overstate the degree of impact resulting in unnecessary relocation of gear, and early notification of works therefore direct engagement between FLO and fishing representatives is important to explain vessel activity. Active communication of any changes to planned activities is important to ensure fishers are aware of such changes.

8.4 Emergency procedures in event of snagging

If you suspect that you have fouled a submarine cable/structure the following action should be taken:

1. If weights are excessive and you suspect you are fast to a cable / structure, DO NOT endanger your vessel and crew by attempting to recover your gear.
2. Carefully plot your ships position as accurately as possible.
3. Advise HM Coastguard of your situation and call the 24 hour emergency number associated with the cable/structure and state that an incident is occurring which may concern a subsea cable/structure.
4. The closer to the surface a subsea cable is lifted when fouled by fishing gear, the more danger there is to the fishing vessel.
5. If it is thought prudent to slip, or cut one or both warps or bridles, in an attempt to clear a cable from the fishing gear, should always lower the gear to the seabed first. Attempting to slip anything bearing excessive weight should be avoided.

Emergency contact numbers can be found for assets in KIS-ORCA – either pan/zoom to the asset, or use the search box and click on any item:

https://kis-orca.org/map/

If you feel you may have a claim for compensation for loss of gear you should contact the appropriate authority within 24 hours of arrival in port. This may be the emergency contact found on KIS-ORCA or the HM Coastguard>

Full particulars of the incident should be given, and full details recorded in the official log, including the date and exact time, the vessel's position at the time of the incident, the depth of water and a description of the cable if sighted including additional evidence such as photographic or video footage.

Under the Submarine Telegraph Act 1885 cable owners are obliged to compensate the owners of vessels who can prove that they have sacrificed an anchor, net or other fishing gear in order to avoid injuring a submarine cable.

ESCA acknowledge the obligation of cable owners under the above act and support the principle of sacrificing gear to avoid damaging a submarine cable. It is recommended that compensation be paid on a "New for Old" basis. This procedure requires the incident to be evidenced and relies upon trust between both parties to ensure that fraudulent claims are not made.

ESCA Guideline 01 - Appendix 03 - Fishing Claims Forms & Guidance Notes, provides information, guidance on how to apply for compensation of lost gear including template forms. The guideline can be downloaded from https://www.escaeu.org/guidelines/.

9. Summary

These Guidelines have recognised the importance of early and constructive engagement between the fishing industry during all cable operations. A collaborative and positive approach will minimise the potential disruption to activities, both for cable and fishing. These Guidelines provide support to anyone undertaking work related to subsea cables, provides a consistent approach to liaison supported by fishing stakeholders, as well as providing information to fishing stakeholders to better understand a subsea linear cable project.

Both sectors and other stakeholders have a responsibility to work together to minimise impacts to seabed users and to maximise opportunities for coexistence. Collaboration and innovation is key – for example, development of cable friendly fishing gear, or targeting sufficient burial depth of cables (where seabed conditions allow) is beneficial for all as it would reduce the likelihood of interactions between fishing gear and cables and enhance safety at sea.

10. Revision Process

This document has been created with the agreement of all contributors. Any edits will be incorporated by the following process.

1. Any identified required updates (by any party) are notified to the Maritime Subgroup of ESCA.
2. All parties listed on the document - including government depts - will be invited to comment. The target review period will be 2 weeks.
3. Following the results of the review process, all comments will be collated and the final revision version created. This process will aim to be completed within 2 weeks.
4. The Final draft of the document revision will be issued to all parties for approval on a no-objection process. A four week period will be set to receive objections within.

The aim will be to complete the process within an 8 week period, but these can be amended on request. Every party will be entitled to a veto and so the document will only be updated with a full consensus.

ANNEXES

Annex 1: Subsea Cable Sectoral Distinctions

Table-1: Different cable types and their uses

[1] The table displays typical burial depth. 'Deep burial' can be undertaken for some cable installations but would be on a case-by-case basis depending on the geomorphology and is considered atypical to standard practice. Where deeper burial is used, this can make it more difficult or impossible to repair or recover cables.

Subsea Cables				
Type	**Approx. diameter**	**Typical target burial depth**[1] (subject to conditions)	**Use**	**Burial methods**
Telecommunications	17-60mm	0-1.5m	Subsea telecommunications cables carry approximately 99% of the world's global communications.	They are small in diameter and can be surface laid or buried (typically plough buried to target depth 1.5m where feasible) to protect the cable from external aggression. Plough burial is a 'simultaneous lay and bury' operation meaning impacts on other sea users are short term and transitory during that phase. They can also be installed through ducts near to landfall as well as being protected by articulated pipe. Telecommunications cables can have further external protection applied such as rock or

Subsea Cables				
Type	**Approx. diameter**	**Typical target burial depth**[1] (subject to conditions)	**Use**	**Burial methods**
				articulated concrete mattressing, but this is mostly seen at crossings of power cables and pipelines and not commonly applied for routine protection of telecommunications subsea cables.
HVAC renewable energy – inter-array cables	33kv . 70-130mm 66kv . 160-185mm	0-1.5m	Inter-array cables connect turbines within an offshore wind farm and can be 33-36kv or increasingly 66kv. These will be contained within an offshore wind farm area.	Inter array cables are typically protected through burial. Inter array cables will generally not have additional external protection applied.
HVAC distribution cables 132kV	100-300mm	0-1.5m	These cables can serve inter-island connections or be part of a distribution network involving subsea links. Fibre-optics can also be included within the cable to undertake certain functions but would not generally be used for general telecommunications.	Cables may be surface laid, ploughed, jetted, trenched or protected by ducting, mattresses or rock and predominantly include HVAC trefoil construction.

Subsea Cables				
Type	Approx. diameter	Typical target burial depth[1] (subject to conditions)	Use	Burial methods
HVAC transmission cables above 132kV	250-300mm	0-1.5m	Predominantly of trefoil construction.	These cables may be surface laid, ploughed, jetted, trenched or protected by ducting, mattresses or rock etc.
HVDC transmission cables above 132kV	100-180mm	0-1.5m	Predominantly one pole per cable and laid as a bundle of two power cables and one fibre optic cable. Cables may be separated at landfalls or may be laid as separate cables though this is not common.	Cables may be surface laid, ploughed, jetted, trenched or protected by ducting, mattresses or rock etc.
HVDC renewable energy export cables & interconnector cables	130-250mm	0-1.5m	As with transmission cables – these are bundled cable systems, comprising of two power cables and usually one fibre optic cable for transmission of data on operations. Renewable energy export cables carry power to shore from a wind farm or other renewable energy installation.	These are also likely to be buried by ploughing, jetting, trenching and are likely to have external protection applied.

Subsea Cables				
Type	Approx. diameter	Typical target burial depth[1] (subject to conditions)	Use	Burial methods
			Interconnector cables connect the transmission system of two separate networks.	
Other types of subsea cable	Variable	Variable	Other types of subsea cable may include scientific cables (i.e., tsunami early warning systems, research arrays etc); military cables; cables related to oil and gas facilities or extractions; composite cables with combined purpose; legacy cables such as out-of-service telegraph or coaxial cables;	

Annex 2: Fisheries gear types

The table below is intended to aid the understanding of the types of fishing gear that may be used – regional variance is noted in the last column. Application to other areas should be undertaken with care as other gear types and characteristics are likely to apply.

Gear characteristics:	Key species:	Average vessel size:	Seabed interaction:	Likely penetration depth:	Ground loyalty:	Gear marking and repositioning factors:	Sensitivity and consequence of ground closures (temp):
Static Gear							
Potting – lobster and crab							
Pot numbers can range from a few hundred to several thousand. Strings can range from 10 pots - >50 pots. Vessel size determines string length	Lobster/ Crab	Under 10m mainly inside 6 nm but over 10 m outside of 6 nm	Gear static on seabed with anchors	25 to 50mm avg	Very High	Vessel port letters/numbers are shown on end markers. Repositioning is influenced by vessel size and number of pots they can carry	Very high
Potting - whelk							
Pot numbers can range from a few hundred to several thousand. 20 to 80 in a string depending on vessel size/area.	Whelks	Under 10m mainly inside 6 nm but over 10 m	Gear static on seabed. Sometimes with anchors.	25 to 50mm avg	Medium	Vessel port letters/numbers are shown on end markers. Repositioning is influenced by vessel size and number of pots they can carry	Medium.

		outside of 6 nm					
Static Nets							
A net is approx. 100m. Several nets in a fleet. For example 4 to 6 fleets per boat. Skate gear is fished in longer fleets up to 8 nets and 6 fleets.	Dover Sole, skate, Bass, Plaice, Turbot, Brill, Cod, Pollack (most demersal species)	Under 10m mainly inside 6 nm but over 10 m outside of 6 nm	Light gear. Fleets with anchored ends	25 to 50mm avg	Medium	Vessel port letters/numbers are shown on end markers. Gear can be tended.	Medium
Longlining							
Lines of baited hooks are deployed either on the seabed or midwater. Lines can be very long (miles) in length.	Bass, skate (demersal species and sometimes pelagic species).	Under 10m and Over 10 m	Very light gear, sometimes light anchored ends	25mm	Medium	Vessel port letters/numbers are shown on end markers. Gear can be tended.	Medium
Rod and Line (mostly static during fishing operations but highly mobile between locations)							
A vessel can deploy multiple rod and line	Bass, mackerel, cod, pollack and other demersal species	Under 10m mostly	Light gear with weighted hooks	No penetration	Medium/Low	Restricted by location of suitable fishing grounds	Medium/Low

Mobile Gear							
Beam Trawl							
Net is held open by a beam on shoes at each end. Net lengths can vary and may contain tickler chains or chain mats. Towed behind the vessel, length of which varies by vessel and water depth.	Demersal species such as gadoids and flatfish	Under 10 m but mostly over 10 m	Shoes on the beam and any chains associated with the net.	5-10 cm	Medium	Restricted by location of suitable fishing grounds	Medium
Demersal/Otter Trawl							
Net is held open by trawl doors/otter boards. On rough ground rock hoppers can be fitted to the leading edge of the trawl. Towed behind the vessel, length of which varies by vessel and water depth.	Demersal species such as gadoids and flatfish	Under 10 m but mostly over 10 m	Trawl doors/otter boards and any rockhopper requirements.	5-10 cm	Medium	Restricted by location of suitable fishing grounds	Medium
Scallop dredging							
Bags of metal rings with a toothed bar on leading edge. Queen scallop dredges do not have a toothed bar but use tickler chains. Each dredge is approximately 1 m in width and the number of dredges	King and queen scallops	Under 10 m but mostly over 10 m	Towing bar and toothed bar for king scallop. Towing bar and tickler chains for		Maximum 20-30 cm	Restricted by location of suitable fishing grounds	Medium

towed is determined by the size of vessel (eg 10 dredges per side).			queen scallop				
Bottom drift netting							
A net is approx. 100m. There can be several nets in a fleet with boats working differing number of fleets.	Dover Sole, skate, bass (demersal species)	Under 10m	Light, gear contacts seabed, but with limited weight (moved by tide)	5mm	Very High	Vessel port letters/numbers are shown on end markers. Gear can be tended.	High
Surface drift netting							
A net is approx. 50m. There can be several nets in a fleet with boats working differing number of fleets..	Herring	Under 10m	Surface gear driven by tide	No penetration	Medium	Vessel port letters/numbers are shown on end markers. Gear can be tended.	Medium
Cockle Suction Dredge							
Suction dredge suspended beneath the vessel while in operation on the seabed.	Cockles	Mostly over 10 m	Suction dredge head on seabed	25 to 50mm	Extremely high	Restricted by location of suitable fishing grounds and tidal conditions	Extremely high.
Oyster dredge							

Multiple dredges used, each dredge approx.. 1m. Approx 120kg per dredge.	Oysters	Under 10m	Rakes across the seabed throughout fishing.	25 to 50mm	Very High	Restricted by location of suitable fishing grounds and tidal conditions	Very High.

[1] Reduction of activity rather than loss of earnings.

Notes:

- If there is no agreement to remove gear from the survey or construction area it is advisable for daylight recces to be undertaken before a survey vessel commences, especially if surveying into darkness.
- Please review MMO gear marking advice for more information: Marking of fishing gear, retrieval and notification of lost gear - GOV.UK

Other useful resources on fishing gear types:

- Database home: https://seafish.org/responsible-sourcing/fishing-gear-database/
- Trawl example: https://seafish.org/responsible-sourcing/fishing-gear-database/gear/demersal-trawl-general/

This guide is also available in one download:

- Basic Fishing Methods: https://seafish.org/document/?id=9f2fcd97-8bef-4c28-9185-b219b8eedf8a

Annex 3: Mitigation Measures

Where avoidance of interactions is not possible, mitigation measures to minimise the impact of developments on fishing activity should be incorporated into project design and, where feasible, these measures should be developed in partnership with affected local fishers.

There are several ways a project can work with the fishing industry to minimise the impact of project activity such as, for example, considering timing of specific activities in the context of seasonal fishing activities. Doing this will help to build a positive working relationship with, and minimise the impact on, fishers.

By considering the below mitigation measures, the project may be able to avoid, or reduce, the need for co-operation agreements:

- Engage, well in advance of any activity, with key local fisheries stakeholders to discuss the survey and construction methodologies and timescales;
- When planning site investigation survey works, determine with the survey manager what fishing gear clearance they ***need*** to be able to complete the works and, in so doing, aim to minimise the affected area;
- Investigate whether it is possible to apply a flexible approach to the survey whereby complete clearance may not need to be requested but as an example, phased, shorter-term, clearance as the survey progresses may be an option;
- If full clearance is required, determine if it is possible to undertake the survey outside of the local peak fishing season;
- Consider if it is possible to phase the closures to minimise the area of impact to the fishing industry;
- Scout surveys can be undertaken to determine baseline fishing activities;
- Work with other developers in the vicinity and other stakeholders (e.g. TCE and CES) to coordinate surveys if appropriate to minimise the overall cumulative impact.

Offshore Fishing Liaison Officer (power and renewables only)

- Whilst a land-based FLO who is on call for the fishing industry to contact during operations is more common, there may be some occasions when a specific operation would benefit from having an Offshore Fisheries Liaison Officer (OFLO) onboard a main lay/specialist vessel if the work is taking place in an area with high fishing activity to minimise the potential for interaction between fishing activity and cable operations.
- Offshore FLOs are generally only considered for renewables or power cable activities which may take place in an area over a longer period of time and are not considered necessary for telecommunications cable activities unless there is a specific need identified as a mitigation.
- Prior to contracting an OFLO, the manager within a company responsible for fisheries liaison (See Fishing Liaison Manager [Section 5.2]) should discuss the requirement with the relevant

affected fishing authorities and government bodies. Where such a requirement has been identified and agreed it should be implemented in accordance with individual company policy.

- The intended role of the OFLO is to monitor fishing activity in the area and to advise fishing vessels, on a daily basis, of the passage of the vessels concerned and the safe distance that fishing vessels are requested to keep clear of them. The OFLO should report any vessels not adhering to the above instructions and prepare a report of any incident involving fishing vessels, which should then be passed back to the manager responsible for fisheries liaison and the project team.
- The OFLO should report to the manager responsible for fisheries liaison and company representative on board the vessel on a daily basis.
- Where possible, the OFLO should have regional expertise on the type and intensity of fishing activity

Co-operation payments

- Co-operation payments will only be considered at the level of individual businesses and not collectively. Co-operation payments typically aim to address unavoidable losses and/or costs directly incurred by individual fishing businesses through an evidence-based payment calculated based on economic dependency on the area.
- Primarily, co-operation agreements during survey activity are reserved for static gear fishing operations due to the requirement to remove static fishing gear from an area of seabed and evidence of historical economic reliance on that area of seabed along with the proof that relocation is unavoidable. Static gear vessels should be able to quantify historic reliance on a local fishing area and the impact of any temporary restrictions on that site due to cable project activity.
- Co-operation payments must be based on evidence. It is important to ensure that claims of disruption are genuine. Evidence requirements should be proportionate and consider the practicalities associated with providing evidence so that genuine claims are not precluded. There is an obligation on affected fishers to provide the evidence needed to verify a claim.
- Should cable owners and fishers enter into cooperation agreements, impacted fishers are required to provide:

1. Copy of fishing licence;
2. Copy of MCA safety certificate;
3. Copy of Certificate of British Registry
4. Accounts as submitted or tax for the last 3 representative years of the of the past 5 years OR letter from accountant confirming tier based on annual turnover from fishing
5. A few examples of sales notes from the past 3 months, to show the vessel is actively fishing with static gear

6. A photograph of the on-board GPS plotter to show where static gear is located within the survey area or coordinates of gear locations and drawings on a chart to help us understand which part of the cable route area you fish within (if no GPS plotter);
7. The best available data including AIS/VMS/iVMS tracks for the previous 3 years

Annex 4: Fisheries questionnaire example questions

- Is there known fishing activity in the identified area of interest?
- Which fish species are targeted within the identified area of interest?
- Which types of fishing gear are used within the area of interest?
- From which ports/harbours/locations does the corresponding fishing fleet operate?
- Is there any seasonality to the fisheries identified?
- Is the type of fishing activity changing in the area of interest?
- Are the identified fisheries represented by any particular fisheries organisation?
- Are there individual representatives not represented by fisheries organisations?
- Is there a preferred method of communication?
- Are there any immediate concerns or questions regarding the area of interest?
- Are you aware of any other stakeholders within the area of interest?
- Are there any existing constraints on fisheries operations within the area of interest?
- Where are your key fishing grounds (a picture of an area on an admiralty chart is sufficient)
- Where do you typically fish?
- Can you describe the specific locations or areas where you frequently fish, including any particular hotspots or seasonal fishing grounds?
- When do you usually fish?
- What are the peak seasons or times of year when you fish in this area? Are there specific times of day that are more productive for your fishing activities?
- What types of fishing methods do you use?
- Can you explain the fishing techniques you employ (e.g. trawling, longlining, gillnetting)? How do these methods affect the areas where you fish?
- Are there any specific species you target?
- What fish species do you primarily catch in this region? Are there any species that are particularly sensitive to disturbances or changes in their habitat?
- Have you noticed any changes in fishing patterns or fish populations?
- In your experience, have there been any recent changes in fish populations, migration patterns, or fishing conditions in the area? How might these changes impact your fishing activities?
- Are you aware of any other projects that might be impacting your fishing ability in the area?

Annex 5 Glossary

Term	Description
As-laid data	A record of the actual conditions and location of the project as it was completed.
Asset owner	An individual or entity that holds the legal title to an asset.
Asset representative	An individual or entity appointed by the asset owner to act on their behalf in managing, maintaining, and overseeing the asset.
Cable awareness chart	A detailed map or chart that provides information about the locations and routes of subsea cables, used primarily by mariners, fishers, and offshore operators.
Cable developer	A professional organisation, or individual, responsible for designing, developing, and implementing subsea cable systems.
Cable positional data	Information that specifies the precise location of the cable.
Co-existence	The practice of ensuring that the activities of fishers and the presence of subsea cables can occur simultaneously without conflict or harm to either party. This involves careful planning, communication, and management to minimise the impact of cable installations on fishing activities and vice versa.
Co-operation agreements	Legal instruments that facilitate collaboration between two or more parties to achieve a common goal.
Co-operation payments	Transactions made between parties as part of a co-operation agreement to ensure that all parties involved in the collaboration are fairly compensated and that the agreed-upon objectives can be achieved efficiently.
Compensation	The act of providing something, potentially financial, as a recompense for loss.
Data	Facts, statistics, or information collected together for reference, analysis, or use in decision-making.

Dialogue without prejudice	A form of communication used during negotiations or dispute resolutions where parties can speak openly and candidly without the fear that their statements will be used against them in future legal proceedings. This type of dialogue encourages honest and constructive discussions aimed at reaching a mutually acceptable agreement. The term "without prejudice" ensures that any admissions, offers, or concessions made during these discussions cannot be presented as evidence in court.
Early engagement	The proactive involvement of stakeholders, such as community members, employees, or partners, at the initial stages of a project or initiative. Early engagement aims to gather input, build relationships, and address concerns early on, ensuring that the project aligns with the needs and expectations of all parties involved. This approach can lead to better decision-making, increased support, and smoother implementation by fostering collaboration and transparency from the outset.
Engagement principles	Fundamental guidelines that inform and shape the process of engaging between sectors and stakeholders. These ensure that engagement efforts are effective, inclusive, and meaningful.
Export power cables	High-voltage cables used to transmit electricity generated by offshore wind farms or other marine energy installations to the onshore power grid.
Fishers	Individuals who engage in the activity of catching fish and other aquatic organisms for primarily commercial but also recreational, or subsistence purposes.
Fishing gear	Tools and equipment used by fishers to catch fish and other aquatic organisms. Fishing gear varies widely depending on the type of fishing, the species targeted, and the environment. Reference to Annex 2 for more info.
Fishing grounds	Specific areas of the sea where fish are abundant and commonly caught by fishers. Areas are often characterised by favourable conditions for fish

	populations, such as suitable water temperature, depth, and availability of food.
Fishery liaison	A role or service that facilitates communication and cooperation between marine developers and the fishing industry.
Fishing Industry Representative (FIR)	Often a consultancy, rather than a point of contact within the cable owner company. They should be the conduit for information exchange between the asset owner/representative and the fishing interests who target the area.
Fisheries Liaison Manager (FLM)	In-house manager responsible for fisheries liaison who represents their company on all fisheries related issues.
Fishing Liaison Officer (FLO)	Representative of the cable project who will engage with fishing stakeholders regularly. The FLO is often a consultancy, rather than a point of contact within the cable owner.
Fishing plotter	An electronic device used by fishers to navigate and locate fishing grounds.
Fishing operations	The activities and processes involved in catching fish and other aquatic organisms.
Fishing organisations	Entities that represent the interests of fishers and the fishing industry. These organisations can operate at local, national, or international levels and are involved in various activities, including advocacy, resource management, research, and policy development. Examples include, regional fisheries management organisations, national fishing associations, local fishing co-operatives, inshore fisheries groups or individuals.
Fishing stakeholders	Individuals, groups, or organisations that have an interest in or are affected by the fishing industry and its management.
Geophysical data	Information collected through various geophysical methods to study the physical properties and processes of the seabed and foreshore (in the case of subsea cable projects). This data is gathered using techniques such as

	seismic surveys, magnetic and gravitational measurements, and remote sensing.
Geotechnical data	Information obtained from the investigation and analysis of soil, rock, and subsurface conditions to inform engineering and construction projects. This data includes measurements and observations from various tests and surveys, such as soil samples, and geophysical surveys.
Inter-array cables	A network of cables that connect individual wind turbines within an offshore wind farm to a central connection point, typically an offshore substation. These cables transmit the electricity generated by the turbines to the substation, where it can be converted and fed into the power grid.
Kingfisher Bulletin	The Kingfisher Bulletin provides the fishing and marine industries with alerts of offshore hazards, activity notices and news, in the waters around the UK and Northern Europe.
KIS-ORCA	The KIS-ORCA project aims to provide fishers with accurate, up to date and free information relating to subsea cables and offshore renewable energy structures across Europe.
Latency	Latency in subsea cables refers to the time it takes for data to travel from one point to another through the system.
Linear cables	Subsea cables not within a designated offshore zone such as Offshore Renewable Energy Installations (OREI) and broadly covers the following types of cables: Telecoms, power interconnectors and export power cables.
Maritime safety regulations	Maritime safety regulations are essential for ensuring the safety of vessels, crew, passengers, and the environment. Key international regulations include SOLAS & COLREGs as well as hydrographic charting requirements.

Mitigation measures	Strategies and actions taken to reduce or eliminate the negative impacts of activities prior to the consideration of compensation.
"New for Old" basis	If an item is lost or damaged beyond repair, it will be replaced with a brand-new item of the same or equivalent specification, regardless of the age or depreciation of the original item.
Non-Disclosure Agreement (NDA)	A legally binding contract that establishes a confidential relationship between two or more parties. The party receiving confidential information agrees not to disclose it to others without authorisation.
Notices to Mariners (NtMs)	An official communication that provides important updates and information to mariners regarding navigational safety.
Offshore Fishing Liaison Officer	A version of a Fishing Liaison Officer (FLO), but based onboard a main lay/specialist vessel, particularly if the work is taking place in an area with high levels of fishing activity.
Penetration depths	Penetration depths of fishing gear, particularly those that contact the seabed, are an important factor in understanding their impact.
Positional information	The specific location or place where something is situated.
Power interconnector cables	Connects the transmission system of two separate power networks.
Principal system supplier	The supplier responsible for planning and installing the system. The asset owners will contract directly with the principal system supplier.
Project lifecycle	The project lifecycle refers to the series of phases that a project goes through from initiation to completion.
Residual impacts	Refers to the remaining effects of an activity or event after mitigation measures have been implemented.
Route diversity	The degree to which two or more cables are separated geographically.

Seasonality	Refers to how different seasons affect fish behaviour, availability, and fishing success.
Snagging	Refers to the situation where fishing nets get caught or entangled on underwater obstacles.
SOLAS V Regulation 19 2.1.4	Specifies that all ships, regardless of size, must have nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage
Statutory licencing body	An organisation established by law to regulate and oversee specific professions or activities. These bodies ensure that individuals and organisations comply with legal standards and requirements, often through the issuance of licenses or certifications. They play a crucial role in maintaining professional standards, protecting public interests, and enforcing regulations
Submarine Telegraph Act 1885	A UK law enacted to implement an international convention for the protection of submarine telegraph cables.
Subsea cables	For the purpose of this document subsea cables refer to any cable laid beneath the surface of the sea carrying either power or telecommunications.

Annex 6 Notice to Mariners Template

Please note that this Annex is an example and the most up to date NTM Template is available on request from secretary@escaeu.org

NOTICE TO MARINERS

Please promulgate the following as a Notice to Mariners

[SUBSEA CABLE INSTALLATION PROJECT]

Date of notice:	[Insert Date]
Notice Number:	[Insert Reference Number]
Issued by:	[Insert Company Name or Project Authority]
Area of Operations:	[Insert general location]
Coordinates for the activities are attached below.	

Introduction

Mariners are advised that [Company Name], on behalf of [Client Name], will be undertaking the [installation of a submarine cable] as part of the [Project Name] in the following areas: [General description of the area and location of the works, including nearby landmarks].

The vessel [insert name(s) of vessels and photos below] will be undertaking underwater activities in the area and mariners should exercise caution and communicate with the vessel.

Other sea users are requested to: [e.g. – maintain a distance of 1/4NM from any cable buoys deployed, keep clear of xxx distance of any activities, not enter any exclusion zones etc)]

For additional information please contact the [insert role e.g Project Manager or FLO etc]

Tel: +44 Email:

Project name [Logo]

This notice is to inform all fishing vessels, shipping traffic, and other stakeholders in the area about the nature of the operations and any potential risks to navigation during this

	[Vessel Name] Call Sign: MMSI: IMO:

period.

Project Details

- Activity: [e.g. Subsea Cable Installation]
- Start Date: [Insert Start Date]
- End Date: [Insert End Date]
- Working Hours: [Insert Hours of Operation, e.g., 24/7 or specific working hours]
- Vessels Involved: The following vessels will be involved in the operations:
    - [Vessel Name] (Cable Lay Vessel)
    - [Vessel Name] (Support Vessel)
    - [Other Vessel Name] (Survey Vessel)
- Equipment: [e.g. describe any subsea equipment or underwater gear that will be deployed].
- Please visit [insert website] for more information.

Geographic Area of Operations

The [subsea cable installation] will take place within the following coordinates (WGS84 Datum):

Latitude	Longitude
[Insert]	[Insert]

For additional information please contact the [insert role e.g Project Manager or FLO etc]

Tel: +44 Email:

A clearance of [Insert Distance] nautical miles is requested around the working vessels [and/or other equipment deployed] for the safety of both mariners and project personnel.

Navigational Safety

- Mariners are advised to maintain a safe distance of at least [Insert Distance] nautical miles from the vessels involved in the cable installation.

- Other relevant details: [e.g. Include details of any guard vessels or other small craft that may be active in the vicinity as part of the project]

- Other requests [e.g. Fishing gear and trawling should not be deployed in the requested clearance area during the installation period to avoid entanglement with subsea equipment.]

- Mariners are requested to exercise caution and remain vigilant when navigating in the vicinity of the operations.

Communication and Monitoring

- The working vessels will maintain constant VHF radio watch on Channels [Insert VHF Channel] and [Insert Channel] and can be contacted for coordination and safety updates.

- Updates on the progress of the cable installation and any changes to the schedule or working areas will be provided regularly.

Contact Information

For further information, please contact:

[Name]

[Company Name]

For additional information please contact the [insert role e.g Project Manager or FLO etc]

Tel: +44 Email:

Phone: [Insert Contact Number]

Email: [Insert Contact Email]

Guard Vessel Contact (24/7):

[Vessel Name]

VHF: [Insert VHF Channel]

Phone: [Insert Contact Number]

This Notice is issued for the safety of mariners and the successful execution of the project. Compliance with the guidelines mentioned in this Notice is appreciated.

Distribution

[Include organisational distribution list without names or contact details]

Chart (*Not for Navigation*)

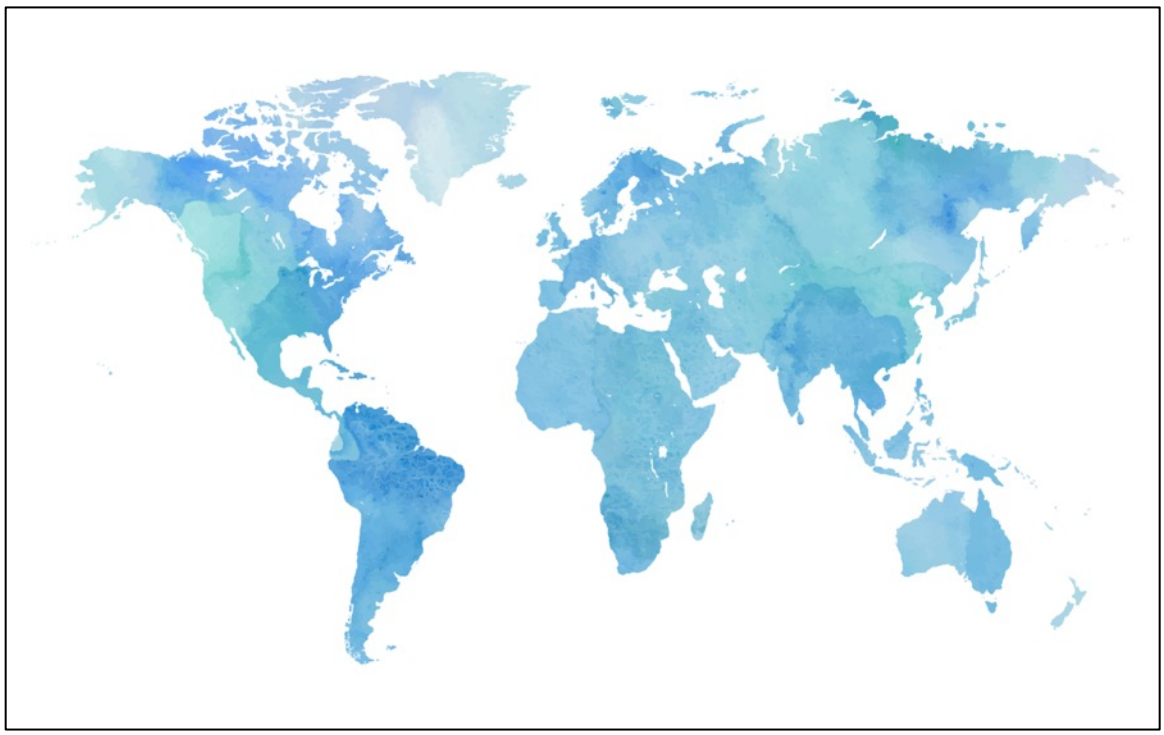


Chart overview 1