



WIER & WIND

MULTI-USE PROCEDURE BE

A PROCEDURE TO FACILITATE OBTAINING A CO-USE PERMIT IN A BELGIAN OFFSHORE WIND FARM

Project of *INTERREG Vlaanderen-Nederland*

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Background

For the Interreg project Wier&Wind a procedure was created to align potential multi-users with wind park operators. In this context, multi-users are defined as new/existing activities for offshore deployment that target the unused space in wind farms specifically for their operations. This document helps with identifying required permits for multi-use and with preparing with the application for such permits. It also provides guidance for engaging with multi-use stakeholders and the wind farm operators in particular.

This document provides a clear plan for entrepreneurs who are interested to perform multi-use activities in either (or both) the Dutch or the Belgian part of the North Sea. The Multi-Use Procedure is written from the perspective of the potential multi-user. This document provides information and guidance on the process of applying for permits as a multi-user and helps engage with multi-use stakeholders. Please be aware that this procedure is validated for the Dutch and Flanders part of the North Sea only. Other parts of the North Sea may follow upon request from the seaweed sector.

Multi-Use in Belgium

In Belgium, the [Marine Spatial Plan \(MRP\)](#) is the policy document that indicates what type of activities can take place in which zones of the Belgian part of the North Sea.

In 2014, the first MRP was in effect up until 2020. The [newest MRP](#) is in effect between 2020 and 2026, thereby setting the criteria for the use of space in the North Sea in Belgium. The MRP 2020 – 2026, further referred to as MRP (Marien Ruimtelijk Plan in Flemish), defines clearly which activities can be performed in what locations by means of zones. These zones are called “concession zones” and are indicated in the figure below.



FIGURE 1: CONCESSION ZONES AS DEFINED IN THE MRP FOR PERIOD 2020-2026

As potential Multi-Use Operator (MUO) one can only perform activities within concession zones designated for that purpose. The zones that allow multi-use are commercial and industrial activity zones (CIAZ) and zones for renewable energy production (REP).

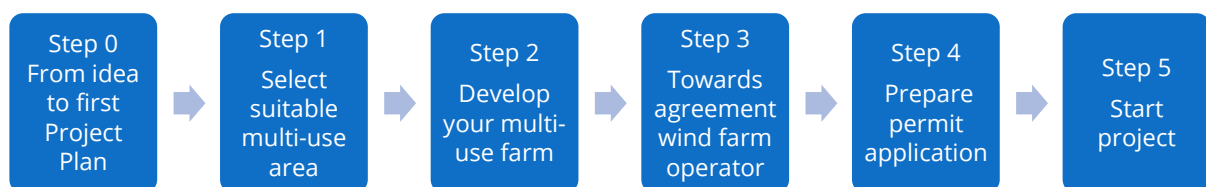
The CIAZs allow for any type of multi-use, e.g., nature restoration in combination with lobster cages. Whereas the zones for REP allow only for aquaculture as a form of multi-use. In these REP zones you will find wind turbines. This document will only focus on multi-use activities within REP zones.

The following chapter will guide you, as a potential Multi-Use Operator (MUO) through the process of submitting required permit applications for your farm; the multi-use procedure. Please note that is not an official document, so no claims can be made based on information as provided in here. The document provides an overview of the possible steps to be taken for an agreement between windfarm operator (WFO) and yourself (MUO).

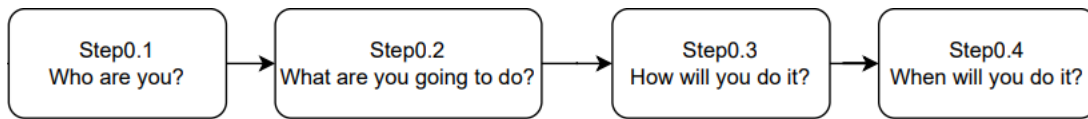
What is the multi-use procedure?

Offshore wind farms are complex industrial areas with a lot of regulations to ensure a safe and predictable electricity production. In addition, they are situated in the North Sea, a challenging environment in many respects. Therefore, safe, and constructive cooperation between a Wind Farm Operator (WFO) and a Multi-Use Operator (MUO) in the same area requires detailed alignment on almost every aspect of both parties' activities. This Multi-Use Procedure (MUP) provides a clear framework for both MUO and WFO to hopefully achieve such an alignment. Following the [MUP flowchart](#) it may also become clear that the intended Multi-Use is not viable for whatever reason. That may be a disappointment, but at least you will have reached this conclusion based on factual argumentation. This conclusion then gives both parties a clear direction for improvements where needed.

The MUO and WFO together will follow the Multi-Use Procedure with the aim of reaching a (written) agreement on their detailed operational alignment for Multi-Use. This will be finished prior to the permit application by the MUO. With such an agreement, the outcome of the permit application process will become much more predictable for the MUO. As an added benefit the WFO will also know exactly who is doing the permit application and what their intention is. Finally, the permit issuing governmental body should in principle get more permit applications that have a high chance of being granted, and this will save everybody time. A solution where everyone benefits, that is the purpose of the Multi-Use Procedure!



0 From idea to first Project Plan



0.1 Who are you?

This sounds trivial but often it is not clear to the Wind Farm Operator (WFO) with whom they are dealing. But if you want to make agreements on how you wish to cooperate, then the first step is to get clear who is making an agreement with whom. Therefore, it really helps if you can clarify this to the WFO. Usually, a basic set of PowerPoint slides that show the following should be sufficient:

- the setup of your organization (shareholders, holding companies or daughter companies),
- your contact details,
- your role in the organisation,
- your general business case, and
- for how long you intend to be active in the multi-use area.

0.2 What are you going to do?

Provide a short and easy to understand explanation of what you intend to do. For guidance, you should not need more than 3-5 PowerPoint slides to explain this. You should also be able to summarise it in a couple sentences that are understandable in layman's terms. For example: "...basically we will install solar panels in an area of 100ha, connect it to the wind farm and sell the produced electricity to the wind farm owner".

0.3 How will you do it?

As part of this step, provide clarification to the WFO on activities needed for your first major installation activities as well as your smaller day-to-day operations. With what vessels, how often and how long do you expect to be in the wind farm. As a guideline, this could include the following documents:

- General arrangement drawings that show your systems and how they are to be installed offshore, in the wind farm.
- Procedures for starting your major activities: installation of your systems, (major) repair of your installations (for example: unplanned maintenance after damage) and to remove your systems from the Multi-Use Area.
- Procedures for the main operational activities, your day-to-day work. For example, for seaweed cultivation this would include activities such as seeding, harvest, planned maintenance, inspections.

0.4 When will you do it?

It is useful to separate between two types of activities: the main installation/removal activities for your production systems and the day-to-day operational activities.

Main installation and removal activities:

- when do you intend to start with the installation activities, what season or month,
- when would you typically perform the removal activities, what season or month,
- what are the foreseen durations of these installation/removal activities?

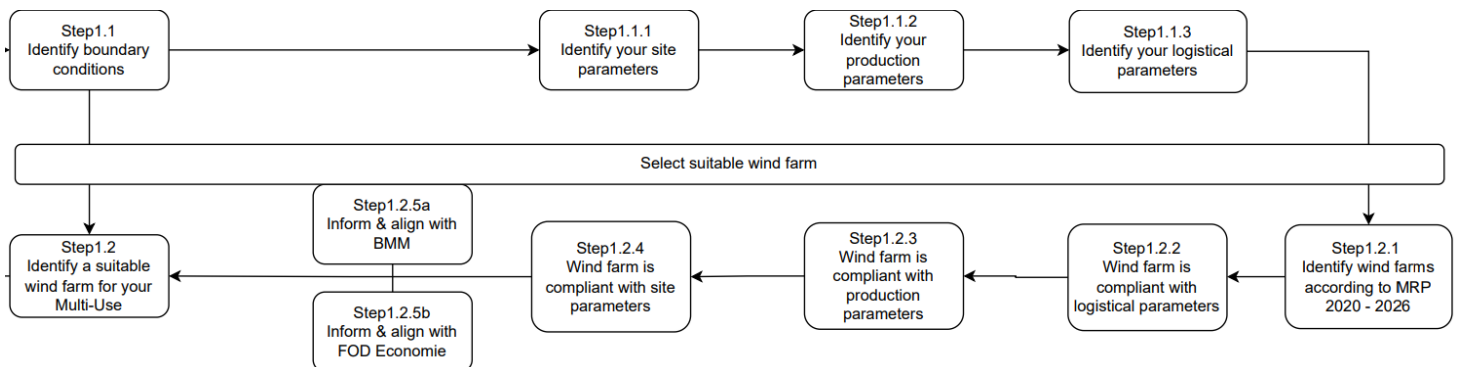
Day-to-day operational activities:

- when would you do your main operational activities and how often;
- how long in advance could you plan this, and could it change at the last minute;
- what are the foreseen durations of these operational activities?

It is recommended to prepare a general planning schedule for preparation, installation and start of production of your multi-use activity. Furthermore, it will help if you can provide a yearly schedule of your operational, day-to-day activities.

Result of this step: Project Plan version 1 – Introduction and general plan

1 Select a suitable multi-use area



1.1 Identify boundary conditions

Each type of Multi-Use activity will have its own set of boundary conditions such as maximum distance to shore, preferred water depth, proximity to your office, etc. It is important to identify these boundary conditions for your own Multi-Use activity because this will help you to determine what offshore wind farm locations are suitable for you. In the below steps we have some guidelines to help you to identify these boundary conditions.

1.1.1 Identify your site parameters

This includes all environmental parameters that are/could be relevant for your Multi-Use activity. For example, wave height may be important if your activity includes systems that are floating on the water surface like floating solar panels. However, if nature development on the seabed is your Multi-Use activity, then seabed conditions and tidal current speeds may be more relevant and even governing. Usually, or at least in current offshore industries, these environmental parameters are summarised with the term Site Conditions. That is because for each offshore site, these parameters will have specific values that characterise this site. For instance, one of the Site Conditions of the North Sea Innovation Lab is that the water depth is between 18-20m.

In Site Conditions, the following parameters included:

- Wind speed, direction & frequency of occurrence;
- Wave height, direction & frequency of occurrence;
- Water current speeds, direction & frequency of occurrence;
- Water depth;
- Seabed shape and profile (usually indicated with the term geophysical parameters (This includes presence of sand banks, sand dunes and obstacles such as shipwrecks and unexploded ordnance);
- Seabed soil/ ground conditions (usually indicated with the term geotechnical parameters (This includes type of soil such as sand, clay, rocks, etc.).

This should cover most of the Site Conditions although there may be a few more (e.g., ice), nevertheless, it is a good list to start with. It is now up to you to determine the limiting values for each of these parameters for your Multi-Use activity. Do not worry too much yet about the level of detail. Just make a start by identifying what you already know. Further details can be added later when you progress with your design. In case you need an example of this, just look in Step 1.2.1, that includes a link to a few Site Conditions reports that were made for the various offshore wind farms.

1.1.2 Identify your production parameters

This follows the same logic as explained in Step 1.1.1 above with the only difference that this should cover parameters directly related to your production. This list of parameters is of course specific to your Multi-Use activity so you should now be the expert on what is needed here. Below you find an example of production parameters relevant for seaweed production:

- Water depth
- Water turbidity range
- Water temperature range
- Nutrient flux (Ph, N)
- Salinity
- Contaminants in the water

Result of this step: a list of production conditions for your Multi-Use that a potential offshore wind location must comply with.

1.1.3 Identify your logistical parameters

This follows the same logic as explained in Step 1.1.1 above with the only difference that this should cover parameters related to the logistical aspects of your production process. This may prove more important than you would initially think, so pay close attention here, because it may have a significant impact on your overall business case. Here is a potential list of parameters that could be included in this category:

- Port locations in the vicinity of your Multi-Use area;
- Sailing distance and time from you port to your Multi-Use area;
- Facilities in the preferred port location for storage, assembly, and transport of any equipment you may need as part of your installation/maintenance activities;
- Distance of the preferred port location to your offices;
- Availability of marine service contractors in the preferred port;
- Availability of sufficient trained personnel in the region of your preferred port location;
- Facilities in your preferred port for processing, storage, and distribution of your product (in case of food/biomass production);
- Potential for cooperation with the relevant Wind Farm Operator;
- Maximum size of the Multi-Use Area in the wind farm;
- Potential for future expansion of the Multi-Use in the wind farm;
- Availability of a grid connection;
- Etc.

1.2.1 Identify wind farms according to MRP 2020-2026

In Belgium you can make a distinction between two types of wind farms. The ones that were in use before the issue of the MRP 2020-2026 and wind farms that are part of the new concession zones.

- Developed zones (figure 2), before MRP 2020 - 2026
 - [Seamade/ Mermaid](#)
 - [Northwester 2](#)
 - [Nobelwind](#)
 - [Belwind](#)
 - [Seamade/ Seastar](#)
 - [Northwind](#)
 - [Rentel](#)
 - [C-Power](#)
 - [Norther](#)

- To be developed zones, after MRP 2020 – 2026,
 - Noordhinder North
 - Noordhinder South
 - Fairybank

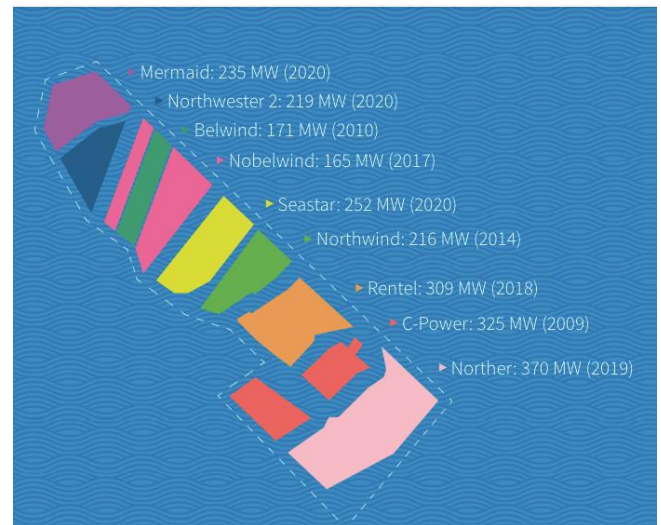


FIGURE 2: DEVELOPED ZONES BEFORE MRP "20-"26

The significant difference is that for the new wind farms, (to be) built after the issue of MRP 2020 – 2026, you as multi-use operator (MUO) no longer need the official permission from the wind farm operator. Nevertheless, it is highly recommended that you as potential MUO prepares an official agreement with the wind farm operator to support your permit application process. More on this will follow in step 2 below.

1.2.2 Windfarm is compliant with logistical parameters

During step 1 you identified the most important logistical parameters are for starting multi-use in a wind farm for your specific multi-use. As you now looked closer into the available windfarms it is time to check whether they are compliant with your identified boundary conditions. Note: information beyond distance to shore might be hard to come by, but various parties could help provide the information that is relevant to your logistical parameters.

1.2.3 & 1.2.4 Windfarm is compliant with production & site parameters

Production and site parameters are a bit harder to come by, largely as this information is not as accessible to the public as it is in the Netherlands. It could also be the case that it's not available at all, other than general numbers that are taken for the North Sea as a whole. Most likely this will be the case for production parameters. Information that is available can be checked on the site of VLIZ, the Flemish institute on the sea.

1.2.5 Informing and alignment

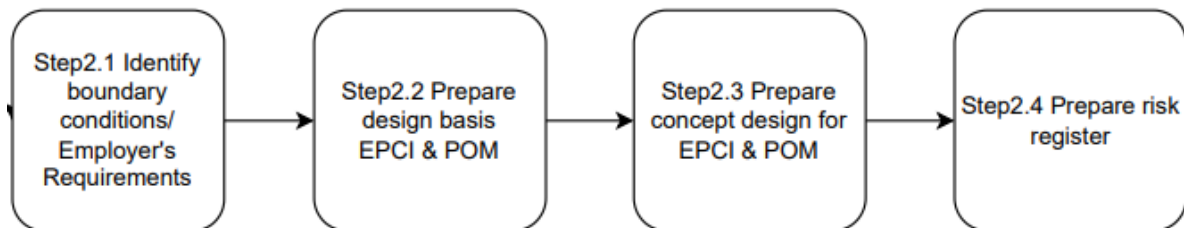
Step 1.2.5 is informing and aligning the proposal with two parties: the MUMM & the FOD Economie.

The Management Unit of the North Sea Mathematical Models and the Scheldt estuary (MUMM) is responsible for the follow-up of different legal obligations and rights for the management of the marine environment. The proposed plans for your multi-use operation are tested by this scientific institute against the several legislative frameworks that are in place in the windfarms.

The WFO has the environmental permit. It could be that your activities as a multi-user in the concession zone will fall under this environmental permit. However, it is more likely that if you want to do multi-use in a wind farm concession zone, you will have to apply for an environmental permit yourself. That is because applying for changes in the original permit takes a long time and costs a lot of money. With the FOD Economie you align your multi-use plans with the requirements for a concession zone permit.

[*Result of this step: Project Plan version 2 – Multi-use requirements and wind farm selection*](#)

2 Develop your multi-use farm



2.1 Identify boundary conditions / employer's requirements

Realisation multi-use within a wind farm appears to be quite difficult, as entrepreneurs and wind farm owners are now experiencing. In the [Boundary Conditions Register for Multi-Use](#) you can find a summary of the current boundary conditions identified. It is therefore recommended to prepare a document where you indicate for each of these requirements whether it is applicable to your type of Multi-Use activity. If this is the case, then also describe how you will comply with these relevant requirements. The better you can demonstrate compliance with these requirements, the less likely it is for the WFO to raise objections to your intended MU-activities.

2.2 Prepare design basis EPCI & POM

Every production location has different requirements, that means that your design basis for EPCI & POM will have to be altered for every location. It is important to note that there can be different applicable codes & standards for every different location.

2.3 Prepare concept design for EPCI & POM

In this step two documents are made, the first document will cover the Engineering, Procurement, Construction and Installation. The second document will cover production, operations & maintenance. In these documents you report the what, who, how and when during your project.

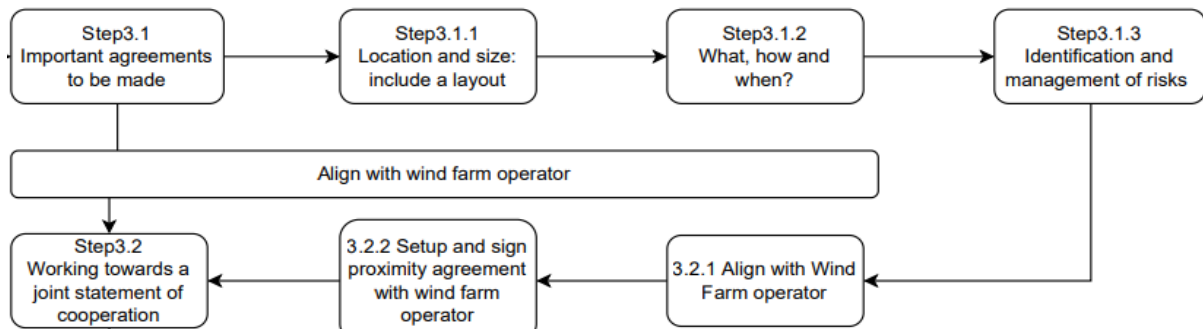
2.4 Prepare risk register

One way to responsibly manage identified risks is via the risk register. Record all the identified risks in the risk register and try to identify adequate mitigations for each of these risks. Luckily, you do not have to start from scratch. A [first version of a risk register](#) has already been prepared as part of this MU-Procedure. This includes all risks that could be identified for generic MU as well as potential mitigation. It is recommended to start from this generic risk register and make it specific for your MU activity. If you hear the words risk management and risk register for the first time in your life, then it might be wise to first read this:

- Risk management: https://en.wikipedia.org/wiki/Risk_management
- Risk management tool risk register: https://en.wikipedia.org/wiki/Risk_register

[Result of this step: Project Plan version 3 – farm design concept](#)

3 Towards agreement with wind farm operator



3.1 Important agreements to be made

You do not have to detail everything out at this stage, nor do you have to agree on each detail at this stage. Nevertheless, it is highly recommended to reach an agreement on a few items that are vital as a basis for successful (future) cooperation and a successful permit application.

3.1.1 Location and size: including a layout

Agree where in the wind farm you will perform your multi-Use activity. This should include as a minimum a detailed lay-out drawing of the wind farm area with your Multi-Use Area(s) drawn in. The Multi-Use Area(s) should be clearly defined with the following parameters:

- Area in m²
- Coordinates of the edges (corner points)
- Distance to the wind farm assets
- Anticipated layout of the multi-Use installations inside the Multi-Use Area(s)

3.1.2 What, how and when?

These are all aspects that you have prepared in previous steps. In your discussions with the WFO you will most likely add/change/remove aspects of this. And this is good, because it means that you are aligning on important aspects of your future cooperation. To avoid any misunderstandings in the future it is highly recommended to make a summary of these agreements that you both are comfortable to sign off on. Of course, you can refer to the detailed documents/agreements in this summary. The summary is useful because it is a straightforward way to recap what you have discussed and agreed, and you use it to prepare your permit application.

As a guideline, it could be helpful to structure this summary by project life cycle phase:

- Design
- Procurement, manufacturing and assembly (onshore)
- Installation offshore
- Operation, maintenance and inspection
- Decommissioning

3.1.3 Identification and management of risks

This is considered a vital step. A common understanding of the potential risks of and for multi-Use, suitable mitigations and who will be responsible for any residual risks. Be as open as possible towards the WFO about your concerns, your worries and how you intend to address those. Also, be very open for any type of observations of the WFO. This may feel annoying at times, but they are much more likely to have a lot more experience with operating in the North Sea. Make good use of this experience. This will probably result in a whole list of potential issues and “points to be addressed” and yes, that will be

a challenge. However, you know now exactly what you're getting yourself into and what you need to do to manage that in a responsible way. And the good thing is, you don't have to do this all by yourself. Use your network, the WFO and/or the government to help you to overcome this. A great many stakeholders support the concept of multi-use and they are willing to help you!

What you should agree on at this stage is the following:

- The list of all relevant risks associated with your multi-Use activities in the wind farm. Take care that this goes both ways: risk of MU to the wind farm but also risk of the wind farm operations to you as MUO.
- For each risk on this list an agreed mitigation as well as who will implement the mitigation (if relevant). The implementation of this mitigation can of course take place at a later stage.
- For the residual risks (i.e., remaining risk after mitigation), an agreement on who is responsible for this risk and how the residual risk will be covered. The implementation of this, again, can be done at a later stage – but always prior to the risk coming into effect. For example, the risk of a collision of a MU-maintenance ship with a wind turbine should be addressed before the operational phase and not necessarily in the design phase.
- As an example, here a few risks associated with multi-Use that were already highlighted and for which a mitigation is proposed:
 - Risk of impacting the ecological impact of the wind farm: try to make an assessment up-front of the potential impact of the multi-Use activities on the presence of birds and marine life. If this presence would increase than it could impact the ecological impact studies of the wind farm.
 - Financial risk or consequential financial risk: causing damage to each other's assets is an unfortunate event and usually can be adequately addressed with a suitable insurance. Therefore, provide to each other evidence of insurance against damage caused to each other's assets. An insurance certificate will usually work.

3.2.1 Align with wind farm operator

In various meetings with the WFO you will try to establish a few things:

- Is this WFO the party that I want to work with?
- Is the location of this wind farm right for me?
- When taking all the risks and conditions for this location into account, is my multi-Use business case still viable?
- And, more importantly, am I still motivated to proceed with my plans? Or do I want to seek alternatives?
- Can we come to a reasonable, preferably win-win agreement as WFO and Multi-Use Operator (MUO)?

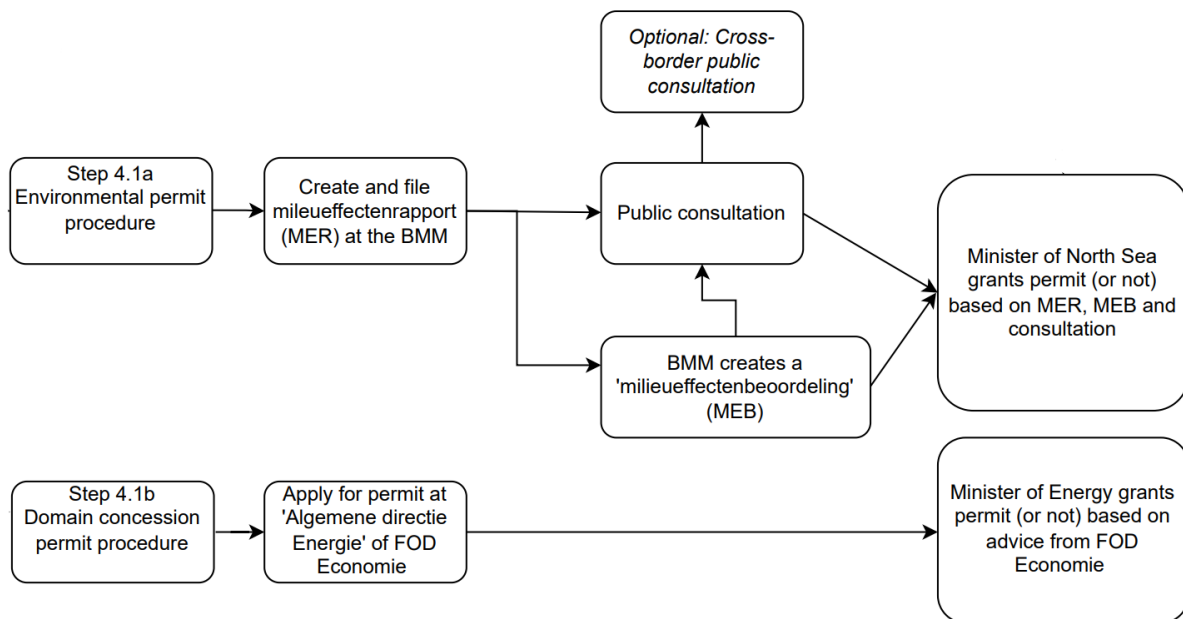
3.2.2 Setup and sign proximity agreement with wind farm operator

3.3 Working towards a joint statement of cooperation

It is considered useful to prepare a joint statement that can be put on top of all the documents that you have prepared in the above steps. It will give context to your future cooperation, and it will give you to clarify the benefits of your cooperation for yourselves as wind farm and Multi-User as well as for all the other stakeholders of the North Sea and the general public in particular. It is also a nice opportunity to highlight the positive spirit in which you as Multi-Use Operation and Wind farm operator wish to cooperate in this part of our beautiful North Sea.

[Result of this step: Project Plan version 4 – alignment with stakeholders](#)

4 Prepare permit application



Step 4.1a Environmental permit procedure

Create an environmental impact report and file this at MUMM, where the scientific department: the MARIMA team is then conducting an environmental impact assessment. When you apply for a permit the permit application is also published in the Belgian State paper. Other aspiring multi-users can then also apply for the same zone. Parallel to this the MUMM gives advice to the federal minister for the Marine environment, this minister then decides whether or not to issue an environmental permit.

Step 4.1b Domain concession permit procedure

You apply for a concession permit at the general directive energy of the FOD Economie, the minister of energy, then grants a permit (or not) based on the advice of the FOD Economie.

If all steps are in order the start of the project execution can happen. The permit application evaluates on eight different criteria:

1. Added value for the economy and society
2. Amount of multi-use
3. Effects on nature
4. Effects on safety at sea
5. Visual impact
6. Quality on technical and economic aspects
7. Quality of exploitation and maintenance
8. Strength of the consortium that applies for the permit on technical, economical and societal aspects.

[Result of this step: Project Plan version 5 - Project execution plan](#)

5 Project execution

Congratulations, you can start the executorial phase of your multi-use activity.

6 Flowchart:

