

D7 Hydrographical changes

Existing Programmes

If you have already reported this programme under one of your other (sub)regions, you can refer to this programme by adding the Programme ID code for the first (sub)region here. And then add the relevant MarineUnits where the programme applies within this Region/Sub region.

Provide a unique identifier for a programme already reported under another Region/Sub region

List all the MarineUnitIDs where the monitoring programme applies within the Region/Sub region

Existing Sub Programmes

If you have referenced a monitoring programme then please indicate if the same sub programme(s) are implemented within this region/sub region with 'Y'. If additional sub programme(s) are relevant for this region/sub region then report the SubProgrammeID under reference Sub Programme. If the list of sub programmes are not identical with the referenced monitoring programme then report all the relevant sub programmes for the monitoring programme within this region/sub region.

No

Reference Sub Programme

Each sub-programme ID for each (sub)region/Member State must be unique.

Provide a unique identifier for a sub programme.	Sub programme name
ANSDE_Sub_049	Water column - physical characteristics
ANSDE_Sub_048	Water column - hydrological characteristics

4e: Programme ID

Provide a unique identifier for programme. Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08)

ANSDE_Mon_009

List all the MarineUnitIDs within this (sub)region where the monitoring programme applies

4f: Programme description

Describe the overall approaches of the monitoring programme, including: · The rationale for your balance between monitoring of state/impact, pressures, activities and measures? · How it adapts to new and emerging environmental problems (pressures and impacts) in relation to the relevant Descriptor(s). Free text or URL web link or section in paper report

Der Deskriptor D7 bezieht sich auf neue Entwicklungen wie Offshore Windparks oder künstliche Inseln und auf permanente Änderungen des hydrographischen, bzw. ozeanographischen Regimes und der Topographie; dies treten primär in den Küstengewässern auf. Hierbei sind auch die klimabedingten Veränderungen zu berücksichtigen. In der Nordsee werden 2 Arten signifikanter Veränderungen erwartet: (1) Durch die hohe natürliche Variabilität mit Zeitskalen >50 Jahre und langfristige klimabedingte Veränderungen und (2) durch die oben genannten menschlichen Eingriffe. Die Bewertung der natürlichen Veränderungen erfordert belastbare Referenzzeitreihen von mindestens 30 Jahren Dauer, für die Auswirkungen menschlicher Eingriffe können detaillierte Modellstudien und die Erkenntnisse und Daten der Umweltverträglichkeitsstudien genutzt werden. Das aktive Monitoring beinhaltet die hydrographischen Basisparameter Temperatur und Salzgehalt (raum-zeitliche Verteilung, vertikale Profile, Jahresgang etc.) und die Meeresoberflächentemperatur. Weiterhin werden Strömungen, Süßwassereinträge durch Flüsse, Höhe des Meeresspiegels, Topographie/Bathymetrie, Flächen unterschiedlicher Substrate sowie physische Beeinträchtigungen vorherrschender und spezieller Habitate als assoziierte Faktoren bei den Untersuchungen berücksichtigt. Einige Parameter, die nicht direkt zu D7 gehören, wie Trübung, Secchi-Tiefe oder Auftrieb, werden ebenfalls als Begleitparameter mitgemessen. Weitere Details sind dem Kapitel "5.2 Hydrographical monitoring (Descriptor 7)", Seite 55-57 in: Zampoukas, N. et al., 2014: Technical guidance on monitoring for the Marine Strategy Framework Directive, EUR – Scientific and Technical Research Series, 166pp. doi:10.2788/70344 zu entnehmen.

5a: Relevant GES criteria

Which GES criteria are addressed by the programme?

Select all relevant from list: GES criteria

- 1.4: Habitat distribution
- 1.5: Habitat extent
- 6.1: Physical damage, having regard to substrate characteristics
- 7.1: Spatial characterisation of permanent alterations
- 7.2: Impact of permanent hydrographical changes

Description of Other (if selected):

5b: Relevant GES characteristics [indicators]

Which GES characteristics (indicators) are addressed by the programme?

Select all relevant from list: GES Indicators

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1.5.1: Habitat area | <input checked="" type="checkbox"/> 7.1.1: Extent of area affected by permanent alterations |
| <input checked="" type="checkbox"/> 1.5.2: Habitat volume | <input checked="" type="checkbox"/> 7.2.1: Spatial extent of habitats affected by the permanent alteration |
| <input checked="" type="checkbox"/> 1.6.3: Physical | <input checked="" type="checkbox"/> 7.2.2: Changes in habitats |
| <input checked="" type="checkbox"/> 6.1.2: Extent of the seabed significantly affected by human activities for the different substrate types | |

Description of Other (if selected):

5c: Relevant features, pressures and impacts from MSFD Annex III**Habitats**

Relevant features, pressures and impacts from MSFD Annex III

Select all relevant habitat elements (from MS Art. 8 report - features present)

- Seabed habitats - all**
- Water column habitats - all**

Description of Other (if selected):

Habitat Specials

Relevant features, pressures and impacts from MSFD Annex III

Select all relevant species elements (from MS Art. 8 report - features present)

Description of Other (if selected):

Physical/Chemical Features

Relevant features, pressures and impacts from MSFD Annex III

Select all relevant physical/chemical elements (from MS Art. 8 report - features present)

- Physical/chemical features: Topography/bathymetry**
- Physical/chemical features: Sea temperature (surface)**
- Physical/chemical features: Sea temperature (bottom)**
- Physical/chemical features: Ice cover**
- Physical/chemical features: Salinity**
- Physical/chemical features: Current velocity**
- Physical/chemical features: Wave exposure**
- Physical/chemical features: Upwelling**
- Physical/chemical features: Mixing characteristics**
- Physical/chemical features: Turbidity**
- Physical/chemical features: Transparency**

Description of Other (if selected):

Pressures

Relevant features, pressures and impacts from MSFD Annex III

Select all relevant pressure elements (from MS Art. 8 report - features present)

- Pressure: Physical loss**
- Pressure: Physical damage**
- Pressure: Changes in thermal regime**
- Pressure: Changes in salinity regime**

Description of Other (if selected):

5d: Adequacy: for assessment of GES (Art. 8 & 9) - Adequate data: Yes or No?

Will the programme provide adequate data and information to enable the periodic assessment of environmental status, and distance from and progress towards GES, including whether environmental status is improving, stable or deteriorating? Yes or no? **Yes**

Established methods for assessment: Yes or no? **No**

Adequate understanding of GES: Yes or no? **Yes**

Adequate capacity to perform assessments: Yes or no? **No**

5e: Natural variability

How does the programme address natural variability?

- In a quantitative process Expert opinion
 In a qualitative process Other

Description of Other (if selected):

5f: Description GES - Add to end of current guidance: Free text or URL web link or section in paper report.

Describe how the programme: a. addresses assessment needs for the relevant Descriptor(s) and targets b. meets the needs of providing data/ information to support assessment of the Descriptor (or particular biodiversity component programme for D1, 4, 6) c. contributes to determining distance from GES and trends in status d. addresses natural and climatic variability and distinguish this from the effects of anthropogenic pressures e. responds to risks of not achieving GES

In der Nordsee herrscht eine hohe natürliche Variabilität der hydrographischen und hydrologischen Bedingungen. Die räumlichen Schwankungen reichen von lokalen Events bis hin zu überregionalen Phänomenen, die zeitlich innerhalb von weniger als einem Tag bis hin zu mehreren Jahren auftreten können. Die Auswirkungen menschlichen Tätigkeit sind jedoch nur in Hinblick auf kleinskalige Effekte, für die der Deskriptor D7 jedoch nicht konzipiert wurde, von Bedeutung.

5g: Gap-filling date GES

If not yet considered adequate for data and information needs, when will the programme be considered fully adequate? Select one from enumeration list

- By 2014 By 2018 By 2020 After 2020

5h: Plans GES

If the programme is not yet considered fully adequate, what plans are in place to make it adequate (e.g. to fill gaps in data, methods, understanding or capacity)? Free text or URL web link or section in paper report

Im Zuge der Umsetzung der MSRL ist der Ausbau der Beobachtungsmethoden, insbesondere der Fernerkundung (Sentinel 3, Copernicus-Dienste) geplant. Passend zu diesen neuen Methoden sollen entsprechende Bewertungsverfahren entwickelt werden. Die hierfür notwendigen Ressourcen wurden für die zukünftigen Haushaltsplanungen angemeldet.

6a: Relevant targets (from Art. 10)

Which targets are addressed by your programme (Art. 10)?

- UZN3
 UZN4
 UZN7

Select relevant associated indicator targets (from the MS report on Art. 10)

- UZN3_IND_3.1.1
 UZN3_IND_3.1.2
 UZN3_IND_3.1.3
 UZN3_IND_3.1.4
 UZN3_IND_3.3.1
 UZN3_IND_3.4.1
 UZN3_IND_3.4.2
 UZN4_IND_4.3.1

- UZN4_IND_4.5.1
- UZN4_IND_4.6.1
- UZN4_IND_4.6.2
- UZN7_IND_7.1.1
- UZN7_IND_7.1.2
- UZN7_IND_7.1.3
- UZN7_IND_7.1.4
- UZN7_IND_7.1.5
- UZN7_IND_7.2.1
- UZN7_IND_7.2.2
- UZN7_IND_7.2.3
- UZN7_IND_7.3.1

Add relevant targets (from the MS report on Art. 10)

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6b: Adequacy: for assessment of progress with targets (Art. 10)

Will the programme provide suitable and sufficient data and information to enable assessment of progress towards achievement of the relevant environmental targets (using indicators identified by MS under Art. 10) Suitable and sufficient data: Yes or no? **Yes**

Established methods for assessment: Yes or no? **No**

Adequate capacity to perform assessments: Yes or no? **No**

6c: Target updating

Suitable and sufficient data: Yes or no?

6d: Description Targets

Explain how the programme will contribute to the assessment of progress with targets. Free text or URL web link or section in paper report

Die Daten, die aus den neuen Beobachtungsmethoden erwartet werden, erweitern fortlaufend den umfassenden Referenzdatenbestand und tragen somit zu einem zunehmend Verständnis der natürlichen Bedingungen und anthropogenen Veränderungen bei.

6e: Gap-filling date targets

If not yet considered adequate for data and information needs, when will the programme be considered fully adequate? Select one from enumeration list

- By 2014 By 2018 By 2020 After 2020

6f: Plans Targets - (e.g. to fill gaps in data, methods or capacity)?

If the programme is not yet considered fully adequate, what plans are in place to make it adequate (e.g. to fill gaps in data, methods, understanding or capacity)? Free text or URL web link or section in paper report

Das Monitoringprogramm kann eine vollständige Einschätzung zur Erreichung der Umweltziele erst dann liefern, wenn die nationalen, operativen Umweltziele entsprechend konkretisiert und quantifiziert und passende Indikatoren entwickelt wurden und anwendbar sind. Im Zusammenhang mit der Erstellung der Maßnahmenprogramme nach Art. 13 MSRL wird eine solche Konkretisierung und Quantifizierung der Umweltziele nach Art. 10 MSRL vorgenommen. Dieser Prozess wird noch bis 2018 andauern. Durch die fortlaufende Erweiterung der Datenbasis wird gleichzeitig das Prozessverständnis gefördert, das erforderlich ist um den Umweltzustand zu bewerten und hinsichtlich der Notwendigkeit von Maßnahmen zur Erreichung der genannten Ziele zu beurteilen. Hierzu gehört die Optimierung von Beobachtungsmethoden (s. Q5h), die Fortführung der flächendeckenden Habitatkartierung und die Entwicklung geeigneter Bewertungsverfahren.

7a: Link to relevant activities

Which activities will the programme address?

- Extraction of non-living resources: Marine mining (sand and gravel)
- Extraction of non-living resources: Dredging
- Man-made structures (incl. construction phase): Placement and operation of offshore structures (other than for energy production)

Description of Other (if selected):

7b: Description Activities

Describe the nature of activity and/or pressure monitoring (e.g. addressing spatial distribution, intensity and/or frequency) and how the programme is considered adequate to assess which activities and/or pressures are causing environmental change (degradation) and hence identification of possible measures, if needed. Free text or URL web link or section in paper report

Die Auswirkungen menschlicher Aktivitäten auf die hydrographischen Bedingungen können weitestgehend durch die genannten Subprogramme (Hydrographische Survey's, bathymetrische Vermessungen und Habitatkartierungen) sowie durch vorhabenbezogene Untersuchungen (UVPs zu Sand- und Kiesentnahmen, zu Offshore Bauaktivitäten, etc.) beurteilt werden.

7c: Relevant measures

Which existing measures will the programme address?

7d: Description Measures

Describe the nature of monitoring of measures and how the programme enables their effectiveness (impact) in relation to delivering desired changes in environmental status to be assessed (e.g. what processes are in place to prove corrective measures are having the desired effect, and how is uncertainty quantified)? Free text or URL web link or section in paper report

Das nationale Maßnahmenprogramm Art. 13 MSRL befindet sich derzeit noch in der Aufstellung. Aussagen, wie das Monitoring eine Effizienzkontrolle der Maßnahmen gewährleistet, können erst nach Festlegung der einzelnen Maßnahmen getroffen werden. Die Fragen 7c bis 7f können somit im ersten Berichtszyklus noch nicht vollständig beantwortet werden. Dies erfolgt im zweiten Berichtszyklus 2018.

7e: Adequacy for assessment of measures (Art. 13)) - Adequate data: Yes or No?

Will the programme provide adequate data and information to enable the identification of activities and/or their pressures that are causing environmental degradation (and consequently suitable measures if needed) and the effectiveness of relevant measures?

Yes or no?

Established methods for assessment: Yes or no?

Adequate understanding of GES: Yes or no?

Adequate capacity to perform assessments: Yes or no?

Addresses activities/pressures: Yes or no?

Addresses effectiveness of measures: Yes or no?

7f: Gap Filling Date Activities Measures

If not yet considered adequate for data and information needs, when will the programme be considered fully adequate? Select one from enumeration list

By 2014 By 2018 By 2020 After 2020

8a: Links to existing monitoring programmes

Which monitoring programmes under Community legislation or international agreements contribute to and are compatible with your MSFD programme? Note: specific details are captured at sub-programme level – question 4m)

- | | |
|--|---|
| <input type="checkbox"/> Bathing Water Directive | <input checked="" type="checkbox"/> Water Framework Directive |
| <input type="checkbox"/> Common Fisheries Policy - Data Collection Framework | <input type="checkbox"/> Barcelona Convention UNEP/MAP |
| <input checked="" type="checkbox"/> Habitats Directive | <input type="checkbox"/> Bucharest Convention |
| <input type="checkbox"/> Birds Directive | <input type="checkbox"/> Helsinki Convention |
| <input type="checkbox"/> Nitrates Directive | <input checked="" type="checkbox"/> OSPAR Convention |
| <input type="checkbox"/> Urban Waste Water Treatment Directive | <input checked="" type="checkbox"/> Trilateral Wadden Sea Cooperation |
| | <input type="checkbox"/> Other (specify) |

Description of Other (if selected):