Monitoring Specifications

Date: 2010-05-12

HD Habitat Type 1210 Annual Vegetation of Drift Lines

ARGE BLMP - Working Group for the North Sea and Baltic Sea Monitoring Programme

At the 34th North German Environmental Ministerial Meeting held on 17 April 1997, the competent departments of the German Federal Government and of the federal states of Hamburg, Mecklenburg-Vorpommern, Lower Saxony and Schleswig-Holstein agreed to establish a joint working group co-ordinating the monitoring of the marine environment of the North and Baltic Seas (ARGE BLMP Nord- und Ostsee).

Members of ARGE BLMP are:

- Federal Ministry of Food, Agriculture and Consumer Protection
- Federal Ministry of Transport, Building and Urban Development
- Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
- Federal Ministry of Education and Research
- Authority for Urban Development and Environment of the Free and Hanseatic City of Hamburg
- Mecklenburg-Vorpommern Ministry for Agriculture, the Environment and Consumer Protection
- Lower Saxony Ministry for the Environment and Climate Protection
- Schleswig-Holstein Ministry for Agriculture, the Environment and Rural Areas

The Monitoring Manual describes the current measuring programme implemented under BLMP. The monitoring requirements of the different EC Directives (Marine Strategy Framework Directive, Water Framework Directive, FFH, Birds Directive), marine protection conventions (OSPAR, HELCOM, Trilateral Monitoring and Assesment Program) and other bodies of regulations have been taken into account in the Manual. The Monitoring Manual is available free of charge on the BLMP website at www.blmp-online.de/Seiten/Monitoringhandbuch.htm

Editorial information

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1 General

1.1 Subject area

Biological Monitoring - Habitats - HD Habitat Type 1210 - Annual Vegetation of Drift Lines

1.2 Definition

1.2.1 EU-Definition

Annual vegetation of drift lines

Formations of annuals or representatives of annuals and perennials, occupying accumulations of drift material and gravel rich in nitrogenous organic matter (*Cakiletea maritimae* p.).

1.2.2 National definition

Young drift lines colonised by annuals with sea rocket communities (*Cakiletea maritimae*) on organic drift material deposited at high tide and gravel enriched with organic material. Frequently overtopped with sand on sandy beaches; also found on shingle beaches. For the most part, these are narrow, linear habitats, although extensive formations occur more rarely on sand banks.

1.2.3 Mapping procedure

On the North Sea, annual vegetation of drift lines is widespread on sandy beaches along the German mainland coast and islands, provided they are not used too heavily for bathing. On the Baltic Sea coast, annual vegetation of drift lines occurs to a lesser extent, but is widespread. Annual vegetation of drift lines on sand is much more frequent than the rarer formation on shingle beaches. The occurrence of corresponding vegetation is a crucial precondition for the allocation of a section of beach to this habitat type.

The vegetation is made up overwhelmingly of annual species and is often gappy (depending on the intensity with which the beach is used), while its spatial distribution may change to a greater or lesser degree after every high tide. For this reason, vegetation-free areas of the drift line are also to be incorporated into the area delimited if corresponding plant species occur at least now and then in the section examined. Drift lines are mostly linear formations, although extensive formations are also found more rarely in sandflat areas. On account of the annual variations in the location of the drift lines above the waterline, the whole beach or sandflat between the line of the mean water level in the Baltic Sea or mean high water spring tides in the North Sea and, landward, dunes or the occurrence of perennial vegetation is incorporated into the area delimited.

Embryonic shifting dunes may host drift line species, which are treated separately as a distinct habitat type (2110) if *Elymus farctus* is dominant and the dunes rise distinctly, as a rule at least 30 cm, above the surrounding beach.

Delimitation from other habitat types:

1220: Vegetation overwhelmingly made up of annual species.

1230: Position below the foot of the sea cliff slope.

2110: Largely flat relief or dunes rising <0.3 m above beach level.

1.3 Competent authority/ies

Mecklenburg-Vorpommern:	LUNG
Schleswig-Holstein:	LKN-SH, LLUR

1.4 Working group

Ad Hoc Working Group on Habitat Types

2 Monitoring requirements

2.1 Necessity

HD [1]

Article 11 [2]

Comments

"Member States shall undertake surveillance of the conservation status of the natural habitats and species referred to in Article 2 with particular regard to priority natural habitat types and priority species."

This provision is not limited to NATURA 2000 areas, while habitat types outside Habitats Directive areas are also to be included in the monitoring as appropriate.

Article 17 [3]

Comments

"Every six years […], Member States shall draw up a report on the implementation of the measures taken under this Directive. This report shall include […] the main results of the surveillance referred to in Article 11."

Article 17 governs the performance of the reporting obligations in general terms. DocHab 04-03/03 (European Commission, 2006) sets out further substantive standards and guidelines.

WFD [4]

Article 8 in conjunction with Article 6 and Annex IV

Comments

"Member States shall ensure the establishment of programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status…"

"[F]or protected areas the above programmes shall be supplemented by those specifications contained in Community legislation under which the individual protected areas have been established." (Third indent of Article 8(1))

Under Article 6 in conjunction with Annex IV, the protected areas also include NATURA 2000 sites designated for the protection of habitats and species, provided the maintenance or improvement of water status is an important factor in their protection.

TMAP [5]

Wadden Sea Plan (Stade Declaration, 1997)

Comments

The Trilateral Wadden Sea Plan was adopted at the eighth Trilateral Government Conference between the three countries with coastlines along the Wadden Sea, Denmark, Germany and the Netherlands. It is inspired by the guiding principle of achieving, as far as possible, a natural, self-sustaining ecosystem in which natural processes can proceed in an undisturbed way. The Plan formulates joint conservation targets, including targets for water and sediments, beaches, dunes, salt marshes and marine mammals. Projects and measures are developed to promote the achievement of these targets. Since 1994, the Trilateral Monitoring and Assessment Programme (TMAP) has been the most important instrument enabling the parties to track the progress made towards the achievement of the targets throughout the Wadden Sea. Measurable physical, chemical, biological and socioeconomic variables are examined (cf. CWSS and TMAG, 2004).

2.2 Environmental targets

HD

Maintenance of Habitat Type 1210 with a favourable conservation status or, where applicable, its restoration to such a status:

- Stable or increasing range and overall area
- Dynamics of the annual vegetation of drift lines involved in the formation of biotopes
- Largely natural sediment, current and wave conditions
- Species composition typical of the relevant biotopes with stable populations of the characteristic species
- No or minor impairments, above all due to coastal protection, beach clearance and tourism

TMAP

The following targets have been defined for beaches (Wadden Sea Quality Status Report 2004):

- Increased natural dynamics
- Favourable conditions for migrating and breeding birds

2.3 Threats

- Restriction of natural dynamics as a result of coastal protection measures
- Beach clearance, including mechanical changes (trampling, recreational use)

2.4 Spatial allocation

Comments on the BD - coastal waters

This habitat type is covered indirectly by the Birds Directive if it is a habitat for bird species crucial to the value of an EU bird protection area.

	EEZ	12- nm zone	Coastal waters 1)	Transitional waters
MSFD	-	-	-	-
Birds Directive	-	-	x	-
HD	-	-	x	-
WFD	-	-	-	-
HELCOM	-	-	-	-
OSPAR	-	-	-	-
TMAP	-	-	x	-

1) Under the WFD: baseline plus one nautical mile

3 Monitoring concept

3.1 Description of monitoring network

The foundation for the network is provided by the Concept for the Monitoring of the Conservation Status of Habitat Types and Species under the Habitats Directive in Germany (*Konzept zum Monitoring des Erhaltungszustandes von Lebensraumtypen und Arten der FFH-Richtlinie in Deutschland*), which was drawn up at the federal level for terrestrial habitat types on the basis of the results of an R+D project (SACHTELEBEN and BEHRENS, 2009).

On account of the small number of large-scale sites that have been defined, a total census is to be carried out for this habitat type under the concept. The sites that have been delimited are geographically/topographically discrete spaces, as a rule islands or parts of islands and/or sections of coast oriented towards adjacent seaward water bodies (subject to the WFD).

North Sea

On the North Sea coast, there are eight sites in Schleswig-Holstein and two sites in Hamburg.

Baltic Sea

On the Baltic Sea, there are 19 sites on the Schleswig-Holstein coast and 13 sites in Mecklenburg-Vorpommern.

3.2 Monitoring activities

North Sea and Baltic Sea

Surveying and Evaluation of Annual Vegetation of Drift Lines (1210)

Methods:

The target variables are the status quo and trends in:

- Occurrence, range and area
- Typical species spectrum and ecological structural diversity

The sampling strategy must make it possible to obtain evidence about the ecological status of the habitat type.

Monitoring concept:

Area-wide surveying of the overall extent of the habitat type to ascertain its range and area. Selection and permanent specification of representative sample plots or transects for the detailed surveying of qualitative parameters (see below).

Basic monitoring and specification of the monitoring network

An area-wide survey of the habitat type is carried out in the course of the six-year reporting cycle in order to assess its range and area as characteristic variables. Both on the North Sea and on the Baltic Sea, this survey is carried out using aerial images and the biotope mapping keys issued by the Länder and/or the TMAP typology and the associated mapping key. The primary goal is the uniform identification and assessment of HD habitat types across the different Länder. Depending on what is known about the changes in certain areas, it may be sufficient to carry out reviews of known sites based on aerial images in alternation with area-wide terrestrial surveys. This is a matter to be decided by the relevant specialist authorities at Land level.

Representative survey areas along the transects are established and surveyed or the transects surveyed in their entirety in order to record characteristic qualitative variables (characteristic structures, functions and species, impairments) (for general comments on the specification of survey areas, see SACHTELEBEN and BEHRENS, 2009). Where a total census is to be carried out, each site must be covered by at least one transect. The transects or the survey areas within the transects represent the various sites in terms of their manifestation, variability and conservation status (selection criteria: topographical, geomorphological and habitat situation, structure and size). The data that are required for the assessment of the criteria mentioned in the assessment matrix (see below) are gathered in these areas. The number of transects and survey areas specified within the transects must be sufficient to adequately depict the variance of the manifestations and conservation statuses at the qualitative and quantitative levels. As a rule, the individual sites should not be less than approx. 100 m in length; the survey areas specified reflect the form and size of the sites delimited in the course of the area-wide mapping.

As a rule, the transects run at right angles to the coastline in order to optimise the representation of the sequence of habitats. Depending on the size of the site or the complexes of sites, the survey areas may range in size from single, permanent plots to several large, spatially specified survey areas along transects and transects in their entirety. Where appropriate, it is also possible for full-coverage site

surveying to be implemented at small sites along the mainland coasts on the North Sea and Baltic Sea. The "structured walks" procedure may be deployed in this context. Where appropriate, the transects encompass all the habitat types found on the relevant section of coast or island. This is the best way of incorporating natural transitions and dynamic changes into the assessment.

The survey areas along the transects or the transects themselves are to be plotted using GPS with the highest possible positional accuracy (approx. 1 - 5 m), so that they can be surveyed again when the mapping procedure is repeated. Where the sites change to a considerable extent, the boundaries of the transects or survey areas must be adjusted as necessary. The length of the transects may be increased in areas where a habitat type is expanding or decreased where a habitat type is shrinking.

Frequency:

The frequency for the surveys of the transects or survey areas ranges from once a year to once per reporting period. In the latter case, the survey cycle is to be intensified as necessary, depending on the actual dynamics of change at the specific location. The concrete specification of the transects and survey areas and, where appropriate, the specification of a different survey cycle are matters to be decided by the relevant specialist authorities at Land level.

The results from the individual survey areas are compiled and the conservation status of the habitat type for the relevant biogeographical region assessed, incorporating the results of the area-wide mapping, in order to carry out an overall assessment of the habitat type site in question (see SACHTELEBEN and BEHRENS, 2009).

Parameter:

- Area of the habitat type
- Biotope types according to the mapping keys issued by the Länder; additionally, on the North Sea, TMAP vegetation types
- Coastal protection measures
- Mechanical changes, clearance
- Recreational uses/facilities
- Species spectrum
- Structures, processes and zoning typical of the location

3.3 Additional parameters

4 Assessment

4.1 Assessment procedures

North Sea and Baltic Sea

Title

HD Habitat Type - Annual Vegetation of Drift Lines (1210)

Authors

(KRAUSE et al., 2008)

Guideline:

HD

Comments:

The assessment matrices for the marine and coastal habitat types listed in Annex I of the Habitats Directive form the basis for the performance of the monitoring and reporting obligations established in Articles 11 and 17.

The typical species listed in the matrices under the assessment criterion "Completeness of the typical species inventory" are intended to reflect the functional structure of a habitat type, since this is not evaluated in any other way. Given that "typical species" may occur in various habitat types, they are not to be equated with "characteristic species".

The species lists set out here are not exhaustive. It remains possible for items to be added and deleted in order to take account of more recent findings. The species lists must be adjusted to specific regional circumstances for the mapping of the sites in question. The threshold values cited for some habitat and impairment parameters also have to be specified particularly for individual regions as appropriate.

The inventories of typical species for the habitat types represent one of the main ecological assets that have to be assessed in order to comply with the obligations placed on Member States with regard to reporting to the EU. Nevertheless, although they are to be assessed as indicators of the conservation status of the habitat type in question, no separate species monitoring needs to be carried out on individual typical species. Information on the presence of the species is sufficient for this purpose. Optionally, abundances, trends, etc. may be obtained to support the assessment.

The assessment of the manifestations of the habitat type specific to the physical region in question is used to supplement the habitat type profiles and assessment matrices drawn up by the specialist authorities at Land level.

On the assessment of beaches and sea cliffs (Habitat Types 1210 - 1230):

The habitat types for beaches and sea cliffs are highly dynamic habitats, the boundaries and manifestations of which are subject to constant change. Active coastal dynamics and their manifestations are therefore reflected, in particular, in the assessment parameters for habitat structures and impairments.

The diversity of natural substrates typical of the habitat and, in particular, processes that have identifiable effects on sea cliffs (rock falls, solifluction, etc.) are assessed as expressions of unrestricted coastal dynamics. Biotic parameters are subordinated.

The assessment is carried out by meaning the subcriteria.

The proportion of all the plant species potentially present at a location that actually occur is drawn on for the assessment.

In addition to this, furthermore, the number or occurrence of typical animal species may be incorporated into the assessment as a subcriterion, provided studies of suitable species groups are available.

In particular, mechanical and structural changes in the habitat type sites or the surrounding areas that influence them, inputs of substances and damage caused by recreational use are assessed as impairments. As a matter of principle, what is decisive is the subcriterion that has been assessed least favourably in each case, i.e. the subcriterion that constitutes the greatest impairment.

Assessment matrix

5 Quality assurance

- Quality Assurance Panel

5.1 Monitoring institutions

- LLUR
- LUNG
- LKN-SH

5.2 Guidance documents

- Council of the European Communities, 1992: Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora; *Official Journal*; L 206: pp. 7-50.
- Drachenfels, O.v.; 2004: *Kartierschlüssel für Biotoptypen in Niedersachsen unter besonderer Berücksichtigung der nach § 28a und § 28b NNatG geschützten Biotope sowie der Lebensraumtypen von Anhang I der FFH-Richtlinie: Stand März 2004: 6., völlig überarb. Aufl.*; Naturschutz Landschaftspfl. Niedersachs.; A/4; 240 pp.
- European Commission, DG Environment, 2006: *Assessment, monitoring and reporting under Article 17 of the Habitats Directive: Explanatory Notes & Guidelines: Final Draft.*
- European Commission, DG Environment, 2007: *Interpretation Manual of European Union Habitats.*
- Krause, J., Drachenfels, O.v., Ellwanger, G., Farke, H., Fleet, D.M., Gemperlein, J., Heinicke, K., Herrmann, C., Klugkist, H., Lenschow, U., Michalczyk, C., Narberhaus, I., Schröder, E., Stock, M. and K. Zscheile (2008): *Bewertungsschemata für die Küsten- und Meereslebensraumtypen der FFH-Richtlinie: Ergebnis Bund-Länder-Arbeitskreis "FFH-Berichtspflichten Meere und Küsten": Stand: 27.05.2008.*
- Sachteleben, J., Behrens, M. et al., 2009: *Konzept zum Monitoring des Erhaltungszustandes von Lebensraumtypen und Arten der FFH-Richtlinie in Deutschland: Ergebnisse des F+E-Vorhabens "Konzeptionelle Umsetzung der EU-Vorgaben zum FFH-Monitoring und Berichtspflichten in Deutschland" (Stand: November 2008)*; commissioned by the Federal Agency for Nature Conservation.
- State Agency for Nature and Environment of the Land Schleswig-Holstein, 2007: *Hinweise zur Bewertung des Erhaltungszustandes von FFH-Lebensraumtypen in Schleswig-Holstein: 1. Fassung, Juli 2007.*
- State Agency for Nature and Environment of the Land Schleswig-Holstein, 2007: *Steckbriefe und Kartierhinweise für FFH-Lebensraumtypen in Schleswig-Holstein: 1. Fassung, Mai 2007.*
- State Authority for Environment, Nature Protection and Geology of the Land Mecklenburg-Vorpommern, 2010: *Anleitung für die Kartierung von Biotoptypen und FFH-Lebensraumtypen in Mecklenburg-Vorpommern: 2. vollst. überarb. Aufl., Stand: März 2010.*
- TMAP Manual

5.3 Standards

- To be specified by the Quality Assurance Panel at the UBA as necessary.

5.4 Current status

6 Literature

7 Activities required to implement the concept

7.1 Changes to the current monitoring programme

HD Habitat Type 1210 must be monitored in accordance with the methodology described in sections 3 and 4.

7.2 Working steps required

- Specification and surveying of study areas or transects
- Data management: GIS and Land databases, updating of Standard Data Forms
- Evaluation with a view to management plans and/or necessary measures

Footnotes

(1) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

(2) Article 11 (monitoring of habitats and all species listed in Annexes II, IV and V) imposes the obligation to monitor the conservation status of all habitats (listed in Annex I) of Community interest. In consequence, this provision is not limited to NATURA 2000 areas, but habitat types outside the Habitat Directive areas are also to be included in the monitoring as appropriate.

(3) Article 17 governs the performance of reporting obligations. The Habitats Directive imposes binding obligations concerning the submission of reports to the European Commission (Articles 11 and 17).

(4) EC Water Framework Directive; Directive 2000/60/EC. The coastal waters subject to ecological assessment under the WFD extend 1 nautical mile beyond the baseline.

(5) The monitoring requirements under TMAP were specified in the Wadden Sea Plan (Sylt, 2010) (see also TMAP Manual, section 2).