

**Water quality - Guidance standard on assessing the
hydromorphological features of transitional and coastal
waters**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Water quality - Guidance standard on assessing the hydromorphological features of transitional and coastal waters

Qualité de l'eau - Norme guide pour l'évaluation des caractéristiques hydromorphologiques des eaux de transition et des eaux côtières

Wasserbeschaffenheit - Anleitung zur Beurteilung der hydromorphologischen Merkmale der Übergangs- und Küstengewässer

This European Standard was approved by CEN on 11 July 2014.

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Foreword

This document (EN 16503:2014) has been prepared by Technical Committee CEN/TC 230 "Water analysis", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2015 and conflicting national standards shall be withdrawn at the latest by February 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Introduction

Hydromorphology of transitional and coastal (TraC) waters is one of the basic features of marine and coastal ecosystems controlling the presence of biota. Hydromorphology is the result of the interaction between the structure of the systems and their functioning. Structure includes sea-bed geology, sediment features, morphology and water depth, whereas functioning includes hydrodynamics, sediment dynamics and morphodynamic processes.

Over the past several millennia, human developments in TraC waters throughout Europe have caused substantial changes in the hydromorphological characteristics and ecological functioning of many water bodies. Hydromorphological changes are an important consideration in implementing the Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD). In addition, for the Habitats Directive there is a need to maintain certain 'features' in favourable condition, which has also given rise to a focus on hydromorphological assessments.

In a general sense, transitional waters (e.g. estuaries, fjords, some lagoons) are neither fully open coastal systems nor enclosed or flowing freshwater areas. (for the WFD definition, see Clause 2). Their boundaries may be defined by hydromorphological features and discontinuities, by salinity, or by any other hydrographic feature (e.g. water depth and tidal regime). The term 'coastal waters' has been defined for various legal and political purposes (e.g. see Clause 2) but in this hydromorphological standard they are defined as waters characterized by coastal features and influenced by coastal processes.

This European Standard:

- a) supports environmental and conservation agencies in meeting monitoring requirements of the WFD and MSFD;
- b) provides information supporting other environmental reporting requirements (e.g. in relation to biodiversity or environmental impact assessment);
- c) supports management and restoration initiatives;
- d) identifies and defines the main pressures affecting European TraC waters.

Note that in this standard, "assessment" is used as a broad term referring to the general description of features and the pressures that impinge upon them. It is not used to imply the judgement of particular levels of "quality" or "value", whether related to status under the WFD, MSFD or more generally.

WARNING — Persons using this European Standard should be familiar with usual laboratory and fieldwork practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT – It is absolutely essential that tests conducted according to this European Standard be carried out by suitably trained staff.

1 Scope

This European Standard gives guidelines for characterizing the hydromorphology of transitional or coastal (TraC) waters, but does not prescribe detailed methods of assessment. The main aim of this document is to improve the comparability of hydromorphological survey methods, data processing, and the interpretation and presentation of results.

This European Standard:

- a) lists essential features and processes of TraC waters that should be characterized as part of a hydromorphological survey and used for determining hydromorphological condition;
- b) gives guidance on strategies for collecting and presenting hydromorphological data depending on the resources available and the anticipated use of the assessment;
- c) describes how to generate data sets appropriate for monitoring and reporting on the condition of Natura 2000 sites designated under the Habitats Directive and the Birds Directive;
- d) provides guidance on data quality assurance.

This European Standard does not deal with biological assessments in TraC waters such as the presence or absence of individual species or community composition, nor does it attempt to link specific hydromorphological features with their associated biological communities. However, it is relevant where plants or other organisms form significant structural elements of the habitat (e.g. saltmarshes, biogenic reefs).

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

aquatic macrophyte

larger plant of marine and brackish water which is easily seen with the naked eye, including angiosperms and macroalgae

EXAMPLE Examples for angiosperms: reeds, saltmarsh and seagrass beds; example for macroalgae: seaweed.

[SOURCE: EN 16039:2011, 3.1, modified]

2.2

attribute

specific recorded elements of a hydromorphological feature

EXAMPLE 'Silt' and 'boulders' are natural substrate texture attributes, 'sheet piling' and 'gabions' are attributes of engineered banks.

[SOURCE: EN 16039:2011, 3.2]

2.3

bay closing line

straight line drawn between prominent physical features on either side of a bay