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Standards

Irish Standard
I.S. EN 17123:2018

Water quality - Guidance on determining the degree of modification of the hydromorphological features of transitional and coastal waters

I.S. EN 17123:2018

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National Foreword

I.S. EN 17123:2018 is the adopted Irish version of the European Document EN 17123:2018, Water quality - Guidance on determining the degree of modification of the hydromorphological features of transitional and coastal waters

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EUROPEAN STANDARD

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English Version

Water quality - Guidance on determining the degree of modification of the hydromorphological features of transitional and coastal waters

Qualité de l'eau - Guide pour la détermination du degré de modification des caractéristiques hydromorphologiques des eaux de transition et des eaux côtières

Wasserbeschaffenheit - Anleitung zur Bestimmung der Ausprägung hydromorphologischer Merkmale der Übergangs- und Küstengewässer

This European Standard was approved by CEN on 5 October 2018.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17123:2018) 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of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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

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Introduction

This document will enable broad assessments and comparisons to be made of the hydromorphological modifications of Transitional (estuaries, lagoons, etc) and Coastal waters (TraC waters) throughout Europe (e.g. for reporting by the European Environment Agency). These systems have been increasingly influenced by human activities over many centuries and hence the modifications relate to historical and recent developments that are superimposed over the natural and large-scale changes and variability experienced by these systems.

This document attempts to acknowledge the particular spatial and temporal heterogeneity of coastal and transitional systems. TraC systems are dominated by multi-directional processes (waves acting in different directions, as well as bi-directional tidal flows operating at differing tidal levels, which can be further complicated by variable wind orientation). As a result, the natural variability within coastal and transitional water bodies can often be significant in spatial and temporal scales, which need to be reflected during comparisons against natural baselines or reference conditions.

European Directives such as the Water Framework Directive (WFD)[ref 1] and the Marine Strategy Framework Directive (MSFD) [ref 2] require Member States to determine that hydromorphological and physico-chemical conditions should be suitable for supporting biological assemblages; the WFD and MSFD in turn require Member States to indicate, respectively, that good ecological status and good environmental status have been attained. The MSFD descriptors, criteria and indicators include hydromorphological features.

EN 16503 (*Water quality — Guidance standard on assessing the hydromorphological features of transitional and coastal waters*) describes a protocol for field survey and feature recording, whereas this standard gives guidance on assessing the modification of TraC hydromorphological features. It focuses especially on human pressures that affect TraC waters and thus will be valuable for implementing the WFD by indicating the extent to which these pressures will cause a departure from hydromorphological reference conditions.

Although the procedure described in this document enables the hydromorphological modification of TraC waters to be determined and described, it does not attempt either to describe methods for defining high status for hydromorphology under the WFD or to link broadscale hydromorphological classification to assessments of ecological status. In addition to its relevance to the WFD and MSFD, this standard has applications also for nature conservation, environmental impact assessment, river basin management, flood and erosion risk assessment (e.g. the EC Floods Directive) [ref 3] and setting targets for restoration. In addition, for the Habitats Directive [ref 4] there is a need to maintain certain “features” in favourable condition, which has also given rise to a focus on hydromorphological assessments.

(Note that in this standard, “assessment” is used as a broad term referring to the general description of features and the pressures affecting 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 — Safety issues are paramount when surveying transitional and coastal waters. This European 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 health and safety practices and to ensure compliance with any EU and national regulatory conditions or guidelines.

IMPORTANT — Persons using this document should be familiar with usual laboratory and fieldwork practice. It is absolutely essential that tests conducted according to this document be carried out by suitably trained staff.

1 Scope

This document provides guidance on characterizing the modifications of the hydromorphological features of TraC waters described in EN 16503, enabling consistent comparisons of hydromorphological modification between TraC waters within a country and between different countries in Europe. Its primary aim is to assess "departure from naturalness" as a result of human pressures on TraC hydromorphology, and it suggests suitable sources of information that may contribute to describing the modification of hydromorphological features. The procedures set out in this standard will encourage the objective assessment and reporting of the variability in transitional and coastal waters, and contribute to the work needed to implement the WFD and the MSFD; however, it does not replace methods that have been developed for local assessment and reporting.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
attribute
specific recorded element of a hydromorphological feature

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

[SOURCE: EN 16039:2011, definition 3.2]

3.2
bathymetry
shape of the sea-bed as measured by the distribution of depth

3.3
beach nourishment
artificial process of replenishing the beach using marine sediment (e.g. sand) to increase the recreational value or to protect the beach against erosion

3.4
bedform pattern
morphology of the sea bed

Note 1 to entry: Refers to the morphology of soft bottoms. The bedform patterns may be simple or complex depending on the size and shape of the system and the nature of the local sediment transport processes. Deposition produces features such as sand and gravel bars, while erosion results in scour features.

[SOURCE: EN 16503:2014, definition 2.4]