

**VEE KVALITEET. JUHENDSTANDARD JÕGEDE
HÜDROMORFOLOOGILISTE TUNNUSTE HINDAMISEKS**

**Water Quality - Guidance standard for assessing the
hydromorphological features of rivers**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

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English version

Water Quality - Guidance standard for assessing the hydromorphological features of rivers

Qualité de l'eau - Guide pour l'évaluation des caractéristiques hydromorphologiques des rivières

Wasserbeschaffenheit - Anleitung zur Beurteilung hydromorphologischer Eigenschaften von Fließgewässern

This European Standard was approved by CEN on 23 September 2004.

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Foreword

This document (EN 14614:2004) 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of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard : Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

WARNING — Safety issues are paramount when surveying rivers. Surveyors should conform to EU and national Health and Safety legislation, and any additional guidelines appropriate for working in or near rivers.

Introduction

Historically, many countries in Europe have assessed river 'quality' simply in terms of the chemical or pollution status of the water flowing in river channels. A more comprehensive view of river habitats is needed, however, to answer pressing ecological questions such as those arising from the EC Water Framework Directive (WFD) (Commission of the European Communities, 2000) and the EC Habitats Directive, to underpin the International Convention on Biodiversity, or to assess proposed river engineering schemes and other catchment developments. In most European countries there are now pressures from statutory and voluntary environment and conservation agencies to see rivers returned to a more natural condition. This implies a need to evaluate areas deserving protection and those requiring rehabilitation, and to encourage better management of river systems throughout Europe.

1 Scope

This document provides guidance on the features to be recorded when characterising and assessing the hydromorphology of rivers. It is based on methods developed, tested, and compared in Europe. Its main aim is to improve the comparability of hydromorphological survey methods, data processing, interpretation and presentation of results. Whilst it has particular importance in relation to the reporting requirements of the WFD, it also has considerably wider scope for other applications. Although hydromorphology is dependent on hydrology and underlying geology, this standard is focused on the structural features of rivers and on river continuity. In addition, whilst recognising the important influence of hydromorphology on plant and animal ecology and, conversely, the influence of plants and animals on hydromorphology, no attempt is made to provide guidance in this area.

2 Terms and definitions

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

2.1

aquatic macrophytes

larger plants of fresh water which are easily seen with the naked eye, including all aquatic vascular plants, bryophytes, stoneworts (Characeae) and macro-algal growths

NOTE This definition includes plants associated with open water or wetlands with shallow water.

2.2

attribute

specific recorded element of a hydromorphological feature (e.g. 'boulders' and 'silt' are substrate attributes; 'sheet piling' and 'gabions' are attributes of engineered banks)

2.3

backwater

area of low velocity or static water under dry-weather flows, most commonly former river channels or flood channels within the alluvial floodplain, connected to the river channel at least in periods of high flow

2.4

bank

permanent side of a river or island, which is above the normal water level and only submerged during periods of high river flow

NOTE In the context of this standard, the top is marked by the first major break in slope, above which cultivation or development is possible.

2.5

bankfull

maximum point on banks at which floods are held within the channel before spilling over onto the floodplain

2.6

berm

natural or artificial shelf within a river that is exposed above water level during low flows, but is submerged during high flows

2.7

bog

wetland, in which the vegetation communities (frequently dominated by *Sphagnum* mosses) form peat over long periods of time