

Water quality - Guidance on assuring the quality of biological and ecological assessments in the aquatic environment

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14996:2006 sisaldab Euroopa standardi EN 14996:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 31.07.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14996:2006 consists of the English text of the European standard EN 14996:2006.</p> <p>This document is endorsed on 31.07.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This guidance standard defines activities appropriate for ensuring that the quality of ecological assessments in surface waters (including rivers, lakes, transitional and coastal waters and the open sea) and sediments meets specified requirements. This standard also covers hydromorphological aspects relevant to ecological assessment. While it has particular importance in relation to the assessment of ecological status in surface waters, it also applicable to other types of investigation and habitat.</p>	<p>Scope:</p> <p>This guidance standard defines activities appropriate for ensuring that the quality of ecological assessments in surface waters (including rivers, lakes, transitional and coastal waters and the open sea) and sediments meets specified requirements. This standard also covers hydromorphological aspects relevant to ecological assessment. While it has particular importance in relation to the assessment of ecological status in surface waters, it also applicable to other types of investigation and habitat.</p>
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Võtmesõnad:

English Version

Water quality - Guidance on assuring the quality of biological and ecological assessments in the aquatic environment

Qualité de l'eau - Guide d'assurance qualité pour des évaluations biologiques et écologiques dans l'environnement aquatique

Wasserbeschaffenheit - Anleitung zur Qualitätssicherung biologischer und ökologischer Untersuchungsverfahren in der aquatischen Umwelt

This European Standard was approved by CEN on 3 May 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Principle.....	8
5 Design of biological and ecological studies.....	8
6 Surveys and sampling.....	9
7 Analysis	9
8 Performance characteristics	11
9 Validation of results	11
10 Measurement uncertainty	12
11 Interpretation and reporting	12
12 Training.....	12
Bibliography	14

Foreword

This document (EN 14996:2006) 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 December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

SAFETY PRECAUTIONS — Safety issues are paramount when surveying surface waters. Surveyors should conform to EU and national Health and Safety legislation and any additional guidelines appropriate for working in or near water.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

The importance of ecology in new legislation such as the EC Water Framework Directive (WFD 2000/60/EC) means that ecological data from aquatic environments shall be of a known and verifiable quality. General guidelines on quality assurance are given in the EN ISO 9000 series and, especially, EN ISO/IEC 17025. This guidance standard is designed to complement these standards by providing advice specific to the quality assurance of ecological data collected from aquatic environments. The principles outlined in this standard are applicable to all field and laboratory work and to all organisations producing ecological data.

According to the precise use to which this standard is to be put, it is essential for specifiers and users to agree on any necessary variations or optional procedural details prior to use.

1 Scope

This guidance standard defines activities appropriate for ensuring that the quality of ecological assessments in surface waters (including rivers, lakes, transitional and coastal waters and the open sea) and sediments meets specified requirements. This standard also covers hydromorphological aspects relevant to ecological assessment. While it has particular importance in relation to the assessment of ecological status in surface waters, it is also applicable to other types of investigation and habitat.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Not applicable.

3 Terms and definitions

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

3.1

accuracy

closeness of agreement between the result of a measurement and the true value of the measurand

NOTE 1 Accuracy consists of bias (systematic error) and random error.

NOTE 2 The true value is a value that would be obtained by a perfect measurement, thus true values cannot be determined and, consequently, accuracy is generally a hypothetical concept. In specific cases a 'true' value of a sample might be derived from interlaboratory studies as the mean value of all participants. This value should be regarded as a relative true value. For the purpose of this standard, accuracy can also refer to the application of the correct biological name to an organism.

3.2

bias

errors that are consistent rather than random in nature. Average of an infinite number of measurements of the same measurand under the same conditions divided by the true value of the measurand

NOTE 1 As only a limited number of measurements can be performed bias can only be estimated.

NOTE 2 Often referred to as 'systematic error'.

3.3

detection limit of discrete entities

minimum number and/or size of a specific taxon or group of organisms in a sample at which its presence can be detected with a certain confidence

3.4

error

difference between an individual result and the average (random error)

3.5

fitness for purpose

extent to which the performance of a protocol matches the criteria that best describes the end-user's need

NOTE Fitness should normally be assessed by a validation study.