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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Environmental management - Quantitative environmental
information - Guidelines and examples**

环境管理 定量环境信息 指南和示例

(English Translation)

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Table of Contents

Foreword

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This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is equivalent to ISO 14033:2019 "Environmental management - Quantitative environmental information - Guidelines and examples".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Environmental Management (SAC/TC 207).

Introduction

This document provides guidelines and examples for acquiring and delivering quantitative environmental information. It also aims to support the review and validation of quantitative information.

This document supports continuous improvement in environmental management and the achievement of sustainable development. It aims to address complex issues through the application of systems analysis and econometrics.

Environmental data processing is broken down into easily distinguishable practical steps, each with low complexity and a clear objective, thus providing a basis for quantitative environmental information.

This document provides support for data collection and processing. It is intended for those working on quantitative environmental information (including data acquisition, processing, reporting, and review).

Because this document involves data measurement, data acquisition, and data processing, it is also closely related to the field of digitalization, such as digital twins and sensors.

This document covers location, sensor data acquisition, processing, and interpretation, as well as concepts related to "big data," such as statistical analysis and statistical inference.

How to effectively and efficiently locate sensors (or other data sources) for this type of

analysis, and how to transparently reference such data sources to help...

It provides guidelines for interpreting and reviewing big data statistical analysis.

This guiding framework follows the general principles of continuous improvement and adheres to the iterative Plan-Do-Check-Act (PDCA) methodology.

This document provides guidelines on how to acquire, organize, and report data to achieve the data quality required for quantitative environmental information applications.

The document uses examples to address data quality issues. Data quality is an expected and implicit outcome of the guidelines provided in this document, but it is not explicitly stated in the text.

Detailed explanation.

The guidelines cover everything from planning, defining, and acquiring quantitative data to performing mathematical processing. The guidelines can serve as part of a methodology or tool.

This section is used to review work that generates quantitative environmental information, such as life cycle assessments or environmental performance assessments. This guide does not include specific methodologies.

This document discusses tools or methods, but rather how to acquire and deliver quantitative data for such applications. It refers to data as individual entities, rather than terms like numbers.

This document is based on a set of values such as databases. It is developed based on the application of numerous quantitative environmental information and is intended for use in various types of evaluations within an organization.

Therefore, quantitative environmental information can influence confidence in decision-making, including technology development, investment, and financial decisions. Any type of anticipated application and related...

All assessments rely on first identifying the expectations associated with the outcomes generated using quantitative environmental information before establishing methods for data collection.

The statistical numerical design standard for the set.

This document is based on numerous applications of environmental information and aims to make quantitative comparisons, such as level measurements and benchmarking, and continuous control.

Improvements (compared to the previous year), quantitative identification of priority areas, numerical assessment and risk comparison, and decisions regarding design, investment, or procurement.

The document supports quantitative comparison by highlighting perspectives that are particularly relevant to planning and achieving comparable quantitative results.

This document provides guidelines for obtaining and providing various quantitative environmental information and data. When an organization applies this document to its environment...

Benefit.

In order to fully utilize this document to acquire, organize, and report quantitative environmental information, special consideration should be given to identifying the skills required of practitioners.

Appendix E provides explanatory information to avoid misunderstanding of the guidance in this document.

Guidelines and Examples for Quantitative Environmental Information Management

1 Scope

This document provides a systematic and standardized guide for acquiring and reviewing quantitative environmental information and data, supporting environmental management standards and environmental reporting.

Application of the announcement.

This document provides organizations with the general principles, policies, and strategies necessary for obtaining quantitative environmental information for internal and/or external purposes.

And guidelines for activities. For example, such purposes could be to establish a record-keeping system to support decisions related to environmental policies and strategies.

This is especially important for comparing quantitative environmental information. This information relates to organizations, activities, facilities, technologies, and products.

This document addresses issues related to the definition, collection, processing, interpretation, and presentation of quantitative environmental information, providing guidance on how to use it for intended purposes.

The goal is to establish accurate, verifiable, and reliable guidelines, employing proven and mature methodologies to prepare guidelines suitable for specific environmental management needs.

information.

This document applies to all organizations, regardless of their size, type, location, structure, activities, products, level of development, or whether they have established an environment.

Management system.

Note 1: Quantitative information is a quantitative description of environmental performance in the form of environmental performance indicators according to ISO 14031.

Note 2: Quantitative information also quantifies risk for the purpose of risk management.

This document supplements the content of other environmental management standards.

Note 3: Appendices A and B provide illustrative and general examples on how to apply the guidelines and framework. Appendices C and D provide information on...

Misunderstanding of this document.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 14050 Environmental Management Vocabulary Note. GB/T 24050-2004 Environmental Management Terminology (ISO 14050:2002, IDT)

3 Terms and Definitions

The terms and definitions defined in ISO 14050 and the following terms and definitions apply to this document.

3.1 Information Types

3.1.1

basic data

Data obtained during the data acquisition process.

Note: Basic data consists of one or more values and units, depending on the nature of the item the basic data represents. Some basic data may be infinite.

A unit without a unit, such as an index or ratio.

3.1.2

Activity data

Quantitative indicators for activities that impact the environment.