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**INDUSTRY STANDARD OF THE
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**Technical guidelines for eco-environmental health risk
assessment - General principles**

生态环境健康风险评估技术指南 总纲

(English Translation)

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Foreword

In order to implement the "Environmental Protection Law of the People's Republic of China", strengthen ecological environment risk management, and promote the integration of the concept of public health Environmental management, guide and standardize the ecological environment health risk assessment work, formulate this standard.

This standard stipulates the general principles, procedures, content, methods and technical requirements of ecological environment health risk assessment.

This standard is issued for the first time.

This standard was formulated by the Department of Regulations and Standards of the Ministry of Ecology and Environment.

The main drafting organizations of this standard. Environmental Planning Institute of Ministry of Ecology and Environment, Chinese Society of Environmental Sciences, Huazhong University of Science and Technology, University of Science and Technology Beijing, Institute of Environmental Standards, Ministry of Ecology and Environment, South China Institute of Environmental Sciences, Ministry of Ecology and Environment.

This standard was approved by the Ministry of Ecology and Environment on March 18, 2020.

This standard shall be implemented from the date of issuance.

This standard is interpreted by the Ministry of Ecology and Environment.

General Outline of Technical Guidelines for Ecological Environment Health Risk Assessment

1 Scope of application

This standard stipulates the general principles, procedures, content, methods and technical requirements of ecological environment health risk assessment.

This standard is applicable to guide the process of ecological environment management to prevent and control environmental chemical factors closely related to damage to public health and carry out environmental health risk assessment.

2 Normative references

This standard refers to the following documents or their clauses. For undated references, the latest version (including amendments) applies in this standard.

GB/T 27921 Risk Management Risk Assessment Technology HJ 839 Environmental and health field survey technical specifications cross-sectional survey HJ 875 Technical Guidelines for Population Exposure Assessment of Environmental Pollutants HJ 876 Technical Specification for Children's Soil Intake Survey Trace Element Method HJ 877 Technical Specification for Investigation of Exposure Parameters

3 Terms and definitions

The following terms and definitions apply to this standard.

Hazard identification the process of determining the types and attributes of harmful effects caused by chemical factors in the environment to people, individuals or target organs.

Hazard characterization the process of qualitatively or quantitatively describing the inherent characteristics of chemical factors in the environment that cause harmful effects of individuals or groups.

Exposure assessment

The process of estimating or measuring the exposure, frequency and duration of the exposure of individuals or groups to chemical factors in the environment, including Analysis of the source, exposure route, exposure route, the number and characteristics of the exposed population and the uncertainty of the chemical factors in the environment.

Exposure scenario

The description of the scene where the chemical factors in the environment migrate through different ways and reach the contact surface of the exposed receptor, that is, a description of the process of exposure.

Series of facts, presumptions and assumptions.

Note: Rewrite HJ 875-2017, Terminology and Definition 3.3.

Risk characterization Qualitative or quantitative analysis of the possibility of harmful effects of the target population exposed to chemical factors in the environment under specific exposure conditions and the process of its uncertainty.

Uncertainty

Due to the lack of scientific understanding, the limitation of assessment methods and the lack of basic data, etc., the results of ecological environment health risk assessment are accurate Sexually affected conditions.

4.1.1 Scientificity

Fully collect existing data and information, based on the latest scientific evidence, according to the needs of ecological environment management, assessment purposes, and data availability and effectiveness, scientifically and reasonably determine the evaluation plan to ensure the systemicity and completeness of the evaluation process and the objectivity of the evaluation conclusion.

4.1.2 Hierarchical

Under the current awareness level and technical measures, according to the needs of ecological environment management, use the available data information and tools and methods, by from simple to complex, from conservative to practical, it is evaluated step by step.

4.1.3 Caution

The results of risk assessment should include the health of sensitive or highly exposed people exposed to chemical factors in the environment under the most unfavourable scenario in reality.

risk.

4.1.4 Transparency

The entire process of risk assessment should be fully and systematically recorded. Among them, special attention should be paid to the constraints, uncertain Contents and assumptions and their processing methods, different opinions and viewpoints in the assessment, and major decisions that directly affect the results of the risk assessment.

4.2 Technical guide system for ecological environment health risk assessment

The eco-environmental health risk assessment technical guide system is composed of general outline, basic method technical guide and application field technical guide.

The general outline stipulates the general principles, procedures, content, methods and technical requirements of ecological environment health risk assessment.

The basic method technical guide is a technical guide formulated for the general techniques and methods of each link of ecological environment health risk assessment.

A certain range can be used as the basis and basis for other guidelines.

Application field technical guidelines are special technical guidelines formulated for specific ecological environment management needs.

4.3 Evaluation procedure

The ecological environment health risk assessment procedure includes plan formulation, hazard identification, hazard characterization, exposure assessment and risk characterization. The assessment procedure is shown in Figure 1.

Hazard identification and hazard characterization together constitute a hazard assessment. The toxic effect and mode of action or mechanism determined by the hazard assessment are exposure assessment Provide a basis for the construction of exposure scenarios such as exposure pathways and exposure time. The exposure route, exposure time, exposure frequency and the exposure level and other information provide clues and basis for determining the key effect endpoints of the hazard assessment.

5.1 Clarify the purpose of evaluation

Before conducting a risk assessment, the risk assessor should fully communicate with risk managers and stakeholders, and clarify the ecological environment to be supported by the assessment.

Environmental management needs or ecological environmental issues that need attention.

5.2 Determine the scope of assessment

Determine the scope of assessment through data collection and analysis, personnel interviews, on-site investigations and ecological environment monitoring, including.

a) Target factors. Comprehensive consideration of source characteristics, environmental behavior, hazard characteristics and management requirements, etc., to determine the Chemical factors.

b) Time range. Comprehensive analysis of the hazard characteristics of the target