



# SLOVENSKI STANDARD SIST EN ISO 19204:2023

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**Kakovost tal - Postopek za oceno ekološkega tveganja onesnaženosti tal za posamezno lokacijo (pristop TRIAD za kakovost tal) (ISO 19204:2017)**

Soil quality - Procedure for site-specific ecological risk assessment of soil contamination (soil quality TRIAD approach) (ISO 19204:2017)

Bodenbeschaffenheit - Vorgehensweise zur standortbezogenen ökologischen Risikobewertung von Bodenverunreinigungen (TRIAD-Ansatz zur Bewertung der Bodenbeschaffenheit) (ISO 19204:2017)

Qualité du sol - Procédure d'évaluation des risques écologiques spécifiques au site de la contamination des sols (approche TRIADE de la qualité du sol) (ISO 19204:2017)

**Ta slovenski standard je istoveten z: EN ISO 19204:2022**

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**ICS:**

13.080.01	Kakovost tal in pedologija na splošno	Soil quality and pedology in general
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## Soil quality - Procedure for site-specific ecological risk assessment of soil contamination (soil quality TRIAD approach) (ISO 19204:2017)

Qualité du sol - Procédure d'évaluation des risques écologiques spécifiques au site de la contamination des sols (approche TRIADE de la qualité du sol) (ISO 19204:2017)

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## European foreword

The text of ISO 19204:2017 has been prepared by Technical Committee ISO/TC 190 "Soil quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 19204:2022 by Technical Committee CEN/TC 444 "Environmental characterization of solid matrices" the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

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The text of ISO 19204:2017 has been approved by CEN as EN ISO 19204:2022 without any modification.



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**Soil quality — Procedure for site-specific ecological risk assessment of soil contamination (soil quality TRIAD approach)**

*Qualité du sol — Procédure d'évaluation des risques écologiques spécifiques au site de la contamination des sols (approche TRIADE de la qualité du sol)*

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**ISO 19204:2017(E)****Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 190, *Soil quality*, Subcommittee SC 7, *Soil and site assessment*.

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## Introduction

This document is set up to ensure the quality of the site-specific ecological risk assessment of soil contamination. This process was described previously in a report by the Dutch PGBO (Integrated Soil Research Programme Agency), continued in the current SKB (Foundation for Soil Knowledge Development and Transfer)[69]. The present document is based on these Dutch reports but has been shortened in order to increase its general applicability. In addition, parts of the ecological risk assessment framework for contaminants in soil prepared by the British Environment Agency[21][22][23][24][25][26][27] were considered (this tiered framework does use the same three Lines of Evidence (LoE) as the TRIAD but not in parallel but consecutively). Experiences from various other sources[29][30][68], in particular, a summary of a Danish study performed as part of the EU FP6 project Liberation[36], as well as a Danish report[35], were added.

The term TRIAD relates to the following three LoE's: chemistry, toxicology and ecology[10]. Originally, it was described as Sediment Quality TRIAD by Long and Chapman[38]. The TRIAD does not particularly consist of three lines of evidence (up to five have been proposed[11]) but in specific situations, two might be sufficient. Descriptions of the soil quality TRIAD approach in the context of soil contamination are given, for example, in References [36], [40], [55], [59], [60], [63], [69], [71] and [73]. It should be mentioned that the soil quality TRIAD is not only used in Central Europe but also in other regions of the world, for example, in Portugal[1], Italy[67] or Brazil[44]. These publications can be used as case studies for the application of the soil quality TRIAD.

NOTE Recently, the ecological risk assessment procedures in The Netherlands, Norway, Sweden and the United Kingdom were compared[35]. The basic ideas of the TRIAD approach [e.g. a tiered approach and the combination of information from different disciplines (chemistry, ecotoxicology, and ecology)] have been accepted in these countries. However, only in the United Kingdom[21][22][23][24][25][26][27] and The Netherlands[40][43][53][58][60][61][63] have detailed frameworks been developed. The overall structure of this document combines and modifies both national frameworks in order to provide guidance independently from the country or region where the site to be assessed is located. The terminology of this document does follow the approach described in the EU project Liberation[36].

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