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**Soil quality — Characterization of soil  
with respect to human exposure**

*Qualité du sol — Caractérisation des sols en lien avec l'évaluation de  
l'exposition des personnes*

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## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 7, *Impact assessment*.

This second edition cancels and replaces the first edition (ISO 15800:2003), which has been technically revised. The main changes compared to the previous edition are as follows:

- the feedback on contaminated soil management for 15 years has been taken into account;
- the analysis results have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Characterizations of soils and sites relating to human exposure are performed all over the world. They are often planned and conducted by consultancies and expert organizations. Information from these characterizations is used to assess human exposure. Furthermore, these characterizations are used for decision-making by companies, individuals and local and national authorities as well as a basis for recommendations and regulations issued by national and international authorities.

The assessment of potential human health effects from exposure can be used for:

- the classification of contaminated sites;
- recommendations regarding the remediation of sites, soils and soil materials, e.g. priority of remediation;
- decisions regarding the future/planned use of contaminated sites;
- decisions regarding the disposal/treatment/re-use of contaminated or remediated soil and/or soil material.

The information needed for evaluations of human exposure is, to some extent, dependent on the way in which the exposure is assessed, e.g. calculations can be based on different scenarios, each requiring different information.

The extent of investigations necessary for the assessment of human exposure varies depending on the level of contamination and the investigated area. In some cases, the assessment of potential human health exposure can be based solely on information on the substances present in the soil and their concentrations and the relevant soil parameters. In other cases, it is necessary to know the “availability” of the substance (i.e. the proportion biologically active). This information will depend on the type and concentration of the substance, the relevant soil parameters and the type of exposure relevant for the area investigated, represented in the conceptual site model (CSM). Furthermore, the sampling method and strategies can depend on the use of the project area and the possible exposure patterns.

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