

CORE QUESTIONS ON DRINKING-WATER AND SANITATION FOR HOUSEHOLD SURVEYS



**World Health
Organization**



United Nations Children's Fund

WHO Library Cataloguing-in-Publication Data

Core questions on drinking-water and sanitation for household surveys.

1. Water supply. 2. Sanitation. 3. Data collection - standards. 4. Guidelines. I. WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. II. World Health Organization. III. UNICEF.

ISBN 92 4 156326 5

(NLM classification: WA 675)

ISBN 978 92 4 156326 0

© **World Health Organization and UNICEF 2006**

All rights reserved. Publications of the World Health Organization can be obtained from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel: +41 22 791 3264; fax: +41 22 791 4857; email: bookorders@who.int).

The World Health Organization and UNICEF welcome requests for permission to reproduce or translate their publications – whether for sale or for noncommercial distribution. Applications and enquiries should be addressed to WHO, Office of Publications, at the above address (fax: +41 22 791 4806; email: permissions@who.int or to UNICEF, Division of Communication, 3 United Nations Plaza, New York 10017, USA (fax: +1 212 303 7985; email: nyhqdoc.permit@unicef.org).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization or UNICEF concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization or UNICEF in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization and UNICEF do not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Layout by Strategic Communications SA, Geneva
Printed in Switzerland

TABLE OF CONTENTS

Preface	4
1. Why use harmonized questions in household surveys?	5
2. The core set of questions on drinking-water and sanitation for household surveys.....	6
3. Survey questions about drinking-water.....	8
4. Survey questions about sanitation	12
5. Survey question about the safe disposal of children's faeces	15
6. Analysis of survey data.....	16
7. Tools and resources.....	22
8. Acknowledgements	24
9. Contact information	25

LIST OF TABLES

Table 1 Classification of improved and unimproved drinking-water and sanitation facilities.....	16
Table 2 Use of improved drinking-water sources.....	17
Table 2A Use of improved drinking-water sources by those responding “bottled water” as the main source of drinking-water in Question 1.....	18
Table 3 Use of improved sanitation facilities.....	19
Table 4 Presentation of drinking-water data in final report	20
Table 5 Presentation of sanitation data in final report.....	21

PREFACE

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) prepared this document *Core questions on drinking-water and sanitation for household surveys* for use in comprehensive surveys that include questions on drinking-water and sanitation. If national and subnational household surveys use the questions and response categories in this guide, this will help to improve survey comparability over time and harmonize them with international monitoring programmes, including the JMP.

The harmonized questions in this guide are derived from an in-depth study of several international survey instruments. The questions were developed by the JMP in collaboration with experts from three international survey programmes – the Demographic and Health Survey (DHS), the Multiple Indicator Cluster Survey (MICS) and the World Health Survey (WHS) – as well with selected members of the JMP Technical Advisory Group (TAG). The DHS, MICS and WHS have adopted these harmonized questions to solve the comparability problems that previously existed across the different surveys.

This guide:

- Explains why it is important to adopt a harmonized set of drinking-water and sanitation questions in household surveys.
- Introduces a set of harmonized survey questions related to drinking-water and sanitation issues.
- Explains how household survey data are used to estimate access to drinking-water and sanitation.
- Discusses the classification of drinking-water and sanitation technologies as “improved” or “unimproved,” and provides definitions for such technologies.
- Presents tools and information for monitoring the use of improved drinking-water and sanitation facilities.

A companion document to this set of core questions has been prepared by Rod Shaw of the Water, Engineering and Development Centre (WEDC), Loughborough University, UK. Entitled “Drinking-Water and Sanitation: A compendium of illustrations for household surveys,” this document is available on the JMP web site (www.wssinfo.org).

1. WHY USE HARMONIZED QUESTIONS IN HOUSEHOLD SURVEYS?

Surveys are routinely used to assess household use of improved drinking-water and sanitation, and to assess hygiene-related practices in countries across the globe. Examples include the Demographic and Health Survey (DHS), supported by the United States Agency for International Development (USAID); the UNICEF-supported Multiple Indicator Cluster Survey (MICS); the WHO World Health Survey (WHS); the Reproductive Health Survey; the Living Standards Measurement Study (LSMS); the Core Welfare Indicator Questionnaires (CWIQ); and national censuses.

Accurate information about drinking-water, sanitation and hygiene related issues is invaluable to national leaders, decision-makers and stakeholders when making policy decisions. Sound, evidence-based information can be used in a variety of ways, including:

- to assess progress towards national and international goals and targets;
- to promote increased investments in the sector;
- to focus attention on needy areas and efficiently allot resources.

To ensure that the national, regional and global estimates are of the best quality possible, the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) uses different household surveys to estimate drinking-water and sanitation coverage. However, one problem with using data from a variety of sources is that the different survey results often cannot be compared, as different surveys may use different questions and response categories. As a result, it has been difficult to establish accurate trends over time within countries, and to compare data from different countries. Solving comparability problems is therefore crucial for estimating coverage accurately, and this prompted the JMP to formulate the set of harmonized survey questions and response categories presented in this guide.

This set of questions and response categories is intended for use in household surveys and national censuses; they have already been incorporated into several international survey programmes including DHS, MICS and WHS. It is envisioned that, with the expanded use of these harmonized questions, the pool of reliable data will increase, leading to higher quality estimates at country, regional and global levels.

Box 1: The JMP and global estimates

The JMP serves as the official mechanism of the United Nations for monitoring access to drinking-water and sanitation, and for reporting globally on the status of drinking-water and sanitation coverage. The coverage estimates are used to measure progress towards MDG Target 7c, «To halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation.»

2. THE CORE SET OF QUESTIONS ON DRINKING-WATER AND SANITATION FOR HOUSEHOLD SURVEYS

The harmonized survey questions in this guide assess the type of drinking-water source and sanitation facility that household members use. The questions also assess hygiene practices with respect to the disposal of children's faeces. The questions are not exhaustive, but serve as a core set to include in comprehensive household surveys. There are a number of detailed survey instruments for assessing household sources of drinking-water, sanitation facilities, and hygiene behaviours, including the Environmental Health Project/USAID *Guidelines for assessing hygiene improvement*, the World Bank LSMS, and the London School of Hygiene and Tropical Medicine *WSH indicators for VISION 21*. The harmonized survey questions in this guide will serve as a core set of drinking-water and sanitation questions for comprehensive surveys that include concerns beyond water and sanitation. These and other useful survey tools are listed in section 7. *Tools and resources*.

In this section, the harmonized questions are presented in three parts: questions related to drinking-water, to sanitation, and a question on the disposal of children's faeces. The harmonized questions for drinking-water provide information about the type of water source used, the time required to collect the water, and the household member responsible for fetching the water. There is also a question about the treatment of household drinking-water. The sanitation-related questions focus on access to sanitation facilities, and include questions about the type of sanitation facility used by the household and whether the facility is shared with others. The harmonized question on children's faeces aims at understanding household practices for disposing of them.

2.1 Survey questions about drinking-water

Question 1 aims to determine the household's main source of drinking-water, which serves as a proxy indicator for whether a household's drinking-water is safe. The assumption is that certain types of drinking-water sources are likely to deliver drinking-water of adequate quality for their basic health needs. This approximation is used because it would be too costly and time consuming to assess drinking-water quality through national household surveys (see section 6. *Analysis of survey data* for drinking-water sources that are considered likely to provide safe water).

Question 1A is designed for households that use bottled water as their main source of drinking-water. In such cases, additional information must be obtained about the water source for other domestic purposes, such as cooking and hand-washing. Bottled water is considered an improved source of drinking-water only when the household uses an improved water source for their other domestic uses.

The harmonized question set includes a question to determine if the round-trip water hauling time between the household and the water source takes more than 30 minutes.

Several other factors, in addition to the quantity of water available and the time and distance to the source, affect the quality of the access that a household has to drinking-water. Such factors include the quality of the water delivered, the continuity of the drinking-water service, the seasonal availability of water, and the affordability of the services. The time needed

to haul water (Question 2) and who within the household collects the water (Question 3) can be relatively easily assessed by national household surveys. This is not the case for continuity, reliability, seasonality and affordability of water supplies, since the assessments require too many questions, and these factors are best assessed by surveys dealing exclusively with drinking-water, sanitation and hygiene issues.

Household water treatment (Questions 4 and 5) can significantly impact the quality of water at the point of use. Appropriate household treatment involves any method proven to be effective in removing or killing pathogens, such as boiling the water, adding bleach or chlorine to the water, using a water-filtering device, solar disinfection of the water and settling methods. Some of these treatments are used individually, but some are combined to ensure that the pathogens are effectively inactivated.

2.2 Survey questions about sanitation

Facilities that are not shared between households and that hygienically separate human excreta from human contact are considered to be adequate.¹ Certain technologies are more likely than others to meet these adequacy standards. Technologies meeting the above requirements are called “improved” and those that do not are “unimproved”. (See section 6. *Analysis of survey data* for details of sanitation facilities that are considered likely to provide adequate sanitation).

Improved sanitation facilities include a flush/pour-flush toilet or latrine that flushes to a sewer, septic tank or pit. A ventilated improved pit (VIP) latrine, pit latrines with the pit well covered by a slab, or composting toilets are also considered improved. Open pits or latrines without a proper slab to cover the pit are considered to be unimproved. Hanging latrines, which deposit untreated excreta directly into bodies of water or in the open, are also unimproved as there is a high risk that individuals could come into direct contact with human excreta.

Questions 6 and 7 determine whether a sanitation facility is shared with other households, and if so with how many (Question 8). If a facility is shared and poorly maintained, this can undercut the hygienic quality of the facility and discourage people from using it. Such facilities pose health hazards by exposing people directly to human excreta, but in densely populated urban areas, shared or public facilities are often the only sanitation alternative.

2.3 Survey question about safe disposal of children's faeces

Question 9 deals with the disposal of children's faeces because this is a critical aspect of sanitary behaviour. Compared to the faeces of an adult, children's faeces are more likely to be a source of contamination for the household environment.² Many cultures, however, do not regard the faeces of small children as dangerous and do not dispose of them in a safe manner. The preferred disposal method, which should ensure that the household environment is not contaminated, is putting or rinsing stools into a sanitation facility.

¹ WHO/UNICEF JMP. *Report of the first meeting of the Technical Advisory Group*. Geneva, 23-25 April 2002.

² Kleinau E, Pyle D, Nichols L, Rosensweig F, Cogswell L, Tomasek A. *Strategic report 8: Guidelines for assessing hygiene improvement*. Arlington, VA, Environmental Health Project II (USAID), 2004.

3. SURVEY QUESTIONS ABOUT DRINKING-WATER

QUESTION 1: Main drinking-water source

The purpose of this question is to determine the main source of drinking-water for members of the household (i.e. the water source that supplies most of the household drinking-water needs). The type of water source or technology specified by the household is used as an indicator for whether the drinking-water is of suitable quality.

The water sources likely to be of suitable quality, or “improved”, are: a piped water supply into the dwelling; piped water to a yard/plot; a public tap/standpipe; a tube well/borehole; a protected dug well; a protected spring; and rainwater. Watersources that are “unimproved” are: an unprotected dug well; an unprotected spring; a cart with a small tank/drum; a water tanker-truck; and surface water.

Q1. What is the main source of drinking-water for members of your household?

Piped water into dwelling	>>Q4
Piped water to yard/plot	>>Q4
Public tap/standpipe	>>Q2
Tubewell/borehole	>>Q2
Protected dug well	>>Q2
Unprotected dug well	>>Q2
Protected spring	>>Q2
Unprotected spring	>>Q2
Rainwater collection	>>Q2

Indicator

Use of improved drinking-water sources.

Numerator

Number of household members using improved sources of drinking-water.

Denominator

Total number of household members in households surveyed.

DEFINITIONS

“Improved” sources of drinking-water

- **Piped water into dwelling**, also called a household connection, is defined as a water service pipe connected with in-house plumbing to one or more taps (e.g. in the kitchen and bathroom).
- **Piped water to yard/plot**, also called a yard connection, is defined as a piped water connection to a tap placed in the yard or plot outside the house.
- **Public tap or standpipe** is a public water point from which people can collect water. A standpipe is also known as a public fountain or public tap. Public standpipes can have one or more taps and are typically made of brickwork, masonry or concrete.
- **Tubewell or borehole** is a deep hole that has been driven, bored or drilled, with the purpose of reaching groundwater supplies. Boreholes/tubewells are constructed with casing, or pipes, which prevent the small

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_29841

