

Status of small-scale water supplies in the WHO European Region

Results of a survey conducted under the Protocol on Water and Health

Margriet Samwel (WECF)

Enkhtsetseg Shinee (WHO/Europe)

Bettina Rickert (UBA)



26-27 November 2014
7th meeting of the WG on Water and Health
Geneva

Umwelt 
Bundesamt

Background of the survey

- Programme of work under the Protocol on Water and Health 2011-2013
- Aimed to improve the evidence base on the status of small-scale water supplies (SSWS) in the WHO European region
- A questionnaire was developed by the technical working group (Germany, Czech Republic, WECF)

Method - the questionnaire

The questionnaire was divided into 5 sections:

- 1) legal and regulatory requirements related to SSWS management;
- 2) numbers of SSWS;
- 3) raw water sources used by SSWS;
- 4) operators and organization of SSWS;
- 5) quality of drinking water provided by SSWS.

Method: distribution and response rate

- Questionnaires were sent to all **53 Member States** of the WHO European region
- Distribution through WHO Regional Office for Europe and Country Offices to the health and environment ministries, National Focal Points of the Protocol
- **Response rate: 43 countries** (covering 82% of the total population of the region)
- **47 questionnaires** returned and assessed
 - United Kingdom – 3 questionnaires from 3 regions
 - Belgium – 2 questionnaires from 2 regions
 - Bosnia and Herzegovina – 2 questionnaires from Republic Sprska and the Federation of Bosnia and Herzegovina

Information provided

Wide variation on the amount of information:

- 100% contained information on regulatory requirements and institutional responsibilities
- 57% about numbers of persons served by individual or non-piped supplies
- 19% about drinking-water quality for individual or non piped supplies
- Very limited data on outbreaks of water related diseases

Main findings of the survey

The term “small-scale water supplies” (46 responses from 42 countries)

Some former Soviet countries categorize:

pipied – non-pipied water

centralised – non centralised

local (rural) –urban supplies

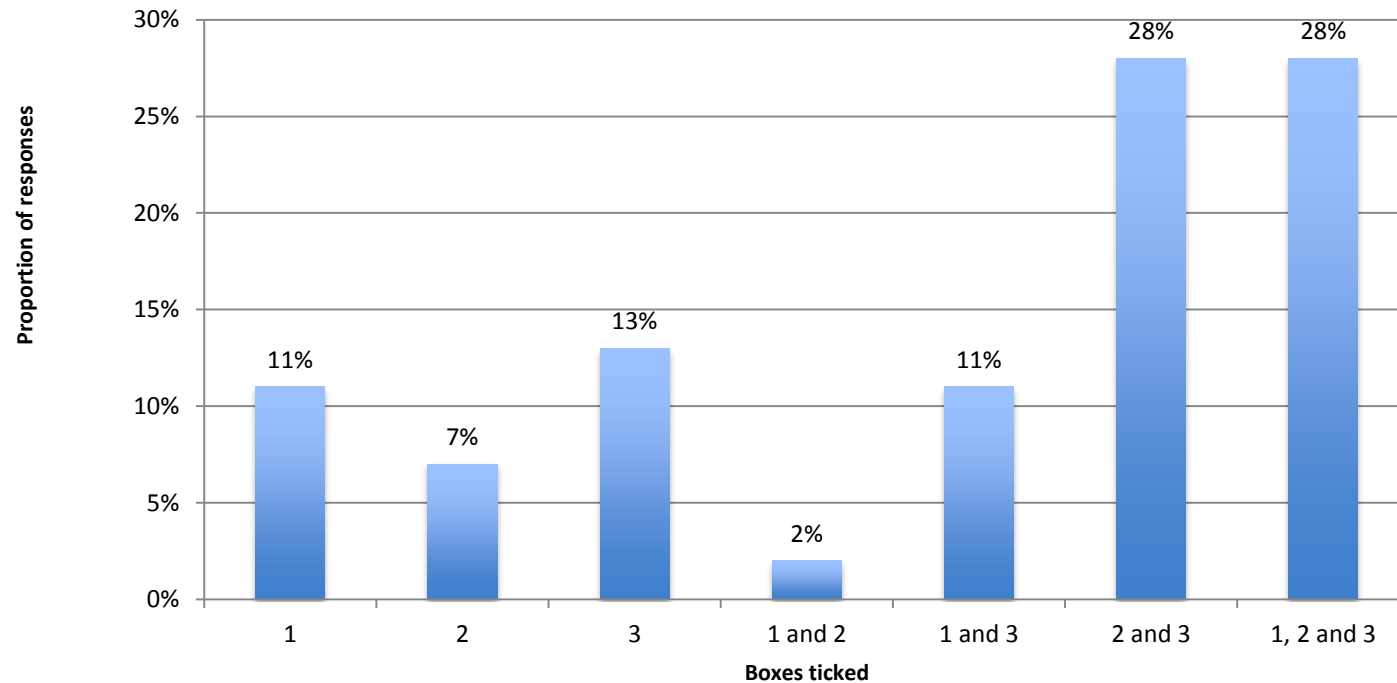
EU member states categorize based on number of persons supplied and/or daily volume produced water:

≤ 50 persons ($\leq 10\text{m}^3/\text{day}$)

51 - 500 persons ($> 10\text{m}^3 - \leq 100\text{m}^3/\text{day}$)

501 - 5000 persons ($> 100\text{m}^3/\text{day} - \leq 1000\text{m}^3/\text{day}$)

Bases for definitions of small-scale water supplies (46 responses from 42 countries)



Note: tick-box numbers 1, 2 and 3 represent the following criteria used to define small-scale water supplies:

1 = type of management (public/individual supplies)

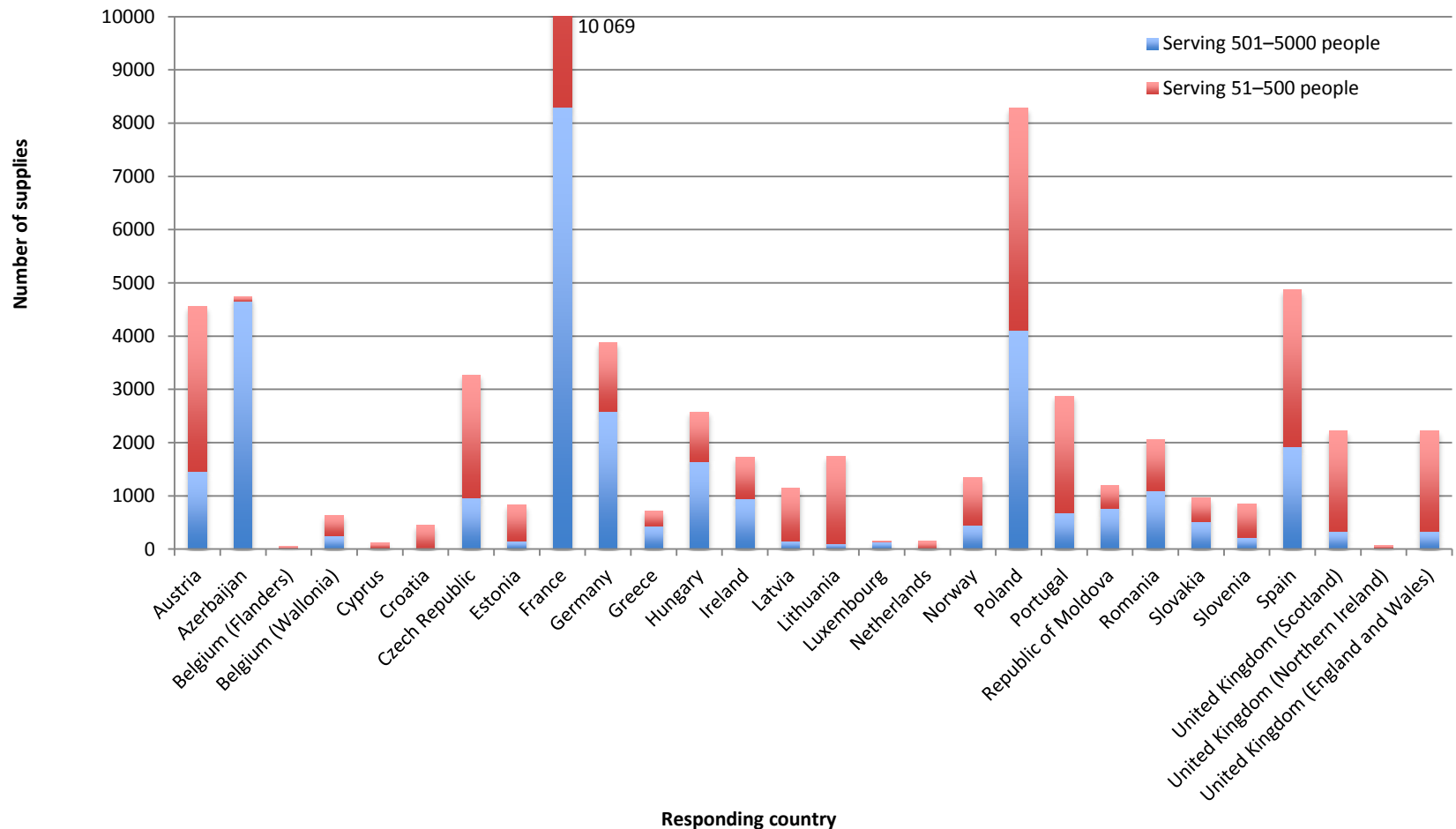
2 = amount of supplied water

3 = number of people served.

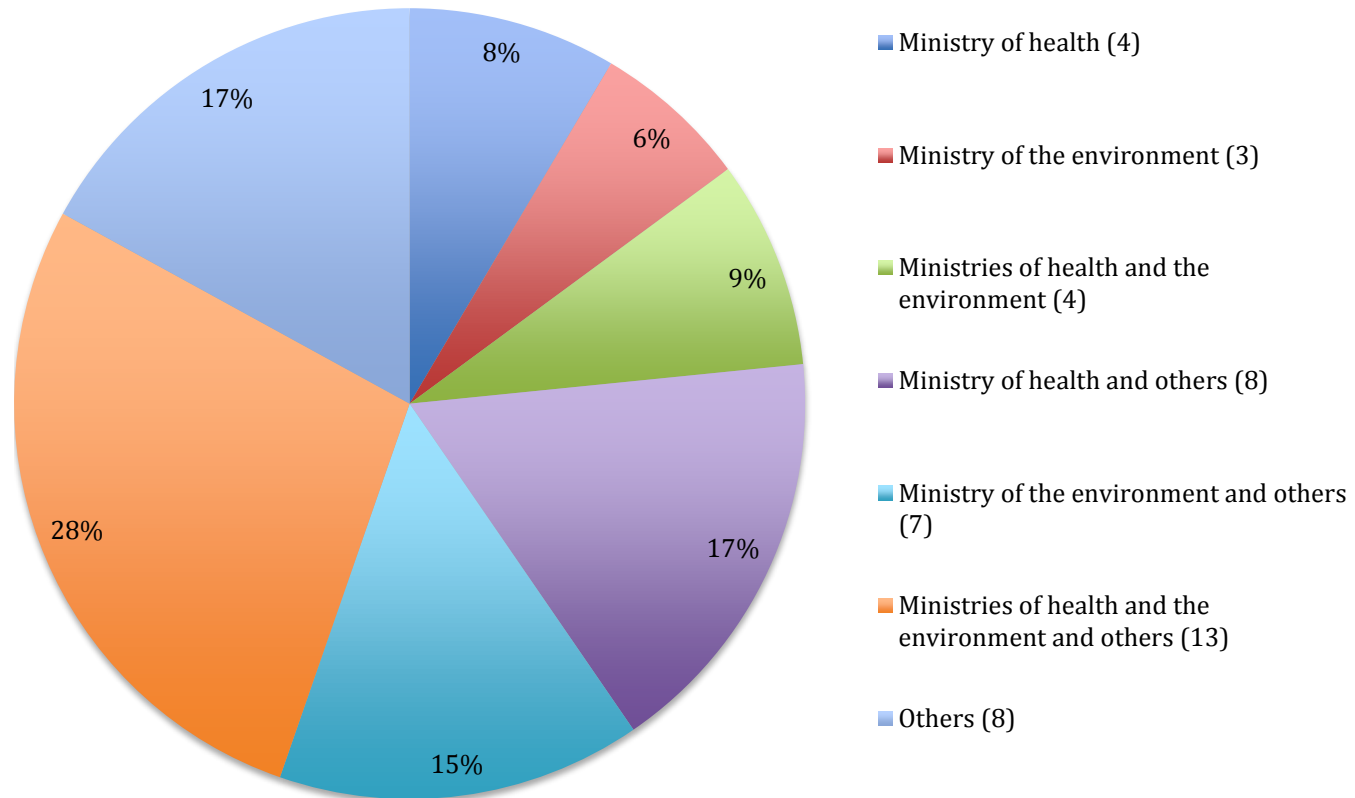
Proportion of people served by small-scale water supplies, including non-piped and individual supplies (28 responses from 25 countries)

Category of small-scale water supplies	Proportion of population served (%)
Water supplies serving 501–5000 people	13
Water supplies serving 51–500 people	2
≤50 people, non-piped, individual supplies	8
Total population of the WHO European Region served by small-scale water supplies	23

Numbers of small-scale water supplies serving 51–5000 people in responding countries



Institutions responsible for regulating water supply in (47 responses from 43 countries)



In 29 cases (61%) the ministry of health and in 27 cases (57%) the ministry of the environment had either shared or sole responsibility for regulating water supply. The next most frequently mentioned other institution was the ministry of agriculture, in 13 cases (28%).

Legal and regulatory requirements for small-scale water supplies (45 responses from 41 responding countries)

42 (93%) indicated that all legal and regulatory requirements apply to public small-scale water supplies.

20 (44%) mentioned explicitly that supplies serving up to 50 people that are not used for commercial purposes are exempted from regulatory requirements.

12 (27%) indicated that the legal and regulatory requirements for drinking-water also apply to individual water supplies.

7 (16%) indicated that none of the legal and regulatory requirements apply to individual supplies.

Only 1 response indicated that none of the requirements apply to public small-scale supplies.

Requirements for qualifications and training programmes for operators of small-scale public water supplies (44 responses from 40 countries)

49 % - **no minimum qualification** is required for operation of small public supplies

52% of the “no minimum qualification” responders mentioned that training programmes for operators were available

Surveillance requirements for small-scale water supplies (46 responses from 42 countries)

7% indicated that neither independent drinking-water monitoring and/or inspection nor self-checking operators was required

11% indicated only self-checking by operators was required

13% indicated only independent drinking-water monitoring and/or inspection was required

Water quality monitoring in small-scale water supplies (46 responses from 42 countries)

Compliance for microbiological indicators for the supply size of over 10 m³ and up to 400 m³

In 22% (of 18 EU countries) level of compliance with national standards for *E. coli* and/or enterococci was less than 90%

In 78% (of 18 EU countries) level of compliance with national standards for *E. coli* and/or enterococci was more than 90%

Compliance of chemical parameters for small-scale water supplies over 10 m³ and up to 1000 m³ (27 responses from 25 countries)

12 (44%) reported a level of compliance between 95% and 100% for the analysed parameter

15 (56%) reported a level of compliance of less than 95% for one or more chemical parameters

13 (48%) reported a level of compliance of less than 90% for one or more chemical parameters

**Compliance for
individual, decentralized and local supplies
and supplies serving up to 50 people
(10 responses from 9 countries)**

Level of compliance for microbiological parameters

Country	Type of supply	Compliance rate (%)
Belarus*	Non-centralized	90
Bosnia Herz. Spska**	Local supply	73
Ireland*	Small private supply	95
Portugal*	≤ 50 people	95
Republic of Moldova*	Wells	90
	Child care	95
Romania*	Public and individual wells	69
Russian Federation**	Non-piped rural supply	77
Spain*	≤ 50 people	100
UK N-ireland*	≤ 50 people	80
UK- Scotland*	≤ 50 people	78

E. coli *

Not specified microbiological indicators**

**Epidemiological data indicating outbreaks
specifically related to small-scale water supplies in
responding countries
(46 responses from 42 countries)**

48% indicated that epidemiological data indicating outbreaks exists

46% indicated that no such information exists

In 6% of the cases the answer was not clear

Preliminary conclusions

- The term “Small-scale water supply” is not clearly defined
- Extrapolation of questionnaire data to total population of the WHO European region (902 millions):
 - *135 million persons (15%) are served by water supplies serving over 50 and up to 5000 people*
 - *72 million people (8%) are served by non-piped water supplies, individual wells, supplies serving up to 50 people*
 - *101 million people (49%) are served by SSWS for which no educational or competence requirements of the operator are established*

Preliminary conclusions

- **Lack of regulatory requirements**
 - individual and/or supplies serving up to 50 persons
 - source protection
 - no requirements for operators qualification for 1/2 SSWS
 - in 1/5 of SSWS absent or poor requirements for drinking water quality monitoring
- **Insufficient monitoring and severe gap on water quality data** of non-piped, individual water supply systems serving up to 50 people
- **Lack of surveillance of water related diseases and outbreak investigation** capacity in SSWS areas

Feedback on the report from WGWH

- We are looking for feedback on the correctness of the report
- We are NOT looking for more recent data than we used in the assessment
- To facilitate this, the report was translated into Russian.
- Feedback by 10 December 2014 to be considered for further revision.

**Thank you
very much for
your attention**

