

# Use of existing databases and reporting systems for the Protocol on Water and Health

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Management and Risk Communication



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# Purposes

- Develop a rationale to manage, update and display data relevant for water & health
- Identify available data, update frequency and data gaps
- Identify deficits and priorities concerning PWH  
objective: protection of human health
- Trace progress being made in achieving targets
- Facilitate communication



# PWH Art. 1: Objective

The objective of this protocol is to promote ...  
the protection of human health and well-being, ...  
through improving water management ... and  
through preventing, controlling and reducing  
water-related disease.

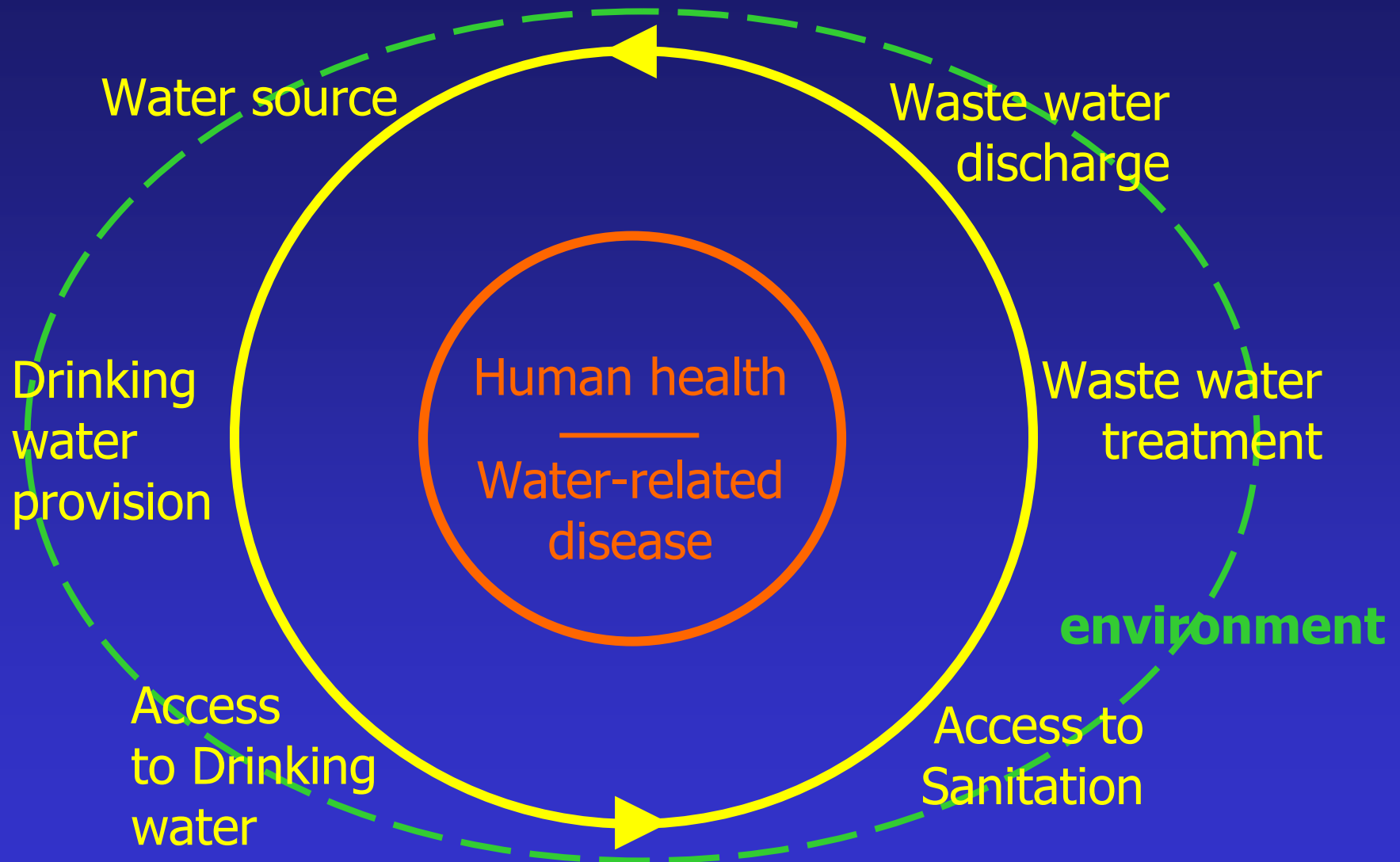


# PWH Art. 6: Targets

- Resource water quality
- Drinking water quality
- Proportions served by collective water supply systems
- Proportions served by collective sanitation systems
- Discharges of untreated waste and storm water
- Quality of water discharged from waste water treatment installations
- Outbreaks and incidents



# The health-related water cycle



# Sources

Inst.	Database	Acronym
UN	Population database	POP
	Environmental database	ENV
	AQUASTAT	AQU
	Monitoring of progress towards MDG	MDG
UNECE	Environmental Performance Reviews	EPR <sub>ev</sub>
WHO	Joint Monitoring Programme	JMP
	Health for All Database	HFA
	Centralized Information System on Infectious Diseases	CISID
EU	Eurostat	EUStat
	EEA EIONET data service	EIONET
	Analytical DWQ summary reports	DWQRep
	Different disease networks	DisNet
	Expanded basic surveillance network	EBSNet



# Data Matrix

Data Source	RW Qu	RW Av	DW Cap	DW Am	DW Acc	DW Qu	San Acc	WW Cap	WW Disc	WR Dis	POP
POP											
ENV											
AQU											
MDG											
EPRev											
JMP											
HFA											
CISID											
EUStat											
EIONET											
DWQRep											
DisNet											
EBSNet											



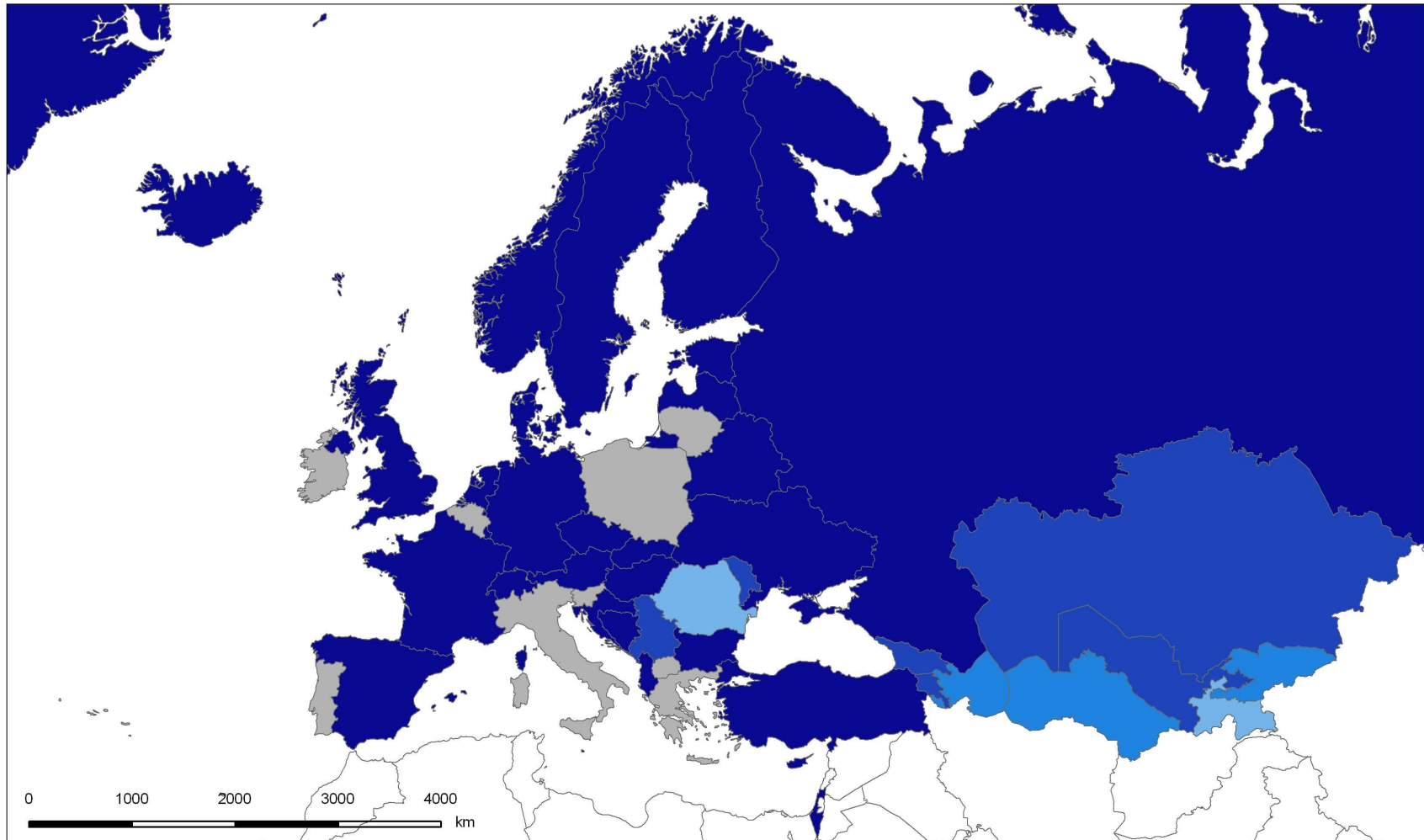
# Status

- piloted data management system
- five data bases included
- linked to Geographical Information System (Water&Health-GIS)
- static, offline / intranet
- one-dimensional maps





## Access to improved water supply 2004 - Europe



Percentage [%] of population with access to improved water supply (2004)



Datasource: ESRI 2004; JMP 2006  
Cartography: Institute for Hygiene and Public Health,  
University of Bonn, 2007

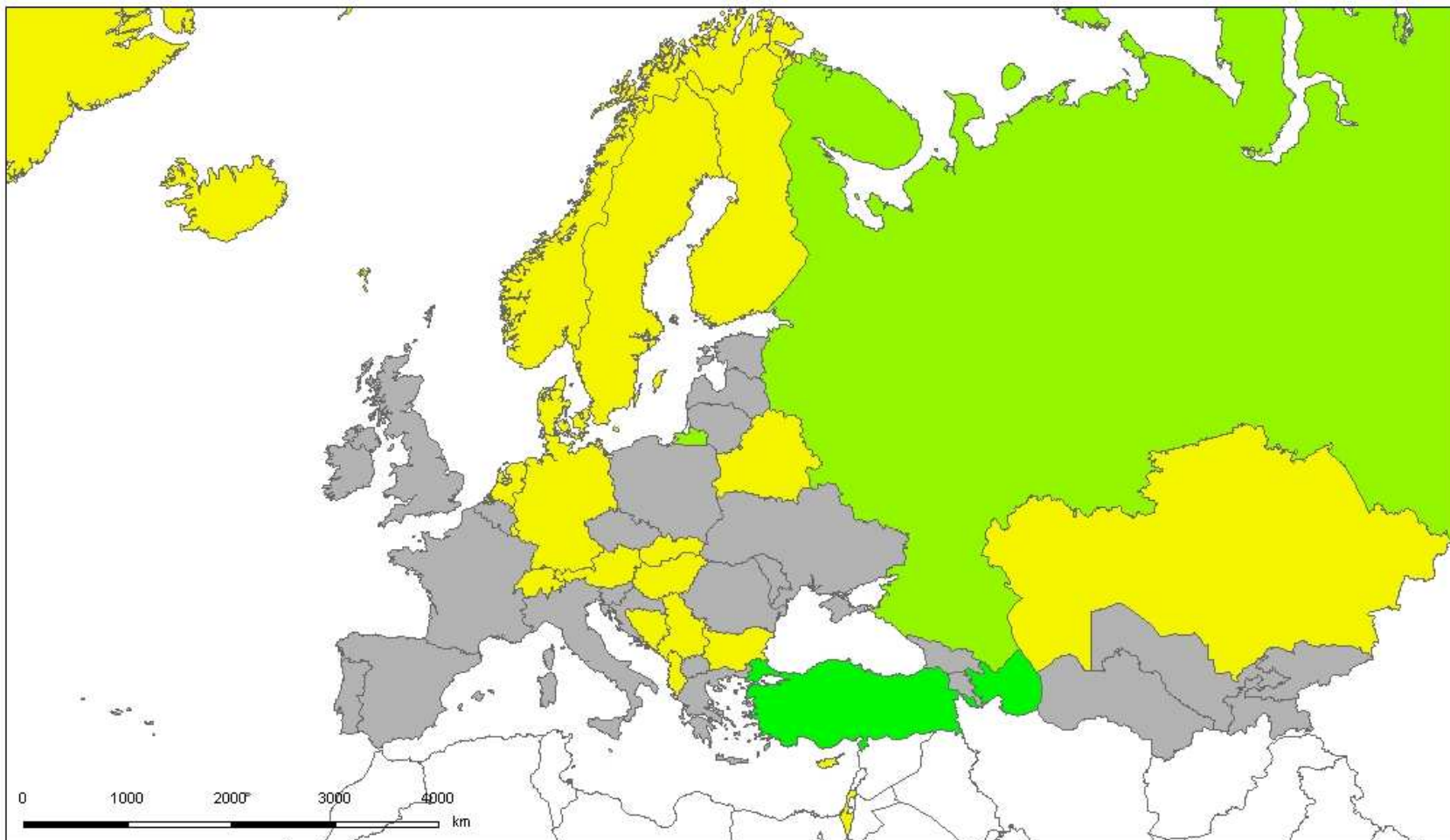


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## Change of access to improved water supply 1990 - 2004 - Europe



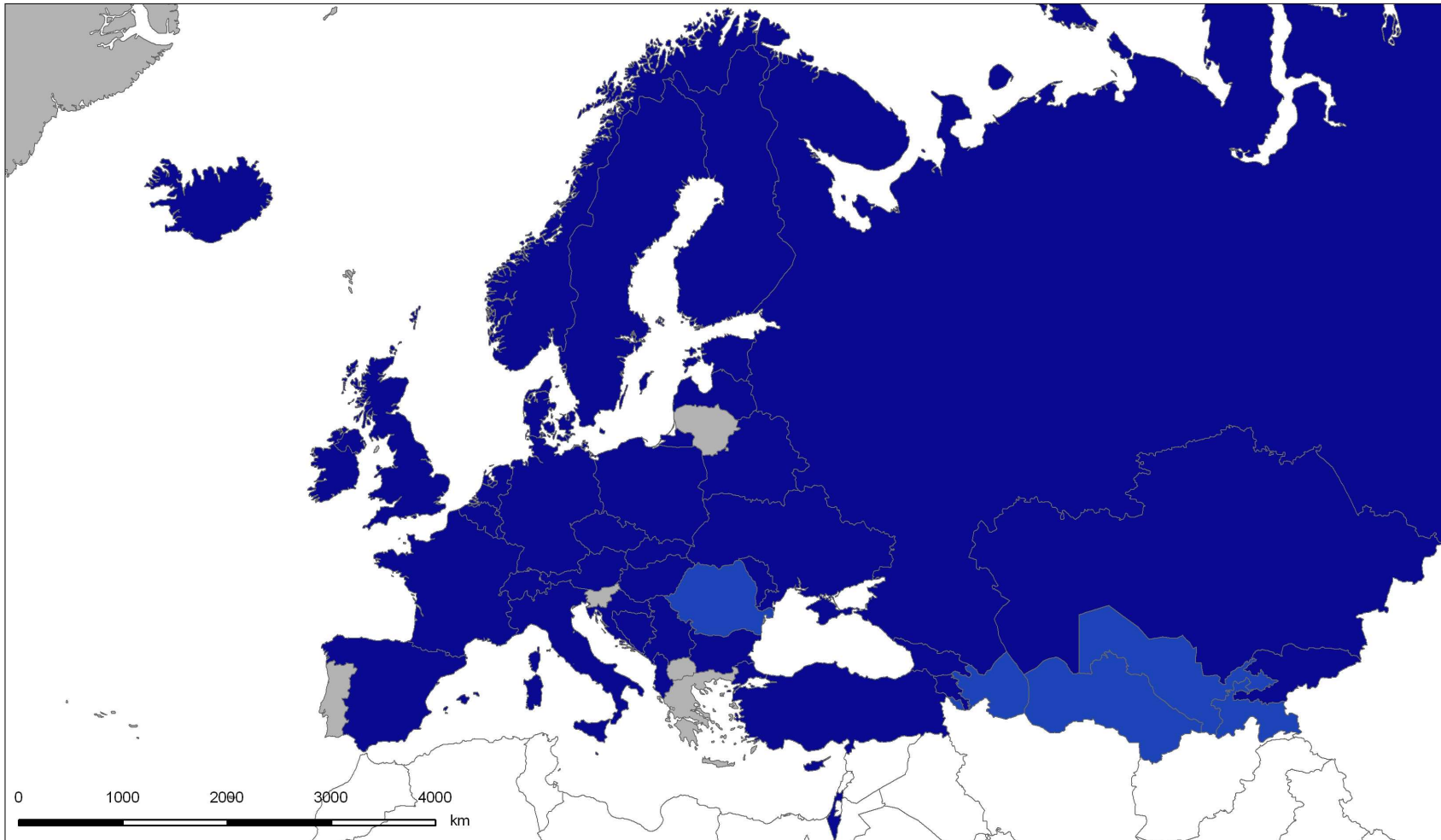
Change [%] of population with access to improved water supply 1990 - 2004



Data source: ESRI 2004; JMP 2004  
Cartography: Institute for Hygiene and Public Health,  
University of Bonn, 2007



## Urban access to improved water supply 2004 - Europe



Percentage [%] of urban population with access to improved water supply (2004)



Datasource: ESRI 2004; JMP 2006  
Cartography: Institute for Hygiene and Public Health,  
University of Bonn 2007

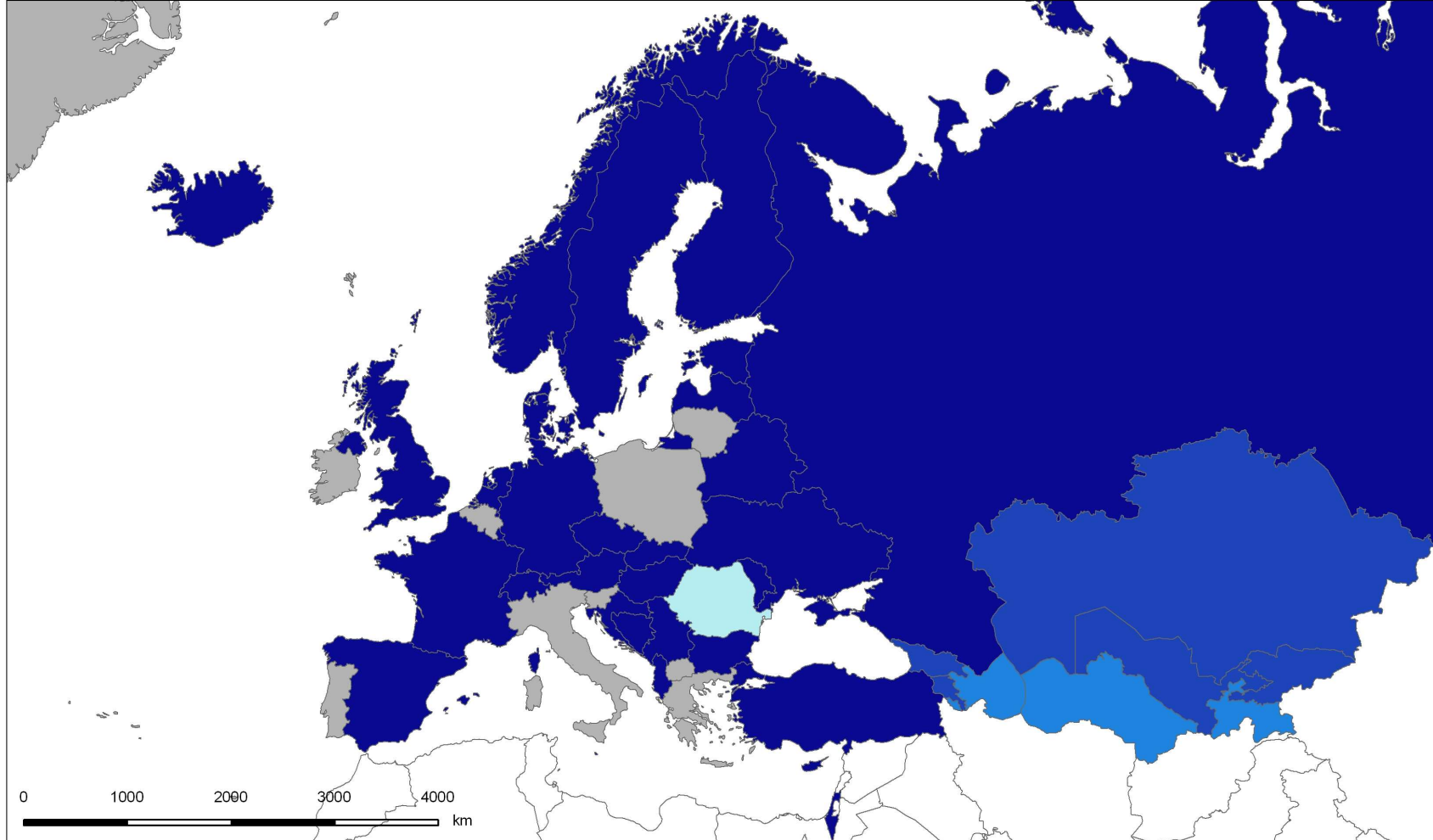


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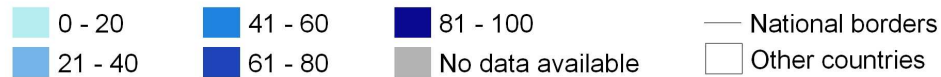
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## Rural access to improved water supply 2004 - Europe



Percentage [%] of rural population with access to improved water supply (2004)



Datasource: ESRI 2004; JMP 2006  
Cartography: Institute for Hygiene and Public Health,  
University of Bonn 2007

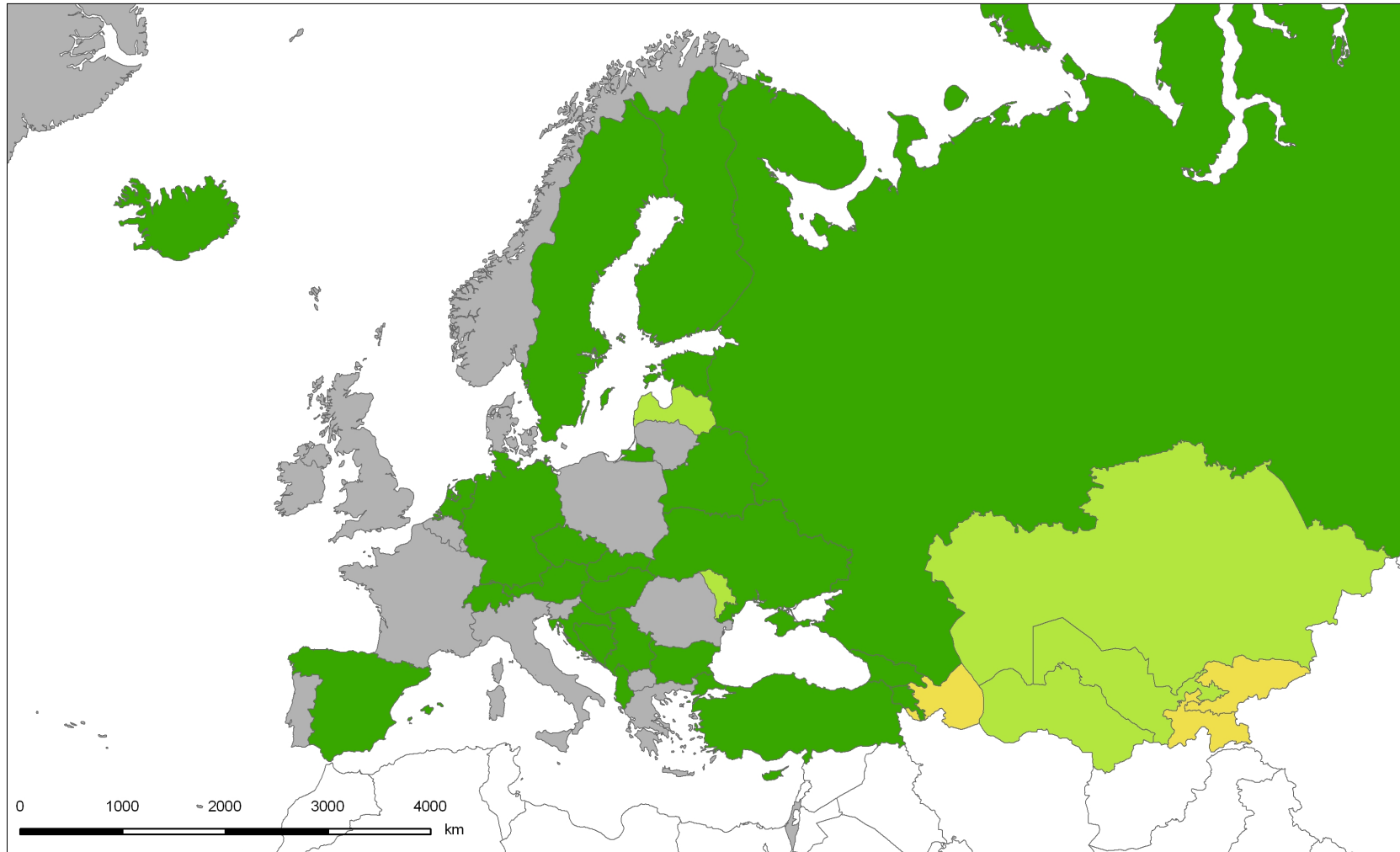


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## Access to improved sanitation 2004 - Europe



Percentage [%] of population with access to improved sanitation (2004)

0 - 20	41 - 60	81 - 100	— National borders
21 - 40	61 - 80	— No data available	□ Other countries

Datasource: ESRI 2004; JMP 2006  
Cartography: Institute for Hygiene and Public Health,  
University of Bonn, 2007

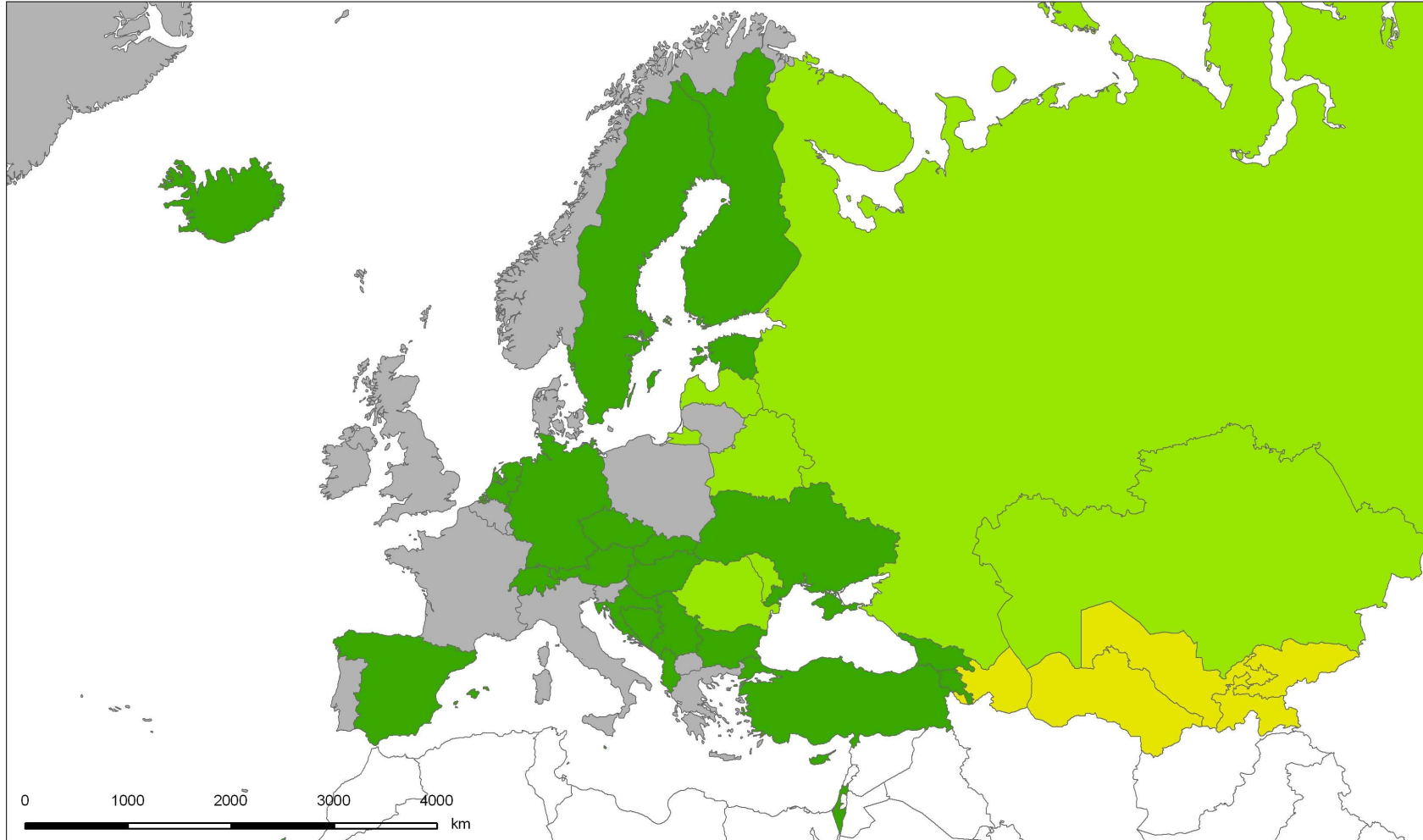


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## Urban access to improved sanitation 2004 - Europe



Percentage [%] of urban population with access to improved sanitation (2004)



Datasource: ESRI 2004; JMP 2006  
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University of Bonn 2007

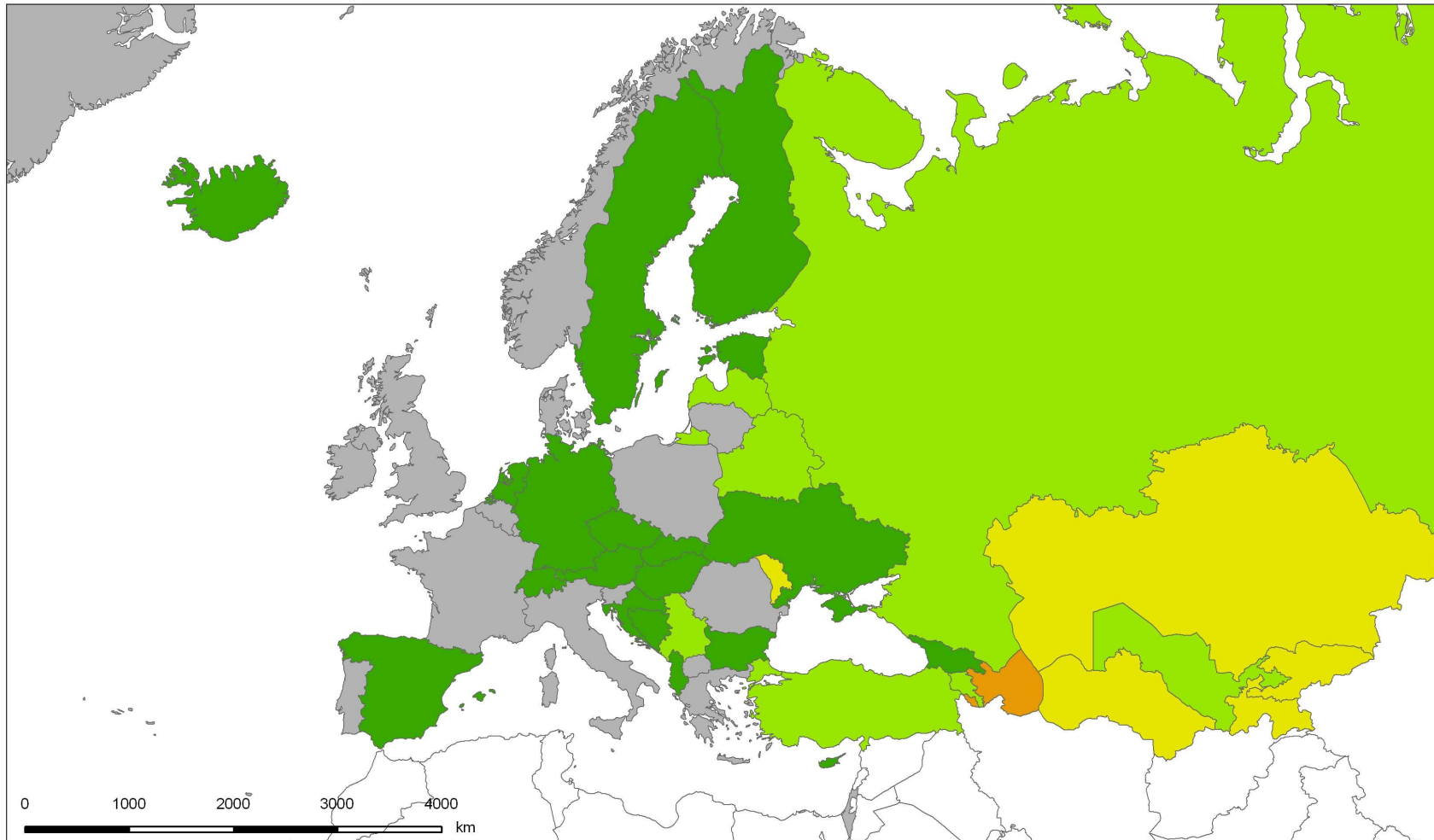


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## Rural access to improved sanitation 2004 - Europe



Percentage [%] of rural population with access to improved sanitation (2004)



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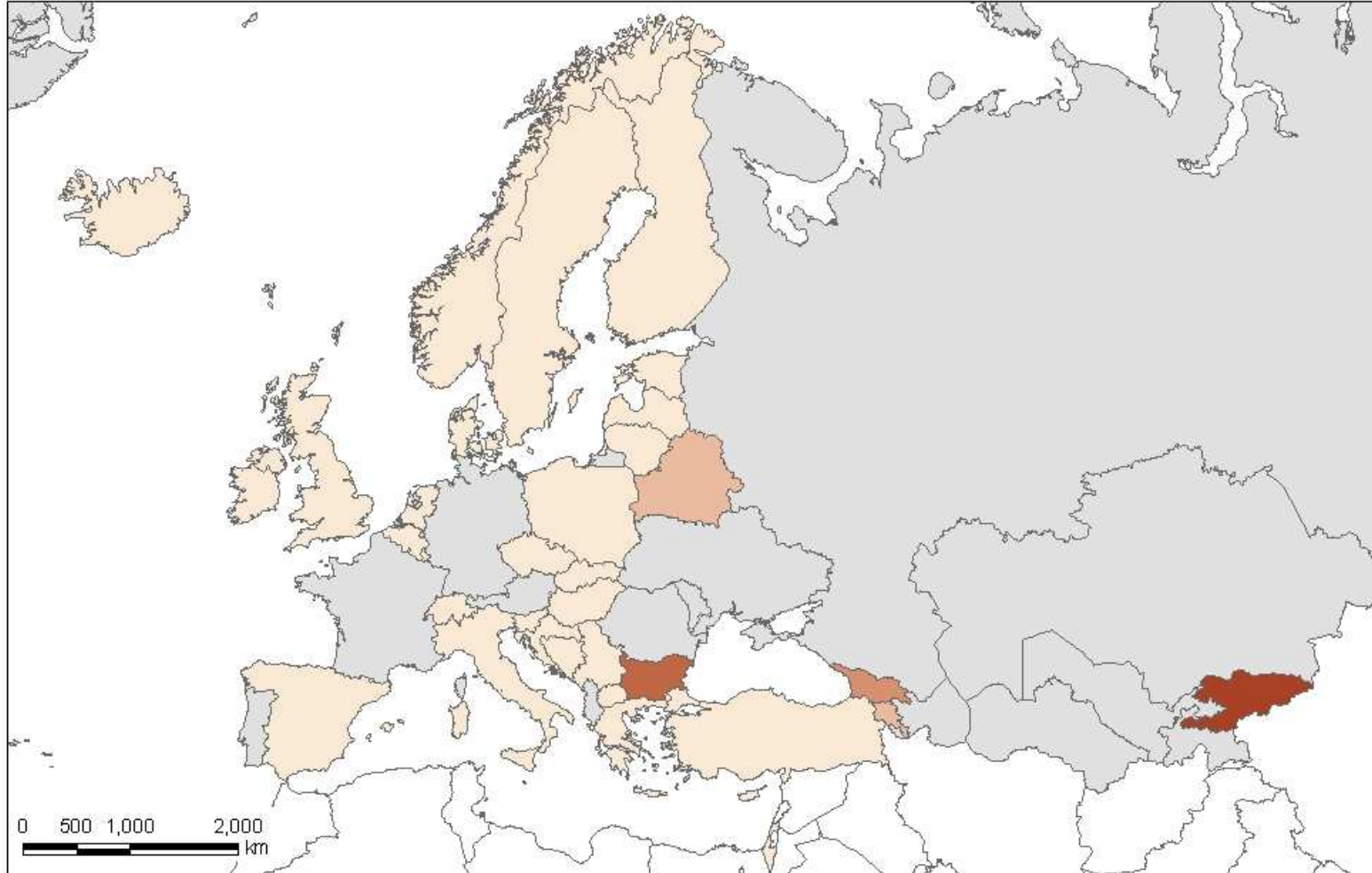


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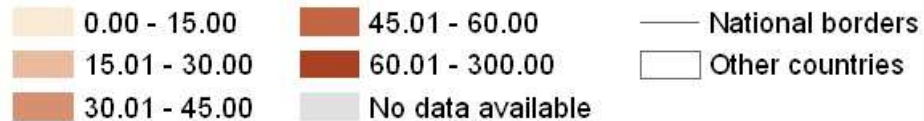
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## Viral hepatitis A incidence 2004 in the WHO Region Europe



### Viral hepatitis A incidence per 100,000 (2004)



Data Source: ESRI 2004; HFA - DB 2006  
 Cartography: WHOCC for Health Promoting  
 Water Management and  
 Risk Communication, Bonn 2007



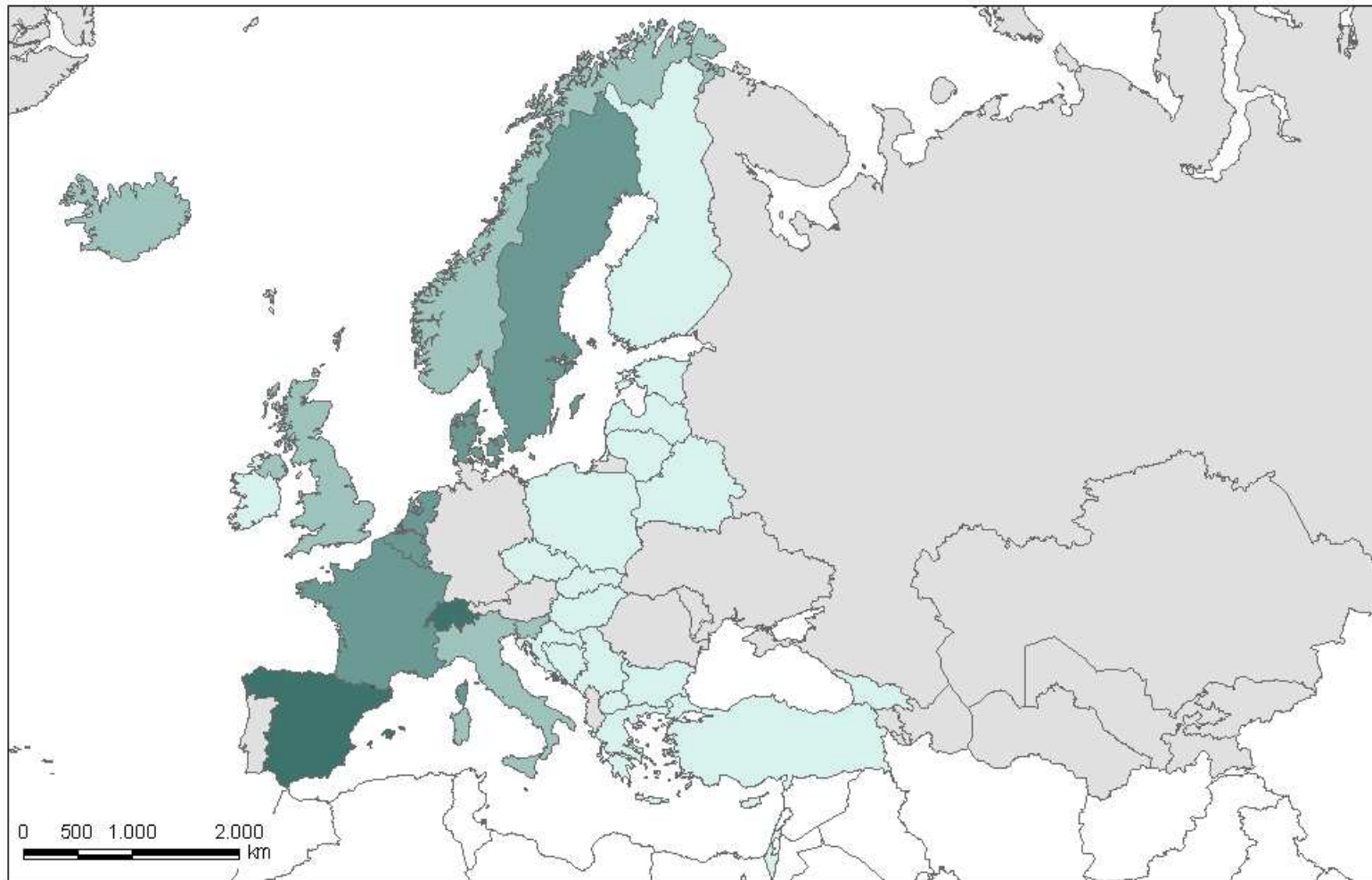
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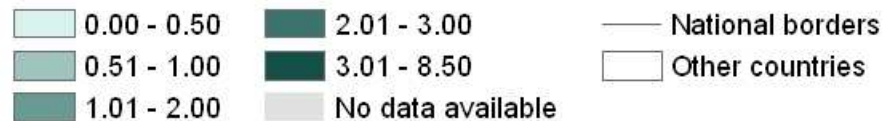




## Legionellosis Incidence 2004 in the WHO Region Europe



### Legionellosis incidence per 100,000 (2004)



Data Source: ESRI 2004; CISID 2006  
 Cartography: WHOCC for Health Promoting  
 Water Management and  
 Risk Communication, Bonn 2007



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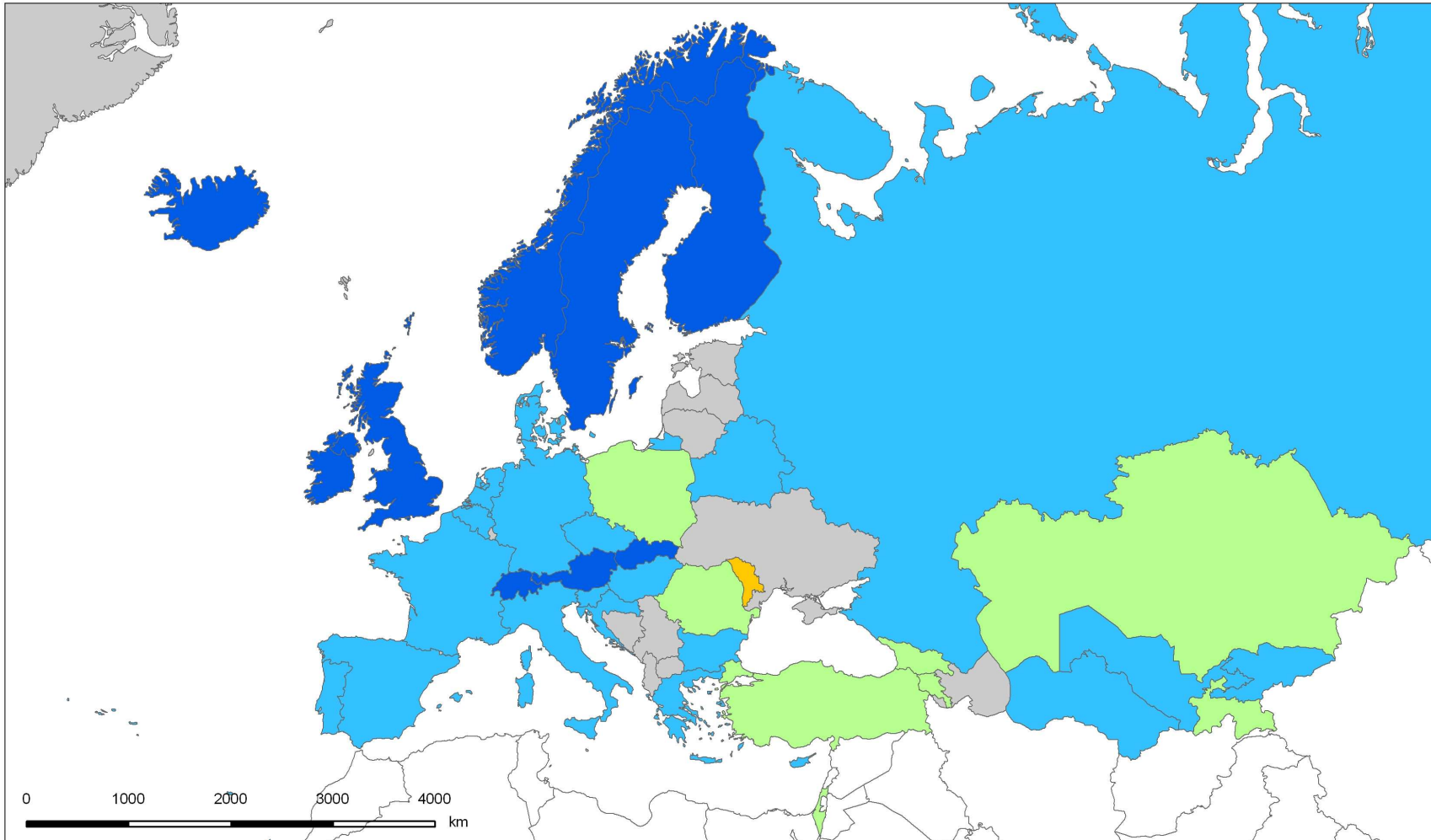


# Perspectives

- Implementing all relevant / available data bases
- Implementing a Web-GIS server
- Interactive use:
  - scale / section
  - time period
  - parameters
  - multidimensional mapping
  - mouse-driven query of background information
  - export / print options
  - from water poverty towards health impact index



## Water Poverty Index 2002 - Europe



Water Poverty Index [WPI] (2002)



Data source: ESRI 2004; Lawrence, Meigh & Sullivan 2002  
Cartography: Institute for Hygiene and Public Health,  
University of Bonn 2007



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