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**Rural poverty and
health systems
in the WHO
European Region**

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WHO/European Commission equity project**

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Acronyms

BCG	Bacillus of Calmette and Guerin, tuberculosis vaccine
CE	Council of Europe
CSDH	Commission on Social Determinants of Health
DALYs	disability-adjusted life years
DHS	demographic health survey
DPT	diphtheria, tetanus and pertussis
EC	European Commission
ECA	World Bank's Europe and Central Asia Region
EU	European Union
EU27	countries belonging to the EU after January 2007
GDP	gross domestic product
GP	general practitioner
HepB	hepatitis B
IFAD	International Fund for Agricultural Development
ILO	International Labour Organization
MDG	Millennium Development Goal
MICS	multiple indicator cluster survey
MMR	measles, mumps and rubella
n/a	not available
NHS	National Health Service [United Kingdom]
NIS	newly independent states
OECD	Organisation for Economic Co-operation and Development
POLIO	poliomyelitis
RED	reaching every district
SEE	south-eastern Europe
SPF	social protection floor
TB	tuberculosis
UNICEF	United Nations Children's Fund

1. Introduction

Globally, poverty continues to have a rural face. About 1.4 billion people worldwide live in extreme poverty, with more than 70% of them living in rural areas of developing countries (IFAD, 2010). The recent pace of urbanization and current forecasts for urban population growth imply that most of the world's poor will still live in rural areas for many decades to come (Ravallion, Chen & Sangraula, 2007).

The social determinants of health – the conditions in which people are born, grow, live, work and age – are mostly responsible for health inequities, defined as the unfair and avoidable differences in health status seen within and between countries (WHO, 2009a). In disadvantaged rural areas, the drivers of poverty are also the drivers of ill health. The health system, which is a determinant of health, is often not sufficiently equipped in rural areas to respond to the needs of the population, consequently contributing to rural–urban health inequities.

The Commission on Social Determinants of Health (see Box 1) recommends promoting health equity between rural and urban areas through sustained investment in rural development, addressing exclusionary policies and processes that lead to rural poverty.

Box 1. Commission on Social Determinants of Health

In 2005, WHO established the Commission on Social Determinants of Health (CSDH), the task of which was to synthesize evidence on the social determinants of health and define recommendations on how that evidence could be put to better use. The final CSDH recommendations were released in August 2008 in the report *Closing the gap in a generation: health equity through action on the social determinants of health*. The recommendations were endorsed by World Health Assembly resolution 62.14.

Source: CSDH (2008).

This briefing presents a short analysis of rural poverty and health systems in the WHO European Region.¹ The paper is divided into four main sections addressing:

- rural poverty in the Region
- select social determinants of health in disadvantaged rural areas
- differences in health system performance and health between rural and urban areas, and
- implications for health systems.

This briefing supports follow up to key European resolutions, charters and communications that provide guidance for reducing health inequities. These include the European Commission (EC) communication on reducing health inequalities in the European Union (EU) (EC, 2009a), World Health Assembly resolution 62.14 on reducing health inequities through action on the social determinants of health (World Health Assembly, 2009) and the Tallinn Charter: “Health Systems for Health and Wealth” (WHO Regional Office for Europe, 2008a).

2. Summary

In multiple countries of the WHO European Region poverty rates are higher in rural areas. Demographic issues (out-migration and an ageing population), remoteness and the accompanying limited access to infrastructure and services, lower levels and quality of education, lower employment rates and less effective social protection are among the reasons for poverty's often entrenched nature in many rural areas of the Region. The history of rural poverty in some countries reflects challenges brought about during the transition period that began in the early 1990s. Today, emerging evidence suggests that the financial crisis and economic downturn are worsening the situation of rural poor in some parts of the Region.

The rural dimension is often neglected in analyses of health status and health system performance. Data on differences between rural and urban areas on these topics are typically scarce, lacking a comprehensive view of all health system functions, public health governance, and a full spectrum of health issues. In the health sector

¹ The WHO European Region comprises 53 Member States: Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Monaco, Montenegro, the Netherlands, Norway, Poland, Portugal, the Republic of Moldova, Romania, the Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, the United Kingdom, and Uzbekistan.

and beyond, limited data and analysis of the situation of rural populations, and in particular of the rural poor, contribute to their invisibility and neglect in policy processes in many countries (EC, 2008). A factor contributing to this, particularly at international level, is the lack of a standardized definition of “rurality”, as described in Box 2.

Box 2. Definitions of rural areas

Official definitions of “rural areas” differ by country, reflecting the varying national characteristics that distinguish urban from rural areas. Definitions are often based on dispersed populations, an agricultural-based economy and distance from major urban centres. For international comparisons, the Organisation for Economic Co-operation and Development (OECD)¹ regional typology permits classification of regions as predominantly rural, intermediate and predominantly urban. These are based on criteria reflecting population density, regional population percentage living in rural communities and presence of large urban centres in a region. At EU levels, definitions developed by the EC Directorate General for Regional Policy build on the OECD definition by considering accessibility to services. Eurostat uses the variable “degree of urbanization”, with a breakdown by densely populated, intermediate area, and thinly-populated areas (see Annex 2). The need for a standardized definition of rurality has been highlighted as particularly salient to the EU context.

Source: EC (2008), OECD (2006), Eurostat (2010a).

Challenges to health system performance in rural areas can include a lack of qualified health workers; greater distance to major hospitals; lesser access to specialized services and pharmacies, health promotion and prevention activities; financial barriers linked to lower incomes and insurance coverage, as well as higher costs for transportation and associated lodging; lesser effective emergency care services; lower quality infrastructure; and potentially greater demands on health workers.

Using the Millennium Development Goals (MDGs) 4, 5, 6, and 7 to orient analysis, there are rural–urban differences in health status and health behaviours and in access to key services. Rural areas can face greater challenges in safeguarding child and maternal health in many countries of the European Region. There is a marked difference in under-five mortality rates in many countries, with rates being higher in rural areas. Adequate reproductive health services are also lacking in many rural areas. While available data indicate that HIV/AIDS prevalence and tuberculosis (TB) incidence are higher in urban areas, knowledge of both can be lower in rural areas. In addition, rural–urban and rural–abroad migration patterns require further attention in relation to increased vulnerability and implications for transmission routes. Access to improved water and sanitation is lower in rural areas in many countries across the European Region, potentially contributing to diarrhoeal disease, typhoid fever and hepatitis A. Solid fuel usage, which is associated with pneumonia and other acute lower respiratory diseases in children and chronic obstructive pulmonary disease and lung cancer (where coal is used) among adults, is more frequent in rural than urban areas. In terms of occupational health, agriculture is one of the most hazardous industries, largely due to workplace accidents involving machinery and poisoning by pesticides and agrochemicals.

Although an exploration of rural–urban inequities in noncommunicable diseases was beyond the scope of this briefing, there is evidence of less availability of prevention activities (including screening) in some rural areas and rural–urban inequities in types of cancer.

Health systems (defined as the ensemble of all public and private organizations, institutions and resources mandated to improve, maintain or restore health) can do more to meet the needs of rural populations. Potential actions towards this end span health systems’ four functions—resource generation, stewardship, service delivery and financing—as described below.

- In terms of **resource generation**, health systems can work to increase access to health workers in rural areas through a range of interventions, with implications for human resources planning and management in terms of adjustments in education, regulation, financial incentives and professional support. Increased attention to ensuring availability and accessibility of pharmacies and essential medicines in rural areas and for the poor is also required.
- Through the **stewardship** function, health systems can play an active role in rural development policy. This entails contributing to improved cross-sectoral coordination at central and local levels. It also involves better vertical coordination within the health system and between central and local levels, and ensuring that health policies, programmes and monitoring and evaluation reflect the needs of rural populations. Better data on the rural dimension of health, health inequities, health determinants and health system performance are needed for these tasks.

¹ Of the 31 countries of the OECD, 23 are in the European Region.

- **Service delivery** faces a range of challenges in rural areas, linked to lower density populations, greater travel distances by service users and providers, and lack of economies of scale. Governments are working to address these challenges through a wide range of interventions. Increased systematic research is required to identify how best to improve and monitor health service provision and usage in rural areas, avoiding a one-size-fits-all approach and reflecting a comprehensive view of health services (including promotion and prevention activities).
- Health **financing policy** can help reduce health inequities experienced by the rural poor, particularly if it aims to provide universal coverage. Action towards universal coverage includes enabling a method of prepayment of financial contributions for health care with a view to sharing risk among the population and avoiding catastrophic and impoverishing health expenditures. Attention to funding formulae that determine resource allocation to rural areas, and to the costs of travel and lodging associated with service usage, are also of relevance.

3. Rural poverty in the European Region

Drawing from existing data, this section highlights rural–urban differences in poverty in select countries of the European Region and describes some of the general characteristics and drivers of rural poverty. A subsection is dedicated to the effect on rural poverty of the transition period, which was marked by a decline in rural institutional capacity and a deterioration of rural social and physical infrastructure. The impact of the recent financial crisis and economic downturn on rural poverty in select countries is also briefly discussed.

Poverty and rural areas

There is evidence that poverty rates are for the most part² higher in rural areas in many countries of the European Region. While not appropriate for crosscountry comparisons, data on the poverty headcount (or percentage of people living below the national poverty line deemed appropriate for the country by its authorities) show varying differences between rural and urban areas. In the World Bank Europe and Central Asia (ECA) Region,³ rural populations are among the groups at greatest risk of poverty. The poverty headcount for selected countries is shown in Table 1. In multiple countries, rural residents form the bulk of the nation’s poor. This is the case in low-income newly independent states (NIS) and south-eastern European countries, where rural residents account for 70% and 62% respectively of the total number of people experiencing poverty (Alam et al., 2005).

Table 1. Poverty headcount: percentage of people living below the national poverty line in selected countries of the European Region

Country	Year of data	National	Rural	Urban
Albania	2005	18.5	24.2	11.2
Bosnia and Herzegovina	2002	19.5	19.9	13.8
Kyrgyzstan	2005	43.1	50.8	29.8
Latvia	2004	5.9	12.7	...
Republic of Moldova	2002	48.5	67.2	42.6
Tajikistan	2007	53.5	55.0	...
The former Yugoslav Republic of Macedonia	2003	21.7	22.3	...
Turkey	2002	27.0	34.5	22.0
Ukraine	2003	19.5	28.4	...
Uzbekistan	2003	27.2	29.8	22.6

Source: FAO (2010), derived from World Bank (2010).

The most rapid declines in poverty in the ECA Region during recent decades have been observed in capital cities, with rural areas registering the smallest declines (Alam et al., 2005). The rural situation deteriorated during the 1990s, when inequality between rural and urban areas increased in most countries (IFAD, 2002). The ECA Region as a whole has seen an increase in the share of poor living in rural areas: at the end of the 1990s, 45% of all poor

² There are some exceptions. For instance, data on the poverty headcount for Armenia (2001), Azerbaijan (2001) and Georgia (2003) indicate a greater percentage of people living below the national poverty line in urban areas.

³ The list of countries belonging to the World Bank ECA Region is available at the following link: <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/ECAEXT/0,,contentMDK:21776903~menuPK:5026204~pagePK:146736~piPK:146830~theSitePK:258599,00.html>

in the ECA Region lived in rural areas, and the proportion had increased to 50% by 2005 (Alam et al., 2005).

The average living standard in the EU, as expressed by gross domestic product (GDP) per head, is generally lower in rural than in urban areas (EC, 2008). Annex 1 features a table with data from Eurostat showing the percentage of persons experiencing poverty or social exclusion (defined as either at risk of poverty or severely materially deprived or living in households with very low work intensity) in densely populated areas, intermediate areas, and thinly populated areas. It shows that, drawing from 2008 data, in 19 of the 27 EU Member States the percentage of the population at risk of poverty or social exclusion was higher in thinly populated areas than in densely populated areas. For countries belonging to the EU after January 2007 (EU27) as a whole, the percentage of the population at risk of poverty or social exclusion in the thinly populated areas was 29.8%, compared to 22.2% in densely populated areas (Eurostat, 2008, unpublished data).

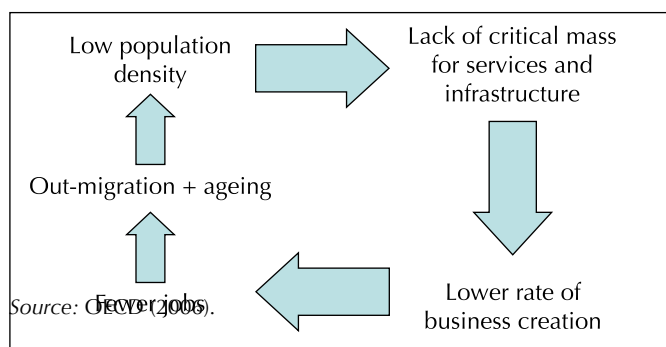
Work commissioned by the EC highlights the importance of looking at both the poverty of, and the poverty in, rural areas (EC, 2008). Poverty “of” rural areas is the potential disadvantage of rural areas compared to urban areas. Poverty “in” rural areas refers to the features of poverty and social exclusion for people living in rural areas.

Four main categories of problems that characterize rural areas in the EU and determine the risk of poverty and social exclusion are (EC, 2008):

- demography, referring to out-migration, exodus and urbanization, counterurbanization and returning migrations and the ageing population;
- remoteness, relating to lack of access to infrastructure and basic services;
- education, with general lack of preschool facilities, difficulties in accessing primary and secondary schools, inadequate strategies for grouping schools and lower quality of education; and
- the labour market, with lower employment rates, persistent long-term unemployment, greater numbers of seasonal workers and low pensions, and also inadequate labour market institutions, mismatches between jobs and skills and lack of accessibility to workplaces.

These categories are similar to those set out in OECD work on rural development. OECD (2006) describes a number of challenges that can contribute to weaker economic performance in rural areas.⁴ These include: out-migration and ageing; lower educational attainment; lower average labour productivity; and overall low levels of public services. Fig. 1 illustrates how these factors can synergize and create a circle of decline (OECD, 2006).

Fig. 1. Circle of decline in rural regions



As was highlighted above, rural poverty influences, and is influenced by, demographic changes such as migration and ageing. Out-migration (EC, 2008) is a frequent means of achieving social mobility for many young people from disadvantaged families in rural areas. In western EU countries, there is a continuing trend of urbanization from more remote (poorer) rural areas to urban and accessible rural areas. Rural-to-urban and rural-to-abroad migration is under way in eastern countries of the European Region, with the latter particularly affecting young people (EC, 2008).

Migration can be of a seasonal or longer-term type, and remittances to rural households can be a significant source of income. In some EU countries, the percentage of elderly in rural areas is typically higher than the

⁴ OECD and other sources specify that “rural” should not be seen as being synonymous with decline. For instance, some rural regions in OECD countries have capitalized on rural assets such as natural heritage, environment and quality of life, while working in parallel to improve transport links, invest in human capital and ameliorate infrastructure. In some cases, this has resulted in dynamic employment creation and economic growth (OECD, 2006).

national average (EC, 2008). Problems associated with ageing are worsened by the isolation, distances to basic services such as health care and weaker transport infrastructure that characterize some rural regions (EC, 2008). Local labour supplies can be jeopardized in regions where the proportion of younger people is less than that of elderly people.

EC work on rural poverty globally (EC, 2002) highlights additional (and to some extent overlapping) features salient to some countries in the European Region. These include:

- low incomes and consumption resulting from the low productivity of rural activities (which is influenced by insufficient access to markets, technologies and services);
- inequality in ownership and access to productive assets (including land, capital and rural infrastructure);
- poor health, education and nutrition status of rural livelihoods, which limit human capital (worldwide, food insecurity and undernourishment are highest among people experiencing extreme poverty, the majority of whom live in rural areas (IFAD, 2010));
- degradation of natural resources that provide the basis of rural livelihoods;
- vulnerability to risks, including natural disasters, pests and economic shocks; and
- weak political power of the rural poor (they have less political influence than urban populations, who tend to be more organized and visible).

The *Rural poverty report 2011*, produced by the United Nations International Fund for Agricultural Development (IFAD), addresses rural poverty in developing countries globally. However, some findings are also relevant for the situation of the rural poor in Member States of the WHO European Region (see Box 3).

Box 3. Findings from the *Rural poverty report 2011*

The Rural Poverty Report 2011 describes how rural poverty results from a lack of assets, limited economic opportunities and poor education and capabilities, as well as disadvantages rooted in social and political inequalities. Beyond household level factors, economic growth, and local availability of opportunities, markets, infrastructure and enabling institutions – including good governance – are important to overcome rural poverty. While the report highlights that each country context is different and there is heterogeneity in rural development priorities and challenges within countries, it calls for increased attention to the following four opportunities:

1. improving the overall environment in rural areas to make them places where people can find greater opportunities and face fewer risks, including through increased investment in infrastructure and utilities, rural services, and good governance;
2. reducing the level of risk that poor rural people face and helping them to improve their risk management capacity, including through stimulating the market to provide new risk-reducing technologies and services for poor rural people and expanding social protection;
3. advancing individual capabilities, enabling the rural poor to develop the skills and knowledge to take advantage of new economic opportunities; and
4. strengthening the collective capabilities of rural people, including through membership-based organizations.

Source: IFAD (2010).

The transition and rural poverty

Aspects of rural poverty in some countries of the European Region are rooted in changes that occurred during the transition. In the eastern part of the Region, poverty increased during the 1990s at a pace unparalleled elsewhere in recent times (IFAD, 2002). Dramatic drops in social spending resulted in significant reductions in the coverage and quality of basic services. Decentralization and privatization were undertaken without complementary efforts to build local capacity, identify local resources or establish national regulatory frameworks (Bennett et al., 2010). Deteriorating institutional capacity and weakened social and physical infrastructure contributed to rural poverty in these countries (IFAD, 2002; IBRD, 2002).

The transition period was marked by increased multidimensional poverty in rural areas. The well-being of rural residents in many countries worsened, with varying degrees of impact on material living standards, health, education, employment conditions, voice, social capital, environment and security. The *Regional assessment of rural poverty in central and eastern Europe and the newly independent states* (IFAD, 2002) reported on the emergence of increased malnutrition, rising levels of disease and reduced standards of education in farm areas during the transition.

Social protection in rural areas was considerably weakened during the transition. The loss of former collective farms created a vacuum in social services that had previously been provided through the farms (IBRD, 2002). This

left communities lacking in critical tools for safeguarding human capital, including schools, health services and social protection mechanisms (IBRD, 2002). Groups that relied on social protection mechanisms for their primary support became the most vulnerable: these groups included the elderly, disabled people, children (especially orphans) and the unemployed (Narayan et al., 1999).

Rural roads and improved water supplies, which had been developed primarily to suit the needs of former state and collective farms, deteriorated, lacked maintenance and faced difficulties in meeting the needs of a population that became more dispersed during the transition (IFAD, 2002). Cash-poor rural populations became further isolated by a sharp reduction in subsidized municipal transportation to nearby towns and cities (IBRD, 2002).

Many rural communities in countries undergoing transition experienced a deterioration of social cohesion in the 1990s brought on by unaccustomed material hardship and changing social norms. When economic circumstances prevented social norms from being upheld, people withdrew and became socially isolated, causing depression and feelings of worthlessness (Narayan et al., 1999). This negatively affected social cohesion among communities, kinship groups and even households (Narayan et al., 1999). Processes such as privatization and restructuring of agricultural and industrial enterprises contributed to the increased vulnerability of social networks (Kuehnast & Dudwick, 2001). The following quotation exemplifies the impact of these on rural social networks in Kyrgyzstan:

Since about 80 percent of the poor live in rural areas, networks of the rural poor are most affected. Because collective farms, non-farm enterprises, and schools once played a key role in bringing rural people together and cementing social networks, their closure has created additional impediments for social networks (Kuehnast & Dudwick, 2001).

Since many social transactions among rural people concern fundamental issues of survival, such as securing market access, food, fuel and water, or obtaining access to health care, weakened social networks reduced the ability of the rural poor to cope with risk (Kuehnast & Dudwick, 2001). In rural communities in countries undergoing transition, male suicide rates increased, trafficking in young women rose, drug use, alcoholism and teenage pregnancies rose, and young men were increasingly recruited into the drug trade and criminality (IFAD, 2002; IBRD, 2002).

There is evidence that some challenges that emerged during the transition persist today, continuing to contribute to rural poverty and the “circle of decline” (see Fig. 1). For instance, an EC study (EC, 2008) identified former workers at state farms in Poland and Lithuania and their families as a group at risk of poverty.

The impact of the financial crisis and economic downturn on rural poverty

This social class of ours is forgotten. It will come to absolute poverty for us. I can't produce any longer. I can change production area, but I must not take risks without financial support (participant of focus group to assess the impact of the crisis on small rural households Kragujevac, Serbia) (Ipsos Strategic Marketing, 2009, unpublished data).

There is limited evidence on the foreseen and/or actual impact of the recent financial crisis and economic downturn on rural poverty in the European Region. Existing sources point to a worsening situation for the rural poor, with variations between countries. Simulations on the potential impact of the crisis in the Russian Federation suggest that the poverty headcount in rural areas will probably rise by over 5% (World Bank, 2009). In Montenegro, shocks associated with the crisis are more likely to affect rural households and families with two or more children, two groups in which poverty is already concentrated (Hirshleifer, 2009, unpublished data).

A crisis rapid assessment for Serbia commissioned by the World Bank and the Deputy Prime Minister for European Integration (Ipsos Strategic Marketing, 2009, unpublished data) provided evidence on the impacts of the crisis on vulnerable groups, including small rural households. These included:

- the low purchasing price of agricultural products (which affects agricultural holdings without machinery most severely as they have to hire machines for work);
- a more intense increase in the price of basic raw materials such as seeds and fertilizers;
- the loss of customers as companies that had previously purchased agricultural products went out of business;
- lack of income from employment (their own or that of family members), difficulties in finding waged work and seasonal jobs and greater difficulties in finding any job given the overall shortage of employment opportunities and minimal contact with towns;
- waiting for payment of wages;

- increases in the price of health services (which has a significant effect on small rural households in which many people do not have health insurance);
- inability to pay agricultural pension contributions and a loss of social protection linked to loss of jobs; and
- increases in the price of basic products and utilities such as gas, phone and electricity.

In Ukraine, the crisis has affected both the poverty rate in rural areas and the proportion of the rural poor in the total number of people experiencing poverty. The poverty rate in rural areas increased by 0.3% in 2008, reaching 38.2% (UNDP Ukraine, 2009). As the economic crisis strongly impacted on urban areas, the proportion of the rural poor in the total number of people living in poverty in Ukraine registered a decrease in the first quarter of 2009 (UNDP Ukraine, 2009).

Employment and income loss in the Republic of Moldova is a much stronger driver of the crisis than had been expected, headed by a rural and agricultural depression (United Nations in the Republic of Moldova, 2009):

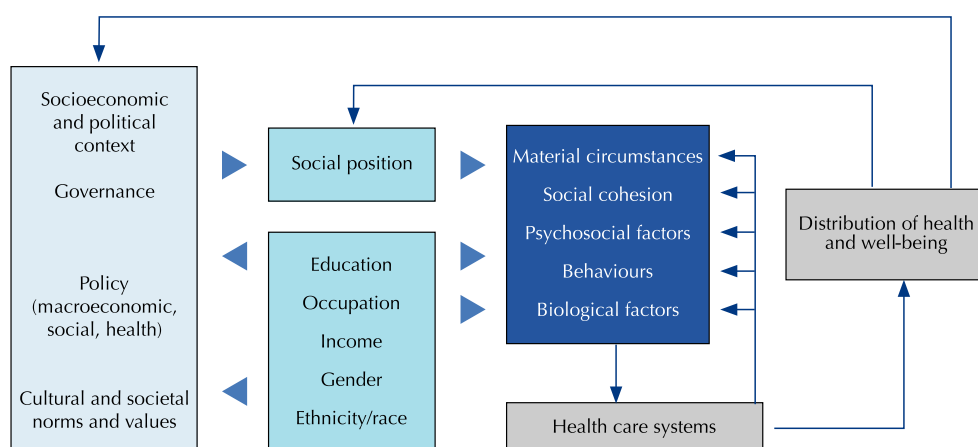
Rural households depend heavily on income from self-employment in agriculture, and on social payments and remittances. Comparing the 6-month period comprising the fourth quarter of 2008 and the first quarter of 2009 with the same period one year before, rural income decreased by more than 7 per cent. This was driven by a fall in employment income (12 per cent) and agricultural self-employment income (25 per cent). The gravity of this situation is made worse by falling remittances. Remittances represented around 25 per cent of rural households' total income, and their fall will have significant impacts. Nationally, it is estimated that 36 per cent of households who currently receive remittances and are ranked in income quintiles higher than quintile 1 (the poorest quintile) would fall back into quintile 1 without remittances. An additional 19 per cent would fall back from higher quintiles to quintile 2 without remittances.

In the United Kingdom (Wales), the economic recession triggered by the financial crisis has resulted in rising levels of unemployment and lower numbers of job vacancies in rural areas (Milbourne, 2009). This has increased the significance of the public sector and created new challenges for workfare policies. A benefit has been an increased recognition of rural poverty among welfare policy stakeholders (Milbourne, 2009).

4. Select social determinants of health in disadvantaged rural areas

The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices (WHO, 2009a). This section elaborates on select determinants of health of relevance to rural poverty – education, employment conditions, social protection and participation. As no determinant operates in a vacuum, it also briefly describes the intersections between these determinants and how these compound disadvantage. The section draws from the work of the CSDH, the conceptual framework for which is presented in Fig. 2.

Fig. 2. CSDH conceptual framework



Source: CSDH (2008) *Determinants of Health and Inequalities*

Education

Education is a key element in ensuring equitable and sustainable development and poverty reduction in rural

communities. Education, beginning in the early years and spanning through tertiary levels and continuing education as adults, strongly shapes lifelong trajectories in terms of income, employment, living conditions and opportunities for health (CSDH, 2008). The early years are particularly important; early child development science shows that brain development is highly sensitive to external influences in early childhood, starting in utero, with lifelong effects (CSDH, 2008). Because of this, the CSDH calls for governments to build universal coverage of a comprehensive package of quality early child development programmes and services for children, mothers and other caregivers, regardless of ability to pay (CSDH, 2008).

As the previous section mentioned, education levels are often comparatively low in disadvantaged rural areas. Low education levels contribute to a low employment rate and, consequently, may increase the poverty rate, which in turn negatively affects the chance of people receiving high-quality education (EC, 2008). There are also considerably lower rates of engagement in early childhood services and preschool and kindergarten facilities (EC, 2008; Bennett et al., 2010), which is relevant in relation to the reduction of intergenerational transmission of rural poverty and social exclusion across the European Region. In several south-eastern European (SEE) countries and NIS, over 70% of rural children do not access an early childhood service before entering school; children living in rural areas are also less likely to attend preschool facilities than children living in urban areas (Bennett et al., 2010). The proportion of children aged 3–5 years educated in nursery schools in Poland in 2003 was 8% in rural areas, compared to 58.9% in urban areas. In Norway, the proportion of children in kindergarten is marked by regional differences reflecting a rural–urban divide: for instance, 76% in Oslo and 52% in the rural Aust-Agder region (EC, 2008).

Factors contributing to lower levels of education in rural areas can include poverty, distance from the education facility and lower quality of education due to infrastructure and staff qualification reasons. The decline in the number of rural schools reduces their accessibility, meaning that travel distances and the cost of transportation are also relevant factors (EC, 2008).

Generally, higher levels of education are associated with lower poverty rates. However, the rural poor must have access to other assets, including land and infrastructure, so that their education can influence income-generating potential (Valdés et al., 2010). For instance, people in Albania with higher education levels, low access to land but high access to infrastructure make up 38% of the rural population and only 17% of the rural poor, while those with higher education levels, low access to land and low access to infrastructure make up 33% of the rural population and 45% of the rural poor (Valdés et al., 2010).

Employment

The CSDH has highlighted the important effects of employment and working conditions on health and health equity. Employment and working conditions contribute to health through their contributions to financial security, social status, personal development, social relations and self-esteem, and protection from physical and psychosocial hazards (CSDH, 2008). Unemployment, informal work, temporary work and precarious work are among the employment-related conditions that are associated with poorer health status (CSDH, 2008). People working in lower-status occupations are also disproportionately exposed to a range of health hazards, including work-related injury and fatality (CSDH, 2008).

In disadvantaged rural areas, poor labour market opportunities can force qualified people to migrate; this worsens the quality of the local labour force (EC, 2008). The lower quality of the workforce can be a disincentive to investment by domestic or foreign firms in the area, with a consequent further deterioration in the labour market situation.

In EU countries, which saw a decline in labour market indicators in rural areas between 2000 and 2005, specific barriers to employment in rural areas include:

- the structure of the local labour market, including mismatches between skills and jobs and a lack of relevant training;
- the use of informal social networks by employers when recruiting;
- accessibility to the workplace, with a strong reliance on cars (which may exclude more disadvantaged rural groups) or public transport services, which may be in short supply;
- the opportunity costs of participating in the labour market, which may reflect care-related considerations (due to lack of accessible child- and elderly-care services) and the “benefit trap” (where a strong welfare benefit scheme exists); and
- limited access to job placement services and other labour market inclusion interventions (EC, 2008).

In the eastern part of the Region, the transition resulted in a dramatic decrease in the demand for labour in rural areas, as in many cases jobs once guaranteed by the state no longer existed and new opportunities to absorb these

workers were slow to emerge. In the absence of alternatives, many families turned to subsistence agriculture to cope with loss of employment (IFAD, 2002). Despite land reform and other policy changes, limited access to essential inputs and technologies, barriers to land consolidation, poor market access, scarcity of rural credit and limited off-farm earning opportunities have negatively affected on employment opportunities for the rural poor (IFAD, 2002).

Some groups may be at greater risk of exclusion from the labour market. Due to limited employment opportunities in rural areas in southern and eastern EU Member States, there is a strong migration (to urban areas or abroad, respectively) of females in economically active age groups (EC, 2008). Migrants and Roma may also face exclusion from the labour market or be exposed disproportionately to adverse working conditions. As stated above, lack of employment opportunities for young people in rural areas contributes to out-migration, which can further weaken the labour market in disadvantaged rural areas.

Social protection

Extending social protection to all people across the life-course contributes to health and health equity (CSDH, 2008). Social protection can significantly reduce on multidimensional poverty, limiting its influence as a determinant of ill health, and can help break the intergenerational transmission of disadvantage. For instance, the number of people at risk of poverty in the EU in 2007 was 84 million, or 17% of the population (Eurostat, 2010a), but this number would have been considerably higher in the absence of social transfers: social transfers lifted 34.6% of people from the risk of poverty in 2007 (Eurostat, 2010a).

Social protection has been defined by the International Labour Organization (ILO) as:

a holistic set of life-cycle-based strategies that seeks to protect workers at their workplaces in the formal and informal economy against unfair, hazardous and unhealthy working conditions. It also seeks to provide access to health services, a minimum income for people with incomes under the poverty line and support for families with children. It replaces income from work lost through sickness, unemployment, maternity, invalidity, loss of breadwinner or old age (ILO, 2008).

The Social Protection Floor (SPF) Initiative, led by ILO and WHO and involving other multilateral agencies, has adopted the social protection floor approach. This approach consists of a basic set of rights and transfers that protect a minimum level of access to essential services and income security. Components include:

- ensuring the availability and continuity of, and geographical and financial access to **essential services**, such as water and sanitation, food and adequate nutrition, health, education, housing, life and asset saving information and other social services; and
- realizing access by ensuring a basic set of essential **social transfers**, in cash and in kind, to provide a minimum income and livelihood security for poor and vulnerable populations and to facilitate access to essential services. The basic set includes social transfers (but also information, entitlements and policies) to children, people in active age groups with insufficient income and older persons (SPF, 2009).

Evidence shows that rural populations in many countries face greater challenges in accessing high-quality essential services. In addition to education (discussed above) and health services (discussed in the next section), a clear example of this relates to water and sanitation. Globally, seven out of ten people without improved sanitation in 2008 lived in rural areas, as did more than eight out of ten without an improved drinking-water source (WHO/UNICEF, 2010b). Almost 140 million people (16% of the population) in the European Region in 2008 did not have a household connection to a drinking-water supply, 85 million (10%) did not have improved sanitation and over 41 million (5%) lacked access to a safe drinking-water supply (WHO Regional Office for Europe, 2010a). Insufficient access to improved water and sanitation services disproportionately affects rural populations across the European Region.

Social transfers can be more limited in disadvantaged rural areas due to issues such as higher levels of labour market informality, casual labour and self-employment (including in subsistence agriculture) (ILO, 2008). Coverage of contributions-based pensions or sickness payments can be lower due to the lack of formal sector employment and more prevalent poverty (ILO, 2008). Insurance markets can be weak in disadvantaged rural areas, especially for elderly and chronically ill people (ILO, 2008).

Poor rural women can experience exclusion from social protection schemes while also being disadvantaged by weak social protection in rural areas. Many poor rural women have participated in unpaid labour in agriculture

and have worked part time or have interrupted their working lives for family reasons, with negative consequences in terms of accumulated employment benefits and pension rights. Lower levels of social protection components, such as child- and elderly-care services, negatively influence rural women's ability to participate in the labour market. For instance, a study conducted in the Umbria region of Italy demonstrated a serious shortage of child-care services in rural areas. The female employment rate was about 40% in Umbria's largest city (Perugia) but fell to 28% in the most disadvantaged rural areas. The lack of child care, together with the need to take care of elderly relatives, was considered a factor constraining rural women in Umbria from participating in the labour market (Lucatelli, Savastano & Coccia, 2006).

Evidence from the EU indicates that take-up rates for social protection transfers are lower in rural areas, underlining the need for better access to information and advice about public benefit entitlement (EC, 2008). Other factors contributing to lower uptake include a culture of independence and self-reliance prevailing in rural areas, as well as a perceived or real lack of anonymity in collecting benefits that can generate social stigma (EC, 2008).

Migrant workers, especially those with irregular status, are particularly at risk of lacking basic social protection. A report by the Council of Europe (CE) noted that migrant labour is increasingly used in Mediterranean agriculture, especially for seasonal activities, and that many of the workers are undeclared. As a result of their irregular status, they have no right to receive minimum wages or make social security contributions and are often subject to exploitation and abuse (CE Parliamentary Assembly, 2003).

Participation

The CSDH underlines the importance of inclusion, agency and control for social development, health and well-being. It recommends that efforts to reduce health inequities involve empowering individuals and groups to represent their needs and interests strongly and effectively (CSDH, 2008). The rural poor, in comparison to the urban poor, face more constraints in participating in policy processes that influence their livelihoods across a range of sectors. These may include distance, weak (or lack of) coordination, a lack of civil society organizations representing the rural poor and, given the political invisibility of the rural poor, limited opportunities for meaningful involvement (Summer et al., 2008). These can be compounded by other constraints disproportionately affecting the poor in general, such as lower levels of education and confidence, and limited incentives to participate that are linked to lack of time and negative perception of benefit (Summer et al., 2008). Groups that may face deeper rural poverty and social exclusion, such as landless people, the unemployed, elderly people, ethnic minorities, migrants and women and children, can also be underrepresented in movements to engage the rural poor in policy dialogues (Summer et al., 2008).

Summer et al. (2008) describe how tackling the challenge of improving access of the rural poor to governance structures and policy processes will require attention to four main subchallenges:

1. generating a rural-poor-led policy initiative
2. facilitating access by the rural poor to policy processes
3. increasing the influence of the rural poor in policy processes
4. ensuring that policy formation becomes implemented.

Key lessons learnt for each of these subchallenges are featured in Annex 2.

5. Rural–urban differences in health system performance and health

Limited data are available on rural–urban differences in health system performance in many countries across the Region. There is also a shortage of routinely collected comprehensive data on rural–urban inequities in health status. This section, far from being an exhaustive review, draws from select sources to highlight issues related to rural–urban differences in health system performance and health in the European Region. As coverage of all health issues is not possible due to space constraints, the section concentrates on issues addressed by MDGs 4, 5, 6 and 7 (covering child and maternal health, HIV/AIDS and TB, and environmental health concerns) as a means to focus discussion.

Inequities in health system performance between rural and urban areas

There are inequities in health system performance between rural and urban areas, with urban areas for the most

part having the advantage in terms of ease of access to a range of services. Although varying greatly from country to country, rural–urban differences may be seen in areas including, but not limited to, the following:

- presence of qualified health care workers;
- distance to major hospitals;
- access to specialized services;
- access to health promotion and prevention activities;
- availability of pharmacies and essential medicines;
- financial barriers to health services, as incomes and the number of insured people can be lower in rural areas and additional costs are presented (such as travel and lodging costs associated with seeking care for oneself or a family member);
- effectiveness of emergency care services;
- quality of the infrastructure, including equipment conditions in hospitals; and
- demands on health workers.

Some of these issues are briefly expanded below, drawing from the Health Systems in Transition series of the European Observatory on Health Systems and Policies and other sources.

The limited presence of qualified health care workers and the need for an increased focus on effective strategies to recruit and retain staff in remote rural areas have been identified as a priority in many countries globally. There are persisting challenges with the geographical distribution of health personnel in Georgia, despite recent efforts to encourage family doctors into rural practice, with rural communities remaining underserved (Chanturidze et al., 2009). Armenia is experiencing a shortage of health sector workers in rural areas, with about two thirds of the health care labour force being based in the capital city (which does not reflect the country's population distribution) (Hakobyan et al., 2006).

In Bulgaria, there is often a single general practitioner (GP) providing services to the population in rural areas. This limits a patient's ability to exercise his or her right to choose a GP and to obtain a second opinion (Georgieva et al., 2007). Patients in rural areas in Latvia have unequal access to primary health care services due to a smaller number of providers, as family doctors are not willing to practise in rural areas (Tragakes et al., 2008). The lack of qualified health personnel in Ukraine is influenced by lower wages in rural facilities compared with those in urban facilities (UCSR et al., 2008). In Norway, ensuring sufficient qualified health professionals, particularly physicians, in the more sparsely populated northern part of the country has been a longstanding challenge (Straume & Shaw, 2010).

Research undertaken by the European Rural and Isolated Practitioner Association (EURIPA, 2010) on public health and health services in rural areas highlights that in addition to being fewer in number, rural health workers may face problems linked to excessive workloads, limited resources and lack of access to continuing education and training. These considerations influence the willingness of health workers to be stationed in rural areas.

There is evidence from some countries that pharmacies, essential medicines and specialized services can be more difficult to access in rural areas. In Romania, there are more than three times as many pharmacies registered in urban areas than in rural areas, despite the fact that nearly half the population lives in rural areas (Vladescu et al., 2008). Specialized services such as mental health care are also unevenly distributed across the country (Vladescu et al., 2008). In Georgia, while all routine medicines can be located in Tbilisi, the full range of medicines may not be available in rural and in remote mountainous regions with a smaller population and lower per capita income (Chanturidze et al., 2009). Obstetric care in Armenia is provided at hospital obstetric-gynaecological departments, regional maternity homes and at republican centres for specialized care, all of which are generally confined to urban areas. Whereas the majority of women in Armenia receive maternal care services, the limited availability of obstetric care in rural areas contributes to an urban–rural divide (Hakobyan et al., 2006). Access to rehabilitation services in Estonia differs according to region: patients living in larger cities receive about two thirds more rehabilitation care services than people living in rural areas (Koppel et al., 2008).

As incomes can be lower and unemployment or self-employment in agriculture higher in some rural areas, there may be a greater number of uninsured people, who face consequent difficulties in paying for health services. Costs for travel and lodging associated with service use can also comprise and/or aggravate financial barriers to access. In Latvia, the incomes of people in rural areas are lower than the national average and there is reduced access to services due to lack of availability. These factors result in less expenditure on health care services and medicines by the rural population (Tragakes et al., 2008). Rural populations are also among the groups in Latvia

who are more likely to encounter catastrophic health expenditure⁵ (WHO, 2009b).

About 75% of the population in the Republic of Moldova is covered by health insurance, with the 25% not covered mainly residing in rural areas (Jowett & Shishkin, 2010). The rural uninsured population lacks sufficient access to health care services due to financial difficulties and limited transportation and is also at higher risk of incurring catastrophic out-of-pocket expenditure on health care (Jowett & Shishkin, 2010). On 23 December 2009, however, Law no. 128-XVIII was passed; this law extends full primary health services to all citizens irrespective of their insurance status. In Romania and Greece, the smaller number of people with health insurance in rural areas and the lower incomes of rural inhabitants (such as agricultural workers and small farmers who may have lower pensions) pose financial barriers to access (EC, 2008). In Bosnia and Herzegovina, rural–urban discrepancies in health insurance coverage and lack of transferability of insurance benefits across the country contribute to inequity in access to health care (WHO, 2007).

The quality of services available in rural areas may also be lower in terms of infrastructure (such as equipment, conditions of hospitals and information and communication systems). Emergency care is often cited as being of inferior quality in rural areas due to limitations within and beyond the health sector: in Bulgaria, for instance, challenges in delivering effective emergency care in rural areas include the underdeveloped road network and communication infrastructure. Mountainous terrain and the lack of available airports in remote rural areas make it hard to transport critically ill people (Georgieva et al., 2007). In some EU countries, the waiting time in rural areas to receive emergency services is well above the average (EC, 2008).

Child and maternal health

Available data highlight rural–urban inequities in child and maternal health, as shown in Table 2.

When compared to other regions globally, the European Region has high percentages of births attended by skilled health personnel, with the rural–urban difference being only a few percentage points in many countries. However, there are some countries with considerable differences, such as Azerbaijan, Tajikistan and Turkey (WHO, 2010a). With regard to under-five mortality rates (referring to the probability of dying by age five per 1000 live births), available data show large rural–urban inequities in multiple countries, with rural areas lagging behind (WHO, 2010a). A factor contributing to this can be the lack of a balanced rural–urban distribution of an appropriate mix of adequately skilled professionals, including well-trained family doctors, obstetricians, paediatricians, nurses, midwives and immunization staff. Other factors can include, but are not limited to, lower quality of care, weak referral systems and lack of evidence-based clinical practice.

In EU countries, where data on child health disaggregated by rural–urban residence are also limited, there are concerns regarding whether children in rural areas get an equal standard of care as urban children. Drawing from research conducted with 34 European countries (including many EU Member States), Katz et al. (2002) suggest that reasons for this include a shift away from paediatricians towards family physicians treating the entire population, including young children, in areas where the population is dispersed. While this may reflect financial considerations associated with the costs of specialists in rural areas, the impacts on quality of care need to be carefully monitored (Katz et al., 2002). There is a need to ensure adequate training of family physicians in child health and enable them to refer children to specialists when necessary without facing restrictions (Rechel et al., 2009).

With regard to measles vaccination coverage among 1-year-olds, rural areas in some countries unexpectedly do better than urban areas. Some individuals in large, densely populated urban centres do not access immunization services on a regular basis. A factor that can contribute to this is migration (from abroad and from rural to urban areas), as migrants may not be registered at an urban health facility in the absence of active outreach. However, despite high levels in rural areas in some countries, it should be noted that there are still rural pockets of unimmunized populations. As social determinants of health intersect, the disadvantages to health of lower education, lower income and living in a remote disadvantaged rural area can synergize to exacerbate barriers to required services. Official numbers can exclude people who lack access to the health system, masking certain unimmunized pockets in remote rural areas. Ethnic minority groups such as the Roma may also have lower immunization coverage rates in rural areas, linked to processes of social exclusion that span economic, cultural, social and political dimensions.

Table 2. Inequities in child and maternal health by rural and urban residence in selected countries

⁵ Catastrophic health expenditure is health spending that exceeds a certain threshold percentage of total nonsubsistence household spending.

Member State	Year	Births attended by skilled health personnel ^{a,b} (%)		Measles immunization coverage among 1-year-olds ^{a,c}		Under-five mortality rate ^{a,d}	
		Rural	Urban	Rural	Urban	Rural	Urban
Albania ^e	2005	100	100	...	...	19	20
Armenia ^e	2005	98	99	80	67	42	26
Azerbaijan	2006	81	97	44	64	64	52
Belarus ^e	2005	100	100	99	98	...	...
Bosnia and Herzegovina ^e	2006	100	100	80	74	...	...
Georgia ^e	2005	98	99	...	...	45	24
Kazakhstan ^e	2006	100	100	99	100	43	30
Kyrgyzstan ^e	2006	96	100	...	...	50	35
Montenegro ^e	2005	98	100	82	84	...	...
Republic of Moldova	2005	99	100	92	88	30	20
Serbia ^e	2005	99	99	89	85		
Tajikistan ^e	2005	81	89	90	96	83	70
The former Yugoslav Republic of Macedonia ^e	2005–2006	98	98	88	89	26	10
Turkey ^f	2008	80	96	87	90	43	29
Turkmenistan	2000	97	98	92	82	100	73
Ukraine	2007	98	99	...	...	20	19
Uzbekistan ^e	2006	100	100	98	97	59	51

Source: WHO (2010a); Hacettepe University Institute of Population Studies (2009).

^a Unless otherwise stated, data are derived from demographic health surveys (DHS).

^b Data derived from DHS relate to births occurring in the five-year period preceding the survey, unless otherwise stated, and data derived from multiple indicator cluster surveys (MICS) relate to births occurring in the two years prior to the survey.

^c Data refer to coverage of measles or measles, mumps and rubella (MMR) vaccine at 12, 15, 18, 24 or 30 months, depending on the country.

^d For all countries where the data source is DHS, the under-five mortality rate by rural–urban relates to the decade preceding the study.

^e Data are derived from MICS (round 3), with data extracted from country reports available on the UNICEF web site (www.childinfo.org).

^f The figures were extracted directly from the Turkey DHS for 2008.

Country-specific data from DHS⁶ show that when looking at vaccination for diseases beyond measles, rates of coverage and rural–urban inequities differ. For instance, 80% of urban children in Turkey in 2008 were vaccinated against seven diseases (TB, diphtheria, pertussis, tetanus, poliomyelitis, hepatitis B and measles) compared to only 67% of rural children. In Azerbaijan in 2006, 55% of children living in urban areas received BCG, 1-2-3 DPT, 1-2-3 POLIO, MMR and HepB vaccinations,⁷ against 29% of children in rural areas. In Armenia in 2005, however, only 51% of urban children received BCG, 1-2-3 DPT, 1-2-3 POLIO, MMR and HepB vaccinations, in comparison with 62% of rural children. Access to, and utilization of, immunization services by all populations in countries across the European Region are being addressed through interventions such as the enhanced implementation of “reaching every district” (RED) strategies. These focus efforts on the lowest administrative level to ensure equity in access to services, including possible outreach efforts, and work to ensure that children are fully immunized through continued monitoring and supervision of services.

Data from DHS⁸ reveal rural–urban inequities in access to reproductive health services. In Armenia in 2005, 94%

⁶ Data in this paragraph come from the following sources: Hacettepe University Institute of Population Studies (2009); State Statistical Committee [Azerbaijan] & Macro International Inc. (2008); National Statistical Service [Armenia], Ministry of Health [Armenia] & ORC Macro (2006).

⁷ BCG stands for Bacillus of Calmette and Guerin, the tuberculosis vaccine trademark of Pasteur Institute in Paris; DPT stands for diphtheria, tetanus and pertussis; POLIO stands for poliomyelitis; MMR stands for measles, mumps and rubella; HepB stands for hepatitis B.

⁸ Data in this paragraph come from the following sources: National Statistical Service [Armenia], Ministry of Health [Armenia] & ORC Macro

of mothers in urban areas receive antenatal care from professional health services providers (doctors, nurses and midwives), compared to 83% of mothers in rural areas. Exposure to family planning advice was also lower in rural areas. Ninety per cent of mothers in urban areas in Azerbaijan in 2006 received antenatal care from professional health services providers, compared to 63% in rural areas. The percentage of women in Azerbaijan who made 4 or more antenatal care visits was much lower in rural areas than in urban areas (30% compared to 60%). In Ukraine in 2007, currently married women in urban areas were more likely to use a family planning method than rural women, perhaps reflecting wider availability and easier access to methods in urban than in rural areas. The contraceptive prevalence rate for modern methods was 50% in urban areas, compared with 42% in rural areas.

HIV/AIDS and TB

The rate of newly diagnosed HIV cases reported per million people has more than doubled in the European Region since 2000, from 44 cases per million in 2000 to 89 per million in 2008.⁹ Roughly 2 million people live with HIV in the east of the Region, an area that is home to the fastest-growing HIV epidemic in the world (ECDC/WHO Regional Office for Europe, 2008).

Globally, available data indicate that HIV prevalence is typically higher in urban areas (WHO, UNAIDS & UNICEF, 2009). However, the rural population is often engaged in rural–urban migration and migration abroad, where it can be disproportionately exposed to social exclusion and related disadvantages. Exclusionary processes and poverty can heighten the risk of engaging in sex work and injecting drug use, practising unprotected sex or falling victim to trafficking, all of which bear a high risk of HIV transmission. According to IFAD (2006), migration is one of the key drivers of the HIV epidemic in Armenia and the Republic of Moldova, where the epidemic is still in its early stages. Migrant men act as a bridging population between potentially high-risk communities abroad and lower-risk communities at home. This is further aggravated by low awareness of effective HIV prevention measures.

Existing data from DHS provide evidence of rural–urban differences in knowledge of HIV transmission and prevention methods. For instance, rural women and men in Albania, Armenia, Azerbaijan and the Republic of Moldova demonstrate lower awareness of HIV preventive methods such as condom use (Table 3). Due attention to the rural population (especially migrants from rural areas) in HIV prevention efforts consequently constitutes one element of measures to curb the epidemic. Globally, as treatment services are often inequitably distributed between urban and rural areas (WHO, UNAIDS & UNICEF, 2009), there is also a need to ensure appropriate testing and treatment services in rural areas. Data need to be disaggregated further to assess equity in service availability for people living in rural areas (WHO, UNAIDS & UNICEF, 2009).

Table 3. Percentage of respondents to DHS in Albania, Armenia, Azerbaijan and the Republic of Moldova who say HIV can be prevented by using condoms every time they have sexual intercourse

Country	Year	Residence	Women	Men
Albania	2008/2009	Rural	64%	78%
		Urban	86%	90%
Armenia	2005	Rural	64%	81%
		Urban	76%	81%
Azerbaijan	2006	Rural	21%	42%
		Urban	48%	67%
Republic of Moldova	2005	Rural	73%	83%
		Urban	85%	93%

Sources: Institute of Statistics, Institute of Public Health [Albania] & ICF Macro (2010); National Statistical Service [Armenia], Ministry of Health [Armenia] & ORC Macro (2006); State Statistical Committee [Azerbaijan] & Macro International Inc. (2008); NSCPM [Republic of Moldova] & ORC Macro (2006).

DHS show that rural women in particular are at a disadvantage in terms of their knowledge of methods to prevent HIV infection. In addition, gender inequities may further prevent them from protecting themselves from exposure to infection. DHS findings¹⁰ from Albania, Azerbaijan and the Republic of Moldova indicate that rural respondents

(2006); State Statistical Committee [Azerbaijan] & Macro International Inc. (2008); UCSR et al. (2008).

⁹ Based on data from the 43 countries that have consistently reported HIV surveillance data.

¹⁰ The sources for this paragraph are: Institute of Statistics, Institute of Public Health [Albania] & ICF Macro (2010); National Statistical Service [Armenia], Ministry of Health [Armenia] & ORC Macro (2006); State Statistical Committee [Azerbaijan] & Macro International Inc. (2008);

were less likely than urban respondents to be supportive of a woman's right to refuse sex with her husband when he has a sexually transmitted infection. For example, in Albania in 2008/2009, only 72% of rural women and 69% of rural men, compared to 84% of urban women and 77% of urban men, were supportive of a woman's right to do so.

TB has been documented as being more frequent in urban areas in many countries of the world, including in western European countries (Hayward et al., 2003). In urban contexts, factors contributing to TB incidence include, but are not limited to, HIV infection, overcrowding and high population density, migration from countries with higher incidence of TB and adverse living and working conditions experienced by migrants in the country of destination (de Vries et al., 2010), illicit drug use, homelessness, household contacts with recent TB cases and detention in prison (with prisons being environments conducive to the spread of TB). All of the above are also determinants for multidrug-resistant TB and extensively drug-resistant TB.

In rural areas, where TB is reported to have lower incidence, labour migration and TB are an issue potentially meriting further research across the European Region. The example from Tajikistan below (Gilpin et al., unpublished observations, 2010) provides insight into issues surrounding labour migration and TB.

In Tajikistan, 75% of the poor live in rural areas. In addition to internal migration, a response to poverty is migrating abroad, frequently to neighbouring countries such as the Russian Federation. The regions most affected by emigration are Khatlon and Rasht Valley. A knowledge, attitude, behaviour and practice survey was conducted among labour migrants from these regions to elucidate factors influencing access to tuberculosis diagnosis and care both in their labour destination country and at home. The study showed that migrants have increased vulnerability to tuberculosis due to the working and living conditions in the destination country and that access to health services is limited due to their legal status or the high cost of health services abroad. The average knowledge of migrants regarding tuberculosis is low and misconceptions are frequent.

Some DHS¹¹ highlight rural–urban differences regarding knowledge of TB. In the Republic of Moldova in 2005, despite the virtually universal degree of awareness of TB (in terms of having heard of it), considerably fewer survey respondents were able to name correctly the most prevalent means of transmission (through the air when an infected person coughs). Rural respondents had less knowledge than urban populations: 69% of rural women and 59% of rural men reported that TB was spread through the air by coughing, compared to 83% of urban women and 78% of urban men. In Ukraine, where there are higher levels of awareness of the primary means of transmission, there are still rural–urban differences. In 2007, 92% of rural women and 89% of rural men reported that TB was spread through the air by coughing, compared to 96% of urban women and 95% of urban men. In Armenia in 2005, more urban women than rural women had ever heard of TB (95% compared to 86%, respectively). However, this changed for men, with urban men reporting having heard of it less than rural men (86% compared to 89% respectively).

Environmental health

As highlighted in the previous section, access to improved water and sanitation is lower in rural areas in multiple countries of the European Region. This is further evidenced in Annex 3. Poor water quality and lack of sanitation contribute to diarrhoeal disease, typhoid fever and hepatitis A (WHO Regional Office for Europe, 2010b). The burden of diarrhoeal disease in the European Region in 2001 was estimated to be 5.3% of all deaths and 3.5% of all disability-adjusted life years (DALYs) in children aged 0–14 years. Large reductions in deaths and DALYs could potentially be achieved through the development of infrastructures and better personal hygiene, including in rural areas (WHO Regional Office for Europe, 2009a). Access alone does not guarantee safety of the water supply. For water to comply with the WHO guidelines for drinking-water quality, operation and maintenance of the production and distribution network are key preconditions (WHO Regional Office for Europe, 2010a). Upkeep of these networks can face particular difficulties in disadvantaged and remote rural areas.

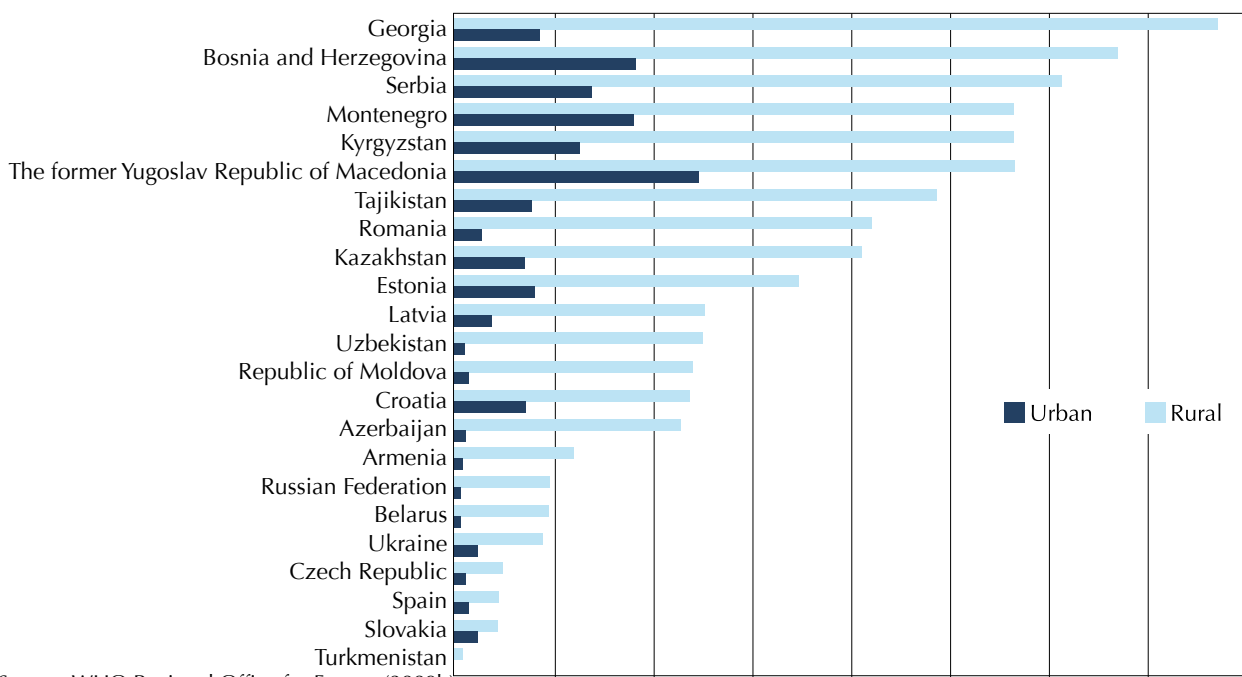
Solid fuels usage tends to be more frequent in rural than urban areas. Cooking and heating with solid fuels such as dung, wood, agricultural residues, grass, straw, charcoal and coal are a major source of indoor air pollution. Using solid fuels is associated with increased mortality from pneumonia and other acute lower respiratory diseases among children and increased mortality from chronic obstructive pulmonary disease and lung cancer (where coal is used) among adults (WHO, 2010a). Solid fuel usage is greatest in the EUR B WHO epidemiological subgrouping, which consists of Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Georgia, Kyrgyzstan, Montenegro, Poland, Romania, Serbia, Slovakia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Turkmenistan and Uzbekistan. The estimated burden of acute lower respiratory infections in children aged under

NCPM [Republic of Moldova] & ORC Macro (2006).

¹¹ Sources for this paragraph are: NCPM [Republic of Moldova] & ORC Macro (2006); UCSR et al. (2008); Institute of Statistics, Institute of Public Health [Albania] & ICF Macro (2010); National Statistical Service [Armenia], Ministry of Health [Armenia] & ORC Macro (2006).

five years that were attributable to the use of solid fuels in the home in 2007 was 11 600 deaths and 319 000 DALYs for the EUR B country grouping (WHO Regional Office for Europe, 2009b). Fig. 3 demonstrates the rural–urban difference in the proportion of children exposed to solid fuels in their homes.

Fig. 3. Proportion of children aged 0–14 years living in homes using solid fuels for cooking in urban and rural areas in select countries of the WHO European Region, 2005



Source: WHO Regional Office for Europe (2009b)

Note: Data for Azerbaijan, Kazakhstan, Kyrgyzstan and Uzbekistan are for 2006; data for Croatia, the Czech Republic, Estonia, Georgia, Latvia, Slovakia and Spain are for 2003; data for Romania are for 2002; data for Turkmenistan are for 2000; data for Ukraine are for 2007.

In relation to occupational health, agriculture is one of the three most hazardous industries (with the others being mining and construction) (ILO, 2004). ILO estimates that, worldwide, there are 170 000 fatal workplace accidents a year involving agricultural workers, with millions more suffering serious injury due to workplace accidents involving machinery and poisoning by pesticides and agrochemicals (ILO, 2004). Data from the EU indicate that agriculture is among the sectors where work-related health problems most often occur (Eurostat, 2010b). There are difficulties in estimating the real burden of occupational diseases in agriculture in light of the large number of unregistered workers, lack of appropriate registration and lack of diagnostic capacity (ICOH, 2007).

While there have been reductions in the standardized incidence of serious accidents at work in the agricultural, hunting and forestry sector in some countries (see Table 4), they continue to present a public health concern requiring increased attention. The variation between countries is notable, evidencing inter-country inequities (although there remains a need to harmonize survey methods).

Agricultural workers are self-employed farmers, unpaid family workers and hired workers, the last of whom are very often seasonal and/or temporary workers who lack adequate job security (ILO, 2004). These workers may not have any information on occupational risks and may lack contact with occupational health and safety structures and services. Health surveillance of agricultural workers may be undertaken by health personnel who have inadequate training in occupational health and who consequently fail to recognize and report an occupational disease (ICOH, 2007). An example of this is failure to diagnose less severe cases of pesticide and agrochemical poisoning (ICOH, 2007).

Table 4. Standardized incidence of serious accidents at work in the agricultural, hunting and forestry sector (per 100 000 people in employment)

Country	All sectors, 2007	Agriculture, hunting and forestry		
		2007	2000	Difference (%) 2007–2000
EU15 ^a	2838	3 926	6 625	-40.74
EU15 and Norway	2836	3 892	6 610	-41.12
Belgium	2733	3 394	5 754	-41.01
Denmark	2742	1 559	1 541	1.17
Germany	3119	8 267	14 443	-42.76
Ireland	1475	809	1 548 ^b	-47.74
Greece	n/a	1 283 ^c	2 695	-52.39
Spain	4668	2 270	2 763	-17.84
France	3969	1 929	4 496	-57.10
Italy	2664	5 812	8 808	-34.01
Luxembourg	3457	5 355	8 610	-37.80
Netherlands	2964	2 698	5 754	-53.11
Austria	2156	6 037	11 138	-45.80
Portugal	4325	816	2 422	-66.31
Finland	2753	1 173	729	60.91
Sweden	994	1 158	1 629	-28.91
United Kingdom	1080	2 048	2 328	-12.03
Norway	2785	1 158	4 035	-71.30
Switzerland	3208	6 368	8 269 ^d	-22.99

Source: Eurostat (2010c).

Note: the standardized incidence of serious accidents at work is the number of people involved in accidents at work with more than 3 days absence per 100 000 people in employment for a given year. The denominator is not the number of registered workers, but the figure obtained from the EU labour force survey, which is a quarterly sample survey with a sample size of about 1.5 million individuals each quarter. It may not include non-official workers. Recent changes in the rules for reporting of all occupational health problems will result in higher levels of incidence than those in the above table for some countries.

^a Member States belonging to the EU before 2004.

^b Ireland: data for 1998–2001 are not comparable, so data for 2002 are used.

^c Greece: as 2007 data are missing, data for 2006 are used.

^d Switzerland: as 2000 data are missing, 2004 data are used.

Additional environmental health concerns highlighted as particularly salient to rural areas in the European Region (Institute of Rural Health, 2009; EC, 2008; WHO Regional Office for Europe, 2000) include:

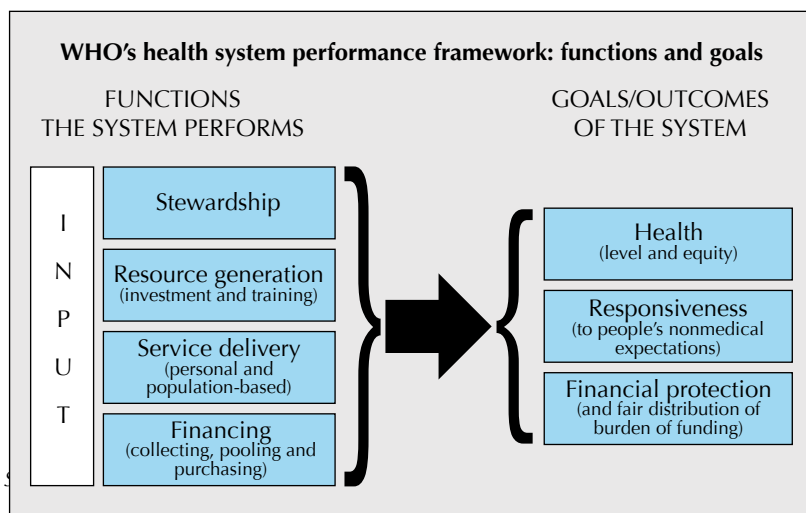
- the frequently lower quality of housing in disadvantaged rural areas that can be associated with exposure to indoor pollutants and mould;
- exposure to zoonoses (diseases of animals communicable to humans);
- chemical pollution from agricultural sprays and runoff;
- poor systems for environmental monitoring and health monitoring;
- inadequate domestic and industrial waste management in rural areas; and
- the frequent proximity of rural settlements to industry.

6. Implications for health systems

A health system is the ensemble of all public and private organizations, institutions and resources mandated to improve, maintain or restore health. Health systems encompass both personal and population services as well as activities to influence the policies and actions of other sectors to address the social, environmental and economic determinants of health (WHO Regional Office for Europe, 2008a).

Health systems have four functions: financing, stewardship, service delivery and resource generation (Fig. 4). This section explores action areas to help ensure that the rural poor can equitably benefit from efforts towards the health system goals of health, responsiveness and financial protection. This is not an exhaustive exploration, but serves to highlight select resources and issues identified as requiring further research.

Fig. 4. Health systems performance framework: functions and goals



Resource generation

The resource generation function of health systems includes the production and deployment of the right mix of human resources, maintaining their competence and productivity through continuing education and training, ensuring the necessary investment in physical infrastructure and facilities, and achieving the best affordable mix of pharmaceuticals and health technologies.

Although about half of the global population lives in rural areas, these areas are served by only 38% of the total nursing workforce and by less than a quarter of the total physician workforce (WHO, 2010b). As evidenced in the previous section, countries across the European Region face challenges in ensuring the presence of a sufficient number of skilled health workers in rural areas. WHO has advanced a programme of work dedicated to supporting Member States to increase access to health workers in remote and rural areas through improved retention. The programme's global policy recommendations, focusing on interventions within the remit of human resources planning and management, are featured in Table 5. They are grouped according to four main categories: education, regulation, financial incentives, and personal and professional support.

Table 5. Global policy recommendations for increasing access to health workers in remote and rural areas through improved retention

Education	<ol style="list-style-type: none"> 1. Use targeted admission policies to enrol students with a rural background in education programmes for various health disciplines, in order to increase the likelihood of graduates choosing to practise in rural areas. 2. Locate health professional schools, campuses and family medicine residency programmes outside of capitals and other major cities as graduates of these schools and programmes are more likely to work in rural areas. 3. Expose undergraduate students of various health disciplines to rural community experiences and clinical rotations as these can have a positive influence on attracting and recruiting health workers to rural areas. 4. Revise undergraduate and postgraduate curricula to include rural health topics so as to enhance the competencies of health professionals working in rural areas, and thereby increase their job satisfaction and retention. 5. Design continuing education and professional development programmes that meet the needs of rural health workers and that are accessible from where they live and work, so as to support their retention.
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Regulation	<ol style="list-style-type: none"> 1. Introduce and regulate enhanced scopes of practice in rural and remote areas to increase the potential for job satisfaction, thereby assisting recruitment and retention. 2. Introduce different types of health workers with appropriate training and regulation for rural practice in order to increase the number of health workers practising in rural and remote areas. 3. Ensure compulsory service requirements in rural and remote areas are accompanied with appropriate support and incentives so as to increase recruitment and subsequent retention of health professionals in these areas. 4. Provide scholarships, bursaries or other education subsidies with enforceable agreements of return of service in rural or remote areas to increase recruitment of health workers in these areas.
Financial incentives	<ol style="list-style-type: none"> 1. Use a combination of fiscally sustainable financial incentives, such as hardship allowances, grants for housing, free transportation and paid vacations, sufficient to outweigh the opportunity costs associated with working in rural areas, as perceived by health workers, to improve rural retention.
Personal and professional support	<ol style="list-style-type: none"> 1. Improve living conditions for health workers and their families and invest in infrastructure and services (sanitation, electricity, telecommunications, schools, etc.), as these factors have a significant influence on a health worker's decision to locate to and remain in rural areas. 2. Provide a good and safe working environment, including appropriate equipment and supplies, supportive supervision and mentoring, in order to make these posts professionally attractive and thereby increase the recruitment and retention of health workers in remote and rural areas. 3. Identify and implement appropriate outreach activities to facilitate cooperation between health workers from better served areas and those in underserved areas, and, where feasible, use telehealth to provide additional support to health workers in remote and rural areas. 4. Develop and support career development programmes and provide senior posts in rural areas so that health workers can move up the career path as a result of experience, education and training, without necessarily leaving rural areas. 5. Support the development of professional networks, rural health professional associations, rural health journals, etc., in order to improve the morale and status of rural providers and reduce feelings of professional isolation. 6. Adopt public recognition measures such as rural health days, awards and titles at local, national and international levels to lift the profile of working in rural areas as these create the conditions to improve intrinsic motivation and thereby contribute to the retention of rural health workers.

Source: WHO (2010b).

Evidence suggests that the choice of interventions to improve the recruitment and retention of health workers in rural areas should be informed by an in-depth understanding of the health workforce. In addition to comprehensive labour market and situational analyses, this requires an analysis of the complex factors that influence the decisions of health workers to leave rural areas, as well as those that influence them to stay (WHO, 2010b). Factors that can contribute to workers wanting to leave rural areas may include low wages, a challenging and insufficiently resourced working environment, adverse living conditions for oneself and one's family, and limited career advancement opportunities. The 88th volume of the *Bulletin of the World Health Organization* is dedicated to the topic of increasing access to health workers in remote and rural areas through improved retention (WHO, 2010c), and is a useful resource for more information.

Box 4 provides an example of how Norway has gone about addressing improved retention in the sparsely populated northern areas.

Box 4. Physician retention in Finnmark county, Norway

In Norway, the density of physicians and other health professionals is one of the highest in Europe. However, in the northern part of the country, providing sufficient qualified health professionals, particularly physicians, has been a longstanding challenge. The health workforce crisis in the northern county of Finnmark peaked in 1997. In response, a new primary care internship initiative was launched. Interns who agree to take up vacant positions in Finnmark undertake training in general practice and public health upon completion of their internship, with all specialist training expenses covered. The county medical association also arranges for courses and professional fellowships twice a year. It is therefore possible to achieve full specialization in general practice and public health without leaving Finnmark. The main results of the initiative are encouraging: of the 267 medical graduates who interned in Finnmark between 1999 and 2006, almost twice as many as expected accepted their first fully licensed job in the region.

Source: Straume & Shaw (2010).

Increased attention is required in some countries to ensuring the availability of, and access to, pharmacies and essential medicines in rural areas and for the poor. In developing countries globally, only 42% of facilities in the

public sector and 64% in the private sector have essential medicines available (MDG Gap Task Force, 2010). Median prices for drugs in developing countries globally are on average 2.7 times higher than international reference prices in the public health care sector and 6.3 times higher in the private sector (MDG Gap Task Force, 2010). The rural poor can face the double-pronged challenge of lack of availability of essential medicines and inability to afford them. Adequate attention to physical infrastructure and facilities, which evidence suggests can be run down or missing key equipment and technology in some disadvantaged rural areas of the Region, is an important part of the resource generation function of health systems.

Stewardship

The health system stewardship function involves the formulation of strategic policy direction and oversight of regulation and its implementation. It also entails the provision of information/intelligence to ensure accountability and transparency, and the alignment of development assistance with national priorities. The stewardship function entails working for “equity and health in all policies” (Council of the European Union, 2010) in relation to strategic policy design by using evidence on the links between social, economic and environmental factors and health. Exploration of all components of stewardship in relation to rural health is beyond the scope of this briefing. This subsection will focus on strategic policy direction and the provision of information to better address the needs of rural populations.

The CSDH calls for the promotion of health equity between rural and urban areas through sustained investment in rural development (CSDH, 2008). It calls for addressing the exclusionary policies and processes that lead to rural poverty (CSDH, 2008) and the “circle of decline” (see Fig. 1) that some rural areas of the Region are experiencing. Improving daily living conditions and their structural drivers in disadvantaged rural areas will require that rural governance work to reduce rural–urban differences and improve performance across a range of sectors (such as health, education, employment and infrastructure). This task involves a wide variety of public and private actors.

According to the OECD (2006), advancing towards a new rural paradigm reflecting growth, improved wellness, sustainability and social inclusion will require governance dimensions to be addressed horizontally at central and local levels and vertically across levels of government. For the health sector, this approach can mean working at national and local levels with other sectors to address the wider determinants of health (for example, with the environment sector for improved water and sanitation and energy sources in rural communities; with the education sector on the training of health personnel or integration of health concerns into school curricula; or at cross-government levels for an equity-oriented health impact assessment of a multisectoral development activity). In terms of vertical coordination, it entails improved coordination between central and local levels of the health system to ensure that rural populations’ needs (and other health equity considerations) are adequately reflected in policy-making, resource allocation, programme implementation and monitoring and evaluation processes.

Participation by the health sector in integrated and multisectoral platforms for rural development is important to ensure adequate attention to the social, economic and environmental determinants of health and foster investment in the health system in rural areas. The OECD highlights multiple approaches used by central governments to overcome a sectoral approach in favour of an integrated policy approach to rural development. Horizontal coordination governance options include:

- high-level special units to address place-based policy development;
- integrated ministries that have an explicit jurisdiction over rural development issues;
- “policy proofing” to facilitate policy coherence for rural areas (see Box 5 for resources on rural proofing from the United Kingdom (England); and
- interministerial coordination via working groups and formal contracts (OECD, 2006).

Box 5. Rural proofing for health: resources from the United Kingdom (England)

The concept of “rural proofing” was developed by the Countryside Agency of England as a result of the government’s rural white paper, which aimed to improve quality of life in rural areas and ensure that the needs of rural communities were reflected in all policy areas. The “rural proofing – policy-maker’s checklist” helps ensure that the needs of rural populations are considered in policy development. The checklist has subsequently been updated by the Commission for Rural Communities and rural proofing remains a mandatory requirement in policy-making. To support rural proofing in the health sector, the Institute of Rural Health developed the rural proofing for health toolkit. The toolkit addresses the following areas: access to services/transport; primary care; community care; specialist services; hospital services; and patient and public involvement. Available at the Institute of Rural Health web site (www.ruralhealthgoodpractice.org.uk), the toolkit aims to ensure that health care services are rurally sensitive and that there are no inequities in access to care.

Sources: Department of the Environment, Transport and the Regions (2000); Institute of Rural Health (2005); Commission for Rural Communities (2009).

At local level, integrated rural policy is frequently implemented by multisectoral partnerships serving a shared target area, pooling knowledge and resources and developing a rural development strategy based on a shared vision and set of common objectives (OECD, 2006). In keeping with the recommendations of the CSDH, the health sector has a role in promoting and enabling the participation of rural communities in multisectoral platforms for rural development at both central and local levels (see Annex 1).

Good data on rural populations and their health are crucial for policy-making, programme design and implementation, monitoring and evaluation. With a view towards enabling the attainment of the highest possible level of health for all people, the CSDH recommends that health information systems should have the capacity to routinely collect, collate and disseminate information on health, health inequities, health determinants and health system performance (CSDH, 2008). Table 6, taken from the final report of the CSDH, exemplifies the components of a comprehensive national health equity surveillance framework. Such a framework permits the identification of rural–urban differences and inequities within rural areas that are linked to social determinants. A health equity surveillance system can be built progressively, depending on a country’s stage of development and existing health information system (CSDH, 2008). The report of the Measurement and Evidence Knowledge Network of the CSDH (Kelly et al., 2007) and the Spanish EU Presidency background paper on monitoring social determinants of health and the reduction of health inequalities (Ministry of Health and Social Policy of Spain, 2010) further analyse this issue.

Service delivery

Lower density populations, greater travel distances by both service users and providers and lack of economies of scale (with unit costs potentially higher in sparsely populated rural areas) are some of the challenges facing service provision in rural areas (OECD, 2010). Governments have taken a wide range of approaches to try to guarantee health service availability in rural areas. The following policies and interventions have been undertaken by EU Member States to counter geographical inequity in access to care:

- better adjustment of resources to needs;
- municipal reforms that extend municipalities’ population base;
- cooperation between municipalities;
- crossborder agreements for the provision of care;
- definition of a package of countrywide standardized services;
- the creation of free or low-cost telephone helplines;
- more and better distribution of primary health care and/or definition of a minimum basket of primary care services in all health centres; more GPs or family doctors in underprovided areas;
- the operation of smaller units;
- increased ambulances, dispatch and arrival centres and a maximum response time for ambulances;
- improved transport networks;
- improved hospital capacity in underprovided areas;
- modernized local health infrastructure; and
- use of European Structural Funds to help tackle geographical differences in provision (EC, 2007).

Table 6. Towards a comprehensive national health equity surveillance framework

<p>Health inequities</p>	<p>Include information on:</p> <ul style="list-style-type: none"> • health outcomes stratified by: <ul style="list-style-type: none"> ◦ sex; ◦ at least two socioeconomic stratifiers (education, income/wealth, occupational class); ◦ ethnic group/race/indigeneity/migrant status; ◦ other contextually relevant social stratifiers; ◦ place of residence (rural–urban and province or other relevant geographical unit); • the distribution of the population across the subgroups; • a summary measure of relative health equity including the rate ratio, the relative index of inequality, the relative version of the population attributable risk, and the concentration index; • a summary measure of absolute health inequity including the rate difference, the slope index of inequality, and the population attributable risk. 	
<p>Health outcomes</p>	<p>Include information on:</p> <ul style="list-style-type: none"> • mortality (all cause, cause-specific, age-specific); • early child development; • mental health; • morbidity and disability; • self-assessed physical and mental health; • cause-specific outcomes. 	
<p>Determinants, where applicable including stratified data</p>	<p>Daily living conditions:</p> <ul style="list-style-type: none"> • health behaviours: <ul style="list-style-type: none"> ◦ smoking; ◦ alcohol; ◦ physical activity; ◦ diet and nutrition; • health care: <ul style="list-style-type: none"> ◦ coverage; ◦ health system infrastructure; • working conditions: <ul style="list-style-type: none"> ◦ material working hazards; ◦ stress. 	<ul style="list-style-type: none"> • physical and social environment: <ul style="list-style-type: none"> ◦ water and sanitation; ◦ housing conditions; ◦ infrastructure, transport and urban design; ◦ air quality; ◦ social capital; • social protection: <ul style="list-style-type: none"> ◦ coverage; ◦ generosity.
	<p>Structural drivers of health inequity:</p> <ul style="list-style-type: none"> • gender: <ul style="list-style-type: none"> ◦ norms and values; ◦ economic participation; ◦ sexual and reproductive health; • social inequities: <ul style="list-style-type: none"> ◦ social exclusion; ◦ income and wealth distribution; ◦ education; 	<ul style="list-style-type: none"> • sociopolitical context: <ul style="list-style-type: none"> ◦ civil rights; ◦ employment conditions; ◦ governance and public spending priorities; ◦ macroeconomic conditions.
<p>Consequences of ill-health</p>	<p>Include information on:</p> <ul style="list-style-type: none"> • economic consequences; • social consequences. 	

Source: CSDH (2008), adapted to include migrant status.

Additional measures may include the use of mobile medical units, the provision of home care for elderly people, paying for (or providing) transportation for service users, and one-stop shops (EC, 2008; Lucatelli, Savastano & Peta, 2008; Tragakes et al., 2008). One-stop shops operate like information hubs that provide access to a diverse number of programmes from one centralized point. While these decrease provider costs and increase rural providers' access to a range of services, there is evidence of operational difficulties linked to different administrative cultures trying to share a space, constraints on the development of services and financial limitations of rural communities that undermine long-term sustainability (OECD, 2010). Some countries, particularly in the western part of the Region, have invested in increased use of Internet services, including for diagnostic purposes and distributing results from specialized examinations (EC, 2008). However, a considerable percentage of the population in rural areas in many countries continues not to subscribe or have access to Internet services and/or is computer illiterate, particularly among the elderly population (EC, 2008).

Box 6 provides an example of how new technology is being put to use by community nurses supporting GPs in Germany.

Box 6. Innovation in rural health: AGnES community medicine nurses programme, Germany

In Germany, the AGnES community medicine nurses programme provides support to GPs in rural areas. The programme aims to reduce the time GPs spend commuting for home visits for routine procedures and involves the use of an electronic “tablet” that the community medicine nurses use to send patients’ health information in real time to the GP and, if necessary, have a video conference. The nurses operate under the guidance of a GP and receive training in the operational procedures of GP practice, treatment for chronic diseases and use of e-health equipment.

Source: OECD (2010).

There is a need for increased systematic research on how best to improve and monitor health service provision and use in rural areas across the European Region. Such research needs to take into account heterogeneity of and within rural areas of the Region, which make a “one-size-fits-all” approach far from possible. In addition, research needs to reflect a comprehensive view of health services (including promotion and prevention activities) that are important for public health governance and are critical for reducing some of the differences in rural–urban health highlighted in the previous section. For instance, notable public health activities include efforts to create safer workplaces, safer drinking-water and healthier mothers and infants as well as to provide access to family planning services (WHO, 2009c). Evidence points to the need to increase investment in these services in many rural areas of the European Region.

While not addressed in the previous section, noncommunicable diseases produce the largest burden of mortality in the European Region (WHO Regional Office for Europe, 2009c). Diseases of the circulatory system continue to be the main cause of death, with cancer (malignant neoplasms) being the second most important cause. There is evidence of less availability of prevention (including screening) activities in rural areas in some countries and of rural–urban inequities in types of cancer (Stamatiou & Skolarikos, 2009; Smailyte & Kurtinaitis, 2008; Trigoni et al., 2008). Distance from screening sites and transportation problems, combined with absence of symptoms and lower levels of awareness, can contribute to non-use of screening services in rural areas. There is a need for further research on ways to enhance cancer prevention and early detection intervention strategies for rural populations.

Due attention should be paid to ensuring that service models can respond to demographic changes in rural areas. An ageing population and the out-migration of young people in some countries require more formalized care for the elderly and disabled (EC, 2008). Some rural areas, particularly agricultural areas characterized by seasonal work, have significant migrant labour populations who may face financial, administrative and cultural barriers in accessing necessary services. Services may need to be adapted to ensure accessibility and quality for these populations. The same applies to rural areas with Roma populations. In light of the need for health services and other social services to better account for the rural poor and specific populations experiencing social exclusion in rural areas, the need to mainstream the rural dimension into social inclusion and social protection policies has been highlighted (EC, 2008; ILO, 2008).

Also of relevance to the health system’s service delivery function and the health sector’s contribution to rural development is the innovative use of multifunctional agriculture for “social farming”. This concept has become increasingly recognized in recent years, particularly in EU Member States. Social farming consists of the use of agricultural resources for therapy, rehabilitation, education and social integration services. It has relevance for the health sector in relation to health topics including, but not limited to, mental health, substance abuse, rehabilitation, long-term care and assisted living (including for elderly people) and health education (on nutrition and physical activity, for example). In the Netherlands, social farming is undergoing rapid professionalization with steps being taken to develop indicators, certificates and training programmes for farmers so that quality can be guaranteed. Farming activities to promote mental and physical health in the Netherlands are partly financed through the national health budget (EC, 2009b). Social farming contributes to the maintenance and/or creation of new employment opportunities and income-generating activities in rural areas (Finuola & Pascale, 2010). In addition, a feature of social farming in some countries has been to facilitate integration into the labour market of people with a physical or mental disability, people with a history of long-term unemployment or early school leaving or other populations experiencing social exclusion (Finuola & Pascale, 2010; Circeo Solidarity Farm Social Co-operative, 2008). As such, social farming can contribute to influencing the social determinants of health such as social exclusion, unemployment and low incomes in rural areas.

Financing

Health financing policy can play an important role in reducing health inequities experienced by the rural poor. As income levels can be lower and insurance coverage less in rural areas, efforts to ensure universal coverage through the removal of financial barriers are crucial. This reflects recommendations of the CSDH, which call for national governments to ensure adequate public funding for essential health services, focusing on achieving universal coverage of health services regardless of ability to pay and minimizing out-of-pocket health spending (CSDH, 2008).

Strengthening prepayment mechanisms facilitates risk-sharing amongst the population and can significantly reduce financial barriers and help to avoid catastrophic health expenditure and the impoverishment of individuals as a result of seeking care (World Health Assembly, 2005). It can also include, among other actions, the rationalization and expansion of basic packages of health services provided as a universal guarantee (WHO, 2009b). This approach weakens the link between contributions (such as earmarked health taxes) and entitlements, in turn strengthening the right to essential health services. Catastrophic health expenditures are often driven by spending on medicines, especially for lower-income households, and it may be appropriate to extend benefit packages to cover a wider range of pharmaceutical products (WHO, 2009b). Fragmentation in financing arrangements is an obstacle to efficient redistribution of resources in relation to need for countries at all levels of income. Reforms to help reduce fragmentation can enable health financing policy to be more effective in enabling universal coverage (WHO Regional Office for Europe, 2008b).

It is important to plan for the progressive transition to universal coverage, conducting research to understand the barriers faced by populations who are not covered (including those in rural areas) and the options for expanding coverage within the particular macroeconomic, sociocultural and political context of the country (World Health Assembly, 2005). The current crisis represents an opportunity to scale up measures to ensure financial access of all people to the health system. The world health report for 2010 (WHO, 2010d) examines how countries at all stages of development can take actions towards this aim.

As was expressed above, financial barriers to needed services by the rural poor can also be influenced by costs for travel and lodging associated with service usage. An example of how health financing policy is working to address this can be found in the United Kingdom, where an estimated 1.4 million people miss, turn down or simply choose not to seek health care because of transport problems (Department of Health, 2010). The “health care travel costs scheme” is part of the National Health Service (NHS) low-income scheme. It was established to provide financial assistance to patients who do not have a medical need for ambulance transport, but who require assistance with their travel costs. Under the scheme, patients on low incomes or who are receiving specific qualifying benefits or allowances are reimbursed in part or in full for costs incurred in travelling to receive certain NHS services, where their journey meets certain criteria (Department of Health, 2010).

Attention to fund allocation formulae is also of relevance to ensuring universal coverage for rural populations, as it relates to the health financing policy objective of promoting the equitable use and provision of services relative to needs across a population. There is evidence that achieving equitable outcomes costs more in rural areas for reasons that include remoteness and limited economies of scale (OECD, 2010; All-party Parliamentary Group on Rural Services, 2010). In parts of the Region, ageing (with elderly populations incurring higher health care costs) also results in higher health care costs in rural areas. In light of these and other considerations linked to socially determined health inequities in rural areas, increased attention to how funding formulae can meet unavoidable additional costs of providing health care in rural areas is required (including through the use of evidence-based rurality adjustments) (All-party Parliamentary Group on Rural Services, 2010).

This briefing has aimed to provide an overview of rural poverty, select social determinants of health in rural areas, and differences in health system performance and health between rural and urban areas in the WHO European Region. It has also raised considerations on how health systems can respond, through actions that span the four health system functions. There is a clear need for more research on how health systems can counter the intersecting challenges of multidimensional poverty and rurality. However, the need for more research should not prohibit the scaling up of action, drawing from the existing evidence base and know-how. Box 7 highlights key resources for more information.

Box 7. Select key resources for more information

CSDH (2008). *Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health*. Geneva, World Health Organization (http://www.who.int/social_determinants/thecommission/finalreport/en/index.html, accessed 15 August 2010).

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Annex 1

Population at risk of poverty or social exclusion^{a,b} in the EU27, 2008

	Densely populated (%)	Intermediate (%)	Thinly populated (%)	Total population (%)
Austria	18.6	14.9	15.4	18.6
Belgium	23.7	16.8	24.5	20.8
Bulgaria	36.4	47.6	50.6	44.8
Cyprus	21.3	19.6	25.1	22.2
Czech Republic	15.3	16.9	14.1	15.3
Germany	21.2	17.2	22.6	20.1
Denmark	20.1	13.7	15.7	16.3
Estonia	17.9	19.4	25.6	21.8
Spain	19.6	23.9	28.3	22.9
Finland	15.9	16.0	18.6	17.4
France	20.4	16.3	19.2	18.8
Greece	23.3	21.0	33.8	28.1
Hungary	23.5	27.6	31.6	28.2
Ireland	20.2	22.8	27.4	23.7
Italy	24.4	25.0	28.4	25.3
Lithuania	21.4	.	35.2	29.3
Luxembourg	21.1	9.0	13.1	15.5
Latvia	29.5	23.3	38.5	33.8
Malta	19.5	19.4	.	19.5
Netherlands	15.1	14.1	19.8	14.9
Poland	23.5	32.0	36.1	30.5
Portugal	22.4	29.1	28.0	26.0
Romania	28.9	43.2	53.6	44.2
Sweden	15.4	13.7	15.0	14.9
Slovenia	17.6	17.3	19.7	18.5
Slovakia	17.3	18.3	24.5	20.6
United Kingdom	24.0	18.8	19.9	23.2
EU27	22.2	20.1	29.8	23.6

Source: Eurostat (2008, unpublished data).

^a Degree of urbanization is addressed by EU-SILC Description Target Variable DB100 (Eurostat, 2010d). A densely populated area is defined as a contiguous set of local areas, each of which has a density superior to 500 inhabitants per square kilometre, where the total population for the set is at least 50 000 inhabitants. An intermediate area is defined as a contiguous set of local areas, not belonging to a densely-populated area, each of which has a density superior to 100 inhabitants per square kilometre, and either with a total population for the set of at least 50 000 inhabitants or adjacent to a densely-populated area. A thinly-populated area is defined as a contiguous set of local areas belonging neither to a densely-populated nor to an intermediate area.

^b The Europe 2020 strategy promotes social inclusion, in particular through the reduction of poverty, by aiming to lift at least 20 million people out of the risk of poverty and exclusion. The "EU2020" indicator summarizes number of people who are either at risk-of-poverty or severely materially deprived or living in households with very low work intensity (in case of intersections between the three sub-indicators such a person is counted only once). At risk-of-poverty rate is defined as share of persons with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalized disposable income after social transfers. Severe material deprivation rate is defined as share of population with an enforced lack of at least four out of nine material deprivation items in the "economic strain and durables" dimension. The nine items considered are: 1) arrears on mortgage or rent payments, utility bills, hire purchase instalments or other loan payments; 2) capacity to afford paying for one week's annual holiday away from home; 3) capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day; 4) capacity to face unexpected financial expenses [set amount corresponding to the monthly national at-risk-of-poverty threshold of the previous year]; 5) household cannot afford a telephone (including mobile phone); 6) household cannot afford a colour television; 7) household cannot afford a washing machine; 8) household cannot afford a car and 9) ability of the household to pay for keeping its home adequately warm. People living in households with very low work intensity are people aged 0–59 living in households where the working age members worked less than 20% of their total work potential during the past year.

Annex 2

Challenge: access of the rural poor to governance structures and policy processes

Sub-challenges and lessons learnt:	
Actors/ networks	Subchallenge: generating a rural-poor-led policy initiative. Actors should:
	<ul style="list-style-type: none"> • support the establishment and development of rural poor civil society organizations (CSOs) to articulate their needs; • promote grassroots ownership of rural poor CSOs via political parties, producer organizations and social movements.
	Subchallenge: access by the rural poor to formal and informal policy processes. Actors should:
	<ul style="list-style-type: none"> • raise awareness of rural poor CSOs on institutional and legal processes; • promote political commitment/leadership from government on participatory policy processes; • identify donors who open space for rural poor CSO participation and fund such processes (particularly in financial support to rural poor CSOs to access policy spaces and incentives for rural poor CSOs to participate).
	Subchallenge: influence of the rural poor in formal and informal policy processes. Actors should:
	<ul style="list-style-type: none"> • develop capacity for rural poor CSOs to engage in policy debates via technical, advocacy and language skills and skills in negotiation, lobbying and communication; • provide access of rural poor CSOs to information necessary to participate (policy history, etc.) and access to good evidence to support their case; • provide access to rural poor CSOs of means of communication to make the voices of the rural poor heard and to network with other stakeholders; • promote rural poor CSOs who are credible to government as legitimate representatives of the rural poor.
Institutions/ context	Subchallenge: ensuring that policy formation becomes implemented. Actors should:
	<ul style="list-style-type: none"> • develop capacity for rural poor CSOs to engage in monitoring and evaluation of policy implementation; • build a monitoring procedure to provide feedback to key partners periodically.
	Subchallenge: generating a rural-poor-led policy initiative. Actors should:
	<ul style="list-style-type: none"> • establish rights (and a legal framework) such as freedom of association; • develop a history of social mobilization and social movements; • raise awareness of rural poor CSOs' right to participate and be exposed to international discourses.
	Subchallenge: access by the rural poor to formal and informal policy processes. Actors should:
	<ul style="list-style-type: none"> • overcome bureaucratic resistance to rural poor CSO participation (via political leadership and promoting legitimacy of CSOs, for example); • establish transparent rules and legal statutes to promote participation; • identify key entry points, such as mobilizing producer organizations, social movements and innovative spaces.
Actors/ networks	Subchallenge: influence of the rural poor in formal and informal policy processes. Actors should:
	<ul style="list-style-type: none"> • encourage governance structures, bureaucracy and politicians to be receptive to the voice of the rural poor; • promote popular or consultative spaces rather than formal electoral spaces.
	Subchallenge: ensuring that policy formation becomes implemented. Actors should:
	<ul style="list-style-type: none"> • develop a defined and publicized procedure for providing feedback and support in the fulfillment of roles in policy implementation; • develop effective local and regional coordinating mechanisms.

Source: adapted from Summer et al. (2008).

Annex 3

Percentage of urban and rural populations with improved drinking-water and improved sanitation in the European Region, 2008

Member State	Population using improved drinking-water sources (%)			Population using improved sanitation (%)		
	Urban	Rural	Total	Urban	Rural	Total
Albania	96	98	97	98	98	98
Andorra	100	97	100	100	100	100
Armenia	98	93	96	95	80	90
Austria	100	100	100	100	100	100
Azerbaijan	88	71	80	51	39	45
Belarus	100	99	100	91	97	93
Belgium	100	100	100	100	100	100
Bosnia and Herzegovina	100	98	99	99	92	95
Bulgaria	100	100	100	100	100	100
Croatia	100	97	99	99	98	99
Cyprus	100	100	100	100	100	100
Czech Republic	100	100	100	99	97	98
Denmark	100	100	100	100	100	100
Estonia	99	97	98	96	94	95
Finland	100	100	100	100	100	100
France	100	100	100	100	100	100
Georgia	100	96	98	96	93	95
Germany	100	100	100	100	100	100
Greece	100	99	100	99	97	98
Hungary	100	100	100	100	100	100
Iceland	100	98	100	100	100	100
Ireland	100	100	100	100	98	99
Israel	100	100	100	100	100	100
Italy	100	100	100	n/a	n/a	n/a
Kazakhstan	99	90	95	97	98	97
Kyrgyzstan	99	85	90	94	93	93
Latvia	100	96	99	82	71	78
Lithuania	n/a	n/a	n/a	n/a	n/a	n/a
Luxembourg	100	99	100	100	100	100
Malta	100	99	100	100	100	100
Monaco	100	n/a	n/a	100	n/a	n/a
Montenegro	100	96	98	96	86	92
Netherlands	100	100	100	100	100	100
Norway	100	100	100	100	100	100
Poland	100	100	100	96	80	90
Portugal	99	100	99	100	100	100
Republic of Moldova	96	85	90	85	74	79

(continued from previous page)						
Member State	Population using improved drinking water sources (%)			Population using improved sanitation (%)		
Romania	n/a	n/a	n/a	88	54	72
Russian Federation	98	89	96	93	70	87
San Marino	n/a	n/a	n/a	n/a	n/a	n/a
Serbia	99	98	99	96	88	92
Slovakia	100	100	100	100	99	100
Slovenia	100	99	99	100	100	100
Spain	100	100	100	100	100	100
Sweden	100	100	100	100	100	100
Switzerland	100	100	100	100	100	100
Tajikistan	94	61	70	95	94	94
The former Yugoslav Republic of Macedonia	100	99	100	92	82	89
Turkey	100	96	99	97	75	90
Turkmenistan	97	n/a	n/a	99	97	98
United Kingdom	100	100	100	100	100	100
Ukraine	98	97	98	97	90	95
Uzbekistan	98	81	87	100	100	100

Source: WHO/UNICEF (2010a).

Notes:

- Improved drinking-water sources include: piped water into dwelling, plot or yard; public tap/standpipe; borehole/tube well; protected dug well; protected spring; rainwater collection; and bottled water (if a secondary available source is also improved). Improved sanitation facilities are facilities that hygienically separate human excreta from human contact and include: flush/pour flush toilets or latrines connected to a sewer, septic tank or pit; ventilated pit latrines; pit latrines with a slab or platform of any material which covers the pit entirely except for the drop hole; and composting toilets/latrines.

- n/a means not available

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Notes



The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.



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Health systems will not automatically gravitate towards greater equity or naturally evolve towards universal coverage. Economic decisions within a country will not automatically protect the poor or promote their health. Globalization will not self-regulate in ways that ensure fair distribution of benefits. All of these outcomes require deliberate policy decisions.

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