V   INVENTORY OF RURAL INDICATORS BY INTERNATIONAL ORGANIZATIONS

V.1   Introduction

In the sections below a brief account is given of the set of indicators developed by major international organizations. This builds on the introduction already given in Chapter III section 4 to the themes within rural development on which these organizations have identified their need for statistics. Many of the indicators and the arguments behind them are of course much the same for all international organizations. Details of the OECD indicators are given first and these are not repeated in subsequent sections for the other organizations. This explains why the OECD section is much longer than those for the other organizations.

In order not to burden the text the various list of indicators explored and/or adopted by the European Union and World Bank are shown in Annex 4 and Annex 5, respectively. These include details about the definitions of the indicators.

V.2   OECD

V.2.1   Introduction

Since rural development is a complex, multidimensional concept, rural conditions and trends cannot be described by a single yardstick. To cover the various perspectives, a whole set of indicators has to be found. Furthermore, the focus of analytical and policy interest in rural affairs changes over time.

Rural to urban migration has always been a major issue but even here perspectives have changed. In some countries there have been indications of counter-urbanisation and rural revival. Analysis of the economic determinants for migration has often led to a particular interest in the structural adjustments in agriculture. Rural has often been used as a synonym for agricultural. Such a notion has lost its usefulness because agriculture has long since ceased to be the most important economic base for most rural areas in OECD Member Countries. Farmers have become a minority even in rural villages and rural people are employed more and more in the secondary and tertiary sectors.

However, agriculture, together with forestry, still involves the management of land resources. It continues to shape the environmental quality of the countryside. Land use changes can have an important impact not only on ecological integrity but also on aesthetic, visual amenities. Environmental quality has become a key factor in any assessment of rural living conditions, as has education, health and safety. Income figures are still important criteria for measuring rural and regional disparities. However, alone they are not sufficient to explain why people stay or leave rural places.

OECD-wide rural indicators must cover the whole range of rural concerns and should improve the understanding of those factors which influence the design, implementation and impact of rural policies. As a first step, it is useful to distinguish between those subjects which are of general importance and which provide the necessary background for any rural assessment and other more specialized subjects for which a more detailed analysis is required.

The OECD identified the following general subjects, which cover the range of rural development (as well as urban) concerns in the OECD:

- Population and migration;
- Economic structure and performance;
- Social well-being and equity;
- Environment and sustainability.

With the aim of covering these subjects with as much balance as possible, a basic set of rural indicators considered suitable for OECD purposes was selected.

The selection process for the indicators reflected the three principles developed earlier: **relevance, reliability and realisability**. It was based on an assessment of various aspects, such as:

- Likely territorial differences;
- Coverage of the analytical issues;
- Explanatory power of the indicator;
- Availability of disaggregated data.

It is clear that no single basic indicator could be accepted individually as a reasonable yardstick for an assessment of rural conditions and trends. Even comparatively narrow aspects of rural life, such as education and health, are not adequately reflected by such crude measures as the percentage of population with a completed post secondary education, or infant mortality. Nor can disparities in social well-being be measured simply in terms of income per capita.

Not all of the indicators in the basic set are equally accessible. In fact, the list includes indicators with **three levels of availability**:

- Available in the short term;
- Feasible in the midterm;
- Desirable in the longer term.

Thus, this basic set of rural indicators cannot be considered final. In the course of further work it might be appropriate to modify the list by taking out some of the variables or adding new ones. Improvements, especially with regard to data availability, appear particularly desirable in the field of rural indicators on social well-being and environmental quality. The basic set of rural indicators should, however, always be restricted to a limited number of statistics, sufficiently balanced to cover all of the four general subjects (OECD, 1996).

In addition to, and in conjunction with, the work on the general subjects, other, **special subjects** will receive increasing attention. These could include rural employment and human resources, rural environment and amenities, rural infrastructure and access to services, rural tourism, small and medium-sized enterprises (SMEs) and agriculture.

V.2.2 Population and migration

Basic information on the distribution of population over territory is indispensable for any rural analysis. Indications on population change, both natural and migratory, are of key importance in assessing past trends and future prospects of rural development. Territorially disaggregated population statistics differentiated by sex and age provide the foundations for a more detailed description or projection of rural

problems and perspectives. More refined analysis of economic and social aspects of rural life often also requires information about the social organization of the population at the level of households and local communities.

As for a basic set of indicators on population and migration the following were chosen:

- Population density;
- Population change;
- Population structure;
- Households;
- Communities.

Indicators

Density: Despite the enormous differences in average national figures, population density is considered as a key indicator for rural analysis at the OECD level. It serves as the main criterion for the distinction of rural from urban in terms of both population and area. Density reflects territorial differences in settlement pattern. It also indicates difficulties in getting or providing access to infrastructure and services.

Change: Population change for sub-national territorial units provides basic information for assessing trends in demographic geography. It is appropriate to distinguish at least the following components: total net change, the natural balance (calculated as births minus deaths) and net migration (total net change minus natural balance). It would also be useful to know, for example, if increasing net migration gains are due to increased in-migration or reduced outmigration. It is, however, very difficult to obtain such disaggregated statistics at regional and local levels.

Structures: Data on the distribution of population by sex and age provide the basis for the calculation of various demographic ratios. Indices relating the population in different age classes, such as the dependency ratio - those aged 0-14 plus those aged 65 and over divided by those aged 15-64 - or the vitality ratio – those aged 20-39 divided by those aged 60 and over - can be used for the description of demographic features. They are also valuable tools in socio-economic analysis as well as in the planning of infrastructure, such as schools or hospitals. For many purposes, it is also important to be able to distinguish population data by sex (OECD, 1996).

Households: Apart from statistics on categories of individual persons, information on the structure and changes in their social organization can be important in learning more about territorial differences and developments. Household size and the share of children growing up in single parent households are variables that could indicate such differences.

Communities: In addition to family and household statistics, data on the share of the population living in local communities of different sizes can provide further detail to assess the degree of rurality or agglomeration of sub-national territorial units (OECD, 1996).

V.2.3 Economic structure and performance

For the basic set of rural indicators, economic information can best be obtained from territorially disaggregated statistics on labour force and employment as well as from regional accounts of production and investment.

Ensuring and promoting efficient rural production and employment is surely one of the main objectives of rural policies. Thus, data on employment and value added growth, or labour force participation and unemployment rates are key variables for assessing the state of, and the prospects for, rural development. Since improvement in productivity and efficiency of rural economies always requires structural adjustment and investment, information should also be made available on these subjects (OECD, 1996).

The following indicators were chosen to describe economic structure and performance:

- Labour force;
- Employment;
- Sectoral shares;
- Productivity;
- Investment.

Indicators

Labour force: Labour Force statistics are of key importance for any assessment of economic development in different parts of a country. Change in total labour force and male and female participation rates are considered important indicators. For the purposes of rural analysis, it is crucial to clarify whether labour force and employment data are based on a measurement concept which refers to the "place of residence" or to the "place of work".

Employment: Employment growth and unemployment rates are major rural policy concerns. However, it should be realised that unemployment rates are very crude measures, which are difficult to compare internationally. They are often based on different statistical concepts and registration practices. Proper assessment of the rural labour market situation would need more detailed information on the underlying past and future trends in job supply and demand. At the moment such data are difficult to obtain. In any case, what should be sought is more differentiated information on the nature of unemployment, by age, sex and duration.

Sectoral shares: Sectoral shares in employment and production (e.g. Gross Value Added) are usually examined to give a first indication of the main economic bases of an area. Knowledge of the shares of the three main sectors (primary, secondary, and tertiary) alone already provides valuable initial information. A further disaggregation would be more useful, however. This would allow analysts to distinguish between, for example, agriculture, forestry or fishing within the primary sector, or tourism from other activities in the services sector.

Productivity: If data are available for employment and production then productivity figures can easily be calculated. They would be important tools for the understanding of structural adjustments within and between the different parts of a country. Unfortunately, as of yet, the availability of territorially disaggregated production data is limited in many countries.

Investment: At present, the territorial detail of statistics on Gross Fixed Capital Formation is even less complete than for total production. However, since investment is crucial for any attempt to promote rural development it would appear appropriate to add an investment indicator to the basic list. Distinguishing among different types of investment, in particular, private and public, would be ideal.

V.2.4 Social well-being and equity

While territorial income distribution is an important rural policy concern, disparities in social well-being and equivalence in standards of living cannot be properly assessed in income terms alone. A whole series of other aspects determining quality of life should be taken into account. However, it has proved difficult to find social indicators which can reasonably be discussed in a sub-national and inter-national context at the same time.

The following indicators were chosen to describe important aspects of social well-being and equity:

- Income;
- Housing;
- Education;
- Health;
- Safety.

<u>**Indicators**</u>

Income: Per capita income is probably the most commonly used measure to assess social disparities. Availability and quality of data sources is not, however, as good as one would expect. In Europe, most countries use Gross Domestic Product (GDP) per inhabitant as an indicator for regional income disparities. The smaller the area covered the more likely it is that this indicator will be misleading, because the GDP of an area is not necessarily produced only by the people living in that same area. The more important commuting becomes, the less meaningful the results. Since personal incomes depend to a large extent on redistribution through taxes and transfers, **figures on disposable personal income would surely be more appropriate indicators**. The purchasing power of income, however, may not be the same in every part of a country. This is even more true for international comparison, since current exchange rates do not always reflect the differences in purchasing power.

Housing: Housing conditions are an important component of a comprehensive monitoring of living conditions. The measurement and comparison of housing standards is difficult. However, the number of persons per room and the percentage of households having flush toilets appear to be variables that could provide initial indications of territorial differences in housing quality.

Education: Population with a higher level of education is another important aspect in describing territorial disparities. Since education systems differ considerably between countries, the most appropriate way to assess territorial differences would seem to be to measure the share of population over age 25 with a completed post secondary education.

Health and safety: Infant mortality and crime rates are, of course, not sufficient to adequately describe health and personal safety conditions. As part of a larger set of social indicators, however, they can serve as initial indicators for analysing territorial equivalence in qualities of life (OECD, 1996).

V.2.5 Environment and sustainability[1]

Environmental quality is an important resource for, as well as a result of, rural development. To be sustainable, rural development has to be sensitive to environmental changes and impact. It should support efforts to maintain ecological integrity. Sustainable rural development requires adequate integration of environmental considerations into private and public decision-making.

For many environmental issues availability of territorially differentiated statistics is still very limited. A major problem for the integration of socio-economic and environmental information in rural analysis is that the grids of territorial units used to collect and present the respective data often do not coincide.

The following basic indicators on environment and sustainability were chosen:

- Topography and climate;
- Land use;
- Habitats and species;
- Soils and water;
- air quality.

Indicators

Topography and climate: Topography and climate not only shape the natural conditions but also help determine the attractiveness of areas as places for living, working and recreation. Measurement which makes sense in an international context is not easy, however. In a first attempt, the share of mountain area (over 600 meters) and the vegetation period (growing days per year) were selected as potentially relevant indicators. As a synthetic indicator that refers to a site-specific mix of threshold values in temperature, precipitation, sunshine etc., the vegetation period is not only important for agriculture but is also relevant for assessing locational amenities for housing or tourism.

Land use: Data on land use, and in particular on changes in land use, can provide basic information not only on economic dynamics, e.g. in the farming sector, but also on basic environmental conditions. It is appropriate to distinguish between changes in total land use and changes in agricultural land use. In combination with other indicators, a growing share of arable land can be interpreted as an indication of increases in soil erosion and pollution risks. If, however, the initial share is low, a reduction of arable land could also be interpreted as a negative sign, because the diversity of landscapes and habitats may be diminishing.

Habitats and species: The share of protected areas is a commonly used indicator for measuring the existence of nature conservation values, although its reliability as an environmental indicator is not very strong. It could even be interpreted as an indicator for nature at risk because without a threat there is often no need to designate such areas. As a rural indicator, comparing primarily territorial differences, and in combination with other indicators, its explanatory value may be higher, however. An indicator for assessing species diversity is the share of endangered species. At the national level, information on the number of threatened species exists for most OECD Member Countries. Information for sub-national units would be much more valuable. Providing such data, however, will not be easy in the short run.

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[1] It is recognized that, in its present version, the Handbook does not cover indicators of landscape quality and amenity. Annex 6 goes some way to redress the balance.

Soils and water: Conservation of soils and protection of ground and surface water are closely related issues. They have become key environmental concerns, in particular in many rural areas. Detailed maps on natural erosion risk do not yet exist for all OECD Countries but could be developed in the midterm. It would be "a once and for all" exercise. Combined with data on land use changes, an erosion risk indicator could provide information for purposes of soil conservation and also for water protection, since soil erosion is a major source for surface water pollution. Ground water pollution in rural areas is to a large extent due to intensive agriculture. Since the problem is not just mineral fertiliser use, nor even just the total amount applied, nutrient balances (input minus withdrawal per hectare) should be calculated as indicators. Again data are not yet available for many countries but they could be developed within a reasonable time-frame.

Air quality: Ideally, balances of flows should also be established in order to assess air quality. While this may not be realistic in the short-term, emission data for air pollutants such as sulphur dioxide and carbon dioxide do differ considerably between rural and urban places. These may help to provide some initial information on territorial differences in environmental quality and sustainability (OECD, 1996).

Table V.1 shows the set of indicators for which the OECD has collected data from Member Countries.

Table V.1
OECD rural indicators

Selected rural indicators by type of region (Regionen)	Predominantly rural regions	Significantly rural regions	Predominantly urbanized regions	National total or average
1 **Population and area**				
Distribution of regions				
Distribution of population (%)				
Distribution of area (%)				
Population density (inhab./km^2)				
2 **Annual population change** (%)				
Total net change				
Natural balance				
Net migration				
3 **Demographic structure** (index)				
Dependency				
Vitality				
4 **Employment by sector** (%)				
Agriculture				
Industry				
Services				
Total				
5 Labour market				
Annual employment growth (%)				
Participation rate (%)				
Unemployment rate (% of LF)				
6 **Productivity and income** (nat.=100)				
GDP per capita				
Personal income				
7 **Land use change** (%)				
Agriculture				
Forestry				
Other				
Total				

Source: OECD. Creating rural indicators for shaping territorial policy. Paris, 1996.

V.3 European Union

V.3.1 Indicators suggested in the PAIS report

The rural development domain of the Proposal on Agri-Environmental Indicators (PAIS) aimed to produce an inventory of social and economic statistics used, or with the potential, to measure changes in the rural regions of Member States. Information on indicators in the PAIS project was collected in a variety of ways, and from a variety of sources both within the administrations of Member States and within the academic community. As a result, it was possible to present information relating to **over 500 indicators** and descriptions of national approaches to rural development indicators in nine Member States.

Following an assessment of these indicators, grouped according to various themes, and using standard criteria of sensitivity, analytical soundness, comprehensibility, reference value and policy relevance, **55 indicators have been selected, which are considered to represent "good practice"** in addressing the needs of rural development policymakers and practitioners. The indicators are grouped under the headings shown below.

(i) *Population and migration - demographic structure and evolution*

An area's development depends on its population settlement and structure. For example, in areas of sparse settlement patterns it is difficult to achieve economies of scale in the production and/or delivery of goods and services. Both the level and change in population, and the resultant impact on resources, are often key development considerations. Permanent outmigration, for example, can drain labour, initiative, and income from rural areas. In several countries a key policy concern is high internal migration of young and educated people who are leaving rural municipalities and even regional centres and heading to the major city regions. It is clear that reproduction rates in most rural areas are now below urban rates, and that most rural areas depend on net inward migration for the maintenance of population. The scale and character (age-structure, class-structure, etc) of this inward migration is both an important indicator of economic performance, and a crucial element in future demographics. It is clear that, outside the commuting zones of major towns and cities, the scale and nature of inward migration varies considerably between different rural areas.

The common parameters used in relation to population composition are age structure, gender and household status. Different age-cohorts are of particular relevance to rural areas. Rural areas are often characterized by top-heavy age structures as a result of selective in- and outmigration in the past. As such, indicators of the general well-being of rural areas include:

- Per cent of population under 18;
- Per cent of population over 65;
- Per cent of young people aged 15-30.

These examples are used principally for the justification of policy support and allocation of resources in the rural policy context, although they are of course important for planning the delivery of a whole range of services such as education, health care and so forth.

Clearly, demographic forces influence the size and structure of the labour market. As exemplified by EU policy, age cohorts are often used in the calculation of demographic labour market indices. This group of indicators, generally expressed in ratios, include measures of the:

- Dependency rate (by gender): (population 0-14 + population over 64)/(population 15-64)*100;
- Social weight of young population: (population 0-14)/(population 15-64)*100;
- Rejuvenation rate: (population over 65)/(population 0-14)*100;
- Substitution rate: (population 15-24)/(population 55-64)*100;
- Demographic labour market index: (population 5-14)/(population 55-64)*100.

The last point gives an early indication of how many new jobs will be required in the next 10 years in order to prevent outmigration and population decline. The indicators are also disaggregated by gender.

At the most basic level, population change alone is a common and first indicator of development. Because of the strong relationship between development and population change, it is a popular indicator for identifying priority areas for special support in rural policy. The three principal components of population change are births, deaths and migration. The common indicators of population change, expressed as both ratios (per 1,000 of population) and in per cent are:

- Net migration;
- Average annual population change (natural balance and migration);
- Decennial population change (annual rate).

(ii) Social well-being - quality of life

Quality of life factors, such as levels of crime, quality of, and access to, education and health services and the quality of the local environment have also been shown to be important for inward and outward migration decisions in rural areas.

Many of these concerns are applicable to all territories, but some are of particular importance to rural areas. In addition, there are issues that are intrinsically more 'rural' in nature such as employment in agriculture and forestry, specialised value added activities, environmental and landscape management, and rural tourism and recreation. Monitoring regional change in these sectors is increasingly relevant in view of the evolving nature of rural employment and diversification policies.

The enhancement of individual welfare, the improvement of living and working conditions and reduction of social exclusion are principal aims of European social and cohesion policies. The set of issues covered include:

- Rural safety;
- Rural environment;
- Rural income;
- Consumer oriented services;
- Housing.

(iii) *Economic structure and performance*

Diversification of the rural economy, and the creation and maintenance of employment are critical issues for Europe's rural areas. One part of this debate concerns the "multifunctionality" of agriculture, based on the insight that agriculture is not limited to food production, but extends to environmental and wider socio-economic functions. Policy measures to diversify on- and off-farm income sources and to widen the economic base of rural economies are implemented through a plethora of national and regional policies and agencies. The tourism sector has acquired a wider significance as rural areas transform into service-based economies. This is a sector that is able to utilize rural landscape amenities, as well as being associated with rural heritage and culture.

Strengthening the competitiveness of rural Europe does not only depend on the production factors available, but on a whole range of factors. They include access to an adequate transport and communications infrastructure that can enable rural areas to compete in the global economy, proximity to public services, conditions for entrepreneurship and effective support mechanisms.

Six issues have been identified as having important policy implications with regard to economic structure and diversification:

- Labour market structure and performance;
- Enterprise and innovation;
- Tourism and recreation;
- Multifunctionality of agriculture; and
- Business infrastructure.

The main indicators of economic structure pertain to both employment and output per employee within different economic sectors. The emphasis on these indicators is no longer on analysing the sectoral employment share of the primary sector in rural areas, but the degree to which the 'new economy' is prevalent, including tourism-dependent sectors, producer services, high technology manufacturing and quality value added activities.

The Rural Labour Market: The following change indicators are applied across all Member States at regional level (NUTS II or III level):[2]

- Unemployment rate;
- Participation rate;
- Self-employment;
- Long-term unemployment change;
- Educational attainment rate.

Enterprise and Innovation: Business vitality, in terms of density of businesses and turnover of businesses, can have a direct impact on the economic well-being of a territory. A focus on local entrepreneurship is concurrent throughout the EU and many national regional development policies.

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[2] NUTS = Nomenclature of Statistical Territorial Units.

Business Infrastructure:

Level of provision:
- Number of Internet service providers (ISPs) within a territory;
- Provision of Integrated Service Digital Network (ISDN) and Asymmetric Digital Subscriber Line (ADSL) in a territory based on capacity and speed;
- Annual subscription cost of ISDN, ADSL and other broadband technology.

Level of usage;
- Number of ISDN, ADSL, cable subscribers by businesses within a territory;
- Number of Internet hosts and business subscribers to digital services;
- Turnover of business generated from the Internet;
- Number of home and work-based Internet users (and e-mail).

Tourism in Rural Development: Tourism is now viewed as a key rural industry within Europe. The countryside is recognized as an important resource for leisure pursuits for the domestic market, in addition to overseas visitors. Yet the indicators that are used to measure the supply and demand of tourism in rural areas continue to be limited. Tourism, as an activity, affects a range of policy areas: employment, regional development, education, environment, consumer protection, health, safety, culture, new technology, transport, finance and taxation. However, tourism remains difficult to define and measure, particularly in terms of its contribution to the national economy given that many of the commodities produced and consumed are subsumed within other elements and sectoral shares in national accounting systems.

The major statistics collected on tourism can be divided into supply and demand. Different tourism dimensions can be summarised as follows:

- Physical features of consumption;
- Physical features of supply;
- Employment features;
- Other monetary features, e.g. tourist expenditure.

Multifunctionality of agriculture: The multiple functions of agriculture (MFA) are critical issues for rural development indicators to capture and measure. As a sector, concerns relate to population maintenance, employment, landscape, environmental quality, and tourism and other non-production-related functions. Under rural development, research focuses on the social and economic functions of agriculture, largely excluding landscape and environmental quality, although these are critical dimensions of MFA. There are three key areas that socio-economic indicators can address**:** farm household employment; agricultural diversification and agricultural productivity.

The diversification of **farm household employment** into non-farming activities, where the unit of analysis is the farm household, constitutes one set of indicators. Under tourism, indicators of the role of tourism related enterprises on farms have been highlighted. Similarly, farm household employment and income from other non-farming enterprises are being measured. Measurement of changes in employment, time input, and turnover generated from alternative activities on assisted holdings, compared to non-assisted holdings, will be key evaluation indicators for the programmes.

A second set of indicators concerns the **diversification of primary production** on the farm holding, reflected in measurements of the uptake of agri-environment schemes, forestry and organic aid schemes. Usually calculated on a number of holdings and area basis, the indicators are expressed for policy-supported holdings. For example, typical indicators of organic farming include 'certified organic and in-conversion

land area and holdings,' the percentage of utilizable agricultural area (UAA) devoted to organic farming, and its evolution.

Although there is a wealth of efforts to measure the impact of agriculture on the environment, there have been fewer efforts to capture the impact that agriculture's habitat and species maintenance efforts have had on public goods. Indicators of habitats and species are currently restricted to proxy measures, such as the area of national, EU or Internationally designated areas. Although not used in this context, the population of farm birds, for example, could be an indirect indicator of farming's multifunctional role, based on the existence of values stemming from an altruistic concern for the environment (although this may be more applicable to urban residents, than rural). Other examples could include area of farmland maintained as woodland, plant diversity, hedgerows and organically farmed area. Difficulty in providing any scientifically sound calculation of the value of public goods may, in part, explain why such indicators are not utilized.

A third set of indicators concerns measurements of **farm structure (inputs) and productivity** (output). Farm employment structure by EU land use categories are the most common indicators of resources, along with the form of farm tenure and total income from farming. Farm productivity is measured using output per hectare and output per employee and includes changes over time. There is little variation in the indicators used between countries, although some are able to produce data at finer spatial scales than others.

The proposed set of indicators is shown in Table 1 in Annex 4. This table could very well be amended to include columns for the geographic classes (such as "rural" and "urban" or "predominantly rural regions," "intermediate regions" and "predominantly urban regions") because every indicator applies equally to each type of geography.

V.3.2   Indicators suggested in the Hay report

The Hay report (2002) stresses that there are significant problems concerning data availability even though it was not expected that data for all the variables would, in the first instance, exist at a NUTS 3 level or lower.

Much of the data, however, does not go beyond NUTS 2. This is a recurring problem for many of the required variables, with data for several only provided/collected at country level (NUTS 0) rather than district level (NUTS 3) or even regional level (NUTS 2). In fact, for a total of **fifty-eight indicators**, with the current data available, only **seven** of these can be calculated at NUTS 3.

Even when data is collected at NUTS 2 or NUTS 3 level there are problems with lack of harmonization. Data may exist, for example, for some countries in the years 1994 and 1996, and yet, for others it is only available for 1995 and 1997, thus making a country comparison for the same year impossible.

To add further confusion to the issue, in the years that NUTS 3 or NUTS 2 data exists there are often internal country data gaps. Although data may be provided at either NUTS 3/2 for a certain year, it might not be a 'full set', with possibly one fifth of the data missing.

In addition, for certain variables some countries simply do not provide data - for any year or at any NUTS level. In such cases a study of the EU-15 becomes instead a study of the EU-9 or EU-10. What makes this issue more difficult in terms of a country comparison is the fact that the data for the remaining

EU-9 or EU-10 will contain many of the problems mentioned above and, therefore, data will be neither complete nor satisfactory for the purposes of analysis.

Table 2 in Annex 4 lists the indicators suggested in the Hay report. Again, these indicators could also be applied to characterize urban areas.

Based on the Hay report and the PAIS project, themes and indicators that were selected by Eurostat are shown in Table 3 in Annex 4.

V.3.3 Common indicators for monitoring rural development programming – midterm review

Agenda 2000 required Member States and regions to undertake a midterm review of their rural development programmes, based on common guidelines and indicators, to be submitted to the Commission no later than the end of 2003 (EC, 2003a; 2003b). The purpose of this is, of course, to assess how well the assistance has performed with regard to the achievement of objectives *vis-à-vis* the different categories of beneficiaries (EC, 2002).

The guidelines for the evaluation reports include an explanation of the methodologies applied, including the implications for the quality of the data and the findings, and the sampling techniques and sources that are used to collect the data. Moreover, it is required that optimum use be made of so-called secondary data, i.e. data that exist already, for example from the monitoring system. If primary data are used they must be based on representative sampling techniques.

Table 4 in Annex 4 contains a list of the common evaluation questions. In agreement with Member States, the European Commission has drawn up a series of common indicators for monitoring rural development programming for the period 2000-2006. These indicators and explanatory guidelines on how to complete the common rural development monitoring indicator tables can be found at the following Internet address: http://europa.eu.int/comm/agriculture/rur/eval/index_en.htm

V.4   The World Bank

For developing countries it is suggested that core indicators are selected from the following five themes.

- Basic socio-economic data;
- Enabling environment for rural development;
- Broad based economic growth for rural poverty reduction;
- Natural resource management and biodiversity;
- Social well-being (education and health).

These themes, and the proposed indicators under each theme, are partly derived from the set of indicators suggested by World Bank experts, which is shown in Annex 5. The indicators selected are largely determined by the availability of data and the particular policy issue that is to be addressed.

Many of the indicators listed in Annex 5 are highly correlated. From a resource point of view it makes good sense to identify those correlated indicators and only select one or a few from each group.[3] For the regular monitoring of rural development it is also important that complementary indicators are selected from each theme and that these indicators can be regularly measured.

For a great deal of the indicators listed in Annex 5, data are most probably not available on a regular basis. However, as is discussed in Chapter VI, when designing population and housing censuses, agriculture censuses, household budget surveys, labour force surveys and other types of survey, the data needs for constructing a selection of these indicators should be covered by the surveys.

V.5   FAO

Table V.3 lists the World Conference on Agrarian Reforms and Rural Development (WCARRD) set of primary indicators. The indicators marked with an asterisk are the "core" indicators for use in monitoring poverty alleviation.

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[3] Principal component analysis (PCA) constitutes a **tool for evaluating and presenting the redundancies or associations between several continuous variables** (measured by the correlation coefficient) and is often **used to graphically represent and summarize the key features of a dataset**. Thanks to this descriptive method, datasets with a large number of variables can be analysed and summarized graphically, revealing the underlying structure of the data. Source: http://training.creascience.com/product_info.php?products_id=45

Table V.3
The WCARRD list of primary indicators

I.   Poverty alleviation with equity
Income/consumption
1.   Percentage of population in households with per capita income below the poverty line *
2.   Percentage of income accruing to each fractile (decile/quartile) of the population *
Nutrition
3.   Percentage of children aged 1-5 years in groups less than: *
          80% weight-for-age
          90% height-for-age
          80% weight-for-height
4.   Percentage of under-nourished population *
Health
5.   Infant and child mortality rate *
6.   Percentage of the population in villages/communities with at least one health auxiliary
Education
7.   Adult literacy rate *
8.   Primary school enrolment and completion rates
Housing
9.   Percentage of rural household with specified housing facilities, e.g. piped water, electricity and
       sanitation facilities
Access to community services
10.   Percentage of population living in villages/communities with access to: potable water, public health
       services, primary schools *

II.   Access to land, water and other natural resources
Access to community services
11.   Percentage of number and area of agricultural holdings by size groups and tenure *
12.   Percentage of heads of rural households without land *
13.   Average wage rate of agricultural labourers *
14.   Rate of unemployment and under-employment
15.   Percentage of landless agricultural labourers to the population economically active in agriculture *

III. Access to inputs, markets and services
16.   Percentage of rural households receiving institutional credit

IV.   Development of non-farm rural activities
17.   Percentage of economically active population engaged in non-agricultural activities in the rural areas

V.   Education, training and extension
18.   Number of rural (including agricultural) extension personnel per 1,000 holdings/households

VI.   Growth
19.   Annual rate of population growth

Source: FAO.

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