INDICATORS ON RURAL DEVELOPMENT
AND AGRICULTURE HOUSEHOLD INCOME

By

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Some Rural Figures in the ESCWA region

- **Rural Population**
  - 70% of in Yemen
  - about 60% in Egypt and Sudan
  - 47% in Syria

- **Employment in agriculture**
  - 31% in Egypt in 2007
  - 19% in Syria in 2007

- **Share of agriculture in GDP**
  - 29% in Sudan, 19.6% in Syria,
  - about 10% in Yemen in 2008.
  - 15% in Egypt in 2006.

- **Land**
  - 5.06% arable and permanent land of total land area, in 2007
Particular focus on agriculture household income and wealth

1. Agriculture is an activity that accounts for a substantial share of the land use in many countries
2. The contribution of agriculture to economic activity is concentrated in rural areas
3. Historically agriculture has been a major activity of the people that live in rural areas
4. Agricultural households are a major source of the factors of production whose reallocation is an integral part of rural development
5. Policy for rural development has often grown out of agricultural policy

Components of rural development

- Technology
- Ecology
- Rural development
- Society
- Economy

Dynamic concept with medium to long term changes and adjustment
Importance of rural development

Rural development

Rural areas ➔ Urban areas

Population distribution doesn’t get skewed towards urban areas

Relevance to policy makers

A successful rural development policy should allow rural areas to:

1. Be able to at least maintain their population
2. Diversify their economic base beyond the primary sector, maintaining or even increasing employment rates to absorb the loss of jobs in the primary sector
3. Be able to keep poverty rates and unemployment rates on a level not worse than those in urban areas
4. Be as easily accessible as possible and provide a minimum set of services
Measures of rurality

1. Characteristics of an indicator on rurality

1- Use of variables that are reliable and simple to measure.

2- Feasibility of measurement, and comparability.

2. Statistical requirements of a rural indicator

1. **Understandable**
   clear and brief, easy to read and understand

2. **Transparent**: clear inputs and production process

3. **Significant and relevant** informative to users.

4. **Analytical**
   give a sufficient insight into the phenomena.
2. Statistical requirements of a rural indicator (cont’d)

5. **Complete**
   cover the whole population of statistical units or the whole geographical area

6. **Reliable**
   have little statistical error or noise

7. **Comparable**
   at different levels (inside, outside and inter-temporal)

8. **Coherent**
   same reference period, accountancy criteria and mode of calculation.

9. **Continuous**
   no interruptions in the indicator time series.

10. **Accessible**
    easy to get by users in terms of effort, time and money costs.

11. **Timeliness**
    provide information to users as close as possible to the occurrence of the phenomena under study.

12. **Not expensive**
    cost of production minimized.
3. Dimensions of any indicator

Three dimensions may be identified when assembling any indicator:
1. The state or situation or level
2. The dispersion or concentration or variability
3. The tendency or trend over time.

Each dimension of a given indicator adds important information for the policy discussion.

Data sources

- Population and housing censuses
- Agriculture censuses and surveys
- Household budget surveys
- Administrative data and registers
- Scientific measures (GIS and satellite, land cover, land use)
- Informal sector (ESCWA is implementing a project in this field)
Indicators proposed for rural development

Scheme I

A. Components of rural development
- A1. Natural environment
- A2. Social well-being
- A3. Conditions for economic well-being

B. Potential of rural development
- B1. Territory with respect to population
- B2. Economic structure
- B3. Communications

C. Special focuses on developing countries

Suggested sets of rural indicators

A. Components of rural development

A.1 Natural environment
Quality of the countryside and the condition of the natural environment (natural resources and wildlife), as necessary requirements to reach a good quality of life and as an opportunity to enhance the economic conditions of the rural population.
Suggested proxy indicators

**State**

1.1 *Per capita drinking water:* cubic metres of drinkable water at time t / population at time t

1.2 *Per capita CO\(^2\) emission:* tonnes of CO\(^2\) emission at time t / population at time t

1.3 *Per capita energy consumption:* KWh of energy consumption at time t / population at time t

1.4 *Biodiversity index:* number of animals at time t / square kilometers of the surface at time t

1.5 *Landscape index:* square kilometers of land lost from agriculture and forestry to industrial, housing, road and other uses at time t / square kilometers of the surface at time t

1.6 *Waste recycling index:* per cent of waste that is recycled at time t

**Tendency over time**

*For each indicator:* indicator at time t / indicator at time t-1

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**A.2 Social well-being**

Quality of social life and welfare. Good quality means good education and health; reduced risks and vulnerability of people.

Suggested proxy indicators:

**State**

2.1 *Literacy rate:* % of population, aged 15 – 24, who have completed a given level of formal schooling at time t

2.2 *Infant mortality rate:* # of deaths of infants (under one year of age) per 1,000 live births at time t

2.3 *Newspapers per capita:* # of newspapers sold at time t / population at time t

2.4 *Political rights:* % of the eligible voters who voted in the last election

2.5 *Green areas rate:* green area as % of total area at time t

**Tendency over time**

*For each indicator:* indicator at time t / indicator at time t-1
A.3 Conditions for economic well-being

Income and wealth of people.
Suggested proxy indicators:

State

3.1 *Real per capita income*: real income at time \( t \) / population at time \( t \)

**Tendency**

*Real per capita income growth*: real per capita income at time \( t \) / real per capita income at time \( t-1 \)

**Dispersion and concentration**

- *Real per capita income inequality*: normalized squared error from the mean at time \( t \). Gini Index of Inequality at time \( t \)

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B. Potential of rural development

B.1 Territory with respect to population

territory available to the rural population to live, cultivate (usable agricultural land) and perform other economic activities.

Suggested proxy indicators:

State

1.1 *Per capita territory*: square kilometres of the surface at time \( t \) / population at time \( t \) (which is the inverse of the population density)

1.2 *Per capita AAU*: agricultural Area Utilised (AAU) (square kilometres) by rural population at time \( t \) / rural population at time \( t \)

1.3 *Rural youth*: rural population under 14 at time \( t \) / rural population at time \( t \)

**Dispersion**

1.4 *Per capita territory*: # of rural territorial units within each size class of square kilometers of surface area per inhabitant at time \( t \)

1.5 *Per capita AAU*: # of rural territorial units within each size class of AAU at time \( t \)

**Tendency over time**

1.6 *Rural pop. growth*: rural population time \( t \) / rural population \( t-1 \)
B.2 Economic structure

Health of the economic environment of the rural population

Suggested proxy indicators:

**State**

2.1- *employment rate*: population employed at time t / population at time t

2.2- *local government debt rate*: local government debt in region r at time t / population in region r at time t

**Tendency over time**

2.3- *migration rate*: %net flow of population at time t

2.4- *employment growth rate*: population employed at time t / population employed at time t-1

2.5- *local government debt reduction*: local government debt in region r at time t / local government debt in region r at time t-1

B.3 Communications

Ability of rural population to communicate and interact with the rest of the world.

Suggested proxy indicators:

**State**

3.1- *Per capita stations*: number of stations (railway stations, ports and airports) at time t / rural population at time t

3.2- *Per capita telephones*: number of telephones (home, mobile and public) available at time t / population at time t

**Tendency over time**

3.3- *Per capita stations rate of growth*: number of stations at time t/ number of stations at time t-1

3.4- *Per capita telephones rate of growth*: number of telephones at time t / number of telephones at time t-1
C. Special focus on developing countries

<table>
<thead>
<tr>
<th>Category</th>
<th>Indicators</th>
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| 1 Market and institutions | • food price index  
                          | • membership in organizations of agricultural producers                     |
| 2 Infrastructure       | • rural population with access to electricity                                |
| 3 Poverty              | • rural population living on less than $1 a day  
                          | • rural child malnutrition                                                  |
| 4 Agriculture          | • agricultural productivity  
                          | • food production index                                                     |
| 5 Natural resource     | • forests and deforestation                                                 |
| 6 Education            | • rural female literacy with respect to rural male literacy  
                          | • net rural enrolment ratio in primary education                            |
| 7 Health               | • infection among rural population                                          |

Indicators proposed for rural development

**Scheme II**

Within this livelihood context the core analytical framework starts from the so-called “asset pentagon”, which contains the following five categories of capital:
Summary

- Rural development is very important in ESCWA region.
- The development of indicators to monitor status, gaps and trends is urgent.
- Data collection on rural development should be enhanced through census questions, surveys, administrative records and others.
References

- Rural Households’ Livelihood and Well-Being
- National Account Studies of the ESCWA region, Bulletin No 29.
  [http://laborsta.ilo.org](http://laborsta.ilo.org)
- Compendium for environmental statistics, ESCWA 2009.