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Education for Rural People – Main Policy Issues

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If you are planning for a year, sow rice, if you are planning for a decade, plant trees, if you are planning for a lifetime, educate people.

(Chinese proverb)

FOREWORD

Despite unprecedented growth in world incomes and unparalleled improvements in global standards of living over the past few years, mankind has failed to rid the world of abject poverty and hunger. The numbers speak for themselves:

- 840 million undernourished people;
- 1.5 billion people who live without access to safe drinking water;
- 2 billion people who live without electricity;
- 860 million illiterate adults, more than half of whom are women;
- 130 million children out of school;
- 14 million children who have lost their mothers or both parents due to AIDS[1].

Within each of these groups – and many of them overlap - the majority live in rural areas. Indeed more than 70 per cent of the world's poor are rural poor.

In this new millennium, in which our daily news is dominated by crime, we should realize that inequalities feed delinquency and terrorism, which in turn frequently constitute a sign of the poor's exasperation with world inequalities. One of the major inequalities affecting the rural poor is their unequal access to quality education, which is so important for social and economic development.

[1] http://www.fao.org/waicent/portal/statistics_en.asp

INTRODUCTION

In today's world many people from occidental countries care about the latest model of sport car and cannot wait that the new mobile phone with a built-in camera is launched on the market. Their children of just few years have visited already foreign capitals and they love to choose their favourite meal at the restaurant. Meanwhile, just few hundreds of kilometres away, whole populations die of hunger and do not have enough drinking water. Children often have to work instead of going to school. The inequalities are even deeper when considering the urban and the rural areas of the developing countries. Lack of knowledge is often one of the causes of the impossibility of breaking the vicious circle of poverty. Therefore, one of the key solutions to end up with the trap of poverty and hunger and start on a development road is to provide people with appropriate education. This is not an easy task and we are still far from reaching the Millennium Development Goal of Basic Education for All.

Education for Rural People (ERP) is an ambitious initiative launched by FAO and UNESCO which puts this MDG high on its agenda. It aims at convincing the policy-makers to put the rural development and education for people in remote areas on the list of priorities. Encouraging partnerships between the stakeholders is one of the objectives that ERP set itself. It acts as an advisor to draw up national plans on education and as a focal point disseminating information on good practices.

To give a clear image of what ERP is and what are the main policy issues it has to deal with, I used a variety of sources. Mainly, the paper is based on the publications of ERP, especially the study undertaken by FAO and UNESCO before launching the initiative. Also, regarding cooperation partnerships and specific kinds of projects, I used the material provided by the workshops organized by ERP. The ERP website was a useful source of information as well and there are numerous links to other interesting information resources. Some data regarding the education in rural areas can be found in the Food Insecurity in the World report published annually by FAO. UNESCO

Institute of Statistics and Education for All Monitoring Report provide numbers on specific aspects of teaching and learning.

In the first chapter I first presented a general framework of the initiative, the key facts of the history that led to launching ERP and the main objectives it set itself. In the second section I described the situation of the rural areas in the world today and the influence that the education has on the economic growth and the people's well-being. The main areas of ERP intervention are mentioned in the following section which enumerates the possible actions that the flagship could undertake and the way in which it should plan the projects. Partnership and monitoring are the key aspects in efficient implementation of this initiative and they are dealt with at the end of the first chapter.

In the second chapter I described the main policy issues of the three pillars of the education which could lead to progress in rural development. First of all, the basic education, to which I dedicated the largest part of the chapter as it constitutes also a Millennium Development Goal, far from being achieved. The following stage of education, vocational training, is presented in the light of the changing labour market and globalization. Then the higher education and more specifically the agricultural one is examined: what is its current state and what challenges it has to face in order to become an active actor in the process of rural development. Additionally, contextualized learning is put on the same level in the chapter as it could be a valid method at all the stages of education making it more practical and understandable for a vaster audience.

1 EDUCATION FOR RURAL PEOPLE TO ADDRESS POVERTY AND UNDERNOURISHMENT

1.1 The general framework of ERP

1.1.1 The general picture

Despite decades of effort to improve education and development for rural people, especially the poor, the broad picture remains as follows:

- Some 3 billion people live in rural communities, mainly in countries with low per-capita incomes and high rates of poverty. Most make their small incomes from small-scale agriculture and forms of self-employment, and many need the assistance of their children in sustaining their households;
- Nearly a billion people (two thirds of them women and most rural) are unschooled and unable to access information for development. In several countries, rural illiteracy rates are two to three times higher than urban rates;
- 130 million children are not in school; most are rural;
- Drop-out rates from rural primary schools remain unacceptably high. Large proportions of drop-outs have not mastered basic skills sufficiently for daily use and further development;
- 211 million children and adolescents are in forms of child labour that will lead to large proportions of them becoming illiterate adults[2].

1.1.2 Education as a Human Right

Education is not only an essential prerequisite for reducing poverty and improving the living conditions of rural people, but also a basic human right in itself. The United Nations Universal Declaration of Human Rights (10 December 1948) in its article 26 states that "Everyone has the right to education". The declaration foresees compulsory and free primary education for all, general availability and accessibility to secondary education, including technical and professional education, and higher education with progressive introduction of free education and liberty for parents to choose school for

[2] UNESCO, *EFA Global Monitoring Report 2002 Education for All: Is the World on Track?, UNESCO, Paris, 2002.*

their children.

1.1.3 ERP flagship

As the majority of the world's poor, illiterate and undernourished live in rural areas, it is a major challenge to ensure their access to quality education. The lack of learning opportunities is both a cause and an effect of rural poverty. Hence, education and training strategies need to be integrated within all aspects of sustainable rural development, through plans of action that are multisectoral and interdisciplinary. This means creating new partnerships between people working in agriculture and rural development, and people working in education.

To address this challenge, the Directors-General of FAO and UNESCO jointly launched the flagship programme on Education for Rural People (ERP) in September 2002 (http://www.fao.org/sd/erp/) during the World Summit on Sustainable Development held in Johannesburg as a key activity to implement the Summit Plan.

Education for rural people is crucial to achieving both the Education for All (EFA) goals, and the Millennium Development Goals (MDGs) eradicating extreme poverty and hunger, ensuring universal primary education by 2015, promoting gender equity and ensuring environmental sustainability. In 1996, the World Food Summit in Rome stressed increased access to education for the poor and members of disadvantaged groups, including rural people, as a key to achieving poverty eradication, food security, durable peace and sustainable development. The 2002 World Summit on Sustainable Development also emphasized the role of education.

The flagship aims to narrow the gap in education between urban and rural areas, by expanding rural people's access to quality basic education as well as improving its quality. Governments, international and national non-governmental organizations are invited to join this partnership. Building awareness on the importance of ERP is a crucial step to achieve all the Millennium Development Goals, and particularly,

eradicating extreme poverty and hunger, achieving universal primary education and promoting gender equity.

At a national level, countries will draw up action plans – with the technical support of partners – to boost basic education in rural areas. Internationally, the focus will be on lobbying and recruiting new partners, and encouraging the exchange of experiences and knowledge on Education for Rural People.

1.1.4 FAO's position

FAO has accepted to be the ERP lead agency since they were convinced that education is a key to sustainable development and food security and poverty reduction. Rural-urban disparities are issues of major concern for the international community and FAO member countries, as are disparities in education in rural areas.

The FAO Constitution (Quebec, 16 October 1945) in the article 1 paragraph 2b stresses the importance of Agriculture Education for fulfilling its mandate by saying "The Organization shall promote and, where appropriate, shall recommend national and international action with respect to: (…) the improvement of education and administration relating to nutrition, food and agriculture, and the spread of public knowledge of nutritional and agricultural science and practice."

FAO has entrusted the ERP flagship to its Sustainable Development Department and in particular the Extension, Education and Communication Service. It has the mission to mobilize partners, without whom the flagship could not sail, and with them to support action for more and better education programmes for disadvantaged rural women, men, girls and boys. Its most important partners are of course the governments of countries where rural people are at the severest educational disadvantages, but they are also the partners most in need of allies beyond their borders.

1.1.5 UNESCO and IIEP

The International Institute for Educational Planning (IIEP) of UNESCO has a key role

with FAO in the flagship. It is a centre for training and research – specialized in educational planning and management. IIEP was created by UNESCO in 1963 in Paris. It is supported by grants from UNESCO and by voluntary contributions from Member States. IIEP is an integral part of UNESCO, yet it enjoys a large amount of autonomy. The IIEP's goal is to help Member States improve the quality and effectiveness of their education systems. The Institutes' score activities are training and research. It also provides services to Member States on request. Recently IIWP has signed bilateral partnership agreements with some 20 institutions and set up a number of networks. Together with the UNESCO Division of Basic Education, IIEP constitutes another pole to FAO in the ERP programme.

1.1.6 Education for All (EFA)

The Education for All movement took off at the World Conference on Education for All in 1990 in Jomtien, Thailand. The representatives from 155 countries and 150 organizations pledged to provide education for all by the year 2000. Their intention was that children, youth and adults would "benefit from educational opportunities designed to meet their basic learning needs"[3]. The World Declaration on Education for All thus defined a bold new direction in education. The Declaration rang the death-knell of rigid, prescriptive education systems and ushered in an era where flexibility could thrive. From now on, education would be tailor-made, adapted to the needs, culture and circumstances of learners. The decision to review progress a decade later was taken in Jomtien.

Two important milestones intervened in 1996. The Mid-Decade Conference held in Amman Jordan, noted that considerable progress had been made its weak reporting underlined the need for an in-depth assessment. The EFA decade culminated at the World Education Forum (April 2000, Dakar, Senegal) which adopted the Dakar Framework for Action Education for All: Meeting Our Collective Commitments. This document commits governments to achieving quality basic education for all by 2015,

[3] http://www.unesco.org/education/efa/index.shtml

with particular emphasis on girls' schooling and a pledge from donor countries and institutions that "no country seriously committed to basic education will be thwarted in the achievement of this goal by lack of resources"[4].

The Dakar Framework outlines a number of goals in order to meet Education for All, each with special relevance to Education for Rural People. The first goal is the expansion and improvement of comprehensive early childhood care and education especially for the most vulnerable and disadvantaged. This requires a special focus on expansion in underserved rural areas where the needs for childcare and pre-school are often greatest. Continuing on, the Framework calls for ensuring that, by 2015, all children, with a special emphasis on girls and children in difficult circumstances, have access to and complete free and compulsory primary education of good quality. This goal compels governments to educate all children, including those most difficult to reach such as children living in remote and rural areas. Therefore, there is a need to seek them out and find ways to keep them in school or in alternative but equivalent programmes. Furthermore, the Framework includes the goal to ensure that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes. This requires that such programmes are appropriate also to the learning and working levels of youth and adults in rural areas. Another target has been set fore a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults. The implication here is the need for special efforts in rural areas where most illiterates (especially women) live. Additional goals of the Framework include the elimination of gender disparities in primary and secondary education which are greater in rural areas.

Currently EFA launched nine specialized flagships: Early childhood development, Literacy, Girls' education, Education in emergency situations, School health, HIV/AIDS, Teachers and the quality of education, Education and disability, Education

[4] http://www.unesco.org/education/wef/en-leadup/dakfram.shtm

for Rural People. The last one has been implemented by joint efforts of FAO and UNESCO.

1.1.7 Partnership as a key to effectiveness

To avoid a waste of resources and efforts, a partnership approach should be undertaken for all actions in the framework of Education for Rural People. Coordination of all kinds of actions is a key to an effective strategy therefore the partnership, led by FAO, is a call for member countries, United Nations agencies, Civil Society, academic institutions and private sector for coordinated, increased efforts in targeting rural people's needs by promoting increased access to quality basic education.

The possibility of becoming a member is open to institutions/organizations committed to work individually or together to promote and facilitate basic quality education for rural people. NGOs and other civil society organizations (under no financial obligation other than the one already undertaken through projects they promote in favour of basic education for rural people are invited to join FAO and UNESCO in a partnership designed to increase coordinated and collaborative efforts with, and for, rural populations.

The only requirement to join is to be concretely involved in activities in favour of rural people. If anyone is interested, they only have to fill in the form available on the ERP website.

1.2 Education for rural development and poverty reduction

1.2.1 Rural trends

It is estimated that for the next two decades, the majority of the population living in developing countries will continue to be rural. This is even more the case for the least developed countries where the people living in rural areas will still represent over 55 per cent of the total population in 2030. In other words, during this period, the development challenge will continue to be related to rural trends and conditions.

Consequently achieving the targets set by the World Food Summit for the year 2015 will require particular emphasis on rural areas.

In spite of the global trends confirming the urbanization scenario, available data also document the strength of rurality. It is worth noting that the vast majority of the rural population is concentrated in a few countries, 35 nations representing 85 per cent of the world rural population in 2000. In 2030, it is expected that Bangladesh, Pakistan and Indonesia will join China and India in the group of countries recording over 100 million people living in rural areas. The overall population increase experienced during 1960-2000 led to a considerable growth in the size of the rural population from 2 billion in 1960 to 3.2 billion in 2000. This expansion was mainly due to rural demographic expansion in the less developed regions.

For the international community, poverty is now considered as the greatest challenge. Of special concern are the 1.2 billion people living on less than $1 a day (75 per cent living in rural areas) and the additional 1.6 billion living on less than $2 a day[5]. Poverty reduction efforts take place within a broader development framework agreed upon at the Millennium summit held in New York in September 2000.

One could expect that such an agenda, including the mobilization against poverty, leads to greater attention paid to rural issues. Indeed, in developing countries rurality often equates to poverty. Yet, in spite of significant rural-urban migration, the great majority of the poor are still rural. Average income levels remain lower in the countryside than in the cities and a larger share of the population is living below specified poverty lines. To a large extent, reducing poverty requires first addressing the challenge of rural poverty.

1.2.2 Education for economic growth

The development theoreticians of he 1960s viewed agricultural growth as the principal

[5] IFAD, *Rural Poverty Report 2001: The challenge of ending rural poverty* (hrrp://www.ifad.org/poverty/index.htm).

force driving a nation's development. For example, Arthur Lewis wrote in 1954, "if agriculture is in a slump, it offers only a stagnant market and hampers the development of the rest of the economy. If agricultural development is neglected, it becomes more difficult to develop anything else: this is the fundamental principle of balanced growth"[6].

The idea that agriculture plays an important role in the overall economic growth of developing countries seems to be confirmed by the existence of a correlation between increased agricultural yields and increases in total output. Of the 68 countries for which we have reliable data, 30 saw their agricultural production increase by over 3 per cent annually during the 1970s and 1980s. In all of these countries, the average GDP growth rate was at least 2.5 per cent during the period, and two-thirds of the countries with strong growth of agricultural output also recorded very high rates of economic growth (above 5 per cent a year).

The next question was which factors were favourable to an increase in agricultural productivity. In one of the seminal works of human capital theory, there is an observation that education explains the greater part of total factor productivity, and Becker in the first part of Human Capital formulates this in microeconomic terms. Human capital theory regards education as an investment "like any other", and as a generator of externalities. For example, individuals make individual choices concerning their education, but this choice has a strong economic impact through the resulting increase in total factor productivity. The role of human capital in a country's growth was the subject of prolonged debate, and a number of authors have tried to provide an empirical demonstration of the relation between education and agricultural productivity in developing countries. The empirical estimates prove that the relationship between the educational level of the agricultural labour force and productivity may take three forms:

[6] Lewis, A. "Development with unlimited supplies of labour" in: Manchester School of Economics and Social Studies, 22(2), 1954, pp.139-191

- education can improve the quality of farmers' labour by enabling them to produce more with their available stock of production factors (other than labour);
- education can increase the efficiency of resource allocation;
- education can help farmers to choose more effective means of production by adopting new techniques.

All of the studies conducted to demonstrate the relationship between education and agricultural productivity show that farmers' education has a positive impact on their productivity. According to these results, agricultural productivity is 7.4 per cent higher on average for a farmer with four years of elementary education. This effect is stronger in an environment undergoing modernization than in a traditional environment.

However, the empirical studies should be regarded with caution, as levels of education and productivity can be difficult to measure. Let us be convinced by the significant numbers which credibility definitely cannot be undermined, but a holistic approach must be assumed to illustrate fully the complexity of the education-productivity relationship. The latter is influenced by a number of social, institutional, cultural, political and other factors, which in most cases are interdependent. The critiques, in fact do not question the relationship itself but an overly narrow economic approach. A gradual consensus on the fact that development cannot be measured in terms of economic growth alone emerged particularly as a result of the UNDP's work on the Human Development Index (HDI)[7].

Prior to the formation of the ERP flagship, FAO and UNESCO/IIEP launched a broad international study reviewing the current relationship between education, rural development and the reduction of poverty[8]. Although it recommends holistic approaches to education for rural development, it acknowledges that designing them presents a difficult challenge. The study therefore urges each country to develop its

[7] UNDP, *Human Development Report*, New York, 1996.
[8] The findings of the study are presented by Lavinia Gasperini (FAO) and David Atchoarena (IIEP) in *Education for Rural Development: Towards new policy responses*, FAO-UNESCO/IIEP, 2003.

own path to address ERP. The flagship will contribute by convening forums to share and study successful experiences in how such approaches might be organized. The Bangkok workshop in November 2002[9] brought together ministries of education and agriculture. This kind of occasion needs to be incorporated into a more thoroughly though-out framework with permanent mechanisms to help elaborate and implement holistic strategies.

1.2.3 Education and undernourishment

In a way that rurality often implicates poverty, similarly lack of education is a phenomenon that favours malnutrition which in turn is an obvious consequence of poverty.

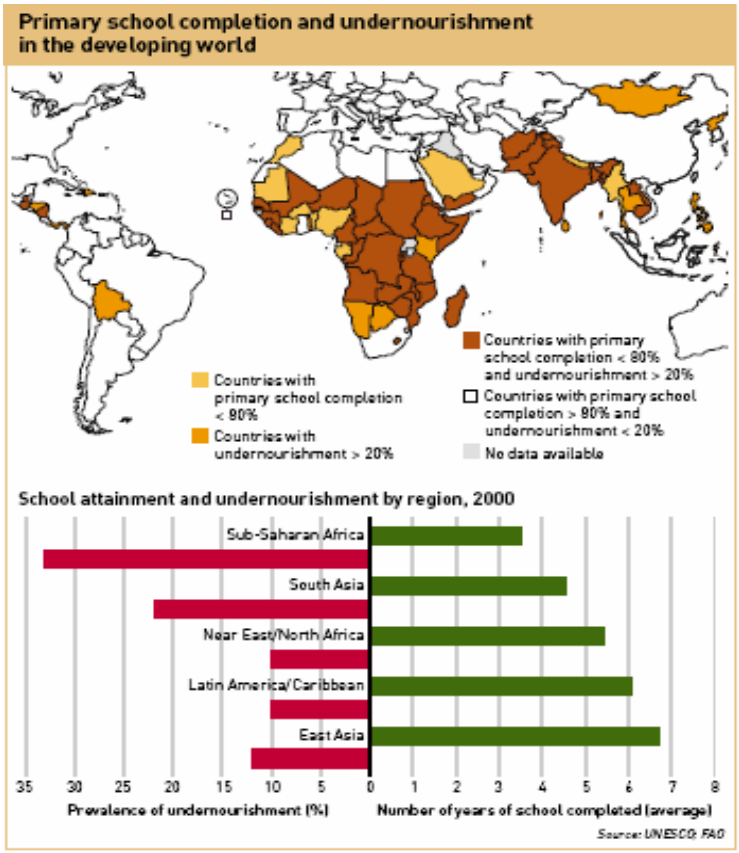


Figure 1. Primary school completion and undernourishment

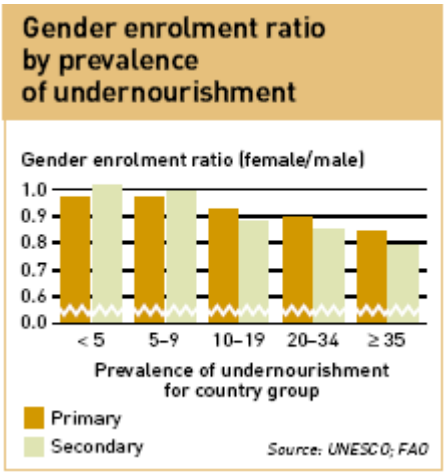
In fact, we are in the middle of a viscous circle where lack of education undermines

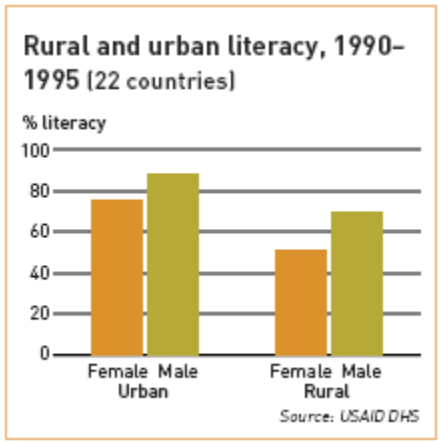
[9] A summary of the seminar may be found in *Education for Rural Development in Asia: Experiences and policy lessons*, IIEP, 2002.

productivity, employability and earning capacity, leading directly to poverty and hunger. Every year of schooling increases individual wages by about 10 percent, worldwide[10]. Investments in education have resulted in higher returns than investments in physical capital. The fact that hunger, illiteracy and lack of schooling affect many of the same areas and people is no coincidence. Nor does it merely reflect the fact that both hunger and lack of education are facets of extreme poverty. Hunger, malnutrition and food insecurity erode cognitive abilities and reduce school attendance. Conversely, illiteracy and lack of education reduce earning capacity and contribute directly to hunger and poverty.

In the rural areas where the vast majority of the world's hungry people live, research shows that a farmer with four years of primary education is, on average, almost 9 percent more productive than a farmer with no education. When combined with the availability of inputs such as fertilizers, new seed or farm machinery, the productivity increase rises to 13 percent[11]. It is not only by increasing productivity and incomes that education reduces hunger and malnutrition.

Better education for women, in particular, is strongly associated with improvement in their families' health (Figure 2). Research confirms that educated women's children are better nourished, less likely to die in infancy and more liable to attend school.





[10] FAO, The State of Food Insecurity in the World, FAO, Rome, 2004.
[11] FAO, The State of Food Insecurity in the World, FAO, Rome, 2005.

Figure 2. Gender enrolment **Figure 3. Rural and urban literacy**

Therefore investing in the education of one generation is much more than these words say: it is an investment in all the future generations that descend from that family. A recent study of 63 countries concluded that gains in women's education made the single largest contribution to declines in malnutrition during 1970-1995[12], accounting for 43 percent of the total progress. But cultural traditions and legal obstacles often prevent women and girls from attending school, holding jobs or accessing resources and services that would allow them to improve their families' livelihoods. School attendance and literacy rates are particularly low for women and girls in rural areas. In 50 developing countries for which data are provided, primary school attendance for rural girls averaged only 58 percent, compared 3 percent for rural boys and over 75 percent for urban children[13]. As a result, around two thirds of the illiterate people in the developing world are women and the gender gap is significantly larger in rural areas (Figure 3). Poor, food-insecure families often cannot afford school fees and depend on children, particularly girls, for tasks such as fetching water and fuelwood. Undernutrition and illiteracy and strictly correlated in the youngest age group (Figure 4). Hunger and malnutrition deter children from going to school and stunt their learning capacity when they do attend.

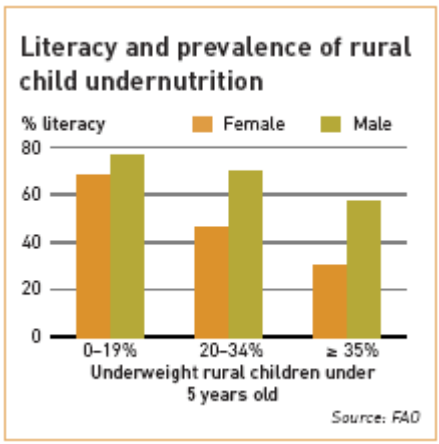


Figure 4. Literacy and child undernutrition

A study in rural Pakistan found that a relatively minor improvement in nutrition would increase the likelihood of starting school by 4 percent for boys and 19 percent for girls. Low birthweight, protein energy malnutrition, iron deficiency anaemia and iodine deficiency have all been linked to cognitive deficiencies that reduce children's ability to learn. Iodine deficiency, for example, affects an estimated 1.6 billion people worldwide and has been associated

[12] *Ibid.*
[13] *Ibid.*

with an average 13.5 point reduction in IQ for a population. Iron deficiency anaemia, which affects more than half of all school-age children, damages their ability to learn by eroding attention span and memory[14].

The MDGs set the target of ensuring that every child in the world receives a primary school education by the year 2015. But progress towards the goal of universal primary education has been slow and uneven More than 121 million school-age children remain out of school. Two-thirds of them are girls, and most of them live in rural areas in the regions where hunger and poverty are most widespread. Among those children who do attend school. One third drop out before they acquire basic literacy and arithmetic skills. On average, adults have completed only 3.5 years of school in sub-Saharan Africa and only 4.5 years in South Asia. These are also the two subregions where hunger is most prevalent and where progress in reducing it has lagged (see Figure 1).

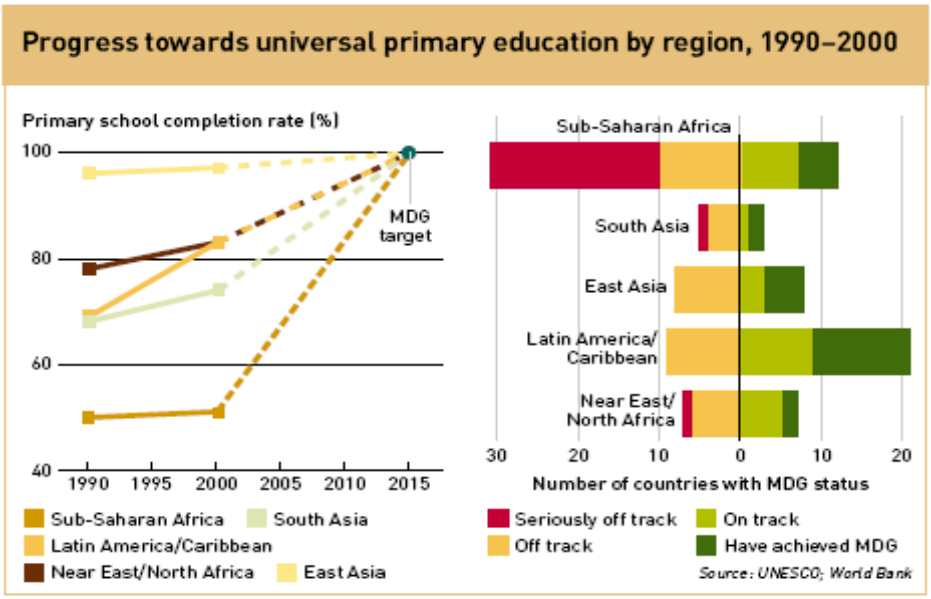


Figure 5. Progress towards primary education by region, 1990-2000.

To reach the MDG target, the rate at which out-of-school children are being enrolled in school would have to quadruple. If enrolments in sub-Saharan Africa continue at the current pace, fewer than half the countries in the region will reach the target (Figure 5).

[14] *Ibid.*

Improving education can be one of the most effective ways to reduce hunger and malnutrition. Malnutrition rates decline with increased literacy, especially female literacy. Higher rates of literacy among rural women are also associated with increased enrolment of girls in primary school and lower rates of malnutrition as shows the figure below.

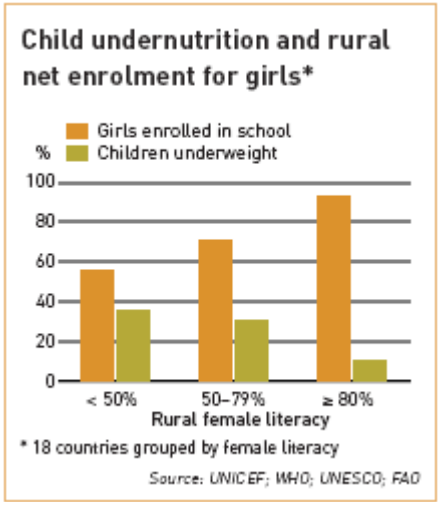


Figure 6. Child undernutrition and rural net enrolment for girls

Education is also the front line against HIV/AIDS. A recent study in Uganda found that people who finished primary school were only half as likely to contract HIV – and those with a secondary education only 15 percent as likely – as those who received little or no schooling. The Indian state of Kerala is often cited as a prime example of the virtuous circle of benefits from investments in education and nutrition. Since shortly after independence, successive governments in Kerala have made education a top priority. Special attention has been given to girls and women rural areas. The investment has paid off. Although Kerala is not one of India's wealthier states, it ranks first in female literacy and school enrolment by a wide margin. Kerala also boasts the lowest rate of malnutrition among children and an infant mortality rate that is a fifth of that of the country as a whole as you can see in the figure below (Figure 7).

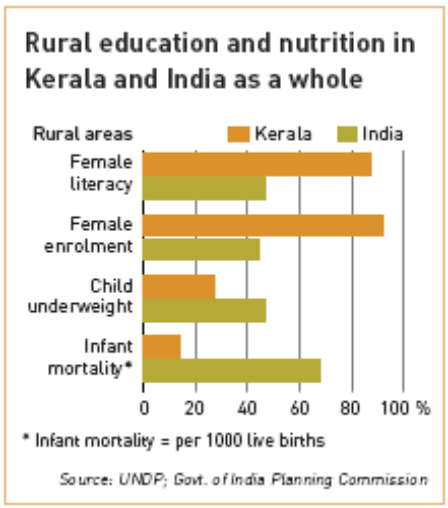


Figure 7. Rural education and nutrition in Kerala and India as a whole

A number of countries have recognized the importance of education for rural people and adopted policies to make it more accessible and relevant. Almost half of the rural schools in Colombia, for example, have adopted the Escuela Nueva model. These schools emphasize

participatory learning and employ a curriculum that combines core national content with local modules relevant to the culture and needs of rural people. Communities and parent are actively engaged in the schools. Drop-out rates are far lower and third-grade scores in Spanish and mathematics are significantly higher than in traditional schools.

The Indian state of Madhya Pradesh pledged to build a primary school building within 90 days for any rural community that provided space and hired a qualified teacher. Today, all children of primary school age in the state are enrolled in school.

Programmes that take direct aim simultaneously at lack of education and malnutrition have achieved notable gains in several countries. In Bangladesh's Food for Education programme, families receive food if they send their children to school instead of putting them to work. After eight years, an evaluation by the International Food Policy Research Institute found gains in both education and nutrition. Primary school attendance had increased, especially for girls. School absences and drop-out rates had declined. And calorie and protein consumption among participating families had risen significantly.

Mexico's Programa de Educación, Salud y Alimentación [PROGRESA] provides cash transfers to more tan 2.6 million poor, rural families as long as they send their children to school. Benefits are higher for older children and for girls, who are more likely to drop out prior to secondary school. The programme also provides nutritional supplements for infants and small children in participation families. After its first three years in operation, enrolment for the critical transition year from primary to secondary school increased by 20 percent for girls and 10 percent for boys. Simulation of the impact over a longer period shows that, on average, children would complete 0.6 more grades in school and 19 percent more of them would attend some secondary grades.

1.3 Intervention frameworks

This issue, as well as these of monitoring and partnerships, were thoroughly discussed during the Aid Agencies Workshop which took place in Rome in December 2002[15]. After considering the findings of the study[16], the workshop took up the question of the kinds of framework that the ERP flagship should develop in approaching its task and the kinds of mechanism it should use to be effective.

The first requirement for the flagship is to identify precisely where it fits into the many current international initiatives. The list is long: the Dakar Framework of Action, the G-8 process in 2002, the Fast Track Initiative led by the World Bank and other donors, the PRSP and SWAp frameworks, the United Nations system Network on Rural Development and Food Security, with its 80 national thematic groups. All these initiatives need to be taken into account in delimiting the niche and modus operandi for the ERP flagship. Overlap and supplication are, as always, to be avoided.

The second requirement is that the flagship bear in mind that, despite the apparent neglect of education for poor rural people, the area is not virgin territory. On the contrary, efforts to make educational programmes in schools and other arenas relevant and useful for rural children, adolescents and adults have a long history and some are still current. In whichever country it works, then, the flagship should be sure that is has learned what efforts have already been made or are still in process, which have been relatively successful or disappointing and why.

On the other hand, since almost every country can point to at least one initiative of its own in education for rural people, the fact that only one of nine governments in Asia and, only two in West Africa have put a special focus on rural people, demands investigation country by country.

Within the guidelines derived from the considerations above, five parameters should

[15] *Education for Rural People, Aid agencies workshop*, 12-13 Dec.2002, Rome, Italy, FAO and UNESCO/IIEP, 2003.
[16] *Education for Rural Development: Towards new policy responses, op.cit.*

steer the efforts of the ERP flagship. The first will be dependable long term support, because any initiative will almost inevitably require additional financial and human resources and, in the nature of rural development, a relatively long time to mature.

Second will be painstaking co-ordination between the governments and the donors and between the donors themselves. Given the drive for overarching PRSP and within them SWAp for each development sector, neither donors nor the flagship can logically think in terms of isolated projects. They all need to buy into not only an overall development sector, but in the case of the rural space, also into a set of harmonized plans for several sectors serving a given population. The ERP flagship would have to be willing to join such concerted activities on the basis of what its comparative advantages could contribute to the overall effort.

The third parameter must be an insistence on quality. Past experience has shown clearly that simply increasing the numbers of schools or enrolments is not enough. Whether programmes serve children or adults, poor quality in instruction and support lead to poor attendance, poor learning, repetition and drop-out. High quality has the opposite effects and indeed helps generate stronger demand and more enrolments.

The fourth and fifth parameters are coupled: capacity building and sustainability. The drive for decentralization necessitates expanded capacities at all levels of an education and development system, because high-quality planning with remote rural communities will come to nothing, if not backed by high-quality support at the central and intervening levels. All countries operate with three interacting sets of institutions, which are not equal in capacity, influence or effectiveness. The weakest in all three dimensions tend to be the rural communities themselves: articulating their development needs and the education to support them requires a range of capacities that need to be deliberately nurtured. The second set of institutions comprises the sectoral ministries and departments, while the third comprises the cross-sector ministries like finance or national planning, which tend to be the most powerful and

influential, particularly in framing the PRSP and allocating finance. All three sets obviously need to work together. Enabling them to do so on a more equal footing is a major challenge of capacity building.

Without capacity building, particularly at the decentralized and community levels, the sustainability of development and educational initiatives will be put at risk. Within such frameworks and contexts, the ERP flagship could assess, country by country, which points on the demand and supply sides of education it might help address most productively. The range of factors behind weak and particular causes differ from country to country, so that priorities and strategies for dealing with them should also vary.

The flagship might review what measures have been used to overcome the universal compartmentalization of specialist ministries, departments and agencies at central, middle and local levels; and explore whether fresh avenues could be opened. Could tools of institutional reform be fashioned to promote and reward more active communication and stronger synergy between agencies concerned with education for rural people and development? Pressing this point further are experiences with primary schools and with adult education programmes. In the Bouaké region of the Côte d'Ivoire, a group of mothers banded together to cultivate a field for profit. Their motive was to raise the money necessary for their children's schooling. To make their enterprise maximally productive – and without assistance from the school or educational authority – they called on an agricultural trainer to help them obtain the necessary inputs and teach them the necessary skills. In adult programmes, efforts combine literacy instruction with training in improved agriculture, small businesses an income-generating activities have foundered, because they could not obtain the help of the appropriate technical staff. Could the flagship not help design measures to support educational, agricultural and off-farm business development agencies in collaborating to promote the sorts of enterprise undertaken by the women of Bouaké? In contrast to the task of determining just how the ERP flagship should reinforce education for rural

people, identifying what it should decidedly not attempt is relatively simple. In the matter of objectives, long and varied experience has demonstrated that fostering positive attitudes towards agriculture and manual labour and to reducing rural-urban migration are beyond the power of educational programmes. They are much more under the influence of the economy and its income structure. Related to this is the observation that separate systems or curricula for rural populations are usually rejected by their intended beneficiaries, simply because they appear to cut off avenues to higher-status wage and salary employment, while programmes of pre-vocational training for primary and elementary schools do not yield the expected results.

1.4 Monitoring mechanisms and indicators

The essential issue for ERP is that of indicators and mechanisms for monitoring developments and progress in education for rural people. It can be demonstrated by one of the very first experiences, that is the rural education strategy for Croatia whose government requested FAO's assistance to formulate the strategy. It has been possible to agree an approach, a framework for analysis and a set of indicators that would ensure harmonization with the country's current education strategy, its EFA plan and its policies for rural development and agriculture.

Croatia has around 5 million people, of whom something over 2 million (43 per cent) live in its rural areas, a rural population density of around 37 persons per square kilometre. Economically, the country is classed as 'upper-middle income' with a per-capita income of US$4,520 in 1998. The rural per-capita income is likely to be somewhat lower. In terms of human development, Croatia ranks high: life expectancy for women is 77 years, the mortality rate for children under the age of 5 is only 10 per 1000. The net enrolment ratio in primary schools is 82 per cent and both boys and girls are expected to complete 12 years of both primary and secondary courses.

Although these statistics are likely to be less favourable for Croatia's rural people, they would nevertheless suggest that an educational strategy for them would be more in the

nature of an operation to mop up pockets of rural disadvantage, rather than an urgent campaign to rectify serious inequities. However to be soundly designed, any operation requires sufficient relevant and reliable information on what is already in existence, what is missing and what might be improved. The kind of information required to steer a strategy for education for rural development is not readily available or easily generated even in countries that have reached Croatia's stage of human and economic development. For instance, the data in the country do not distinguish between urban and rural conditions. To identify precisely and with parsimony just what additional information would be needed to proceed, the government and FAO team first established and defined three foundation concepts: 'basic education', basic learning needs' and 'education for rural people' envisaging a broad educational approach in the perspective of enhancing rural development and reducing rural poverty.

The next step established an agreed analytical scheme. Each component of education would be examined from six perspectives: (1) supply of educational opportunity; (2) actual access to opportunity by population groups; (3) demand expressed through enrolments; (4) quality as embodied in curriculum content and instructional materials; (5) quality as exhibited through attendance, completion and graduation rates; and (6) institutional capacity in every level and component of the education support system. In addition, for each agreed indicator, there would be a systematic comparison between national and rural rations and provisions. Since the conceptual framework for analysis monitoring and indicators was agreed, the Government of Croatia and FAO moved forward with designing mechanisms of implementation that will complement the arrangements that now exist for keeping track of supply, access and quality.

Another important question that has to be raised while talking about monitoring is a methodology for evaluating non-formal educational activities across several development sectors. The need for a better methodology springs from three sources: EFA, the United Nations Literacy Decade and the drive for poverty reduction. This has led to a deepening recognition that varieties of learning activities take place in most

communities and could benefit from being more systematically supported, if the demand for them were better known, along with their contributions, strengths and needs for reinforcement. The third source is the neglect that methods of monitoring and evaluation for non-formal education have suffered during the past quarter of a century, which has led to a loss of credibility.

Financed by UNESCO's Japanese Funds-in-Trust, four sites in three countries[17] are testing the methodology, which aims to combine a participatory community-based approach with the usual quantitative and necessary statistics on supply, demand, take up, completion rates, costs and so on. The community base enables a full picture of the educational opportunities available to and used by specific groups of people. The scope covers learning activities in adult basic education, extension training in agriculture, cattle and other livestock, forestry, fisheries, health, water and the entire range of occupational training, whether by government agencies or other organizations. In addition to the community base, the project attempts to use information technology and specially designed software, MANGO (Map-based Analysis for Non-formal education Goals and Outcomes), so as to make the advantages of computers accessible to communities and local educational and training personnel.

The third question that regards monitoring is the state of achievement of the Millennium Development Goals for primary education only: gender parity by 2005 and universal primary completion by 2015. The shift of emphasis from the gross and net enrolment ratios to the completion ratio as the appropriate indicator of universal primary education was a recognition that only completing the full primary course could ensure that young people had equipped themselves with enough skills to function fully as citizens. To bear out this point, statistics from Niger showed that fewer than a quarter of adults who had completed only four of the seven-year primary course could read easily, whereas nearly 90 per cent of those who had completed the full seven years could do so. Using examples from several African countries, the

[17] Cambodia, India (sites in Andhra Pradesh and Madhya Pradesh) and Tanzania.

presentation documented the disadvantages suffered by rural children – in one case rural boys were only half as likely to enrol in primary school as urban girls. It also highlighted the disparities between boys and girls in both rural and urban areas, and between the richest, the average and the poorest segments of populations, and pointed out that the disparities are to be found at both macro and micro levels. These more disaggregated figures of course bore out the larger-scale data presented in the opening addresses. They also highlighted the differences that exist between countries in progress towards ERP and in the tasks that remain to be accomplished.

The collection of school data has seen considerable improvement over the past 10 years or so in a number of countries, and central ministries now have databases that could produce detailed disaggregated analyses by regions, provinces and districts. They could generate current information on gender distribution, age distribution, rates of repetition, survival and completion, the incidence of multi-grade teaching and biennial enrolment, as well as pupil/teacher rations and the distribution of textbooks. At present, however, very few countries actually capitalize on this potential for information and management. This could be a point of leverage for the ERP flagship.

For identifying and comparing trends countrywide, updated demographic data are necessary, but expensive to obtain and therefore scarce. Instead, reliance is placed on average inter-census growth rates that tend to ignore migrations, recent changes in the fertility rate or in the spread of HIV/AIDS. However, several countries do conduct periodic household surveys, which can be very helpful in detecting rural/urban and other comparisons and for cross-checking data derived from the school system, particularly from the perspective of poverty alleviation.

Monitoring the quality of achievements and outcomes has for the most part relied on standardized examinations. Despite their limitations in reach – often, pupils thought by their teachers not likely to do well are discouraged from sitting the examinations – and quality in terms of the skills they test, these can be analyzed to detect weaknesses

in teaching in particular subjects and in particular geographic areas and schools. However, a few countries have gone beyond general examinations and have introduced more probing assessments of knowledge and skills gained, but only on the basis of samples. These of course need to be reiterated periodically, which in turn requires capacity and expense.

Whatever the progress in refining and monitoring indicators, progress towards UPC itself depends on designing and, even more, on implementing sound education policies. Major gains in efficiency in retaining and actually instructing pupils are imperative, and these can be achieved only through effective reforms in matters like the actual allocation of resources, teacher' terms of service, repetition rates, numbers of hours actually taught in a school year, actual provision of texts and other learning materials. Many of these are of course to be found in the target values of the Fast Track Initiative (FTI). Maintaining a special focus on rural people is an essential ingredient of UPC, for most of the progress needs to be made with poor and very poor rural families (and also poor urban families. The ERP flagship could help ensure that the favourable contexts provided by SWAp and the FTI are properly utilized, as well as work to develop, establish and sustain workable mechanisms for monitoring, data collection, data analysis and the generation of reliable, up-to-date information.

In conclusion, it has to be said that indicators require data and that data require people with the requisite capacities, time and financial resources to gather, collate, organize and analyze them, and then disseminate the information generated. The fact that most countries have an abundance of data, which they have not analyzed for the purposes of policy and managements or for tracking disparities between rural and urban populations, suggests that they may well lack the resources of capacity, or both, to do so, and it is obviously important not to construct monitoring systems that cannot be sustained by local capacities. What seems to be called for is a strengthening of Management Information Systems, along with a streamlining of indicators and the data required to generate them. That would be helpful not only for countries with data

overload, but also for those where data are scarce. However, any streamlining should take care to include indicators not only of inputs and outcomes, but also process, to enable the monitoring of political changes and reforms.

In addition to the concerns about the quantities of data, there was some concern about quality and reliability: for example, school systems where resources are allocated by enrolments have been known to inflate their figures. The issue of devising incentives for the collectors of data to collect carefully and conscientiously had to be considered.

For the national level, the data should be sufficient to indicate overall progress towards EFA. Within the nation, data would be needed to measure how specific areas of population groups were faring in regards to specific objectives. It should also be possible for local people to see how their own localities were doing, which would of course entail developing local databases and nurturing local capabilities to interpret them. This is of course what the MANGO test is seeking to do. Early indications from the three countries testing MANGO suggest that, when local people understand the data and appreciate their usefulness, they can and indeed will exert themselves to help with collecting them.

A further point is that local databases facilitate linking the data from the school system with those from non-formal education activities, which in turn facilitates consistency and complementarity between data and indicators. Indeed, local databases facilitate linking educational development more completely with the wider spectrum of local rural development.

1.5 Coordination and partnerships for effective aid policies and practices

The coordination between many agencies involved with different forms of education and training for rural peoples and their development is of the most important issues to be considered while undertaking any initiative under the flagship of ERP. Co-ordinating external assistance is already an important item on the agenda of both

recipient governments and the agencies dealing with financial resources and technical assistance. PRSP, SWAp, ''sleeping partners' and 'basket' or pooled financing are already examples of initiatives to promote more effective co-ordination and consistency. In addition, many if not most governments hold annual co-ordination group meetings, at which they and their partners review relative areas of support and approaches to sector development, and agree on strategies to achieve the goals of the different sectors. The principles of avoiding duplications of effort and over-concentrations of resources and seeking how best to invest increasingly scarce externally provided resources to maximize development gains are universally agreed, if not always ideally implemented. Co-ordination is acknowledged to be particularly important for rural development, which is multisectoral in nature but depends on a monosectoral division of labour almost everywhere.

Accumulating experience has made it clear that effective co-ordination between disparate and independent agencies requires at least some sense of partnership. It is also clear that the scope of both co-ordination and partnership needs to be widely cast to include not only donors and governments, but also all the many levels of stakeholders from central ministries through the leaderships of local communities to the prospective beneficiaries themselves. The question for the Aid Agencies Workshop[18] was whether the ERP flagship could do anything about facilitating better partnerships and more effective co-ordination in the service of education and development for rural people. Eight key principles for successful partnerships were set out. They applied with equal force to partnerships between two individuals, between two or several agencies an between agencies and less-formal communities of interest such as the parents concerned with primary schools or participants in an adult education programme.

Key principles for successful partnerships:

- Agreeing in detail a common vision, joint objectives and mutual benefits;

[18] *Education for Rural People, Aid agencies workshop*, 12-13 Dec.2002, *op.cit.*

- Identifying complementary contributions that will clearly create new value;
- Distributing roles in alignment with comparative advantages and without duplication;
- Openness to learning from each other;
- Trust and transparency in shared decision-making;
- Promoting informal personal connections to cement formal institutional links;
- Fairly sharing work, problems, proceeds, recognition and rewards;
- Shared monitoring and evaluation of synergy, efficiency, productivity, diversity, openness, flexibility, adaptability, security of relationship and legitimacy.

Working in support of partnerships, and particularly in support of the sixth principle, is the concept of networks. Its aim is to stimulate interaction, sharing information, strengthening professional support and raising awareness of emerging issues and developments among all the stakeholders in a partnership. Although networks can form and develop spontaneously, they, like the partnerships themselves, require deliberate nurturing and support to be fully effective.

In the context of large organizations, especially those with branches spread through several countries around the globe, the leadership's commitment to partnerships needs not only to be explicit and strong, it needs also to permeate every one of its personnel, whose functions affect a partnership. However, without clear incentives to dedicate time and effort to constructing partnerships and making them work, staff can tend to talk the language of partnership, but continue on easier paths of implementation. The ERP flagship could be of use to its many partners by prompting them to assess the extent to which their internal patterns of incentives for recognition and career advancement support and even promote an orientation to partnerships and networks.

In education for rural people and in the present push for decentralization, partnerships and networks can involve eight or more sets of stakeholders on both the national and international planes. As the workshop itself demonstrates, a mechanism like the ERP flagship needs, on the one and, to work and network with the appropriate personnel of

three sets of international stakeholders – governmental, intergovernmental and non-governmental – to create, be sure of and sustain a shared vision in the face of the usual fluidity of careers and policies. On the other hand, when it comes to particular countries, the ERP flagship has a double task. It has not only to check that the local staff of the international stakeholders have been appraised of and share the vision, it has also to forge and negotiate that vision with five or more national sets of stakeholders: the central government agencies involved – in rural development, they could be several – the local government agencies involved, a number of non-governmental agencies, some of which may operate only within very restricted areas, teacher' unions or associations, and local stakeholders like community leaders, the parents of local school populations or the participants in local education and development programmes. The number of links in the chain of connections that need to be fashioned to achieve sound partnerships in education for rural people may help explain why the terms 'partnership', 'co-ordination', 'co-operation' and 'collaboration' appear so often in print as aspiration, but less often as fully realized implementation.

However, there are many experiences to show that care, patience and time can make these concepts realities. An example presented to the workshop was the Shiksha Karmi project in the Indian State of Rajasthan. It has a history of 27 years, 1975-2002, during which time it has grown from a pilot of just three village schools to over 4000 schools in more than 2000 relatively isolated villages. Although a detailed description of the initiative is not appropriate here, the experience gives several useful signals for policy in education for rural people.

Perhaps the most important for present purposes is that the ERP flagship should be on the lookout for these kinds of initiatives and use them to develop guidelines on how governments might encourage and incorporate partnerships for education for rural people into their plans for EFA.

A second signal is further confirmation that local NGOs can be vital in developing and

testing ideas that are directly relevant to poor rural people and fill gaps that the standard governments' machinery fails to close. Appropriately encouraging and reinforcing their efforts, particularly those which are faith based, would appear to be sound policy. In several countries, however, relations between governments and NGOs have been marked more by mutual wariness than by mutual trust, encouragement and co-operation. Where this remains the case, the ERP flagship might seek opportunities to promote better relations between the two sets of stakeholders for the greater benefit of rural people.

Alongside the NGOs as possibly under-utilized resources are the academic and private sectors. The educational, agricultural, environmental and economic branches of higher education could be encouraged to undertake the kinds of qualitative, quantitative and action research that could uncover opportunities for productive partnerships between community groups, NGOs, government agencies and international supporters. Similarly, those parts of the private sector that have an interest in rural development and prosperity could, where appropriate, be invited to consider partnerships, while its consulting branch might complement the research capacities of the universities.

A third signal from Shiksha Karmi concerns what is called 'people's participation'. The initiating NGO, the Social Work and Research Centre leaderships of their communities, were willing to accept responsibility for managing and maintaining the schools. In addition to time and effort, this often involved a frequently overlooked type of material resource, namely, contributions in kind –labour, thatching materials, bricks and the like. These forms of contribution are important, if only to give the community some status as an equal, contributing partner, together with a real and palpable stake in the ownership of the products and benefits of the partnership. The ERP flagship should be sure not to allow this aspect of partnership to be neglected.

A further concern was raised in regard to a rural population group that was at risk of being overlooked. This group comprised the orphans created by the HIV/AIDS

pandemic. The inability of many families and communities to cope with the orphans meant that the state had to replace the deceased parents in supporting and educating them. Given the usual bias of the state to concern itself more with urban populations, there was a danger that the extent of the rural dimension of the problem could be underestimated and underserved. The ERP flagship will then need to maintain a watching brief in the interests of the rural HIV/AIDS orphans.

A final point of the workshop's presentations was that, given the already long and chronically unequal struggle for education and development for rural people and the huge challenge of its task, the ERP flagship should be a light mechanism of advocacy and co-ordination, shake itself free from bureaucratic constraints and dare to behave as a pioneering, activist, lobbying mechanism.

2 ALL STAGES OF EDUCATION IN SERVICE OF RURAL DEVELOPMENT[19]

2.1 Basic education in rural areas

The lack of basic learning opportunities is both a contributing cause and an effect of rural poverty in the low-income countries. Even where schools exist, various economic and social obstacles prevent some children, especially girls, from enrolling. The opportunity cost of schooling is one of the main obstacles for poor families, who often count on their children's labour and earnings. Also, 'school learning' may appear quite irrelevant with respect to their more immediate survival needs.

In general terms, rural children and adults – most of whom are poor – have very limited opportunities to obtain a viable basic education that would help them break out of the poverty cycle. Many rural children never enter a school, many of those who do enroll fail to complete the full primary cycle and even among those who do complete it, many leave school barely literate. The curriculum and sometimes the language of instruction are not suited to local conditions. Rural schools are often in poor repair, poorly equipped and staffed with poorly prepared and poorly paid teachers. Programmes targeting rural adolescents and adults often are not well organized, nor well adapted to local learning needs and depend on untrained or poorly trained, low-paid personnel. Such programmes are difficult to expand or even sustain. Furthermore, rural learners of whatever age are generally at a disadvantage in comparison with their cousins in the city who have access to relatively better educational opportunities – which are often still well below the standards aimed at in government policy.

The *World Declaration on Education for All* (1990) states in its first article that "Every person – child, youth and adult shall be able to benefit from educational opportunities designed to meet their basic learning needs". It goes on to say that these needs

[19] This chapter is mainly based on the results of the research presented in *Education for Rural Development: Towards new policy responses*, *op.cit.*

comprise essential learning tools, such as literacy and numeracy, as well as the knowledge, skills, values and attitudes people require to function well and continue learning in their particular environment. It also acknowledges that "the scope of basic learning needs and how they should be met varies with individual countries and cultures and inevitably changes with the passage of time".

In examining the provision of basic education in rural areas, one should bear in mind that social conditions there are changing and the rural economy is becoming more diverse, with expanding opportunities for off-farm employment. These changes necessarily influence what constitutes constants, such as literacy and numeracy skills, the basic learning needs of rural children and adults today are probably more extensive than those of a generation ago and these learning needs continue to evolve. This means that the content and delivery of basic education will have to evolve as well.

Governments in many developing countries are trying to shape the evolution of rural life through economic development policy. The Green Revolution, for example, brought many changes to rural life in addition to increased agricultural production. Other changes are occurring in response to market forces that signal changing priorities for rural products and employment. In addition to meeting currently neglected learning needs in rural areas, basic education must respond to these changing economic and social conditions in order to be relevant and effective.

The contribution of ERP uses the term education for rural development, which implies that the function or purpose of education in rural areas is or should be to contribute to rural development and well-being, including food security, health, employment, protection of the environment and management of natural resources. It envisages a broad educational approach to meet effectively and equitably the basic learning needs of rural children, out-of-school youth and adults, in the perspective of reducing rural

poverty[20]. The following section will examine the actual situation in respect to this positive vision of education in rural areas.

2.1.1 Basic education in rural areas today

In recent years, the provision of basic education in rural areas has been heavily influenced by two main currents of development policy. The first one derives from the World Conference on Education for All in Jomtien in 1990. Providing basic education for all is now understood to be not only a fundamental obligation of any government, but also to be necessary prerequisite for social and economic development. The second and concurrent influence has been the world community's renewed commitments during the 1990s to alleviate poverty. This has helped underscore the importance of meeting the basic learning needs of the three-quarters of the world's poor who live in rural areas[21]. This current of development policy views basic education as a necessary instrument to make improvements in various domains, such as family health, food security, employment, productivity and democratic behaviour.

Primary schooling

The today situation is not very optimistic. As for access, rural children in low-income countries generally still have less opportunity to attend and complete primary school than do children in the better served urban areas. The geographical distribution of schools in most developing countries is not adequate to reach all rural children. Incomplete school is another common phenomenon that offers instruction in a few but not all primary grades. Children who are thus obliged to leave school at age nine or less have a very limited 'basic education' and are prone to losing their literacy and numeracy skills. Even where schools exist, various economic and social obstacles prevent some children from attending them. The opportunity cost[22] of schooling is one of the main obstacles for poor families, who would lose the income of services derived

[20] Gasperini, L.; Maguire, C., *Targeting the rural poor: the role of education and training*, Rome, FAO, 2001.
[21] IFAD, *Rural Poverty Report 2001*, *op.cit.*
[22] The opportunity cost of a decision (e.g. going to school) is the value of the foregone alternative decision (e.g. working).

from children's labour. In many developing countries child labour remains a considerable obstacle to EFA. Introducing more flexibility in the delivery system, particularly but not only concerning timetables, represents an important challenge to address the specific needs of working children. Additional gender-specific concerns often underlie the non-enrolment of girls. Local traditions may favour boys' education and give little value, or even a negative value, to a girl's schooling. In some countries, there are also legal obstacles to schooling such as the lack of birth certificate in rural areas (e.g. Egypt) or the denial of citizenship to certain rural minorities (e.g. Thailand). Finally, war and conflicts, which affect mostly rural areas, disrupt the provision of educational services and impede access and regular attendance.

Effective access to schooling involves more than initial enrolment. Regular attendance is a minimal requirement, which unfortunately is often not met in rural schools. Health problems, malnutrition, domestic demands on children's time and seasonal demands for their labour in the fields all take their toll on attendance. Disrupted learning can lead to grade repetition, which in turn leads to over-age children filling primary school classes. Also, repetition is often linked to dropout. These interrelated phenomena are not unique to total schools, but they deprive a lager proportion of rural than urban pupils from obtaining viable basic education. For those rural pupils who manage to complete the primary cycle, opportunities for further study are quite limited, much more so than in urban areas. Rural secondary schools are fewer, without boarding arrangements, so unless the families can find accommodation in the proximity, distance selects out many potential pupils. Distance learning would be an alternative, but apart from occasional rural library, other opportunities to continue self-study are still rare in rural areas.

As for the content of the school curriculum and the perception families have of it, is another important factor sometimes contributing to low enrolment and poor attendance in rural primary schools. Most developing countries have a unitary, centrally determined curriculum, which is generally designed for pupil's familiar with

and urban environment and may contain elements that conflict with local customs and beliefs. This 'urban bias' complicates the task of rural teachers and makes learning that much more difficult for rural children, who see little relevance of some subject matter to their own experience and to life in their community. When school learning is perceived to be irrelevant to rural life and likely to draw children to the city, parents may seen no point in sending their sons and especially their daughters to school.

The quality of the school inputs (e.g. teacher, facilities, materials) also affects school enrolment, attendance and completion rates. Teachers are a key 'input', but the rural teacher is generally poorly trained, supervised and remunerated. Many teachers must cope with ill-equipped classrooms overcrowded with children of several ages. Difficult working conditions combined with a low salary that is often paid late tend to sap the morale of even dedicated teachers. Another serious problem in many rural communities is the frequent tardiness or absence of teachers, whether due to ill health or to other employment to make ends meet. A still more discouraging phenomenon reported by many countries is the disappearing teacher, often a victim of the HIV/AIDS pandemic.

The physical environment of the school, beginning with its proximity to the pupils' homes, also determines to a large extent the quality of schooling. Other important physical factors include the climatic suitability of the building; the adequacy and repair of the classrooms and other facilities; ventilation and lighting; the existence and condition of a playground, a garden and toilets for the children (separate for boys and girls); and the supply of electricity and drinking water.

Another important factor in the quality equation is the pupil and the home environment. Children, who have had good intellectual stimulation and language training, are well prepared to learn in school. Unfortunately, this is not the case for many rural children. Also, children coming from a home with a language other than the school language have another obstacle to overcome. Furthermore, the fatigue

experienced by children burdened with time-consuming household chores or who must walk long distances to attend school also undermines their learning in school and at home. Finally, children who receive little or no supervision or help with their studies at home are also at a disadvantage. Children who are undernourished or otherwise in poor health have difficulty concentrating and attending class regularly. When poor children go to school, they often leave home on an empty stomach. Three hundred million of the world's children are chronically hungry: the approximately 170 million of these children who attend schools must learn while fighting hunger[23].

Other modes of basic education in rural areas

Formal schooling is not the only vehicle of basic education found in rural areas. Some organized pre-school activities for young children contribute to their basic education and school readiness (Early childhood development programmes – ECD) e.g. by teaching the language of further school instruction. In addition, various institutions and services (e.g. health clinics, libraries, agricultural extension) and media (e.g. radio, newspapers, folk theatre) provide rural people with useful information and support informal learning by children and adults. Also, one should not overlook the organized learning offered through non-formal religious instruction (Koranic schools, temple schools, etc.), informal apprenticeships and traditional practices, often of a religious nature, such as story telling, initiation rites and periods of residency with monks. Finally, there are various forms of indigenous, traditional learning provided by families and by communal groups. All of these forms of learning often play an important role in rural communities and help shape people's understanding of their social and natural environment.

Most non-formal education activities in rural areas probably include a component to develop literacy and numeracy skills. This may be the primary focus, or an instrumental element contributing to other objectives, such as improved health, income generation or food security. There are a few encouraging examples of non-formal

[23] World Food Programme, *School feeding baseline survey*, Rome, WFP, 2001.

programmes that have expanded to reach large numbers of rural communities. One of the best known examples is the non-governmental Bangladesh Rural Advancement Committee (BRAC) which began providing rural non-formal schooling in 1985. By 1998 it operated some thirty-four thousand schools serving more than 1.2 million children. Some other programmes, like the rural radio stations in southern Mali, make use of radio or other media in the vernacular current in rural areas to inform various rural target groups and promote their basic learning in respect to health, agricultural practices, child care, environmental issues, etc. It is impossible to have a clear picture of the numbers of persons actually reached, nor of the impact on their knowledge, but anecdotal evidence suggests that such programmes can be quite effective and appreciated by rural communities[24].

Learning achievements and outcomes

The quality and effectiveness of schooling and other forms of basic education should translate into learning achievement and positive changes in behaviour. With respect to primary schooling, the UNESCO-UNICEF Monitoring Learning Achievement project[25] has generated survey findings in a large number of low-income countries. These surveys indicate that pupils in urban schools generally develop better literacy, numeracy and 'life skills' than do pupils in rural schools.

Assessments of learning achievement of rural participants in adult basic education programmes have usually found some gains in general knowledge and specific skills, including but not limited to literacy skills. However, other outcomes of these programmes are probably a least as important. For example, a recent World Bank report based on a review of various studies found that adult basic education increases participants' efficacy for individual or collective action. The acquisition of literacy and numeracy skills can increase adults' self-confidence in their dealings in the market place – which in turn may improve their income. This 'empowerment' effect is

[24] Emiliani, M.; Gasperini, L., *Compendium of experiences of Italian NGOs in basic education (draft)*, Rome, FAO, 2002.
[25] Monitoring Learning Achievement (MLA) Project, *Urban/rural disparities* (mimeo), Paris, UNESCO, 2002.

particularly significant for women in male-dominated societies. Literacy also facilitates learning other skills, such as management skills. The report found that basic education programmes for adults show definite positive effects on family health and family planning. Furthermore, such programmes have a synergy effect on children's schooling. Neo-literate mothers, in particular, seek to put and keep their daughters in school[26]. Besides such beneficial outcomes for the learners and their families, certain benefits for the community are sometimes attributed to adult education programmes, such as improved social cohesion and reduction in violence.

Not enough to break the poverty cycle

Although there are local exceptions to the pattern of basic education in the rural areas of low-income countries sketched above, opportunities for basic learning are generally inadequate to help rural dwellers break out of the poverty cycle. This lack of basic learning opportunities is both a contributing cause and an effect of rural poverty.

Rural poverty-reduction policy should be a priority of the governments' strategy, however, it is not so for various reasons. The main one seems to be that developing country governments have other priorities that absorb their attention and resources. Public expenditure patterns reveal that most countries' real priorities favour urban development rather than rural development. This reflects and understandable concern to deal with the many problems associated with the relentless process of urbanization, but it is also a response to the growing political power of the urban population. Higher spending in rural areas should normally improve outcome more than higher spending in urban areas[27]. Thus this urban bias in public expenditure is not only inequitable, it is not cost effective, nor does it contribute to the country's sound, overall development. The poverty and political weakness of rural populations are cited as main causes of rural neglect in a recent report issued by UNESCO's International Research and

[26] Lauglo, J., *Engaging with adults. The case for increased support to adult basic education in sub-Saharan Africa*, Washington DC, World Bank, 2001.
[27] IFAD 2001, *op.cit*.

training Centre for Rural Education[28].

Even when government recognizes the imperative need to invest more in rural areas, it must sort through many competing demands and fix reasonable priorities. For some countries, prior disappointing experiences with agricultural education and with adult literacy campaigns raise legitimate questions about how best to proceed. For instance, how can primary school curricula be made relevant to local needs and conditions? What kind of adult basic education programmes will be most effective? Attempting to deal with these issues through a centralized education bureaucracy is fraught with problems and few governments have so far found a formula that allows sufficient flexibility and accountability. Meanwhile, indecision and hesitant initiatives prevent any serious increase in resources allocated to basic education in rural areas.

2.1.2 Improving the provision of basic education in rural areas

Despite the shortcomings in the provision of basic education in rural areas today and the chronic shortfall in resources allocated for it, progress is being made as many countries continue their efforts to expand its coverage and improve its quality. To reach the goals of Education for All, a determined and long-term commitment is required to expand learning opportunities for various categories of learners across different age groups with a broad range of basic learning needs. In order to maximize the returns on this investment, basic education must be offered on an equitable basis so that all learners have a fair opportunity to obtain a viable basic education and be able to continue learning throughout their lifetime. Some combination of formal and non-formal programmes is needed, as well as various informal educational opportunities (e.g. rural newspapers, libraries, women's associations) for lifelong learning.

To attract and retain learners and to meet their needs effectively, a simultaneous commitment to improve the quality and relevance of basic education programmes is called for. In many instances, this will entail designing and running the programmes in

[28] INRULED (International Research and Training Centre for Rural Education), *Education for rural transformation: towards a policy framework*, Beijing, INRULED/UNESCO, 2001.

close harmony with other development activities (health, food security, agricultural production etc.) organized in the rural areas concerned to ensure that learners can put their knowledge and skills to good use.

Furthermore, efforts to expand and improve basic education in rural areas need to be undertaken in the broader context of each country's education and training system. Systemic reforms should aim both to remove the existing urban/rural disparities in educational opportunity and to ensure a coherent system with appropriate bridges between its various streams and a fair recognition of learning levels achieved in diverse ways.

2.1.3 Expanding the provision of basic education with more equity

As seen earlier, a large proportion of the world's rural population has little or no access to basic education offered by the state or by other education providers. Constructing more primary schools and classrooms in rural areas is an obvious priority for many countries. A parallel strategy to increase school capacity is to seek ways to use existing facilities and teachers more efficiently to accommodate more pupils. Where feasible, for instance, multigrade classrooms and teaching pupils in shifts (e.g. one set in the morning, another set in the afternoon) can effectively expand school system's capacity. Making primary education compulsory is an important prerequisite for achieving EFA. Legislation governing education in some countries needs to be reviewed and revised to make compulsory education attainable and enforceable in rural areas.

While the physical expansion of the primary school system certainly enable more children to have access to schooling, meeting the basic learning needs of the marginalized and neglected groups and categories of learners will require additional, special efforts. Among the children unenrolled to school, girls still constitute a majority. Increasing the proportion of girls in school – thereby moving toward better male/female equity – often requires special measures to induce parents to enroll their daughters and keep them in school. Some relatively simple changes can often make a

big difference. For example, enclosing the schoolyard with a fence and building a separate latrine for girls can help allay parental concerns for their daughters' safety. Another simple measure is adjusting the school calendar to accommodate other demands on girls' time, such as fetching water early in the morning or selling goods on the weekly market day. Sometimes, more ambitious measures are needed such as recruiting more women teachers in order to overcome the parents' reluctance to male teachers in some societies. Adjusting the curriculum to eliminate the gender stereotypes and retain girls in school and compensating parents for the opportunity costs they incur when girls attend school could be among the more demanding solutions.

Working children are another large, amorphous group that schools generally fail to serve. In rural areas, children can be seen tending flocks, working in the fields, running errands in the villages, doing household chores, minding young children and working at various crafts. Some forms of child labour are clearly hazardous and harmful, such as the young banana picker in Ecuador, some as young as eight, who are exposed to the spraying of toxic chemicals and to sexual harassment, according to a recent report by Human Rights Watch[29]. Most countries have legislation for a defined period of compulsory education, but enforcement, particularly in rural areas, is problematic. Poor families often depend on their children's labour and whatever additional income they earn. Forcing their children to attend school – even if this could be done – would undermine the viability of many poor families. The more humane approach is to find ways to adapt school to their needs or to provide alternative opportunities to acquire basic education. As mentioned earlier with respect to girls, some adjustment of school hours and the school calendar may also enable some working children to attend at least part-time. Similarly school deeding and other incentive schemes can help compensate families for the labour or income foregone when their children attend school instead of working.

[29] *The Economist*, 27 April 2002.

Illiterate adults and other who have weak literacy and numeracy skills constitute a very large target group for adult basic education (ABE). This is clearly an important dimension of Education for All and can also be a strategic factor in the transformation of rural areas. The literate mothers generally see to it that their sons and daughters become literate, too. There are definite correlations between parental education levels and children's school enrolment, attendance and learning achievement. This suggests that any serious national effort to achieve universal primary education (UPE) should include a strong ABE component. Together, UPE and ABE can reduce the incidence of illiteracy more quickly. The link between adult literacy and family planning practices is now well established, and ABE can also lead to improvements in family nutrition, health and childcare. A less visible but important outcome reported by many AB participants is improved self-confidence, a basic ingredient of empowerment of rural people, especially of women. Literacy and numeracy are directly useful in the marketplace and in management tasks, so these skills, together with certain other ABE content, can lead to more productive livelihoods – an essential factor in alleviating poverty.

Remote rural populations are neglected or under-served by the school system in many low-income countries. In addition to the geographical factors that tend to isolate them, people living in remote rural areas may be further marginalized from the mainstream by ethnicity, culture, language, or religion, as well as their material poverty. The centrally determined school curriculum may appear to them as quite irrelevant to their very different basic learning needs. In this connection, a recent case study of remote highland communities in Thailand noted a growing awareness of the need to harmonize modern knowledge and local wisdom. Consequently, to maintain the socio-cultural heritage and integrity through inter-generation communication, the importance of local curriculum development is recognized y a number of communities, as well as concerned governmental and non-governmental organizations[30].

[30] FAO, Regional Office for Asia and Pacific, *Case Study on education opportunities for hill tribes in northern Thailand: implications for sustainable rural development*, Bangkok, FAO, 2002.

Nomadic peoples, unlike most marginalized groups in remote rural areas, have a distinct lifestyle that sets them apart from the sedentary 'host population'. They are often desperately poor in material terms, and subject to the vagaries of the climate. In addition, they may differ form he majority population by ethnicity, religion and language. Such differences can be a source of antagonism, mistrust and even conflict between them. The sedentary population may consider nomads as 'foreigners' with an inferior, primitive way of life. Most observers would probably agree that schooling, especially through boarding schools, tends to undermine nomadic culture and traditional values, but its threat to the economic structure of pastoralists which depends on household and collective responsibilities is less evident. As the nomads consider children's work as a process of socialization, the schooling interferes with the 'duty' of parents, it is perceived antagonistic to the nomadic way of life. Apart from the issues of policy and perceptions regarding education, providing basic education to nomadic groups involves some major challenges in respect to content and logistics. There is abundant evidence that nomads value literacy and numeracy skills, but other elements of the nationally prescribed curriculum may appear less useful to them. The lack of curriculum relevance is often cited as a major reason for the low participation and completion rates of nomadic children. This suggests that nomads need to be much more involved in planning the curriculum designed for their children. Also, like with the remote areas populations, using the prevalent mother tongue can help strengthen the group's cultural identity, whereas use of a national language may help integrate the group more closely with the mainstream national culture – or alienate the nomads further. This seems another matter well worth negotiating with the group concerned. The usual, fixed location school model is generally inappropriate for nomadic peoples and can be difficult to maintain. Providing schools with boarding facilities, though a costly option, has been used with mixed success in some countries. A mobile school seems a more promising solution, but it has also proved problematic. Open and distance learning (ODL) seems to offer another possible solution to reach nomadic peoples, but so far it has had limited impact, at least in Africa. However, it has been

used quite successfully in the non-formal education project for Gobi in Mongolia[31].

Refugees and internally displaced persons (IDPs) uprooted from their homes by natural disasters or by civil conflicts constitute yet another heterogeneous category of people found in rural areas and who have little or no access to established education services. A review of educational provision in emergency situations found that displaced people make every effort to provide some form of schooling to their children.[32] In emergency situations, providing food and shelter is the understandable priority, but there is a growing realization that a rapid educational response is important in meeting the psycho-social needs of displaced children, as well as adults. Few low-income countries are adequately prepared or have contingency plans to deal with an influx of refugees or with an internal emergency situation. Fortunately, there are several international organizations and NGOs that have valuable experience and access to resources to assist governments in emergency situations. Each crisis is unique in some respects, so the appropriate educational response needs to be worked out on a case-by-case basis, preferably in consultation with the population groups concerned.

Children and adults with disabilities constitute a transversal category whose learning needs are not met well or at all, especially in rural areas. To some extent, these learners face a double discrimination. They are excluded from basic education programmes because of physical, mental or behavioural impairments – or because of negative attitudes in respect to their impairments and they are penalized by the rest of the rural people. Early detection of actual or latent disabilities can often lead to treatment that reduces their gravity and enables the child or adult to participate in learning activities with little special attention. Simple screening for visual or hearing impairments may save a child's schooling. A programme to inform parents about possible disabilities, their treatment and effects, on a child's ability to learn can help draw out children with disabilities who otherwise may be kept at home because of shame or ignorance.

[31] UNESCO, *In the green desert*, *Making it work*. Innovations Series, no 12, UNESCO, Paris, 1997.
[32] UNESCO, *Education in situations of emergency and crisis: challenges for the new century*. (Thematic study for the World Education Forum, Dakar, 2000), Paris, UNESCO.

2.1.4 Improving the quality and outcomes of basic education

Efforts to expand basic education programmes to reach more learners in rural areas need to be accompanied by measures to ensure that the content, quality and delivery of those programmes effectively meet learners' needs. Basic education that is seen to be relevant to rural people's learning needs and of good quality is better ale to attract and retain learners. Each set of actors and stakeholders has a perspective that needs to be taken into account. And so the teachers are the key actors in the education process. A well-trained and motivated instructor is better able to stimulate and guide learners. Recruiting and training men and women teachers locally, when feasible, may reduce costs, ensure that teachers know the local language and customs and are acceptable and accountable to the local community. Even if salaries cannot be topped up, rural teaching assignments may be made more attractive by incentives in the form of access to further education and training or provision of living quarters or transport. Some temporary skilled teachers are also needed to replace immediately the teachers very often eliminated by HIV/AIDS pandemic widespread in developing countries.

The relevance of the curricula used in primary schooling and other basic education programmes in rural areas determines their appeal to learners and their effectiveness at meeting basic learning needs. Experience suggests at least four guidelines for designing basic education content for learners in rural areas. First, the curriculum should relate to the local context, customs, livelihoods and rural development activities. Second, it should take due account of the teachers' qualifications. Third, it should make use of the locally available skills, knowledge and other resources. Fourth, it should respond to the expressed wishes of the community, determined through consultation and negotiation with the community.

Learning materials and educational facilities constitute an important input to basic education that is generally deficient, both in quality and in quantity. A well maintained building, suited to the climate, with furnished classrooms and good ventilation

facilitates the teaching-learning process. Safe drinking water, separate toilets for girls and boys and electricity should become normal features of rural schools. Unfortunately, this is not the actual image. Moreover, the learning materials, such as textbooks, maps, chalk, pencils are often in short supply. Even the teacher may have non course guides or resource materials. Effort to improve the quality and outcomes of the basic education need to give early attention to these material supports. Experience gained over the years in developing low cost teaching aids and equipment using locally available materials could be shared between countries and utilized more widely.

Assessing learning achievement at given intervals can help both the teacher and the learner to measure progress in the learning process. When properly done in a non-threatening manner, tests can be an effective pedagogical tool, encouraging learners to make their best effort. Test results also help supervisors and administrators to detect weaknesses in the curriculum or in teaching or in other inputs and to take corrective measures as needed.

2.1.5 Planning and managing improvements to basic education in rural areas

From the examples in the preceding section, it is evident that significant efforts are being made to improve and expand the provision of basic education in rural areas. The main guideline points that the policy-makers and planners should bear in mind while designing basic education strategies are not new, but still should be applied more effectively.

Monitoring basic education activities is a prerequisite for planning and implementing reforms, it has been largely discussed in the section 1.4. Basic statistics on the school-age population, enrolments, attendance, completion and promotion are essential for good management of the school system, but often incomplete and flawed for rural areas. These and other quantitative and qualitative data, broken down by gender, community, type of schooling, administrative area and other appropriate categories,

are useful in detecting disparities and malfunctions that require corrective action, such as eliminating the urban/rural disparities.

Addressing this issue requires also comprehensive planning within the overall education and training system, so that basic education in rural areas can offer relevant learning opportunities equivalent in quality to those accessible in urban areas. Its formal and non-formal components should be designed and managed to be complementary and, insofar as possible, they should be integrated with other development initiatives. Eliminating disparities does not imply homogenization of the teaching-learning process nor of its specific content. There is a great diversity in rural areas, both in local situations and in the basic learning needs of various groups of learners. Involving local communities in the planning and implementation processes can more easily achieve diversity in the provision of basic education.

To target funding where it is most needed, it is often useful to push the choice of allocation or resources to lower levels by decentralizing responsibility for basic education which may make funding decisions more sensitive to local needs. Within the state budget for primary schooling, some rethinking of allocations could help rectify current urban/rural disparities. In communities where formal schooling is not yet feasible or where there is a pool of out-of-school children and illiterate adolescents and adults, non-formal basic education programmes are the obvious alternative. As seen earlier, radio and audio- and videocassettes have proved effective educational media in several rural situation and thus offer and investment possibility that can sometimes be a cost-effective means to reach certain disadvantaged groups.

Close co-operation among the providers of basic education is a prerequisite for making meaningful progress in rural areas. It was largely discussed in the section 1.5. Promoting community ownership of basic education programmes helps ensure their relevance, sustainability and effectiveness both in terms of learning achievement and of contributing to other rural development objectives. As mentioned before, the

communities have to be involved for that in the planning process. Governments should take the lead at the national level, coordinating the efforts of its departments and those of various other stakeholders, initiating action when necessary and ensuring that due attention is given to important principles such as equity and policy goals such as poverty alleviation. As the NGOs too bring to rural areas a significant contribution and sometimes are the only providers of education in very remote areas, the sustainability of NGO programmes need a special attention and support. In low-income countries, where private sector involvement in education is most evident, private enterprises can collaborate with government to support rural schools.

Last but not least, apart from a coterie of university-based education specialists who undertake useful research and education ministry assignments, the institutions themselves, with few exceptions other than agriculture institutions, have made rather modest contributions, if any to the expansion of educational opportunities in rural areas. So there appear to be ethical as well as pragmatic grounds for a counter-argument that surely some of the intellectual resources of tertiary institutions could focus on improving the education system, including basic education in rural areas.

2.2 Contextualization of teaching and learning

Improving relevance is a major concern for basic education particularly when dealing with rural areas. While in many countries including agriculture as a component of primary school education has acquired a poor reputation (a major reason for this is the association of agriculture subject with unproductive labour), innovative approaches linking learning to students' environments seem to open new avenues both in developed and developing countries.

There has been a significant growth in interest in experimental education and project-based learning as educators recognize the value of hands-on learning. Reflecting this trend, garden-based learning is now a vibrant field of both educational theory and practice. Theoretical and methodological approaches to garden-based learning vary

greatly across the educational landscape, however, the application of the pedagogy falls principally under one of two frameworks: experiential education (in contemporary language frequently referred to as project-based learning) and/or environmental education.

The review of innovative approaches of teaching in rural areas shows that agriculture has in fact much to offer to basic education and primary schooling, but in ways which are quite different to traditional approaches. While garden-based learning seems to be better documented for developed countries, efforts to relate teaching to rural environments, including agriculture, appear as a global phenomenon. In developing countries, the approach is still often called school gardening. Sharing experiences might help to create new partnerships and overcome some of the bottlenecks faced in past experiences.

2.2.1 Using students' environment to enhance learning

It is clear that agriculture can play a powerful role in the wider learning process in rural schools. An agricultural topic used as a medium for contextualizing part of the curriculum can provide an avenue through which children can have repeated experiences which help them to master cognitive, physical and social skills. Agriculture can be the basis of integrated projects incorporated in the school curriculum, with academic activities chosen for their locally relevant, experimental attributes. For example, the Department of Primary Education, Sri Lanka, advocates strongly the use of agricultural experience as a medium for contextualization and has maintained their emphasis on its importance in the recent national programme of curriculum development:

"The Success of the teaching-learning process depends heavily on the motivation of both the learner and he teacher. It has been identified that information regarding food habits and types of food of the community can be used in introducing innovative strategies in education. Outdoor activities using agricultural plots in the school and the home an also make learning more meaningful and hence attractive. These plots could

be used for introducing concepts in mathematics, language and social studies, etc… Since agriculture is the main occupation of the parents in the Sinhala Medium areas, every attempt must be made to help them to learn better practices. Well maintained agricultural plots in the school could also serve as demonstration plots for the community. In addition these could be used as nurseries to provide seeds and plants of improved varieties to farmers"[33].

Even though the agricultural experience of individuals will differ, agriculture can still be used as a vehicle to make school learning more meaningful. Metaphors and analogies can be based on agricultural activities and experiences and thus enhance the acquisition of literacy, numeracy and the skills basic scientific reasoning within the confines of a subject-based curriculum. Children may be encouraged to relate the learning processes in school with the natural learning process which exists outside the classroom and begin to provide the means by which the process of learning becomes continuous, in school and beyond. At home, many pupils will be involved in daily agricultural practices such as feeding and herding livestock, watering, digging and weeding. Agricultural seasons may also affect pupils' school attendance record. This familiarity with agriculture may provide a basis for contextualizing learning over a range of subjects. It can enable children to develop not only basic knowledge and skills, but also higher-order competencies, such as problem-solving and thinking skills and broader competencies such as leadership skills, group skills and personal initiative. This is likely to enhance interest and thus motivation.

'Farmers of the Future' (ICRAF, 2002) is one example of an initiative which aims to test and integrated approach of contextualized learning and agroforestry in basic education. Through this programme, ICRAF intends to facilitate and contribute to institutionalization of agroforestry in basic education. In so doing, it aims to help to enhance the quality of learning in basic education systems and reach the farmers of the

[33] Ministry of Education and Higher Education, Sri Lanka, *Guidelines for the implementation of the Primary Education Reform*, Colombo, Ministry of Education and Higher Education, 2000.

future, while at the same time influencing the farmers of today. This has the effect o scaling-up agroforestry technologies which have been tried and tested through farmer-led research and integrating them with teaching and learning approaches which have been found successful in rural primary schools and basic education. There is the recognition that a programme of this nature can and indeed should not be undertaken by a single organization. A broad initiative needs to be elaborated through collaboration with partners for complementarity and synergy. Anticipated thrusts of the programme will be:

- Advancing education-related policy with relevant lessons;
- Enhancing the capacity of teachers to provide theoretical and practical education through contextualization of agroforestry-related teaching and learning materials and methods;
- Enhancing the capacity of clients of basic education to apply life skills through the medium of agroforestry;
- Linking schools and communities;
- Understanding contest, needs assessment, synthesis of existing experiences;
- Information, documentation and communication; monitoring and evaluation.

Through partnership and collaboration between institutions, organizations and groups concerned with agroforestry and basic education, activities will be based on a participatory approach and support to teacher training and materials development are likely to be significant components. Monitoring and evaluation of processes and outcomes, dissemination of lessons learned and policy advocacy are all seen as essential elements of the initiative.

This and other examples of initiatives are at early stage of planning and implementation. Looking at progress, there is the sense that this is an exciting time for agriculture in schools. Many innovative approaches have been tried with varying degrees of success and failure, yet novel ways of working are still emerging. What really seems to be changing is the emphasis on the contribution of agriculture to the overall learning process. Six successful strategies for contextualization of learning

using agriculture emerge clearly from experiences to date:

i. **Innovative methods of teaching and learning introduced:**
Relating learning to the agricultural context is CHEAP:

- Child-centred
- Holistic
- Experiential
- Active
- Practical

ii. **New materials developed:**

- Linked to the local environment and learners' experience
- Locally produced by teachers and students
- Complementary to the existing curriculum and integrating topics/subjects across the curriculum

iii. **Nutritious food produced through environmentally sound practices and sustainable land use:**

- Applying a combination of indigenous and external knowledge and techniques
- Yielding high quality vegetables, meat, fruit and dairy products, many of which may be of local. 'traditional' origin
- Food for consumption by learners or for sale

iv. **Community members involved in schooling and school members involved in the community:**

- Farmers and local experts help teachers and students learn about agriculture and land use systems
- Parents and community members learn new ideas, methods and techniques from their children and teachers and from school demonstration plots

As a result, this will:

- maximize limited resources
- develop relevant curriculum and learning materials
- identify and address problems
- promote girls' education
- create and nourish community-school partnerships
- realize democracy

- increase accountability
- ensure sustainability
- improve home environment

v. **Sustainable agriculture and rural development supported:**

- Good practice learned and shared between the school and the community
- Strong linkages to other aspects of community development; health, nutrition, environment, literacy, etc.

vi. **Advocacy for strengthening of institutions:**

- Sharing lessons learned and experiences with donors, educators, policy makers and the wider community
- Highlighting the need for continued and increased support for basic education and sustainable agriculture and rural development from key agents

In order to implement these strategies, a number of critical factors are required which can be summarized in tree categories: physical resources (e.g. land, water supply, accommodation for teachers), human resources (e.g. a teacher aware and supportive of the value of innovative approaches, decentralized school management, school advisory and inspection systems and financing) and community support (e.g. sound parenting, creating a supportive home environment and parental support to schools).

2.2.2 Garden-based learning in schools

The experiential education (in contemporary language frequently referred to as project-based learning – PBL) has been at the roots of effective education and was called for by early educational philosophers and practitioners. Comenius (1592-1670) said: for every school "there should be a garden attached where they (students) may feast their eyes on trees, flowers and plants. Where they always hope to hear and see something new. Since the senses are the trustiest servants of the memory, this method (gardens) of sensuous perception will lead to the permanent retention of knowledge"[34]. Another famous pedagogue, Montessori (1870-1952), claimed: "When he (the student) knows that the life of the plants that have been sown depends upon his care in watering them … without which the little plant dries up, …the child becomes vigilant, as on e who is

[34] Comenius, John Amos, *The great didactic*, published 1649, translated by M.W. Keatinge, 1896.

beginning to feel a mission in life"[35]. A scientific inquiry into why gardens are a useful teaching tool could be informed by research in the fields of development and educational psychology, from theories of experiential education and intelligence as well as the impact of outdoor environments on children. The current call to return to this pedagogy is prompted by research on children's learning (Kandel and Hawkins, 2002) and by exemplary projects around the world that demonstrate the value of hands-on learning.

Gardening with children can be the first step in developing ecological literacy that is "understanding of the principles of organization that ecosystems have developed to sustain the web of life" (Fritjof Capra). David Orr, chair of Environmental Studies at Oberlin College, makes a strong case for the inclusion of ecological literacy at an early age "when the tug towards life is strongest and when we are most alert and impressionable". He also suggests that early education in ecological literacy is imperative in developed countries "before their children's minds become marinated in the culture of television, consumerism, shopping malls, computers, freeways…"[36].

The PBL provides children also with agricultural literacy i.e. understanding of the food and fibre system including its history and current economic, social and environmental significance as well as some knowledge of food and fibre production, processing and domestic and international marketing. As a complement, is also includes enough knowledge of nutrition to make informed personal choices about diet and health. Especially in today's urban societies (in developed and developing countries), where the child's contact with land is limited and the contact and understanding of the natural processes is always diminishing, garden-based learning could resolve this dilemma. This method should also make part of the vocational agricultural training.

Garden-based learning applied while using the best practices can contribute to basic

[35] Montessori, M., *The absorbent mind*, Dell Pub.Co., New York, 1969.
[36] David W.Orr, *Ecological literacy*, New York: State University of New York Press, 1992.

education in any society at several levels: academic performance, ecological literacy, school environment and culture, community linkages, nutrition and health and vocational education. The practice of garden-based learning like most pedagogy relies on some key concepts of instruction to be effective: hands-on learning and integrated, interdisciplinary instruction, etc. However, it also makes a unique contribution not replicated in other pedagogies. It engages the student in a stewardship relationship with other living organisms and teaches not only the science of life but also the interconnected nature of the web of life and how everyday actions can have profound effects on the long-term health of the system. Garden-based learning can perhaps make its greatest contribution in both developed and developing economies by providing a path into ecological literacy and sustainable development that is otherwise mentality that has crept into even the most rural communities on the globe. Garden-based learning can also create a greater sensitivity and appreciation for life and a deeper understanding of the interconnectedness of all living organisms.

2.3 Technical and vocational education – skills for rural development

In the recent past, renewed attention has been paid to investment in education as a means of fulfilling economic growth, full employment and social cohesion. This renewed interest is related to the deep transformation of national economies and labour markets, as well as in rural areas where off-farm employment is playing a growing role. In addition to the sectoral transfer of labour away from agriculture production, globalization has far-reaching implications for occupational profiles. Addressing this transformation will require increased investment in education and training in order to raise productivity levels and equip vulnerable rural communities to cope with such change. In a fast changing and unpredictable environment, fostering flexibility relies on solid general education and on broad vocational skills which can be updated and completed through lifelong learning pathways. While the debate on skills for rural development used to focus mainly on agriculture, the transformation of rural labour markets implies that delivery systems should become responsive to a wide range of economic activities such as agroindustries, craft production, tourism and other

services. For this reason, the concept of a so-called Agricultural Education and Training (AET) system becomes largely obsolete. What is needed today is a much broader conception of skills for rural development. Whilst the pressure for privatization is often strong, the direction explored in Brazil illustrates an original approach to combine market responsiveness with equity and poverty reduction concerns. In a policy area which has largely been disappointing, these examples provide the ingredients that may feed successful skill development strategies in rural areas.

2.3.1 Rural labour market challenges and training policy responses

In most developed countries farm employment has been decreasing significantly over the years. The current trend is towards a rise in labour productivity, contributing to a decline in agricultural employment. Agriculture is much more important in income and employment terms in emerging and transition economies (ETEs) than it is in OECD countries. At the same time, agricultural trade barriers, export subsidies and domestic support in OECD countries have limited the potential benefits of free trade in agriculture for ETEs. High dependence on agriculture in ETEs and protectionist policies in OECD countries suggest that ETEs have even more to gain from agricultural trade reform than OECD countries. Trade reform in OECD countries is a precondition to successful development efforts. However, macroeconomic developments influence farm households not only by affecting prices of agricultural commodities but by affecting employment opportunities in the non-farm sector. As a general trend, there is a greater prevalence of non-farm employment and pluri-activity among farm households and a correspondingly greater dependence on non-farm income. Traditionally, agriculture has been considered as the main sector for employment creation in rural areas. Hence, for many people, 'rural' and 'agriculture' are synonymous. Increasingly, policy makers realize that the job creation potential of the farm is limited and that new sources of rural employment will be required in the future.

Already, available information shows that non-farm employment and income are

significant in rural areas, it is estimated that in sub-Saharan Africa and Latin America about 40 to 45 per cent of average rural household income originates from non-farm activities. This share already represents around 30 to 40 per cent in South Asia[37]. Although the rise of the non-far rural economy seems to be a global trend, the nature of the activities involved varies greatly from country to country, depending on the level of development. Typically, labour supply is influenced by several factors such as age, gender and education. Age and education are found to be among the most important determinants of off-farm work. The increasing educational attainment levels in rural areas can influence the allocation of labour resources. A higher level of education increases the endowment of human capital and therefore opens access to higher non-farm wages. In fact, increasing the level of education in the agriculture sector can produce opposite results on employment strategies. It is generally accepted that more education allows farmers to access and process information, allocate resources and adopt new technologies more effectively. By raising the farm earning capacity, this would suggest that education reduces farm exits. However, as indicated above, schooling also increases the opportunity for employment outside the sector and thus reduces the capacity of the agriculture sector to retain the most educated components of the workforce.

The distinction between specific and general education can clarify this relationship. While farm-specific training is likely to contribute to retain labour force in the agriculture sector, more general types of education may increase the probability of leaving the sector for non-formal employment (Weiss, 1996). Implications of the transformation of rural labour markets for skill development are critical since training for agriculture, as an explicit goal, is increasingly challenged by the need to prepare for non-farm employment as well as for coping strategies in a rapidly changing environment. However, the provision of technical skill is often not prepared to address the needs of rural labour markets.

[37] D. Start, „The rise and fall of the rural non-farm economy: poverty impacts and policy options", in: *Development Policy Review*, 19(4), 491-505, Overseas Development Institute, London, 2001.

Besides the trend towards industry specialization, in many countries rural areas become the host of new forms of tourism. In recent years increasing attention has being paid to pro-poor tourism initiatives. Among the factors that influence the benefits to the poor from tourism, skills constitute a key determinant. Therefore targeted education and training programmes form an important component of strategies to enhance the economic participation of the poor in tourism enterprise.

Renewing modes of delivery has also been a major challenge for training reform. In this respect a central concern is to consolidate linkages between employers and providers. Seeking to create a positive interaction between learning and working was experimented in many countries in an attempt to establish linkages between education and agricultural work. Through various modalities, including apprenticeship, linking education and work experience constitutes today, beyond the agriculture sector, a major component of most vocational education reforms.

Finding better ways, besides formal provision, of combating poverty is a highest priority in many countries. Designing community-based responses, linking training provision to basic needs and to local development initiatives constitutes a much needed approach in rural areas. One promising example in relation to poverty alleviation and employment promotion is the vocational training programme for youth employment which was implemented in collaboration with ILO, through a technical co-operation project (POCET) in Honduras. This initiative resulted in an improved level of income-generating activities for young people in covered rural areas. The lessons of this experience are being disseminated to other countries, including Guatemala and El Salvador.

Like all development projects, the Education for Work Project (POCET) aimed to improve the standard of living of the poorest, in this case a large part of the population of isolated rural settlements in its region of operation in Honduras. The Education for

Work project in Comayagua which existed from 1990 to 1996, attempted to overcome the deficiencies of earlier projects It aimed to do so by providing an alternative whose methodological conception would encourage change by integrating, as far as possible, the educational components of instrumental education (literacy and basic formation) within those of vocational education while linking them to initiatives in the areas of production and services. This was achieved by developing productive initiatives (projects for the production of goods or services) and the creation of diverse forms of associations, including the communal and intercommunity production associations, without excluding the possibility of direct insertion in the market and dependent employment.

A correlation between levels of education, vocational training, production, productivity and people's incomes has been demonstrated. It is thus argued that gains in productivity that cannot be attributed only to growth variable, such as labour and capital factors have their origin in the growing productive capacity that education, vocational training and organization provide.

It can therefore be concluded that these factors are a form of investment in people because they generate results in terms of individual and collective production and thus generate income. Raising the knowledge and skills of a person of working age, as a form of capital, can improve their well-being since improving their organization, production and productivity allow them greater returns from their activities and thus a higher income and in general a higher level of social and economic development.

Beyond the contribution of training to poverty reduction through community linkages, the response of technical and vocational education to social and economic change requires creating new forms of co-operation and partnership with the labour market. In addition to macro-level policy initiatives to cross traditional borders of responsibilities between stakeholders, a major challenge lies with the motivation and capacity of institutions to enter new fields. If traditional vocational schools are mainly concerned

with delivery, they increasingly need to engage in various forms of collaboration with employers to provide company-based training and hob placement services to students and also to offer continuing education and other types of support to enterprises.

A positive example of this kind of collaboration is the Narrogin Agricultural college supported jointly by the Education Department of Western Australia (WA) and the Department of Agriculture. It is one of six agricultural schools in WA and has a long history of success in providing students with a well-rounded education as well as skills to proceed directly into the primary industry work force or to higher education studies in agriculture. As well as running a commercial dryland farm, the school is gradually increasing its provision of short courses and field days to meet industry demands. During 1995 the College was approached by the Farm Machinery Dealers Association (FMDA) to discuss and ongoing problem of a lack of qualified people in rural Western Australia to sell and service specialized agricultural equipment. The FMDA was attracted to Narrogin because of its reputation in producing practical graduates with a range of farm and engineering skills. Many FMDA members operate combined dealerships in farm machinery, heavy equipment and cars and trucks, which require skills in sales, parts, yard assembly and field servicing. Demand for these skills was said to be high, with the industry having the capacity to absorb up to 15 or 16 graduates annually from the proposed courses. Given the range of products sold and serviced by FMDA members any proposed entry level training programme would have to be broad based and include a mix of industry skills and general education. The FMDA also suggested that training programme design should allow students a choice of pathways at course completion for entry into a range of apprenticeships relevant to the farm machinery industry needs. The College responded to the FMDA by investigating the design parameters for such a course. The course design process commenced in early 1996 with the intent of beginning the course at the start of 1997. The FMDA course is a two-year full time course designed for youths exiting year 10 with no immediate goal of proceeding to full-time tertiary education. During each year students are required to complete four weeks of structured workplace learning

arranged in two-week blocks. On completion of the course FMDA members will offer to graduates entry to apprenticeships with advanced standing. Already a number of enterprises have made firm job offers for students to commence with them at the end of their year 11 studies. In responding to the industry demand for this type of course the school has found that while industry supports the work placement part of the course through its members, it has relied on the school to undertake the design, implementation and resourcing of the programme[38].

Financing is obviously a critical dimension of any policy or skill development in rural areas. The discussion on funding skill development and financing principles is not a new debate. A large body of literatures dedicated to both the rationale of funding and on specific financing mechanisms. Exploring new financing arrangements for skills development is often seen as an imperative because governments are not able or not prepared to provide all the additional resources required to expand and improve the national skills base. This calls for more resources in addition to public funds and for more effective utilization of the resources.

Increasingly, funding for vocational education and training is based on tripartite mechanisms, which include government, individuals and employers. In countries where decentralization processes are progressing, local governments are providing resources for training and skills development. However, little data are available on the sharing pattern in individual countries, even with regard to pre-employment vocational training.

By and large, governments retain primary responsibility to promote and co-finance skills development. Frequently this includes creating incentives for employers and for individuals to invest more in skills development. The current trend emphasizes the role of employers and individuals in contributing to the costs of skills development.

[38] Malley, J., *Responding to social and economic change: the take up of VET by schools,* CEET/ACER, undated.

The concept of funding partnerships illustrates this approach. It is often concretized by the establishment of training funds typically funded by a payroll tax.

It is important to stress the fact that this trend towards increasing employers' contributions is not purely a financial issue. The aim is not only to mobilize additional resources, but also to increase the overall involvement of employers in steering and delivery mechanisms for training. Such an increased involvement is expected to improve the quality of training delivery and to align training supply with the requirements of employment. Hence, financing of skills development is very much linked to the issues of responsiveness to market needs, to adaptation and relevance of training.

Besides concerns of relevance and effectiveness, alleviating poverty requires that more money be spent in favour of the most vulnerable groups of the population, often located in rural areas, where the experience shows that the private sector is poorly interested in investing. On grounds of equity, there is a strong case to redirect expenditures where social problems are the most difficult. More creativity is also required to design innovative funding schemes for financing, in a sustainable way, access to training for the poor. Recent initiatives undertaken to support training for farmers point out new directions that deserve further exploration. New methods of sustainable funding for farmer field schools are emerging due to the crisis in extension services in the developing world. Indeed, a main concern for funding extension revolves around the issue of fiscal sustainability of extension activities 0 that is how extension and research services will be able to maintain operational activities in the field without significant external support.

Under a few new initiatives, privatization is being strongly promoted as a method to fund extension. Although private consultants currently work in high value crops in all countries, it is difficult to see how resource-poor farmers in developing countries, who do not have their own funds nor the benefits of heavily subsidized production and

marketing systems, will be ale to afford private payment for all services. Nor is it obvious how rural people will have access to information on other agriculturally related issues such as HIV/AIDS, women's reproductive health, nutrition and environmental management that are of wide social concern but often not of immediate household concern, especially when many rural families have never heard of these issues or where women are economically powerless.

Besides privatization and private sector promotion, publicly funded extension for the rural poor will also exist for the foreseeable future. This system, however, must be responsive to building people, independent community organizations and economic growth that will contribute to financing in the long run.

A new process started in 1999, in East Africa, leading to the development of self-financed Integrated Production and Pest Management (IPPM) field schools in Kenya, Uganda and in Zimbabwe. The first step is for a local sponsoring group or newly formed group to submit a grant proposal. Typically, grant support is a combination of materials and cash. The size of the grant is US$100 to $400 per season of study. Direct payments to field school facilitators are made by the field school ate pre-agreed upon rates. It is the responsibility of the facilitator to provide a profitable educational activity including bringing in socially important issues such as HIV/AIDS, women's reproductive health, soil fertility management, etc. Proceeds from the field school plots are reinvested in the group's own account. The funds are used by the group for further study, purchase of animals or other activities. Each group is also requested to assist in training one other group and farmer-led field schools are quite successful.

As a result of this grant process, groups have shown a very high level of ownership of the field school process and many field schools enjoy a high level of matching funds, material inputs provided by the community and participants and an increasing ability to manage funds and activities on their own. Groups become independent of extension while extension has better partners. The process of grants also allows groups to

organize themselves to continue on their own. Many field school participants go on to develop longer-term associations due to their cohesion, trust and joint funding raising ability. The grants capitalize groups and catalyze new ways of working together. It is envisaged to connect IPPM education the UNESCO-led Education for All programme.
Beyond investment in human capital, it is increasingly felt that social capital plays and important role in economic performance as well as in the capacity of individuals and communities to adjust to new environments. Change is sometimes described as a cumulative process using existing knowledge through interactive learning. In turn, these interactions build new knowledge.

Effective learning processes are expected to contribute to social capital formation. While this rationale has mainly been explored at the macro and enterprise levels, learning processes and social capital also serve local development.

2.4 Higher agricultural education

Agriculture universities, traditionally focused on crop and animal production, can redirect their mission towards the broader aim of supporting rural development. Although most of the work on rural development is still concentrated in faculties of agriculture, increasingly, addressing the needs of the rural people and space also concerns other departments and universities. It is important to agree that HAE or agricultural education will not be expected to be the sole source of education for rural development. HAE has a responsibility to provide teaching and learning opportunities for those who seek careers in the management of the rural development process or who will, at various levels, implement rural development activities and processes. In addition HAE has an opportunity to support the education and training for rural development that lies outside the present mandates of higher agricultural education entities. All levels of schooling can and should be able ask the university for support and help. To ensure success in further education, university faculties should give sustained attention to the quality of materials, teaching methodology and the assessment of results in school prior to university. To adequately address these two

large challenges will require most HAE entities to make major adjustment to the way in which they view the needs of the rural areas and conduct their business.

Higher agricultural education in many developing countries is experiencing serious problems that impact on the quality of education and bring into question the relevance of programs offered. Included are inadequate funding, excess intake of students, poor infrastructure, declining quality of research and teaching, low faculty morale and high graduate unemployment rates. These problems and others, are not being dealt with because of internal and external factors that include declining political power in rural electorates, the impact of low prices for agricultural products, the competing demands of other components of higher education (HE) and the absence of policies for higher education for agriculture and rural development.

The development community is renewing its efforts on rural development with fresh insights to the key factors that militate against rural development and poverty reduction. Countries are drawing up poverty-reduction strategies (PRS) with the co-operation of involved sectors and international funding is becoming available to implement these strategies. There are two interrelated approaches to education for rural development (ERD) that must be the responsibility of HAE. One is professional development for those who manage and implement the process and the other relates to the rest of the population within the rural space.

Higher agricultural education has a key role to play in ensuring that critical knowledge and skills are imparted to teachers and students; that other rural development actors appreciate the role of agriculture and sustainable natural resources management and the synergies involved in working together to build human resource capacity. HAE institutions have to act quickly to clarify their roles or missions, establish their legitimate place in the higher education system and make the organizational and administrative changes necessary to provide a meaningful contribution to both the professional and general audiences concerned with rural development.

Bringing about the needed reforms will not be easy but a commitment to fully participating in ERD may catalyze wider change. However, expectations must be realistic for much of HAE still needs to pass through a fundamental change process, redefine its role and attain an acceptable standard in the HAE system.

2.4.1 Challenges and opportunities for higher agricultural education

In the interest of creating a baseline for understanding and against which to measure improvement, the main HAE problems are listed below. Many of the problems in their most obvious state can be found in developing countries but similar problems manifest themselves in various degrees in the more developed countries as well. Here are some most important ones:

- National support for agricultural education has weakened;
- Investment in agricultural education by governments, donor agencies and organizations has dropped dramatically from the highs of the 1960s and 1970s;
- Funding is inadequate to maintain physical facilities and support minimum standards;
- Teaching and research standards have dropped;
- Insufficient practical and job-related skills are taught;
- Political interference prevents rationalization of undergraduate and trainee intake, leading to overcrowding, decreasing per capita funding support, and low staff morale;
- Isolation has encouraged inbreeding in staff appointments;
- Agricultural education has tended to become isolated from mainstream academia;
- Curricula do not keep pace with changes in the sector and employer expectations;
- Unemployment of graduates, especially at tertiary level, is high;
- There is a change in the profile of students' backgrounds from mostly rural to increasingly urban;
- Programmes no longer attract highest achievers from secondary streams;
- Information technology is underutilized.

The key lesson from the HAE problem list is that the world's concentration on food production especially after the Second World War has weakened since the gains in productivity associated with the Green Revolution created a situation where global food production surpassed population needs. Regrettably, this did not necessarily translate to equitable distribution of food to all who needed it. Coupled with the lessening of fear of world-wide famine has been the continuing phenomenon of urbanization which has swung the political power base away from rural areas and led to a decrease in resource allocations for, amongst others, higher agricultural education. The impact of this has been declining physical and academic standards but not necessarily to declining enrolments. This latter phenomenon is often a response to political pressure on universities to accept more students and a desire of growing populations for third level qualifications. The urgency of 'getting a degree' often swells the ranks of HAE but the impact of those graduating on agriculture or rural development is not necessarily strong.

Despite visible successes in producing more food, scientists are concerned about stagnation of yield growth rates and yield declines and the unpredictability of climate change and environmental degradation. The agriculture battle has not been won and there is much to be concerned about. Conway suggests that a new revolution in international agricultural research is needed. To be successful it will have to depart in significant ways from the Green Revolution of recent decades. He adds that yield declines have to be resolved while reversing the environmental degradation. More sustainable production in the future will also depend on less use of pesticides and inorganic fertilizers and on reduced emissions of greenhouse gases and other global pollutants[39]. However, the colleges of agriculture are still organized around the biological and other agricultural disciplines while the social sciences have a much lower priority and weak investments.

[39] Conway, G., *The doubly green revolution: food for all in the 21st century*, penguin Books, London 1997.

If higher agricultural education is to play an active and constructive role in rural development it will have to adjust its programmes to new and nontraditional topics, new teaching and learning models, new partnerships with academia, research organizations and rural space stakeholders, expanded representation in governance and continuous dialogue with policy-makers. Some of the realities that have to be addressed by HAE will include:

- Curriculum to be based on labour market surveys;
- Stakeholders must have in put to HAE decision-making;
- Intakes (and outputs) must reflect both sector and rural space development needs;
- Incentives for teaching quality in place;
- Faculty members need to reflect a diversity of backgrounds and experiences;
- Closer ties with the wider education system;
- Team teaching within HAE disciplines and with HE system;
- Rural development practitioners as members of teaching teams;
- Researchers used as teaching resource;
- Practical work by students on university farms and in communities, including decision-making experience;
- Student evaluation on programmes' needs to be introduced;
- Co-operation with and inputs supplied to basic and secondary education;
- Focus on non-formal adult education and training programmes;
- Partnerships with other sector ministries and concerned stakeholders in the public and private sectors and with society at large;
- Research and analysis of decentralized government needs and provision of services;
- Policy advice to government;
- Staff training provided as contribution to morale and to education quality;
- Visiting scholars – teachers and researchers encouraged;
- Increased use of information technology;
- Greater stakeholder representation in HAE governance.

2.4.2 The ways to reform the HAE

To make a meaningful contribution to the process of rural development, any programme has to be elaborated remembering the three substantial features:

1. Improving the living standards of the subsistence population involves mobilization and allocation of resources.
2. Mass participation requires that resources be allocated to low-income regions and classes and that the productive and social services reach them.
3. Making the process self-sustaining requires development of the appropriate skills and implementing capacity and the presence of institutions at the local, regional and national levels

Given the generic problems with HAE, already detailed, what needs to be done o enable HAE to play its critical part in what is becoming a major development undertaking of the twenty-first century – rural development and poverty alleviation? There are two critical areas where change can be initiated and supported. First, there must be national policy on HAE and indeed on education for rural development in general. Theses policies dealing with HAE need to be connected with the ones on education for rural development within the wider education policy rather than with the established and 'traditional' agricultural education and 'rural education' that are seen to be wanting. Second, HAE institutions themselves must be committed to catalyzing change. Indeed HAE institutions must be able to advise and guide policy-makers on the problems and solutions to the provision of education and training for agriculture and rural development.

Recent thinking about higher education in developing countries and about education sector strategies has much relevance for policy-makers who have the responsibility for ensuring that education for rural development has the vision, strategy and implementation resources necessary to make an impact on revitalizing the rural space. The desirable features of the HAE are:

1. **Stratified structure.** It comprises one tier that is oriented towards research and

selectivity and another that imparts knowledge to large numbers of students.

2. **Adequate and stable long-term funding.** Governments have a crucial role in providing stability.
3. **Competition.** It requires a high degree of autonomy for academic institutions, allowing them to exploit their strengths and overcome weaknesses. One common indicator of competition is faculty mobility between institutions, which tends to promote a healthy academic environment through intellectual cross-fertilization.
4. **Flexibility.** They need to be able to adapt quickly to changing trends in field of study and skills demanded in the labour market.
5. **Well-defined standards.** They articulate clear standards and set for themselves challenging goals that are consistent with the needs of their societies.
6. **Immunity from political manipulation.** They are insulated from the undue influence of political parties, governments or short-term political developments in educational affairs.
7. **Well-defined links to other sectors.** It must pay attention to secondary education provision in order to take account of student preparation. It will also benefit primary and secondary education through training qualified teachers. Quality higher education will also increase students' aspirations at the primary and secondary levels, leading to higher standards as students compete for tertiary education places. Strong links between higher education and its environment can generate many beneficial effects, including helping to overcome intellectual isolation and allowing the achievement of 'critical mass' in a larger number of specialized fields e.g. advocates for higher education and industry can work together to ensure that graduates have the skills that industry needs.
8. **Supportive legal and regulatory structure.** Legal and regulatory environment encourages innovation and achievement, while discourages corruption, duplication of effort and exploitation of poorly informed consumers.
9. **System-wide resources.** Management information systems, standardized tests and curriculum work best when developed centrally and shared widely.

2.4.3 Policy directions and issues

Higher education and HAE cannot be left to market forces in the hope that these will provide the type of education that serves the national and public interest. The government must ensure that public interest is served and that basic research relevant to the country's needs is undertaken. Within the framework of state control governments own, finance, and operate higher education institutions. Without careful monitoring this can lead to politicians appointing vice-chancellors and ministries dictating degree requirements and curricula. Instances of political pressure forcing HE and HAE institutions to increase student intake with the consequent dilution of education, facilities and morale are not uncommon. It is therefore necessary to create buffer mechanisms to provide a balance between state responsibility to protect and promote the public's interest with an individual institution's need for academic freedom and autonomy. To provide the balance, formally constituted entities must help make the case for education and its growth to the organs of government.

The challenge for agricultural education is to accept the opportunity to become part of a major shift in focus from production agriculture to rural development. HAE is in a third wave of change that impacts heavily on its role - the first being production agriculture, the second environment and now rural development. HAE can educate the professional and technical personnel needed to promote sustainable agriculture and take leadership in implementing the process of rural development. Of course this reform is not cost-neutral but without such an incentive little change will take place. Policy-makers need to back all new or revised policies with the resources required to fully implement them. It must be legally permissible to perform income-generating activities at the faculties and to use the funds in a discretionary manner, and also draw limits on the extent to which proprietary research can be conducted.

CONCLUSION

We cannot expect that sole education will interrupt the vicious circle of helplessness and hopelessness of the rural populations and take them out of poverty right away. It is, however, a powerful tool that can be deposited directly onto the hands of the concerned populations and offer them a possibility of starting a progressive rise on their own. It is long and hard process but in the long term visible effects are sure to appear. There are evidences of the empowerment that education gives to rural people and proofs that economic growth and undernourishment fall are directly dependent from the education provision.

A lot has to be done yet but the realistic ways of facing the challenges have been traced. Experiences and research have shown that reaching the objectives of Education for All and of the rural development is possible. To obtain visible results, strong partnerships between all the stakeholders have to develop at national and international level. There must be a strong lobbying activity from the groups reinforced by cooperation to convince the governments and international organizations to allocate more resources to education sector and on the part of the executive bodies – more efficiency, transparency and strategic planning. Many lessons have been learnt in this sector – they should not be forgotten but rather made common to all the interested parties so as to avoid the errors from the past.

Many rural children never enter a school, many of those who do enroll fail to complete the full primary cycle. Even among those who do complete it, many leave school barely literate. The curriculum and sometimes the language of instruction are not suited to local conditions. In fact, the curriculum planning should never be done on the highest level, but should necessarily involve the communities to which it is addressed. Furthermore, to attract numerous groups of undernourished rural populations the authorities should think of introducing feeding programmes to schools, maybe linking

it to the garden-based learning. Parents who decide to let their daughters study might get some kind of incentives from the government which could help reduce the gender gap in the school enrolment rates. The same should expect qualified teachers who accept positions in rural areas schools.

Globalization and the consequent changes in the labour market imply a need for skilled personnel in the off-farm jobs. Addressing this transformation will require increased investment in education and training in order to raise productivity levels and equip vulnerable rural communities with capacities to cope with such change. In a changing and unpredictable environment, fostering flexibility relies on solid general education and on broad vocational skills which can be updated and completed through lifelong learning pathways. While the debate on skills for rural development used to focus mainly on agriculture, the transformation of rural labour markets implies that delivery systems should become responsive to a wide range of economic activities such as agroindustries, craft production, tourism and other services. Vocational institutes curricula should therefore be planned in close cooperation with the employers and following the development trends. Some important employing institutions could create their own curriculum profiles and then commit themselves to recruit such educated classes of students.

Last but not least, agriculture universities, traditionally focused on crop and animal production should redirect their mission as soon as possible to the broader aim of supporting rural development. Although most of the work on rural development is still concentrated in faculties of agriculture, addressing the needs of the rural people could become the issue for other departments and universities. It is important to agree that HAE or agricultural education will not be the sole source of education for rural development. HAE has a responsibility to provide teaching and learning opportunities for those who seek careers in the management of the rural development process. It should educate qualified personnel to promote sustainable development at lower levels of education and take a strong position in the process of rural development.

Contextualization of learning, especially a garden-based technique is not new in the education planning but it should be further explored and widely implemented. Its efficiency for learning and many positive side effects have been underestimated and it could be a valid solution to many problems that education in rural areas is facing. Many notorious pedagogues claimed beneficial effects of direct contact with trees and plants on children's process of learning. Moreover, crops yielded from the school gardens could serve as ingredients to prepare nutritious meals for pupils that they could cook themselves. This aspect has not been explored enough and this practice would be a very interesting proposal for developed and developing countries. In the first case, healthy meals would be an alternative to highly caloric diet and a way to combating obesity in the occidental countries. In the developing countries, offering meal to children at school would be an attracting factor for parents who hesitate whether to send their children to school or not. Another important issue is an early awareness of the nature and its cycle and the consequent respect that is taught to children since their first years at school. In this era of global warming and pollution that threaten our environment, it is particularly important to educate a generation of people respective of natural resources and responsible for sustainable development.

A global perspective inclusive of all aspects of rural development presented by ERP must necessarily be disseminated among all the stakeholders in the process of education planning. Research for best policies, records of good practices and lists of errors from the past that ERP has been working on can be made available to all the interested parties. The theoretical bases offered by ERP are a step forward on the way of assuring appropriate education to all people in every part of the world; another one is making everyone aware of these issues and convincing the executive level actors of the urgent need to implement these new strategies.

APPENDIX 1
INTERVIEW WITH LAVINIA GASPERINI

Interview with Ms. Lavinia Gasperini, Senior Officer of the Extension, Education and Communication Service (SDRE) at FAO

"The UN System Network on Rural Development and Food Security is crucial in promoting a wide recognition of the importance of supporting Education for rural people as a key to achieving poverty reduction, food security, rural development and education for all."- Lavinia Gasperini

Lavinia Gasperini, senior officer of the Extension, Education and Communication Service (SDRE) talks about the FAO-UNESCO partnership its achievements up to know and future challenges for the years to come.

What are the main objectives of the FAO-UNESCO partnership in support of Education for rural people?

Addressing poverty, enhancing agriculture productivity and technology, ensuring food security and sustainable management of natural resources and environment requires not only the support of institutions and the creation of an infrastructure, but also the organization of an appropriate education for the direct actors of the process. The Director-General of both UNESCO and FAO recognized this fact by jointly launching the ninth flagship on "Education for Rural People" (ERP) within the UNESCO led Education For All (EFA) initiative, during the World Summit on Sustainable Development in Johannesburg in September 2002.

The majority of the world's poorest people, illiterates and children not attending school, live in rural areas. Therefore to achieve EFA, poverty reduction and food security we need to target this population's specific learning needs with particular strategies according to their cultural background and socio economic reality. In this sense, the ERP flagship is a call for a collaborative effort to increase the coordination in targeting the educational needs of rural people. Up to now, the flagship is succeeding in bringing together government entities, academic expertise, policy makers, UN system agencies and bilateral agencies as well as grass root practitioners who are all committed in achieving the first three Millennium Development Goals (MDGs) in an integrated way.

First three Millennium Development Goals

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education by increasing access to quality basic Education for rural people. Fostering national capacity to design and implement basic education plans to address learning needs of rural people.
3. Promoting gender equality by encouraging access of girls to school

These activities have resulted in an increased commitment towards Education for rural people. The flagship will also help coordinate and increase technical support towards countries willing to address the basic educational needs for rural people within the overall effort of Poverty Reduction and Education For All strategies. At national level, the flagship advocates for more investments in ERP. At international level, the flagship reached, in less than a year, more than 60 members of a vast range of constituencies among UN agencies, NGOs, foundations, academic institutes, and the private sector.

What are the most urgent demands that must be faced to address the needs of education in the rural world?

Rural people demand increased access to quality improved education. Some of the most common and urgent actions needed include:

- The expansion of a school network to provide education and address the insufficient distribution of school infrastructures in rural areas
- School feeding programmes to encourage attendance and ensure that learning of rural children is not affected by malnutrition and hunger
- Non formal education initiatives to reach rural school drop-outs, illiterate adults and working children among the rural population
- Gender focus to promote equity in schooling among rural girls and boys
- Specific measures for marginalized groups such as working children, remote populations (e.g. populations in mountain areas and small islands), nomadic populations, refugees and displaced people as well as disabled people. These measures can include the creation of specific school calendars according to the harvest period for working children and the creation of nomadic schools

On another important level, the quality of education in rural areas can be improved by promoting specific training initiatives and incentives for rural teachers, and ensuring that the relevance of the curriculum taught is in line with the needs of rural people. The availability of relevant teaching/learning materials and the promotion of community involvement are essential to fulfill educational needs.

What concrete objectives has the FAO-UNESCO partnership achieved up to now and what next steps will be taken?

A recent publication on a global study entitled "Education for rural development: towards new policy responses" undertaken in partnership by FAO and the UNESCO Institute of Education Planning(IIEP) was launched this year. The study's aim is to build awareness of the importance of Education for rural people as a crucial step to achieve the MDGs.

The book includes fifteen case studies from around the world regarding these topics. The study will soon be available on line and will be included in the list of virtual publications that the partnership has issued. This list includes a large number of articles and other publications produced on ERP in collaboration with UNESCO, Universities, NGOs.

Following two international seminars on Education for rural people held during late 2003 in Thailand and Italy (please read article published in the December edition of the Website), UNESCO and the International Research and Training Centre for Rural Education (INRULED) organized a third event under the theme International

Symposium on Rural Education in Baodin, China on 20-23 January 2003. During this event, both FAO and IIEP organized two workshops.

A strong network is currently being built among flagship members. One of the communication instruments supporting the exchange of information is the ERP informal Newsletter. Two editions have already circulated via e-mail so far, among international organizations, NGOs, Universities and the private sector exchanging information on activities and good practices in the domain of Education for rural people.

In addition, an ERP Technical Cooperation pilot project (TCP) was started by FAO in Kosovo in support of the Ministry of Education and Agriculture, for the development of a participatory national strategy to address the learning needs of rural people. A launching workshop was held on 1 July, 2003 in Pristine and was attended by high level officials of Agriculture, Education and Labour Ministries as well as by UN Agency representatives from ILO and UNICEF, bilateral donor agencies (GTZ, Swiss and Danish cooperation), private sector representatives and members of the civil society (rural credit representatives, farmers and producers associations, rural cooperatives, rural women organizations, local NGOs, students organizations, representatives and parents from rural schools, among many others). Studies on the educational needs of rural people were also undertaken in Serbia, Bosnia and Croatia and will be soon published on the FAO Website. A preliminary project formulation mission was recently undertaken in Mozambique.

During this year's second semester, ERP will be addressed by special sessions within the Regional Workshops organized by the UNESCO regional offices in Latin America (Santiago) and Asia (Bangkok) for Education for All national coordinators. By the beginning of 2004, a regional ERP workshop will be jointly organized by FAO and UNESCO regional offices and the UNESCO International Institute for Education Planning (IIEP) in Latin America and in Asia. This event will help Ministries of Education and Agriculture plan activities to address the learning needs of rural people. A country study will be undertaken in collaboration with local authorities by FAO, UNESCO Regional Offices and IIEP, in collaboration with CIDE -a regional NGO specialized in educational research - in Chile and other Latin America countries still to be defined. Several new publications such as a guide on "Monitoring Education for rural people: indicators and approaches" or "Guidelines for planners: Education for rural people, a key to Education for All" will be useful to support policy makers in promoting Education for rural people. These publications are undertaken in close collaboration with UNESCO/IIEP.

How can the UN System Network on Rural Development and Food Security cooperate in the support of the Education for rural people initiative?

The Un System Network on Rural Development and Food Security is crucial in promoting a wide recognition of the importance of supporting Education for rural people as a key to achieving poverty reduction, food security, rural development and education for all. It can be an important advocacy and information sharing mechanism that can help better focusing on ERP in Rural Development and national Education for All plans of action, and in the United Nations Assistance Development Framework (UNDAF) and the Poverty Reduction Strategy Papers (PRSP). It can also help by promoting improved coordination on ERP, sharing of experiences among the members of the UN System Network on Rural Development and Food Security and among the flagship members.

APPENDIX 2
ACRONYMS

ABE	Adult Basic Education
AET	Agricultural Education and Training
BRAC	Bangladesh Rural Advancement Committee
ECD	Early childhood development
EFA	Education for All
ERD	Education for Rural Development
ERP	Education for Rural People
ETEs	Emerging and transition economies
FAO	Food and Agriculture Organization
FMDA	Farm Machinery Dealers Association
GDP	Gross Domestic Product
HAE	Higher agricultural education
HE	Higher education
ICRAF	International Centre for Research in Agroforestry
IDPs	Internally displaced persons
IFAD	International Fund for Agricultural Development
IIEP	International Institute for Educational Planning
ILO	International Labour Organization
INRULED	International Research and Training Centre for Rural Education
IPPM	Integrated Production and Pest Management
MAFRD	Ministry of Agriculture, Forestry and Rural Development
MDGs	Millennium Development Goals
MLA	Monitoring Learning Achievement
NGO	Non-governmental organization
OECD	Organization for Economic Cooperation and Development
ODL	Open and distance learning
PBL	Project-based learning
PRSP	Poverty Reduction Strategy Papers
SWAP	Sector-Wide Approach
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations
UPE	Universal Primary Education
WA	Western Australia

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