

in educational programmes. The importance of such programmes for rural youth and adults is underlined by the fact that over four out of five out of school children are rural (UNESCO, 2008) and therefore non-formal education represents the only opportunity to bridge their knowledge and skills gaps.

Functional adult literacy and non-formal basic education and training programmes provide a further learning chance to children, youth and adults who did not have the opportunity to pursue education in the formal systems of education. Such programmes can be coordinated with agriculture technical and vocational education and training centres and universities, as well as extension in the form of learning in context so that basic knowledge and competencies as well as technical and life skills are included in educational programmes.

In some cases, specially trained staff will be required to provide education and training services to non-traditional learners. Appreciation for cultural and ethnic diversity, language skills, and an understanding of the learners' background and challenges are critical to success in sustaining programmes that address learning needs of non-traditional populations. In the case of the hill tribes of northern Thailand, trained farmer volunteers have been effective at bridging the cultural divide (FAO, 2002a).

In some cases, additional resources will be needed to fund travel to remote areas such as mountain communities or small islands; to build residences for teachers assigned to areas where the target audience resides; to create safe and welcoming education facilities; and to provide special equipment, particularly in the case of disabled learners.

An example of an innovative approach to extending non-formal primary education to difficult to reach groups can be found in the experience of Orissa, India, whereby fisheries extension staff members were trained to provide these services to the children of fisherfolk. This pilot programme reached children from 6 to 14 years of age and prepared them to join formal school at a later date. In this programme, extension staff members who were already working with the parents of these children were tasked with also providing a service to the children, thereby taking advantage of the contacts they had already established to build confidence among their clientele (FAO, 2004b).

An example from Thailand: community involvement in curriculum determination for hill tribes

Organizations: Government of Thailand, local NGOs

Source: <http://www.ftp://ftp.fao.org/docrep/fao/004/AC383E/AC383E00.pdf>

Among the rural populations of Thailand, hill tribe people are among the most disadvantaged and vulnerable. While in recent years there have been some improvement in the socio-economic situation, modernization and influences from the lowlands have led to rapid changes in life patterns. Traditional self-sufficiency can no longer be maintained. Without skills and other means to cope, these communities suffer from deterioration in crucial areas such as agriculture, employment and socio-cultural values. Their production inputs are limited; they generally are denied access to basic social services, including education and health; and they lack opportunities for systematic skills development. Problems with citizenship and land settlement also complicate the life of hill tribe people.

Government policy towards the hill tribes is based on the Cabinet decision of 6 July 1976, which states that the government's intention is to integrate hill tribe people into the Thai State and give them full rights to practice their religions and maintain their cultures as "first class", self-reliant Thai citizens. The Royal Thai Government supports education for the hill tribe people through a four-way approach including: (1) participation and communication, (2) local curriculum development, (3) local capacity building and (4) inter-organization collaboration.

One response to this policy was the creation of the Hill Area Education Project in 1981 jointly implemented by the Departments of Public Welfare and Non-Formal Education responding to the needs and problems of hill tribe communities through a flexible low-cost community-based learning model. The programme combines the support of governmental and non-governmental organizations with community participation.

The educational approach is to reinforce and build on already existing knowledge and resources. To enhance a sense of ownership, various highland community learning centres were built by villagers using local materials and volunteer teachers came from

the local community. Classes are conducted both for children and adults, based on a community-oriented curriculum which includes 35 percent of basic skills (including Thai language and mathematics) and 65 percent of life and social experience (19 basic topics/units and a completely open-ended local curriculum).

The curriculum is not graded. Completion of curricular objectives does not have to conform to fixed course duration. Children are required to spend around 6 000 hours to complete the entire community curriculum course and adults about 1 200 hours. Learning achievement is assessed by teachers along with villagers or officials according to different methods and criteria such as gender, age and ethnic group. To complement the learning at the centres, radio and satellite programmes are also offered. Self-study by community members is also encouraged.

An example from Kenya: non-traditional learning for children of pastoralist families

Organizations: GTZ (German Agency for Technical Cooperation), ActionAid Kenya

Source: http://www.care.org/careswork/whatwedo/education/docs/BGE_workthroughcommunities.pdf?source=170940420000&channel=REDGoogleTXT

With the assistance of NGOs, in particular ActionAid Kenya and the GTZ-assisted Samburu District Development Programme, and in response to a request from the community, a project was developed to help out of school Kenyan children from animal herding families obtain an education. For these poor rural families, children must help take care of and watch over the animals during the day. During dry seasons, children have to travel long distances to find pasture for their animals.

A non-formal education project was designed to accommodate the special needs of pastoralist children in Kenya. The *Lchekuti* (shepherds) project, planned and carried out in the Samburu District of Kenya, uses a multi-grade and multi-shift approach to learning. The project targets pastoralist children, both girls and boys, between the ages of 6 and 16. Generally, classes are held between 15.00 and 21.00 hours when the animals have been brought home from pasture. Another arrangement is to have two groups of students. One group of students attends class from Monday to Wednesday

while the other group stays with the animals. The group of young people taking care of the animals the first part of the week, then goes to class from Thursday to Saturday.

The curriculum is presented in Kiswahili and covers subjects such as numeracy, culture, religion, animal husbandry, business education and child care. The curriculum is determined by the local community, parents and students and is a reflection of the harsh environment of the Samburu District, a semi-arid region of Kenya.

In this non-formal educational setting, the learning is facilitated by volunteers and primary school teachers who have been trained and are supported by GTZ and ActionAid Kenya. Enrolment and attendance vary by season. During the wet season, when children do not have to go far to find good pasture, large numbers attend the classes. On the other hand, during the dry season, many children are not able to attend at all as they are out with animals looking for adequate grazing.

The factors leading to the relative success of this project include the need perceived by parents for some form of education for their out of school children and youth, and the involvement of the community in finding solutions to meeting this need. Another important contribution to success is the flexibility of timing and the short duration of classes allowing young people to continue their family herding responsibilities. The spirit of volunteerism and the willingness of volunteer teachers from the community are essential to the success of the project. The multi-grade system accommodates learners of different ages and learning ability. The multi-shift approach allows for needed flexibility in scheduling classes. It has also been found that the learning is gender-responsive and culturally appropriate which increases motivation of the students and support from parents and the community as a whole.



CHALLENGE 7

Redefining agricultural education

ERP includes agricultural education whose focus has been broadening to encompass a range of life and vocational skills related to both on-farm and off-farm employment. Historically, agricultural primary, secondary and technical and vocational education and training have focused sharply on preparing graduates for on-farm employment, whereas post-secondary and higher education have aimed to produce graduates to fill agriculturally related public sector positions (Avila *et al.*, 2005a). A generally prevailing universal assumption was that agriculture is the only economic activity viable in rural areas and, consequently, all agricultural education and training, at the primary, secondary and higher levels need to be production oriented.

To prepare individuals to succeed in increasingly knowledge-based rural economies linked to global supply chains, agricultural education will need to be redefined to reflect changes in rural areas. Agricultural education needs to respond to the changes in technology, emerging natural resource challenges, opportunities for on-farm and off-farm employment, the need to adapt to climate change, and opportunities in entrepreneurship and small enterprise development (Van Crowder *et al.*, 1998). The prevailing assumption needs to be broadened to include a range of income-generating activities operating in the rural space like agriculturally and non-agriculturally related enterprises. Developing rural people's resilience to adapt and to cope with a variety of global crises is critical to their ability to thrive. Crises may include those related to market fluctuations, climate change, drought as well as others. In extreme cases, a crisis might even lead national authorities to train rural people in skills needed in other locations. For example, the President of the Republic of Kiribati, a small island in South Pacific, indicated recently, as a way to cope with climate change and rising ocean levels, the need to "... train its people in skills that are needed in other lands and start emigrating. There is a shortage of nurses in Australia, so the women in Kiribati are trained to be nurses" (Greenway, 2009). China, on the other hand, might need to retrain rural migrants that cannot find work in cities, and are returning to rural areas. During the first five weeks of 2009, the



number of migrants returning to rural areas was roughly 20 millions, twice as many as estimated at the end of 2008, and a number that represents one in seven rural migrant workers (LaFraniere, 2009).

Incorporating agriculture into the primary school curriculum in rural areas seems quite logical from the perspective of food security. However, because of negative stereotypes associated with farming, such efforts can meet with resistance if they are viewed as focused only on preparing students to be farmers. Schools that have integrated agriculture into science and/or business curricula and those that use school gardening as an experiential learning laboratory have had greater success. Additionally, incorporating health and nutrition into the curriculum helps students appreciate the systemic relationships within food, agriculture and health (FAO/UNESCO-IIEP, 2004a).



At colleges and institutes that offer technical and vocational agricultural education for preparing technicians to work in the private sector and government service, there is a need to broaden and update curricula to include a number of new topics related to sustainable rural development. These curricula might include sustainable agriculture approaches, social change processes especially for those planning to work in extension and with NGOs, and a better understanding of emerging challenges such as climate change, variability in agricultural input and product costs, and the impacts (and opportunities) associated with participation in global supply chains.

Higher agricultural education has a role to play in supporting education and training in the rural context. The engaged university is one that seeks out opportunities to work directly with communities. In the late 1990s, the Escuela Agrícola Panamericana (Zamorano), an international institution located in Honduras, carried out an ambitious multifaceted transformation programme on the evolving needs of the college's external constituencies and society at large (FAO/UNESCO-IIEP, 2004b). EARTH University in Costa Rica has developed a strong link to surrounding communities with benefits accruing to both the communities



and the students from EARTH who interact with them (<http://www.earth.ac.cr/ing/index.php>). In so doing, the community and the university are both strengthened. Universities gain first-hand knowledge of the challenges currently confronting rural people and can better address these specific challenges through research and teaching. Universities can play a key role in training teachers and extension staff, in assisting with the development of curriculum, in developing new technologies of relevance to rural people, in leading agricultural innovation systems, and helping with monitoring and evaluation of educational rural programmes (FAO/UNESCO-IIEP, 2007a). Over the past several decades, Chinese higher agricultural education institutions have been producing highly qualified graduates for agricultural research, extension services and rural administration. The institutional reform, initiated in the 1990s, introduced into the curriculum courses relevant to rural people's needs such as 'human resource development for rural development', 'gender and development', 'participatory training methodologies', and 'participatory community development'. Students graduated under this curriculum play an active role in addressing current local and global challenges to rural development and livelihoods (FAO/UNESCO-IIEP, 2004c).

An example from Kyrgyzstan: adapting vocational agricultural education to the new market economy

Organizations: Helvetas, Ministry of Labour and Social Protection, GTZ, UNDP, Agriculture

Universities of Naryn and Bishkek, Swiss College of Agriculture in Zollikofen, Switzerland

Source: http://www.helvetas.org/global/pdf/projects/asien/04_09_berufsbildung_e.pdf

Following the collapse of the Soviet Union, agriculture changed from a state-owned enterprise to private ownership. In Kyrgyzstan, rural people who had been engaged in agriculture generally had experience in very specialized areas of production. With the change to a market economy, rural people had to take on the role of independent farmers, responsible for all aspects of working the land and marketing their produce.

Since 2001, Helvetas, a non-profit private development organization based in Switzerland, has been working with other partners to develop advisory services for farmers. They soon realized that there was a need for more in-depth training in agriculture to help farmers meet the demands of the new economy. The Agricultural and Rural Vocational Education project was established in Naryn oblast to help people living in the rural areas of this poor region of the country develop knowledge, skills and attitudes to manage private farms and other rural-based businesses.

The project created a new form of vocational agricultural education for men and women farmers in seven pilot partner schools. The learning is based on the situation and conditions associated with farming in this region of Kyrgyzstan. The curriculum was developed using a participatory approach involving farmers, students, parents, teachers, school administrators as well as local and national agriculture specialists.

The project started with 100 students in two schools in the villages of Kochkor and Ottuk, but soon expanded to include over 650 students covering the entire Naryn oblast. The national methodological centre of the Ministry of Labour and Social Protection has been involved in the project so that the vocational agricultural education programme could be applied to other regions of the country.

The vocational agricultural education programme involves three levels of education, progressing from the category of “farm labourer” to “master farmer”. The first level is

for a total of one and a half year of education and provides basic skills training to carry out general farming tasks. The next level is “farmer” where young men and women graduate after three years and are fully able to operate a farm on their own. The next level, “master farmer”, takes the training one step further and focuses on market-oriented entrepreneurship. Graduates who obtain this level of training are also qualified to provide practical field training to other farmers.

Initially students, as part of an apprenticeship system, spend one third of their education time working on host farms. The training involves both theory and practical experience on the school farms. Students are encouraged throughout the training to acquire a business-oriented and problem-solving approach, which is new for many teachers. Teachers also have to learn new roles as fellow learners, coaches and facilitators of the learning process. School managers learn to administer the new educational system and continually look for ways to strengthen and improve existing systems and structures within their institutions.

**An example from Paraguay:
agricultural education: teaching children from low-income rural areas how to save, invest and earn money**

Organization: Fundación Paraguaya

Source: <http://www.fundacionparaguaya.org.py/index.php?c=208> and <http://www.theworldchallenge.co.uk/html/home.html>

Paraguay has a large rural population and is one of the poorest countries in Latin America where two thirds of the land is held by 2 percent of the population. The majority are peasant farmers on small land holdings. It is a country where the wealthy stay wealthy and the poor tend to remain poor. In 2002, Martin Burt, the former mayor of Asunción, with the assistance of the Fundación Paraguaya for cooperation and development, set up *Escuela Agrícola* to help children from the poorest families in the countryside become rural entrepreneurs.

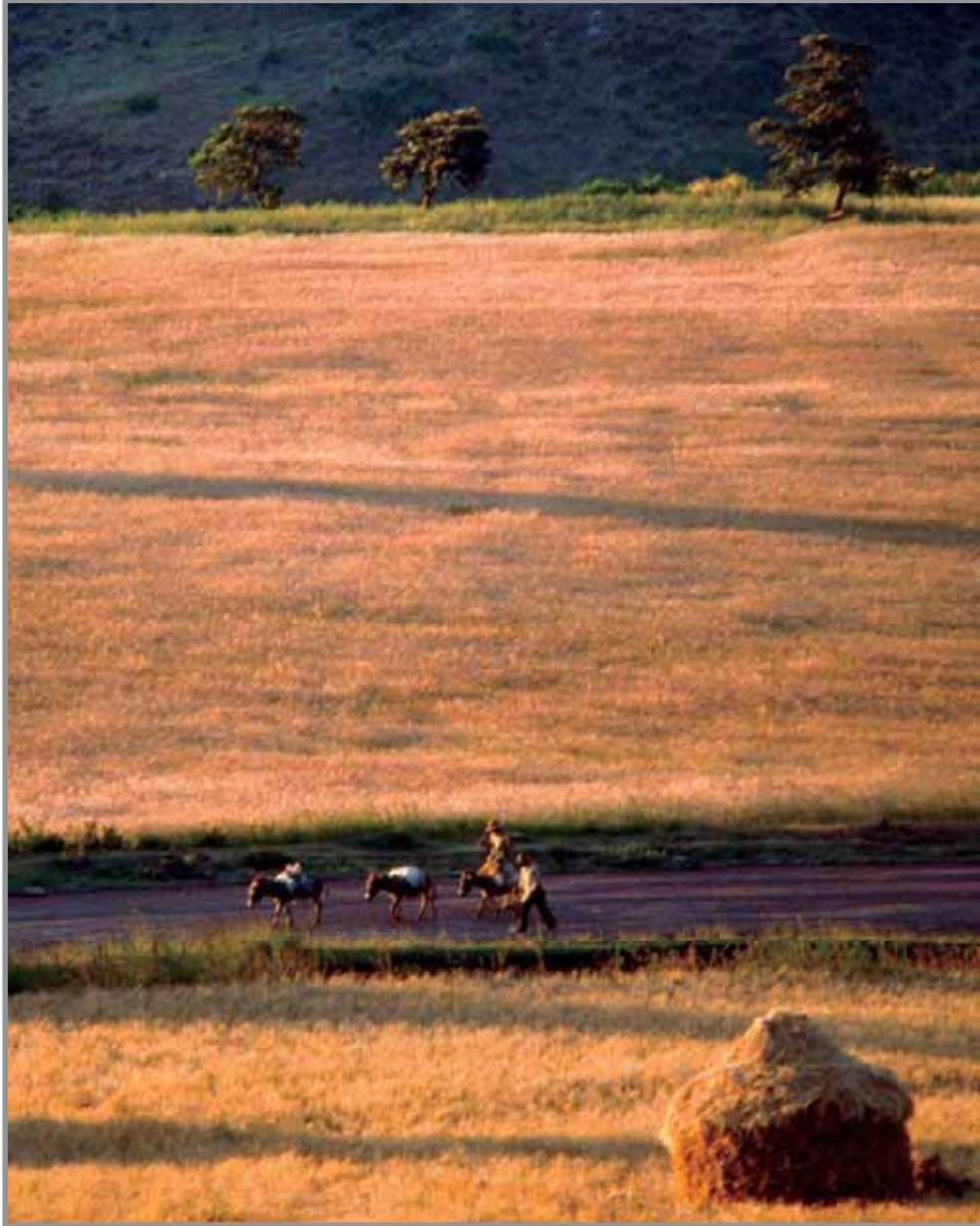
Escuela Agrícola is one of the 12 projects in the world that have been nominated for the World Challenge 2008 Award, sponsored by BBC, Newsweek and the Shell

Corporation recognizing projects and small businesses from around the world that have shown enterprise and innovation at the grassroots level. In 2007, the school hosted the World Conference on Self-Sufficient Agricultural Schools with representatives attending from 22 countries in Africa, Asia, Latin America, the United States of America and the United Kingdom.

The school was converted from a highly subsidized standard agricultural high school to a self-sufficient and fully organic farm school for children of poor rural families. The school has 62 hectares of land and approximately 7 000 square metres of fairly modern buildings. Students spend half of their time outside of the classroom where they learn not only how to increase yields but also how to maximize profits and sell their produce.

Escuela Agrícola teaches students how to make the most of their parent's land using the latest in organic technology. In addition to agriculture and other basic academic subjects, the school teaches life skills and reproductive health. The school is completely self-sufficient. Students grow most of their own food and sell value-added products such as cheese and yoghurts. The school even runs a small income-earning hotel, where urban people can come to enjoy the countryside and learn a little about agriculture. Most importantly, the people from the city who visit the school farm and stay at the hotel see the students not as poor peasant farm youth, but rather as a group of young, highly motivated and technically skilled entrepreneurs.

Students, both boys and girls, come from very poor rural families who generally have many children and no hope of providing them possibilities of an advanced education. *Escuela Agrícola* provides room and board, as most students come from remote areas far from urban centres. Students, who come from most of the departments in the country, must have completed grade 9 and be between 15 and 21 years of age. Their families have to own some land where the students can go back and be expected to develop a profitable agribusiness. Students who graduate from the *Escuela Agrícola* benefit from the Fundación Paraguaya's microenterprise development programme, which allows the Central Bank of Paraguay to lend money to the young poor farmers.



CHALLENGE 7



CHALLENGE 8

Skills training for rural people

Despite the existence of thousands of agriculture and rural development technical and vocational education training (TVET) institutions and skills training courses all over the world, the international community has placed little political priority, very few financial resources, and only minor research attention on this subsector. The UNESCO policy studies and recommendations published in recent years on TVET focus mainly on urban dwellers needs and institutions. Since the late 1980s and for about 20 years, the World Bank has underestimated the importance of TVET in general. However, with the World Bank's recent shift to prioritization of agriculture (World Bank, 2007c) as a key development issue, the importance of agricultural education and training was rediscovered and is now being promoted as a crucial pro-poor investment (World Bank, 2007a).



A narrow skills base can limit employment options and reduce livelihood alternatives for rural citizens. Skills training in rural areas needs to include a balance among life skills, food production skills and self-employment skills. Appropriate non-formal skills training for adults and school drop-outs can permit rural people to diversify their skills for a more secure livelihood and greater resilience during times of stress (FAO/UNESCO-IIEP, 2006b). Vocational and technical education and training could benefit from the inclusion of agriculture and rural development content to ensure relevance of the programmes (Avila *et al.*, 2005ab). Leaders from African countries emphasized the need for non-formal livelihood skills training for adults and school drop-outs aimed at income-generating activities through self-employment (FAO/UNESCO-IIEP, 2006b).

Innovative models have been developed in Lao People's Democratic Republic, where production-based vocational schools combine learning, earning and doing (FAO/UNESCO-IIEP, 2002). Another example is the Junior Farmer Field and Life School programme

in Mozambique that deals with agricultural as well as life skills development among young rural citizens (FAO/UNESCO-IIEP, 2006b). The FAO Interdepartmental Working Group on Training for Technicians and Capacity Building has identified five examples of “best practices” and these were published in booklet form (FAO, 2007a).

In some instances, there is a tremendous urgency to this task. For example, many youth in rural areas can no longer be thought of as “future farmers”; they are today’s farmers because of the loss of parents to HIV/AIDS. The traditional apprenticeship within the family economy has been lost and, with it, also invaluable indigenous knowledge. Vocational and technical education and training programmes for children and youth are one response to this problem. The Junior Farmer Field Schools undertaken with orphans of HIV/AIDS parents are running in several African countries with FAO technical assistance.

An example from Nigeria: university outreach delivers seminar to local farmers

Organizations: Teach a Man to Fish, Akwamfon Sustainable Agricultural and Community Education Initiative and the Akwa Ibom Agricultural Development Programme

Source: <http://www.teachamantofish.org.uk/blogs/ASCA/2008/04/sife-akadep-aid-rural-agriculture.html>

The student organization, Students in Free Enterprise (SIFE), from the University of Uyo in Nigeria, in collaboration with the Akwa Ibom Agricultural Development Programme (AKADEP) and the Akwamfon Sustainable Agricultural and Community Education Initiative planned and carried out a seminar for men, women and youth from the Ikpe Annang Community and five surrounding villages. The theme of the seminar was Agriculture as a Business. Crop and livestock experts from AKADEP spoke on various topics while a representative from the SIFE moderated the seminar.

Topics discussed included how to profit by using good farm practices such as the timing of farming operations to maximize production and take advantage of market demand; the use of improved types and breeds of livestock; and the use of a combination of organic and inorganic fertilizers to maximize production and be most environmentally responsible.

On the animal husbandry side, a presentation was made on the potential for the production of grasscutters to increase farm income and food security. Grasscutters, a small rodent, are appreciated as food by many African households and bring a good price in the market. As a type of bushmeat, the animals are usually hunted; however, with proper care, they can be raised on the farm. They are very productive, breed during all the year, have many offspring and grow fast. Farmers were also told how to acquire lime to control the acidity of their soils. Other useful advice included how to order improved crop varieties and good quality livestock, as well as advice on dry season farming of fluted pumpkins and other vegetable crops that are very much in demand during the dry season and have a good market value.

Farmers raised many questions during the seminar. In the follow-up plan of action, it was agreed that SIFE students and advisors would return to the village to demonstrate good crop and livestock production practices according to the needs and interests of the farmers. It was also agreed that the farmers would register with AKADEP so that the local farmers' association could be linked with major markets to sell their produce and livestock.

Some farmers mentioned that this was the first time that the government had presented such a programme in their village. The farmers were appreciative of the seminar and said that otherwise they would have had to spend much money and travel long distances to get the kind of information that was provided.

An example from Kenya: building capacity of goat farmers through skills training

Organizations: FARM Africa, local governments and Meru Goat Breeders Association

Source: <http://www.farmafrica.org.uk/programme.cfm?programmeid=30&context=subject&subjectid=3> and www.ilri.org/johnvercoeconference/files/Presentations/01_ChristiePeacock_Farm%20Africa%20case%20study.pps

Small farmers in Kenya face many problems like limited potential for increases in crop yields; land holdings shrinking because of fragmentation; cash crop prices that are stagnant or are falling; and unreliable support services for cattle. Based on the lessons learned from an earlier project, the Meru Dairy Goat and Healthcare Project, which was carried out from 1996 to 2004 in central Kenya, a new dairy goat improvement project

was started in the semi-arid areas of Kitui and Mwingi Districts in Eastern Kenya to increase farm incomes and household food security.

The project is based on the premise that any real significant increase in animal production in Kenya will come through a breed improvement programme coupled with good quality animal health care services. Under the project, farmers obtain up to three litres of milk per day per animal using the Toggenburg crosses compared to the 200 ml generally obtained from local goat breeds. Each village group received a purebred Toggenburg buck for cross breeding, along with four does for a breeding unit to maintain purebred animals and ensure a sustainable supply of pure breeding stock for replacement and expansion to other areas.

The project is unique as it is a totally community-based dairy goat production and breed improvement programme, supported by a private veterinary system, local extension services and a farmer-managed breeders association to take care of breeding arrangements and manage all inputs. All this has been possible through community organization and skills training to build the capacity of milk goat producers and local technicians. The village dairy farmer groups are 21 with over 500 members and almost 70 percent of the members are women.

An initial three-day training programme for the farmers was provided to enhance group cohesiveness, develop a shared vision of the functioning of the local dairy goat breeding and production programme and give a chance to members to share experiences and lessons learned. Additional training included such topics as group dynamics to strengthen group decision-making and action; goat breeding techniques; how to provide for adequate housing, goat identification and record keeping; feed conversion; and kid rearing. There was also training to help selected farmers set up and maintain a village breeding station.

As part of the capacity building for local support services, community extension workers and village drug shop attendants were trained. Extension workers received training on animal husbandry practices, group dynamics and farmer-to-farmer extension skills. One week of training was provided to nine drug shop attendants where they received orientation as to their role in the decentralized community animal health system and the principles under which it operates. To further develop their capacity, the drug shop attendants were trained on effective communication with clients; how to improve on drug shops public image; common animal diseases and their clinical signs; and the drugs that are used to treat various diseases.



CHALLENGE 08



CHALLENGE 9

Recruitment and retention of extension and school staff

Having talented and committed extension staff and teachers posted in rural areas is central to the success of educational enterprises at all levels. Preparing sufficient numbers of qualified and motivated extension staff and teachers is a critical initial step. However, it is far from automatic that these individuals will gravitate towards rural postings upon graduation. Recruitment for and retention in rural areas present significant challenges and require special attention. Rural teachers are difficult to recruit and retain because of factors such as a lower social status than urban teachers, feelings of isolation, distance from family and friends, lack of career development and training opportunities, lack of incentives, difficulty adjusting to rural lifestyles, lack of amenities, difficulty of communication, poor shopping, and others.

One innovation identified by ERP partners is the reform of recruitment practices by attracting prospective extension workers and teachers who are originally from rural areas. Teachers who work where they grew up are more likely to stay. Some efforts have also been made to “grow your own” teachers by encouraging (and subsidizing) rural youth to consider teaching professions. *Ad hoc* colleges to train rural teachers are part of the Rural Education Programme running in Colombia.

Another area identified as ripe for change is the deployment policies that can be adjusted to make rural areas more attractive. This can be done through bonuses, higher salaries compared to other government employees in rural areas, loan forgiveness, provision of subsidized housing, access to better health care, posting newly qualified teachers/extension workers in pairs, establishment of career progression options, and other similar policies.

In Malaysia, for example, a package of incentives, including a piece of land and training in agriculture, was used to encourage teachers to stay in rural areas. In Lao People’s Democratic Republic, profit sharing in school-based income-generating activities is allowed whereby both students and teachers benefit financially (FAO/UNESCO/IIEP, 2002). Another way to keep teachers and extension staff connected is to provide, where feasible, mobile phones and Internet service for staff based in remote areas.

Yet, even with the implementation of these and other innovative ideas, there will likely still be shortages of staff in rural areas in some countries. Adjustments will need to be made. For example, increased mobility of a smaller number of extension staff in rural areas can expand coverage if adequate funds for transport are available. In the formal education sector, multi-grade classrooms are one response to teacher shortages (UNESCO-IIEP, 2003).

An example from Peru:

***Kamayoq*: village farmer-to-farmer extension workers promote farmer innovation and experimentation in rural areas**

Organization: Practical Action

Source: http://pdf.usaid.gov/pdf_docs/PNADF052.pdf and <http://www.aprendesperu.org/>

As in other countries, structural adjustments in the 1990s led to the breakdown of traditional agricultural research and extension services in Peru. The existing government system was weak, focusing primarily on technology transfer and ignoring farmer innovation and experimentation. By 1992, the government extension programme run by the National Institute for Agricultural Research had fewer than 100 officers for the entire country. The assumption was that extension services for all farmers would be provided by the private sector. What happened in the field is that resource-poor farmers were not able to pay for these services mostly directed to larger commercial operations.

Practical Action, an NGO working in the Quechua-speaking farming communities of the Peruvian Andes helped villagers solve the problem by developing their capacity through education and training for a sustainable farmer-to-farmer extension system supporting farmer innovation and experimentation. Based on the pedagogic approach of the Brazilian educator, Paulo Freire, Practical Action designed a training approach that respected the social and cultural context of the local farmers and placed an emphasis on learn-by-doing and farmer participation.

Practical Action's work began on irrigation technologies in the early 1990s, using farmer extension agents called *Kamayoq*. *Kamayoq* is a word from the Inca Empire language that meant a respected group of people who could predict climate and weather and



made recommendations for sowing and other agricultural practices. The use of the term *Kamayoq* is significant in that it is a direct link to the Quechua people's historic past.

By the mid-1990s, Practical Action realized that the activities had to be broader than irrigation to better meet the needs of farmers. In 1996, as a result of considerable donor funding, a *Kamayoq* school was established in Sicuani, about 140 kilometres from Cuzco. The school has been operating ever since and has the fundamental objective of training groups of farmers who are then responsible to go back to their communities to train other farmers.

A key to the training is to encourage the *Kamayoq* to be creative with farmers and encourage innovation and experimentation to deal with agricultural and veterinary problems. As farming conditions in the Andes are very complex, there are no standardized solutions. The training courses take place over an eight-month period, which include approximately 27 training sessions. Over 200 *Kamayoq* have been trained so far and of

these, 15 percent were women. At the school, some of the training takes place in the classroom, but most is carried out at the various field locations.

There have been many positive impacts from this programme. Before the *Kamayoa* started their work, most families were subsistence farmers. Now they grow subsistence crops but also, particularly among women, they raise onions and carrots for the market. Families have been able to increase income from market sales and thus pay for education for their children. The rates of mortality among cattle have fallen greatly as farmers are now better able to detect animal disease and take action to prevent losses.

An example from Mozambique: teacher training college helps farmers to increase production through Farmer Club project

Organizations: Humana People to People, USDA, Plant Aid Inc., Government of Mozambique

Source: <http://www.humana.org/dns/Article.asp?NewsID=35>

Since 1993, Humana People to People has worked to develop teacher training colleges in Mozambique, Angola and Malawi. In that year, the first teacher training college was opened in Maputo with support from the Development Aid from People to People in Mozambique. The college was strongly inspired by the Necessary Teacher Training College model from Tvind in Denmark. There are now six teacher training colleges in Mozambique.

One of the Teacher Training Colleges in Chimoio Province is working with local villages of communal farmers to foster increased agricultural production in order to strengthen food security and increase household incomes. The work is carried out around the formation of community Farmer Clubs. The college has organized ten Farmer Clubs in Macossa, Barue, Sussundenga, Chimoio, Gondola and Manica Districts in Chimoio Province.

The clubs are run by graduate teachers and students in their 11-month teaching practice who will be working in rural primary schools throughout the country. Each Farmer Club has from 30 to 55 members. The teachers are responsible for providing relevant lessons related to agricultural production and marketing, carrying out practical demonstrations in the field, and providing other types of overall assistance to the communal farmer members.



The student teachers are assigned to rural primary schools in the Province. They are given bicycles in order to reach all farmer members of each Farmer Club in the area of operation. Farmer Club members receive training through the presentation of 15-18 courses, depending on their interests and needs. The courses include some theory with demonstrations and practical work carried out on Saturdays. Most demonstration plots are located at the village primary schools where student teachers have been assigned. In addition to the courses and field demonstration work, student teachers are on-call to help individual farmer members of the Farmer Group at any time.

Student teachers also help members of the Farmer Club market their produce. Some farmers provide vegetables for use in the school and other produce is sold at the local market. Harvests from the demonstration plots are donated to schools, orphanages and prisons. The project has been very successful in helping communal farmers and members of the village Farmer Clubs gain the necessary skills and knowledge to enable them to improve their agricultural production and marketing, and thus increase overall household incomes and strengthen food security.



CHALLENGE 10

Effective pro-rural policies

In the absence of adequate pro-rural policies on education and financing, many of the innovations mentioned in previous sections will not be feasible. However, motivating major changes in policy and resource allocation to favour rural citizens is generally very difficult to achieve, owing to the absence of powerful political forces that advocate for rural people.

National policies and strategies that effectively address ERP recognize and target the diversity of needs of rural people such as agro-ecological differences, geographical differences, and socio-economic and cultural differences (FAO/UNESCO/IIEP, 2006a). However national investments in ERP are seldom a top priority. But, as Burchi and De Muro (2007) found, education is a neglected key to food security. They indicated that “... the association between food insecurity and primary education is very high” (p. 3) and also that “... *primary* more than basic, secondary or tertiary education for rural



people contributes to the promotion of food security in rural areas” (*ibid.*, p. 38). Because of the link between education and food security, education was shown to be an area worthy of further investment. “... primary education is a crucial element to reduce food insecurity in rural areas, even when compared to other factors such as access to water, health and sanitation” (*ibid.*, p. 3).

In general, ERP partners believe there has been an under-investment in developing rural people’s capacities by the state. Basic education is generally considered a public good, and most believe it should be funded by the state. It can be argued, likewise, that rural extension is also a public good when it is dealing with food security for the most vulnerable populations. Poor farmers generally cannot afford to pay for school fees for their children nor for advice on food security interventions, and they generally will not pay for extension advice on environmental improvements. Therefore, public investment is often required to address these audiences.

Responsive, pro-rural policies cannot be developed without an adequate information base. Data on ERP that enable governments and the international community to

understand the precise educational needs of rural people will aid in the development of effective national policies and will help the donor community understand why ERP should be repositioned higher on the world agenda.

National governments are finding it challenging to build effective ERP programmes in the face of decreasing donor investment in education, training and rural development (FAO, 2002c). But the argument for making such investments is compelling. Burchi and De Muro (2007) stated that “if a developing country such as Mali, which is among those with lowest levels of education, manages to double access to primary education, it can reduce the intensity of food insecurity by approximately 20 or 24 percent in rural areas” (p. 38). They concluded that education for rural people, which is the main group of people directly involved in food production, processing, and commercialisation, “is a key factor in fighting food insecurity in developing countries” (*ibid.*, p. 37). In this example, an investment in one sector can have a multiplier effect resulting in a positive impact on another sector.

An example from Peru: innovations in decentralization improve quality of education for rural people

Organizations: USAID, Academy for Educational Development, Government of Peru, AprenDes

Source: http://pdf.usaid.gov/pdf_docs/PNADF052.pdf and <http://www.aprendesperu.org/>

The project, Innovations in Decentralization and Active Schools (AprenDes), in rural Peru has accomplished a great deal since it started in 2003. With a partnership between USAID/Peru and the Ministry of Education, the project is being carried out in schools and school communities in rural areas of the San Martin region of Peru. The project supports the Peruvian Government’s 2003 Education Law, which promotes decentralization as a way to improve the quality of education in the country. The project is implemented by the Academy for Educational Development and focuses on decentralized local management of schools, improved educational quality and democratic practices. The goal of this project is to improve the quality of ERP from bottom up as well as top down.

The project focuses on the design of effective decentralization policies and their implementation through community level management of quality education in the regional and local context. Community members and students themselves become involved as the project promotes group work, self-initiated learning, democratic behaviour and parent involvement. In this way, students become active participants in the social and economic life of their local communities. AprenDes in San Martin region has already impacted over 6 000 students in 140 one-teacher and multi-grade rural schools. The project works to strengthen the capacity of the Ministry of Education, local governments and others to help them assume appropriate and supportive roles in the decentralization process. The teacher's role is to facilitate the learning process. Project facilitators are hired to train the teachers, give them technical support and promote the development of effective learning materials.

Under the national Decentralization Law, each local school is managed by an Educational Council, made up of representatives of students, parents, school directors and community leaders. The local Educational Councils receive training and then work together to develop the annual school plan. The schools under the project are converted from traditional schools to "active schools", characterized by active learning and by the participation of parents, students, teachers, members of the community and school administrators. In a traditional school, the teacher lectures and the students try to commit the material to memory by copying notes from the blackboard. In the active schools, students work in small groups and learn reading, mathematics and natural sciences in learning centres. Students research and analyze real problems in the community. They are involved in community service projects and are actively involved in the management of their school. Students prepare oral stories and write articles about life and work in their community.

In the active schools, teachers become facilitators of learning. They facilitate learning in small groups. Networks of teachers meet periodically to share experiences, observe other classes and solve educational problems. Teachers learn new techniques through practical experience, training and feedback from other teachers and are responsible for developing their own learning materials. They design training manuals and adapt learning guides based on the local conditions and prepare materials important to the needs of their students.

An example from El Salvador: EDUCO - reform expands educational opportunities for children in the poorest rural communities

Organizations: Ministry of Education, World Bank, UNESCO, UNDP

Source: <http://www.ifc.org/ifcext/edinvest.nsf/Content/EvaluationStudies>; http://www.iadb.org/ethics/documentos/lie_impl-i.pdf; and http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079934475/547667-1135281552767/ElSalvador_EDUCO.pdf

As late as the early 1990s, El Salvador had one of the weakest educational systems in all of Latin America, with high levels of repetition and drop-out. The 12-year long civil war in the 1980s contributed to a weak education system, especially in rural areas. Some schools, particularly in the north (Chalatenango, Morazán and Cabanas) and San Vicente, in the central region, were closed definitely because of the frequent army and guerrilla confrontations. Existing rural schools supported by the government were of such poor quality that parents thought school was a waste of time and many kept their children, especially girls, at home to take care of younger siblings and do household chores. In 1990, the net enrolment rate for primary education was 61.3 percent meaning that more than half million primary-age children were not in school.

In 1991, with the support of the World Bank and the Inter-American Development Bank, the Ministry of Education established the Community Participation Education Programme to expand educational opportunities by providing pre-primary and primary education to the poorest communities in El Salvador. The Spanish acronym of the programme is EDUCO. The programme started with 8 416 students in 263 schools. By 1996, the programme was expanded to include 168 672 students in 5 721 schools. The objectives of the programme are to increase access to education for the poorest rural communities; promote local community participation in education; and improve the quality of pre-school and primary education.

Under this decentralized educational reform, parents in a community elect among themselves a managing body called the Community Education Association (ACE). The Ministry of Education enters into a renewable one-year contract, which is governed by a formal outline of rights and responsibilities between the government and the community. The community agrees to deliver a given curriculum to a determined

number of students. The ACEs are the direct employer of the teachers. They select, hire and dismiss those teachers who do not perform up to a certain standard. Teachers' performance and attendance are monitored by the ACE. The community associations are also responsible for equipping and maintaining the school facilities. To function, each ACE receives a direct transfer of funds from the Ministry of Education.

Evaluations of EDUCO indicate that the programme is in fact serving the poorest communities in El Salvador. There are no differences in academic performance between students attending the EDUCO schools and those going to traditional schools, even though the socio-economic conditions of the EDUCO students are inferior to those attending traditional schools. The EDUCO schools generally have worse infrastructure and basic services than the traditional schools and yet the EDUCO schools tend to have more and better teaching materials. Most importantly, parents of EDUCO students are more involved in the education of their children.



