



## "DISTANCE LEARNING CONTENT IN AGRICULTURE AND RURAL DEVELOPMENT WITH IT APPLICATION IN ANURADHAPURA DISTRICT OF SRI LANKA"

By.

Shanthi De Silva G D Lekamge Uma Coomaraswamy The Open University of Sri Lanka

Food and Agriculture Organization and The Open University of Sri Lanka

Workshop on "Distance Learning Content to Favour Sri Lankan Rural Women's Learning"

> 21-23 May 2004 Colombo, Sri Lanka

# Distance Learning Content in Agriculture and Rural Development with IT Application in Anuradhapura District of Sri Lanka

C. Shanthi De Silva<sup>1</sup>, G.D Lekamge<sup>2</sup> and U Coomaraswamy<sup>3</sup>

#### ABSTRACT

A case study was undertaken to identify the distance learning content in agriculture and rural development with IT application for women and girls in Anuradhapura District of Sri Lanka. The intermediate objectives were to identify the information sources through which rural women obtain information related to their rural livelihood; assess the knowledge of rural women and girls on IT application; identify core and the preferred areas in agriculture and rural development; identify the curriculum content and the supporting material for teaching agriculture and rural development appropriate for the rural women and girls in the Anuradhapura District.

Individual interviews and focused group discussions were conducted with 50 women and girls for collecting data of this study. The sample was selected randomly from the Madhya Nuwara Gampalatha of Anuradhpura District with the assistance of the Divisional Secretary. A group of eight to nine participants were included randomly for a focus group discussion. In addition, officers of the Provincial Department of Agriculture and the Divisional Secretariat were interviewed to collect supplementary information related to this study. To analyse quantitative data SPSS statistical package was used. A qualitative analysis was also conducted for open-ended answers.

Senior Lecturer in Agricultural Engineering, Faculty of Engineering Technology, The Open University of Sri Lanka, Nawala, Nugegoda

<sup>&</sup>lt;sup>2</sup>Head, Department of Education, Faculty of Education, The Open University of Sri Lanka, Nawala, Nugegoda

<sup>&</sup>lt;sup>3</sup> Vice Chancellor, The Open University of Sri Lanka, Nawala, Nugegoda

Results indicated that the majority of the women were below the age of 50 and that their main livelihood is Vegetable cultivation. Most of them own land for vegetable cultivation and use domestic wells, as they do not have irrigation water or even an adequate number of agro -wells. They cultivate only rainfed paddy as water is the main constraint for agricultural activities. Nearly 55 percent of them had received training in agriculture related activities by the Department of Agriculture and non-government organisations. The main source of getting information was through TV, Grama Niladhari and Samurdhi Officers.

Even though the majority of the sample (96%) had never used a computer, 88 per cent expressed their willingness to learn to use a computer. Nearly 80 per cent of them felt that it would be very useful for their livelihood. Out of them 49 per cent wanted to have training on computer and 47 per cent particularly mentioned their preference to follow the awareness programme of the Open University at the Anuradhapura Centre. However none of them were in a position to bear the cost of their training.

The core areas in agriculture and rural development for which they expected training were vegetable and cash crops, paddy cultivation and livestock rearing. Among the preferred areas in agriculture and rural development for training vegetable cultivation, water conservation, low cost irrigation systems, livestock, poultry rearing, anthurium culture, child rights and mushroom cultivation were priorities.

The majority of them preferred a combination of lecture, print and AV as their mode of learning. In addition some have selected either a combination of lecture and print or only face-to-face lectures. Water and finance were the major constraints for their agricultural activities and learning purposes respectively.

Key words: agriculture, rural development, distance learning, information technology, livelihood, and empowerment

#### INTRODUCTION

Sri Lanka is predominantly an agricultural country that consists of three major climatological zones namely the dry, intermediate and wet zones. Based on an average annual rainfall, the country has been divided into three zones, wet, dry and intermediate (Figure 1). Dry zone has an average rainfall of below 1900 mm, intermediate zone between 1900-2000mm, and wet zone 2500-5500mm. Sri Lanka experiences high seasonal and spatial variations in rainfall, due to the bi-monsoonal climatic pattern: Northeast monsoon from October to March (Maha or wet season) and Southwest monsoon from April to September (Yala or dry season). In the extreme northwest (Mannar, Kalpitiya area) and in the extreme southwest (yala area) arid conditions exist as the mean annual rainfall drops below 1000mm.

More than two thirds of the agricultural activities in Sri Lanka are confined to the dry zone and this zone is more prone to drought due to the unreliable rainfall pattern. The main livelihood of the communities in this zone depends on agricultural activities, which is also limited due to water scarcity. The dry season has two major seasons per year and these seasons are strongly influenced by the monsoon circulation. The north-east monsoon brings considerable rainfall over the whole of the island during the maha season, from September to March. In the dry zone, more than two thirds of the annual rainfall is received during the maha season, and more than 70 percent of the maha season rainfall is received from October to December. The south-west monsoon brings reliable rainfall only to the south-west of the country during the yala season from April to August.

Rice is the major crop cultivated in the maha season. In yala season other field crops such as vegetables, cash crops, leafy vegetables and fruit trees such as Banana, Citrus and Mango are cultivated with water from the numerous surface tanks and the supplementary water from domestic or agro wells. In the Dry Zone Anuradhapura is one such agricultural area that experiences drought for more than 6 months of the year. It is mainly a result of

poorly distributed rainfall pattern, high evaporative proportion and inadequacy or absence of surface water storage (De Silva, 1995).

On most occasions when severe drought sets on, relief measures in the form of dry ration and water are distributed to the affected communities. But the permanent alternative or sustainable measures are not sought or implemented and the rural community continues to live in the same condition year after year. Therefore educate the rural communities to use their resources with appropriate knowledge and technology to enhance their livelihood options such as agriculture and rural development, to alleviate poverty, upgrade their living standards, education and family health becomes imperative. The efforts are underway to improve the livelihood of the farming communities in the Dry Zone to adopt alternative farming practices. The information exchange process can be both accelerated and improved through appropriate application of information and communication technologies (ICT).

#### Statement of the problem

In Sri Lanka the rural woman plays an important and essential role in the agricultural and rural development sector. When there is water scarcity, she has to search for water for different needs such as drinking, washing cloths and watering crops. Her roles are as the principal provider and carrier of water, main caretaker of the family's health and an active participant in transplanting, weeding and harvesting of paddy cultivation, which is a multi-faceted role. She is also involved in the planting, weeding and watering of other field crops. It is often women and girls who are mostly involved in water collection and usage.

Therefore women should have access to information, communication, technology and production techniques to facilitate the performance of the above roles. New information and communication technologies (ICTs) could certainly help to make their livelihood better. Such enhancements happen in a variety of ways. For instance, decisions can be

made as to which crops should be planted by referring to market information downloaded from the Internet and early access to drought disaster occurrence will help the rural women to plan their activities of storing water, conserving water and selecting drought resistance crops for cultivation. It will help them to take best options and adopt best practices to face the drought conditions.

The FAO strategy of action for information identifies a dual approach that can be summed up as 'Information on Rural Women and Information for Rural Women". The information on rural women approach aims to improve the gender -specific data to advise policy makers on gender responsive planning and resource allocation in the agriculture and rural development sectors. The information for rural women approach aims to provide information for empowering women with knowledge for their advancement in the economic and social spheres within their households, as well as in their communities and the nation. Within this frame work the FAO gender and development program in collaboration with communication for development programme jointly explores the education and communication strategies to serve the information learning needs of rural women. Defined broadly as a technical area of harnessing ICT for the advancement of rural women the programme focuses on issues related to rural women's advancement in the context of emerging information and communication technologies, which dominated the education and development environment. An element of the technical program focuses on distance learning approaches (DLA) to reach rural women leaders.

The rationale for such a focus on DLA for rural women is based on the prevalent conditions related to rural women's access to learning resources, as well as those associated with educational systems and paradigms, the emerging role of information and communication technologies for development in the Asian region. First, social and physical distances isolate rural women and girls including access to educational centres and learning resources and impair their economic and social advancement. They also face social and cultural restrictions on their mobility. Second, in the region the agriculture

education system is the dominant one in delivering information to rural communities, but still all have not mastered distance education modality to reach rural women. At the other end there are many well-organised Open University systems with an extensive network of learning centres and educational experience serving mostly urban clients. An under utilised potential exists in creating partnership among these systems to harness their respective expertise to reach rural women. Third, a greater availability of Information Communication Technologies combined with appropriate content can hasten rural women's access to learning. Fourth as a result of the movement of social mobilisation among the rural communities in the region, there are many women's groups and community based organisations that could be linked to distance learning centres to serve the learning needs of rural women.

Unfortunately, there is no program offered through distance mode by any university in Sri Lanka on agriculture and rural development, which is appropriate for rural women and girls to acquire knowledge. There is an urgent need to provide avenues for improving rural women's knowledge and skills and to assess their potential to use IT based learning systems. In recent years, the information technology s a field is becoming increasingly important in technology transfer and communication. Therefore it is essential to focus on the need to educate the rural women and girls on information technology for accessing information.

In a case study conducted by the Open University of Sri Lanka supported by FAO it was revealed that the farming communities in different areas have different interests. However, the Anuradhapura District is selected for this case study as the main interest in this area is agriculture and it is also a representative area for the dry zone agriculture in this country. Considering this university's philosophy of "open learning" and its infrastructure of the study centre in Anuradhapura will be in a suitable position to improve the knowledge in agriculture and rural development for the rural women and girls with Information Communication Technology (ICT) application.

#### Objectives

The objectives of the case study will be as follows:

- To identify the information sources, formal and informal networks through which rural women obtain information related to their rural livelihood and agricultural activities
- To assess the knowledge of rural women and girls on IT application to gain knowledge on agricultural technology, marketing and other information
- To identify the core areas in agriculture and rural development in the Anuradhapura District
- To list the preferred areas in agriculture and rural development for developing distance learning programmes
- Identify the curriculum content and the supporting material for teaching agriculture and rural development appropriate for rural women and girls in the Anuradhapura District.

#### LITERATURE REVIEW

Rural women in Asia contribute significantly to the agricultural sector, and rural development. They have extensive workloads with dual responsibilities for farm and household production. They also have responsibilities for home maintenance and household crop production if they have land (Wickramasinghe, 1994). Nearly 68% of the women are involved in agricultural work in plantations and more than 70% of the rural women are involved in subsistence production (Department of Census and Statistics, 1997). Moreover, women have an active role being heavily involved in livestock production, forest use, and fishery processing. They also contribute considerably to household income through farm and on farm activities, as well as by under taking employment overseas most often in the service sector (Bulletin of Labour Statistics of Sri Lanka 2000; Kumar, 1998). Further, women's work as a family labourer is underestimated (Food and Agriculture Organization of the United Nations, 2001; UNDP, 1997), and laws and traditional social

norms are biased in favour of men and constitute a barrier to women's equitable access to resources.

To empower women and to enable them to perform effectively and efficiently in the labour force the literature suggests that it is imperative for women to be supported with access to information (FAO, 2001), knowledge and skills. A danger exists however, that with exponential growth in information related to economic and social participation and in the technologies that disseminate information at a high speed, the educational divide (formal and informal) may be exaggerated among rural women (Sustainable Development Department, Food and Agriculture Organization of the United Nations, 2001).

Information for rural women addresses the need to provide information for empowering women with knowledge for their advancement in the economic and social spheres, within their households, as well as in their communities (FAO, 2001). The remission in information for women related to economic and social participation and the technologies that disseminate information at high speed may lead to additional educational and information inequity suffered by rural women (UNDP, 1997). Lack of education and information may also result in stress and frustration for women and their families as well as result in inappropriate judgement, leading to ineffective and unproductive practices. However their access to information, communication, technology and production techniques remain to be improved (FAO, 2001).

Therefore, it is advocated that Sri Lanka explores how she can fully utilize her resources for developing human resources for agriculture and rural development, particularly among rural women. Further, it is suggested that the educational resources in Sri Lanka be mobilised to eliminate the educational and information inequity suffered by rural women.

#### METHODOLOGY

A descriptive survey design was chosen for this study. Two procedures were followed to obtain information for this study. The interview schedule concentrated on four major areas such as basic data, information gathered at present, knowledge on IT and areas of learning. A sample interview schedule is in the Annexe 1. Focused group discussions were directed on the current information gathering system, deficiencies of the present system, areas of agriculture for enhancement of knowledge, mode of learning, areas in agriculture and rural development needs for training and demonstration, knowledge on ICT and constraints for learning.

With the assistance of Divisional Secretariat Office in the Anuradhapura District, 50 women and girls were selected randomly from Madhya Nuwara Gampalatha Division for this case study. The participants were informed about the dates of the interviews and focused group discussions were held at the Divisional Secretary Office of the Madhya Nuwara Gampalatha.

Two senior staff members of the Open University staff including the principal investigator conducted the individual interviews and focus group discussions. Groups of 8 to 9 participants were formed randomly for the conduct of focus group discussion. A total six of focused group discussions were held during the process. Participants were informed of the purpose and voluntary nature of the study prior to collecting data. There were no anticipated risks or direct benefits for the participants in this study. As the participants had to share their personal and confidential information they were given an assurance that their identities would not be revealed and their rights as human subjects would be protected. In addition a few officers of the Provincial Department of Agriculture and Divisional Secretary were interviewed to get more information on agriculture and women related aspects.

The results are discussed in sub sections in accordance with the objectives of the study.

Quantitative analysis was conducted using SPSS statistical package and open-ended answers were analysed qualitatively.

#### THE CASE STUDY AREA

The North Central Province of Sri Lanka is made up of the two districts of Anuradhapura and Polonnaruwa. This study is limited to the Anuradhapura district, which is situated entirely within the Dry Zone as shown in Figure 1. Although, the mean annual rainfall in this region is around 1,400 mm, the major rainfall season (maha) has a 75 percent rainfall expectancy of around 650 mm. The total annual evapotranspiration is around 1,750 mm.

Agriculture based sustainable human settlement in this region had been made possible by the construction of small surface storage systems or "tanks" which occur in the form of assemblages of cascades of small village tanks. These small tank cascades occur within meso-catchment basins ranging in size from 15 to 25 sq.kilometers. Improper maintenance of these tanks over the past decade has caused people to rely on the individual groundwater wells for their agricultural and domestic activities.

Water shortage during the dry season from May to September has been a major constraint to agricultural development in this region. With the rapid increase in rural farm population, the demand for water has become very high, which in turn has led to an increase in the use of groundwater resources.

Section 2000 Section 1990

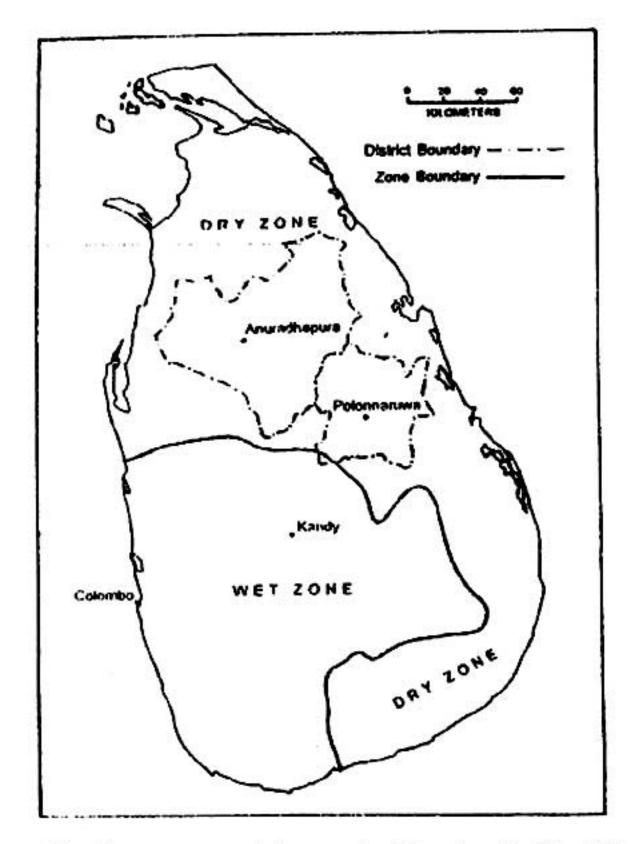


Figure 1 The climate zones and the two administrative districts of the North Central Province.

#### RESULTS AND DISCUSSION

#### Basic Data

More than half of the sample (53%) was in the age group of 31 to 50 years and 39 percent were in the age group of 16 to 30 years (Figure 2). When the educational qualifications were considered the majority were O/L qualified. Interestingly 10 per cent of the target population had A/L qualifications. However nearly 20 per cent had received an education only up to Grade 5 and another 10 per cent studied only up to Grade 8 (Figure 3). Majority (32 per cent) were married and 2 per cent were widowed.

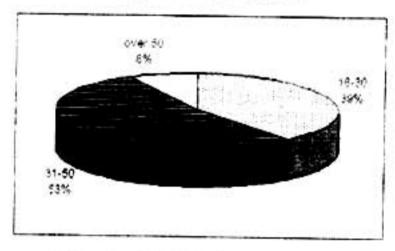


Figure 2 Age Distribution

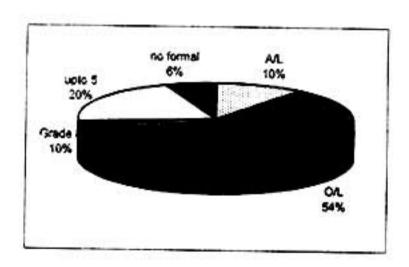


Figure 3 Educational Qualifications

Figure 4 shows that the main livelihoods of the target population are vegetable cultivation (37%) and paddy cultivation (27%). When the ownership of land for agricultural activities was considered, 90% of the population possesses highland (upland), which was suitable for vegetable cultivation (Figure 5). Only 6 percent of the target population owned low land, which was suitable for paddy cultivation.

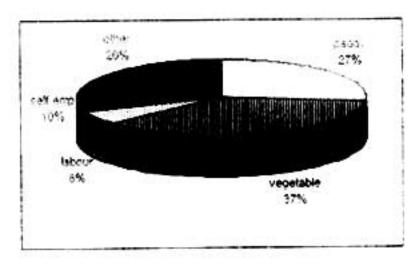


Figure 4 Main Livelihoods of people

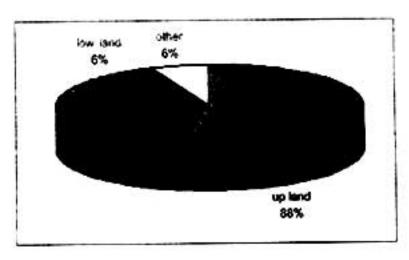


Figure 5 Ownership of Land

Focused group discussions revealed that the people who do not own low land for paddy cultivation used to hire lowland from others. Data of the availability of water revealed that 65% of the target population had domestic wells and about 14 per cent shared neighbours' domestic wells. Only 8 per cent depended on village tanks and another 6 per cent had agro

wells. It is interesting to note that this case study area does not have any major irrigation schemes and that village tanks were not maintained properly to store enough water to meet the people's requirements of water. Cultivation of paddy needs lots of water, which cannot be done by using domestic well water. Even to cultivate paddy as rainfed crop, the majority of the population does not own low land (Figure 6). Analysis of data showed that 78% of the target population said that water is the main constraint for their agricultural activities whereas 16% said that their constraint is land. Water is the limiting factor, which decides the livelihood of the people in the case study area (Figure 7).

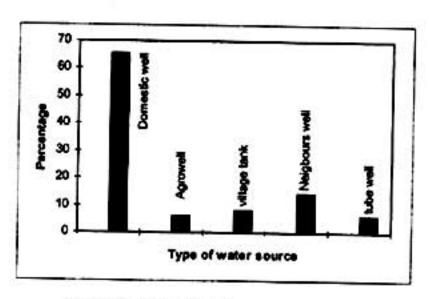


Figure 6 Water Source

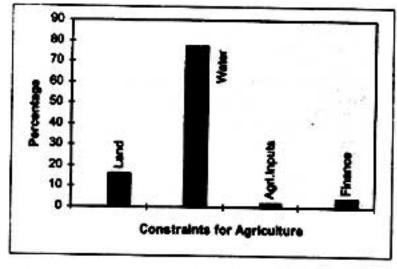


Figure 7 Constraints for Agricultural Activities

#### Information on agriculture and rural development

#### Training

Training related to agricultural activities was received only by 56% of the target population. Out of them, 42% had received training on agricultural activities such as land preparation; timing of cultivation, pest and disease control, fertiliser application, poultry and livestock rearing and 27 per cent received training on "Gewathu wagawa" or home vegetable gardening. When the duration of training was considered 75% received less than 10 days training and out of that the longest duration most was 3-day practical demonstration. There were very few women who had undergone training on sewing and cloth painting for longer periods such as 6 months and 1 year. There was also1-3 month training on various aspects on palm leaf craft (Table 1)

Table 1 Type of Training

Type of Training	Frequency	Percentage
lome garden	7	14.3
ood	3	6.1
Agriculture	11	22.4
Sewing	3	6.1
Self Employment	2	4.1
Total	26	53.1

Nearly 30 percent received training from Department of Agriculture (Maha Illuppalama) and, a similar percentage from private sectors such as Bank of Ceylon and NGOs. Ministry of Women Affairs and women organisations provided training for 25% of the participants who received training. There were other institutions such as Women Committees, Provincial Council and Rural Development Organisations were involved in training the rural women and girls (Table 2).

Table 2 Name of the Trainee

Name of the Trainee	Frequency	Percentage	
Department of Agriculture	8	28.6	
Women Organisation	2	7.1	
Provincial Council	2	7.1	
Ministry of Women Affairs	7	25.0	
Non-Governmental	ç	28.6	
Organisation			
Rural Development Sector	1	3.6	

Informal discussions with the Provincial Department of Agriculture officers in Anuradhapura also revealed that there were lots of activities focused on rural women. There were training programmes for women on anthuriam flower cultivation and the products were sold for funerals and weddings. Women are trained for home garden cultivation using low cost material. There are also training programmes on food processing and how to keep the excess harvest for longer periods by simple drying and dehydration processes.

According to the officers, there were a few special programmes for widows who were stigmatised by society who had no one to help them in their day-to-day activities. To empower them they were given training on embroidery, home gardening and time management. Generally the widows and the women in the rural communities complain that they are tired after house hold work and do not have any energy to learn more. According to a study conducted by the Provincial Department of Agriculture, Anuradhapura, it was revealed that these women walk about 8 miles per day within their house due to unorganised kitchen and time management. Therefore a kitchen improvement programme was given to arrange the kitchen in a way that they need not walk in searching for the items for cooking. As they revealed, this programme improved their time management and also the preparation of their meals without wasting their time and energy. This programme was conducted for 1140 farm families in 16 Secretarial Divisions.

The other special programme was for the women who were addicted to drug and other narcotics. Heroine is popular in town and the "ganja" and "kasippu" are common in villages side. It was revealed by the officers that the "ganja" and "kasippu" (illicit liquor) were used by girls even at the age of 12 years. In addition the young mothers too drink Kasippu and the children are neglected without parental care. Women's, farmer's and youth organisations have been developed with the purpose of rehabilitating the affected in that community. A few selected mothers were given Pre- school training and the affected children were sent to their pre-schools. A Buddhist monk in the Buddhist temple in that area was put in charge of the drug addicted people of that area.

A study conducted by the ADB on Internally Displaced Persons (IDP) in the Anuradhapura District also revealed that the rate of prostitution is high in this area and it is connected with the illicit liquor used by women at a very young age. The main contribution factor of the misconduct of women in this area was poverty (ADB, 2003).

The information gathered from the focus group discussions and the information gathered from the officers in the provincial agriculture and the divisional secretariat were in agreement. It shows that the participants get information and knowledge in the form of training from the officers of the respective departments.

#### Other Information Sources

Participants were asked to list more than one source of receiving information related to agriculture. A total of 70 % indicated that they received information from TV and and a total of 57% from friends. A considerable percentage (57%) indicated Grama Niladhari and Samurdhi officers as the other sources of information

#### Problems in the information received at present

As the first problem, about 85 per cent of the target population revealed that the information received is not adequate and the rest felt that they do not have time to look for

information. As their second problem, 60 per cent did not have enough training and for 20 per cent the information received was not useful. However 12 per cent felt that, whatever information they receive is of no use without funds. Insufficient training was the third problem mentioned by 78 per cent of the sample.

In general, the majority was not satisfied with the present way of receiving information. Nearly 40 per cent of the population suggested that they would like to receive more information related to agriculture and rural development and 29 per cent of the target population was interested on training. It was interesting to note that 14 per cent of the population felt that there should be more visitors from organisations to provide information.

#### Access to knowledge on IT information

Among the target population 92 per cent were never used a computer before. Naturally about 82 per cent of the target population do not have access to computer. Even though the target population had never used a computer before, a substantial percentage expressed their willingness to (88%) learn using the computer. Majority felt that (80%) the knowledge of computer use would be very useful for their day-to-day activities. To enhance their knowledge on computer use 49 per cent wanted training in computer field and about 47 per cent expressed the need to follow the computer awareness programme of the Open University of Sri Lanka.

#### Core areas of learning in agriculture and rural development

As first priority nearly 59 per cent of the target population identified the cultivation of other field crops such as vegetable and cash crops as the core area of learning and 29 per cent wanted paddy cultivation. Livestock rearing was preferred by 8 per cent of the target population. A negligible percentage indicated their preference to get knowledge and skills for rural development.

As the second priority 35 per cent of the population wanted the knowledge on livestock farming and 31 per cent on other field crops such as vegetables and cash crops and only 10 per cent stated a need for rural development. The rest preferred knowledge on aquaculture and computer

When the third priority was considered 22 and 19 per cent of the target population requested knowledge on livestock and computer respectively. A similar percentage (16%) preferred knowledge on computer use, agriculture and rural development (Table 3).

Table 3 Core Areas of Learning

Core Area	First	Priority	Second	Third	Priority
	(%)		Priority(%)	(%)	
Paddy Cultivation	28.6		2.1		
Vegetable Crops	59.2		31.3	2.7	
Livestock	8.2		35.4	21.6	
Rural	2.0		10.4	16.2	
Development					
Computer	2.0		6.3	18.9	
Aquaculture			4.2	8.1	
General			10.4	18.9	
Agriculture					
Sewing				10.8	
Foreign Language				2.7	

## Preferred areas of learning in agriculture and rural development

The majority (65%) wanted to learn vegetable cultivation as their first priority. Anthurium Culture and Child Rights were preferred by 8% and 6% respectively. As the second priority 30 and 22 per cent selected low cost irrigation systems and fruit crop cultivation

respectively. As the third priority nearly 35 per cent needed to learn about the water conservation methods and about 11 per cent to learn about low cost irrigation systems. These results showed the severity of water scarcity in the region and people's interest to learn about water conservation (Table 4).

As their mode of learning 76 per cent preferred a combination of lecture, print and AV. A considerable percentage required a combination of lecture and print and only 6 per cent needed face-to-face lectures.

Cross tabulations were calculated for preferred areas of learning by age and educational qualifications to check whether there was any pattern emerging from data. Results showed that irrespective of age vegetable cultivation was selected as their first priority. As Table 5 indicated 27% from 16-30 age category, 31% from 31-50-age category and 6% from over 50 category selected vegetable cultivation. In the case of second priority for preferred learning, 16-30 age group preferred low cost irrigation systems, whereas 31-50 age group preferred fruit crop cultivation (Table 6). When educational qualifications were considered with the preferred area no significant difference emerged (Table 7)

## Support services and constraints

The major constraint for women's learning was finance as indicated by 88 per cent of the target population. Secondly distance was mentioned by 8 per cent of the population as they live in remote areas where there are inadequate transport facilities. However, 4 per cent of the population had the problem of finding time for their learning activities.

Table 4 Preferred Area of Learning in Agriculture and Rural Development

Preferred Area of	First	Second	Third
Learning	Priority	Priority	Priority
	(%)	(%)	(%)
Vegetable	64.6	4.3	6.5
Cultivation			
Anthurium Culture	8.3	2.2	8.7
Fruit crop	2.1	21.7	6.5
Cultivation			
Poultry	4.2	4.3	
Child Rights	6.3		2.2
Mushroom Culture	2.1	4.3	2.2
Yoghurt Processing	2.1	2.2	
Goat Farming	2.1	4.3	
Paddy	4.2		
Poultry	4.2	4.3	4.3
Bee Keeping			
Composting			6.5
Low cost irrigation			10.9
Freshwater Fish			6.5
Water conservation			34.8
Food processing			2.2
Child care		2.2	
Child Development		4.3	2.2
Groundwater use		2.2	500,500
Environment			2.2
Flower plant culture			4.4

Table 5 Preferred Area of Learning 1 by Age

Age	Preferred Areas of Learning -First Priority (%)									
	1	2	3	4	5	6	7	8	9	Total
16-30	27.1	4.2	2.1	2.1					2.1	37.5
31-50	31.3	4.2		4.2	2.1	2.1	2.1	2.1	6.3	54.2
Over 5	06.3	200000		180750	10775			2.1	0.5	8.3
Total	64.6	8.3	2.1	6.3	2.1	2.1	2.1	4.2	4.2	100.0

- Vegetable Cultivation
- 2 Anthurium Culture
- 3 Fruit crop cultivation
- 4 Child rights
- Mushroom cultivation
- 5 Yogurt production
- 7 Goat farming
- 8 Paddy
- Poultry

Table 6 Preferred Area of Learning 2 by Age

Age	4		Preferred Area of Learning -Second Priority (%)											Tota					
		1	2	3	4	5	6	7	8	9			12	13	_		16	17	-
16- 30				2.2	2.2	2.2	19.6	6		6.5		1 1 1 2 1 2	2.2	2.2					37.0
31- 50		.3	2.2	19.6			4.3	2.2	2.2		4.3	2.2		2.2	2.2	4.3	2.2	4.3	56.5
Over 50							6.5												6.5
<b>Total</b>	4	.3	2.27	21.7	2.2	2.2	30.4	2.2	2.2	6.5	4.3	2.2	2.2	4.3	2.2	4.3	2.2	4.3	100

- Vegetable Cultivation
- 2 Anthurium Culture
- 3 Fruit crop cultivation
- Bee keeping
- 5 Composting
- Low cost irrigation systems 6
- 7 Fresh water fish
- Water conservation
- 9 Flower plant sale
- 10 Mushroom cultivation
- 11 Food processing
- 12 Yogurt production
- 13 Goat farming
- 14 Child care
- 15 Child Development
- 16 Groundwater use
- 17 Poultry

Table 7 Preferred Area of Learning by Educational Qualification

Education		Preferred Area of Learning-First Priority (%)									
	1	2	3	4	5	6	7	8	9		
AL	2.1		2.1			2.1		2.1		8.3	
	39.6	6.3		6.3					2.1	54.2	
Up to 8	8.3							2.1		10.4	
Up to 5	2.1									2.1	
200 about 1000 l	10.4						2.1		6.3	18.8	
No formal		2.1								2.1	
Other	2.1	200000000000000000000000000000000000000			2.1					4.2	
	64.6	8.3	2.1	6.3	2.1	2.1	2.1	4.2	4.2	100.0	

- Vegetable Cultivation
- 2 Anthurium Culture
- 3 Fruit crop cultivation
- 4 Child rights
- 5 Mushroom cultivation
- 6 Yogurt production
- 7 Goat farming
- 8 Paddy
- 9 Poultry

#### CONCLUSIONS

#### General conclusions

The majority of the sample was below 50 years of age and completed their studies up to Grade 8. A considerable proportion had O/L qualifications and a few had studied upto A/L. Their major livelihood is cultivation of other field crops such as vegetables and cash crop cultivation using the domestic wells. They do not have irrigation water and paddy was cultivated as rainfed crop. More than half of the population had undergone training on agricultural activities such as home gardening. Those training programmes were conducted by the Department of Agriculture, private sector such as NGOs and the Ministry of Women Affairs. Their main sources of information were TV, Gramasevaka Niladhari, Radio and friends. However they are not satisfied with the source of information reached them.

Almost all participants in the sample did not have any knowledge of Computer use though, a substantial percentage indicated that they want computer training and the computer

knowledge they would receive would be very useful. Out of them nearly 50 per cent wanted to follow the computer awareness programme of the Open University.

Where the core areas in agriculture and rural development were concerned, the majority wanted knowledge of cultivation of other field crops such as vegetable and cash crop cultivation, and the rest wanted paddy cultivation and livestock rearing. The majority mentioned vegetable cultivation as their preferred area of learning and the rest mentioned fruit crop cultivation and water conservation.

The most preferred mode of learning was a combination of lecture, print and AV. However a lesser percentage preferred to learn through a combination of lecture and print or only through face-to-face lectures. The major constraint for the rural women's learning in the case study area was finance as they also indicated that time was not a problem.

## Project output

As agreed in the concept paper the output of the case study is as follows:

## Inventory of information sources, formal and informal networks

Department of Agriculture

Private sector such as NGO, Bank of Ceylon

Ministry of Women Affairs

Grama Niladhari

Samurdhi Officer

Provincial Council

Women Organisations

Radio

TV

Agricultural Officers

Farmer Organisations

Friends Status of knowledge on IT application 95% of the population has not used IT before 86% of the population like to learn IT 80% feel that the Computer knowledge is useful 49% like to have training in Computer 47% like to follow the Awareness programme of the Open University at Anuradhapura Centre Finance is the major problem for to enhance the computer knowledge Specific core areas in Agriculture and Rural Development that women like to learn Other Field Crops such as vegetables and Cash crop cultivation Paddy Cultivation Livestock rearing Rural development Preferred Areas on Learning in Agriculture and Rural Development\_ Water Conservation Low cost irrigation systems Vegetable Cultivation Anthurium Culture Fruit crop cultivation Composting Fresh Water Fish Culture Poultry farming Flower plant culture and sale Mushroom Cultivation Food Processing

Newspapers

Child Development

Environment

#### General Education Areas

Computer

English

Foreign Language

Sewing

Painting

List of Supporting Material

Supplementary information

Finance

Agricultural Inputs

#### REFERENCES

Abeyratne Bandara, W. M. (1997). Rural Poverty in Sri Lanka: Definition and Extendof Rural Poverty.

http://www.unescap.org/rural/doc/beijing\_march97/Sri\_Lanka.PDF

Bhatia, S.C., Mehta, M.L. (1985). Development Oriented Adult Education, New Delhi: Indian University Association for Continuing Education.

Bulletin of Labour Statistics of Sri Lanka (2000). Issue number 15, Department of Census and Statistics, Ministry of Finance and Planning, Colombo.

Deavers, K. L., & Brown, D.L. Natural Resources Dependence, Rural Development, and Rural Poverty. Washington, DC: U.S. Department of Agriculture, 258-775. Department of Census and Statistics (1997). Quarterly Report of the Sri Lanka Labour Force, 1997. Colombo: Department of Census and Statistics, Ministry of Finance and Planning.

Department of Census and Statistics (2000). Quarterly Report of the Sri Lanka Labour Force, 2000. Colombo: Department of Census and Statistics, Ministry of Finance and Planning.

De Silva, C.S (1995) Use of large diameter wells (Agro-wells) for supplementary irrigation from hard rock aquifers in Sri Lanka. Ph.D Thesis Cranfield University, United Kingdom.

Department of Census and Statistics (2001). Population by Sex, Age, Religion, Ethnicity According to District and D.S. Division (provisional). Colombo: Department of Census and Statistics, Ministry of Finance and Planning.

Food & Agricultural Organisation of the United Nations. (2001, October). Rural Women and Distance Learning: Regional Strategies. Expert Consultation of the Food and Agricultural Organization of the United Nations, Bangkok.

Horn, J.G. (1985). Recruitment and Preparation of Quality Teachers for Rural Schools. Manhatton, KS: Kansas State University, 258-785.

Kumar, V. (1998). Gender Dimensions in Agro-Biodiversity Management: Country Profile.
Sri Lanka.

Kulatunga, S. (1998). Faculty of Educational Technology, OUSL study material in print, unit 1: Bridging the gap - distance writing. (R. Melton, DFID Consultant, G. Padmaperuman, & B. Weerasinghe, Ed.). Nawala, Nugegoda: OUSL.

Mahajan, V.S. (1996). Agriculture, Rural Development and Panchayati Raj.: National Level Strategies and Policies. New Delhi: Deep 7 Deep Publications.

Perraton, H. (1988). A Theory for Distance Education. In D. Sewart, D. Keegan, & B. Holmberg (Ed.), Distance Education: International Perspectives (pp. 34-45). New York: Routledge.

Sparks, J.J. (1993). Matching teacing methods to educational aims in distance education. In D. Keegan (Ed.) Handbook of qualitative research. Thousand Oaks, California: Sage Publications, Inc. p. 118-137.

The Mirror Economist. (2002, April, 9). Agriculture: Key Factor in Growth. The Daily Mirror, p. 9.

United Nations Development Project. (1997). Human Development Report. New York: Oxford University Press.

UNDP (1997). Human Development Report 1997. New York: UNDP.

Wickramasinghe, A. (1994). Deforestation, Women and Forestry: The Case of Sri Lanka. Ulrecht: International Books.