

**Impact of Participation in IFAD Activities on Rural Women  
Development: A case study of White Nile Agricultural  
Services Project (WNASP)**

**By**

**Wisal Abd Elrhman Ishag Mohammed**

**B.sc (Honor) - Agriculture**

**2001**

**Sudan University of Science and Technology**

**A thesis Submitted to the University of Khartoum in Partial  
Fulfillment of the Requirement for the M.sc in Agricultural  
Extension and Rural Development**

**Supervisor: Dr: Elwasila Mukhtar Mohammed  
Department of Agricultural Extension and Rural  
Development, Faculty of Agriculture  
University of Khartoum**

**2007**

# DEDICATION

This work is dedicated to  
my kind father and mother

All my

Sisters

Brothers

And all my friends

With my love

## Acknowledgments

First, I am most grateful to Allah for assistance, health and patience he has given me to complete this work.

I wish to express my special appreciation to my supervisor Dr: Elwasila Mukhtar (Department of agricultural extension and rural development, Faculty of Agriculture, university of Khartoum) for his help, suggestions and advices to carry out this study.

My great thanks to my family for patience, encouragement and assistance during the study.

Special words of thanks go to my colleagues and friend Eslam and Abdelmonim who willingly lend their hand during the data collection.

My thanks are also due to the University of Khartoum for sponsoring this study.

Finally, my thanks are extended to staff members of Technology Transfer and Extension Administration/ Ministry of Agriculture in White Nile state for their help and assistant during the study.

## **Abstract**

This study was conducted in White Nile state with the objective of assessing the impact of participation in International Fund for Agricultural Development (IFAD) activities on rural women development.

The IFAD is a United Nation agency, established in 1977 with clear mandate to combat hunger and rural poverty in low-income food-deficit regions of the world. Its main objective is to improve the living conditions of the rural poor on sustainable basis.

The study is an attempt to stand on the extent of women participation in the activities promoted by the project and to assess the impact of participation on women development.

The main objectives of this study were to examine the impact of women participation in the activities of IFAD project on rural women development in the white Nile area, identify the factors that prevent women from active participation in IFAD project activities and how these factors can be tackled to improve the level of participation in women development programs.

The independent variables of the study were participation in income-generating activities, participation in training programs, participation in environmental activities and participation in social and health services. The dependent variables of the study were income, capability of reading and writing, acquire skills, variety of food and standard of living.

The White Nile Agricultural Services Project activities covered 24 schemes distributed over the four localities of the White Nile state, namely Kosti, Eljeblien, Eldueim and Elgeteena. Each locality

embracing a number of IFAD schemes, each scheme is subdivided into villages.

Multi- stage stratified random sampling procedure was used to select the sample of the study, (sixty participants and sixty non participants women) were selected from the project area.

To meet the objectives of the study, both primary and secondary data were collected and used. Primary data was collected through field survey carried out in the area. Questionnaire, interviews, observations and group discussions were used as tools for collecting the primary data.

Frequency distribution and chi- square test were used for data analysis and management using the computerized Statistical Package for Social Sciences(SPSS).

Descriptive statistics of socio-economic characteristics of the respondents revealed that the majority of the participants were within the productive age (20-50 years old), most of them were married, also most of them had formal education, and about (64.8%) of them their average income was below poverty line (100-300 SDG). The majority of the women did not participated in a project before IFAD, but all of them participated in group training.

Chi- square test results indicated that there was no significant association of participant's participation in income-generating activities, forestry program, social and health services neither with their level of writing and reading nor with their level of income. Also chi- square test results showed that there was a significant association between women participation in awareness activities and their participation in social and health services.

The study recommended the improving of social, health and child care services for rural women through establishment and distribution of rural hospitals, health centers and medical services equitably all over the State. Also the establishment of revolving fund in the rural area under supervision of the women leaders in the villages is of high importance.

## ملخص الدراسة

أجريت هذه الدراسة بولاية النيل الأبيض بغرض تقييم اثر المشاركة في أنشطة إيفاد على تنمية المراة الريفية.

يعتبر الصندوق الدولي للتنمية الزراعية أحد وكالات الامم المتحدة والذي تم إنشائه في عام 1977 وذلك بهدف مكافحة الجوع و الفقر وتحسين مستوى المعيشة لفقراء الريف في العالم.

الدراسة محاولة للوقوف على مدى مشاركة المراة الريفية في أنشطة إيفاد وتقييم اثر المشاركة على تنميتها.

الأهداف الرئيسية لهذه الدراسة هي معرفة اثر مشاركة المراة في أنشطة إيفاد بمنطقة النيل الأبيض على تنميتها والتعرف على العوامل التي منعتها من المشاركة الفاعلة وكيف يمكن التغلب عليها لتحسين مستوى المشاركة في برامج تنمية المراة .

المتغيرات المستقلة في هذه الدراسة هي المشاركة في الأنشطة المدرة للدخل، المشاركة في برامج التدريب، المشاركة في الأنشطة البيئية والمشاركة في الخدمات الاجتماعية والصحية. والمتغيرات التابعة هي الدخل، المقدره على القراءة والكتابة، المهارات، نوعية الغذاء ومستوى المعيشة.

شملت أنشطة مشروع النيل الأبيض للخدمات الزراعية 24 مشروع وزعت على محليات الولاية الأربع وهى كوستي، الجبلين، الدويم القطينة وتشمل كل محلية عدد من المشاريع ويضم كل مشروع عدد من القرى.

تم استخدام الطريقة العشوائية الطبقيّة متعددة المراحل لاختيار عينة الدراسة (60 امراة مشاركة و 60 غير مشاركة) تم اختيارهن من منطقة المشروع.

لمقابلة أهداف الدراسة، تم جمع واستخدام البيانات الأولية والثانوية، البيانات الأولية تم جمعها بالمسح الميداني عن طريق الاستبيان، المقابلات، الملاحظة ومجموعات النقاش. اما المعلومات الثانوية فقد تم جمعها من المصادر ذات الصلة. تم تحليل البيانات عن طريق التوزيع التكراري واختبار مربع كاي وباستخدام برنامج الحزم الإحصائية للعلوم الاجتماعية (SPSS).

أظهرت نتائج التحليل الوصفي للخصائص الاجتماعية والاقتصادية للمبحوثين أن الغالبية العظمى من المشاركات في الأعمار المنتجة وتتراوح أعمارهن من 20-50 سنة، وان معظمهن متزوجات كما ان معظمهن تلقين تعليماً نظامياً، وحوالي 64,8% منهن متوسط دخلهن اقل من مستوى خط الفقر (100-300) جنييه، وان الغالبية العظمى منهن لم يشاركن في مشاريع قبل إيفاد وان كل المبحوثات شاركن في تدريب المجموعات.

أظهرت نتائج مربع كأي أنه لا يوجد ارتباط معنوي لمشاركة المرأة في الأنشطة المدرة للدخل، برامج الغابات، الخدمات الاجتماعية والصحية سواء مع مستوى القراءة والكتابة أو مستوى الدخل بالنسبة لهن، كما أثبتت نتائج مربع كأي بأنه يوجد ارتباط معنوي بين مشاركة المراه في برامج التوعية ومشاركتها في برنامج الخدمات الاجتماعية والصحية.

أوصت الدراسة بتحسين الخدمات الصحية والاجتماعية ورعاية الطفولة بالنسبة للمرأة الريفية عن طريق إنشاء المستشفيات الريفية، المراكز الصحية والخدمات العلاجية وتوزيعها على حد سواء في كل الولاية، وإنشاء الصناديق الدوارة في المناطق الريفية تحت إشراف قيادات المراه في الريف.



# List of contents

page	
	Dedication ..... i
	Acknowledgments..... ii
	English Abstract..... iii
	Arabic abstract..... vi
	List of contents..... viii
	List of tables..... xiii
	List of Abbreviations..... xv
	Chapter on Introduction..... 1
	1-1 Background information..... 1
	1-2 Problem statement..... 2
	1-3 Objectives of the study..... 3
	1-4 Justification of the study..... 4
	1-5 Variables of study ..... 4
	1-6 Hypotheses of the study..... 4
	1-7 Organization of the study ..... 5
	Chapter two Literature review..... 6
	2-1 Rural development..... 6
	2-1-1 Rural development concept and definition..... 6
	2-1-2 Objectives of rural poverty and development program..... 7
	2-1-3 Aims and objectives of rural development..... 8
	2-1-4 Principles of rural development..... 9
	2-1-5 Concept of sustainable development ..... 9
	2-1-6 Sustainable agriculture and rural development concept ..... 10
	2-1-7 Rural development approaches ..... 10

2-1-7-1 The improvement approach .....	10
2-1-7-1-1 Participatory approach.....	11
2-1-7-1-2 Rural social animation approach.....	12
2-1-7-2 The transformation approach .....	13
2-1-8 Common characteristics of rural communities.....	13
2-1-9 Training for rural development.....	14
2-1-10 Participation .....	15
2-1-11 Implementation of participation .....	15
2-1-11-1 Mobilization.....	15
2-1-11-2 Decision – making.....	15
2-1-11-3 Empowering .....	16
2-1-12 Concept of participatory development.....	16
2-2 Women in Development.....	17
2-2-1 Status of women in Sudan .....	17
2-2-1-1 Armed conflict and peace.....	19
2-2-1-2 Constraints to women development and empowerment.....	19
2-2-2 Position and status of rural women in development approach.....	20
2-2-3 Rural women .....	21
2-2-4 The role of women in general .....	21
2-2-5 Rural problems.....	21
2-2-5-1 National and environment problems.....	21
2-2-5-2 Socio- economic problems.....	22
2-2-6 Approaches of women in development.....	22
2-2-6-1 Welfare approach.....	22
2-2-6-2 Equity approach.....	23

2-2-6-3 The anti- poverty approach .....	23
2-2-6-4 Efficiency approach .....	23
2-2-6-5 The empowerment approach.....	23
2-2-6-6 Emancipation approach .....	24
2-2-6-7 Participation approach.....	24
2-2-6-8 Gender and development approach.....	24
2-3 International Fund for Agricultural Development .....	25
2-3-1IFAD in Sudan .....	26
2-3-1-1 IFAD operation.....	26
2-3-1-2 Completed IFAD operation.....	27
2-3-2 White Nile for Agricultural Services Project.....	27
2-3-3 Women in development programs.....	27
2-3-3-1 Main objectives of the programs .....	28
2-3-3-2 Background about women program.....	28
2-3-3-3 Women economic situation in the project area.....	30
2-3-3-4 Activities and methodology of the project.....	31
2-3-3-5 Women programs activities.....	31
2-3-3-5-1 Income- generating activities.....	31
2-3-3-5-2 Environmental activities.....	32
2-3-3-5-2-1 The clay stoves.....	32
2-3-3-5-2-2 Forestry extension and seeding production .....	32
2-3-3-5-3 Training centers.....	33
2-3-3-5-4 National training for women leaders.....	33
2-3-3-5-5 Social activities.....	33
chapter three- Research Methodology.....	35

3-1 The conceptual model of study .....	35
3-2 Area of the study .....	36
3-3 Sampling selection procedure.....	37
3-4 Sampling frame.....	38
3-5 Data collection.....	39
3-6 Data analysis.....	39
Chapter four- Results and Discussion.....	40
4-1 Socio- economic characteristic of the participants.....	40
4-1-1 Age .....	40
4.1.2 Marital status.....	41
4.1.3 Education level.....	42
4.1.4 Family size.....	43
4.1.5 Type of job .....	43
4.1.6 Family income.....	44
4.1.7 Participation in projects before IFAD.....	45
4.1.8 Income level .....	46
4.1.9 Type of training.....	46
4.2 Chi- square results of women participation in (WIN) unit activities...	48
4.2.1 Income level by type of activities to gain money.....	48
4.2.2 Income level by forestry program.....	48
4.2.3 Level of writing and reading after IFAD by type of activities to gain money.....	51
4.2.4 Level of writing and reading after participation in IFAD by their level of participation .....	53
4.2.5 Level of writing and reading for the participants by number of	

training courses .....	54
4.2.6 Number of meals/day after IFAD by the income- generating activities.....	55
4.2.7 Number of meals/day after IFAD by participation in forestry program.....	57
4.2.8 Number of meals/day for the participants after IFAD by their participation in social and health services.....	58
4.2.9 Participants' attendance of awareness program by their participation in income- generating activities.....	59
4.2.10 Participants' attendance of awareness program by their participation in Forestry program.....	61
4.2.11 Participants' attendance of awareness activities by social and health services.....	62
4.2.12 attendance of awareness activities by income level.....	63
4-3 Background data of the respondents.....	64
4.3.1 Age.....	64
4.3.2 Marital status.....	65
4.3.3 Education level .....	66
4.3.4 Type of Job.....	68
4.3.5 Family size.....	68
4.3.6 Family income before participation in IFAD activities.....	69
4.3.7 Previous Participation.....	70
4.3. 8 Level of writing and reading before participation.....	71
Chapter five- summary, main finding and recommendation.....	72
5-1 Summary of the study.....	72
5-2 Main findings of the study.....	73

5-3 Recommendations .....	74
References.....	75
Appendices.....	80

### **List of tables**

	<b>Page</b>
Table4.1.1 Frequency distribution of the participants by their age.....	41
Table 4.1.2 Frequency distribution of the participants by their marital status.....	41
Table 4.1.3 Frequency distribution of the participants by their education level.....	42
Table 4.1.4 Frequency distribution of the participants according to their family size .....	43
Table 4.1.5 Distribution of the participants according to their type of job.....	44
Table 4.1.6 Frequency distribution of the participants according to their family income.....	45
Table 4.1.7 Frequency distribution of the participants by their participation in projects before IFAD.....	46
Table 4.1.8 Frequency distribution of the participants by their income	

level.....	46
Table 4.1.9 Frequency distribution of the respondents according to type of training undertaken .....	47
Table 4.2.1 Distribution of participants' income level by participation In income- generating activities.....	49
Table 4.2.2 Distribution of participants' income level by participation in forestry program.....	50
Table 4.2.3 Distribution of the participants' level of reading and writing by participation in income- generating activities.....	52
Table 4.2.4 Distributions of the respondents according to their level of writing and reading after participation in IFAD by their level of participation.....	53
Table 4.2.5 Distribution of the participants according to their level of writing and reading by number of training courses.....	54
Table 4.2.6 Relationship between the participants' number of meals/ day by participation in income- generating activities .....	56
Table 4.2.7 Participants' number of meals/ day after participation in IFAD by participation in forestry program .....	57
Table 4.2.8 Distribution of the participants' number of meals/day after participation in IFAD by participation in social and health services....	58
Table 4.2.9 Relationship between the participants' attendance of awareness program and participation in income- generating activities	60
Table 4.2.10 Relationship between participation in forestry program and participants' attendance of awareness program .....	61

Table 4.2.11 Relationship between participation in social and health services and participants' attendance of awareness program.....	62
Table 4.2.12 Distribution of the participants' income level by their attendance of awareness program .....	63
Table 4.3.1 Distribution of the respondents' participation by age .....	64
Table 4.3.2 Distribution of the respondents' participation by marital status .....	65
Table 4.3.3 Distribution of the respondents' participation by education level.....	67
Table 4.3.4 Distribution of the respondents' participation by type job.	68
Table 4.3.5 Distribution of the respondents' participation by family size.....	69
Table 4.3.6 Distribution of the respondents' participation by family income before participation in IFAD activities .....	70
Table 4.3.7 Distribution of the respondents' participation by participation in project before IFAD.....	70
Table 4.3.8-Distribution of the respondents' participation by Level of writing and reading before participation .....	71



## **List of Abbreviations**

- NGOs : Non- governmental Organization
- IFAD : International Fund for Agricultural Development
- CARE : Co- operative of American Relief Everywhere
- GTZ : Germany Technology Support
- WNASP : White Nile for Agricultural Services Project
- FAO : Food and Agricultural Organization
- IA : Improvement Approach
- PA : Participatory Approach
- UNICEF : United Nation and International Children Fund
- TA : Transformation Approach
- GOS : Government of Sudan
- PRA : Participatory Rural Appraisal

- SWO : Senior Women Officer  
PFM : Project Field Manager  
WID : Women in Development  
WAD : Women and Development  
MANRAW: Ministry of Agriculture, Natural Resources and  
Animal  
Wealth  
MEP : Ministry of Economic Planning  
ABS : Agricultural Bank of Sudan  
FNC : Forestry National Corporation  
AED : Agricultural Extension Department  
SPSS : Statistical Package for Social Science

## CHAPTER ONE

### Introduction

#### 1-1 Background Information

Till recently the Sudanese women in rural areas were not able to participate actively in income-generating activities due to historical and socio-cultural reasons such as illiteracy, low level of skills, lack of access to training and credit facilities, coupled with unevaluated contribution to family income and gender bias.

Since early eighties non-government organizations (NGOs) developed an approach of promoting informal groups or self –help groups of poor especially for women in the rural areas.

Although the model of development varied among NGOs, the generalization of the basic philosophy of Ferandes, (1995) is that

the informal groups were recognized by financial institutions and governments as potential tool for development.

In Sudan, the announcement of monetary policies of the bank of Sudan (1994-1995) had been given impetus to the process of groups and individual project formulation among women in the rural areas. Efforts were taken by banks and other agencies such as Sudanese Agricultural Bank, Farmers Bank, International Fund for Agricultural Development Programs (IFAD), United Nation Development Organization (OXFAM, CARE, GTZ...etc). (Rehinan1996).

## 1-2 Problem statement

Rural development is considered as one of the main elements of comprehensive socio-economics development plans, particularly during the recent years.

Women play a key role in the economic field, with females constituting 26.5% of total labors force in Sudan.

In White Nile state, the major economic activities are rain-fed farming and nomadic-pastoralist, in which women are the main producers, they participate in the agricultural operations in their own farms, employed as wage labors, enter in share-cropping activities, look after lives-stock and care for their children.

In addition to the fact that attention received by women in development policies is negligible, the opportunities to acquire knowledge and training related to women needs to improve their

level of involvement in development activities are scares.

Women development cannot be achieved since women remain isolated from mainstream of development planning and will continue to be in disadvantaged position.

The International Fund for Agricultural Development is a United Nation agency, established in 1977 with clear mandate to combat hunger and rural poverty in low-income food-deficit regions of the world. Its objective is to improve the living conditions of the rural poor on sustainable basis, this is to be achieved through funding of the rural development projects, specifically assisting the poorest of the poor to improve their health, nutrition, education levels and general well being on sustainable basis (Vande sand, 2000).

In Sudan IFAD support and established some of rural credit projects among which are Elnuhud Credit Project, Elroseries Projects and White Nile for Agricultural Services Project (WNASP).

WNASP aims to provide improved agricultural services to small-scale farmers and development of rural women in the project areas.

It is argued that women in development unit program (activities) contributed successfully to the improvement of the women situation in the project area by building women capacities, improve their household living standards, and improve their health and social situation and helping them in increasing their income. Despite the WID allegation that all this desirable positive change had happened by incorporating local women in the activities through participatory approach, still high rate of illiteracy, low family income, and spread of diseases were observed, and the occurrence of a real women development in the area is debatable.

### **1-3 Objectives of the study**

The primary objective of this study was to examine the impact of women participation in the activities of IFAD project in the White Nile area on women development, and to identify the factors that prevent women from active participation in IFAD project in the area. The specific objectives of the study were to:

1/ Identity the real impact of IFAD programs and activities designed for women development on women development in the area.

2/ Describe the project approach to women in development programs and investigate how it incorporated women in it's activities.

3/ Identity the factors influenced women participation in development activities introduced by project.

4/ Develop some policy recommendation according to the results of the study that may help women in decision- making process that leads to the improvement of their status in the White Nile area.

### **1-4 Justification of the study**

The high rate of migration of rural men to urban centers and transfer of responsibility of agricultural work to the women require appropriate plans and programs for improving the performance of women as heads of household. The improvement of women participation in development calls for adequate development activities to be delivered especially to the households headed by women.

### **1-5 Variables of the study**

The independent variables of the study were:

- 1/ Participation in income-generating activities
- 2/ Participation in training programs
- 3/ Participation in environmental activities
- 4/ Participation in social and health services

### **The dependent variables of the study**

These include;

- 1/Income
- 2/Capability of reading and writing
- 3/ Acquire skills
- 4/ Variety of food
- 5/ Standard of living

### **1-6 Hypothesis of the study**

Women participation in income-generating activities, training programs, social and health activities and environmental activities are significantly associated with income, capability of reading and writing, improvement in food Variety, acquire skills and the standard of living.

### **1-7 Organization of the study**

The study composed of five chapters, organized as follows:

Chapter one is an introduction and background

Chapter two is a literature review

Chapter three described the research methodology

Chapter four presented the results and discussion of the study

Chapter five included the summary of the study, the main findings and recommendations of the study

## **CHAPTER TWO**

### **Literature review**

#### **2-1 Rural Development**

##### **2- 1-1 Rural development concept and definition**

The term rural development is used by many writers to refer to the process of transformation and change associated with socio-economic participation of the rural masses.

According to lele (1975),"rural development is defined as improving living standards of the mass of the low-income population residing in rural areas and making the process of their development self-sustaining" ( Lele, U. 1975:25)

Chamber (1983), defined rural development as "strategy to enable specific group of people, Poor rural, women and men to gain for themselves and children more and what they want and need".(Champers,1983:145).

World Bank(1975), stated that "rural development is strategy designed to increase rural production, income and productivity, which would enhance the ability of rural people to contribute to the national economic".

FAO (1999), stated that," rural development must be defined as comprehensive strategy to improve the quality of live of rural people basically, it must be designed as a part of an overall development policy".

Kalim.et.al(1979),stated that " rural development as strategy, which is designed to improve economic and social life of specific group of people, the group include small-scale farmer, tenants and the

landless it involves helping the poorest among those who search livelihood in the rural areas to demand and control more the benefits of development".

Oakley ( 1985), stated that" rural development defined as far-reaching transformation of socio-economic development structures, institutions, relationship and processes in any rural area. It conceives the goals of rural development not simply as agricultural and economic growth in the narrow sense but as balanced social and economic development".

Allen, et.al(2000), who analyzed the relationship between poverty and development, argued that it might as first appear that two are virtually opposite, surely poverty means a lack of development, where as development implies, moving towards getting rid of poverty.

## **2-1-2 Objectives of the rural poverty and development programs**

The objectives of these programs are mainly to:

- 1/ promote the integration of rural poverty and agricultural development issues into national poverty.
- 2/ advance the policy dialogue and disseminating best practices on rural poverty reduction themes.
- 3/ strengthen rural institutions by providing their staffs with cutting-edge knowledge and developing their skills.
- 4/ develop new strengthening existing partnership with local institutions to scale-up knowledge dissemination.
- 5/ improve the capacity of stakeholders to develop, implement and monitor rural development and poverty reduction strategies.



### **2-1-3 Aims and objectives of rural development**

Based on the ideas of Alhafian (1995), Nabel and Amain (2001), the role of rural development is to facilitate and promote national and sustainable development through attaining the following:-

- 1/ create sustainable source of income in rural areas.
- 2/ increase the agricultural output per capita income on sustainable manner.
- 3/ an environmental conservation and utilization of local resources
- 4/ transformation of subsistence farmers into commercial or market oriented system.
- 5/ provision of social services
- 6/ promotion of appropriate education and communication
- 7/ to develop people attitudes to wards change and transformation and mobilize them to participate in the process of development
- 8/ increase institution building to serve the mobilization of local population and the need for development process such as land tenure institution and credit.
- 9/improving the living standards of the subsistence population involve mobilization and allocation of resources so as to reach desirable balance over time between the welfare and productive services available to subsistence rural sector.
- 10/ mass participation requires that resources are allocated to low income regions and classes and the productive and social services actually reach them.
- 11/ making the process of self-sustaining require development of the appropriate skills, implementing capacity building and the presence of institution at the local, regional and national levels, to insure the effective use of the existing resources and to foster the

mobilization of additional financial and human resources for continued development of the subsistence sector.

#### **2-1-4 Principles of rural development**

According to Adam (2002), there are five principles for the implementation of rural development programs, including:-

- 1/ Access: to ensure that elders and elites do not monopolize benefits of the programs and reach to the needed people.
- 2/ Independence; programs must be designed to help and support, not to be dependent on.
- 3/ Sustainability: contact the programs planning and solution to the local socio-economic situation considering the abilities and aspiration of people.
- 4/ Participation; always to consult the local people, seek out their ideas and involve them as much as possible in the programs.
- 5/ Effectiveness: programs should be based on the effective use of local resources.

#### **2-1-5 Concept of sustainable development**

Badri (2003) stated that:" Sustainable development involve revising a social and economic system to ensure that the real income rise, education standards increase, the health of the nation improved and the general quality of life is advanced "

“Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own need" (FAO, 2001)

#### **2-1-6 Sustainable agriculture and rural development concept**

The World Commission on Environment and Development drew attention to common challenges of population growth, the need for strategies for sustaining food security and the need to conserve natural resources.

As indicated by Abdellati, 2002)

“Major adjustments are needed in agricultural, environmental and macroeconomic policy, at both national and international levels, in developed as well as developing countries, to create the condition for sustainable agriculture and rural development".(Abdellati,2002). He added that the major objective of sustainable agriculture and rural development is to increase food production in a sustainable way and enhance food security. This will involve education initiative, utilization of economic incentive and the development of appropriate and new technologies, thus ensuring stable supplies of nutritionally adequate food, access to those supplies by vulnerable groups and production for markets, employment and income generating activities to alleviate poverty and natural resources management and environment production.

## **2-1-7 Rural development approaches**

### **2-1-7-1 The improvement approach (IA)**

This approach foster community development through mobilization of both human and non-human resources and promote popular participation, which is necessary for successful rural development programs, it attempts to bring change and transformation within existing socio-economic system and relation of production.

World Bank, describes the improvement approach as, "aiming at the progressive improvement in peasant method of crop and animal husbandry by working on the peasant farmer on both psychological and technical plants to induce and increase in his productivity without any radical social and legal system"(Long,N.1977:145 ).

The improvement approach allows for the continuity of existing social institutions and land tenure arrangement. It is often taken to imply wider coverage in respect to different aspects of the rural society more than agricultural services. Such as provision of the educational programs, health services, such as industrialization e.g. income generating projects. The IA takes the following forms:

#### **2-1-7-1-1 Participatory approach (PA)**

It is a bottom- up approach aiming to promote participation of the target group in all project cycle (planning, implementation, monitoring and evaluation), through the relevant institutions introduced during the project life.

World Bank defined term participatory as" process by which legitimate interests in project influence decision which affected them" (OXFAM, 1992:14).

The levels of participation were identified by the World Bank including the following:-

1/ information sharing: people told about development project how it may affect them so that they can decide on their level of participation.

2/ consultation: people to be consulted through key issues and provide vital feedback to the project managers.

3/ decision-making: people should be involved in the designing and implementation of the project activities and thus influence its development at every stage.

4/ initiating action: people organized to take action in the face of shared problem or area of interest rather than responding to the initiative of outside agencies (Ibid, (1992).

As indicated by Ali (1986), the philosophical assumption of participation can be summarized as follows:

1/ Mobilization: to enable beneficiaries to relief their exploited resources.

2/ Self-reliance: to achieve self-reliance popular participation should be considered as an ideal means to minimize the cost of community development on their state.

3/ Consultation: in which popular participation is seen as a process by which the donors can avoid costly errors of inappropriate projects.

4/ Self-help: where participation may be taken as contribution of free menial labor to reduce the cost of public work.

5/ Facilitation: assisting people to acquire practical skills to improve their accesses to national resources (Adam, 1996).

#### **2-1-7-1-2 Rural social animation approach:**

Is a form of participatory intervention, which helps the rural people to realize their problems and autonomously taking initiatives.

Adam (1996), stated that" rural social animation approach is educational and political movement aimed at awaking rural people to realized their potentials, it concentrated on the recruitment and training of villagers as animators"( Adam,M.1992:69).

As indicated by UNICEF (1996), the approach attempts to identify and to meet the needs of the local people by involving them in communal activities. To achieve development objectives in turn the concept of the animation attempts to meet the following objectives:

- 1/ Enable people to build capacities of their local institutions and knowledge base
- 2/ Consider people as subject of change
- 3/ Assist people to collect out data concerned with their poverty and to acquire basic management and technical skills to plan and manage activities.
- 4/ Assist people to understand the causal factors of their poverty and to estimate their real life situation and experience
- 5/ to bring people to contact with formal agencies and institution

### **2-1-7-2 The Transformation Approach (TA)**

This approach entails to create radical change in the traditional system of production in the target societies.

Long (1977), defined the (TA) as" an attempt to establish new forms of agriculture and social organization which makes radical break with existing peasant system in terms of operation production techniques, and socio-legal structure, thus to improve the productivity and organization of peasant farmers ".

The TA includes resettlement project, land reform programs and capitalist farming system.

### **2-1-8 Common characteristics of rural communities**

Rural communities are generally characterized by:

- 1/ the density of population in the rural settlement is less than that in urban settlement.
- 2/ the size of rural settlement is comparatively smaller than urban.
- 3/ agriculture is the major occupation in the rural area.
- 4/ the average per capita income is low.
- 5/ the work in the rural area depend on seasonal bases. (Abid, 1992)

### **2-1-9 Training for rural development**

Training is designed, basically to narrow the gap between the current level of competence and that needed by an organization at any given time, moreover to broaden the perception of clientele.

According to Lele (1975), "for rural development to be viable in the long run, greater attention to local involvement and development of rural institution is necessary than has provided in the programs analyzed".

Local involvement and institutional development are not likely to be very effective unless training is provided at three levels:

- 1/ in its broadest sense, to sensitize rural people and thus to increase in perceptivity and ability to respond to development programs as well as to encourage local initiative.
- 2/ for the field staff: to improve technical and administrative performance
- 3/ for higher- level administrative staff: to improve the quality of policy formulation, degree of coordinating the overall effectiveness of implementation.

## **2-1-10 Participation**

Participation means to sensitize people and thus to increase the receptivity and ability of rural people to respond to development programs as well as to encourage local initiative.

Popular participation in development should be broadly understood as the active involvement of people in decision making process.

Creating an environment of collective responsibility of project that is an important ingredient for building of commitment to change.

The development of shared vision can improve the sustainability of project.

## **2-1-11 Implementation of participation**

### **2-1-11-1 Mobilization**

Is an important dynamic in development practices, reflects ideology which argues the need to mobilize the rural sector in order to transform it and make it more responsive.

### **2-1-11-2 Decision-making**

Rural population collaborates with the decision taken.

Mechanism for decision making at government level:

1/ active participation of the poor can only be brought about by adequate peoples organization at the local level.

2/ some have gone so far to define participation in term of process by which the rural poor can organize themselves.

Through organization people would have voice can influence decision making  
e.g. women's groups.

### **2-1-11-3 Empowering**

1/ participation is a process of empowering the rural poor.

2/ the power: in terms of accesses and control of the resources necessary to protect livelihood.



3/ the promotion of popular participation implies redistribution of power in society for it is power which enables groups to determine which needs and whose needs, will be met through distribution of resources.

Understanding the empowerment contain three main elements:

1/ the sharing of power and of scarce resources.

2/ deliberate the efforts by social groups to control their own living condition.

3/ opening up opportunity from below.

Three issues in empowerment:

1/ identification and structuring of the socio-economic groups as basic social units

2/ process of non-formal education and consciousness rising

3/ some form of outside assistance which is an instrument in initiating, and accompanying the process of empowerment

(Abd elrhim, 2004)

## **1-2-12 Concept of participatory development**

The concept of popular participation as an alternative top- down development approach is considered valuable development activity.

Durno (1989), argued:" a program of participatory development implies that people participate because they have realized that their needs can be best addressed through co. operative efforts"

## **2-2 Status of women in Sudan**

As stated by Gutbi Elmahadi (2005),

Women constitute approximately 15,600,000 out of the total Sudanese population. ([www//.sudani.official-women](http://www.sudani.official-women)).

Women play a key role in the economic field with females constituting 26.5% of the total labor force.

This is up from 7% of the work force in the 1960s.

Sudan's 1998 constitution clearly stated that all Sudanese are equal before the law without discrimination as to sex or race. All labor legislation is based on complete equality between men and women.

The 1998 constitution reiterated and earlier equal employment, opportunity clauses in the 1973 constitution. These provisions were reinforced in the 1997 public services ACT which provided for equal wages for equal employment, open competition based on competence, qualification and experience, equal pension rights and equality regarding leave and holidays with due consideration for women being allowed extra special leaves.

([www//.sudani.official-women](http://www.sudani.official-women)).

While most of the women work within the agricultural sector large percentage also work as professionals serving as ambassadors, university professors, doctors, lawyers, engineers, senior army officers, journalists and teachers.

Politically women are well represented. Sudanese women become involved in national politics from the mid 1940s onwards women secured the right to vote in 1953. In Sudan women have unfettered rights to elect and be electing in presidential, federal, state and local election.

Women have chaired select committees with the federal national assembly. There have been women ministers in Sudanese government since the early 1973s ([www//.sudani.women](http://www.sudani.women)).

There have been several women ministers in the present government holding portfolios such as health, social welfare, public services and manpower and cabinet affairs.

There is women policy unit within ministry of social planning, drawing up national policies and plans for women development. There are related women development units in many ministries, corporations, institutions and institute of officially recognized women organization.

Sudan health system focused on primary health care approach, has paid special attention to the health of women and children since they made up to 75% of the population. Women health has always been a focus in Sudan. The first school for midwives in Africa was opened in Sudan in 1921. Maternal and child health and reproductive health programs have been priority areas in the Sudan. Vaccination center programs provide services for mothers, pregnant women and others, the average age of mothers increased from 17.1 years in 1989 to 25.3% by the year 1993. In the area of Primary Health Care (PHC) and women health protection programs, the coverage of PHC reached more than 80% of all Sudanese women. Despite the civil war, government health coverage programs are also reaching more women in southern Sudan. The coverage has increased from 2% in 1989 to 25% in 1999. ([www//. Fao.org](http://www.fao.org). state). Educationally the present Sudanese government has clearly sought to enhance equality and access. There are now more women than

men in universities, they presently constitute 62% of students in higher education compared to 47.2% in 1995.

#### **2-2-1-1 Armed conflict and peace**

Is primary obstacle that has threatened the passage of Sudanese women for development and progress. Women in Sudan, especially in the south are more concerned with:

- 1/ brining war to halt since they are the most affected during the last thirty-four years.
- 2/encouraging the participation of women in decision- making and peace negotiations
- 3/ strengthening and developing the role of women participation in conflict resolution and spreading the culture of peace

#### **2-2-1-2 Constraints to women development and empowerment**

- 1/due to economic situation and the lack of foreign technical and material assistance, scarcity of local resources were negatively affected the implementation of women special programs.
- 2/ scarcity of trained human resources due to internal and external emigration.
- 3/ lack of sufficient infrastructure for implementing the programs especially in the areas affected by wars and armed conflicts and national factors of drought, desertification and floods
- 4/prevalence of some antiquated customs, traditions and practices which precipitated in the society especially in rural areas, negative tendency such as discouraging girl education.
- 5/ the wide spread of illiteracy among women
- 6/ the scarcity of funds for supporting institution concerned with women affairs

## **2-2-2 Position and status of rural women in development approach**

The policies and program agenda produced by governments and development agencies strongly influence the position and status of women. The thinking behind development approaches. Especially with regard to the role of women in development has gone through significant changes over the past 30 years (CTA, 1999).

Moser (1993), stated that: "in 1950s and 1960s women issues were seen as social humanitarian efforts in the African countries. Programs supported the social welfare, family life, education and home economics directed to women as wives and mothers more than produces. Until the 1970s women's concern were addressed basically upon the assumption that women were objects of development agencies, viewed women primarily in their capacity as housewives, mothers and vulnerable section of society".

At this period and in order to integrate women efficiently in the development process the strategies adopted focused on improving women situation through providing basic needs such as nutrition, health, education, childcare, family planning and skill training.

Since the 1970s many conferences with plan of action focused on women issues were held. Four world conferences on women were held in ( 1975, 1980, 1985 and 1995), in 1979 the world conference on Agrarian Reform and rural development, in 1990 the world summit for children was held, in 1992 the united nation conference of environment and development, the world conference of women rights and the international conference on population and development was in 1994, In1995 the world summit for social

development and in 1992 the summit for the economic advancement of rural women organized by the international fund for agricultural development.

### **2-2-3 Rural women**

There are many characteristics for rural women who depend on different cultural, environmental problem and living needs:

- 1/ the seller who walks to town selling her goods and products
  - 2/The desert woman who weave and her husband market her products because her traditions and customs refuse to go out of home.
  - 3/ the farmer woman who plants on hot sun get rid of injurious plants from the field and harvest the wheat with traditional tools.
  - 4/ woman who is milling wheat, bring water, fire wood and washing in nearly well and taking care of family affairs.
- (FAO,1981)

### **2-2-4 The role of women in general**

There are three basic roles of rural women

- 1/ economic role: as a producer of food and goods for the family economy and has labor force for economic activities.
  - 2/ domestic role; with responsibilities as wives and house keepers and manage the household economy.
  - 3/ reproductive role: as mothers with responsibilities to reproduce family labor, care for children and look after their up brining.
- (Opeit, 1985)

### **2-2-5 Rural problems**

2-2-5-1 National and Environmental Problems: such as

- \* Shortage of water.

- \* Decrease of services.
- \* Decrease of markets and health services

### **2-2-5-2 Socio-economic Problems**

Problems concern the individual and his relationship with society such as:

- \* Lack of benefit from the services given by the government in the area.
- \*Exploitation by some merchants in citizens
- \* Illiteracy
- \*Shortage in means of transportation and communication
- \* High fertility rates and low life expectancy
- \* Ignorance in economic, social and policy fields
- \* Lost of confidence and ability to solve problems
- \* Poor experience and heavy responsibilities, poor training and skills
- \* Exclusion from decision making at family, local and national level. (Opeit, 1999). (Abdelhallm, 1998).

## **2-2-6 Approaches of women in development**

### **2-2-6-1 Welfare approach**

The purpose of this approach is to bring women into development as better mothers, and only their productive role is recognized. So the development policies that are based on this approach seek to meet women practical needs through top-down handouts of food aid, measures against malnutrition and family planning. (Moser, 1989)

### **2-2-6-2 Equity approach**

In this approach, women are seen as active participant in development process. Their triple roles that include their reproductive and community managing role, is recognized and the development policy based on this approach seek to meet women strategic needs through direct state intervention for reducing inequality with men.

### **2-2-6-3 The anti-poverty approach**

the purpose of this approach is to ensure that the poor women increase their productivity, the development policy based on this approach seek to meet women practical needs and enable them to earn an income, particularly through small income-generating projects. Thus in this approach there is shift from reducing women inequality with men to reducing income inequality.

### **2-2-6-4 The efficiency approach**

The purpose of this approach is to ensure that development is more efficient and effective through women economic participation. Moser( 1989 ), stated that this approach is seek to meet practical gender needs while relying on all women three roles and an elasticity concept of women time. Women are seen primarily in terms of capacity to compensate for declining social services by extending their working day.

### **2-2-6-5 The empowerment approach**

The purpose of this approach is to empower women through greater self-reliance. Moser (1989) reported that," Women triple role is recognized and the policy seeks to meet strategic gender needs



indirectly through bottom-up mobilization around practical gender needs."

### **2-2-6-6 Emancipation approach**

This approach is related to the social development, which aimed the political participation of women and directs their activities to fulfill the needs of national development. It recognized women role in production and political participation. It meets the strategic needs of men and women through availing essential commodities and services, division of labor between men and women (Rahama, 1998).

### **2-2-6-7 Participation approach**

The purpose of this approach is to recognize how women participate in the development process, starting from problem identification through different stages of planning , monitoring and finally women should be treated as full participants and not only as beneficiaries. This meant that should be change all traditions, which give men the rights to decide and control resources. Participation here is meant to cancel gender bias (Rahama, 1998).

### **2-2-6-8 Gender and development approach**

This is a diversion toward the development of gender instead of women, based on the assumption that women are not amalgamated in the different life activities as a result of the social traditional policies of man sovereignty. This affects both sexes negatively, as it also shapes man thinking who inherited this sovereignty through old traditional and incorrect religions translations, this approach meant to increase the role of both sexes in development through the promotion of social understanding for the role of both sexes.

Rahama (1998), stated that this approach requires radical changes in the old inherited ideas about the role of both sexes

### **2-3 International Funds for Agricultural Development (IFAD)**

This is an international financial institution and specialized agency of united nation. IFAD was established in 30 November 1977 as a result of the world food conference held in 1974 in Rome and began its activities in the low income food deficit regions of the world.

Thus IFAD is an attempt by international community to positively participate in development and combat hunger and rural poverty.

IFAD assistance is in the form of loans and grants as part of IFAD regular programs.

The effects and impact of IFAD projects is to achieve its ambitious objectives. This on-going process allows IFAD to successful rural development and poverty alleviation and to learn important lessons that may incorporate into the design and implementation of future projects and programs.

Thus with this in mind IFAD endeavors to perform what national governments and voluntary organizations could not accomplish.

IFAD's main objective is to provide direct funding and mobilize additional resources to finance rural development project specially aimed at assisting the poorest of the world's people, small farmers, landless poor, artist's fishermen, nomadic herdsman and rural poor women, to increases their food production, raise their income, improve their health, nutrition and education standards and ensure

their well-being on sustainable basis. In brief, IFAD works for the economic and social development of the poor classes.

IFAD resources are voluntary contribution from member states replenished periodically. Special contribution from member states, loans, repayment and investment income.

These resources are not fully used for productive purposes or for project specific purposes. This is because considerable amount of this fund goes to assets such as cars, furniture in expensive accounts.

### **2-3-1 IFAD in Sudan**

Sudan is one of IFAD's priority countries to receive assistance during the period 1979- 1986. IFAD assisted government of Sudan (GOS) by financing six strategic food production projects in different states of the country with total amount of US\$ 65.5 millions.

IFAD assistance to Sudan in the scope of production has pursued a three-pronged strategy of vertical expansion of the rain-fed sector livestock development, to promote a balanced states development IFAD projects were primarily located outside of the central states.

#### **2-3-1-1 IFAD operation**

- Western Sudan resources management program.
- Gash sustainable livelihoods regenerations projects.
- South Kordofan rural development program.
- North Kordofan rural development program.

#### **2-3-1-2 Completed IFAD operation**

- White Nile Agricultural Services project.
- Northern Province Irrigation Rehabilitation Project Phase

- Southern Rosaries Agricultural development project
- Elnahud co- operation credit project
- Northern Province Irrigation Rehabilitation project
- Western Savannah project phase
- Stock route project
- Northern Region Agricultural rural development
- New Halfa irrigation rural development
- Southern Region Agricultural project

### **2-3-2 White Nile for Agricultural Services Project**

The White Nile agricultural services project (WNASP), had officially and practically started in May 1994 upon the appointment of the coordinator and the field manager. As the project was not effective during 1994, the year was successfully devoted for the start up activities and the establishment of the project foundations.

### **2-3-3 Women in Development program**

The main objective of women in development program is to raise the competence of women in the project area socially and economically, to ensure women participation in on/ off farm activities and to train them on the necessary skills to raise their living standards.

The Participatory Rural Appraisal (PRA) was used to know the problems of women in the project area, it reflected that women problems are:

- 1/ high rate of illiteracy
- 2/ low family income
- 3/ lack of education, health and social awareness
- 4/spread of diseases and illnesses e.g. (Malaria and Balharsia)

5/ lack of clean drinking water

### **2-3-3-1 Main objectives of the program**

- 1/ to build women capacities
- 2/ to improve household living standards
- 3/ to improve health and social situation

### **2-3-3-2 Background about women programs**

The programs for women in development incorporated into the mainstream of the project activities taking into consideration the experience of IFADs on- going projects. Women in development unit consist of senior women officer and two women officer to implement the women program. The senior women officer (SWO) responsible for:

- 1/ preparation the annual work program based on feedback from the field.
- 2/ exchange knowledge with specialist, national organizations who will carry out training in literacy, family planning, domestic science and public health.
- 3/ co- ordination with agricultural bank and farmer's bank for off-farm credit requirement for women to insure simplicity of the procedure and accessibility for women.
- 4/ Follow-up on implementation of field level and monitoring program progress and reporting regularly to the project field manager (PFM).

The other two women officers responsible for:

- 1/ Supervision of social surveys
- 2/ determining specific training program for each village and the training requirement for the village leaders

3/ organizing village level training undertaken by the national organization

4/ promotion of appropriate production groups and ensuring eligibility of the group for credit

5/ Monitoring and following-up progress of the production process to ensure repayment and regular reporting to the senior women officer (SWO) (WID unit report 2000).

There are several institutions involved in women in development program, at central and state level. At central level women and development section (WAD) within the ministerial structure of Ministry of Agriculture and Natural Resources and Animal Wealth (MANRAW) and Ministry of Economic Planning (MEP) were recently established to incorporate women activities in the national development programs and projects. the women in development section in agricultural bank of Sudan (ABS) had undertaken comprehensive study to incorporate women in development program into bank lending policy and operations and to provide credit for women income generating activities in rural area. Other institutions involved in women in development program include( social welfare, nutrition and youth training center for ministry of education, forestry national corporation( FNC), agricultural extension department( AED), of the central state ministry of agriculture(SMA) and some national NGOs.

The gardening and nutrition department of ministry of education in Kosti started training program for 15 villages' women leaders from Guli rural council of Kosti locality in collaboration with popular committee, women union and the agricultural extension of the central state ministry of agriculture. The training program activities

included public health, home economic, sewing and tailoring (WID unit 2000).

### **2-3-3-3 Women economic situation in the project area**

In Elgeteina, where the majority of the population is engaged in fishing and fish- trading and the men either working in Khartoum or aboard in Arab countries, it was observed that women are completely dependent on males, and they make no contribution to the welfare of their families.

Poultry and goat- keeping for family consumption are recognized as female activities. Deprived and female- headed household engages mainly in very small-scale trading.

In Eldueim and Kosti, agriculture is the main occupation together with livestock and fishing, recently demographic change in these areas due to drought and civil war gradually changing the social attitude towards women and their economic activities. A very few women own tenancies in white Nile agricultural scheme administration( WNASA) and their efforts are often recognized, other have inherited land but lack of finance is the main cause of its under- utilization.

Generally, women from poor derived household in village, poultry and livestock raising are recognized as active female only practice agriculture. Women in Kosti and Elduiem are also involved in the production of salted fish (faseakh), (Abdelrhman, 2001).

### **2-3-3-4 Activities and methodology of the project**

1/ establishment of training centers in the villages of the selected schemes

2/ formation of multipurpose women cooperative groups

- 3/ establishment of vegetable and field crops farms and home gardens that could be managed by women
- 4/ training of women to manage small- scale enterprises such as soap, oil and cheese making
- 5/ follow up of repayment activities (IFAD, 2003).

#### **2-3-3-5 Women program activities**

According to WIN unit document (2000), the following activities were implemented:

#### **2-3-3-5-1 Income – generating activities**

The income –generating activities were aiming at improving the socio-economic situation of the rural families within the project area. These activities gave the rural women a chance to own one or more small enterprises that suit their skills and economical situation.

The annual work plan targeted 543 women to benefit from the income generating activities. The small-scale enterprises include:

- Sheep rearing
- Sheep fattening
- Spagatti machine
- Sewing machine
- Goat rearing
- Handicrafts materials
- Poultry
- Net for fishing



### **2-3-3-5-2 Environment activities**

These activities implemented through the communal forestry program, and include:

#### **2-3-3-5-2-1 The clay stove**

The White Nile area is facing a problem of availability of fuel wood. The clay stove has the advantage of economizing the use of fuel wood. The stove can be made at homes, since the ingredients are clay, manure and ashes, which are available in any house.

The work plan of the forestry program include plan for installing improved clay stoves accompanied by training sessions targeted the housewives in the villages of selected schemes.

#### **2-3-3-5-2-2 Forestry extension and seedling production**

The extension activities were carried out by the forestry staff in selected schemes to activate the role of villagers to participate in the forestry program (planning and implementation), 5 women groups were formed in El hudeeb schemes and 6 in El Tawila.

#### **2-3-3-5-3 Training centers**

Women in development program aim at improving the socioeconomic situation of rural women in the project area through the village training centers in 24 schemes. In these training centers women have trained to obtain the essential skills and knowledge to manage their small- scale enterprises.

Women in development training was playing important role in acquiring rural women with the skills and knowledge that viewed to be important for improving the family living condition, 1432 women attended the training sessions in the training centers. These

sessions include handicrafts, literacy, nutrition and food processing tailoring and sewing sessions (IFAD, 2000).

#### **2-3-3-5-4 National training for women leaders**

Women in development program offers training courses for the women groups leaders in some universities e.g. Ahfad university for a period of four months, with different training course each month ( training in small industries such as dairy and soap production, training in how to establish, finance and run small projects etc. The main criteria for the election of group's leaders, elected educated women have desire to participate and train other members of the groups (IFAD, 2001).

#### **2-3-3-5-5 Social activities**

These activities aim to improve the social and sanitation conditions of the rural community in the project area. These activities were done through visits, symposium, meeting, and health days. The meeting discussed the implementation and participation problem and attempt to have suitable solution and set necessary corrective actions.

The symposiums were carried out in collaboration with the concerned governmental department and NGOs. The symposiums covered food and nutrition topics. Also the environmental and harmful customs and traditions were discussed. On average about 50- 60 women were attended each symposium.

Health days were carried out in collaboration with the UNICEF and environmental conservation association.

The health days aim to debate the indigenous diseases for the benefit of about 900 people in project area. Health days also were carried out for animal vaccination and treatment. About 1038 heads

of small ruminant's cows have been treated in the villages of the project area. (IFAD, 2002)

# CHAPTER THREE

## **Research methodology**

### **3-1 The conceptual model of study**

The conceptual model employed in this study was designed to measure the extent of women participation in IFAD activities and quantify the factors which influenced their participation in different activities.

The model composed of four independent variables namely, participation in income-generating activities, participation in forestry program, participation in training program and participation in social and health services, and dependent variables include income, standard of living, capability of writing and reading and skills.

#### **Definition of the variables**

##### **- Income – generating activities**

This variable is used in this study to mean the total numbers of activities practiced during the project period (1995-2002) to generate income.

##### **- Participation in training program**

This variable is measured in term of the numbers of training courses that the respondent had attended from the beginning of the project till the date of the interview.

##### **- Participation in environmental activities**

This variable is measured in term of the seedling activities and clay stoves that practiced by the participant from beginning of the project till the date of interview.

##### **- Participation in social and health activities**

This variable is measured in term of change in education level, attendance of health day that introduced by the project and the degree of knowledge during the project period.

**-improvement in food Variety**

This variable is measured in term of the types of food had been taken by the respondent, since the beginning of the project till the date of the interview.

**- Capability of writing and reading**

This variable is measured in term of the progress of respondent's level of writing and reading since the beginning of the project till the date of interview.

**- Standard of living**

This variable is measured in term of average number of meals per day taken by the respondent during the project period.

**Income level**

This variable is used here to mean the income the respondent had earned due to participation in WID unit activities since the beginning of the project till the date of the interview.

**3-2 Area of the study**

The White Nile state is located in the centre of Sudan "latitude 15 and 15; 12" North and longitude 31 and 31;"East}, neighboring Kordofan on the West, Upper Nile on the south, Gazira on the east and Khartoum state from north direction. Total population is about 1,401,895, they are living in an area of 39,701 square kilometer {almost 9,452,620 Fadden}. Total cultivation area is estimated to be 6,236,240 Fadden, 3,806,241 fadden of it utilized for rain fed, irrigated, sugar sector and 2,429,992 of it utilized for range and forest.

Water resources are mainly the White Nile in addition to rain, small water courses and to some extent underground water.

People in the eastern north areas practicing water harvest through terrace cultivation. The State is linked throughout tarmac road to the north and river line to the south.

The main power is driven from the national network. The state is well characterized by sugar industry, vegetables oil production, and textile and milk - products.

### **3-3 Sample selection procedure**

The White Nile agricultural services project activities covered 24 schemes distributed over the four localities of the White Nile state, namely Kosti, Eljeblien, Eldeuim and Elgeteena. Each locality embracing a number of schemes, each scheme is subdivided into villages.

Multi- stage stratified random sampling procedure was used to select a sample of 120 individuals for the purpose of the study,60 participants and 60 non participants women.

The first stage involved the four localities as a stratum with different schemes. At the second stage one scheme from each locality was randomly selected by lottery. In the third stage villages from the selected schemes were randomly chosen.

With the aid of women in development unit a sample of participants and non- participants respondents was randomly selected from the total population of each village to have a total sample size of 120 respondents (figure 3-4)

### **3-4 Sampling frame**

#### **A. Project schemes**

Kosti locality	Eljeblien locality	Eldeuim locality	Elgetana locality
Um hani Dabat Eltor	Taksaboon Elgazira Aba	El ein Elshore	Abu hindi El Nazaha

El taweela	Elhudiab	Elminedreeb	El Saada
Guli	Eltaif	El khanager	El Kinooz
Um ganeem	Khor Ajol	Areek	
Um dalagam	Dimo	Um takal	
		Wakarah	

Source- Women in Development unit 2003

B. selected schemes and villages from each scheme

Locality	Selected scheme from each locality	Selected village from each scheme
Kosti	Um Hani	Um Hani
ElJebelian	Elgezira Aba	Tayba
ElDueim	Elminedreeb	El mindreeb
El Getena	Abu Handi	Abu Hindi

Source: the researcher, 2007

C. selected participants and non participants from each selected village:

Selected village	Number of selected participants	Number of selected non- participants
Um Hani	13	12
Elminedreeb	15	15
Tayba	20	20
Abu Hindi	12	13

### **3-5 Data collection**

The study was mainly based on primary data, collected through direct field survey, conducted in august (2006), with the aid of questionnaires, interviews, observations and group discussion, in addition to secondary data collected from related sources.

### **3-5Data analysis**

Different statistical procedures were used in the analysis of the collected data, the computerized statistical packages for social science (SPSS) was applied to manipulate the data. Descriptive statistic was used to describe the sample and background variables of the study. The chi- square procedure was employed to determine the significance of observed differences between the variables of the study.

## **CHAPTER FOUR**

### **Results and Discussion**

This chapter includes three parts. The first part intended to present background information on selected characteristics of the participants, the second part deals with measurement and assessment of women participation in IFAD activities, and the frequency distribution and chi- square analysis results. The third



part includes comparative analysis of the participants and non participants.

#### **4-1 Socio- economic characteristic of the participants**

##### **4-1-1 Age**

Participant’s age is expected to have effect on his productivity, since it affects his mental and manual abilities.

Distribution of the participants by age, helps in the determination of their potential labor force quantitatively as well as qualitatively. Results (Table 4. 1.1) indicated that the majority of the participants were 20-50 years old, this means that the participants were within the productive age and economically active, hence they can produce more to satisfy their family needs. Also they can accept new ideas and help the development of the society economically, socially and culturally.

Table 4.1.1: Frequency distribution of the participants by their age:

Age(year)	frequency	percent	valid	Cumulative%
20-30	7	11.7	11.7	11.7
30-40	23	38.3	38.3	50.0
40-50	21	35.0	35.0	85.0
50-60	9	15.0	15.0	100.0

total	60	100.0	100.0	
-------	----	-------	-------	--

#### 4.1.2 Marital status

The frequency distribution results (table 4.1.2) showed that the majority of the participants targeted by women in development program were married. This means that the respondents were able to shoulder their responsibility.

**Table 4.1.2: Frequency distribution of the participants by their marital status**

Marital status	Frequency	percent	marital status%	Cumulative%
married	41	68.3	68.3	68.3
Single	12	20.0	20.0	88.3
Widow	6	10.0	10.0	98.3
Divorced	1	1.7	1.7	100.0
Total	60	100.0	100.0	

#### 4.1.3 Education level

The education level of participants assumed to have significant effects on their development, increase their awareness and skills, contribute to the adoption of new technology.

Insufficient education will contribute more to the weakness of the society and finally it leads to the failure of the development.

The results (table 4.1.3) indicated that more than half of the participants (53.3%) have formal education. This means that the

participants are able to develop their life, and become more productive and through women education the benefit will be transferred to the next generation i.e. their children. Also their education may have apposite impact on their effective participation in the project activities and promotes the process of development in the study area.

**Table 4.1.2: Frequency distribution of the participants by their education level**

Education level	Frequency	percent	Valid %	Cumulative%
illiterate	23	38.3	38.3	38.3
Khalwa	5	8.3	8.3	46.7
Primary school	14	23.3	23.3	70.0
Intermediate school	8	13.3	13.3	83.3
Higher secondary school	9	15.0	15.0	98.3
Graduate	1	1.7	1.7	100.0
Total	60	100.0	100.0	

#### **4.1.4 Family size**

The frequency distribution results( table 4.1.4) showed that more than half of the respondents(55.0%) participated as target group in women in development program of the WNASP have a family of (5-9) members, this mean that women have a great reproductive and productive role( taking care of their families beside working outside home for earning income to satisfy daily needs).

The big family size has two effects, may has a positive and/or negative effect, it may positively increase the labor force in the project area, increase the activities and hence the income. However, it may negatively increase the numbers of dependents and in turn more burden on women and worse family economic situation.

**Table 4.1.4: Frequency distribution of the participants according to their family size**

Family size	Frequency	Percent	Valid %	Cumulative%
Less than 4	22	36.7	37.9	37.9
5-9	33	55.0	56.9	94.8
more than 9	3	5.0	5.2	100.0
missing	2	3.3	100.0	
total	60	100.0		

#### **4.1.5 Type of job:**

In many cases women become the main person who responsible of their families due to migration of their husbands or elder sons or father, also they have earn their living by working on more than a job in addition to their domestic role.

The results (table 4.1.5) indicated that (53.3%) of the respondents had a job, this mean that women in development (WIN) unit program focused on this segment of the women because they were in contact with other people outside their villages , and also by acquiring knowledge and skills through it, they will become more progressive and willing for the future.

**Table 4. 1. 5: Distribution of the participants according to their type of job**

Type of job	Frequency	Percent	Valid %	Cumulative%
official	9	15.0	15.0	15.0
Micro industry	4	6.7	6.7	21.7
Agriculture	17	28.3	28.3	50.0
Others	2	3.3	3.3	53.3
Headed house hold	28	46.7	46.7	100.0
Total	60	100.0	100.0	100.0

#### **4.1.6 Family income**

Nur (1997) indicated that" those with income less than 37000 dinar per month are under poverty line"

The frequency distribution results (table 4.1.6) showed that most of the respondents in the project area, have average income below the poverty line (37000sd) .this mean that families' income belong to the poorest segment of the rural population in the project area, also this result indicated that their ability to promote income did not enhanced by the project activities.

**Table 4.1.6: Frequency distribution of the participants according to their family income**

Family income	Frequency	percent	Valid %	Cumulative%
---------------	-----------	---------	---------	-------------

1000-15000	11	18.3	18.3	18.3
16000- 30000	27	45.0	45.0	64.4
31000-45000	14	23.3	23.3	88.1
45000- 60000	6	10.0	10.0	98.3
more than 60000	1	1.7	1.7	100.0
missing	1	1.7	1.7	
total	60	100.0	100.0	

#### **4.1.7 Participation in projects before IFAD**

Although there were many rural development organizations work in the project area, the results (table 4.1.7) revealed that the majority of the respondents (83.3%) did not participate in projects before IFAD, this mean that the participants were either prevented by social norms or they were unaware of the importance of the organizations to their economic activities.

**Table 4.1.7: Frequency distribution of the participants by their participation in projects before IFAD**

Participation	Frequency	percent	Valid %	Cumulative%
---------------	-----------	---------	---------	-------------

Participated	10	16.7	16.7	16.7
Not participated	50	83.3	83.3	100.0
total	60	100.0	100.0	

#### 4.1.8 Income level

Although one of the objectives of the WID unit programs is the improvement of income level of the participants in the project area, the results (table 4.1.8) indicated that half of the participants their income level was low.

**Table 4.1.8: Frequency distribution of the participants by their income level**

Income level	Frequency	Percent	Valid%	Cumulative%
Extremely high	3	5.0	5.0	5.0
Some what high	2	3.3	3.3	8.3
High	7	11.7	11.7	20.0
Medium	18	30.0	30.0	50.0
Low	30	50.0	50.0	100.0
Total	60	100.0	100.0	

#### 4.1.9 Type of training

The WNASP aim at improving the socio- economic situation of rural women in the project area through village training centers in selected schemes. Women trained to obtain the essential skills and knowledge to manage their income- generating activities.

Results (table 4.1.9) indicated that the entire sample members participated in the training program and most of them participated in literacy classes.

**Table 4.1.9: Frequency distribution of the respondents according to their type of training undertaken**

Training undertaken	Frequency	percent	Valid %	Cumulative%
Handicraft	11	18.3	18.3	18.3
Literacy classes	21	35.0	35.0	53.3
Nutrition	15	25.0	25.0	78.3
Food processing	7	11.7	11.7	90.0
Sewing	6	10.0	10.0	100.0
Total	60	100.0	100.0	



## **4.2 Chi- square results of women participation in (WIN) unit activities**

This part presents the measurement and assessment of women participation in WIN unit activities and results of chi- square for determining the significant or non-significant association and relationship between variables of the study.

### **4.2.1 Participants' income level by participation in income-generating activities**

The program for WID provided credit to participants for income-generating activities, aiming to improve socio- economic situation of participants. These activities gave them a chance to own one or more small scale enterprise that suit their skill.

As shown in table (4.2.1) chi-square test results revealed that there was no significant association between participants' income level and their participation in income-generating activities.

This means that participation in income –generating activities did not influence the level of income for the participants, because most of the women were lost their project due to death of sheeps and goats, in addition to the low prices in their villages, also there were no demand for their produce.

**Table 4.2.1: Distribution of participants' income level by participation in income- generating activities:**

Income level	Type of income generation activities									total
	Goat rearing	Sheep fattening	Nest machine	Cloth machine	Cow rearing	Manual skills	cart	chicken	Cheese making	
<b>Extremely high</b> count % of total	1 1.7%	1 1.7%				1 1.7%				3 5.1%
<b>Some what high</b> count % of total	1 1.7%	1 1.7%								2 3.4%
<b>High</b> count % of total		5 8.5%			1 1.7%	1 1.7%				7 11.9%
<b>Medium</b> count % of total	3 5.1%	4 6.8%	2 3.4%		3 5.1%	2 3.4%	2 3.4%	2 3.4%		18 30.5%
<b>Low</b> count % of total	4 6.8%	10 16.9%	2 3.4%	5 8.5%	4 6.8%	1 1.7%	1 1.7%	1 1.7%	1 1.7%	29 49.2%
<b>Total</b> count % of total	9 15.3%	21 35.6%	4 6.8%	5 8.5%	8 13.6%	5 8.5%	3 5.1%	3 5.1%	1 1.7%	59 100.0%

Chi-square value= 22.993 , df= 32 , sig=.879

#### 4.2.2 Participant' income level by participation in forestry program

White Nile area is facing a problem of huge consumption of fuel wood, the work plan of the forestry program includes plan for installing improved clay stoves accompanied by training sessions targeted the housewives in the villages of selected schemes.

Frequency distribution results (table 4.2.2) showed that half of the participants their income level from forestry program was low, chi- square test results revealed that there was no significant association between participants' income level and participation in forestry program. This means that participation in forestry program did not influence the income level, because most probably the participants did not applied the activity in a sound method, hence low benefit from the program was obtained.

**Table 4.2.2: Distribution of participants' income level by participation in forestry program**

Income level	Forestry program			total
	Improved stoves	Planting trees	Did not participate	
<b>Extremely high</b> count % of total			3 5.0%	3 5.0%
<b>Some what high</b> count % of total	2 3.3%			2 3.3%
<b>High</b> count % of total	3 5.0%		4 6.7%	7 11.7%
<b>Medium</b> count % of total	8 13.3%	1 1.7%	9 15.0%	18 30.0%
<b>Low</b> count % of total	9 15.0%		21 35.0%	30 50.0%
<b>Total</b> count % of total	22 36.7%	1 1.7%	37 61.7%	60.0 100.0%

Chi- square value= 9.062 , df =8 , sig= .337

### **4.2.3 Participants' level of writing and reading after IFAD by participation in income- generating activities**

The main objective of the training program was to improve the level of writing and reading for the participants through literacy classes and to train women to carry out feasibility study and to manage their income generating activities.

Frequency distribution results (table 4.2.3) showed that the majority of participants (73.5%) their level of writing and reading after IFAD was low, chi- square test results indicated that there was no significant association between participants' level of writing and reading after IFAD and participation in income generating activities. This most probably because the women in the project focused on how to return back the capital of their projects and ignored the training program tended to raise their level of reading and writing.

**Table 4.2.3: Distribution of the participants' level of reading and writing by participation in income-generating activities**

Level of reading and writing		Type of income-generating activities						total
		Goat rearing	Sheep fattening	Nest machine	Cloth machine	Cow rearing	Manual skills	
Very good	count	1			1			2
	% of total	2.9%			2.9%			5.9%
Good	count		1		2	1	1	5
	% of total		2.9%		5.9%	2.9%	2.9%	14.7%
moderate	count		1	1				2
	% of total		2.9%	2.9%				5.9%
weak	count	2	12	1	1	6	2	25
	% of total	5.9%	35.3%	2.9%	2.9%	17.6%	5.9%	73.5%
Total	count	3	14	2	4	7	3	34
	% of total	8.8%	41.2%	5.9%	11.8%	20.6%	8.8%	100.0%

Chi-square value= 23.144 , df= 18 , sig= .185

**4.2.4 Participants' level of writing and reading after participation in IFAD by their level of participation**

WID program was playing important role in acquainting rural women with skills and knowledge that viewed to be important for improving the family living conditions through literacy classes. Chi- square test results (table 4.2.4) indicated that there was no significant association between Participants' level of writing and reading and participation in IFAD activities. This means that the participants' level of writing and reading did not influenced by participation in IFAD activities. This may be due to the time of teaching did not suitable for some participants, that is to say it interfere with other works.

**Table 4.2.4: Distributions of the respondents according to their level of writing and reading after participation in IFAD by their level of participation**

Level of participation	Level of reading and writing after IFAD				total
	Very good	good	moderate	weak	
Continuously count % of total	1 3.0%	3 9.1%	1 3.0%	14 42.4%	19 57.6%
Very much count % of total		1 3.0%		1 3.0%	2 6.1%
Some time count % of total	1 3.0%		1 3.0%	5 15.2%	7 21.2%
Rarely count % of total		1 3.0%		1 3.0%	2 6.1%
Not participated count % of total				3 9.1%	3 9.1%
Total count % of total	2 6.1%	5 15.2%	2 6.1%	24 72.7%	33 100.0%

Chi- square value=7.772 , df= 12 , sig=. 803

#### 4.2.5 Participants' level of writing and reading by number of training courses

Women in development program offer training courses for the women who trained in how to establish finance and run small project.

Chi- square test results (table 4.2.5), showed that there was high significant association between participants' engagement in training courses and their level of writing and reading. This is may be due to expectation that the training courses playing important role in acquiring rural women with the skills and knowledge through more and more practice and this lead to improvement in their level of reading and writing.

**Table 4.2.5: Distribution of the participants according to their level of writing and reading by number of training courses**

Number of training course	Level of writing and reading after IFAD				Total
	Very good	Good	moderate	weak	
Zero count		1	2	12	15
% of total		2.9%	5.9%	35.3%	44.1%
One count		3		13	16
% of total		8.8%		38.2%	47.1%
Two count	2	1			3
% of total	5.9%	2.9%			8.8%
Total count	2	5	2	25	34
% of total	5.9%	14.7%	5.9%	73.5	100.0%

chi-square value=27.166 , df=6 , sig= .000

#### **4.2.6 Participants' number of meals/ day after IFAD by their participation in income- generating activities**

The income- generating activities were aiming at improving the socio-economic situation of the rural families in the project area.

Chi- square test results (Table 4.2.6) revealed that there was no significant association between participants' number of meals/ day and their participation in income- generating activities. This is most probably because the participants did not practice what have taken in the activities of the training courses in sound methods.



**Table 4.2.6: Relationship between the participants' number of meals/ day by participation in income-generating activities**

Numbers of meals after IFAD	Type of income-generation activities									total
	Goat raring	Sheep fating	Nest machine	Cloth machine	Cow raring	Manual skills	cart	chicken	Sppecatti machine	
Two meals count		2		1	2					5
% of total		3.4%		1.7%	3.4%					8.5%
Three meals count	9	19	4	4	6	4	3	3	1	53
% of total	15.3%	32.2%	6.8%	6.8%	10.2%	6.8%	5.1%	5.1%	1.7%	89.8%
More than three count						1				1
% of total						1.7%				1.7%
Total count	9	21	4	5	8	5	3	3	1	59
% of total	15.3%	35.6%	6.8%	8.5%	13.6%	8.5%	5.1%	5.1%	1.7%	100.0%

Chi- square value=16.842 , df= 16 , sig= .396

#### 4.2.7 Respondents' number of meals/ day after IFAD by participation in forestry program

Chi-square test results (table 4.2.7) revealed that there was a significant association between numbers of meals/ day taken by the participants and their participation in forestry program. This is mostly due to their usage of improved clay stoves, which facilitate the preparing of food and this is better than fetching the fuel wood from long distance, also this lead to saving the income and resulted in an increase of the number of meals/day for the participants

**Table 4.2.7: Participants' number of meals/ day after participation in IFAD by participation in forestry program**

Number of meals/day after IFAD	Forestry program			total
	Improved stoves	Planting tree	Did not participate	
Two meals count	1	1	3	5
% of total	1.7%	1.7%	5.0%	8.3%
Three meals count	21		33	54
% of total	35.0%		55.0%	90.0%
More than three count			1	1
% of total			1.7%	1.7%
Total count	22	1	37	60
% of total	36.7%	1.7%	61.7%	100.0%

Chi- square value=12.061 , df= 4 , sig=.017

#### 4.2.8 Participants' number of meals/ day after participation in IFAD by participation in social and health services

Some of the activities aimed to improve the social and sanitation conditions of the rural community in the project area through health days, which aim to combat the indigenous disease for the benefit of people in project area.

Chi-square test results (table 4.2.8) revealed that there was a significant association between participants' number of meals/day and their participation in social and health services, this might be referred to the expectation that through more knowledge and awareness about the importance of nutrition, acquainted from the programs and communication with other participants.

**Table 4.2.8: Distribution of the participants' number of meals/day after participation in IFAD by participation in social and health services**

Number of meals after IFAD	Social and health services			total
	Knowledge program	Primary health care	Did not participate	
Two meals	1	1	3	5
count				
% of total	1.7%	1.7%	5.0%	8.3%
Three meals	29		25	54
count				
% of total	48.3%		41.7%	90.0%
More than three	1		1	1
count				
% of total	1.7%		1.7%	1.7%
Total	31	1	28	60
count				
% of total	51.7%	1.7%	46.7%	100.0%

Chi- square value = 13.125 , df= 4 , sig= .011

#### **4.2.9 Participants' attendance of awareness program by their participation in income- generating activities**

The objective of this program is to improve the standard of living for women in the schemes by providing access to income- generating activities and women education.

Chi- square test results (table 4.2.9) indicated that there was no significant association between Participants' attendance of awareness program and their participation in income generating activities. This is due to the traditional opinion of the participants towards the awareness program, they did not applied what they learned in the program, a thing that lead to loss and death of their animals.

**Table 4.2.9: Relationship between the participants' attendance of awareness program and participation in income- generating activities**

Attendance of awareness program		Type of income-generation activities								total	
		Goat rearing	Sheep fattening	Nest machine	Cloth machine	Cow rearing	Manual skills	cart	chicken		Sppecatti machine
continuously	count	4	8	2	1	4	3	2	3	-	27
	% of total	6.8%	13.6%	3.4%	1.7%	6.8%	5.1%	3.4%	5.1%		45.8%
Very much	count	-	1	-	1	-	1	1	-	-	4
	% of total		1.7%		1.7%		1.7%	1.7%			6.8%
Some time	count	1	1	2	-	1	-	-	-	1	6
	% of total	1.7%	1.7%	3.4%		1.7%				1.7%	10.2%
rarely	count	1	2	-	1	-	-	-	-	-	4
	% of total	1.7%	3.4%		1.7%						6.8%
Not attended	count	3	9	-	2	3	1	-	-	-	18
	% of total	5.1%	15.3%		3.4%	5.1%	1.7%				30.5%
Total	count	9	21	4	5	8	5	3	3	1	59
	% of total	15.3%	35.6%	6.8%	8.5%	13.6%	8.5%	5.1%	5.1%	1.7%	100.0%

Chi- square value= 36.200 , df= 32 , sig= .279

#### 4.2.10 Participants' attendance of awareness program by their participation in forestry program

Chi- square test results (Table 4.2.10) showed that there was no significant association between the participants' attendance of awareness program and their participation in forestry program. This confirm the little interest of women in forestry program, this most probably due to shortage of water for planting tree in the project area, and also most of respondents attended the improved stove activities and neglected planting tree program.

**Table 4.2.10: Relationship between participation in forestry program and participants' attendance of awareness program**

Attendance of awareness program	Forestry program			total	
	Improved stoves	Planting tree	Did not participate		
continuously	count	9	1	18	28
	% of total	15.0	1.7%	30.0%	56.7%
Very much	count	2		2	4
	% of total	3.3%		3.3%	6.7%
sometime	count	4		2	6
	% of total	6.7%		3.3%	10.0%
rarely	count	4			4
	% of total	6.7%			6.7%
Not attended	count	3		15	18
	% of total	5.0%		25.0%	30.0%
total	count	22	1	37	60
	% of total	36.7%	1.7%	61.7%	100.0%

Chi- square value=14.043 , df= 8 , sig= .081

#### 4.2.11 Participants' attendance of awareness activities by participation in social and health services

Chi- square test results (table 4.2.11) showed that there was a significant association between participation in social and health activities and respondent's attendance of awareness program. This is due to expectation that through meeting, symposium and health days the respondents discussed the implementation and participation problems and attempted suitable solution, and also they exchanged knowledge and this lead to increasing the awareness of the participants.

**Table 4.2.11:** Relationship between participation in social and health services and participants' attendance of awareness program

Attendance of awareness program	Social and health services			total	
	Awareness activities	Primary health care	Did not participate		
Continuously	count	18		10	28
	% of total	30.0%		16.7	46.7%
Very much	count	1	1	2	4
	% of total	1.7%	1.7%	3.3%	6.7%
Sometime	count	4		2	6
	% of total	6.7%		3.3%	10.0%
Rarely	count	2		2	4
	% of total	3.3%		3.3%	6.7%
Not attended	count	6		12	18
	% of total	10.0%		20.0%	30.0%
Total	count	31	1	28	60
	% of total	51.7%	1.7%	46.7%	100.0%

Chi- square value = 19.358    df = 8    sig = .013

#### 4.2.12 Participants' attendance of awareness program by their income level

Chi- square test results table 4.2.12 showed that there was a significant association between the income level of the participants and their attendance of awareness program. This might be due to the expectation that the participants who attended and practice what they had taken in the awareness program had acquired skills, increased their knowledge and this resulted in improvement of their income level.

**Table 4.2.12: Distribution of the participants' income level by their attendance of awareness program**

Attendance of awareness program	Income level					total
	Extremely high	Somewhat high	high	medium	low	
Continuously	1		3	10	14	28
% of total	1.7%		5.0%	16.7%	23.3%	46.7%
Very much				2	2	4
% of total				3.3%	3.3%	6.7%
Sometime			1	1	4	6
% of total			1.7%	1.7%	6.7%	10.0%
Rarely		2	1		1	4
% of total		3.3%	1.7%		1.7%	6.7%
Not attended	2		2	5	9	18
% of total	3.3%		3.3%	8.3%	15.0%	30.0%
Total	3	2	7	18	30	60
% of total	5.0%	3.3%	11.7%	30.0%	50.0%	100.0%

**Chi- square value= 34.647 , df= 16 , sig = .004**



### 4-3 Background data of the respondents

This part was devoted for the assessment of some socio-economic characteristics of respondents, where chi- square test were applied to check whether these social characteristics influence the participation of women in IFAD activities, and to test if the differences between the participants and non-participants women reached significance or not.

#### 4.3.1 Age

With regard to age and participation, chi- square test results (Table 4.3.1) revealed that there was no significant difference between respondents' according to their age.

This result indicated that the organization most probably covered all the community members, and incorporated all age groups in the project area.

**Table 4.3.1: Distribution of the respondents' participation by age**

Participation	age					total
	20-30	30-40	40-50	50-60	More than 60	
Participant count	10	28	16	6	-	60
% of total	8.3%	23.3%	13.3%	5.0%	-	50.0%
Non-participant count	19	22	12	5	2	60
% of total	15.8%	18.3%	10.0%	4.2%	1.7%	50.0%
Total count	29	50	28	11	2	120
% of total	24.2%	41.7%	23.3%	9.2%	1.7%	100.0%

Chi- square value= 6.175 , df= 4 sig= .186

### 4.3.2 Marital status

With regard to marital status, chi- square test results (table 4.3.2) indicated that there was no significant difference between participants and non-participants.

This is most probably because the opportunities were available to all women in the project area to participate in IFAD activities, and IFAD did so because many families depend on divorced and widowed women who shoulder the responsibility, so it could be stated that the project had succeeded to attract all segments of women to participate and benefit from it's activities.

**Table 4.3.2: Distribution of the respondents' participation by marital status**

Participation	Marital status				total
	married	single	widow	divorced	
Participant	41	12	6	1	60
count					
% of total	34.2%	10.0%	5.0%	.8%	50.0%
Non-participant	44	10	6		60
count					
% of total	36.7%	8.3%	5.0%		50.0%
Total	85	22	12	1	120
count					
% of total	70.8%	18.3%	10.0%	.8%	100.0%

Chi-square value= 1.288 , df= 3 , sig=.73

### **4.3.3 Education level**

Regarding the association between education level and participation, chi-square test results (table 4.3.3) revealed that there was no significant influence of education level on participation in the program activities. This means that education level was more or less similar among the respondents, and this is due to equally limited opportunities for education for females in far rural areas.

**Table 4.3.3: Distribution of the respondents' participation by education level**

<b>Participation</b>	<b>Education level</b>						<b>total</b>
	illiterate	khalwa	Primary school	Intermediate school	Higher secondary	graduate	
Participant count	23	5	14	8	9	1	60
% of total	19.2%	4.2%	11.7%	6.7%	7.5%	.8%	50.0%
Non-participant count	23	3	9	9	10	6	60
% of total	19.2%	2.5%	7.5%	7.5%	8.3%	5.0%	50.0%
Total count	46	8	23	17	19	7	120
% of total	38.3%	6.7%	19.2%	14.2%	15.8%	5.8%	100.0%

**Chi- square value= 5.270 , df= 5 , sig= .384**

#### 4.3.4 Type of Job

In detecting the effect of the type of job, chi- square test results (table 4.3.4) indicated that there was a significant difference between participants and non participants according to type of job, this mean that WIN unit program attracted the women who were have job more than the others. This may be because the employed women have more contact with people outside their project area (i.e. of more cosmopolites).

**Table 4.3.4: Distribution of the respondents' participation by type of job**

Participation	Type of job					total
	official	Small industry	agriculture	Headed house hold	other	
Participant count	9	4	17	28	2	60
Participant % of total	7.5%	3.3%	14.2%	23.3%	1.7%	50.0%
Non-participant count	7	1	7	44	1	60
Non-participant % of total	5.8%	.8%	5.8%	36.7%	.8%	50.0%
Total count	16	5	24	72	3	120
Total % of total	13.3%	4.2%	20.0%	60.0%	2.5%	100.0%

Chi- square value= 10.106 , df= 4 , sig= .039

#### 4.3.5 Family size

Chi- square test results (table 4.3.5) showed that there was no significant difference between participants and non participants according to family size. This might be due to the similarity in family size in rural area.

**Table 4.3.5: Distribution of the respondents' participation by family size**

participation	Family size				total
	Less than 4	5-9	More than 9	missing	
Participant count	22	33	3	2	60
% of total	18.3%	27.5%	2.5%	1.7%	50.0%
Non-Participant count	21	37	1	1	60
% of total	17.5%	30.9%	.8%	.8%	50.0%
Total count	43	70	4	3	120
% of total	35.8%	58.4%	3.3%	2.5%	100.0%

Chi- square value= 2.219 , df= 3 , sig= .528

#### 4.3.6 Family income before participation in IFAD activities

Chi- square test result (table 4.3.6) showed that there was a significant difference between participants and non participants according to family income.

This result is consistent with the argument that individuals of better economic status are usually of more cosmopolitaness.

(Rogers, 1995)

**Table 4.3.6: Distribution of the respondents' participation by family income before participation in IFAD activities**

Participation	Family income before participation in IFAD activity			total
	1000-15000	15000-30000	Have no income	
Participant count	8	4	48	60
%of total	6.7%	3.3%	40.0%	50.0%
None Participant count			60	60
%of total			50.0%	50.0%
Total count	8	4	108	120
%of total	6.7%	3.3%	90.0%	100.0%

Chi- square value= 13.333 , df= 2 , sig= .001

#### **4.3.7 Previous Participation**

With regard to the previous participation, chi- square test results (table 4.3.7) indicated that there was no significant difference between participants and non participants according to their participation in project before IFAD, this is most probably because the previous experience was not so encouraging, so some women wouldn't like to pass the case , or there was no enough knowledge about IFAD activities when started

**Table 4.3.7: Distribution of the respondents' participation by participation before IFAD**

Participation	Participation in project before IFAD		total
	participate	Did not participate	
Participant count	10	50	60
% of total	8.3%	41.7%	50.0%
Non- participant count	8	52	60
% of total	6.7%	43.3%	50.0%
Total count	18	102	120

% of total	15.0%	85.0%	100.0%
------------	-------	-------	--------

**Chi- square value=.261 , df = 1 , sig= .609**

#### **4.3. 8 Respondents' level of writing and reading before participation**

Chi- square test results (table 4.3.8) indicated that there was no significant difference between the two groups with regard to respondents' level of reading and writing before the program.

This most probably because women education level in far rural areas is generally low, hence the level of writing and reading is not of substantial influence on participation.

**Table 4.3.8 Distribution of the respondents' participation by level of writing and reading before the project**

Participation	Level of reading and writing before IFAD					total
	excellent	Very good	good	moderate	weak	
Participant	5	3	8	6	38	60
count						
% of total	4.2%	2.5%	6.7%	5.0%	31.7%	50.0%
Non- participant	7	5	10	6	32	60
count						
% of total	5.8%	4.2%	8.3%	5.0%	26.7%	50.0%
Total	12	8	18	12	70	120
count						
% of total	10.0%	6.7%	15.0%	10.0%	58.3%	100.0%

**Chi- square value= 1.570 , df= 4 , sig= .814**



## CHAPTER FIVE

### Summary, Main findings and Recommendations

This chapter consists of three sections. The first includes a brief summary of the study, the second present a conclusion about the main findings of the study, and the third and final section contains the recommendations of the study.

#### **5-1 summary of study;**

The study assessed women participation in IFAD activities in the White Nile Agricultural Services Project (WNASP) and its impact on rural women development.

To meet the objectives of this study, both primary and secondary data were obtained and used, field survey was conducted in August (2006), to collect the data. Multi stage random sampling was adapted to select two groups of women (60 participants in IFAD activities and 60 non-participants).

Questionnaire, interviews, observations and group discussions were used as tools for collecting primary data.

Frequency distribution and chi- square test were applied for data analysis and management using the Statistical Package for Social Sciences (SPSS).

Descriptive statistics analysis for the personal characteristics of the participants showed that the majority of women were in the productive age group , most of the women were married, most of them had formal education, about (64.8%) of them their income range from(100-300) SDG, few of them participated in projects before , and all of them participated in group training.

Chi- square test results indicated that there was no significant association between participant's participation in income-generating activities, forestry program, social and health services and their level of writing and reading and level of income. Also chi- square test results showed that there was a significant association between women participation in awareness activities and their social and health services.

Chi- square test showed that there was no significant difference between participants and non-participants in relation to their personal characteristics (age, education level and family size). Also chi- square test showed that there was significant difference between the two groups in relation to their type of job, family income and number of meals/ day.

## **5-2 Main findings of the study**

1/The study showed that the WID unit program targeted all women (old, young, employed or unemployed .... etc).

2/ Despite the efforts had been exerted by women in development unit to increase participants' income through introduction of income- generating activities such as animal husbandry( goat and sheep)at small- scale level, no sound economic impact had been attained.

3/ Women participation in income-generating activities, forestry program and social and health services did not influence their level of writing and reading and level of income.

4/The number of participants' meals/ day did not influenced by their participation in income- generating activities, but it was influenced by their participation in forestry program and social and health services.

5/ Women participation in awareness activities was influenced by social and health services.

6/ The number of the participants' training courses influenced by their level of writing and reading.

7/The main factors which influenced the performance of the women in different activities are type of job, family income and number of meals/day.

### **5-3 Recommendations of the study**

1/ Improving education services for rural women through provision of more literacy classes and trained teachers

2/ Improving social, health and child care services for rural women through establishment and distribution of rural hospitals, health centers and medical services equitably all over the state

3/ Strengthening of women awareness about their needs for the forestry activities, such as trees planting and usage of clay stoves, and their importance in their environment protection

4/ Establishment of revolving fund in the rural area under supervision of the women leader's development in the villages

5/There should be more focus on women capacity building, to enable them how they can manage their small- scale enterprises to avoid the risk of loosing their credit capital

6/ More attention and consideration should be given to the different income-generating activities carried out by women such as animal husbandry, sheep fattening...etc, as additional source of income, to improve their standard of living

بسم الله الرحمن الرحيم

جامعة الخرطوم

كلية الزراعة

قسم الإرشاد الزراعي والتنمية الريفية

استبانة دراسة اثر المشاركة في أنشطة إيفاد على تنمية المرأة الريفية بمنطقة

النيل الأبيض للخدمات الزراعية

المحلية.....الوحدة الإدارية.....القرية.....

- 1/ الاسم.....
- 2/ العمر 25-20  35-26  45-36  55-46  5-65
- 3/ الحالة الاجتماعية 1/ متزوجة  2/ عازية  3/ أرملة  4/ مطلقة
- 4/ المستوى التعليمي 1/ أمية  2/ خلوة  3/ ابتدائي  4/ متوسط
- 5/ ثانوي  6/ جامعي  7/ فوق الجامعي
- 5/ المهنة 1/ موظفة  2/ باعات صغيرة  3/ زر  4/
- ربة منزل  5/ أخرى
- 6/ عدد أفراد الأسرة 1/ اقل من 5  2/ 5-9  3/ أكثر من 9
- 7/ دخل الأسرة الشهري بالدينار 1/ 10000 - 15000  2/ 16000 - 30000
- 3/ 31000 - 45000  4/ 46000 - 60000  5/ أكثر من 60000
- 8/ الدخل بعد المشاركة في أنشطة إيفاد بالدينار 1/ 10000 - 15000  2/ 16000 - 30000
- 3/ 31000 - 45000  4/ 46000 - 60000  5/ أكثر من 60000
- 9/ المساهمة في دخل الأسرة:-

الرقم	المصدر المساهم	قدر المساهمة بالدينار
1	الزوجة	
2	الزوج	
3	الأبناء	
4	الأخ	
5	الأقارب	

10/ هل شاركت في أي مشروع من قبل إيفاد؟

- 1/ نعم  2/ لا

إذا كانت الإجابة بنعم حدد نوع النشاط الذي شاركت فيه؟

- 1/ أعمال يدوية  2/ تربية حيوانات  3/ الزراعة  4/ صناعات صغيرة   
5/ أخرى حدد

11/ ما مقدار دخلك قبل المشاركة في أنشطة إيفاد؟ .....

12/ ما هو نوع النشاط الذي شاركت فيه من خلال أنشطة إيفاد والهدف منه؟

الهدف منه				نوع النشاط
الحصول على وسائل الإنتاج	إكساب مهارات	تحسين المستوى المعيشي	زيادة الدخل	
				أ/ الأنشطة المدرة للدخل 1/ تربية الماعز 2/ تسمين الضان 3/ ماكينة شعيرية 4/ ماكينة خياطة 5/ دواجن 6/ أعمال يدوية 7/ صيد الأسماك 8/ كارو
				ب/ برامج الغابات 1/ مواعد محسنة 2/ تشجير
				ج/ الخدمات الاجتماعية والصحية 1/ برامج توعية 2/ الإسعافات الأولية



13 ما هو مستوى الدخل من الأنشطة التي شاركت فيها؟

مستوى الدخل					نوع النشاط
ممتاز	جيد جدا	جيد	متوسط	ضعيف	
					أ/ الأنشطة المدرة للدخل 1/ تربية الماعز 2/ تسمين الضان 3/ ماكينة شعيرية 4/ ماكينة خياطة 5/ دواجن 6/ أعمال يدوية 7/ صيد الأسماك 8/ كارو
					ب/ برامج الغابات 1/ مواعد محسنة 2/ تشجير
					ج/ الخدمات الاجتماعية والصحية 1/ برامج توعية 2/ الإسعافات الأولية

- 14/ هل اتاحت لك فرصة للتدريب في أي مجال من قبل؟ 1/ نعم  لا  2/
- إذا كانت الإجابة بنعم حدد نوع التدريب؟ 1/ محو الأمية  2/ أعمال يدوية
- 3/ صناعات صغيرة  4/ زراعة  5/ تربية حيوانات  6/ أخرى

15/ بعد المشاركة في أنشطة إيفاد ما هو نوع التدريب الذي شاركت فيه؟

- 1/ أعمال يدوية  2/ محو الأمية  3/ التغذية والتصنيع الزراعي  4/ التفصيل والخياطة  5/ الإسعافات الأولية والدواء الدوار  6/ الندوات الصحية والاجتماعية
- 16/ ما هو رأيك في برامج التدريب؟ 1/ كافية جدا  2/ كافية  3/ لا بأس بها
- 17/ كم عدد الدورات التدريبية التي شاركت فيها؟ 1/ صفر  2/ واحدة  3/ اثنين  4/ ثلاثة  5/ أربعة

18/ ما هو مستوى القراءة والكتابة قبل المشاركة في أنشطة إيفاد؟

- 1/ ممتاز  2/ جيد جدا  3/ جيد  4/ متوسط  5/ ضعيف

19/ ما هو مستوى القراءة والكتابة بعد المشاركة في أنشطة إيفاد؟

- 1/ ممتاز  2/ جيد جدا  3/ جيد  4/ متوسط  5/ ضعيف

20/ هل كانت لديك مشاركة من خلال المجموعات من قبل إيفاد؟ 1/ نعم  2/ لا

- إذا كانت الإجابة بنعم ما هو نوع المجموعة؟ 1/ جمعيات تعاونية  2/ مجموعات المزارعين  3/ الصناديق المحلية  4/ مراكز التدريب

إذا كانت الإجابة بلا لماذا لم تحاولي المشاركة من خلال المجموعة؟

1/ ليس لدي فراغ  2/ الأسرة لا تحب ذلك  3/ المجتمع لا يشجع انخراط المرء في

- العمل الجماعي  4/ لأن المجموعات ينتمي إليها المزارعين ذوي الحيازات الكبيرة  5/ لم اسمع بتلك المجموعات

21/ هل شاركت في اجتماعات وحدة المرء بالمشروع؟ 1/ نعم  2/ لا

- إذا كانت الإجابة بنعم إلى أي مدى كانت المشاركة؟ 1/ أشرك باستمرار  2/ أشرك أحيانا  3/ أشرك نادرا  4/ لا أشرك على الإطلاق

إذا كانت الإجابة بلا ما هي أسباب عدم المشاركة؟ 1/ المشاركة لذوي الحيازات الزراعية

- الكبيرة وقادة المجتمع  2/ المشاركة لبعض المجموعات  3/ أسباب أخرى

22/ هل اتاح لك المشروع فرصة للتدريب الداخلي والخارجي؟ 1/ لم تتح لي فرصة على

- الإطلاق  2/ اتاح لي فرص معقولة  3/ اتاح لي فرص كثيرة

23/ هل كنت تحضرين حملات التوعية المنفذة بواسطة المشروع؟ 1/ احضرها باستمرار

- 2/ احضرها كثيرا  3/ غالبا احضرها  4/ نادرا احضرها  5/ لا احضرها
- 24/ كيف تسوقين منتجاتك؟ 1/ عبر وحدة تنمية المرء بالمشروع  2/ تسويق من خلال

- المجموعة  3/ تسويق فردي

25/ ما هي المشاكل التي واجهتك في عملية التسويق؟ 1/ الترحيل  2/ العرض

3/ الطلب  /4 أخرى

26/ كم عدد الوجبات قبل المشاركة في أنشطة المشروع ؟ 1/ واحدة  2/ اثنين   
3/ ثلاثة

27/ ما هو نوع الوجبة قبل المشاركة في أنشطة المشروع ؟

1/ نشويات  2/ بروتينات  3/ بقوليات  4/ نشويات ، بروتينات  5/ كل ما  
ذكر

28/ كم عدد الوجبات بعد المشاركة في أنشطة المشروع ؟ 1/ واحدة  2/ اثنين   
3/ ثلاثة

29/ ما هو نوع الوجبة بعد المشاركة في أنشطة المشروع ؟

1/ نشويات  2/ بروتينات  3/ بقوليات  4/ نشويات ، بروتينات  5/ كل ما  
ذكر

30/ ما هي المشاكل التي واجهتك وعجزت إيفاد عن حلها؟ .....

31/ ما هو المقترح الذي ترينه مناسباً لعمل إيفاد مستقبلاً؟ .....