# CHAPTER ONE INTRODUCTION

# 1.1 Background

Sudan in general and the northern parts in particular have experienced the desertification problem since the eighties of the previous century. Consequently, people in the northern states have been affected in many ways. To name but a few: the drop in agricultural crops' productivity, diminish of arable land, and moving sand dunes that threatened residential areas. Such circumstances led to aggravation of the already existing poverty and other related problems. Hence, many national and International organizations took the initiative to help the people through development projects (Elhadi, 2006).

The rural people in the River Nile State have suffered in particular from the desertification problem more than others. They were in fact deprived from almost all subsistence means and social services. (Bristow, 1992).

Experiences elsewhere have proved that relief interventions were no solution under such conditions. Thus, it was believed that integrated rural development endeavors might be more effective. According to Shepherd (1998) rural development is the set of activities and actions of diverse actors - individuals, organizations, groups – which took together leads to progress in rural areas. Thus the future of rural development is dependent upon empowering commdunities by raising their awareness of the potential for their involvement in the development process.

The SOS Sahel International Organization was among the international organizations that expressed willingness to support such integrated rural development endeavors. SOS has supported the agricultural and forestry sector in Sudan since 1985. It operated its first project in the River Nile State titled: The Village Extension Scheme (VES). The overall concern was to enhance environmental improvement through rural communities' mobilization.

Considering the fact that women in rural communities are among the most disadvantaged groups, the VES project included a women's programme that became one of the most significant components (Bristow, 1992). Accordingly the idea of separating the women's programme had come out. Hence, the Women's Forestry Project (WFP) was established in 1994 in the River Nile state and continued till 2001. (Abbas, 2001).

The WFP targeted mainly rural women and school pupils. The idea was to raise communities' consciousness about desertification and mobilize them to improve the environmental conditions by growing forest and horticultural trees in their villages. It was expected that families' income will improve through selling the surplus products and growing vegetables in the home yards, in addition to reduction of wood consumption by using improved stoves (Abbas, 2001).

When the project terminated in 2001, two Women's Forestry Societies were created in Shendi and Eddamer to take over and continue the WFP activities with technical support from the Forests National Corporation (FNC).

#### 1.2 Research Problem Statement

The WFP was terminated more than a decade ago. However, no scientific study has been carried out to assess the current situation in the project area. Hence, the study before hand is an attempt to fill in such knowledge gab through raising the following research question:

# To what extent the WFP in Shendi Area (Sudan) had contributed to enhancement of rural development endeavor in the area?

This main research question will be tackled through addressing the following questions:

- 1. To what extent the WFP achieved its objectives?
- 2. Which strategies and activities were followed to meet the project targets?
- 3. To what extent were those strategies effective considering achievement of the project objectives?
- 4. What were the strengths and weaknesses of the WFP as a pioneer effort in such a field?
- 5. Which lessons could be learnt from the WFP initiative that would assist decision makers in the development sphere in improving their future development efforts in other villages in River Nile State and other states?

#### 1.3 Research Rationale

As mentioned before already more than a decade passed since the termination of the WFP. Thus, the researcher believes that it is high time to study and assess the current situation in the project area. This study is expected to evaluate effectiveness of strategies applied by the project, and the lessons learnt might assist the decision makers in the development sphere in improving their future development efforts in other villages in River Nile State and other states.

# 1.4 Research Objectives

The objectives of the study include the following:

- 1. To scrutinize the significance of the project as perceived by the stakeholders.
- 2. To identify the factors that influenced women's participation in the WFP.
- 3. To analyze the strategies adopted by the WFP.
- 4. To assess the main constraints that affected its performance.
- 5. To identify the WFP activities that sustained after the project termination.
- 6. To come out with policy recommendations that might contribute to improvement of future rural development efforts.

# 1.5 Organization of the Study

This study includes five chapters starting from chapter one which comprises of Introduction, Research problem Statement, Research Rationale, the Objectives of the Study, and Organization of the Study. While Chapter two which is the theoretical framework of the research includes: Development Concepts, Theories of Development, Rural Development .Rural Development Approaches, Participation, Gender and Development, Rural Women and Forestry, Rural Women and Development, Development Projects and Programmes. Third chapter deals with Study Area, Research Population, Sample Selection, Research Methodology, Data Collection and Analysis. Chapter four reflect Results and Discussion. Finally, the research was concluded with chapter five which includes the Summary of the results, Conclusion and Recommendations.

# Chapter Two Literature Review

# 2.1 Development Concepts

Development is a complicated pattern of economic, social and political change that takes place in a community or a society as it changes from a traditional status. The transformation to modern status includes social and political consciousness, division of labor, literacy, urbanization, industrialization and a broad general participation in the overall development activities at national, regional, local and village levels.

Development involves the use of physical, financial and human resources. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) defines the goals, objectives and the aims of development as: "not to develop things but to develop men". It states the implication of this approach is that "development must be aimed at spiritual, moral and material advancement of the whole human being, both as a member of society and from the point of view of individual fulfillment".

Korten (1990) sees development as "a process by which the members of a society increase their personal and institutional capacities to mobilize and manage resources to produce sustainable and justly distributed improvement in their quality of life, consistent with their own aspiration" The 1974 declaration of Cocoyoc in Mexico emphasized the "development of man not of things" and stressed the need for diversity and the right to follow different roads to development so as to achieve self-reliance. Similarly, in 1975 there was a call for "another development" focusing on human-centered development. In 1977, UNESCO in Paris suggested a total multi-relational process that includes all aspects of life of a collectivity, of its relationship with the outside world and of its own consciousness.

Recent development initiatives tend focus on people, communities, grass-roots, redistribution of wealth, social capital, environment, culture, tradition, local or indigenous knowledge, participation, diversity, local ownership, sustainability, interdependence, multidisciplinary approaches, connectedness, and more.

There is an emerging understanding that without mobilization of domestic savings and industrial policies there may be no successful catch up development. National development strategies for countries at a lower level of development should not copy economic policies used by developed countries; in fact, it was shown more than once that Western

countries themselves did not use liberal policies that they are advocating today for less developed countries when they were at similar stages of development (Burkey, 1993).

In most cases, it is widely accepted that the meaning given to the word "development" is informed by one's culture, tradition, environment, philosophical beliefs, and epoch. Some people propose that development must be viewed in relation to time, place, and circumstance. They reject any attempt by academics to settle on a universally accepted definition. Development focuses largely on improving people's material conditions. It thus includes issues of access to land, water, shelter, employment, income, assets, community facilities, and other essentials. Development means nothing but social transformation that does not occur without a hacking the existing power structures the means of transformation of powerless should emphasize their strategic organization that do not only move more than achieve basically their basic needs that to articulate their strategic change objectives (Ekins in Abusin, 2006).

Chambers (1993) argued that development should be people-centered; people come before things; and poorer people come before the less poor. It is right to put the last first, to give priority to those who are more deprived- the poor, physically weak, vulnerable, isolated and powerless, and to help them change those conditions. It is also right to enable them to identify and demand what they want and need.

In September 2000 the United Nations agreed to adopt a number of 'Millennium Development Goals' while they were adopted by UN in 2000, they were the outcome of international conferences throughout the 1990s. The eight goals are: eradicate extreme poverty and hungers; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; and develop a global partnership for development (Willis, 2005).

# 2.2 Development Decades

Abusin (2006) stated that (1492-1950) 500 Years of history were characterized by colonization exercising key approaches of slave trade, expansion of Europe through colonial trade patterns. The development approach therefore was based on promoting cash economy and cash crops and direct exploitation of colonized states.

The 1950s, were, generally, known as Golden Years of modernization. This was characterized by the industrialization era. Moreover, there was the neo-colonization and the World Bank, International Monetary Fund

(IMF) and General Agreement on Tariffs and Trade (GATT) as important tools for the neo-colonialism.

The 1960, though had seen the independence of many colonized countries, but mark the history of dependency development theories and approaches. There were mainly the development dream of export-oriented growth theory and the transnational corporations. UN declared the 1960 as the development decade (Burkey, 1993).

The 1970s was characterized by the oil and loans dominating the international economy and the dominant growth theory and its 'trickle down effect' this included the Organization of the Petroleum Exporting Countries (OPEC) and oil prices increase. Also the high borrowing and high interest rates to debt and the emergence of the National Investment Institute (NICs) newly industrialized countries. The UN declared it as the second development decade (Burkey, 1993).

The 1980s was famous as 'the lost Decade' characterized by the debt trap. This was the era of SAP and the debt crisis. The IMF conditionality towards its end, the collapse of USSR and Eastern Europe are main phenomena of the 1980s.

The 1990s was simply the era of people participation. It was the Booming era whereby there was rise of people movements, the RIO summit on environment and the Beijing Summit on women participation. There was steady growth of Non-Governmental Organizations (NGOs) work and predominance of claims for participation, rights, good governance etc. Burkey (1993), argued that despite all of these 'decades', the high expectations for development and the eradication of poverty have not been fulfilled.

# 2.3 Theories of Development

# 2.3.1 Modernization Theory

Rostow (1960) came up with stages through which each country can develop. They are :The traditional society, the preconditions for take-off, take-off, the drive to maturity, and the age of high mass consumption. Rostow stresses the importance of the "take-off" stage as the point at which an economy takes off and accelerates toward becoming a modern, industrialized, increasingly prosperous economy. Historically, this concept is somewhat new. It depicts how societies and nations develop from being prehistoric to becoming modern by passing through necessary stages. Major emphasis is put on economic development, political stability, and social and cultural change. One important characteristic of this theory's proponents is that they look at social progress over a certain period with a view toward identifying and isolating social variables which are believed to have contributed to change or progress. Rostow and his

colleagues came under heavy criticism in the 1970s and 1980s because of their conclusion that, since economic and social progress was achieved in some countries, it would work similarly elsewhere.

Burkey (1993) stated that development theory has until recently been dominated by theories and models derived from the experiences of Western economic history. The emergence of capitalism and the advance of the industrial revolution gave a distinctive form to Western developmental thinking. Development and economic growth became synonymous with progress and higher levels of civilization. Growth was seen as a natural process which could be nourished through the application of correct and timely inputs. Likewise it could be impeded by bad conditions, but once these constraints were removed the process would continue. Development in the Third World was expected to be an imitative process in which the less developed countries gradually assumed the qualities of the industrialized nations.

Development was seen essentially as a question of increasing gross levels of savings and investment (both internal and external, private and state) until the economy reached a take-off point into self- sustaining development economic growth was a simple matter of applying appropriate levels of investment after taking into consideration the rate of population growth, the capital: output ratio and the desired rate of growth. A combination of domestic savings, international investment and international aid would provide the fuel to drive the process through 'stages of growth' which would ultimately bring the benefits of modernization to the entire population (Krauth, 2000 and Willis, 2005). Modernization theory attributes underdevelopment to the internal factors in developing countries. Industrial countries are considered the best model for economy and society to be followed. Development is seen as the growth of production and efficiency and as increase of the per capita income. On the other hand, the dualism theory emphasizes the economic, technological and regional dualisms which are often the consequence of social dualism, the absence of relations between people of the different races, religions and languages. The vicious circle of underdevelopment, according to strategy theory, is generally attributed to the scarcity of capital. As a consequence there is low labor productivity, low real income, poor saving capacity and accordingly poor investment. This theory emphasized the need for balanced growth, whereby investment planning is crucial. This implies widening of markets and expanding production (Abusin, 2006).

# 2.3.2 Dependency Theory

Influenced by Marx, the proponents of the Structuralism and Dependency Theory contend that development and underdevelopment are intertwined.

They see some countries achieving development by keeping others underdeveloped. In their view, underdevelopment is therefore a byproduct of development and progress therefore depends upon changing the relationships among nations.

In the late 1950s, Raul Prebisch, the Director of the United Nations Economic Commission for Latin America, and colleagues discovered that economic growth in advanced industrialized countries did not necessarily translate into growth for poorer nations. Actually, their investigations concluded that increased economic activity in the industrialized nations repeatedly caused serious economic problems in less developed nations. Highly critical of the modernization theory, the dependentistas contented that the proponents of modernization had failed to recognize the deeply rooted effects of colonialism on former colonies like trade inequities. Prebisch explained that less developed nations traditionally exported primary commodities to the industrialized nations which then used those commodities to manufacture products that are then sold back to the less developed nations. This "Value Added" process creates a vicious circle for poorer nations. The proceeds from exporting commodities to industrialized nations are not enough to enable poorer nations to afford the cost of importing the value-added products (Odei, 2007).

The dependentistas are of the belief that poor nations constitute the repository of outdated and obsolete technology, and much needed markets to the industrialized nations, industrialized nations responsible for the state of underdevelopment of poorer nations through unjust policies and initiatives, and poorer nations in their attempt to break the status quo are met with economic sanctions and military interventions. As a solution, Prebisch recommended that less developed nations develop programs of import substitution to reduce and subsequently eliminate the need to purchase manufactured goods from industrialized countries. He maintains that less developed countries should use the world market to build up their foreign exchange reserves by still exporting raw materials to industrialized countries (Odei, M 2007). In practice, import substitution turned out to be difficult to implement for three reasons. The economies of scale used by the industrialized countries to keep prices low could not benefit the less developed countries due to the small size of their internal markets. There were serious challenges to the commitment of less developed countries to moving from primary products producers to value added products manufactures. And, lastly, less developed countries were in their ability to control the prices of commodities exported to industrialized countries. The dependentistas have been strongly criticized by Peter Bauer and Martin Wolf, freemarket economists, who contend that lack of competition and corruption, could occur as a result of the implementation of dependency theory (Slaterry, 2003). However, Burkey (1993) argues that the theory maintained that the central nations benefited from trade whereas the peripheral nations suffered. Latin American nations were dualistic societies consisting of a proportionally large traditional agrarian society and a small, modern urbanized society. The former was in many ways feudalistic, and the latter capitalistic. The urbanized centers were themselves develop at the expense of the rural peripheries. The unequal relationships between the centers and the peripheries led to the development of the former and to the underdevelopment of the latter.

The central argument of dependency theory is that socio-economic dependency (neo-colonialism) generates underdevelopment, i.e. the development of underdevelopment. Some of the reasons elaborated for the development of underdevelopment were: long-term trends in the terms of trade favored the centers; the balance of economic and political power was at the centers; and finance and technology were controlled by the centers. In order to reverse this situation, the dependency doctrine stressed industrialism by import substitution, planning and state interventionism in general and regional integration.

#### 2.3.3 State Theory

The State Theory supports the view that the economy is intertwined with politics. This claim reinforces the idea that the take-off period in development is unique to each country, and stresses that government can play a huge role in determining how, and even whether, development occurs in a particular country. The state's role has always been a central concern for economists. Postwar Japan was an early focus for study of the "developmental state" and the key roles of political will; doctrinal consistency; bureaucratic apparatus; and repressive power in formulating and implementing effective economic policies to encourage high speed capitalist growth (Rapley,J 2002).

States in most peripheral countries of Asia, Africa, and Latin America are important, active economic actors, engaged in varying patterns of state intervention. In some developing countries the state's economic role has come to be associated with both rapid industrial transformation and enhanced quality. In other cases, by contrast, governments and bureaucrats have pilfered the economic resources of their own societies, failing to stimulate economic growth and facilitate transfer of wealth into the hands of unproductive elite. In other cases, states intervention is associated with mixed outcomes. States have helped to solve important economic problems, ignored others and created new ones (Kohli, 2004). In East Asia, specifically South Korea and Taiwan, attempts were made to recreate this authoritarian model with the coercive capacity and exclusionary policies of the "developmental state". The economic and

political influence of the United States and Japan in the region combined with gradual liberalization to reinforce these trends.

China, Vietnam, and other rapidly developing economies are the latest examples of this strategy for development combined with a more or less repressive government. In Africa, the absence of autonomous development-oriented bureaucracies compounded with the rental state have prevented most nations from formulating and implementing the sorts of national economic strategies encountered in other less developed regions.

Critics of the State Theory have suggested that the state is most likely to foster development are those which confine the state to administration of only those aspects of public policy that other bodies cannot discharge with efficiency and commitment to the interests of the general public. They see it as vital that the state be in a position to provide sufficient independence to civil society and the market and allowing self-regulating mechanisms to operate through the system.

In the same vein, in present-day developing countries the relations among economic and institutional changes differ sharply among nations which are characterized by different initial social, institutional, and economic conditions. From this review, one must conclude that policy-makers in developing and industrialized countries must commit to radical changes in the global trading and international payments systems if they are to respond to the development needs of developing nations. It is also critical that all the key actors develop a better understanding of the need to match institutions and policies to the stages and realities of each nation (Rapley, 2002).

Starting with a low level of technological capability, Chinese firms (led by the government) placed heavy emphasis on reverse engineering and technology imports in their strategic development. The source of that technology was the Soviet Union in the 1950s, shifting to Japan, the USA and Europe from the 1970s. Due to its complicated ancient and modern history, the Chinese way or China model of development has to be sophisticated, which help make perceptions much more sophisticated than the black-white dichotomy of liberty against tyranny or democracy against authoritarianism.

China model consists of four sub-systems, they are: a unique way of social organization, a unique way of developing its economy, a unique way of government, and a unique outlook on the world.

As many China specialists already find, the way with which the Chinese society is organized is rather different from those in the West. That is to say, the state-society dichotomy does not apply. Instead, the state is not the kind of state we often see in the West, and the society is not organized in terms of civil societies. The state and societies are intermingled with

each other, penetrated by each other into an entity or many entities like waves of concentric circles.

Although China has failed to make the transition from imitation to innovation in the way that Japan, Korea and a few other countries and their firms have, China has been catching up economically since the 1980s. The Gross Domestic Products(GDP) has grown at more than 8% for more than 20 years, and is now second (in purchasing power parity terms) only to the United States of America (USA) (IMD, 2004). Information Technology(IT) is such an example a new system of technology that is totally different from that dominating manufacturing. It has given rise to new business models, products and services. Traditionally, production process begins with R&D, procurement of parts and components, manufacturing and assembling, logistics, marketing and customer service. Japanese companies are good at effectively integrating the entire process through a combination of hardware, software and "human ware". The new IT enabled business models, however, have given rise to many firms that specialize in only one activity within the whole process. Global procurement and mobile human resources are both possible and support the new structure and process, and takes advantage of network. A verification of market-oriented innovation in China can be seen from the increasing number of patents for utility models and external design. Both of them have increased dramatically over the last ten years. The number of invention, utility model and external design patents in 2001 are 4, 3 and 14 times of the number in 1991. While foreigners are accounting for a larger and larger share of invention patents, it is the opposite trend for design patents. This reflects the nature of product innovation in China: foreign technology coupled with Chinese design. The market-oriented innovation strategy gives Chinese firms several advantages over their competitors: more targeted new product development plan, more scheduled production, and lower risk. Furthermore, with Chinese companies' low cost production, they have beaten their competitors in some industries, such as consumer electronics.

# 2.3.4 World Systems Theory

(Raply, 2002).

World Systems Theory was born out of strong criticism of the dependency theory. Developed mostly by Andre Gunder Frank and Immanuel Wallerstein, the world-system theory is an approach to social analysis and social change. Samir Amin, and others greatly contributed to development of this theory. The world systems theory examines the relationships among the core, semi periphery and periphery of the world economy. It points out that the semi-periphery lies between the core and

the periphery and is exploited by the core while it exploits the periphery. This explains the lack of industrialization in less-developed countries. (Chirot et al, 1982).

# 2.4 Economic Development Theory

The contemporary notion of economic development emerged during the 1930s when economists were preoccupied by the issue of how to re-start the world's economy and climb out of the Depression. After World War II, their greatest concern became the industrialization and reconstruction of Eastern Europe. The waves of decolonization in Africa, Asia, and Latin America gradually took center stage. Early on, their economic development theory was viewed as requiring a simple extension of traditional economic theory which equated "development" with growth and industrialization. This approach suggested that the newly independent "underdeveloped" nations in Africa, Asia, and Latin America might possibly, given time, "develop" the infrastructures and institutions leading to improved standards of living observed in Europe.

Alexander Gerschenkron and Walt Rostow argued that all countries passed through the same historical stages of economic development and that currently less developed countries were merely at an earlier stage in this linear historical progress while developed nations were at a later stage. (Easterly, William. 2006).

However, the young nations had infrastructures, institutions, cultures, traditions, and standards of living completely dissimilar from Europe's, and modern development theory grew to focus on analyzing the institutions needed to stimulate, sustain and accelerate growth.

Schultz of the Chicago School moved beyond the concept of capital accumulation to emphasize the importance of human capital formation, meaning education and training. In 1969, Seers argued that "development" was a social phenomenon that involved more than increasing per capita output, and Singer, Myrdal and Adelman supported his assertion that development should be promoting the elimination of poverty, unemployment and inequality (Chang, 2003).

Lately, a group of development workers formulated the following definition: Economic development is a process by which people through their own individual and/or joint efforts boost production for direct consumption and to have a surplus to sell for cash. This requires that the people themselves analyze the problems, identify the causes, set their priorities and acquire new knowledge. It also requires them to organize themselves in order to coordinate and mobilize the effective application of all the factors of production at their disposal. This means that they

must plan, implement and manage their own economic activities. The higher income that accrues through increased savings and investment can be used to satisfy a wider range of the people's wants enabling them to realize greater well-being. However, continued progress requires the reinvestment of part of this surplus (Burkey, 1993).

#### 2.5 Economic Growth and Theories

Nominal growth is defined as economic growth including inflation, while real growth is nominal growth minus inflation. Economic growth is usually brought about by technological innovation and positive external forces.

Economic growth is defined as the increasing capacity of the economy to satisfy the wants of its members. Economic growth is enabled by increases in productivity, which lowers the inputs (labor, capital, material, energy, etc.) for a given amount of output. Lowered costs increase demand for goods and services. Economic growth is also the result of new products and services. For example, labour and land productivity in agriculture were increased during the Green Revolution. The Green Revolution of the 1940s to 1970s introduced new grain hybrids, which increased yields around the world.

Economic growth per capita often, the concern about economic growth focuses on the desire to improve a country's standard of living—the level of goods and services that, on average, individuals purchase or otherwise gain access to. It should be noted that if population has grown along with economic production, increases in GDP do not necessarily result in an improvement in the standard of living. When the focus is on standard of living, economic growth is expressed on a per capita basis.

Theories of economic growth, the mechanisms that let it take place and its main determinants are abounded. One popular theory in the 1940s, for example, was that of the "Big Push". The Big Push Theory suggests that countries needed to jump from one stage of development to another through a virtuous cycle, in which large investments in infrastructure and education coupled with private investments would move the economy to a more productive stage, breaking free from economic paradigms appropriate to a lower productivity stage (Easterly ,William2006).

The Modern Theory suggests that income distribution plays an important role in the determination of aggregate economic activity and economic growth. The credit market imperfection approach, developed by Galor and Zeira (1993), demonstrates that inequality in the presence of credit market imperfections has a long lasting detrimental effect on human capital formation and economic development. The political economy

approach, developed by Alesian and Rodrik (1994) and Persson and Tabellini (1994), suggests that inequality is harmful for economic development because inequality generates a pressure to adopt redistributive policies that have an adverse effect on investment and economic growth.

# 2.6. Focused Development

#### 2.6.1 Introduction

In order to determine whether a society is developing, one must go beyond criteria based on indices of per capita income (which, expressed in statistical form, are misleading) as well as those which concentrate on the study of gross income. The basic, elementary criterion is whether or not the society is a 'being for itself', i.e. its political, economic and cultural decision-making power is located within, (Paulo Freire in Burkey, 1993).

The Cocoyoc Declaration adopted at a symposium in Cocoyoc, Mexico, in 1974 is an important example of the normative approach. The subject of this meeting was resources and development and the majority opinion of the participants was the mankind's predicament is rooted primarily in economic and social structures, and behavior within and between countries. It was declared that a process of growth that did not lead to the fulfillment of basic human needs was a travesty of development. This implied more than just basic physical needs; it also included concepts such as freedom of expression and self-realization in work. Furthermore, there was a need for the rich to reconsider over-consumptive modes of living which violate the 'inner limits' of man and 'outer limits' of nature. 'Another development' theorists believe that development should be: need-oriented, geared to meeting both material and non-material human needs; endogenous, stemming from the heart of each society; self-reliant, implying that each society relies primarily on its own strength and resources; ecologically sound, utilizing rationally the resources of the; and based on structural transformation as an integrated whole. The direction of this structural transformation is indicated by the normative content of the other four points. This implies that there is no universal path to development. Every society must find its own strategy (Burkey, 1993).

#### 2.6.2 Social Development

Social development is a process of gradual change in which people increase their awareness of their own capabilities and common interests, and use this knowledge to analyze their needs; decide on solutions;

organize themselves for cooperative efforts; and mobilize their own human, financial and natural recourse to improve, establish and maintain their own social services and institutions within the context of their own culture and their own political system. Social development is concerns with investments and services carried out or provided by a community for the mutual benefits of the people of that community whether as a village, a district or a nation. These might include health services and facilities, education, water supplies, energy, transport systems, communications. Such services and investments could be provided by private individuals or companies. Resources must be mobilized through taxation, public bonds and expropriation, to cover investment costs and provide operating funds. Management and accountability systems must be in place to insure effective operation and to avoid corruption (Burkey, 1993).

#### 2.6.3 Human Development

Human development is a process by which an individual develops selfrespect, and becomes more self-confident, self-reliant, cooperative and tolerant of others through becoming aware of his/her shortcomings as well as his/her potential for positive change. This takes place through working with others, acquiring new skills and knowledge, and active participation in the economic, social and political development of the community. New Development Theories also emerged to capitalize on previous conceptualization of development. The concept of self-centered development was connected with analysis of local obstacles to were serious development. There concerns about institutional development together with economic growth. However, there were concerns that local development models have failed as a result of high economic, social and ecological costs. The arguments, therefore, focused on the need for efficient institutional environment and social macropolicy framework. The claims were then focusing on the necessary enabling environment, shared analysis of situation involving stakeholders and even partnership to carry out development initiatives (Abusin, 2006). Human resource development is the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively (Khalid, 2012).

The United Nation Development Program (UNDP), in its Human Development Report (1991), "the basic objective of human development is to enlarge the range of people's choices to make development more democratic and participatory".

The 2011 Human Development Report argues that the urgent global challenges of sustainability and equity must be addressed together – and identifies policies on the national and global level that could spur mutually reinforcing progress towards these interlinked goals. Bold

action is needed on both fronts, the Report contends, if the recent human development progress for most of the world's poor majority is to be sustained, for the benefit of future generations as well as for those living today. Past Reports have shown that living standards in most countries have been rising - and converging - for several decades now.

The Report shows further how the world's most disadvantaged people suffer the most from environmental degradation, including in their immediate personal environment, and disproportionately lack political power, making it all the harder for the world community to reach agreement on needed global policy changes. The Report also outlines great potential for positive synergies in the quest for greater equality and sustainability, especially at the national level. The Report further emphasizes the human right to a healthy environment, the importance of integrating social equity into environmental policies, and the critical importance of public participation and official accountability. The 2011 Report concludes with a call for bold new approaches to global development financing and environmental controls, arguing that these measures are both essential and feasible.

#### 2.6.4 Community Development

Campfens (1997) defines community development in the following terms: "From a humanitarian perspective, it may be seen as a search for community, mutual aid, social support, and human liberation in an alienating, oppressive, competitive, and individualistic society. In its more pragmatic institutional sense, it may be viewed as a means for mobilizing communities to join state or institutional initiatives that are aimed at alleviating poverty, solving social problems, strengthening families, fostering democracy, and achieving modernization and socioeconomic development.

The Community Development Foundation in the UK defines it as follows: Community development is a range of practices dedicated to increasing the strength and effectiveness of community life, improving local conditions, especially for people in disadvantaged situations, and enabling people to participate in public decision-making and to achieve greater long term control over their circumstances. Community development involves local participation, identification of needs and response to them, social interaction and the building of inter-group relations, on-going support. Karen (1995), taking into accounts the complexity of the relations within a community, the concept of time, space, and purpose, states that ...community is a dynamic interplay of historic processes and complex relationships, acted out in environments. Community embodies a wholeness; it is not enough to describe it as a sense of place, or as a product (of relationship between individuals) or as

a social system. Rather, community comes into existence and defines its own form, out of the interaction of the participating elements, in environments and over time.

Despite the fact that the realities are otherwise, the commonly accepted approach to rural community development has been to establish projects which treat the village as a more or less harmonious unit. It has not been good practice to give special consideration to specific groups within the community. Community development rejects the traditional top-down approach to adopt a more participatory and bottom-up approach, valuing local input into solutions in order to promote positive outcomes.

Community Development Programmes could be viewed as a process method of programme which involves people organization and participation to community basis for the solution of their common problems. That is to be achieved through implementing a variety of projects and activities aiming to improve infrastructural ,economic, education, hygienic and social aspects such as : health, drinking water, nutrition as well as animal production and agricultural extension and other development services. (Bello, A&Daoud, S. 2009. 34).

#### 2.6.5 Political Development

Political development is a progress of gradual change over time in which the people increase their awareness of their own capabilities, their rights and their responsibilities; and use this knowledge to organize themselves so as to acquire real political power in order (1) to participate in decision-making at local level and to choose their own leaders and representatives at higher levels of government who are accountable to the people; (2) to plan and share power democratically; and (3) to create and allocate communal recourses equitably and efficiently among individual groups. Hence it may be possible to avoid corruption and exploitation, realize social and economic development, political stability and peace, and create a politicized population within the context of their own culture and their own political system (Burkey, 1993).

#### 2.6.6 Sustainable Development

Sustainable development is the management and conservation of the natural resources base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development in the agriculture, forestry and fisheries sectors conserves land, water, plant and animal genetic resources, is

environmentally non-degrading, technically appropriate, economically viable and socially acceptable (FAO, 1988).

In 1987, the United Nations released the Brundtland Report, which included what is now one of the most widely recognized definitions: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs".

The United Nations 2005 World Summit Outcome Document refers to the "interdependent and mutually reinforcing pillars" of sustainable development as economic development, social development, and environmental protection. Economic Sustainability: Agenda 21 clearly identified information, integration, and participation as key building blocks to help countries achieve development that recognizes these interdependent pillars. It emphasizes that in sustainable development everyone is a user and provider of information. It stresses the need to change from old sector-centered ways of doing business to new approaches that involve cross-sectoral co-ordination and the integration of environmental and social concerns into all development processes. Furthermore, Agenda 21 emphasizes that broad public participation in decision making is a fundamental prerequisite for achieving sustainable development. Sustainable development is said to set limits on the developing world. While current first world countries polluted significantly during their development, the same countries encourage third world countries to reduce pollution, which sometimes impedes growth. Some consider that the implementation of sustainable development would mean a reversion to pre-modern lifestyles.

Dresner (2002) argues that sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their needs. Sustainable development is multi-faceted and includes four central components namely; economic, political, social, aspects. Sustainable economic environmental development emphasizes the enhancing of existing local assets without degrading their quality. Political sustainability hinges upon the support of the majority of the community and must be effective over the long-term. sustainability requires that a project or initiative be integrated into, and connected with, a community's particular social structure. Environmental sustainability relates to the impact of a project or proposal on the local environment, with enhancement rather than degradation being the important outcome. It suggests searching out new ways to: a) create

economic vitality, b) maintain a healthy environment, c) build healthy communities, and d) meet local needs. Key principles of sustainable community development include: Fostering a commitment to place, Promoting community vitality, Building local capacity to support resilience and adaptability when confronted with change, Promoting a sense of responsibility as stewardship, Reinforcing the importance of a connection between the local and broader levels, and Promoting equity within the local social structure.

Implementing sustainable development means better environmental management. Environmental management is the "tool kit" used by a group of people to maintain their productivity without paying unacceptable environmental costs. It must draw on their experience and be consisted with their culture....Global environmental threats can only be addressed effectively by placing the environment at the centre of development efforts. This calls for an approach that allows development objectives to be achieved and at the same time places environmental concerns at the centre of the established development agenda..Sustainable rural development requires a new point of departure. Agriculture education itself must be sustainable, not only incorporating new skills, such as environmental economics and appraisal, but also acknowledging the validity of different kinds of knowledge.(FAO 1996).

#### 2.6.7 Eco-development

The rates of ecological change in many parts of Third World have been insidiously accelerating. The crisis of Sahel is the outcome of long decline. The population growth rate in Sub-Saharan Africa of over three per cent per annum, with a doubling time of some 23 years, implies unprecedented rates of change in agriculture, livelihood and social relation; and in other continents too, ecological, economic and social change appear more rapid than before (Chambers, 1993).

Western thought has consistently placed man in the centre of the universe. The natural environment was there for man to conquer, exploit and develop for this sole benefit. Modern economic thought has been dominated by a concept of unlimited growth based on the exploitation of unlimited resources and technological development. The economic and ecological crises of the last decade have, to a large extent, brought an increasing awareness to the importance of man's relationship with the general environment- that human actions have ecological ramifications. The recent international conferences on the ozone hole and the greenhouse effect illustrate this concern. This increasing awareness has led to a school of thought called ecodevelopment. The concept of

ecodevelopment arose partly as a result of the limit to growth debate instigated by the Club of Rome and the 1972UN conference on the environment. Ignacy Sachs (1984), one of the main thinkers within this school, has suggested that ecodevelopment is a style of development that, in each ecoregion, calls for specific solutions to the particular problems of the region in the light of cultural as well as ecological data and long-term as well as immediate needs.

Ecodevelopment is therefore a developmental philosophy that aims to make efficient use of the natural and human resources of a specific region in such a way that provides in the minimum for the basic needs of the people living there while at the same time maintaining a viable ecological environment (Burkey, 1993).

#### 2.6.8 International Development

With the shift in development theories from modernization and structural adjustment programs to poverty reduction, the United Nations system has supported poverty reduction strategies consisting of direct budget support for social welfare programs, with the goal of creating macroeconomic stability resulting in increased economic growth. Increasingly, concepts like poverty, dignity, participation, appropriate technology; sustainability and capacity-building have been emphasized to form the fundamental basis of contemporary development strategies and policies.

International development is focused on long-term solutions to issues facing developing nations, by helping them to build the capacity required to develop sustainable solutions to their problems. It is to be distinguished from disaster relief and humanitarian aid which provide short-term solutions to problems associated with a lack of development and which is not necessarily sustainable. (Burkey, 1993).

There is recognition that International Non-Government Organizations and Intergovernmental Organizations often play key roles in less developed nations in the areas of education, environment, finance, health, human rights, housing, livelihoods, and water and sanitation. Their growth and effectiveness therefore must be a key consideration for international development policy.

Social exclusion is very much a lived experience that occurs in many different settings and affects many groups of people: street children, former prisoners, single parents, ethnic minorities and more. It can occur as a result of an equally wide variety of factors, including unemployment, poor health, a lack of education or affordable housing, racism, fear of differences or political disempowerment (Hills et al 2000).

# 2.7 Rural Development

According to Chambers (1983) rural development is a strategy to enable a specific group of people, poor rural women and men, to gain for themselves and their children more of what they want and need. It involves helping the poorest among those who seek a livelihood in the rural areas to demand and control more of the benefits of development. The group includes small-scale farmers, tenants, and the landless.

How it works, and the shape it takes, is determined and influenced by many factors in the rural areas of the country. Factors such as the stage of economic development of the country, the humanitarian attitudes of its people; the sincerity, skill, wisdom and all-round knowledge of its planners, administrators, and implementers at all levels; the relevant educational institutions; the extent to which its citizens are informed, consulted and encouraged to participate; and other factors of varying importance at the local, village, area, regional and national levels, all effect its direction, its magnitude, its success and also its failure (Poostchi, 1986).

Rural development has matured to the point at which it is possible to perceive of solutions to many of its long-standing problems which pass the test of sustainability, equitability, and efficient use of resources. The evidence suggests that rural development actions have often not been highly appropriate, effective, or led to sustainable and equitable outcomes (Shepherd, 1998).

The rural poor must be given access to land and water resources, agricultural inputs and services, extension and research facilities; they must be permitted to participate in design, implementation and evaluation of rural development programmes; the structure and pattern of international trade and external investment must be adjusted to facilitate the implementation of poverty-oriented rural development strategies (Burkey, 1993).

The new rural development is in fact leading the way towards a new conception of development as a whole. It is giving substance to notions like high-quality growth. In its practice it is increasingly able to reconcile growth with equity, and development with environmental sustainability. In its shift towards participatory approaches it is giving space to much greater diversity of values to underpin the development process, replacing earlier exclusive concern with material progress. It is able to work with and see value in different knowledge systems, and allow their co-evolution; there is no longer the immaturity expressed by assertion of one right way (Shepherd, 1998).

According to Bello,A&Daoud,S(2009) the concepts of rural development may be viewed as the application of policies, strategies and practices by the states, and/ or NGOs in the rural economies, aimed at improving the standard of living of mass population residing in the rural areas .Its main concern, therefore ,deals with poverty alleviation and inequality. Moreover, it is believed that , the rural people(i-e. peasants, pastoralists, agricultural wage labours ,craftsmen, and others ),are suffer from varying poverty levels which determine their limits and made them both poor and backwards.

# 2.8 Participation

Participation is a basis of general development strategy of a society and it may take different forms: household, economic, social, cultural and political participation. It is an essential part of human development and is both a tool and a goal, it is a process rather than an event, and it ensures developing socially responsible policies, strategies and processes, which in turn promote long term economic growth.

Burkey (1993) argues that participation by the people in the institutions and systems which govern their lives is a basic human right and also essential for realignment of political power in favor of disadvantaged groups and for social and economic development. Rural development strategies can realize their full political only through the motivation, active involvement and organization at the grassroots level of rural people, with special emphasis on the least advantaged, in conceptualizing and designing policies and programmes and in creating administrative, social and economic institutions, including cooperative and other voluntary forms of organization for implementing and evaluation them. Participation is an essential part of human growth, which is the development of self-confidence. pride. initiative. creativity. responsibility, cooperation. Without such development within the people themselves all efforts to alleviate their poverty will be immensely more difficult, if not impossible. This process, whereby people learn to take charge of their own lives and solve their own problems, is the essence of development (World Bank, 1994).

Participation lis seen as a process of empowering the disempowered, hence recognizing the differences in power between the different social groups. Therefore, there is necessity to organize the unorganized groups into democratic, self reliant and independent organization (Ghai, 1990). The cutting edge of development practice in the 1990s is described in

terms of 'participation', 'community-driven action', and 'empowerment'.

The broad aim of participatory development is to increase the involvement of socially and economically marginalized people in decision-making over their own lives. The assumption is that participatory approaches empower local people with the skills and confidence to analyze their own situation, research consensus, make decisions and take action, so to improve their circumstances. The ultimate goal is more equitable and sustainable development (Guijt & Kaul shah, 1998).

Rahman (1990) in Shepherd (1998) identified several dimensions of empowerment which provide a good starting point for developing indicators about participation: (i) organization of the disadvantaged and underprivileged in structures under their own control; (ii) knowledge of their social environment and its processes develop by the disadvantaged; (iii) self-reliance, an attitudinal quality strengthened by the solidarity, caring and sharing of collective identity; (iv) creativity; (v) institutional development, in particular the management of collective tasks, and mass participation in deliberation and decision-making; (vi)solidarity-the ability to handle conflicts and tension, to care for those in distress, and a consensus that all should advance together; (vii) progress for women in articulating their points of view, and the evolution of gender relations towards equality, as assessed by women themselves. Empowerment would also imply that there were changes going on in the wider society as a result of grassroots changes: the development of human dignity, popular democracy, and cultural diversity.

To sum up, the philosophical assumptions of participation as indicated in the literature include the following:

- i. Mobilization; to enable the beneficiaries exploits the available resources in a sustainable manner.
- ii. Self-reliance; popular participation is an ideal mean to minimize the cost of community development by pooling community efforts to meet their objectives.
- iii. Consultation; in which popular participation is seen as a process to avoid costly errors of inappropriate projects.
- iv. Self-help; where participation may be taken as contribution of free manual labor to reduce the cost of public work.
- v. Facilitation; assessing people to acquire practical skills to improve their accesses to national resources. (Bello and Daoud, 2009).

# 2.9 Rural Development Approaches

#### 2.9.1 The Basic Needs Approach

By 1970 many observers had discovered that economic growth in the aggregate did not necessarily eliminate poverty. This led to a formulation of the basic needs approach which was adopted by the International Labor Organization (ILO) in 1976. The meeting of the basic human needs of poor people became an important element in alternative development strategies. The ILO defined basic needs to include several elements. First, they include certain minimum requirements of a family for private consumption: adequate food, shelter and clothing are obviously included, as is certain household equipment. Second, they include essential services provided by and for the community at large, such as safe drinking water, sanitation, public transport, and health and educational facilities (Bello & Daoud, 2009).

A Basic Needs program that does not build on the self-reliance and self-help of governments and countries is in danger of degenerating into a global charity program. How many still believe that development means building schools or wells rather than supporting processes of social change and self-reliance? (Burkey, 1993).

However Bello,A&Doaud,S(2009), argued that the most important issue for basic needs strategy is the political framework within which it can be successfully implemented, and stated five operational issues to be taken into consideration at both local and international levels;

- i. The domestic and external resources required for meeting the basic needs for a large and growing number of people in the developing countries. This is mainly because, while the local contribution for meeting the basic needs are necessary. The contribution of the international community is also needed for resource mobilization in terms of aid, research, exchange, and technology.
- ii Designing and redistributing of social services for the benefit of the poor people residing in the remote areas.
- iii Promotion of popular participation to carry on the programme of social change and to articulate the demand for meeting basic needs, and for efficient management of the services developed to satisfy those needs.
- iv Basic needs programme should develop a system of signals and incentives ,in order to investigate the society's preferences for meeting basic needs.

V. Trade –off between basic needs and other objectives. This is mainly because ,with satisfaction of basic needs, other objectives could be achieved in the same time(i-e .self- reliance, protection of environment, and such).

#### 2.9.2 Capacity Building Approach

UNDP defined 'capacity building' as the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation (of women in particular), human resources development and strengthening of managerial systems. Nevertheless, it is crucial to recognize that capacity building is a long-term, continuing process, in which all stakeholders participate (UN, 2009).

In fact capacity building is a process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in the fast-changing world. For organizations, capacity building may relate to almost any aspect of its work: improved governance, leadership, mission and strategy. administration (including human resources. management, and development legal matters), program income generation, implementation, fundraising and partnerships and collaboration, evaluation, advocacy and policy change, marketing, positioning, planning, etc. For individuals, capacity building may relate to leadership development, advocacy skills, training/speaking abilities, technical skills, organizing skills, and other areas of personal and professional development. Capacity building is the elements that give fluidity, flexibility and functionality of a program/organization to adapt to changing needs of the population that is served (UN, 2009).

Infrastructure development has been considered "Economic Capacity Building" because it increases the capacity of any developed or developing society to improve trade, employment, economic development and quality of life. It is also true that where institutional capacity is limited, infrastructure development is probably constrained (World Bank, 2010 and Khalid, 2012).

#### 2.9.3 Community Based Rural Development

Community Based Rural Development is a participatory approach to reducing rural poverty. It promotes collective action by communities by putting them in control of development projects and programs. Community-based organizations assume important responsibilities in project administration and oversight, and often directly manage project resources. Participation in these organizations can provide the politically marginalized with a voice that enables them to negotiate with government

agencies, civil society organizations, and private businesses. In so doing, they cultivate trust and social capital, and accumulate experience in representing themselves. As a result, they are empowered to act collectively, and to become informed agents in the design and conduct of programs now and in the future (World Bank, 2010).

Community-based organizations generally consist of a number of individual members who organize around a common interest or need. They vary greatly in size and in purpose. Some are women's associations and self-help groups organized to gain access to credit and other services. Others are user groups like water use and land management associations which organize to manage a common property resource. Producer organizations organize activities and pool resources around the production of crops, livestock, fish, or forest products and post harvest processing and marketing. Community-based health committees and education committees are commonly engaged in Projects using social funds to enable communities to finance their own development. Village and municipal development committees organize planning and community priority setting across sectors. They also interact with the local government agencies that assume expanded roles in contexts of decentralization (World Bank, 2010).

#### 2.9.4 Integrated Rural Development

Integrated Rural Development (IRD) was an area-based approach to rural poverty reduction that saw the integration of sectoral interventions as a way to bring about more meaningful progress than could be achieved by narrowly sector-specific projects working in relative isolation from one another. Seeking to identify and to capitalize on the potential synergies between activities and services in different sectors, IRD-oriented projects set out to introduce cross sectoral packages of complementary technologies and services relating to agriculture, infrastructure, training, and health. The general failure of IRD programs to bring about sustained improvements in rural living standards led the World Bank and other development agencies to retreat from multi-sector coordination to more traditional sector-specific programs (World Bank, 2010).

#### 2.9.5 The Intermediate Technology Approach

Intermediate technology is referred to also as appropriate technology i.e. appropriate and compatible with human and physical environment of developing countries.

The concept of intermediate technology is a result of the widespread failures of development efforts based on imported technology and the negative side effects of these technologies.

The endeavor of advocates of intermediate technology approach to rural development is to promote the use of simple but more efficient technology which is easy to operate, cheap to maintain and not damaging to the natural and human environment. To achieve that, it is suggested that the technology used by rural farmers should be based on locally available and/or produced materials and closely linked to the past experience and standard of knowledge of local population i.e. based on traditionally used technology. The problem of the relation between traditional and modern technologies in this context is not a struggle between traditionalist and modernist views but rather one of the human dimensions of modern technology and its utilization in a way that is harmonious with human factors and human values (Ezz Eldin, 2010, and Khalid, 2012).

#### 2.9.6 Rural Social Animation

The concept of the (RSA) is an attempt to help the rural people to realize their problems and to act autonomously in taking initiatives. It is forms of participatory intervention to promote popular participation to enable the rural communities participate effectively in the process of their development. Moreover, as indicated by United Nation Children Fund UNICEF(1996) the RSA approach attempts to identify and meet the needs of the local people by involving them in communal activities to achieve development objectives (Bello & Daoud, 2009). In fact, RSA is a participatory approach to rural development concerned with social development. The idea is to activate the creative capacities of rural people to be able to identify their problems, consider the options for their solution, select what they consider appropriate, decide on priorities in implementation and carry it out (Ezz Eldin, 2010, and Khalid, 2012).

#### 2.10 Non Governmental Organizations

Organizations are keys for socio-economic and political development, especially if they work on basis of networks and federations and act on: broadening constituency and social activities; state— Civil Society Organization (CSO) engagement and partnership; local legitimacy, self-reliance and autonomous functioning. Besides there is need for alliance building with similar same mind organizations including political parties (Abusin, 2006).

Nongovernmental organizations with their advantage of non-rigid, locality specific, felt need-based, beneficiary oriented and committed

nature of service have established multitude of roles which can effect 33rural development. Kortten (1990) identified four generations of development-oriented NGOs. The first generation was concerned with relief and welfare; the second with community development; the third with the development of sustainable systems; and the fourth with the people's movements (Chambers, 1993).

The roles of Northern NGOs have changed considerably over a number of decades. Many started with an operational role in providing relief, welfare or services and then made a transition to a second phase during which they were primarily funding agencies supporting longer-term community development projects through a range of intermediaries and community based actions. Some, like Oxfam, have maintained both these roles, while now increasingly adopting 'third generation' strategies, including a much greater emphasis on advocacy to tackle the root causes of poverty, networking, and strengthening the organizational capacity of Southern partners (Oxfam, 1995).

According to Ban & Hawkins (1988) major types of NGOs are:

- Membership organizations through which farmers or rural people try to reach some of their goals collectively;
- Grassroots support organizations which help rural people in their process of development;

Development support organizations which assist membership and grassroots support organizations through financial assistance and/or technical expertise.

# 2.11 Gender and Development

The term gender arose as an analytical tool from an increasing awareness of inequalities due to institutional structure. It focused not only on women as an isolated and homogenous group, but on the roles and needs of both men and women. Given that women are usually in disadvantaged position as compared to men, promotion of gender equality implies an explicit attention to women's needs, interests and perspectives. The objective then is the advancement of the status of women in society, with gender equality as the ultimate goal (UN, 1997 and Elobeid, 2009).

Since the consideration of women's participation in development activities became more serious at the end of the 1970s, two major streams of theory and practice have been developed. The dominant approach, 'women in development' (WID), assumes that women have been left out of development and need to be integrated by others in order to benefit from it. The mechanism for this is generally special, women-only projects which focus on what are considered 'traditional' women' roles related to domestic activities. The alternative approach, 'gender and development'

(GAD), is more critical of development.GAD theory asserts that women have always participated in development but from an unequal position and without acknowledgment. GAD supporters argue that the crucial constraints for women's advancement are the social structure and processes which create and maintain male superiority and female subordination (Humble, 1998).

The relative roles and powers of men and women in development have challenged the foundations of conventional development approaches. The issue of "who benefits by comparison of who contributes" has been raised powerfully by evaluations of development focusing on the differences between men and women. Once women are incorporated in the process of development, and the issues of power relationships between men and women are addressed, it should be easier to include other marginal groups. The inclusion of women challenges some of the bases of the dominant economic theories: the altruistic household, which allow development interventions to be targeted unthinkingly at the (usually male) head of household; the notion of shared poverty: when in fact poverty may be experienced quite differently by men and women; and the valuation of development itself (Kabeer in Shepherd, 1998).

The gender perspective is one in which women's knowledge, experiences and perceptions are given validity and allowed to come to the fore in analyzing and presenting issues. A progressive perspective insists that changes occurring in society, planned or unplanned, have to be viewed critically, with the objective of taking people forward and that a consideration of human dignity is essential in all change (WFS, 1993).

Awareness of the importance of addressing gender concerns has increased significantly. Today improving gender mainstreaming in project design is more a matter of understanding how to do it for different types of activities than of awareness of the need to do so. Projects with a food and nutrition security focus generally give higher priority to the involvement of women (World Bank, 2001 and Elobeid, 2009). Mainstreaming a gender perspectives is the process of assessing the implication for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels. It is a strategy for making the concerns and experiences of as well as of men an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and social spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal of mainstreaming is to achieve gender equality (UN, 1997 and Elobeid, 2009).

Gender analysis comprises: information about access to and control over resources (land, labor, capital, services, income) separately for men and women; the division of labor within the household; the impact of current and past technology changes on the division of labor and control over resources; and the participation of men and women in public decision-making and organizations. This sort of information can be an input into decision-making processes at all stages of a development process: through monitoring and evaluation to re-identification of activities (Shepherd, 1998).

The development of gender planning as a planning tradition is of critical importance for a number of reasons. Probably of greatest importance is the urgent need to inform policy, through the formulation of gender policy at international, national and NGO levels, as well as its integration with sectoral planning. In addition, it is needed to ensure the development of more appropriate; that is, gender aware—planning procedures. Finally, it can assist in the clarification of both technical and political constraints in the implementation of planning practice (Moser, 1993).

# 2.12 Forests for People

The history of human existence and civilizations is intertwined with forests and trees. Forests are crucial for the goods and services they provide, which people all over the world depend on. Strategies to enhance the contributions of the world's forests to social development, livelihoods and poverty eradication are vital at a time when unsustainable practices and economic crises continue to threaten healthy forests and the people who depend upon them.

Over the past several centuries, there has been a progressive pressure on the environmental and natural resources, the effects of which are becoming evident from the global climate changes taking place today. These consequences stem from the gains of development and the standards of living of the poor who are directly dependent on natural resources for the their survival .It is in this context that a new thrust is required for the conservation and sustainable development of our forests resources (Negi, 1996).

Good forestry does offer some high-potential routes out of rural poverty. Forestry can contribute to food security; provide resource safety nets and sometimes enterprise opportunities where little else exists. Forests have also proven to be fertile ground for pioneering good local governance. What is needed is for national and international governance frameworks to take a lead from local initiative and convert laudable intentions into some practical action. It is time to remove the barriers that prevent forests and trees from contributing to the livelihoods of poor people and to

support emerging opportunities for sustainable local forestry enterprises (IIED, 2002).

The XII World Forestry Congress(2003) Final Statement stressed that all societies are dependent on forests and trees, and have responsibilities for the biodiversity, climate regulation, clean air, soil and water conservation ,food security, wood and non wood products ,energy services ,medicines ,cultural values. The Congress is convinced that the needs of the planet and its people can be harmonized, and that forests have enormous potential to make a vital contribution to environmental security, poverty alleviation, social justice, enhancement of human well-being, equity for present and future generations.(FAO.2003).

All dry regions of the world are affected by land degradation; the world's highest rate of desertification is taking place in sub-Saharan Africa, where agricultural productivity is declining at a rate of almost one percent per year. Hence, effective action to combat desertification requires an integrated approach including investments in afforestation (FAO, 2007). So, many countries are shifting strategies to address more effectively the need for the forest sector to contribute to poverty reduction, starting with recognition of forest benefits which are systematically undervalued in almost all countries (FAO, 2007).

The Food and Agricultural Organization of the United Nations (FAO) broadly sees a strong link between forests and two of the eight Millennium Development Goals:(1) eradicating extreme poverty and hunger, and (2) ensuring environmental sustainability. Primarily, forests provide food security for many of the world's rural poor while protecting biodiversity, contributing to carbon sequestration and maintaining and providing clean and reliable water sources for both urban and rural populations.(Sam and Shepherd,2011).

The forests department in Sudan was first established in 1902 mainly for managing the production of railway sleepers. Throughout these years the administration structure has been evolving according to the political, economic, administrative and environmental situations. The forests National Corporation (FNC) is the current governmental body responsible for managing and administering this resource. It was established in 1989

as a para-statal corporation to rehabilitate the Sudan forests through afforestation, extension, reservation, management and protection programmes (Elhadi, 2006).

Administrative and institutional development of the forest service in the Sudan aims at qualifying its capacity to face the challenge of the ecological, environmental and social change. Social forestry is one of these developments. Associated with these developments are the bilateral and donor assistance reflected in the large numbers of forest projects (Elhadi, 2006).

Different organizations were involved in community forestry in Sudan, their involvement ranges from raising local awareness to the encouragement of participation in forest establishment, protection and management. The intention of community forestry programmes in Sudan are: to multiply and raise the incomes and social well-being of the rural people ,to generate employment opportunities for the local population, to educate the local communities to take their responsibilities in the natural resources conservation, to persuade people to take their active role in the planting ,management and protection of the forest resources, to encourage self-reliance of the rural people, and to build up the village economy and the social environment of rural people which help the villagers settle in their villages. SOS Sahel International is an example of agencies that concentrated on forestry development to contribute in rural development and in combating desertification in Sudan (Abdel Magid, 2008).

# 2-12.1 Women and Forestry

Women are major actors in forestry throughout the developing world. They are affected differently than men by environmental degradation, deforestation and pollution. Hence by establishing domestic and international non-governmental organizations, many women have recognized themselves and acknowledge to the world that they not only have the right to participate in environmental dilemmas but they have different relationship with environment including different needs, responsibilities and knowledge about natural resources. (Asain Development Bank 2013).

Women around the world play a key role in the protection of the biological diversity through their varied responsibilities. They have recognized the need not only to protect the bio-diversity, but also to reshine and recreate it. Wangari founded Kenya's green belt movement, involving 80,000 women in planting of trees. Cree Women of Canoe lake, Sasktchewan spent months on Canada's longest running blockade against clear cut logging. Further the Indian women were always ahead in the

matter of prevention of pollution and protection, preservation, conservation, promotion and enhancement of the environment. Throughout the Sahel women are playing a major part in desertification control; but what precisely this part must be clearly understood, and the basic question to ask is whether present anti-desertification policies help advance the socioeconomic position of women through the projects undertaken, or whether they merely make use of their labor (Monimart in Sontheimer, 1991).

Williams (1992) stated that women are actively involved in a wide range of forest-related activities, both those of spontaneous nature and those fostered through development projects and programmes. In fact, with the exclusion of industrial timber and charcoal production, African women are the protagonists in activities related to the management and and use of forest recourses. Particularly important is the gathering of fuelwood, for domestic energy, as well as fruits, leaves, gums and medicinal products both for household use and sale in local markets. Women's participation in the production and dissemination of fuel-efficient cook stoves, in agroforestry, tree nurseries and horticulture are also well- documented.

Moreover Williams (1992) argued that throughout Africa, women do much of the agricultural as well as procuring firewood and water for household use and actively managing natural resources. Over the past two decades, the forestry development community has grown increasingly aware of the important roles played by women in forestry and natural resource management. Many community forestry, agroforestry and farm forestry activities have recognized women's major roles and have sought to promote their participation.

According to Bristow (1998), in several parts of the world there is a long history of women's involvement in tree planting activities. Many countries in South East Asia and Latin America, as well as many African countries, have a tradition of tree planting around the home by women, although tenure and ownership restrictions, and socio-cultural constraints, often limit such activities away from the home area.

# 2.13 Development Projects and Programmes

Until fairly recently, programmes and projects aimed at improving the socio- economic and health condition of the poor tended to initiated,

designed and implemented from the 'top-down' by agencies and institutions with systematic consultation and involvement of the intended beneficiaries. The basic idea was that the introduction of modern technology and science would automatically lead to decent standards of living for all and that the availability of modern health services would defeat illness and disability. However, with experiences has come the awareness that top-down approaches to development create an increasing dependence of the people on outside resources and also sharpen social division. Moreover, the cost of this approach to welfare and development is so high that no government in any low-income country can reasonably expect to meet the needs of all people in the near future. It also became clear that the intended beneficiaries of development and health care do not necessarily share the perception programme planners have of their priority needs. As a result services offered to the people were often rejected or underutilized because they did not meet their needs, respect their sensitivities or respond to local realities (Burkey, 1993).

Community-based rural development grew out of the checkered past of rural development projects and interventions undertaken by the World Bank and other international development institutions since the 1950s. It is grounded in part in the practical experience of projects which sought to engage local communities in various aspects of project identification, planning, and management. Some, like the Camilla pilot in Bangladesh in the 1960s, entailed decentralization and the devolution of project management to local authorities whose proximity to rural communities made them better positioned to cultivate beneficiary participation. Some, like the Integrated Program for Rural Development in Mexico, cultivated and purposefully relied on the participation of communities in project identification to achieve greater 'fit' between community priorities and project investments and activities. In Malawi, the Lilongwe Land Development project begun in 1967 fostered the formation of village and community organizations to take part in decision making and planning. Later, during the 1980s, the Aga Khan Rural Support Program similarly stressed the role of village organizations in project implementation, and with explicit attention to institutional development (World Bank, 2010 and Khalid, 2012).

# 2.14 Training for Development

The term training refers to the acquisition of knowledge, skills, and competencies as a result of the teaching of vocational or practical skills and knowledge that relate to specific useful competencies. Training has specific goals of improving one's capability, capacity, and performance. It forms the core of apprenticeships and backbone of content at institutes

of technology (also known as technical colleges or polytechnics). In addition to the basic training required for a trade, occupation or profession, observers of the labor-market recognize as of 2008 the need to continue training beyond initial qualifications; to maintain, upgrade and update skills throughout working life. People within many professions and occupations may refer to this sort of training as professional development (Lynton & Pareek, 2011).

Traditional training programmes emphasize the transfer of technical skills and knowledge from the trainers to the trainees. The content, methodology and the setting of the training are all determined by the trainers. The trainers decide what skills and knowledge to transfer to the trainees who become passive recipients and objects of training .The trainees do not participate in organizing the learning process. They take no responsibility which lies solely with the trainers. This type of training is essentially undemocratic, hierarchical and non-participatory (Burkey, 1993).

Training and development encompasses three main activities: training, education, and development. However, to practitioners, they encompass three separate, although interrelated, activities:

Training: This activity is both focused upon, and evaluated against, the job that an individual currently holds.

Education: This activity focuses upon the jobs that an individual may potentially hold in the future, and is evaluated against those jobs.

Development: This activity focuses upon the activities that the organization employing the individual, or that the individual is part of, may partake in the future, and is almost impossible to evaluate.

The "stakeholders" in training and development are categorized into several classes. The sponsors of training and development are senior managers. The clients of training and development are business planners. Line managers are responsible for coaching, resources, and performance. The participants are those who actually undergo the processes. The facilitators are Human Resource Management staff. And the providers are specialists in the field. Each of these groups has its own agenda and motivations, which sometimes conflict with the agendas and motivations of the others.

The preparation phase in any training programme is the most crucial one of the whole training process. Accordingly the setting of aims and objectives will be held. Wallace suggests that training is related to three main sets of behavioral concerns. These are the need to:

- help people to develop coping skills
- promote transforming behavior
- help people develop optimal capacity for self-reliance.

In the training courses one must clarify the required output. In order to achieve this overall course aims and objectives should be specified. An aim is a broad meaning of the intended goals or outcomes of an educational or training activity. While objectives are a means by which we could achieve the outcomes, and which the outcomes could be measured. Their focus should be on the learner. Therefore the objectives should state what the learner would be able to know or to do. All objectives should be specific, measurable, attainable, realistic and time – bound. The mnemonic "smart" is helpful on this (Wallace in Abbas, 2001).

#### 2.15 Extension and Rural Development

Generally extension involves the conscious use of communication of information to help people form sound opinions and make good decisions (Ban & Hawkins, 1988). It can be an effective policy instrument for stimulating agricultural development in situations where farmers are unable to reach their goals because they lack knowledge and insight. It should be used as a policy instrument, only if it is in the best interests of government or the organization which pays for the extension service, for the farmers to achieve their goals.

An extension organization can try to achieve changes in a direction which it considers to be desirable for the farmers, such as better control of plant diseases. It also can help farmers to achieve their own goals more successfully, for example, in choosing between a farming system with high average income and high risk, and a system with low income and low risk. Choosing their own goals should be preferred when values play an important role in decision-making.

Extension in an effective instrument only when combined with others, such as research, provision of inputs, credit and marketing. It can teach farmers how to produce crops and animals in the most profitable way, as well as how to organize themselves in cooperatives and other farmer organization. (Ban & Hawkins, 1988).

#### 2.16 SOS Sahel International

#### 2.16.1 Introduction

During 1980s-1990s Sudan suffered from a severe desertification, especially the north and the west parts. Low rainfall, drought and overgrazing were the main reasons led to this situation. Moreover, people themselves negatively contributed to worsening the situation by clearing the land to expand their agricultural projects.

The daily life of rural people became hard, the wind blowing for days and days. The creeping sand dunes covered agricultural land, homes and schools. People had great difficulty in running their normal activities, especially the women who were supposed to do all the domestic activities such as child and elderly care, cooking and food preparation, washing family clothing, collecting water and sometimes firewood and managing the family smaller animals like sheep and goats. During those hard years, several international organizations operated projects in Sudan with rural communities to help them to tackle the environmental problems and to assist in poverty alleviation. Planting trees and forests was the main activity that could help in improving the situation. Trees were expected to combat desertification, fertilize the land and stabilize the environment. Moreover trees would contribute to poverty alleviation, as they provide people with fuel wood, timber and non-timber products.

SOS Sahel International was one of the NGOs that have been involving communities in the forestry activities in Sudan. The Village Extension Scheme (VES) in 1985 was SOS Sahel's first project in Sudan and in Africa. The project was operated in the River Nile State in Northern Sudan. The project's aim was to raise people's environmental awareness involving all the community, including women and school children. Activities included constructing village nurseries, establishing shelterbelts to protect the villages, the houses and schools, to plant windbreaks to protect the agricultural land, and to plant trees inside homes and along the streets.

#### 2.16.2 Involvement of Women with VES

The VES consisted of several sub divisions and programmes .One of the most important components was the Women's programme.

Historically, women in the River Nile State in Northern Sudan were not practicing agricultural activities. It only happened in a few cases when poor women could help in harvesting seasons. In addition to that, women were also restricted from working together with men.

SOS Sahel planners decided to involve rural women in the project from its first stages, as they believed that the whole community should be involved collectively to combat the desertification problems. So women could have a significant role to play. Bristow (1998) argued that: women will become involved in forestry programmes if they have good reasons to do so and if social and cultural conditions permit. Reasons for involvement include the novelty factors, income generation, home and/or farm improvement, village/home protection, status in the community and the need for development in general.

Village leaders were not convinced about the idea of involving women in the project. Mistakenly they assumed that women will refuse to participate in forestry activities. One of the village leaders in Elsseyal Elkabir said, "Why do you want to involve women in the project? Our women know nothing about tree growing; they just know how to burn them". However, when women were asked in a separate meeting, they agreed immediately to participate in the project activities since it would be inside their houses. Accordingly the village men agreed. In fact women have a potential to carry out the forestry activities as they had witnessed the change that occurred in the area. "Over the years we have seen the trees steadily disappearing. Now the wind blows sand everywhere. Many houses and compounds have been covered by up to two-three meters high moving sand dunes" Safia, Head of girl's primary school in Elseyal Elkabir said.

Due to the women's positive response, the women programme was included with VES to work complementary with the other units (Abbas, 2001).

Accordingly, women have been involved in establishing home nurseries to grow forestry seedlings and to plant them inside/in front of their houses. They were involved also in making the shade (mats) for the village nursery, as well as punching thousands of polythene bags for their home nurseries and for the village nurseries. Thus women participated in village nursery construction from inside their houses. As the VES continued its activities with the communities, women felt more confident to participate with the communities outside. The village men had no objection to women participation outside once they have completed their home domestic activities.

The VES achieved many positive results during few years e.g. harvesting the forest products (building poles, timber, firewood, vegetables and fodder). Moreover, the establishment of shelterbelts stabilized the sand dunes moving to some extent, this encouraged people to stop shifting their houses to other areas. In addition to that, those who have already shifted their houses came back to their original places and settled.

The women's programme continued as a part of main project (VES) for 8 years. The degree of high interest and participation by women was shown in the project activities more than the men. The potential of expanding the project activities into more villages with women meant that the women's programme was separated from the main project (VES) and called the Women's Forestry Project (WFP) in 1994.

The idea of separating the women programme from the original project emerged in 1992. The reasons included: firstly, the women had shown a higher interest in their activities than the men, so this will provide them with their own identity and keep their motivation and enthusiasm to continue with their activities. Secondly, the women's socio-economic situation was almost the same in all the River Nile state's rural

communities, the project could be expanded to cover other provinces to involve and benefit more women. Lastly, the women's programme input is very low compared to the project outputs. Following a survey held in the River Nile State in 1992, the Women's Forestry Project (WEP) was established in 1994 to operate with rural women in all River Nile State's provinces.

### 2.16.3 The Women's Forestry Project (WFP)

This project was operated in four provinces in the River Nile state: Shendi, Elmatamma, Eddammer and Barber. The River Nile state lies between longitude 22-16 in the north and latitudes 32-35 in the east. The total area is 124,000 square kilometers. The population according to the 2008 census was about 1.400.000 persons, 67.4% of them are rural communities. The villages involved with the project were located on both sides of the River Nile and both sides of Atbara River. The WFP had two offices; the main office was in Shendi town, while the sub office was in Eddammer, the state capital.

The project objectives included:

- 1. To raise women's environmental awareness.
- 2. To train 120 women from 60 villages in the project area as Village Extension Agents (VEAs) during the first 18 months of the project period in the following activities:
  - Establishing home nurseries to produce forestry seedling, and to plant them inside\outside their home yards.
  - Producing ornamental and fruit seedling to plant inside their compounds.
  - Growing vegetables inside their compounds for home use.
  - Training women to generate income from the sale of surplus seedlings and vegetables.
  - Training women to use improved wood stoves in order to reduce wood consumption.
- 3. To train 10000 women in the 60 villages by the trained 120 VEAs in the above activities.
- 4. To raise school children's environmental awareness and to train them to establish school nurseries, and to plant trees inside/outside the schools.

The main idea was training two village VEAs from each village to keep the knowledge and skills within the village for future sustainability. Moreover, most of the villages are located far away from the WEP offices, which make the follow-up on a weekly basis by the staff rather difficult.

### 2.16.4 Training Courses Methodology

Training courses normally included 12 VEAs from 6 villages in each training circle. The selection of the villages was based on criteria such as: the degree of desertification, availability of water and the interest among the villagers. The selection of 2 VEAs from each selected village was done by the women's union and the community committee in the village, which also followed some criteria such as an active personality and being literate. Poorer families were preferred so as to benefit from the monthly allowance given to the VEAs. All the selected women attended an intensive training course with WEP in Shendi town for 25 days and they were accommodated in the project rest house.

WEP held 10 training courses, 5 in phase one (1994-1997) and 5 in phase two (1998-2000).

The contents of the training courses included:

- 1. A perspective on environmental degradation in the area, with particular reference to causes of desertification, and ways to respond to the threat.
- 2. The Activities of the Forests National Corporation (FNC) in the area.
- 3. The SOS Sahel International in general, the VES and the WFP, their tendency for people's welfare and development. The central role of women in WFP.
- 4. The purpose of extension work and the aims and objectives of forestry extension.
- 5. Home nurseries establishment, theory and practice. The most suitable places for a tree nursery in the house, and technical activities required (digging holes, punching polythene bags, seed treatment, planting, watering, shading and protection of seedlings during their germination.
- 6. Practical training in seedlings production (forestry, fruits and ornamentals).
- 7. Vegetable growing theory and practice.
- 8. Improved stoves- theory and practice.
- 9. Live shelterbelt- theory and practice.
- 10. The techniques of using puppet theatre shows as a way of spreading environmental awareness.
- 11. School programme, objectives and activities.
- 12. How to make simple pesticides from Neem tree (Azadirakhta Indica).
- 13. Women's groups' organization, holding meetings.

- 14. Self evaluation, records keeping, writing simple reports weekly and on monthly bases.
- 15. Field visit by the trainees to the FNC nursery, and the commercial nurseries in the area.

### 2.16.5 Trained VEAs Starting Their work

By the completion of the training courses the trainees start implementing activities with women, but prior to this a first general meeting for the whole community is usually held by WFP staff. The aim of the meeting is to explain more about the project for the villagers (both men and women), and what the VEAs have studied in the training course. Moreover the role of the VEAs with the community will be discussed, and to see how the community thinks they could participate to help themselves to improve their environmental situation. Later on the VEAs will be able to hold meetings on their own with the women's group.

The VEAs started training and implementing activities with women in stages. The women had to divide themselves into groups by location. WFP staff and VEAs accompanied the programme with various extension methods and campaigns.

Once the VEAs started the programme with women the WFP staff paid regular visit on monthly bases to follow up the programme progress with them. During these visit WFP staff would collect the monthly reports that were prepared by the VEAs and monitor what was written in the reports with what is actually done by the participants.

The WFP also provided the VEAs with the raw materials that they would need such as polythene bags, seeds, scissors and punchers, to be distributed to the women. During the training courses they would learn how to be independent from the project in the future by using alternatives to polythene bags, seeds collection and treatments, suitable soil etc. Schorsher argued that, "Village extensionists (VEAs) were unanimously satisfied with the training they had received as well as with the support of the WFP staff when they returned to their villages to implement what they had learnt to train the village women. As they applied their knowledge they started to have more questions and felt a desire for more training on specific aspects such as the production of fruit tree seedlings." (Schorsher et al, 2001).

### 2.17 WFP Activities Implemented by Women2.17.1 Home Group Nurseries

This is the main activity held by all women in each project village to produce forestry seedlings in the first batches, and after women gained experience they produced lemon, guava and ornamental seedlings.

### 2.17.2 Home Vegetable Gardens

The object of this activity was to grow vegetables by women in their homes for home use, to enrich the family meals and nutrition status for a healthy life and to save the money that they could have paid for purchasing vegetables from the market.

Throughout Africa for many generations, small plots of lands near the homesteads have been used as home gardens. Because these gardens serve a family's own needs, they contain a whole range of plants that provide food and medicine (Elasha, 2006).

### 2.17.3 Improved Stoves

The majority of rural women in the River Nile State depend on wood and charcoal for their daily cooking. The WFP introduced two types of improved stoves in order to reduce fuel wood consumption. One is made of mud inside the house by women themselves for wood use, while the one for charcoal is made of metal and a clay liner; this is usually made by experts at a reasonable price.

### 2.17.4 Income Generating Activities

Feasibility study in 1998 to decide income generating prospects was inconclusive. However in 1999 the project staff decided to meet a request by several poor women to provide them with a spaghetti machines. The poorer families, who are mostly headed by widows, organized themselves into groups in 16 villages. One or two groups consisted of 3-5 members in each village. Every group was provided with a spaghetti machine, a sack of flour and polythene bags for packing the products.

### 2.17.5 School Programme

The aim of this programme was to raise the environmental awareness of pupils (both girls and boys), train them to establish school nurseries, to plant, and take care of trees in their schools.

The project staff and VEAs, with the assistance of schoolteachers, held lectures, role-plays and puppet shows in 26 school villages (1998-2000). The pupils were trained to establish nurseries practically and to plant trees in their school compound. The trees society and the tree friends were formed in a few schools. However, the programme failed in the first year (1998) due to several constraints; shortage of water and lack of protection. Moreover the long annual school holiday (3-4 months) makes watering a problem. To solve water problems to some extent, WFP took a positive step further by providing hand pumps and pipes for eight

schools. The village communities also supported this by digging the wells and buying more pipes. The 8 schools operated the activities very well and made use of water for both tree planting and also as drinking water. Schorsher, et. al. (2001), stated that "The school programme should be made a priority as it has a potentials to have a great impact: the work in one school influences people from many places as the children return to their various villages with great enthusiasm to apply their knowledge... For a school programme to be effective it need to be considered as a project in its own rights, to which sufficient staff, time and budget are allocated".

#### 2.17.6 Forming Women's Voluntary Forestry Association

A Women's Voluntary Forestry Association (WVFA) was formed by the end of the project and registered with HAC. Its members include WFP staff, VEAs and interested women in the villages, so as to refresh the normal activities with rural women and to attract funds to start other activities according to the rural women desire and wishes. (WVFA) have already received training in project proposal writing and fund raising so that they could attract finance for their activities.

### CHAPTER THREE RESEARCH METHODOLOGY

### 3.1 Study Area

The Women's Forestry Project (WFP) was operated in the River Nile state in four provinces; Shendi, Elmatamma, Eddammer and Barber. The River Nile state lies between longitude 22-16 in the north and latitudes 32-35 in the east. The total area is 124,000 square kilometers. The population according to 2008 census was about 1.400.00 persons, 67.4% were rural. The villages involved with the WFP are located on both sides of the River Nile and both sides of Atbara River. Nevertheless, the study beforehand is covering mainly rural communities in Shendi and Elmatamma areas.

Shendi town is located about 150 Km north of Khartoum on the eastern side of the River Nile, 17-18 N, 23-24 E. The total area of Shendi town is estimated at 145.96 Kms. While Elmatamma is located parallel to Shendi on the western bank of the River Nile and linked with Shendi with a bridge. Elmatamma area is estimated at 117.23 Kms.

The climate is hot desert. The Northern and Eastern-North wind blow to the area carrying sand. The annual rate of rain is 100 mm. The area is suffering from severe desertification and moving sand dunes.

Shendi is considered as one of the important towns in the North according to its location between the North and eastern North of Sudan and link them with Khartoum (Shendi Locality documents, 2007).

The population in Shendi and Elmatamma and their rural areas is estimated as 300.889 persons. The dominant tribe is Gaalyeen, while other tribes include: Shaygia, Ababda, Hassania, Banyamir, Rashayda, Owdya and Bedairya. The main economic activity is agriculture as it represents the main occupation of 80% of the population. However, traditionally women are not involved in agricultural activities (Shendi Locality documents, 2007).

### 3.2 Population of Study

The population of the study mainly were rural women(house hold) in 12 villages in the project area in addition to the village leaders(men) and school teachers in some of those villages.

### 3.3 Sample Selection Procedure

The study survey for data collections was carried out in Shendi and Elmatamma localities in the River Nile state during July -August 2013.

The FNC offices in both Shendi and Elmatamma provided the researcher with four (4) female staff (extensionists) two (2) from each office, to assist her in the field survey. In fact the 4 extensionists were WFP staff previously.

Sample selection was done in two stages. The first stage was the village selection which based on the following criteria:

- 1. As there are four geographical directions; Shendi south and north, Elmatamma south and north, hence half number approximately of the villages from each direction involved with the WFP was selected for the survey
- 2. The villages were selected to represent both phase 1 and phase 2 of the project equally.
- 3. The villages were classified as very good, good, and weak by (WFP) staff and (VEAs) depending on the villagers' willingness, activeness and project activities achieved. This classification was considered in village selection.
- 4. The population in some villages was more than 300 families; while in other villages were less than 100 families, also this was considered in village selection. Accordingly the following villages were selected. Table (3.1): The villages selected for the study.

Table (3.1): The villages selected for the study

No.	The village	The location	No. of families	The phase	The work Condition
1	Gadow	N. Shendi	315	1	v. good
2	Elmashaykha	N. Shendi	198	2	Good
3	Elkaboshab	N. Shendi	182	2	v. good
4	Elgeliaa	S. Shendi	140	1	v. good
5	Wad Nura	S. Shendi	123	2	Good
6	Abo Elhasan	S. Shendi	112	1	v. good
7	Elsalama Gibli	S. Shendi	160	1	v. good
8	Elsalafeeb	S. Shendi	105	2	Weak
9	Elebiydab	N. Elmatamma	310	2	Good
10	Elfarahseen	N. Elmatamma	154	1	v. good
11	Salawa	S. Elmatamma	266	2	Weak
12	Elgobba	S. Elmatamma	177	1	v. good

Source: Study survey 2013

The second stage for sample sellection was the selection of women from those villages,

a multi – stage stratified proportionate random sampling method was used to select 100 women from the 12 village representing 2235 family. The household was taken as the unit of analysis; however it was represented by the wife (the mother). Table (3.2): No. of households selected from each village.

Table (3.2): No. of households selected from each village

No.	Village	No. of	No. of selected
		families	families
1	Gadow	315	15
2	Elmashaykha	198	9
3	Elkaboshab	182	8
4	Elgeliaa	145	6
5	Wad Nura	123	5
6	Abo Elhasan	112	5
7	Elsalama Gibli	148	6
8	Elsalafeeb	105	5
9	Elebiydab	310	14
10	Elfarahseen	154	7
11	Salawa	266	12
12	Elgobba	177	8
	Total	2235	100

Source: Study survey 2013

### 3.4 Data Collection Procedure

To obtain all needed data about the project a combination of primary and secondary data were used.

The primary data was collected from the respondents using the social survey method, the structured interviewing technique using comprehensive questionnaire for 100 women (main target group) in 12 villages. As well, semi-structured interviews were carried out with twenty village extension agents (VEAs), four village leaders (men), and eleven school teachers. Additionally, focus group discussions were conducted with groups of women in the (12) surveyed villages,

with men in 4 villages, and with officials in Shendi and Elmatamma offices.

The researcher check the questionnaire with the (FNC) and (WFP) extensionists, . The questionnaire covered the main following sections:

- Personal characteristic of respondent.
- Training courses process.
- Changing communities environmental awareness
- Activities implemented by the respondent with WFP.
- Continuation of the activities.
- Project socioeconomic and environmental impact.

In addition to that, guide questions for women's groups discussions were formed, they are:

- Do you know WFP objectives?
- What is your perceptions about desertification causes and solutions?
- Have you participated in WFP activities?
- Do you know some one who was excluded from the project?
- What is the benefits of the project for you and your family?
- What is the benefits of the project for the community in general and the environment?
- Are the men in your village happy about the project? How do you know that?
- Are you continue in some of WFP activities till now? Why?

Secondary data was collected and reviewed from project documents, reports, and other relevant publications in Shendi FNC office, and SOS office in Khartoum..

### 3-5 Data Analysis

The collected Quantitative data was coded and processed in the computer using SPSS, combined with the other primary data and Qualitative data that analyzed through transcription grouping ,pattern finding and summarizing.

## CHAPTER FOUR RESULTS AND DISCUSSIONS

#### 4. Introduction

This chapter focused on analysis and results of the questionnaire that fulfilled by researched rural women that involved with WFP combined with the results of other primary data .

### 4.1 Personal Characteristic of Respondents

### 4.1.1:Age

Table(4.1.1): Frequency distribution and percentage of respondents by age

Age groups	Frequency	Percent
20 - 29	13	13.0%
30 - 39	25	25.0%
40 – 49	41	41.0%
50 – 59	15	15.0%
Above 60	6	6.0%
Total	100	100.0%

Source: Study survey 2013

Table(4.1.1) illustrated that respondents ages varies between 20 to over sixty. This indicates that all ages categories participated in the WFP activities and that the project aim to involve all target groups even the school children as we will see later in this chapter. The table also explained that the majority of respondents (66%) their ages ranges between 30-49 and this is a natural results as women in this age are mature and responsible for most of families domestic works.

#### 4.1.2:Educational Level

Table(4.1.2):Frequency distribution and percentage of respondents by educational level

Educational		
level	Frequency	Percent
Illiterate	11	11.0%
Literate class	8	8.0%
Khalwa	3	3.0%
Basic school	28	28.05%
High school	38	38.0%
University	11	11.0%
Post graduate	1	1.0%
Total	100	100.0%

Source: Study survey 2013

Table (4.1.2) show that most of the participants (38%) attended high school, 28% basic education level, while the illiterate are 11%. Generally the educational level is relatively high in the area comparing with the education situation 15 years ago. We could consider this as one of the developmental indicators in the area as VEAs reported.

### 4.1.3: Marital Status

Table(4.1.3):Frequency distribution and percentage of respondents by marital status

Marital status	Frequency	Percent
Married	65	65.0%
Unmarried	14	14.0%
Widowed	16	16.0%
Divorced	5	5.0%
Total	100	100.0%

Source: Study survey 2013

Table (4.1.3) indicates that 65% of respondents are married, the widows are 16%, while the unmarried are 14% and divorced 5%. The total of married women including widows and divorces are 86%.

### 4.1.4: Family Size

Table(4.1.4): Frequency distribution and percentage of respondents by family size

Family size	Frequency	Percent
Less than 3	21	21.0%
3 -6	56	56.0%
7 -10	21	21.0%
More than 10	2	2.0%
Total	100	100.0%

Source: Study survey 2013

Table (4.1.4) illustrated that respondents whose their family size range between 3-6 are 56%, range between 7-10 are 21%, while less than 3 are 21% and more than 10 are only 2%. This result is like the most of Sudanese families which range between 3-10 members and formed 77% in our respondents (56+21), according to our observations in our societies.

### 4.1.5: Family Income

Table(4.1.5): Frequency distribution and percentage of respondents by family income rate (in Sudanese Pounds)

Family income		
SDG	Frequency	Percent
Less than 400	42	42.0%
400-699	42	42.0%
More than 700	16	16.0%
Total	100	100.0%

Source: Study Survey 2013

Table (4.1.5) illustrated that respondents family income less than 400 SDG and that range between 400-699 SDG are equally 42% each, while more than 700 SDG represented by 16%. According to the living cost in Sudan we could consider the majority of our respondents as poor families. According to World Bank Sudan poverty line in 2009 was \$1.25 and \$2 (PPP) a day.(Purchasing Power Parity, PPP).(World Bank 2014).

### **4.1.6: Family Main Income Source**

Table(4.1.6):Frequency distribution and percentage of

respondents by family main income source

Main income source	Frequency	Percent
Farming	38	38.0%
Government occupation	14	14.0%
Private sector	13	13.0%
Trading	16	16.0%
Others	19	19.0%
Total	100	100.0%

Source: Study Survey 2013

Table(4.1.6) indicated that the respondents family main income sources is represented by farming 38% which is dominant, governments occupations are 14%, trading and private sector 29%, while other occupations are represented by 19% and cover jobs like fisheries, brick making, labours.

### 4.1.7: Private Income

Table(4.1.7): Frequency distribution and percentage of respondents according to availability of own income

Ü		
Private income source	Frequency	Percent
Yes	46	46.0%
No	54	54.0%
Total	100	100.0%

Source: Study Survey 2013

Table (4.1.7) indicated that 46% of our respondents have their income from their own work which cover table (4.1.8) professions 17.4%, free occupations 60.9%, and 21.7% are labours . 54% of respondents have no occupations and depend totally on their family men (fathers, husbands, brothers, or sons) as they explain during the group discussions in all study villages .

#### **4.1.8:Private Income Sources**

Table(4.1.8):Frequency distribution and percentage of respondents according to their own income Sources

<b>Private income Sources</b>	Frequency	Percent	Valid Percent
Profession	8	8.0%	17.4%
Labor	10	10.0%	21.7%
Free occupation	28	28.0%	60.9%
Total	46	46.0%	100.0%
Missing system	54	54.0%	
Total	100	100.0%	100.0%

Source: Study Survey 2013

### 4.2 The Project (WFP)

### 4.2.1: Source of Hearing About (WFP)

Table(4.2. 1) Frequency distribution and percentage of respondents by source of hearing about (WFP)

Source of hearing about		
WFP	Frequency	Percent
From the project staff	51	51.0%
From the neighboring villages	46	46.0%
From local broadcasting	3	3.0%
Total	100	100.0%

Source: Study Survey 2013

Table(4.2.1) illustrated that 51% of respondents heard about WFP from the project staff, while respondents who heard from neighboring villages are 46%, and only 3% heard from the local broadcasting. The last result indicate that either people have no Radios at that time or the programmes that advertise for WFP activities in the State local broadcasting were few. During group discussions respondents assured that both of those justifications were correct.

# 4.2.2 Village Extension Agents (VEAs) Selection Table(4.2. 2) Frequency distribution and percentage of respondents by their opinion about (VEAs) selection from their villages to attend training courses in Shendi town

By whom were the VEAs	Frequency	Percent
selected		
Community Committee	18	18%
Women's Union	61	61%
Community Committee &	12	12%
Women's Union		
I don't know	17	17%
Total	100	100%

Source: Study Survey 2013

Table(4.2.2) show that 61% of respondents pointed out that the VEAs selection from their village to attend training courses in Shendi town was done by the women's union, while 18% explained that the VEAs selection was done by the community committee. On discussion group with WFP staff they explained that at the starting of the WFP work with the villagers they depend on the community committee to choose the VEAs, but as they did not restricted to the selection criteria that explained to them, WFP gave this important issue to the women's union , as the project success or failure in every village depend mainly on the VEAs willingness, activeness and accountability to their work. The villages key informants , the VEAs and the target groups explained that the VEAs have been attending training course in Shendi town for about a month with WFP, they studied the project activities , when they came back to their respective villages they start training courses for women after they organize them in groups .

### 4.2.3: Women's Group Formation

Table(4.2.3): Frequency distribution and percentage of respondents by the methods of groups formation.

Pondono of the mountains of Stocks for mountains			
Methods of group formation	Frequency	Percent	
According to the geographical location.	87	87.0%	
According to the education level	8	8.0%	
According to their relationship with the VES	4	4.0%	
According to the political parties	1	1.0%	
Total	100	100.0%	

Source: Study Survey 2013

The table(4.2.3) illustrated that 87% of respondents reported that women organized themselves in groups according to their geographical location,8% reported that the groups were formed according to the educational levels, while 4% believed that took place according to the relationship with the VEAs, and 1% according to the political parties. During the group discussion with rural women they assured that the groups were formed according to the geographical location. Also they explained that each group members ranged between 3 to 9.

# 4.2.4: Implementation of Training Courses Table(4.2.4): Frequency distribution and percentage of respondents by the agencies who implement the training courses

Agency	Frequency	Percent
The project professional staff	10	10.0%
The village extension agents	78	78.0%
The project professional staff		
& the village extension	12	12.0%
agents		
Total	100	100.0%

Source: Study Survey 2013

Table(4.2.4) explained that 78 % of respondents reported that the training courses on WFP activities were implemented by the VEAs ,while 10% said that they received training from the project professional staff, and 12% reported that they received training from both of them. During the group discussion women in all villages (12), explained that the training courses were held mainly by the 2 VEAs in the villages, but the WFP staff during their extension and monitoring visits to the rural women in their villages they also used to give more doses of training to solidate the women knowledge.

# 4.2.5: WFP Training Courses Main Contents Table(4.2.5): Frequency distribution and percentage of respondents by their training courses main contents

7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Training courses contents	Frequency	Percent	
Establishing home tree nurseries,	68	68%	
tree planting, vegetable			
production, improved stoves			
,income generating activities			
All the above except income	32	32.0%	
generating activities			
Total	100	100.0%	

Source: Study Survey 2013

Table(4.2.5)illustrated that 68% of respondent reflected that they received training on home tree nurseries establishment, tree planting, vegetable production, improved stoves and income generating activities, 32% of

respondents exclude income generating activities. During the discussions with rural women , VEAs and WFP staff explained that income generating activities were added to the training contents half way of phase two , also this justification was supported by project documents (1999-2001). When asked women if the are satisfied with the training courses contents they reflected that it was sufficient enough and they appreciate the WFP and the VEAs humility and good relationships with the communities in general. The villages key informants also highlight this point during field survey 2013.

### 4.2. 6 Quality of Training Courses

Table (4.2.6): Frequency distribution and percentage of respondents by the usefulness and sufficiency of training course they received from the VEAs on the project activities.

<b>Usefulness of the training</b>	Frequency	Percent
Yes	93	93%
No	7	7%
Total	100	100%

Source: Study Survey 2013

Table(4.2.6) illustrated that 93% of respondents reported that training courses on WFP activities held by the VEAs were useful and sufficient ,while 7% believed that training course were not useful. During the group discussion few women explained that they think the project was not useful for them because they couldn't gain any profit. They were not included in the spaghetti programme, and they couldn't produce vegetables as they have no enough water, They only produced and planted seedlings.

#### 4.3 Changing Communities' Environmental Awareness

This was the first activity implemented by the VEAs in every project village for communities in general, and for women and school pupils in particular to raise their awareness about desertification, environmental degradation and their role in participation to solve the problem to some extent by planting trees everywhere in the villages. Several extension methods and tools were used by WFP to attain this aim.

4.3.1:The Most Effective ExtensionTool Used by WFP Table(4.3.1):Frequency distribution and percentage of respondents by their ideas about the most effective extension tool that used by WFP to raise communities environmental awareness

Statement	Frequency	Percent
Puppet theatre	51	51.0%
Meetings	15	15.0%
Lectures	8	8.0%
Projector slides show	15	15.0%
Mobile exhibition	11	11.0%
Total	100	100.0%

Source: Study survey 2013.

Table(4.3.1) illustrates that 51% Of respondents assured that the puppet show was the most effective tool that used to raise community awareness ,15% each believed that the meetings with small groups and projector slide shows were the most effective tools,11% reflect that the mobile exhibition was the most effective tool while 8% only said that lectures were the most effective tool used to raise communities environmental awareness. During the group discussions women were very enthusiastic about the puppet shows as they explained all the village community attend the shows and spent funny time while received the extension message in a simple way. The VEAs in Gadow, Elsalafeeb, and Elfrahseen villages said that they held puppet shows several times in the village according to the villagers requests. The key informants in Gadow and Elsalafeeb village explained that they requested the VEAs in the village to hold an extra show during the Eid holiday as the youth come to village during this occasion. In Gadow village small amount of money collected during shows, was used to build school theatre, we saw Gadow school's theatre during the study survey 2013.

# 4.3.2: Perceptions of Desertification Causes Table (4.3.2): Frequency distribution and percentages of respondents by their perceptions of desertification causes

Reasons	Frequency	Percent
Drought, climate change and rain	7	7.0%
scarcity	/	7.070
Cutting down trees	16	16.0%
Over grazing	1	1.0%
Expanding of agricultural project	3	3.0%
Cutting down trees and over grazing	73	73.0%
Total	100	100.0%

Source: Study survey 2013.

Table (4.3.2) displayed women's perception as concern the desertification process. 73% of respondents were of the opinion that cutting down trees and over grazing were the main reasons behind desertification. However, relatively small category (7%) believes that desertification was linked to climate change. This indicates that rural women are aware of desertification and environmental degradation causes. Furthermore, table (4.3.3) demonstrated women's awareness about the relationship between trees and desertification process. According to the table, 93% of respondents acknowledged that tree planting has an impact on reducing desertification process in the area.

# 4.3.3: Role of Trees in Desertification Control Table (4.3.3): Frequency distribution and percentages of respondents by their opinion concerning role of trees in desertification control

Role of trees in desertification control	Frequency	Percent
Trees help in desertification control	93	93.0%
No relation between trees and desertification	6	6.0%
I don't know	1	1.0%
Total	100	100.0%

Source: Study survey 2013

During the field work of this study trees could be seen easily over houses' walls all over the villages, in addition to existence of big trees in some of schools. Women were very proud that they contributed to desertification

control. The village leaders reflected that the strong wind that used to blow became less. Hence, they have planted windbreaks around their farms to reduce wind swiftness, (Wad Nura, Gadow, Elfrahseen, Elsalama Gibly and Elkaboshab). The women had a new awareness about trees and they were proud to contribute to eradicating desertification.

# 4.3.4: Perceptions About Trees Benefits Table(4.3.4): Frequency distribution and percentage of respondents by their perception about trees benefits.

Perception about trees benefits	Frequency	Percent
Desertification reduction and sandune fixation	2	2%
Fruits and medicine	3	3%
Shade ,fuel wood ,fodder , and building pools	4	4%
Furniture ,weather cooling and beauty	4	4%
All the above	87	87%
Total	100	100%

Source: Study Survey 2013

Table (4.3.4) illustrated that the majority of respondents 87% indicated that tree benefits are desertification reduction, sandune fixation, shade ,fruits ,medicine, fuelwood, fodder, building pools, furniture, weather cooling and the beauty.

### 4.4 Home Group Nurseries

## 4.4.1:Types of Trees Produced and Planted by Women Table (4.4.1): Frequency distribution and percentage of respondents by types of trees they produced and planted

Types of trees	Frequency	Percent
Forests trees	7	7.0%
Fruit trees	5	5.0%
Ornamental trees	1	1.0%
All the above	79	79.0%
Forests and fruit trees	8	8.0%
Total	100	100.0%

Source: Study survey 2013

Table (4.4.1) indicated that the majority of respondents (79%) produced and planted combination of forest, fruit and ornamental tree seedlings, compared to 8% who raised forest and fruit tree seedlings. This exemplifies the extent of women's satisfaction with the training they received. In general village women felt that they had integrated all the basic skills acquired during training and many expressed their confidence in their newly acquired skills.

During the group discussions rural women counted many species that they produced and planted .women in 4 discussion groups (Gadow, Abu Elhasn, Elfrahseen and Elgelaia), explained that they have requested WFP staff to provide them with date palm trees as the dates have a nutritive and medicinal value beside the other numerous benefits of the tree and for their social ceremonies, but the WFP staff couldn't do so. On the other side WFP staff explained that they have paid big efforts to make this activity available starting with London communications, they raised an acceptable proposals with good offer from the Department of Horticulture in Elddamer who had agreed to provide WFP with an old date palm nursery which need rehabilitation and to provide free training course to WFP staff in date palm productions. But unfortunately correspondence with London office took a long time to clarify several technical aspects of the proposal, which ended up not having a time to implement this desired activity. (WFP staff focus group discussions, reports and evaluation 1997-2001). Inspite of this obstacles during the field survey there are a considerable number of date palm tree inside the

houses with dates. This indicates that rural women became confident and they insisted to grew their desired and preferable tree on their own expense.

# 4.4.2:Surplus seedlings Management Table(4.4.2):Frequency distribution and percentage of respondents by their management of their surplus seedlings.

Surplus seedlings management	Frequency	Percent
Give it free to the farmers to be planted as Windbreaks	7	7.0%
give it free to the relatives in other non project areas	54	54.0%
Sell it to the farmers to plant as windbreaks	22	22.0%
Sell it to women in neighbor villages	17	17.0%
Total	100	100.0

Source: Study Survey 2013

Table(4.4.2) showed that 54% of respondents gave the surplus production of seedlings free to the relatives in non project areas, while 7% give it free to the farmers. 39% sold it, either to the farmers, or to the women in neighbor villages . The result reflects the strength of social relationships and links between women and men within the same villages and the non project villages.

Women could sell the surplus seedlings and divide the profit between the group members. Although there was no good marketing in the same village as everyone produces seedlings, they could sell to relatives and friends in other villages that were not involved with the project. Nonetheless, table (4.4.3)reflected that only 39% of respondents were able to sell seedlings from their nurseries.

# 4.4.3: Women's experiences of Selling Seedlings Table (4.4.3): Frequency distributions and percentage by respondents based on their experience of selling seedlings from their nurseries

Seedlings selling	Frequency	Percent
Yes	39	39.0%
No	61	61.0%
Total	100	100.0%

Source: Study survey 2013

During the group discussions and our observations and for our surprise there are still women in 5 villages producing seedlings for sale ,the villages are Elfrahseen, Elgleiaa , Elkaboshab ,Elsalama gibly and Gadow. About 2-4 women in every village have an individual home nursery produce Limon, Moringa, Gawava and Henna(either seedlings or powder), according to demand in the village or non project villages. 61% of respondents do not sell seedlings and explained that the reasons is that the nursery production was not on regular basis, or the seedling surplus were few and there were no good market in the area as everyone produce seedlings.

### 4.4.4: Distribution of The Profit

Table(4.4.4): Frequency distribution and percentage of respondents by their distribution of the profit between the nursery members.

			Valid
Distribution of the profit	Frequency	Percent	Percent
Equally amount every patch	27	27.0%	
	27	27.0%	69.2%
Equally amount in turn	12	12.00/	
	12	12.0%	30.8%
Missing system	61	61%	
Total	100	100.0%	100.0%

Source: Study Survey 2013

Table(4.4.4) illustrated that 27% of respondents distributed the profit equally every patch while 12% distribute it equally in turns as the profit is small amount as they explain during the discussions. Most of the

respondents who sell seedlings assured that the profit contributed in improving the family living condition by purchasing some of their family daily needs, and in providing school children needs.

### 4.4.5: Home Nurseries Follow up

Table(4.4.5): Frequency distribution and percentage of respondents on how they follow up their home nursery

Nursery follow up	Frequency	Percent
Leave it to the housekeeper	34	34.0%
Allocated to the members in turns according to a schedule	66	66.0%
Total	100	100.0%

Source: Study Survey 2013

Table(4.4.5) proved that 66% of respondents divided the follow up between the members in turns according to a schedule while 34% leave the follow up to the housekeeper who have the group nursery in her house. During the group discussions women explained that they paid visits to their nursery continuously without restriction to the fixed schedule.

### **4.4.6: Planting Trees in Public Institutes**

Table(4.4.6): Frequency distribution and percentage of respondents who planted trees in public institutes in their villages

Planting trees in public institutions	Frequency	Percent
Yes	77	77.0 %
No	23	23.0 %
Total	100	100.0 %

Source: Study Survey 2013

The table (4.4.6) proved that 77% of respondents contributed with others in planting trees in public institutions in their villages, the institutions are Mosques, khalwas, youth clubs, streets, health centre's and schools some times. This also was explained during the group discussions, key informants interviews and our observation during the field survey. 23% of respondents did not contribute in public plantation; their excuses were

that the public institutions were planted by village youth or that there was no good protection for the trees from animals and children.

### 4.5 Home Vegetables Gardens

## 4.5.1:Estabishment of Home Vegetables Gardens with WFP Table(4.5.1):Frequency distribution and percentage of respondents involved in establishment of home gardens

Vegetable production	Frequency	Percent
Yes	85	85.0
No	15	15.0
Total	100	100.0

Source: Study Survey 2013

The table(4.5.1) shows that 85% of respondents were establishing home vegetables gardens ,while 15% did not grow vegetables. The group discussions explained that women who grow vegetables either grow it every one in her house individually, or as groups in houses whose owners left to the towns. In some villages women grew vegetables in agricultural land provided by their fathers or brothers. This took place in Elkaboshab, Wad Nura and Elsalafeeb villages, this was a good indicator that the men in the study area encourage women to implement the project activities, although previously they accepted the WFP to work with women on condition that the work would be inside the houses and the training will be held by female extensionists. But by the time they accepted the ideas of women working in the fields and with the communities in general.

### 4.5.2 Locations of Growing Vegetables Table(4.5.2):Frequency distribution and percentage

respondents where they grow vegetables.

			Valid
Growing vegetables places	Frequency	Percent	Percent
Inside the respondent house	60	60.0%	70.6%
Collectively in one of the empty house in the village	9	9.0%	10.6%
Collectively in one of the relative men farm	16	16.0%	18.8%
Missing system	15	15.0%	
Total	100	100.0%	100%

Source: Study Survey 2013

Table(4.5.2) shows that 70.6% of women who produced vegetables grow them inside their houses .10.6% grow vegetable collectively in one of the empty houses in the village,18.8% grow vegetables collectively in one of their relative men farm. The results indicate that the majority of women who have space and water prefered to grow vegetables inside their houses, the last group prove that the women became self confident to some extent, and the men in the village appreciate and encourage their women work ,accordingly they provide them with a piece of land to cultivate ,not only that but also they assist them in growing the vegetables and follow up with them. The vegetables types they grow are Molokhia, Rijla. Eggplant, Arugula. Okra and other vegetables. During the group discussions the respondents who did not grow vegetables explained that they either have no space in the house, have no enough water ,or have no enough time as they have many children, another group explained that they have vegetables in their family's men farms.

### **4.5.3:Perceptions Concerning Benefits of Vegetables Gardens**

Table (4.5.3): Frequency distribution and percentage of respondents by their perception concerning benefits of vegetables gardens

Vegetable gardens benefits	Frequency	Percent	Valid Percent
Diversify family meals	20	20.0%	23.5%
Increase income by avoid buying vegetables	4	4.0%	4.7%
All the above	60	60.0%	70.6%
Increase income by selling surplus	1	1.0%	1.2%
Total	85	85.0%	100.0%
Missing System	15	15.0%	
Total	100	100.0%	

Source: Study survey 2013

The table (4.5.3) illustrated that most of the produced vegetable was for household consumption. Only 1.2% of those who grew vegetables agreed that they gained money by selling surplus from their vegetables gardens. All others clarified that their benefit was in the form of diversifying family meals and/or saving money which could had otherwise being used for buying vegetables from market. During group discussions village women explained that once there is an occasion in the village (someone dies) they don't buy vegetable from the market, instead they collect it from home gardens for the comforters meals.

4.5.4: Vegetable Production Obstacles Table(4.5.4): Frequency distribution and percentage of respondents by their opinion about vegetable production obstacles.

Vegetable production obstacles	Frequency	Percent	Valid Percent
No enough space	18	18.0%	20.0
Shortage of water	23	23.0%	25.5
Lack of production inputs	5	5.0%	5.6
The pests	32	32.0%	35.6
All the above	12	12.0%	13.3
Missing System	10	10.0%	
Total	100	100.0	100%

Source: Study Survey 2013

Table(4.5.4) illustrated that 35.6% of respondents pointed out that the main obstacle of vegetable production is the insects ,25.5% believe that the water shortages is the main problem, 20% reported that lack of enough space, 5.6% think that lack of production inputs and 13.3% reported that all the mentioned reasons. During the group discussion the respondents showed how they try to overcome these problems, they could grow vegetables collectively in relative men farms to make use of space and water. Concerning the insects they said that they use Neem pesticide that they have been trained on how to make and use it during the training courses, they reported that it works to some extent, but sometimes they use commercial pesticide with assistance of their relative farmers.

### 4.6 Improved Stoves

### 4.6.1: Improved Stoves Using

Table(4.6.1): Frequency distribution and percentage of respondents involved in using improved stoves during the project time

Using of improved stoves	Frequency	Percent
Yes	88	88.0%
No	12	12.0%
Total	100	100.0%

Source: Study Survey 2013

Table (4.6.1) indicated that 88% of respondents used the improved stoves during the project time, they explained during the discussions that most of them were no longer using the woodstoves, because FNC since year 2000 is making gas cooker available in rural areas with reasonable prices to be paid in comfortable installments. There are still a considerable number of respondents who use improved stoves beside the gas cookers. Semi nomads who settle by the edge of some villages use wood stoves only (Elebiydhab, Wad Nura, Elfrahseen, Elsalama Gibli, Abo Elhasan and Elsalafeeb).

### 4.6.2:Differences Between the Improved and Traditional Stoves.

Table(4.6.2): Frequency distribution and percentage of respondents who recognized differences between the improved and the traditional stoves.

			Valid
Statement	Frequency	Percent	Percent
Yes	88	88.0%	100.0%
Missing system	12	12.0%	
Total	100	100.0%	100.0%

Source: Study Survey 2013

Table(4.6.2) illustrated that 100% of respondents who used improved stoves have recognized differences between the improved stoves and the traditional ones. During the group discussions in all surveyed villages

women explained that they were happy at that time with improved stoves as they reduce wood consumption and reduce smoke and keep the heat for longer time than the traditional ones. They wrote poems for improved stoves.

### 4.7 Spaghetti Production Programme

Upon the request of several women this component of spaghetti production was added to the project. The poorer families, who were mostly headed by widows, organized themselves into groups. Each group consisting of 3-5 women was provided with a spaghetti machine, a sack of flour and polythene bags for packing the products (WFP documents, 2001).

# 4.7.1: Participation in Spaghetti Production Programme Table (4.7.1): Frequency distribution and percentage of respondents who participated in spaghetti production programme

Statement	Frequency	Percent
Yes	30	30.0%
No	70	70.0%
Total	100	100.0%

Source: Study survey 2013

According to table (4.7.1), only 30% of respondents participated in this activity. As the respondents explained this activity was designed for widows with children. During the field work of this study (2013) women explained that all women who obtained machines used to sell spaghetti. It was the only source of income for some poor families; they stated that this was the most important impact the project had on their life. However, table (4.7.2) proved that only 16.7% of them were still producing spaghetti. During group discussions women explained that most of them stopped producing spaghetti as they failed to compete in local markets. The widows started to sell their productions for merchants in Shendi town, but again unfortunately the demand for their products became less as the quality was less comparing with what exists in the market.

### 4.7.2: Continuation of Spaghetti Production Table (4.7.2): Frequency distribution and percentage of respondents continuing spaghetti production

Statement	Frequency	Percent	Valid Percent
Yes	5	5.0%	16.7%
No	25	25.0%	83.3%
Total	30	30.0%	100.0%
Missing System	70	70.0%	
Total	100	100.0%	

Source: Study survey 2013

### 4.8 Schools' Programme

The aim of this programme was to raise the environmental awareness of pupils (both girls and boys) and train them to establish school nurseries; plant, irrigate and protect trees in their schools and houses. The project staff and VEAs with the assistance of teachers held lectures, and puppet shows in 26 schools. The pupils were trained to establish nurseries practically and to plant trees in their school compound. Trees friends' societies were formed in some schools. However this programme faced several constraints, namely: water shortage, nonexistence of fence, remoteness of school from villages and the long school vacation (3-4 months). In spite of these constraints, WFP staff encouraged schools to solve parts of their problems in collaboration with the local communities. The project provided water pipes for six schools, namely Deim Om Teraifi, Elgobba, Eltondob, Gadow, Salawa and Elfrahseen schools.

### 4.9 Project Activities Follow Up and Monitoring

### 4.9.1:Activities Follow up by the VEAs

Table(4.9.1):Frequency distribution and percentage of respondents by their activities follow up by the VEAs

Activities follow up by the VEAs	Frequency	Percent
Once a week	54	54.0%
Twice a month	24	24.0%
No fixed schedule	22	22.0%
Total	100	100.0%

Source: Study Survey 2013

Table(4.9.1) illustrated that 54% of respondents said that the VEAs paid visit to follow up the activities on weekly basis, 24% said twice a month while 22% reported that no fixed schedule for the VEAs follow up. Moreover during the field survey respondents assured that the WFP staff visited them once a month mostly table(4.9.2).

### 4.9.2:Activities Follow up and Monitoring by WFP Permanent Staff

Table(4.9.2):Frequency distribution and percentage of respondents by the follow up and monitoring held by WFP staff

Activities follow up by WFP	Frequency	Percent
Twice a month	34	34.0%
Once a month	43	43.0%
No fixed schedule	23	23.0%
Total	100	100.0%

Source: Study Survey 2013.

# **4.10** The Socioeconomic and Environmental Impact of WFP

# 4.10.1: The Project's Environmental Impact Table (4.10.1): Frequency distribution and percentage of

respondents by their viewpoints concerning the project'

environmental impact

Project' environmental impact	Frequency	Percent
Houses are full of trees	4	4.0%
Trees were planted in schools, streets and mosques	5	5.0%
Wind and dust became less	2	2.0%
All the above	74	74.0%
All above except wind and dust became less	6	6.0%
All above except trees were planted in schools	9	9.0%
Total	100	100.0%

Source: Study survey 2013

The table (4.10.1) illustrates that 74% of the respondents explained that the environmental impact of the project could be seen in the big numbers of trees that planted inside houses, in the streets, mosques, schools and other institutes in their villages, in addition they admitted that wind and dust storms became less. During group discussions women explained that on one hand they have produced plenty of forest tree seedlings upon farmers' requests so as to plant them as windbreaks around their farms. On the other hand, farmers added that they asked for VEAs support to show them how to establish their own nurseries in their farms. This indicated that the village men were appreciating and trusting the VEAs knowledge.

According to AbdelMagid (2008) the WFP has achieved so many positive results such as: harvesting the forest products such as building pools, timber, firewood, vegetables and fodder.

### 4.10.2: The project's Social Impact

Table (4.10.2): Frequency distribution and percentage of respondents by their views concerning the project's impact on their social life

Project's impact on their social life	Frequency	Percent
Meet always with the group member	5	5.0%
Exchange visits with other group, forms charity <i>sandook</i> , forms cooperatives	19	19.0%
Think of other projects needed in the area	13	13.0%
All the above	44	44.0%
All above except forming charity <i>sandook</i> and cooperatives	19	19.0%
Total	100	100.0%

Source: Study survey 2013

Table (4.10.2) explained that great majority of the respondents expressed their satisfaction with the degree of social impact created by the WFP. According to 81% of respondents the project has positively influenced their social life as they used to meet with the group members; they paid visits to the other groups in the village, they created charity sandook to share during family crises, they started cooperatives, and they started to think of projects that are needed by the community in the area (table 4.9.2). Additionally, group discussions with VEAs revealed that they were of the opinion that the project has contributed notably to rural development in the area. Furthermore, key informants interviews in eight villages pointed out to the fact that village women encouraged men to give them a chance to be responsible for water sources management including collection the specified monthly fees from each household. Also they convinced village leaders to accept the idea of sending a lady from each village to receive training in Eddammer to work as midwife in her village. Women also started to follow literacy classes organized by VEAs and other educated women in their villages.

During the discussion groups in 5 village women explained that some times once an occasion happened in the village especially funeral days, they did not buy vegetables from the market, they only collected vegetables that planted in their houses for the occasions meals.

(Elfarahseen, Elgobba, Gadow, Abo Elhasan and Elkaboshab).

4.10.3: The Project's Economical Impact Table (4.9.3): Frequency distribution and percentage of respondents by their views concerning the project's economical impact on their life

Economical impact	Frequency	Percent
Benefit from the vegetables production only	9	9.0%
Benefit from reduction of fuel wood consumption and uses of trees branches for cooking	1	1.0%
All the above	51	51%
Marketing spaghetti and surplus of the seedlings	30	30.0%
Marketing seedlings only	9	9.0%
Total	100	100.0%

Source: Study survey July 2013

In the field of income generation, some women commenced handicrafts production and participated with their products in exhibitions held in Shendi and Eddammer towns. It is evident that women are now more confident and proud of themselves than before.

Table (4.10.3) indicate that 60 % of respondents benefited from the project vegetable production as they increase family income by avoid buying vegetables from the market, in addition to reduction of fuelwood consumption by using of improved stoves in addition to the uses of tree branches from the trees planted inside the houses, while 30% benefits from selling of spaghetti and surplus of seedlings. 9% benefits from selling of seedlings only, and 9% from vegetable production only. The results indicate that the majority of respondents benefits economically to some extent from one or more of project activities. During group discussions 6 villages( Elgeliaa, ElsalamaGibli women in ,Elkaboshab,Gadow,Elfrahseen and Elgobba) explained how they promote their knowledge in other economic activities so as to increase income, such as participating in seasonal exhibition in the state with fruit and ornamental seedlings in addition to handicrafts. Also women requested the researcher to tell the coming NGOs in the future to provide them with rotating fund to buy sewing machines and small animals namely goats and poultry.

### 4.11 Project Scale Up

4.11.1: Respondents Feedback about Project Scale Up Table(4.10.1): Frequency distribution and percentage of respondents by their feedback for the project's replication in other similar areas in the River Nile State and in Sudan

Statement	Frequency	Percent
Yes	100	100.0%

Source: Study Survey 2013

Table(4.11.1)reflected that respondents 100% recommended to replicate the project in similar areas in River Nile State and in the Sudan. During the group discussions when women asked about their positive expression about WFP they stated several reasons, some of them are to raise communities environmental awareness, to compat the desert in those areas , to green the areas ,for healthy atmosphere, to increase family income ,to increase social movement and linkages ,to assist women to develop themselves and to generalize the project benefits in the other similar communities. The villages key informants expressed their appreciations to the WFP activities and to their women accountability to the project and they added that the women also became experts in writing poems to their participation and achievements with the project, and their empowerments and also their encouragement to women in other non-project villages to be like them. This expressed the communities( men and women) enthusiasm to the WFP activities.

## CHAPTER FIVE SUMMARY OF RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

#### 5.1 Results

The Main results of the study are the following

- 81% of respondents age range between 30-59 years.
- 11% illiterate, 11% university graduates.
- 65% of respondents were married.
- 77% their family size range between 3-10 person.
- 42% their family income range between 400-699 SD,42%less than 400 SD.
- 38% of respondents their family main income resource is farming.
- 46% of respondents have their own private income,61% out of them have free occupations.
- 61% of respondents pointed out that the VEAs selection to work with WFP was held by the women's union.
- 78% of respondents declared the WFP training courses in their villages were held by the VEAs.
- 93% of respondents affirmed that the training courses they involved in were useful.
- 87% of respondents pointed out that the method used for group formation was the geographical location.
- 51% of respondents admitted that puppet shows was the most effective extension tool for raising community environmental awareness.
- 73% of respondents declared that the desertification was caused by cutting down trees and overgrazing.
- 93% of respondents confirmed that trees help in desertification control.
- All respondents received training on home nurseries, tree planting, vegetable productions and improved stoves, while 68% out of them received training in income generating activities.
- 79% of respondents pointed out that they produced and planted forestry, fruits and ornamental species.

- 39% of respondents affirmed that they sell the surplus of seedlings production to their relative farmers to be planted as windbreaks or to the women in non-project villages.
- 66% of respondents confirmed that they allocated the tree nursery follow up to the members according to a schedule.
- 77% of respondents pointed out that they planted seedlings in public institutions in their villages.
- 85% of respondents admitted that they produced vegetables with the project.
- 60% of respondents confirmed that vegetable gardens benefited them in meal diversity for family and increase income by avoid buying vegetables from the market.
- 32% of respondents pointed out that pests are the vegetable obstacle, while 23% confirmed that water shortages is the vegetables production obstacle.
- 88% of respondents admitted that they used improved stoves during the project time.
- 30% of respondents pointed out that they participated in spaghetti programme, 17% out of them continue in spaghetti production.
- 74% of respondents affirmed that the project environmental impact reflected in the trees planted in houses, schools, streets ,mosques, and also wind and dust became less to some extent.
- 81% of respondents pointed out that the project impact on their social life was reflected in their meeting always with other groups members and exchange visits with other groups, forming charity sandouks, forms co-operatives and think of other needed projects in the area.
- 81% of respondents declared that the project benefits them economically as they benefit from vegetables productions, reduction of fuelwood consumption, uses of tree branches for cooking, while 30% benefits from marketing of spaghetti and surplus of seedlings.
- All respondents recommended to scale up the project by replicating it in other similar areas in the River Nile state and other similar areas in Sudan.

#### **5.2 Conclusions**

- This study has shown that the project was successful in improving women's sense of power to act against desertification problems.
- Women in rural areas have a great potential to work in forestry activities since their traditions were respected. They declared that being involved in project activities had changed their lives.
- Although the WFP was terminated in the year 2001, women in some village e.g (Elfarahseen, Elsalama Gibli, Elgobba and Gadow) are still producing seedlings that increase their income, such as Moringa, Limon, and Henna (both as seedlings or powder).
- The project clearly had an impact at all levels of the community, women gained in confidence and respect, improved their influence in community decision-making. Their determination to pursue project activities resulted in community development especially in the area of improving water services but also in increasing the number of trees planted within and around.
- The small scale and low risk income generating initiative introduced was much appreciated by the women and helped to consolidate their increased confidence and initiative.
- Water was the single most important constraint. In villages that had a functioning water tank and distribution network of pipes to all areas of the village the achievements of project activities was high.
- The elements of success of the project lie in the intensive training of well selected village women(the VEAs) who then return to their villages where they train the other women. Thus each village has 2 resource persons.
- The regular contact of the WFP staff (both qualified and with an excellent attitude) to support the VEAs as they trained the women was equally important.
- VEAs exchange visits, refreshment courses and workshops, have proved extremely useful ways by which VEAs can be motivated, enhance their experiences and increase their enthusiasm. Moreover this encouraged them to know about each other's experience and learn from mistakes through their working with rural women in their respective villages.
- The village leaders ,husbands and farmers appreciate women knowledge , their new acquired experience and encourage their participation in solving parts of communities problems with them.
- School programme faced several constraints which need to be highly considered and solved.

#### 5.3 Recommendations

According to the research results we suggest the following recommendations:

#### 5.3.1 For the Government of Sudan

- 1. The government of Sudan to attract the NGOs to work with rural communities in the country. NGOs have comparative advantages on the government, especially in reaching the poor in the remote areas and involving them with the projects.
- 2. The government of Sudan to encourage the implementing of integrated projects for development so as to meet peoples different basic needs, e.g literacy, good health services, solving water problems ,and poverty alleviation.
- **3**. The government of Sudan to solve water lack in several villages in the River Nile State especially those who wrote requests to WFP for assisting them in solving water problem as they need to implement WFP activities in their villages and to benefit from those activities.
- **4**. For effective school programmes in the River Nile basic schools water problems should be solved coupled with schools fencing.
- **5**. The Ministry of Education to consider the environmental improving as an important element to introduce practically for children in basic schools.

#### **5.3.2. For FNC**

- **1**.To activate the Women's Voluntary Forestry Association (WVFA) formed by the end of the project and registered with HAC.
- 2. To design a forestry programme (home nurseries and tree planting) in several village's new extention and new villages located south of Shendi between Diem Om Tereifi and Bannaga Elgobba, they are in a big need for tree planting and they already have water sources recently.

#### **5.3.3. For NGOs**

- 1. Income generation and self finance activities which can be treated in short runs should be included with forestry projects to reduce the administration and operation cost and secure sustainability.
- 2. The coming NGOs in the future to provide rural women in the WFP areas with rotating fund to buy sewing machines and small animals namely goats and poultry.
- **3.** The school programme to be more effective it needs to be considered as a project in its own right, to which sufficient staff, time and budget are allocated.

#### 5.3.4. For FNC and NGOs

- 1. A gradual ,well planned and realistic hand over to the local partner needs to be integrated into such project as an objective in itself ,although parts of WFP activities are still functioning but it would be much better if the women have received supports from FNC (local partner).
- **2.**The forestry projects need a relative long time to earn profits from their products, accordingly it would be better if aspiration income generating activities incorporated with the programmes, so as to motivate participants and to increase their benefits, thus integrated development programmes are much appreciated for rural development.
- **3.**The project merits replication in the River Nile State and in similar regions of Sudan.

#### 5.3.5 For Rural Women

- 1. To continue in their achievements and try to achieve more results from their activities and to implement other activities they desired during the WFP operation and the WFP couldn't implement, so as to earn income and to benefit their communities.
- 2. To keep their motivation to mobile rural women in neighboring non-project villages.
- 3. To participate effectively with their products in local exhibitions held seasonally in the nearest towns.

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