

**The Republic of The Gambia
Office of the President, Energy Division**

Renewable Energy Study for The Gambia



Social and Gender Report

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Abbreviations

AfDB	African Development Bank
AIDS	Acquired Immune Deficiency Virus
CEDAW	International Convention for the Elimination of All Forms of Discrimination against Women
CRD	Central River Division
D	Gambian Dalasi
EC	European Commission
FAWEGAM	Forum for African Women Educationists, Gambia
GBA	Greater Banjul area
HH	Household
HIV	Human Immune Virus
LGA	Local Government Area
LI	Lahmeyer International
LRD	Lower River Division
NBD	North Bank Division
NGOs	Non Governmental Organisations
PRA	Participatory Rural Appraisals
PRSP	Poverty Reduction Strategy Paper
PV	Photovoltaic
RE	Renewable Energy
RETs	Renewable Energy Technologies
SPACO	Strategy for Poverty Alleviation Coordinating Office
UNDP	United Nations Development Programme
UNICEF	United Nation's Children's Fund
URD	Upper River Division
VDC	Village Development Committee
WD	Western Division
WDC	Ward Development Committees
WEC	World Evangelical Crusade



1 Introduction

The Republic of the Gambia was affected by draught in the 1970s. This has seriously affected agriculture the mainstay of the economy and contributed in the depletion of the forest.

Like most countries in the sub – region, the majority of Gambians use fuel wood for cooking and charcoal for ironing. This has further depleted the forest cover. In 1984 the Banjul Declaration was made to protect the flora and fauna of the forest and a number of projects were implemented in response to this.

The forest problem was compounded by the electricity situation which became severe since 1977; supplies are erratic with most parts of the urban areas being with electricity for at least twelve hours a day. This has a negative impact on the economy of the country.

The Gambia government's main objective for the energy sector is the availability of a reliable system of energy supply that is efficient, affordable, sustainable and environmentally friendly. One of the proposed solutions to this problem is the introduction of renewable energy to address the increasing energy demand in the country.

With financial assistance from the African Development Bank (AfDB), Lahmeyer International has been contracted by the government of the Gambia to provide consulting services for the Renewable Energy Study for the Gambia and develop a master plan for the Renewable Energy Sector.

The Gender and Social Analysis is one of the components of this exercise. It provides an assessment of the social and gender issues for the effective utilisation of any form of renewable energy in the Gambia.



2 Socio demographic data

2.1 Population

According to the provisional results of the 2003 Population and Housing Census the population of the Gambia is estimated at 1,364,507. Of these, 687,781 are female while 676,726 are male, (50.4% and 49.6% respectively). It is interesting to note however that the Banjul, Kanifing and Brikama local government Areas (LGA) registered more males than females as compared to the rural parts of the country. This can be attributed to the pattern of migration (rural – urban) especially when most of the industries are located in the urban areas.

2.2 Ethnic groups

The provisional results of the 2003 Population and Housing Census revealed that the Mandinka form the largest ethnic group (40%), followed by the Fula (19%), then the Wolof (15%), the Jola (11%) and the Sarahuleh (9%). The rest of the population belong to much smaller ethnic groups such as the Manjago, Serer and Creole. Each of these ethnic groups has a different historical and cultural background, speak different languages and co – exist with other groups. Most ethnic groups are patrilineal, the patrilineage is responsible for political and social organisation while the matrilineage controls reproduction and fertility.

2.3 Household structure and size

While nuclear family households are more prevalent in the urban area such as Banjul and Kanifing, extended family households are more predominant in the rural areas. In the rural areas, families are modelled along the large traditional family settings. These used to be of great importance for agricultural purposes until the introduction of mechanised agriculture. For social assistance and support, co – existence of members of the extended family is still a common practice. The head of the extended family or Kabilo is generally the oldest surviving male of a founding family. A Kabilo is usually broken down into several Sinkiros or Dabada with related male members as head. This constitutes an independent production and consumption unit within the larger household.

The heads of districts, villages and households are men, a common historical ideology that define men as the protectors and guardians of women and children. Although this belief is still strong in some parts of the country, it is gradually changing in other sectors, with the argument that women's role is central to the survival of the family thus according women rights to political/social privilege and authority.

According to the Provisional results of the 2003 Population and Housing Census, the urban Local Government Areas (LGAs) experience a decline in household size while rural LGAs show an increase in average household size. On the whole average household sizes reduced from 8.9 in 1993 to 8.61 in 2003. Key among the reasons for the downward trend is the influence of western education on attitude to family size. Another reason may be the movement of large proportions of the



population from the agricultural sector to other sectors of the economy over the years, which makes large family sizes less attractive.

Table 1

POPULATION BY SEX, NUMBER OF HOUSEHOLDS LGA, 2003

Local Government Area (LGA)	DIVISION/MUNICIPALITY	Male	Female	Both Sexes	Number of Households
Banjul	Banjul City Council	18,906	15,922	34,828	6,744
Kanifing	Kanifing Municipal Council	164,054	158,536	322,410	49,564
Brikama	Western Division	197,566	195,421	392,987	45,396
Mansakonko	Lower River Division	34,689	37,857	72,546	8,474
Kerewan	North Bank Division	83,386	89,420	172,806	18,458
Kuntaur	Central River Division	38,313	40,785	79,098	7,155
Janjangbureh	Central River Division	51,698	55,103	106,799	10,244
Basse	Upper River Division	88,116	94,917	183,033	12,454
THE GAMBIA		676,726	687,781	1,364,507	158,489

Adapted from the 2003 provisional population and Housing Census Results

2.4 Population growth

The 2003 results indicate a drop in growth rate from 4.2 percent over the period 1983 to 1993 to 2.8. This may be as a result of the outward movement of refugees to their countries of origin. Due to instability in the sub region in the early 1990s, there was an influx of refugees in the Gambia during that period. With the coming of peace in Liberia, Sierra Leone and southern Senegal, those who had come to seek refuge in Gambia either returned home or were resettled in other countries. Recently the Gambia has experienced a decline in economic activity, this coupled with the increase in cost of living and the increase in alien tax, may have also influenced the outward movement of some economic migrants.

2.5 Poverty

Households in the Gambia have experienced a remarkable increase in the incidence of poverty between 1992 and 1998. Overall, 69% of Gambian households live below the poverty line. According to the 1998 poverty assessment, more than half of Gambian households live in abject poverty. The same assessment revealed that extreme poverty has doubled from 15% in 1992/93 to 51% in 1998. The incidence of extreme poverty is highest among groundnut producers, whose conditions have deteriorated since 1992 with most of them experiencing increases in poverty of between 62% and 67%. Although there is urban poverty (GBA), 62% peri urban areas and 70% in rural areas.

The same assessment revealed that LRD, CRD and WD are the poorest divisions and extreme poverty is highest in URD, followed by LRD and NBD. Poverty is increasing in the GBA. It has been confirmed that poverty increases with the



increase in household size, 68% of polygamous families live below the poverty line as opposed to 50% for monogamous families.

The 2001 poverty assessment has also revealed that women especially rural women in polygamous unions are mostly affected by poverty.

A Poverty Reduction Strategy Paper (PRSP) for the Gambia was developed and implemented between 2000 and 2005. The five development objectives of the PRSP are:

- Improving the Enabling Policy Environment to Promote Growth and Poverty Reduction.
- Enhancing the Productive Capacity and Social Protection of the poor and vulnerable.
- Improving Coverage of the Unmet Basic Needs of the Poor.
- Building Capacity for local, People Centred Development through Decentralisation.
- Mainstreaming Gender Equity, Environmental issues, Nutrition, Governance and HIV/ AIDS awareness into all development programmes

To date only 25% of the PRSP was implemented. There has not been any improvement in the energy sector, in fact the energy problem has worsened since 2002, and energy is a priority for any meaningful socio economic development to take place. The rather poor and erratic power supply will not attract most investors to the country. The continuous decline in the supply of electricity compounded by the increasing consumption of fuel wood from 2002 and 2004 has contributed towards the low economic activity, less employment opportunities and increased poverty especially in the rural areas. The process of developing a new PRSP for 2006 to 2008 has begun. Some of the areas that the new PRSP will focus on include Agriculture and Livestock, Fisheries, Tourism, Trade and Industry, The Private Sector, Infrastructure, Transport, Communication, Utilities, Energy, Financial and Micro Finance Services.



3 Access to social services

3.1 Education

The illiteracy rate is high at 77% with only 26.4% of women being literate. The further one moves in the rural areas, the higher the illiteracy rate, for example in the Upper River Division, only 2% of females above 15 years are literate. The value of formal education for all members of society has only been widely accepted recently by both rural and urban communities.

According to the 1993 Gender statistics, improved living standards at household level varied with the level of education of the mother and in the same manner, female headed households in the urban areas fared best in terms of access to adequate sanitation, energy use and use of clean water.

The illiteracy rate among women in the Gambia is 73.6 percent, (Government of the Gambia, 1993) Population and Housing Census; this makes them more of home managers, taking care of children, the elderly and their husbands. Although many adult women continue to benefit from non-formal literacy/numeracy programmes run by government, NGOs and partners, adult women remained disadvantaged. Recent efforts by Government, NGOs and partners benefit girls within the school going ages of 12 – 18. Literacy figures for men and women declines as age increases though it is higher among men than women. Under such circumstances, women find themselves subservient to their husbands powerless with little decision-making power. The scenario is different for educated women, because they are employed and contribute towards family income; they also participate in family decisions.

The value of formal education for all members of society has only been widely accepted recently by both rural and urban communities.

It is confirmed that gender inequality tends to slow economic growth and make the rise from poverty more difficult. The empowerment and the improvement of the political, social, economic and health status of women in the Gambia is a matter of concern to individuals, government and non-governmental organisations.

Concern about the situation of women in the Gambia has drawn attention chiefly to the daily threats to their lives, health and well-being, as a result of over worked and their lack of power and influence.

One issue that was and is still clear by all indications in Gambian society is the opposition at all levels to equality in sharing power and decision-making with women. While decision-making is male dominated and is largely done by men, whether in offices in the home or elsewhere, equality of opportunity is yet to become a reality.

The Gambia's development policies are based on the rationale that broad-based development in general and economic development in particular cannot be achieved without the active participation and involvement of women. Furthermore, the role of women as child bearers and nurturers in the society gives them the very important task of shaping the attitudes and outlooks of future generations of men and women at a very early stage.



With the realisation that government alone cannot meet all the challenges of development, the latter has created an enabling environment for other partners and actors in the development scene such as NGOs, to complement government's efforts. In a developing country like the Gambia, collaboration between NGOs and government has been able to focus on the development needs of the country while reinforcing each other's roles in the drive to fulfil the objectives of growth and women's access to the productive process in many different ways, and several NGOs focus exclusively on improving the status of women.

Since its establishment in 1980, the National Women's Council and Bureau has been fully supportive of strides made by local women's NGOs working towards the empowerment of women and improvement of the status of women.

The low level of female education can be attributed to economic, social, cultural and demographic factors.

3.1.1 Economic

Most families need child labour for commercial and non-commercial ventures. Girls assist their parents in taking care of the younger ones when their mothers are busy in the farms and vegetable gardens, girls also assist in selling in the markets and streets as well as in other domestic chores. For the average rural parent, these activities satisfy immediate basic needs while the benefits of schooling are long term.

3.1.2 Socio economic level of parents

This determines the educational level of children especially girls. The higher the social and economic status of parents, the more likely that they will send their daughters to school and encourage them to continue to higher level. Even though education is tuition - free and non- compulsory at the primary level some parents find it difficult to meet the cost of book rental fees, uniforms, furniture and other charges made by the schools.

3.1.3 Socio-cultural factors

Early marriages, teenage pregnancies and religion are also contributing factors. The practice of early marriage is a deterrent to the education of girls. The widely held belief in the Gambia that "the place of a woman is in her husband's home" renders formal education for women irrelevant for a lot of people. There is also the fear that exposure to education may develop attitudes and values contrary to religion and tradition.

3.1.4 Teenage pregnancy

This is another obstacle to girls' education. The envisaged risks of external influences and pressures have been noted to persuade protective parents to keep their daughters at home where it is hoped that such risks are minimal.



3.1.5 Distance

In some communities girls travel long distances of six to seven kilometres through the forest before they reach the nearest school. To prevent their girls from being raped or attacked in the bush, parents decide not to send them to school.

3.2 Interventions to improve education

According to the Education policy 2003 – 2008 there should be a school 5 kilometres radius of all communities. This is to ensure that every Gambian has access to basic education. The situation is more positive for women and children.

The education of females has positive impact on total fertility and infant mortality rates and on health, nutrition and life expectancy. Girls' education can also determine children's educational attendance and performance and can also determine the educational participation of future generations.

The government is fully aware of these facts and attaches great importance to the education of girls. Special importance is attached to the enrolment of girls in primary school.

In Education the Department of State for Education has embarked on several initiatives to increase the enrolment and retention of girls in school. The Education policy is one of the most gender sensitive policies; a girl's education unit has also been established.

An educational Trust Fund has been set up for girls. The objective is to increase girls' enrolment and retention rates in school. FAWEGAM, UNICEF and Government of the Gambia have introduced Girl Friendly schools in some parts of the country to increase the enrolment and retention rates in schools. The President's Award to the Girls' Education project provides scholarships to girls in middle and high schools to encourage parents especially those who cannot send their girls to school because of poverty.

In the informal sector, non-formal literacy and numeracy classes are conducted for adult females. These training programmes have been instrumental in enabling women to keep records and to run their business enterprises more effectively. However, more of such programmes are required.

In complementing government's efforts, NGOs such as Action Aid and the Christian Children's Fund have made significant contributions in both the formal and informal education system. The non-formal education programmes developed were developed and implemented with financial assistance from partners like UNDP. The World Evangelical Crusade (WEC) Mission, Catholic Relief Services have also made valuable contribution in this area. To further address the problem of literacy, the AfDB funded Community Skills Improvement Project being implemented by the Department of Community Development under the Department of State for Local Government and Lands, also facilitates non formal literacy and numeracy classes for adult females. In addition to literacy training, the project also addresses, income generating skills for women as well as their micro finance needs. While NGOs like the Gambia Girl Guides Association, the Gambia Home Economics Association and the Young Men's Christian Association operate skills centres for girls. Since these



are concentrated in the urban area, they need to be extended to the rural areas for a wider coverage and also to reduce migration from the rural areas.

3.3 Health

Health services are delivered at primary, secondary and tertiary levels, these are:

- Village Health Services – This is the lowest level for health service provision, providing the very basic minimum health package to the village.
- Minor Health Centres – The unit for the delivery of basic health services, the standard is 15,000 population per facility.
- Major Health Centre – This is the referral point for minor health centres for services like obstetric emergencies, essential surgical services and further medical care. The standard is 200,000 population for a major health centre.
- General Hospitals – The regional referral points, with a bed capacity up to 250 beds, they provide additional services not available at the divisional hospital level.
- Teaching and specialist hospital – This is the final referral point.

Private sector health services – The public sector is complemented by NGOs and the private sector. They are less than 20 in number, with bed capacity less than 50 and are mostly located in the urban area. The programme area addressed by the health policy includes child health, reproductive health and nutrition.

It is the wish of the Department of State for Health to make quality health services affordable and accessible to all.

Malaria continues to be the major killer. There has been an increase in HIV/AIDS. While HIV 2 is declining, HIV1 has increased from 0.6 to 1.2. Tuberculosis which was almost eliminated is emerging once again. Women are at high risk for malaria, tuberculosis and HIV/AIDS because of traditional beliefs and practices, illiteracy and poverty. Special programmes are in place to address these.

3.4 Information

This is made accessible through the print and electronic media. There is a national radio station whose efforts are complemented by community radio stations in Brikama and Basse as well as several private stations in the urban area.

Since 1997, there has been an increase in the number of newspaper companies, these has been increased to six.

There is a national television station. Since the majority of the population is illiterate, radio is the most commonly used for the dissemination of information, people especially those in the rural area rely very heavily on radio for information and there is at least one radio set in each household. Traditional means of disseminating information such as theatre and songs have also been found very useful in disseminating development related information. In this vain, a number of traditional



communicators, mostly women, have been trained in various communities for this purpose.

3.5 Electricity and other forms of energy

3.5.1 Electricity

For the urban settlements, Banjul, Kanifing and Brikama, electricity supplies were once more regular, but since 1977, supplies have been quite erratic. This is even worse now with the increase in settlements and industrial plants in these areas. Apart from the priority areas like the health facilities and air port, most areas go without electricity for at least twelve hours a day. Of the six rural growth centres which operate from a different source of supply, less than two receive electricity supply for about six hours a day, the rest are all without. However rural electrification is high on the government's agenda, work towards this is at an advanced stage in some areas like Essau and Bansang in the North Bank and Central River Divisions respectively.

3.5.2 Fuelwood

All households in the rural areas use firewood in cooking, and according to PREDAS kerosene is used by 45% of households for lighting, while 51% use candle for lighting. In the urban areas fuel for cooking varies from firewood to charcoal to gas. Fuelwood accounts for over 97% of the household energy needs, electricity 0.8%, kerosene 1.0%. Electricity consumption includes electricity derived from solar energy. Some urban households use solar photovoltaic systems to generate energy, though it is not popular because of the high cost.

3.5.3 Collection and use of fuelwood

Traditionally, Gambians have used the three stone stove for cooking from time immemorial. Fuelwood is used in these stoves. Almost 60% of households in the urban area use the three stone stove for cooking and the figure is even higher for the rural areas.

In the rural areas women and children collect fuel wood for domestic consumption; this is in the form of branch-wood from the savannah or fallen trees in the forest. The urban settlements receive their supplies of fuelwood from the rural areas, mostly the Lower River Division. In most parts of North Bank Division, the supply of fuelwood is affected by draught, as a result therefore, sometimes women and children walk up to 5 km and spend many hours gathering fuelwood.

On the other hand men collect fuelwood for commercial purposes. For these purpose the type of wood collected is referred to as split wood, tree species such the Keno are needed for this.

In their efforts to acquire split wood, the commercial suppliers resort to illegal acts like falling live trees.



Despite the fact that fuelwood supply is still abundant in areas such as Central River Division (CRD), Upper River Division (URD) and Lower River Division (LRD), it is relatively scarce in some parts of the URD and NBD where people usually resort to creative methods including digging out tree-roots and cutting mangroves to cope with dwindling supplies.

Recently there has been an upsurge of female participation in the commercialisation of fuel wood, they have dominated in the sale of branch wood mainly collected from the forests of the Western Division, and transported to the urban area for sale.

The commercialisation of fuel wood is a regular activity in the urban areas.

Demand for fuelwood increases as the population increases. In the traditional energy sub-sector, energy generation could lead to depletion of the natural resources (forests etc).

Fuelwood is subject to a number of pressures. As a result of the rapid population increase, there has been a rise on the pressure on the forest cover. The energy supply is further eroded by the need for human settlement, expansion in agriculture, over grazing and other increasing demands of the growing population.

It is estimated that fuelwood accounts for 84% of the country's total primary energy consumptions. Until 1980 when the production of charcoal from firewood was banned, both firewood and charcoal were important sources of energy, with most of the charcoal being consumed in urban areas.

3.5.4 Charcoal

To achieve its goals, the National Forest Policy 1995 – 2005 promotes and encourages the introduction of affordable alternative sources in the urban area in order to close the gap between demand from the growing population and the supply from the forest.

The production and sale of charcoal was forbidden in 1980. An estimated amount of about 20,000 tons enters the country from neighbouring countries annually, for use in cooking and ironing in the urban areas (Government of the Gambia 2004). Whereas in most parts of the rural areas charcoal from wood used for cooking is cooled and used for ironing and sometimes cooking. Because kerosene smells, the use of kerosene stoves is not popular.

Government initiated various programmes which include a ban on the production and sale of charcoal and the promotion of charcoal. In spite of these cooking fuel in the Gambia continues to be centred on wood as households substitute firewood for charcoal.

In the 1980s when charcoal was banned by government, briquettes were introduced as an alternative, this was not well accepted by households and communities because of its smoke and limited supply.

3.6 Community Involvement

The involvement of communities in the design, implementation and evaluation of projects is important for the attainment of project objectives. At the design stage



socio cultural and religious barriers can be addressed, fears will be allayed on the side of the beneficiaries, specific needs of the beneficiaries will be incorporated. Once communities have participated in the design of the project, there is the sense of ownership, an important factor for project sustainability.

The effective implementation of a programme in the rural areas based on renewable energy technologies will require the involvement of the beneficiaries from the design through the implementation to the evaluation stages in order to address any socio cultural and religious concerns of the beneficiaries and directly involve them in the implementation. This will build a sense of ownership among the beneficiaries eventually leading to the sustainability of the programme.

In Forestry for example, communities play an important role in the management and protection of forest cover, preventing the forest from bush fires and planting of new trees. Community participation resulted in positive results in the establishment of greenbelts and woodlots in the urban and semi – urban areas for landscaping and recreational activities.

The establishment of forest management committees with equal male, female and youth representation was effective in addressing the forest needs and concerns of all individuals.

This is very important since women and children are the main users of forest products for domestic purposes and the effects of the growing population on the forest will affect them negatively more than other members of the community.

3.7 Involvement of women in decision making

Land in the rural areas is administered under customary tenure, At community level therefore all land belong to families. Since men are the heads of households, they therefore possess ownership. As a result, women can have access to forest resources such as fuelwood and fruits but cannot own the forest; they cannot determine what grows there.

Due to the patriarchal nature of the society, decision making falls in the domain of men. This makes women home managers, taking care of children, the elderly and their husbands. These contributions of women are taken for granted and not valued, making them more subservient to their husbands on whom they depend. The traditional / patriarchal norms tend to limit women's participation in decision making. Under such circumstances, women find themselves powerless with little decision-making power. The scenario is different for educated women, because they are employed and contribute towards family income, they also participate in family decisions.



4 Gender roles

4.1 Gender stereotyping

During the process of socialisation, there is a lot of gender stereotyping in favour of the male gender, this special treatment accorded to boys over girls, continues throughout their lives. This is due to the cultural/patriarchal nature of the Gambian society, which gives the male gender a more domineering role over the female. For these same reasons women face much discrimination in education, marriage, divorce, decision making. Traditional practices like early marriage, teenage pregnancy, wife/widow inheritance, child betrothal and female genital mutilation have negative impacts on the socio economic status of women.

Women have very little decision-making power even regarding their health and that of their children, this impacts negatively on their socio economic status.

The Gambia has ratified the International Convention for the Elimination of All forms of Discrimination Against Women (CEDAW), although some parts of the 1997 constitution of the Gambia are in line with CEDAW, a complete harmonisation of CEDAW and the constitution is required for a full implementation of CEDAW.

4.2 Gender roles

The majority of Gambian Women are illiterate and live in the rural areas have very heavy work schedule, spending an average of 16 hours at farm work and domestic chores per day, hardly using any form of labour saving device. In most cases there is no time to engage in activities for self-improvement. This leads to the poor status of women and subsequently leading to household poverty.

To alleviate poverty at community and household levels will require reducing the rigorous task of rural women time gained as a result of these will be used to undertake income generating activities as well as participate in other development programmes i.e. adult education, health education programmes etc.

As their counterparts in the sub-region, Gambian women are engaged in formal and informal employment, domestic chores, community work, childbearing and rearing during their lifetime, their womanhood is only defined by their later role. They receive recognition for this single role and are not given the required support in it. Because there is no economic value attached to most of the work that women do, these are therefore not considered in the calculation of National economic indices.

Men form the majority in both the formal and informal sectors of employment; they are also the main producers of coarse grains groundnuts, the main cash crop of the country. Women are mostly engaged in subsistence agriculture producing rice during the rainy season and vegetables in the dry season. While most of their produce go towards feeding the family, some are also sold in the local market for cash.

In the dry season men in the rural areas are mostly engaged in community development work such as the mending of fences, maintenance of buildings, and



sinking of wells in women's vegetable gardens. A majority of men also migrate to the urban centres where they are engaged in petty trading and other more paid jobs.

In the urban area, women are engaged in both the formal and informal employment. In the formal sector their positions vary from secretaries to heads of institutions, domestic servants, petty traders, micro and small entrepreneurs. Just like their counterparts in the rural areas, they are also engaged in reproductive and community work.

The Gambia's economy is mainly agrarian providing about 70% of the labour force, 40% of total export earnings and two thirds of household incomes also come from agriculture.

In the Gambia women are the main producers of food crops using traditional tools such as the hand hoe. They are also the producers of horticultural produce with hardly any market for such; as a result there is always a glut of vegetables during the harvest season. They lack food preservation skills resulting in wastage of produce once harvested. The Food and Nutrition Unit of the Department of Agricultural Services has experimented and developed a lot of food products such as cereal grits and flour packages. Solar dried fruits and vegetables have also been produced. These innovations could boost cereal consumption and production as well as reduce spoilage in the vegetable production area.



5 Application of Renewable Energy: Gender and social aspects (Past experiences and lessons learned)

5.1 The Gambia national cookstoves project

Between 1984 and 1991 The Government of the Gambia through the Department of Community Development implemented the Gambia National Cookstoves Project. The was funded by the Danish government through the United Nations Sudano Sahalian Office and it was in response to the Banjul Declaration to preserve the flora and fauna of the forest of the Gambia. Cooking stoves such as the Furno Nufflie, the Kumba Gaye Stove and Sinkiri Kuto were introduced as a way of reducing the consumption of fuel wood. Despite the vigorous sensitisation of communities through radio and open demonstrations, the use of these alternative cooking stoves became more popular in the urban area than in the rural area, the reason may be related to cost. For example, the Furno Noflie with metal lining costs D 350 (US\$ 12.5), the one made from just clay costs D 50 (US\$ 1.8) and the Sinkiri Kuto which is a more permanent structure costs between D 3,500 to D 5,000 (US\$ 126 to US\$ 180). The recent study on household energy consumption conducted in 2005, revealed that urban households use Furno Jambar more often than the rural households 10.9% and 3.0% respectively. Furno Nufflie is also more frequently used in the urban households than in the rural households 30.6% and 11.0% respectively. Although the technology is accepted by women, the cost involved is a deterring factor especially for the rural communities.

5.2 The Gambia peace corps environmental education programme

In 1994, as part of its environmental education programme in schools and communities, the United Nations Peace Corps in the Gambia adopted the building of Kumba Gaye stoves as a strategy. Environmental Clubs were formed in schools with membership varying from 5 to 35 comprising 40% girls and 60% boys. Environmental training manuals and environmental plays were developed for use in schools. The clubs were assisted by motivated teachers and community members. Kaur, a village in the Central River Division was used as a pilot. Members of the environmental clubs were asked to calculate the amount of fuel wood consumed in their homes using the three stone stove, over a period of six months. Between D 250 to D 300 (US\$ 8.9 - 10.7), was spent by individual families on fuelwood. Following these, the new stoves were built for the families using locally available materials such as cow dung, anthill mud, grass and three stones. Over a period of six months, families made savings of 2/3 on cost of fuel wood. As a result of this, other families requested for the stoves. Members of the clubs built the stoves for families and schools, women within the village were also trained to build and repair the stoves on request. The idea was replicated in other parts of the country (Kaiaf, in LRD, and Njaba kunda in NBD). Initially the idea was well received by the women since it is cheaper to use than the three stone-cooking stoves in terms of fuel consumption. Presently with the exception of the schools, almost 90% of the communities in which the Kumba Gaye stove was introduced have reverted back to the three stone system, the reason being that the Kumba Gaye stove is slow, the



women spent more time cooking with the Kumba Gaye stove. Since the rural woman uses manual labour for most of her domestic chores, time is a valuable factor. Further investigation is needed in this area by the project implementers.

5.3 Gas and briquette

When government banned the sale and use of charcoal in the 1980s, alternative sources of energy (gas and briquette) for cooking were introduced. These were not well received, while gas is expensive for most households, the smoke of briquettes and the problem of regular supply was a problem. The use of biogas as an alternative source of energy will require the use of cow dung and human waste as raw materials. The challenges in this will be the need for constant supply of cow dung; since cattle owners use the dung as manure on their farms, alternative forms of manure will be sought. Women do not own moveable assets like cattle, as a result they will not have control over cattle dung. A lot of sensitisation will be required for individuals and communities to accept and use gas from human waste for domestic use, for obvious reasons most people may not appreciate the use of gas from human waste for whatever purpose.

5.4 Hand pump wells

Since the draught period of 1970, hand pump wells were introduced with funding from UNDP. Following the decade for International Drinking water and Sanitation, other donors such as UNICEF and EC also joined. The hand pump wells were funded by UNDP and UNICEF. These were well received by communities especially women who were relieved from the drudgery of using the bucket to draw water, another reason being, the cleanliness of the water. For effective implementation, maintenance teams were established and trained at district level, district management committees were also established to oversee the management of the village committees. Initially the village committees comprised of five men and one woman and in some areas all men. Due to financial mismanagement, women were selected to replace the men, this is so because women have proved to be better financial managers. With women, regular contributions were made and proper accounting systems maintained. All the water management committees are dominated by women. Most people have now realised the need to fully engage women as partners in development. A concept that is openly accepted in most communities of course. Following a sensitisation of the communities, the use of women in the management committees of projects can be replicated in most rural communities. The establishment and use of district maintenance teams can be replicated in any part of the rural communities. The establishment of these teams is two fold: assistance is readily available within the district, one does not have to wait for days for a maintenance team to travel from Banjul, and secondly, the trained personnel live and work in the district, thus contributing towards reducing rural urban drift.



5.5 Solar water supply systems

In 1990 – 1991, the EC funded the Solar photovoltaic Water supply systems in the Gambia. Both the hand pump wells and the Solar PV Water systems were introduced following an assessment of the communities. The need for clean drinking water came out as a key priority this was followed by the need for drinking water for cattle and small ruminants. A participatory rural appraisal methodology was used during the assessment, these involved the communities in their own assessment. It has the advantage of involving men, women and youth since the needs of these groups differ. The assessment involves participatory planning involving women, especially in this era of gender mainstreaming in programme/ project planning design and implementation. The concept of the new water projects was introduced with the overall objective of addressing the needs and concerns of all community members while at the same time allaying fears. It is important for ownership and sustainability. Women were the main focus by virtue of the fact that they are the main users of water. With technical assistance from the staff of the Department of Water Resources, they jointly identified the location of the hand pump wells and stand pipes (in the case of the solar water pumping system). The cost of one Solar photovoltaic water pumping facility is about one million Gambian Dalasis (US\$ 35,971.20), since communities cannot meet the 10% counterpart contribution financially, they contributed in kind by providing labour and locally available material such as sand and gravel for the construction of the facilities. Men, women and youth participated in this. The Department of Water Resources links the communities with existing companies for the periodic repair of the solar photovoltaic water pumping facilities, this is followed by the signing of a contract between the communities and local companies such as GAM Solar and SweGam. As part of the warranty agreement with the suppliers the facilities are maintained for a period of six years. Afterwards the beneficiaries provide the maintenance cost. Following the experience of the hand pump wells, the management committees established for the management of the Solar water pumping facilities are all female or sometimes there is only one male member. The management committees in consultation with the communities agreed on the times for the opening and closure of the taps and this is seriously adhered to.

For every cubic litre of water consumed, members of the communities contribute two Dalasis (US\$ 0.07). Some of the communities have raised as much as D 4,000 (US\$ 143) a month, this is deposited in a bank account and used for the maintenance of the facility. The management committee is responsible for the collection and management of the funds.

It is only in the Marabou dominated communities, that the women seldom participate in development activities. For religious reasons these communities believe that women should be passive. With continuous advocacy however, some changes are being registered in these areas though very small. These Marabou communities are predominant in the Upper River Division with few settlements in the other parts of the country. The communities are fairly rich when compared to others. This is because some of the male members have travelled and settled in Europe where they form unions through which they make financial contributions towards development projects in their villages.



5.5.1 Some technical features about hand pump wells and solar water supply systems

For villages with a population of 250 inhabitants (about 25 families), wells with one hand pump are introduced, wells with two pumps in populations of 500, three in populations of 1000 inhabitants (about 100 families). Solar pumping is introduced in villages with a population above 1000. In the North Bank Division for example, small villages of one kilometre distance are made to share one facility. The solar pumping facility is erected at a strategic position on a higher point.

5.5.2 Some constraints

About 25% of the pumps have collapsed because the communities did not adhere to the rules and regulations of maintaining the facilities, for reasons best known to them. Another reason may be because the project was not properly presented to the beneficiaries. This requires further investigation by the project implementation team at the Department of Water Resources.

One main constraint for the solar facilities has been the frequent thefts and attempts of theft of the solar photovoltaic panels, predominantly in communities close to the border with the Republic of Senegal. In fact there has been an attempt in all the villages close to the border. Anti theft screws were introduced as a solution to no avail, as an alternative therefore, a night watchman is hired at D 600 (US\$ 21.58) to guard each facility. During the warranty period of six years, the watchman is paid by the local company with whom the community has earlier signed a contract for repairs and maintenance, after which, the communities bear the cost paying their watchmen. This strategy has proven successful.

The initial investment of the solar pumping facility is higher but when compared to the running cost of generator-operated pumps, operating the former is cheaper. This is understood and appreciated by both the beneficiaries and the Department of Water Resources, more so the former who bears the running cost when the warranty period ends.

5.5.3 Perception of beneficiaries

Both the hand pump wells and the solar pumping facilities are highly welcomed by women the key beneficiaries because clean water is provided, little time is spent in fetching water, the additional time gained can be used for other development activities; this needs further investigation by the project team at the Department of Water Resources.

5.6 Community involvement

The direct involvement of communities in the design and implementation of projects is important for successful implementation, ownership and sustainability. This is even made easier by the existence of structures such as the Village Development Committees (VDCs) and Ward Development Committees (WDCs), through which



most projects are channelled to the beneficiaries. While the VDCs comprise of representatives of Kabilos, the WDCs are representatives of the cluster of villages which make up the ward. VDCs usually comprise seven members two of whom are women. The memberships of the WDCs are eleven, four out of which are women. The female representation in the committees vary from ward to ward and village to village based on the perception of communities about women serving in decision making bodies, such as project management committees.

In addition to working with these existing structures another useful way of involving communities is through Participatory Rural Appraisals (PRA). This has been an affective tool in engaging communities in their own assessment, jointly agreeing on solutions, who to involve, how, when and where, in the actual implementation. This participatory tool empowers communities to undertake their own assessments without the assistance of projects, it builds a sense of ownership among beneficiaries for long term sustainability. Through PRAs Ward and Village Development Plans are developed.



6 Conclusions and recommendations

From time immemorial, the existence of socio cultural beliefs and practices has determined the behaviour patterns of most Gambians. Adherence to some of these has had a negative impact on some development programmes and projects. Through the advocacy programmes of both government and NGOs, there is now a gradual change of attitude especially in favour of the education of the girl child and the involvement of women in decision making (project management committees) in most parts of the country. However a lot needs to be done in terms of increasing women's direct involvement in project/programme design, implementation and evaluation, more so for projects whose primary target are women. According to statistics, 50.4% of the Gambia's population are female, any development project or programme that does not address gender concerns in its design, implementation and evaluation may not achieve the desired results.

It is confirmed that gender inequality tends to slow economic growth and make the rise from poverty more difficult, thus the need for development projects to adopt gender mainstreaming at all levels of the life circle of projects.

The diverse socio cultural beliefs and practices that are sometimes used interchangeably with religion will affect project/programme performance if not adequately addressed.

For the effective implementation of a renewable energy project/programme therefore, the following recommendations should be considered:

A Participatory Rural Appraisal methodology should be used for the assessment of the communities. This has the advantage of bringing out the needs of the communities while at the same time involving them in the design and planning stages. It will also be a way of gradually introducing the renewable energy concept to the communities through a participatory process, while allaying any fears on the side of the beneficiaries. This will lead to the acceptance of the concept by the communities, ownership and subsequently long – term sustainability.

Through the PRA the communities will also highlight some of the socio cultural and religious issues, which need to be addressed for effective project implementation. Intensive sensitisation through the various channels of communication will be required to further create an understanding of the concept of the project among the beneficiaries and the roles expected of them in its implementation.

The Ward Development and Village Development committees are structures established at the level of the grassroots to facilitate development at that level. In areas where these community level structures exist and are instrumental, it will be necessary to use them as entry points to the target communities. These structures can also be involved in the community assessments, planning and implementation stages. In the absence of these structures or in case they are weak, direct contacts should be made with the head of the district (chief) and village heads(Alkalo) as entry points to meeting the proposed target beneficiaries.

Experience from past rural infrastructure projects (some of them in the field of rural energy) indicate that women are better managers in terms of economic and financial



regulation as well as in maintaining the social fabric. The project management committees at community level should therefore comprise about 75% female, more so when most of the beneficiaries of the RE project/programme, are likely to be women. At the project inception stage, members of the beneficiary communities should be sensitised about this.

The introduction of an alternative source of energy for cooking, mechanical power supply, etc, can serve as a supplement to the rural electrification programme and attract the establishment of industries in the rural areas, this can increase agricultural production, create employment for the rural population, increase rural incomes and reduce rural urban migration. Communities can be sensitised on some of these possibilities without making promises that the RE project/programme will provide these.

In the rural areas land is administered under customary tenure, where land belongs to families and since men are the heads of families, women cannot own land in the rural areas. The implementation of the RE project/programme will require the erection of structures, communities will be consulted through the VDCs or the village head for an allocation of a suitable area in the community for the erection of structures for the project/programme. Based on experience from the Solar PV water supply projects, a form of security system should be put in place to prevent the stealing of the materials and equipment of the project/programme.

Biogas and gasification are also an alternative source of energy for which cow dung could be raw material. Since farmers use cow dung as manure on their farms, to divert its use as a source of energy will require intensive sensitisation and the use of alternative forms of manure, if the desired shift is to be achieved. Traditionally women do not own moveable assets like cattle, as a result their access to cow dung may be limited, even where they have access, there will be a conflict of interest; men wanting to use it as manure while women want to use it as raw material for the biogas project. To avoid such a conflict of interest, intensive sensitisation of the communities on the immediate and long-term benefits of a possible biogas project/programme to the communities will be necessary.



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