

UNITED NATIONS DEVELOPMENT PROGRAM (UNDP)

« Development of a regional strategy to scale up rural agro-enterprises and systems to empower women in sub Saharan Africa »

FINAL REPORT

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October 2016**

ACRONYMS

ACP	African, Caribbean and Pacific countries (
AfDB	African Development Bank
ALR	Local Relay Agents (Agence Locale de Réalisation)
BOAD	West African Development Bank (Banque Ouest Africaine de Developpement)
CAC	Support and Advisory Unit Council (Cellules d'Appui Conseil)
CEMAC	Communauté Economique et Monétaire de l'Afrique Centrale (Central Africa Economic and Monetary Community)
CDM	Clean Development Mechanism
COMCEN	Trade/Marketing Center (CENCOM: Centre de Commercialisation)
COOPEL	Electricity cooperatives
ECCAS	Economic Community of Central Africa States
ECOWAS	Economic Community of West African States
EMCCA	Economic and Monetary Community of Central Africa
EMPE	Micro and Small Business Area,
ETAAL	Agro-Food Processing Company (Entreprise de Transformation Agro –Alimentaire)
GA	Business Group (Groupement d'Affaires)
GDP	Gross Domestic Product
GEF	Global Environment Fund
IDB	Islamic Development Bank
IFAD	International Fund of Agriculture Development
IGA	Income Generating Activity
LDP	Local Development Plan
MFI	micro finance institutions
MFP	Multifunctional Platforms
NCU	National Coordinating Unit
NGO	Non Governmental Organization
OISE	Observatory and Monitoring Evaluation IT tool (Outil Informatisé de Suivi Evaluation)
PREP	Regional Program for Energy and Poverty (Programme Régional Energie et Pauvreté)
RBA	Regional Bureau of Africa
SE4ALL	Sustainable Energy for All
SSA	Sub Saharan Africa,
TOR	Terms of reference
UEMOA	West African Economic and Monetary Union
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Program
UNICEF	United Nations Children Fund
UNIDO	United Nations Industrial Development organization

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PART I. GENERAL CONSIDERATIONS

I.THE CONTEXT OF THE MULTIFONCTIONAL PLATFORMS PROGRAMS

1.1. Background, Situation Analysis : context of the multifunctional platforms programs

In Sub Saharan Africa (SSA), factors like under-exploitation of existing primary resources, weak infrastructure, and a high poverty rate (which exceeds half of the population), have constrained economic performance and contributed to low level of human development and modest GDP growth. Those issues are among the major challenges the countries seek to address.

One the very serious challenge is the environmental issues and energy aspect: climate change is a major issue facing all countries, particularly poor communities in developing countries. Indeed, Sahel region countries are especially susceptible to climate insecurity. Though, energy is a major driver of development and one of the most effective tools in combating poverty, since it is capable of fueling income-generating activities, especially for women. So, needless to say that energy is a critical factor for the economic growth of SSA countries. Unfortunately, it is established that there is an energy gap in those countries. To fill the gap, the United Nations launched in September 2011 the Sustainable Energy for All (SE4All) Initiative which was signed by 42 African countries. It seeks to remedy the situation by setting priorities and plans in the medium and long-term development to achieve SE4All by 2030.

That is why key components of the energy policy in most of the countries are to expand electrification to the majority of rural areas and to increase access to clean energy services. These objectives will be achieved through the development of renewable energies, the use of clean fuel by households, the densification and extension of grids.

The development challenges and agricultural productivity: the agricultural sector is vulnerable to unpredictable weather and has been affected by the lack of proper infrastructure, especially related to energy and water, which has significantly constrained agricultural productivity in most African countries.

It's been acknowledged that agricultural development is two to four times more effective at reducing hunger and poverty than any other sector. Helping farm families grow more is the best way to fight hunger and poverty; this is because, when farmers can grow more food and earn more income, they can achieve self-sufficiency and build better lives. In fact, improvements in agricultural productivity create social and economic ripple effects. With increased incomes, small farmers can better feed their families, send their children to school, provide for their health, and invest in their farms. This makes their communities economically stronger and more stable.

The majority of these farmers practice subsistence farming or operate in local markets due to low productivity, lack of agro-processing skills and facilities and limited access to lucrative markets at the national and international levels. This has kept the incomes of rural people low, entrenching millions of Africans in poverty

In Sub Saharan Africa, (SSA), agribusiness and agro-industry (mostly cottage, informal enterprises) are, not only a major source of food and income, but also source of employment for a large majority of the workforce, most of whom are women. In addition, it estimated that approximately 600 million people lack access to electricity. It follows that to add value to the agricultural sector in Africa and promote global economic growth, it requires to bring together key factors that are: (i) improving the food and agribusiness (ii) access to modern energy, (iii) strengthening the productivity and women entrepreneurship.

As to ensuring specifically a positive local development, it requires a strategy that consists of diversifying sources of revenues through production of high value-added products and on increasing the productivity as well as promoting synergies between smallholders farmers particularly women and agri-businesses. In fact, women are traditionally involved in developing agri-business, along with other subsistence activities such as food gathering, preparation, cooking and fetching water. Therefore, improving food and agro-processing is a key to adding value to Africa's agricultural sector and promoting equitable economic growth, while empowering women.

Indeed, regarding women empowerment and the gender aspect, in Sub-Saharan Africa, women are vital contributors to farm work, and typically in charge of selecting food for feeding their families; yet compared to their male counterparts, women farmers are less productive and unable to reach their full potential. The reason for this gender gap is that women have less access to improved seeds and other inputs, training, and markets. This gap has real consequences: (i) households are less productive, (ii) new approaches and technologies that could increase the amount of food they grow are less likely to be adopted by women, and (iii) children in poor household are undernourished. Due to infrastructure shortcomings, including the non-availability of modern clean energy services or agro-processing equipment in rural areas, women largely rely on rudimentary tools and work in tough physical conditions to carry out agricultural activities. This situation has a direct harmful effect on girls' education and women's health. Because of their mothers' excessive workload, girls are often pressured into abandoning school early on in order to assist with domestic chores.

This is why women are the MFP program's primary beneficiaries, in order to help them lift the burden of the time-consuming and arduous agricultural processing tasks, now completed quickly by the platforms. Labor savings manifest themselves in broad improvements in standard of living, health, food diversity, and education for village children.

It is in consideration of the above mentioned situation that, in 2008, the UNDP Regional Bureau for Africa (RBA UNDP) and the Agricultural Development Program of the Bill & Melinda Gates Foundation (Gates Foundation) have agreed to collaborate in the design and implementation of a project entitled "Extending the successful model of poverty reduction and the empowerment of women in West Africa".

After five years of implementation (2008-2012), the project has had a real impact on the lives of a million people, mostly rural women and women's associations in more than 622 rural communities in Burkina Faso, Mali and Senegal. Through this partnership, people in rural communities in these countries have a wide range of decentralized modern energy services and food processing through the "Agribusiness Multifunctional Platforms (MFP)."

Over time, the MFP program got at the crossroads of multiple policy streams, making it the heart of a complex ecosystem. With impacts and dependencies on energy, entrepreneurship, water, gender, and agriculture, among other policy arenas, the MFP is embedded within a wide array of related development issues.

UNDP cooperation with Bill and Melinda Gates Foundation has been a catalyst at national level as well as in many other African countries for following reasons:

- Firstly, for the progress of those countries, by strengthening the efforts of governments and the support from various bilateral and multilateral partners, private sector and microfinance institutions, in support of agribusinesses of rural women.
- Secondly, a number of West African countries are taking steps to improve agro-food processing enterprises and develop plans to ensure universal access to agribusiness and to modern energy services in rural areas.

A number of West African countries are taking steps to improve agro-food processing enterprises and develop plans to ensure universal access to agribusiness and to modern energy services in rural areas of the country. At

the national level, the programs have contributed to the promotion of the White Paper of ECOWAS on expanding access to modern energy services.

Other African countries took similar measures by engaging in the business model of rural-based multifunctional platforms. As a result, to date, around 4 000 agribusiness MFP in thirteen (13) countries, are serving more than four million people in rural Africa (UNDP, 2014). They have benefited from the experience and knowledge from the best practices in the field through the strategic and financial support from UNDP. These rural agribusinesses specifically target women.

Experiences and technical and technological innovations have demonstrated that, improving more commercial MFP agro-enterprises will strengthen the sustainability of impacts in rural sub-Saharan Africa. This will make it a more attractive agribusiness, powered by renewable energy. This means that the expansion of the introduction of renewable energy will increase the benefits to environment and climate sustainability.

1.2. Justification and objective of the mission

It is in consideration of such a background that UNDP and the Gates Foundation have proposed, drawing on the experiences and knowledge gained from the implementation of MFP programs, to develop an up-scaling strategy of sustainable rural agribusinesses and reproducible across West Africa and other countries in sub-Saharan Africa. It is about expanding the successful model of poverty alleviation and empowerment of women in the target areas, taking into consideration economic, social and environmental aspects.

In reference to the TOR, the mission is to develop: (i) a regional strategy on scaling up successful agribusiness (MFP), and (ii) women's empowerment model in sub-Saharan Africa, both in regional aspects (in terms of coherence and coordination) as well as in its national aspects, in particular the support for the design and implementation of real sustainable national initiatives.

II. THE METHODOLOGY

The necessary data collection occurred primarily from two sources that are firstly the literature review, and secondly interviews with stakeholders and partners. These two sources are supplemented by personal observation of the Consultant at project sites.

The literature review

From the start of the mission, the Consultant has reviewed the existing relevant program documentation, and those related to the national and sub-regional context.

Interviews and visits to key partners and key stakeholders

The consultant met with the key stakeholders (current and potential) such as:

- Those involved in program implementation, including public administrations (the key ministries in selected countries), current and donor agencies and other technical and financial partners (UNDP / PREP, Member States, ECOWAS, ..), implementation managers, coordination and supervision of MFP programs, implementing agencies and other contractors.
- The target beneficiaries and people affected by the program, the women groups and the direct and indirect beneficiaries of the program, for them to express their needs and concerns, their opinions of the program and make substantial suggestions. Also in this category, the government officials and the various intervening agencies

and the implementation structures. Their role in the implementation of the program was also analyzed, provided they are affected by the program.

- The direct addressees of the study: This includes people specifically in position to make a decision relating to the program, such as donors, UNDP programs counterparts, the Bill Gates Foundation, Regional economic organizations, etc.

Throughout the interviews, the consultant has favored a participatory approach, which facilitated the integration of the opinions and arguments of the various key players such as namely: groups target beneficiaries, support structures, policy makers and development partners involved in the program. This approach has helped ensure not only the merits of the proposed measures, but also their durability.

The information and the data collected were then triangulated to verify their accuracy, improve reliability, and ensure valid results.

III PRESENTATION OF THE MFP PROGRAM

3.1. The concept of multifunctional platforms (MFP)

The MFP is a socio-economic development tool to be used by local operators, mainly rural women to facilitate access to modern energy services for rural populations. Also the concept of MFP includes both: (i) technical and technological aspects, (ii) an approach based on the mobilization of endogenous local expertise, in charge of social engineering and the support of the development of socio-economic activities around the MFP, (iii) a windows of micro rural enterprises development opportunities.

The concept, which is now known as Multifunctional Platform (MFP) was originally designed in the 1990s as part of a regional program UNIDO, IFAD Mali and Burkina Faso. Mali was the first country to have initiated a platform approach in Africa. In 1997, UNDP and the Government of Mali began to support existing platforms, recognizing the potential of the concept as a tool for development and fight against poverty for all rural communities.

The MFP program was initially designed to provide access to energy in villages that had none (or, at least, limited access). The goal was to reduce the time and energy devoted by women to repetitive and non-productive domestic tasks, such as the husking and grindings of grains, and to render their daily tasks less taxing. MFPs are widely used by the women in the villages where they are set up.

Over time, the MFP has evolved to include a mini- electricity network and a water distribution network, or an irrigation system with the help of an electric water pump (depending on the needs of the communities). It can also operate other equipment for small income generating businesses.

Thus, MFP has become a pre- rural electrification instrument. The configuration of the MFP is flexible and can be adapted to the specific needs of each village, which justifies a participatory feasibility study prior to its installation.

In terms of technical equipment, the multifunctional platform is a frame on which is placed a simple and robust engine that provides mechanical energy to different modules such as a sheller, a grain mill, an extractor of vegetable oil, a welding station, etc. This is how it contributed to create rural wealth in order to fight effectively against poverty. The MFP is considered to be a drive for economic and social development in the communities.

To present, thirteen countries have been running MFP programs, of which three countries (Mali, Burkina and Senegal) are fully fledged national programs of over 1000 villages. Following the successful implementation in the pioneer countries (Mali, Burkina Faso, Senegal, Guinea and Ghana), the MFP concept has been scaled-up in eight

other countries (Niger, Togo, Mauritania, Chad, Guinea Bissau, Benin, Madagascar and The Gambia) where the concept is piloted.

Six countries (Burkina Faso, Mali, Guinea, Niger, Mauritania and Togo) have successfully piloted renewable energy powered systems, including Pure Vegetable Oil (Jatropha and Neem Oil), Solar, Pico-Hydro and Biogas in 344 villages, mainly through hybrid systems. For example Biogas/Diesel MFPs implemented in Mali resulted into over 45% of fuel cost saving. The utilization of renewable energy (RE) sources to power MFP is further explored with 9 biogas implemented in Mali and a hydro MFP is operational in Guinea. Those renewable energy powered MFP enterprises are expected to provide a wider range of modern energy penetration and to inform UNDP and other development partners' future scaling-up strategies.

Six other sub-Saharan countries (Côte d'Ivoire, Burundi, Gabon, Central Africa Republic, DRC and Sierra Leone) have expressed interest for support from UNDP for the development of similar MFP based initiatives. Furthermore, the SE4All national Action Agendas and Investment Prospectus has considered MFP as part of universal energy access in many Sub-Saharan African countries.

3.2. The objectives

The overall objective of the program is to consolidate and expand access to affordable and decentralized energy services provided by MFP as a mean of increasing incomes and improving access to basic social services, for rural populations, especially women. Through sustainable rural access to electricity, it will do the following:

- Reduce the drudgery and the working hours of women's unpaid work (housework and food production);
- Reduce economic gaps between advantaged and disadvantaged groups (eliminate potential conflicts that may result from differences between the standards of living);
- Contribute to human development through sustainable access to modern energy services and poverty reduction.

More specifically, the overall objectives are:

- Ensure, by promoting MFP business in rural areas, intensification of agro-processing activities and market development of agri-business products chains;
- Stimulate entrepreneurship of rural women in transformation and processing of food with the energy service of the MFP;
- Contribute to improve the accessibility and quality of basic essential services for the provision of energy services MFP community infrastructure (health, education, water, public place ...);
- Improve the technical performance of the MFP and develop alternative of fuel technology through an effective, sustainable and environmentally friendly management;
- Intensify and expand the development of technical, organizational and institutional stakeholders for effective implementation and enhance ownership, in view of the sustainability of interventions;
- Increase and diversify access to energy services through multifunctional platforms in rural areas;
- Develop productive uses of energy services provided by the MFP (Income generating activities development, creation of real wealth);
- Strengthen the capacity of women, artisans, entrepreneurs, local authorities (rural Communities, Regional Development Agencies, etc.);
- Support the introduction of water systems and pre electrification in remote areas of rural areas to improve the quality of basic social services to offer infrastructure to rural populations;
- Promote alternatives to diesel and contribute to the provision of rural households own domestic fuel alternative to wood energy;
- Develop a national capacity to control, monitor and efficiently manage the MFP business;

- Develop research and technological innovations for greater diversity of services offered by the MFP and reduce costs and negative effects on the environment.

Indeed, the cross-cutting impact is the real strength of the MFP program.

3.3. Program beneficiaries

The main beneficiaries of the program are:

- Rural women groups, direct clients, rural households;
- Private operators that are installers and manufacturers artisans, craftsmen welders, battery chargers, traders and potential developers;
- Users of MFP including for example social infrastructure, customers artisans, rural households;
- The civil society and consulting firms including NGOs, associations, literacy operators;
- Partner institutions and programs, or local authorities, consulting support structures for companies, microfinance institutions, training centers, research and development institutes, sectoral programs and projects of the ministries concerned.

IV. ASSESSMENT OF THE PAST EXPERIENCE

4.1. THE RELEVANCE OF THE PROGRAM

With the development policies and strategies of countries

The MFP program is generally in line with the priorities of the national policy and development objectives at national and sectoral level (poverty reduction strategy paper, economic growth accelerated document, etc.). The degree of compatibility of the program, products and expected effects are very high with national policies and priorities and with the needs of intended beneficiaries (women, rural communities, vulnerable zones, etc.).

With the beneficiaries

The program is in line with respect to the objective of increasing the contribution of women and youth in economic and social development. It also responds appropriately to the real needs of rural and suburban areas in modern energy services, to boost the local economy. In addition, it has an effect on the creation of employment and income for vulnerable groups (women and young in rural area), while contributing to the reduction of disparities and development asymmetries.

With key partners such as UNDP and the Gates Foundation. The rural agro-enterprises model run by women is consistent with their guidelines and commitments:

- **The Bill Gates Foundation:** the objective of the Agriculture Development of the Gates Foundation Program is to "reduce hunger and poverty for millions of poor farming families in sub-Saharan Africa and South Asia" in order "to increase sustainable productivity for small farmers".

-. **UNDP:** The regional program incorporated gender considerations -equality across the focus areas. Gender equality featured prominently in the design of projects and programs. The UNDP Strategic Plan (2014-2017) aims to promote "growth and inclusive and sustainable development, integrating production capabilities that create jobs and livelihoods, especially for the poor and minorities."

With the African Union: The program objectives are fully in line with the commitment of the African Union to "Growth driven by agriculture as the main strategy to achieve the objectives of food and nutrition security and

shared by increasing agricultural productivity prosperity of at least 6% per year and increasing public investment in agriculture to 10% of national budgets per year "and the theme on" empowerment and development of Women in Agenda 2063 of Africa ".

With the United Nations: *The Initiative "SE4ALL"*

The program also meets the objectives of the global initiative "Sustainable Energy for All (SE4ALL)" of 2011, in which 42 African countries have signed and which focuses on promoting the use of renewable energy and access to modern energy services.

The tool MFP contributes to the achievement of the three objectives of SE4ALL, namely, universal access to modern energy services, improving energy mix to favorable ecological balance and improving overall energy efficiency. The program also addresses the global concerns on climate change that focus on promoting the use of renewable energy, access to modern energy services and reduce emissions of greenhouse gases.

SDGs targets (by 2030). The relevance of programs is proven with respect to following objectives in particular:

Goal 1: Eradicate poverty in all its forms and everywhere /, completely eliminating extreme poverty worldwide.

At least halve the proportion of men, women and children of all ages living in poverty in all its aspects, as defined by each country.

Goal 3: Health and well-being,

Goal 4: Education,

Goal 5: Achieve gender equality and empower all women and girls / strengthen the use of key technologies, especially information and communications, to promote the empowerment of women.

Goal 6: Clean water & Goal,

Goal 7: Ensure access for all to reliable, sustainable and modern, affordable,

Goal 8: Promote sustainable economic growth, inclusive, sustainable, full and productive employment and decent work.

Goal 10: Reduce inequality.

With African Economic Community sub-regional and regional

The relevance of the project is underlined by the fact that all 15 countries of the Economic Community of West African States (ECOWAS) have committed, through their recently adopted *Regional Policy for Expanding Access to Energy Services for Rural/Peri-urban Populations*, to providing their rural population with universal access to mechanical power for agro-processing and other energy services over the next future.

This Regional White book retains three essential pillars: Access to electricity, Access to modern fuels and Access to the driving force. The multifunctional platform is part of the third pillar. The member countries have formulated programs that constitute the political and strategic framework of national implementation of the regional White Paper while aligning on Sustainable Energy for All Initiative. "

It is the same for the "Energy White Paper ECCAS and CEMAC" adopted in 2015 and aims "To ensure that by 2030, universal access to modern energy services for the people, for the emergence of our region". Prospective and consistent visions have been developed in the national plans in connection with the ECCAS and the CEMAC.

The White Paper reflects the ambition of Member States to achieve the objectives of the initiative "Sustainable Energy for All" (SE4ALL) in 2030. The energy strategy is mainly based around the Power Pool of Central Africa responsible for the implementation of energy policy.

4.2. EFFICIENCY

The efficiency of the MFP programs has been hindered by some constraints and weakness during the implementation. Some of them have been identified and measures to mitigate them are suggested accordingly to increase the efficiency and improve the overall performance of the program.

With regard to financial aspect

- The resource allocation mechanism does not always allow a good and full implementation of annual work plans,
- Insufficient financial resources and the irregularity of their provision with the following consequences: (i) irregularity in the monitoring and support of the villages; (ii) downsizing of the project management team; (iii) interruption of the installation of some platforms; (iv) delays in the implementation of project activities,
- The various obstacles and other difficulties concerning the access to credits,
- Low profits compared to operating expenses, primarily due to (i) the limited number of customers, (ii) high level of expenses because of the cost of gasoil (diesel engines) and in some cases the high cost of repairs, cost due to the frequency of breakdowns,
- The delay in availability of funds and the delay in the mobilization of resources.

Ways to minimize

- Fastest validation and work plans in order to reduce the delay to resources provision,
- engage in an effective mobilization strategy and readjust the objectives and results of the program based on available resources and also get partners' commitments before the programming of activities,
- Develop business plan templates as advocacy support from MFIs, mobilize sinking fund domiciled in the institutions of decentralized financing, and negotiate partnership agreements with microfinance structures to facilitate access to credit,
- Intensification of advisory support to promoters of MFP companies to help improve the management and thus the profitability of MFP,
- The allocation of greater resources, adequate and on time, in consideration of the performance requirements and good program performance in achieving its strategic objectives,
- Mobilizing financial partners for a release in good time and resources also pay special attention should be paid to monitoring the financial implementation in general and in particular the operating expenses.

Operational aspects

- Inadequate quality of MFP equipment,
- The administrative burden in terms of procurement,
- Difficulties in supply of biofuel,
- Limited ownership of tools and methodologies of the program by the operators,
- Poor management of the conditions of sustainability issues, empowerment and sustainability of enterprises MFP,
- Inadequate capacity of partners in the field (communities, technicians, etc.) to comply with the pace of monitoring and implementation,
- Weak capacity and inadequate means of executing agencies (logistics for ex.) and in some cases motivation problem of the facilitators.

Mitigation

- Ensure the quality of technical requirements and rigorous control on delivery of the equipment,
- Develop and implement a plan of ownership and for upgrading based on lessons learned from previous phases and intensify actions to strengthen capacities of MFP operators and technicians,
- Expand the network of technicians in charge of installation in close partnership with the business chambers and technical training centers,
- Be more rigorous and transparent in the selection of support structures, strengthen their institutional capacity and ensure a human resources motivation.

4.3. EFFECTIVENESS AND IMPACTS OF THE PROGRAMS

The effectiveness of the different national MFP programs varied from one country to another. But generally, achievements have been quite significant compared to the respective ambitions.

The various and numerous assessments as well as information gathered from stakeholders and beneficiaries show a number of qualitative and quantitative changes quite remarkable due to the implementation of MFP programs. The positive impacts are diverse and vary. The impact and achievements of the MFP program is the adequacy of the approach that is based primarily on three main elements:

- i) provided rural or suburban communities with a simple technology to provide energy services tailored to the needs of populations;
- ii) the implementation of a social engineering layout that ensures ownership of MFP by the beneficiary communities;
- iii) the effectiveness of the mechanisms and implementation arrangements, including the approach based on delegating the activities through NGOs recruited as Local Implementation Agencies or Support Council Unit.

The introduction of the multifunctional platform in villages has led to considerable changes in the living conditions of the beneficiaries, particularly those of women. The enthusiasm shown by the beneficiary communities reflects a broadly positive overall effect on a large number of people, thanks to the income from income-generating activities (IGA) that helped improve the living conditions of communities.

It is estimated that globally, over 4 million rural people, notably women, are benefiting a range of energy services from close to 4000 MFP enterprises performing in thirteen sub-Saharan countries, for processing local crops, lighting households and public places (health center/school), pumping drinking water and providing energy for handicraft and local private entities. Some of the other impacts include the following:

Women's empowerment and time saving (the establishment of time saving)

It is generally established a free time gain for women ranging from 1 hour 30 minutes to 3 hours / day, which therefore means relief from the drudgery of their domestic tasks such as milling, husking, etc. Analysis of the allocation of women's time between their various activities shows that the result of time savings was reallocated to income-generating economic activities, leisure and rest, care of children. The more detailed analysis on the impact boys / girls shows that the program greatly increases the probability of being in school for boys than for girls, increased hours of agricultural work in their home or in their collective farm field. The benefice is therefore about improving the quality of life. The members of women's groups have acquired skills in managerial and entrepreneurial techniques which contribute to ensure the technical and economic viability of the platform. In addition, other impacts:

- Empowerment of women through the establishment of women's management committees has led to enhance management and leadership skills,
- Increased revenue and financial capacities to create additional income including diversification of economic activities,
- The acquisition of new technical skills, resulting in strengthening the role of women, they also develop a sense of initiative and personal ambition that leads to increased social mobilization and female leadership,
- Awakening and awareness of women who are now able to make their contribution to the development of the community; it is noted also a change of mentality.

Better access to social services

• Health Sector (SDG 3): The income generated through the use of platforms by the beneficiary groups helps with the access to health care for children, thus contributing to reduce infant mortality. The MFP contributes to the

reduction of malnutrition in infants and children, as well as reducing the costs of health care for women by relieving a portion of their workload and increasing their income. It can also improve health conditions through access to clean drinking water (SDG 6). The presence of a MFP with power grid will provide electricity to health center, improving the quality of care due to the possibility for the conservation of medicines and vaccines.

- **Education Sector (SDG 4):** MFP agri-business provided to women other ways to perform the types of tasks usually assigned to girls. This initiative helps to register a higher proportion of girls in primary education, with lower dropout rates and higher completion rates of primary education, particularly for girls. This means the high correlation that exists between the time saving services offered by a MFP and increasing children's opportunities for education, particularly girls. The regular supply of light thanks to the electrification of localities improved the working conditions of students. Furthermore, attendance at literacy centers for women is facilitated by the easing of domestic work, also teachers are more motivated and for students, there is an increasing attendance rates and improved school performance.

The results for education show that thanks to MFP, there is an increase of the likelihood of enrollment and reduction of the class repetition, though the impact on dropouts is statistically insignificant. The impact of MFP on the income-generating activities of women reveals a very strong effect, both in terms of their engagement in other type of activities and in the same time, they are still able to stay devoted to MFP management.

Income generation

The beneficiaries and other stakeholders demonstrate some improvement in their incomes in particular through:

- Income-generating activities run by women (management of a solar energy operated freezer, farming with water supplied through a photovoltaic solar pump, juicing making, etc.),
- the operators and various stakeholder groups in rural areas of intervention have increased capacities and got opportunities to generate income,
- the MFP has proven to be a financially viable unit that provides opportunities to creations SMEs
- the creation of direct and indirect jobs,
- a stock taking study report on “MFP and Employment” completed by Mali in 2011 revealed that at least 27900 jobs, were created by the MFP project,
- The addition of jatropha has helped the diversification of income through the generation of jatropha soap and --other by-products.

Improving living conditions of communities

The program has demonstrated its positive and significant contribution to the fight against poverty, in particular through improving food security of target groups. It has improved also the population's access to reliable, sustainable and modern energy services in rural and suburban areas; thus producing a multiplier effect in terms of acceleration of local development. The MFP program achievements have a socio economic impact in rural areas, particularly among women's groups. Other specific examples of the program's impacts are:

- Diversification and enhancement of local production, and an increase in income and business opportunities as well as an improved quality of processed products,
- Vulnerable populations, particularly women and young people have the tools and can master the techniques of production, storage, harvesting and processing,
- The contribution to local development and emancipation of the beneficiaries including strengthening social cohesion,
- The living conditions of the communities have improved thanks to a large variety of IGA,
- Slowing rural migration to cities of young people because of the improvement of the living environment and job opportunities,
- The strengthening of technical capabilities. In fact, the program has succeeded in developing and providing training on manufacturing capacity, repair and maintenance. As a result, the trained local

technicians and artisans (electricians, blacksmiths, carpenters, mechanics, masons) are better equipped for their work and have the basic tools,"

- Acquisition by local operators of implementation and management capacity of core activities through skills transfer and dissemination of methods,
- Access to media communications (telephone) and audiovisual (television) thanks to available energy,
- Increased interest of stakeholders in the implementation of the platform program.

The enterprise platform has proven to have a multiplicative effect on community well-being through the various services.

Environmental protection

It may be noted in particular the following results:

- The reduction of greenhouse gas emissions resulting from the shift to renewable energy, thus reducing the negative impact on the environment from burning diesel in the MFP.
- The direct benefit of jatropha oil on the community, given that Jatropha oil is CO₂ neutral, thus a better health for the operators due to decreased inhalation of harmful fumes and subsequent potential for respiratory disease.

Constraints and challenges to the effectiveness of national MFP program

The various national programs face real challenges, constraints and other difficulties during their implementation, not to mention the possible risks that could compromise their performance in achieving expected results. As a result, the effectiveness of the program has been negatively affected.

a). Constraints to overcome

The implementation of the various national programs revealed various constraints, weaknesses that must be considered in the development of new upcoming phases.

Policy and institutional environment

- Political interference in the delivery process of selecting implantation MFP,
- Insecurity in some areas of intervention,
- Insufficient consideration of national and sectoral policies for the strategic partnership development,
- Changing priorities and national policies to the detriment of rural populations in areas of extreme poverty.

Ways to minimize

- Neutralize interference with the application of the strict criteria and guidance in addition to advocacy and sensitization,
- Ensure transparent communication with the target communities,
- Concentrate the activities and consult with administration and authorities before the installation of MFP.

In terms of operation and management

- Illiteracy of the beneficiaries is a limit that affects the transfer of skills especially the use of certain tools and managing/operating the MFP. Illiteracy is an unfavorable factor for the proper management of MFP. Nevertheless, efforts are being made to better train those with weakness in literacy,
- Limited performance of the monitoring and evaluation system most of the time due to non- reliability of some data.

Ways to minimize

- Focus on literacy sessions including in local language,

- Make arrangements for support and advice towards a compliance with the guide and methodology of the monitoring and evaluation system.

On the technical aspect

- The lack of routine maintenance and in some cases, insufficient technical competence of the miller,
- Occasional failure may be due to the poor quality of equipment that has something to do with the tender procedure,
- Issue with the availability of jatropha oil, which is a major constraint for the popularization of the use of bio-carburant.

Ways to minimize

- Use continuous training of artisans/technicians, and update the training whenever necessary,
- Boosting the process of installing shops of spare parts supply,
- Ensure the equipment specification in tenders and ensure control during delivery and in any case, require from the supplier of the equipment a minimum guarantee.

Sustainability of companies MFP

- Insufficient ownership of women in charge of managing the MFP,
- Insufficient economic viability of MFP (limited profit),
- lack of sustainability strategy at the level of local support structures,
- Low involvement of Municipalities in some cases despite the effective decentralization.

Ways to minimize

- Ensure the mobilization of local operators and other local stakeholders, and promote the networking,
- Focus on the support component for entrepreneurship and business development with an assigned time (about 2 years or so) for the women to become autonomous,
- Promote the establishment of a body for dialogue and exchange to promote sustainability strategies at local level,
- Encourage the Municipality to fully play its role as a local decentralized relay and local authority.

b).Risks/Challenges

In some circumstances, villages lack the capacity for self-finance or payback loans. Income generated from the MFP is rarely reinvested in expanding the MFP but is either distributed to villagers or used to finance small commerce loans. Loan products and terms are not always amenable to village needs (very short loan terms, 6 months, issues of collateral available to qualify for the loan, etc.).

Increased diesel prices: With the cost of fuel representing somewhere between sometime up to 50 to 70 percent of operating costs, any sustained increase in fuel prices poses a risk to the financial sustainability of the agro-enterprises.

Farmers' vulnerability to climatic variability and extreme climate events: Climatic hazards, like droughts, hamper the profitability of the enterprises.

Initiatives to address these challenges include:

- Fully engage with financial intermediaries to provide medium to long-term finance for capital investments in production and business growth for entrepreneurs in the solar, wind and biomass systems, and soft loans to end-users;
- Mainstream gender into policies and programmes and evaluate effectiveness;
- Opening up the energy sector to the private sector with attractive incentives;
- Capacity building of technicians and artisans in solar installation and maintenance in the installation and maintenance of solar and other renewable energy systems;

- Sensitization of the communities to the new technologies;
- Integrate climate change into programmes and projects and evaluate effectiveness;
- Organise regular inter-Ministerial and Inter-Agency Meetings to review SE4ALL policies, programmes and projects;
- As a measure, initiate crop reserve stocks to provide grain security.

Table 1 Summary Project risks and mitigation measures

Risk	Description/Mitigation	Residual Risk (low, high)
Institutional capacity risks	Organise regular inter-Ministerial and Inter-Agency Meetings to review SE4ALL policies, programmes and projects. Mainstream gender into policies and programmes and evaluate effectiveness Close coordination, regular communication and delegation of responsibility will ensure continuous active involvement of key policy/institutional counterparts and keeping up with institutional capacity building	low
Technology risks	Sensitization of the communities to the new technologies Execution of activities to be implemented will be carried out with the support of experts/companies with demonstrated and successful past experience	low
Increased/fluctuating? diesel prices	With the cost of fuel representing somewhere between sometime up to 50 to 70 percent of operating costs, any sustained increase in fuel prices poses a risk to the financial sustainability of the agro-enterprises. Promote the use of renewable energies like solar, bio-fuel, hydro-electricity, biomass, etc.	high
Farmers' vulnerability to climatic variability and extreme climate events	Climatic hazards, like droughts, hamper the profitability of the enterprises. Integrate climate change into programmes and projects and evaluate effectiveness. Initiate crop reserve stocks to provide grain security.	high
Financial risks	Villages lack the capacity for self-finance or payback loans. Income generated from the MFP is rarely reinvested in expanding the MFP but is either distributed to villagers or used to finance small commerce loans. Loan products and terms are not always amenable to village needs. Fully engage with financial intermediaries to provide medium to long-term finance for capital investments in production and business growth for entrepreneurs in the solar, wind and biomass systems, and soft loans to end-users. Engage in a very active resource mobilization with potential partners	high
Private sector participation	Open up the energy sector to the private sector with attractive incentives.	medium

	Capacity building of technicians and artisans in solar installation and maintenance in the installation and maintenance of solar and other renewable energy systems.	
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PART II MFP UPGRADING STRATEGY

It should be noted that, whatever the characteristics of the model are considered successful, in the reality, some adjustments may be needed to adapt to the realities of national contexts in order to produce effective results.

I. INNOVATION AND EVOLUTION OF MULTIFUNCTIONAL PLATFORM CONCEPT

While it is true that the original concept adequately suited well to the initial objective, limits and several constraints have subsequently appeared. Thus the objectives, the components, the structure and may other elements have changed over time thanks to innovative solutions with real positive impact on the work and on the status of women. During this period of research and development, MFP has been modified based on practical experience with operators of the unit and also on the results of technical research. The installation of the unit, generally composed of a motor and a mill, has become a "platform" comprising (i) various agricultural processing tools, (ii) equipment using mechanical energy produced by the same engine for income generating activities (iii) a system for the distribution of drinking water and electricity.

Since then, the concept kept evolving and MFP is a key element in the local development interest. To prove it, one should consider the multitude of installation requests by people and African countries already equipped with MFP. It is estimated to date that there are close a total of nearly 4 000 installed. The reasons for the success and notoriety of the program most likely result from (i) its relevance and economic importance in relation to the growing needs for modern energy services in rural and peri--urban areas, which, however, conceal significant economic potential still largely under exploited; (li) effective multi-sectoral nature of the MFP (gender, rural development, energy and water, industry, education and training, employment, etc.); (lii) its original multi-functionality. These factors are the reasons why the demand is so high not only in communities and countries that are already equipped, but also in countries without MFP.

Platforms programs are part of several central development issues:

- The first issue is the access to energy in rural areas where electrification is still poor;
- The second issue is that of gender. MFP customers are mostly women. Access to these services enables women to reduce the time spent in food processing;
- The third aspect is community related. The request to install a platform comes from the villages, it must be carried by a group of women. MFP provides community services and have consequences on individual persons (women, children, managers of IGA);
- Ownership of the infrastructure by the beneficiary community appears throughout the project cycle. The appropriation also involves financial contribution, or in the form of work in the construction of the place to house the engine.

It is on the basis of these considerations the decision was made to scale and upgrading the MFP.

To present, it is estimated that there are close to 4000 MFP installed in 13 countries of sub Saharan Africa. 344 of them are powered with renewable energy such as solar, biogas, jatropha oil which account for approximately 5 % of the total MFPs installed.

The upgrade strategy is to adopt ways and means to overcome the initial model considered obsolete to a more formal and structured model and become a real business or micro-industry, as profitable and independent as possible. More specifically: how to ensure in particular the contribution of the following added values: (i) improving the productivity of women's work, (ii) give to women the opportunity, through the MFP, to produce better products in terms of quality and consistency, (iii) provide an opportunity for women to produce and sell products of greater value for a much wider market (iv) and especially to promote and ensure the empowerment of women.

The strategy is closely inspired by implementation experiences in different countries, particularly the following:

Lessons learned.

- The implementation of activities related to access to energy services in rural communities requires the presence of a number of local artisans capable of taking on the management of technical facilities installation;
- The involvement of all community stakeholders (public, private and civil society) in the process of implementation and monitoring of energy units is a guarantee of success and sustainability of operation and development of energy units;
- The close monitoring through capacity building for managers of energy units in communities promotes ownership by the agencies in the technical and economic management in energy services;
- Social cohesion of the beneficiaries is a key factor to ensure sustainable energy systems.

Good practices.

- The use of the participatory approach to achieving economic and social technical feasibility study for the installation of energy units;
- The synergy developed between local stakeholders (politicians, civil society) and managers of energy units;
- The involvement of local artisans in the technical management of installed energy units;
- Literacy teaching of women's groups, including local language;
- The systematic search for the sustainability and consolidation of the benefices of the previous phases to guarantee the sustainability of MFP already installed.

II. ACTIONS TO BE TAKEN FOR THE UPGRADE

The necessary actions of consolidating the achievements of the previous phases and the sustainability of the process of implementing and operating the MFP, should consider it as a tool for local development, for the promotion of women, as well as for the creation of jobs and income adapted to the rural context. To this end, above all, there are prior actions to be undertaken such as:

- Identification / inventory of all technical issues related to non-operating MFP,
- Assessment of needs for capacity building of beneficiaries and performance of MFP,
- Repairing breakdown MFP,
- Estimating the costs required to upgrade.

The actions undertaken as part of the upgrade will depend on the category of MFP such as those with diesel engine, electric mini-grid or mini water supply network, and in particular:

- Driving Forces for pumping and distributing water for domestic and agricultural purposes,
- Driving Forces for post-harvest agricultural mechanization; Driving force for easing the work of women related to the processing of cereals (and other agricultural products) and income-generating activities for medium-sized towns between 1 000 and 2 000 inhabitants; and
- MFP micro private enterprise with variable modules and adaptable to solvent customers.

2.1. An important focus and integration of the IGA to make MFP a real business

- Take all measures to create a favorable environment for the development of income generating activities through local partnerships around the platform to facilitate its operations as a real rural microenterprise for service to community;
- Take necessary steps to promote private entrepreneurship and community business around the MFP, focusing mainly on rural women;
- The MFP in the case of upgrading or scaling up, must be resolutely positioned as a micro processing business and a micro industrialization enterprise in rural areas;
- Take into consideration the evolution of the real rural micro enterprise toward an economic space (with a local value chain) and the emergence of new forms of entrepreneurship;
- Supporting producers in the processing and preservation of perishable products (potato, onion, tomato, etc.) through appropriate technology initiatives around the platforms.

In this regard, there are pilot projects that have proven that MFP can be a stepping stone to the food fortification project at a large-scale, and with all the necessary conditions of quality control.

- Adopt innovations concerning the introduction of new and renewable energy (solar, biofuel, biogas, ...), which are new reasons to expect more profit and thus, sustainability while protecting the environment.
- Define specific actions to achieve results, including (i) the need for materials and equipment, (ii) the choice of the type of energy to power the operation of the main engine, (iii) the required technical expertise to improve the essential functions of the program.

The transformation of IGA just for survival around the MFP in real business with development prospect will indeed be one of the essential conditions for: (i) preserving the current income and (ii) generate new business opportunities (iii) boost local economic dynamics. This is therefore about the exploitation of the potential of promoting productive activities and services around the MFP, backed on food chains with high growth potential, primarily for rural women.

This option should also be based on: (i) a financial services tailored to the needs of MFP and micro rural enterprises; (ii) networking of economic initiatives to achieve optimal size of economic efficiency; (iii) technical and technological support in order to increase productivity and diversification of MFP enterprise services.

2.2. The necessary technical adjustments

The success of the program depends on technical transformation initiatives and technological innovation. It is about building partnership with the technical and technological institutions, as well as some universities to develop technological adaptation strategies based on the needs expressed by the population.

Technically, the upgrade of existing MFP will generally contribute to performance improvement. The following action can be taken:

- Modification of the frame: the initial frame was long and subject to vibrations and breaks. Reducing the frame length has significantly reduced vibration and breakage;
- Design of the new configuration of MFP in three (03) compartments;
- Soundproofing allowing both the reduction of noise and smoke pollution;
- Enlargement and optimization of core modules old MFP;
- Rehabilitation and / or replacement of old MFP out of service and / or having serious technical difficulties;
- Reducing pollution caused by MFP and the use of alternative fuels. The challenge is to have quality equipment and move towards greater autonomy for imported fuel and controlled monitoring of emissions. This will result in the testing and introduction of large-scale fuel such as bio fuel in the

operation of the MFP and initiation of synergies and complementarities with other renewable energies such as solar.

During the upgrade, an agreement should be reached with a craftsman to follow for about 6 months for tests and tests before the extension. In any event, should be taken into account ease of use by people who operate the equipment, premise of empowerment.

For the purchase of equipment

- Prepare a bid for all interested regions for reason of cost-efficiency and quality control at the central level. There should be a guarantee for at least one year;
- Accessories may be manufactured locally by craftsmen with well- defined characteristics, e.g.: chassis, rail, equipment for shea butter, crushers, etc.
- The choice of modules will involve beneficiaries / users and especially and be based on the products to be processed.

2.3. Create synergy within the framework of a dynamic partnership

The implementation of the program is part of the concerted and joint approach for the development of all sectors involved in rural development, the advancement of women, poverty reduction.

- Development of cross-sectoral synergies by creating network or association between MFP;
- Development of partnership with relevant municipalities involved to prepare them, in one hand, to control MFP work, and on the other to support effectively the MFP energy service as part of the communal development plan;
- Propose improvements to the institutional structure and make it more consistent with the tasks at hand, both at country and regional or sub-regional level;
- Capitalization and dissemination of methodological, technical and educational knowledge from earlier phases to expand their scope through exchanges of experience between numerous MFP project developers;
- Establishment of timely and relevant connections with the following structures for better efficiency : (i) national research development organizations, schools and technical institutes, (ii) private institutes of technology (iii) regional frameworks sharing knowledge within UNDP / PREP and sub-regional economic communities (e.g. ECOWAS) (iii) other organizations such as UNIDO, GEF, UNCDF, etc.

2.4. Sensitization and Communication

- Intensifying outreach activities in communities, women's groups, local authorities, particular individuals in villages, and other local dynamic working contributors (mechanic, manufacturers and installers of MFP, traders and electricians, artisans etc.);
- Communication and facilitation on local economic development for more visibility and exchange of experience.

Among others the specific objectives of the sector are to improve food and nutritional security level of the population, ensure commercial and market orientation of agricultural activity, and to ensure the sustainable and effective management of the natural resource base of the country.

- First, and perhaps most important, is by increasing the productivity of women's labour. By mechanizing tasks such as grinding, milling and threshing, MFPs reduce the time women have to devote to basic subsistence activities. Once their basic needs are met, women are able to engage more freely in commercial activities, including accumulating and selling food and agricultural surpluses, attending weekly markets and engaging in off-farm income-generating activities such as petty trade.

- ii) Through their use of improved processing equipment, MFP-based enterprises enable women to produce better quality products both in terms of quality and consistency. These products attract higher prices and enable women to participate in more lucrative markets.
- iii) By providing their clients with access to improved technologies, MFP-based enterprises also enable women to switch from producing and selling low-value commodities to new higher-value products for which there are larger markets.

2.5. Empowering women and improving their participation in development

Empowering women so that they can become autonomous in MFP management, takes on average 2 years (1.5 to 3 years) depending on the circumstances and the place. The various assessments underscore the autonomy criteria that many stakeholders agree with. Such criteria should be taken into account when upgrading and they should serve as dashboard and indicators when assessing the achievement of women's autonomy. Other measures consist of doing the following :

- The designing and monitoring of a plan of gradual and complete autonomy of MFP enterprises, and simultaneous reduction of external assistance to the beneficiaries of MFP;
- Making profit and reinvestment opportunities in income-generating activities, development activities, savings and credit, corporate development MFP, personal development (training), solidarity actions;
- Formalization MFP enterprise;
- Easier and more regular access to financing;
- Setting up an internal organization to ensure the different business functions (procurement, production, marketing ...);
- Great familiarity and regular use of simplified management documents (simplified accounting, management monitoring, reporting ...) and minimal technical skills;
- Demonstrated commercial competitiveness (with a consistent and significant turnover), a good share and / or growing market with a certain level of customer loyalty;
- Proven ability to demonstrate a vision in business, sense of initiative;
- Demonstrated ability to develop additional activities to improve revenue and profitability.

2.6. Capacity building and institutional development

The objective of the capacity building strategy is to create a national and local capacity to manage the MFP enterprise in all aspects and especially to ensure their continued development in terms of technical and technological changes required by the upgrading process. Some of the actions that could be undertaken are:

- Capacity building, based on a prior need assessment, for all operating agents of the platform. These include: (i) members of steering entities and operational coordination, (ii) members of women's groups and non-state associations in literacy, technical and financial management, institutional development and entrepreneurship, (iii) implementing partners (NGOs) regarding MFP monitoring, organization and social mobilization.
- Building organizational and technical capacities of local implementation agencies (ALR, CAC, ...) and beneficiaries of old MFP, designing training programs to update people' knowledge in relation to adjusting to changes due to the upgrade.
- Creating a critical mass of private technicians trained and equipped by the project to help villages with the maintenance and repair that will be paid for by the villages with income generated by the platforms.

III. THE ENVIRONMENT ASPECTS

3.1. Taking into account the environmental impact

By joining the initiative "Sustainable Energy for All", "SE4ALL" countries confirm that access to modern energy services is not only an essential component of energy policy, but also an essential element for achieving the objectives of Sustainable development. The Initiative aims to achieve, by 2030, three major objectives: (i) ensuring universal access to modern energy services; (ii) double the rate of improvement in energy efficiency; and (iii) doubling the share of renewable in the global energy.

Regarding renewable energy, in order to comply with SE4ALL, many countries have adopted a proactive policy and projects aligned with Economic Communities programs (e.g. ECOWAS and UEMOA), aiming at the objective that the share of renewable energy, excluding biomass, will reach 50% of the electricity mix by 2030.

Therefore, it is up to the countries, as part of their MFP program, to take the necessary steps to align with these initiatives and international agendas. The objective is to ensure sustainability of technologies used by minimizing the effects on the physical and human environment, as well as to increase productivity and open up new opportunities while diversifying income through and increasing importance of the value chain of the biofuel sector.

3.2. Access to energy: orientation towards renewable energy

Energy plays a key role in improving the living conditions of the poor; it affects the well-being of individuals as well as for access to water, agricultural productivity, health, education, job creation and environmental sustainability. Also, insufficient access to energy services is a real obstacle to access to essential infrastructure and social services and economic development.

In sub-Saharan African countries, the energy sector is generally characterized by a production deficit that may result in negative consequences for growth forecasts. The difficulties of access to energy services therefore limit the quality of service and performance of sectoral activities (education, health, water and agriculture). The lack of modern energy, in that environment, hinders progress towards poverty reduction.

Awareness and consideration of this critical role of energy are very important assets to the extent that energy is now integrated as a powerful factor in the fight against poverty.

The possible options of power source are generally grouped into two main categories:

- i) The one contributing directly to access to electrical services such as service provided by national networks (high and medium voltage) and the so-called "off-grid" that are mini-grids, platforms, micro-hydro, photovoltaic solar stations, wind and small kits / solar lanterns;
- ii) The one that enables electricity production from renewable energy sources, which can be directly linked to the national network, or directly supply a mini / micro network.

After the upgrade in terms of renewable energy, operators should receive training to upgrade their capacity with respect to the use and maintenance of equipment to ensure improved performance of MFP.

3.3. Electricity production from renewable energy sources

The development of access to modern electricity services is the following:

- Optimize the use of low voltage network already established as a policy to promote the connection of households not yet served;
- Increase the coverage by extending the low voltage networks to new locations in rural areas;
- Develop a pre-electrification policy providing priority access of community services and economic developers to electrical services, domestic lighting service that can be provided by the mini-networks of MFP hybridized with solar or 100% solar depending on the size of the population.

All stakeholders agree that the diesel engine that runs with gasoil as it is the case of all platforms of the first generation is a thing of the past, mainly because fossil fuel emits gas harmful to greenhouse environment. The option is now turning to greener renewable energies less harmful to the environment such as biofuels, solar, biogas, hydropower, wind energy, including hybrid systems. In this regard, the various country experiences abound and can serve as a reference for upgrading the platforms.

Promoting alternative fuel to diesel as “neem” oil or jatropha should no longer only be considered as a sidelined project. The development of renewable energy (production / harvesting of raw materials for biofuels sector), is now seen as a strategic response to a profitable rural entrepreneurship in areas without access to energy services. The development of small businesses around the platform (energy stores), the extension services and energy products (solar kits, gas, home improvement) adapted to the demand of rural households will be definitely a success factor. Renewable energy is a self-sustaining resource that is infinite and not depletable. Depending on the location or environment, the resources vary by region and country. This makes access to renewable energy location and site specific.

Thanks to a technical partnership with national technical institutions, research and training institutes, countries experiences (e.g. Burkina Faso, Mali and Senegal) have shown that the widespread production and use of bio fuel (for example with Jatropha oil) as a substitute for gasoline, and the use of new and renewable energy sources (solar, wind, hydropower and biogas), contribute not only to the preservation of the environment, but also help reducing fuel consumption by 50% to 75% in (based on stakeholder testimonies and also many assessments). Indeed, evaluations of various programs revealed that on average, approximately 72% of the MFP management proceeds are spent in the purchase of diesel, which is a serious constraint to profitability. Also, for better profitability and to contribute to the preservation of the environment, some countries have already engaged, as part of the upgrading process of their first generation MFP, in renewable energy powered MFP installation such as solar, biofuel and biogas, or hybrid electric (hybrid diesel / solar hybrid diesel / biofuel, hybrid diesel / biogas).

3.4. The issue of the use of jatropha

Biodiesel from jatropha has advantages compared to diesel engine and they are:

- Impact on plants, greenery,
- Income generation for farmers.

As jatropha is toxic to consume, its use for biofuels would not compete with any alternative food uses, making it more desirable than edible biofuels options. It is also carbon neutral making it environmentally preferable to fossil fuels. No widespread introduction to the plant on a village level is needed going forward, unlike alternatives such as cottonseed oil. The integration of jatropha-based biofuels into the MFP is intended to both lower fuel costs and increase self-sufficiency of MFPs that had previously depended on diesel fuels.

Energy Efficiency, if combined with Renewable Energy can achieve very desirable results in improving energy access.

The current issues encountered on the ground with MFPs that have integrated both jatropha cultivation and processing into MFP operations:

- Jatropha shrubs take 3-5 years to reach maturity, meaning that farmers will not be able to start recuperating the production of their initial crops until at least 3 years after planting;

- challenges in training villagers to cultivate it in a volume and manner sufficient to produce jatropha oil for the MFP (site selection, seed availability, training, and land availability);
- villagers need to be proven that the quantities they currently possess is not enough for what they want to do, before they start planting it in larger scale;
- the availability and supply chain of jatropha oil are important issues that impact the regular functioning of MFP. This has to do with the production model, and they are:
 - *Decentralized production* models refer to villages that have jatropha presses attached to the MFP and produce oil themselves. Under this model, villagers have full ownership of the pressing process and are responsible for operating and maintaining the press,
 - *Centralized model* for oil production, villages do not have jatropha presses and oil is processed in facilities that are not owned by the village. Centralized processing currently includes processing plants run by private companies. This model has cost and scale advantages before distribution costs are taken into account. Pressing facilities are larger, have better yields, and produce jatropha oil at lower costs compared to localized pressing.

Mitigating some of the issues will consist of the following:

- Establish a centralized and harmonized framework for biofuel promotion,
- Increase the number of professionals working in the biofuels field,
- Enact production licensing requirements and technical quality standards for biofuels,
- Create a dialogue between main public and private actors in the field,
- Maintain trade between international partners in biofuels.

3.5. Other forms of renewable energy

Hybrid solar/ diesel MFP system

Technologically the current results of the research / development conducted in the sub-region, the technological choice of solar powered MFP needs to be hybridized (with other energy sources) with non-solar mills to deal with the urgent need of milling grain power by populations.

The platform "all electric" tested in Guinea is an innovation. Electrical energy comes from a renewable source: a hydroelectric plant.

Advantages over thermal power:

Hygiene: with "thermal" MFP, combustion residues and residual smoke in the shelter of the inner alter the hygienic quality of processed food products.

Separation of machines in different rooms according to milling operations, shelling and oil production

Security: electric MFP allows an instantaneous emergency stop from a push-button and pulleys-belt drives are reduced in length and better protected.

Operation: Start-up of the modules is effortless by starting the electric engine in comparison with manual action of the Chinese or Indian engine.

-The noise is virtually reduced with the electrical source, which ensures the best operating conditions.

-The grain processing time is greatly reduced because of increased yields related to the operation speed of modules. Here, the operator cannot reduce the engine speed.

Maintenance: Maintenance of electrical modules is identical with that of modules installed on the thermal engine.

Yield: electrical modules yield is much higher.

3.6. Additional advantages of renewable energy

Renewable energy systems are well positioned to play a critical role in addressing this growing energy demand. Renewable energy can be considered as a safeguard against energy access, energy efficiency and security concerns. The locally available renewable resources will reduce its dependence on imported and expensive fossil fuels that it can afford. It is promoting this development by creating the policy environment and developing appropriate regulatory and legal frameworks. Renewable energy systems are well positioned to play a critical role in addressing this growing energy demand. As the country's demand for electricity increases, it would need to look into options that are affordable, reliable and have predictable cost attributes.

Energy efficiency measures as a tool to reduce the cost of energy consumption both at individual and national level and thereby increasing energy access to the population by saving kilowatts and significantly reducing the demand for imported fuels for power generation and additional investment in power plants.

In addition, renewable energy and energy efficiency can support the adequate functioning of health care facilities among others through the following measures:

- Vaccine refrigeration and ice pack freezing using solar and wind energy generated on site (temperature control is more accurate than with kerosene-fuelled absorption refrigeration);
- Lighting from renewable energy sources (substitute for kerosene lighting which contributes to poor indoor air quality);
- Solar-based radio and radiotelephone communications (facilitate emergency medical treatment and provide reliable communications to other health clinics and facilities in the region);
- Enable medical appliances to operate with RES (incorporate inverters that are powered by RE into the system);
- Sterilization (sterilize with thermal energy rather than electricity due to lower costs);
- Water treatment (endorse alternatives to chemical disinfection like UV or ozone treatment using RE sources);
- Water supply (RE-powered manual and large-motor generator driven pumps);
- Make the hospital or health clinic the centrepiece of a village mini-grid.

3.7. Access to electrical services: electric mini and micro-networks of water supply

Access to energy services is low in rural villages; that is why the installation of small village energy services units has been proven to be the means of linking directly material and technical development to human development. In modernizing community infrastructure of access to social services, the program assists rural communities to set up micro-grids and mini drinking water networks distributed through terminals fountains. This component aims to couple the MFP to drinking water and electricity supply networks to serve socio-economic and community infrastructure for the benefit of rural populations served by platforms.

Platform with a grid is the one that, apart from the food processing services it offers, contribute to electrify the community social infrastructures (clinics, schools, mosque, church, public lighting of the town) and provide electricity to households.

The criteria to be considered for the transformation of the MFP:

i) Electric mini-grid or water supply:

- not be in the current rural electrification program or within the next 5 to 10 years ,
- be profitable,
- dynamic group,
- not be a shared capital.

ii) Agro- business enterprises:

- be profitable and make a significant annual turnover (in some countries between 3 000USD and 5 000USD or have a net profit of at least 400USD),
- be a dynamic group,
- presence of a value chain in the locality,
- existence of IGA around the MFP,
- demonstrate entrepreneurial spirit.

PART III THE SCALING UP STRATEGY OF WOMEN'S RURAL AGRO-ENTERPRISES IN SUB-SAHARAN AFRICA

I.THE REASONS FOR SCALING UP MFP PROGRAM

The scaling is the extensive installation of MFPs to cover a greater number of localities in the country while ensuring maximum impacts, optimizing performance, and also ensuring their sustainability. In other words, this is about not just making numbers but rather building critical mass in the target communities.

1.1. The results and achievements in the sub-region of Africa

The change of scale is most needed because the MFP largely contributes in rural areas to very important development progress that should be expanded and sustained. These achievements have been shown in many countries with MFP programs, such as Burkina Faso, Mali, Senegal and other countries in the sub region.

The MFP has evolved as a micro rural enterprises, to an important economic bundle of inter- woven local chains of value which combine the following:

- productive activities of processing agricultural and pastoral products,
- the emergence of new professions in installation and technical maintenance,
- the emergence of new economic units: welding, battery charging, sewing, etc.
- new marketing capabilities and market research outside the village,
- emergence of new forms of entrepreneurship, private individual or cooperative and associations,
- the explicit interest shown by micro finance institutions (MFIs) and non-financial support structures for MFP involved particularly in food processing agro products.

The scaling up is also an issue because the level of financial profitability and economic efficiency are correlated. Indeed, the new dynamics of MFP also offers: (i) significant income generation opportunities, while remaining a powerful tool to promote women by alleviating the heavy work which they are constrained to do; (ii) a framework for capacity building through social engineering that accompanies the platforms.

Indeed, MFPs have demonstrated their financial viability as real enterprise in all countries of the sub-region.

The high demand to meet

Scaling up is also attractive to various people and countries considering the strong demand as it is demonstrated by both the data available at the UNDP; e.g. 10,000 projected by Democratic Republic of the Congo (DRC) by 2030, 500 in 5 years in Niger and Senegal, in Mali 5000, 300 in Togo (2016-2020) etc. That is an evidence that shows the growing needs for modern energy services in rural and peri-urban areas (including powered engine and electricity), which have rather economic potential under exploited. The enthusiasm toward MFP expressed by rural populations fully justifies the transition to a new phase of consolidation and expansion nationwide as well as in other countries.

A possibility of wide national and sub-regional coverage

Access to energy services is low in rural villages of West Africa. Although this issue is at the center of regional and national policies, taking it into account in developing policies that aim at human capital (health, education) is still insufficient. The installation of small village units of energy services could be the way to directly combine material and technical development with human development. Also, the program aims national coverage that will be concentrated in the villages with a certain optimum size (e.g. in the case of Senegal villages of 800 to 2000 inhabitants), knowing that installing MFP just here and there would only be of temporary effects and therefore inefficient.

The extension of the platforms on a large scale would address many of the energy needs of rural and suburban areas in general and women in particular.

It is estimated that the total number of potential beneficiaries in Burkina Faso, Ghana, Mali and Senegal amounted to nearly 9 million people, an extension of the project to the whole of ECOWAS or the Sub Saharan Africa (SSA) would be respectively 28 or 98 million people. (Source: UNDP experience of Cahier 2008).

Promoting gender

It is clearly established that most of the results generated by MFP programs are related to women, but gender aspect is not the only cross-cutting issue in the scaling up strategy because it is noted that:

- At the operational level, it is the Female Management Committees that operate platforms that are thus the main target: the MFP expansion project uses this category as a starting block to develop a model.
- Regarding the impacts, making women its main interlocutors, the program can ensure that MFP invest them as interface between the program and the rest of the community.

The consideration of the environmental protection

The development of access to modern energy by multiplying MFP in rural areas not yet eligible for electrification helps to reduce the use of wood and harmful actions of deforestation, which is in line with worldwide concern on climate change and the use of renewable energies (Clean Development Mechanism (CDM), Global Environment Facility (GEF).

The difficulties of access to energy services limit the quality of service and performance of sectoral activities (education, health, water and agriculture). The lack of modern alternative energy hinders progress towards poverty eradication.

Various options of clean renewable energy (bio fuel, solar, etc. ...) are available to run the MFP business in respect of the environment.

A few examples of interest of scaling for stakeholders

- Strategic partners, given the change of scale and the rising of the program, scaling up help to reach a larger number of beneficiaries, attain optimal cost-efficiency, realize networking, develop stronger and more effective synergies not only in hydraulics, pre electrification, but also and especially in the promotion and involvement of private sector in the program.
- For research organizations, opportunities for research and development will be of particular interest (technical and technological innovation both regarding the engine that fuels) with even more motivation into the prospects of scaling up MFP programs.
- Local governments, with their interest about the needs for local economic development, the expansion creates a great opportunity for integrating the MFP program in the dynamics of planning policies and instruments such as Local Development Plans, Annual investments Plans.

An opportunity of the expertise of UNDP / PREP

The increased possibilities of UNDP / PREP provision of support, knowledge, regional exchange of experiences and capacity building will be an important support to the MFP program scaling up.

At regional level

The scope for replicating MFP-based agro-enterprises beyond current countries into other parts of West Africa and Sub Saharan Africa, is fairly wide, given that much of the farming in Africa is done by rural smallholder farmers, particularly women, with little or no access to modern food and agro-processing services. Additionally, the MFPs could result in significant reductions in post-harvest losses, and contribute to food security in these countries, some of which are frequently faced with drought and food shortages.

The rationale for taking a regional approach to scaling up MFP-based enterprises, versus a country-by-country approach, is twofold:

i) *The first reason is cost-effectiveness.*

One of the main advantages of a regional approach is that it minimizes the duplication of efforts. Rather than establishing an independent mechanism for supporting each of the national MFP programs, UNDP use its Regional Energy Poverty Program to support activities which are common to all countries.

These include:

- Knowledge Management (e.g. establishing and maintaining websites, knowledge networks, etc.);
- Technical Advice (e.g. training national program teams on project management, planning, monitoring and Evaluation, etc) and analysis (e.g. monitoring, evaluating and consolidating project results, disseminating best practices, etc.);
- Advocacy (e.g. engaging regional institutions, like ECOWAS, and IFIs in policy dialogues and fund mobilization) By using this regional node, the project facilitates the sharing of resources and expertise that might not otherwise be fully utilized within a single country and enhances its ability to share knowledge and lessons from across the region. This creates a “learning effect”, which further reduces costs and greatly increases the efficiency of program management.

ii) *The second reason*

The objective is to link the project’s results to broader regional initiatives, namely the implementation of ECOWAS’s regional policy. With the endorsement of ECOWAS’s policy, it is necessary to work with regional institutions like ECOWAS to ensure lessons are shared and made available to help accelerate countries’ up-scaling efforts. UNDP will have two main partners for the project. At the regional level, UNDP’s main partners will be ECOWAS and ECCAS, who will be closely associated with the programs, particularly those activities related to supporting the formulation and financing of up-scaled national MFP programs. ECOWAS and ECCAS will also be associated as needed to facilitate/support cross-sectoral policy dialogues at the national level.

1.2. Goals of the scaling

The scaling aims in particular to:

- strengthen program leadership in disseminating the MFP and knowing how to create synergistic partnerships to mobilize complementary experts whose skills that have been capitalized by the program;
- successfully implement the scaling through the creation in the areas of intervention a critical mass of projects that may have a significant impact on development objectives;
- establish local centers of expertise needed for optimal functioning of the MFP;
- promote local expertise and promote the establishment of local centers of expertise related to the food processing industries and natural resources transformation, in the context of promoting rural entrepreneurship;
- introduce innovations aiming to implement progressive transfer conditions of the project ownership to local authorities, along with the funding mechanisms and the management tools of energy services;

- extend and generalize the use of renewable energy in the most possible number of companies MFP or at least 50%, if not 100% by 2030 in countries and sub-regions.

The MFP should no longer be a simple program, but be considered as a real permanent tool for local development to take into account in local development plans.

Specifically, the scaling up is about achieving the following:

- To enable smallholder women to increase and diversify their income by developing X number of MFP-based agro-enterprises in targeted countries: (this process of developing these enterprises – which lasts roughly 24 months and starts with the identification of potential villages and ends with having a monitoring and evaluation system in place). Achieving this objective will dramatically increase the number of MFP-based agro-enterprises and provide an important contribution to improving the livelihood of smallholder farmers. It will also provide the project a sufficient number of enterprises to investigate different technological, institutional and financing options for increasing and diversifying rural women's income-generating opportunities under different social, economic and agro-climatic conditions.
- To strengthen human and institutional capacities which are essential to expanding service delivery at the community level. The limited capacity of countries to support up scaled MFP programs makes it absolutely necessary to invest in building institutional capacities at both the national and local levels. By investing in these capacities upfront, the project will enable economies of scale, resulting in lower unit costs per MFP. As seen in Mali - where considerable efforts have already been made in establishing local project offices and training staff - total average costs have nearly halved as a result of a tenfold increase in the number of MFPs installed.
- To enable governments to upscale their MFP programs by consolidating best practices into rural agro-enterprise models which are replicable and scalable across West Africa and *other* Sub Saharan countries. Best practices will inform the implementation of the project on an ongoing basis and serve as the basis for developing full-scale national MFP programs. Best practices will also serve as the basis for developing a strategy for replicating MFP-based agro-enterprises in other ECOWAS and ECCAS countries and beyond.

II. THE ESSENTIAL FOUNDING ELEMENTS FOR SCALING UP

2.1. The minimum basic principles required

The scaling up of the MFP programs should be based at least on a number of fundamental principles identified as the following:

- "delegated task" is the principle of subsidiarity that consists of giving priority to local expertise and using local agencies and local skilled professionals for the implementation of planned operations, and contracting them to achieve performance by coming with local appropriate solutions;
- The turnover of economic and financial business activities, taking into account an incentive approach for the local private sector to ensure efficiency in investment and operating costs, as well as in monitoring and coordination;
- Profitability, is a good thing but it shouldn't contribute to losing sight of the social objectives of such a program which, after all, target rural communities that are most of the time vulnerable;
- Including the program in national policies and strategies that aim to address in an integrated manner, the specific needs of rural populations, specifically the needs in: (i) energy services, taking into account all energy sectors; (ii) development of agricultural products and also in consideration of the gender issues;

- A participatory approach that consist of involving stakeholders in the design, implementation and monitoring of program activities;
- taking into consideration of the necessity to have available sufficient capacities (human and institutional) to carry out the scaling up (training, awareness raising, and capacity building ...) and the organizing exchange of experiences and good practices for capacity building;
- giving to local people the opportunity to assume responsibility in the dynamics of decentralization, while aiming to ensure each stakeholder's role in the chain of activities with the obligation to achieve results and accountability;
- establishing a dynamic partnership at the various levels of MFP program (technical, financial, institutional, organizational);
- The necessity to take into account the concerns of technical partners, funding agencies and investors (financial, social and environmental);
- Keeping a focus on sustainable development in particular by mating sure to be aligned with the various initiatives (sub-regional, continental and international) for the protection of the environment and natural resources management;
- Equity in gender issue and for the landlocked regions, with special attention to rural women and regions of particular vulnerability;
- Adopting a strategy of ownership and sustainability of the program activities.

2.2. The scaling success conditions and criteria

The scaling at a national level requires: (i) an absolute focus on promoting rural women entrepreneurship around the MFP, (ii) Partnerships based on performance contracts, (iii) promotion of alternative bio-energy as a substitute of diesel engine and wood energy and (iv) a strong institutional setting with an effective monitoring and evaluation system.

It will consider the enterprise MFP as being not only a local economic unit of energy services, but also as a food processing enterprise that can also promote social mobilization, the strengthening of social cohesion and reconciliation between the communities they are installed in. In other words, the MFP is a community development tool around which common interest and solidarity can be developed while integrating local development. The request to install a platform comes from the village and must be carried on by a group of women. In addition, the organization of an exchange framework between the national programs of various countries (with the support of key partners) should be set in order to promote knowledge exchanges.

The key principles that can form the foundation of a successful MFP can be summarized as follow:

- Ensuring technologies deliver exactly what villagers demand and can operate under existing conditions (i.e. ensuring they are “appropriate”);
- Ensuring ownership and leadership by the community;
- Training beneficiaries and local experts;
- Ensuring self-sustainability through diversified market-based approaches; and
- Ensuring parallel public administration capacity development for supporting national up-scaling;
- Unless an enterprise adheres to all five principles, it is unlikely to sustain itself over time.

2.3. Operational implementation

The project will begin immediately with a set of learning and assessment activities aimed at informing and accelerating a wider replication of MFP-based agro-enterprises in target African countries. This will begin with a comprehensive stocktaking and analysis exercise of past MFP experiences and their results, based on data and

information available to date. The project will distill best practices into sustainable rural agro-enterprise models which can be replicated under varying social, economic and agro-climatic conditions.

These models will serve as the basis for devising and launching national up-scaling plans and lending proposals for the four countries to cover all villages in need of agro-processing services. They will also serve as the basis for developing and sharing with the international development community a strategy for replicating MFP-based agro-enterprises in other African countries. The practical actions to carry out prior to launching the MFP implementation are suggested as follow:

- Inform and educate on the benefits of rural MFP in intervention areas;
- Select the villages' applicants in compliance with the approach which is demand driven, meaning in direct response to a specific request of the beneficiaries;
- Carry out the preliminary studies because the supply of MFPs is demand-driven: any new installation of MFP must be based on a feasibility study in selected communities. This study should be participatory, involving the target beneficiaries and other stakeholders active in the program. The technical and methodological experience of similar projects at national and sub-regional levels will be considered. The study consists of doing the following: (i) initiate a participatory feasibility study in target locations to verify in one hand, the conditions of social feasibility, economic and financial, and in other hand to collect basic data that will serve later in the process of monitoring and evaluation of the program; (ii) carry out a technical study on the best conditions to set up/build the power grid network and identify potential customers (socio-community infrastructure, professional customers, ...);
- Support the mobilization of participating beneficiaries for the shelter construction, and other requested contribution;
- Install MFP adapted to the needs identified in the village as a result of the findings of the participatory feasibility study guarantee the monitoring and support of the women groups at least until they gain autonomy;
- Involve stakeholders in the design and implementation of the planned project; and set up local management unit to take care of the energy services and other activities;
- Mobilizing the necessary expertise and skilled professionals (economic leadership - technical monitoring - monitoring and evaluation) to promote and develop their contribution in building emerging dynamic local economic development system;
- Develop and implement a methodological guide for intervention and technical references (for equipment selection, installation and maintenance of MFP) identified, validated and published as a package of technical installation guide, maintenance;
- Take into account the technical and methodological achievements of similar projects at national and sub-regional levels.

The country's strengths should be taken into account through the various aspects of the context to ensure that they are receptive and can accommodate to the demands of scaling and upgrading, such as:

- The national vision as laid out by the Government should enable the up scaling of MFP programs by consolidating best practices into rural agro-enterprise models that are replicable and scalable;
- the presence of a significant potential for industrial development in the agro-pastoral, fisheries, energy and mining sectors;
- the existence of a dynamic informal sector familiar with local resources, has a technology adapted and is gradually emerging towards the modern economy, with the support of microfinance institutions;
- increased responsibility in collaborative and participatory management of development strategies of (i) the private sector either as operator, supplier, artisan, financial institute or through a public / private partnership strategy and (ii) local communities and (iii) the involvement of more and more people of the Diaspora;

- The performance of the people involved as responsible for the implementation of the mechanisms and procedures adopted to make sure that entire country is covered;
- Reaching a new qualitative level in order to provide efficient and diversified services in a sustainable socioeconomic development;
- Further integration in the value chain of food production with a monitoring system of each product;
- Setting up a steering committee, an effective management system and an efficient monitoring and evaluation mechanism aligned on the Regional Observatory / OISE PREP / UNDP.

Taking into account decentralization and local context

Decentralization has become a reality in number of countries. Regions and municipalities, through their elected representatives and their councils are now first-class players in charge of development planning and subsequent monitoring of implementing activities. It is important to ensure greater integration of the MFP in the decentralized planning process and sectors development programs.

An adequate response to the needs expressed should aim: (i) to maximize the expected impacts of MFP on local economic and social development, knowing how to evolve and follow the change of the rhythm, to access remote areas and to adapt to the sociological diversity; (ii) to set up a suitable institutional framework promoting solid stakeholder participation and (iii) to improve the performance of strategic planning procedures, financial resource mobilization as well as an effective and transparent management.

In addition, other actions should be considered.

- A progressive and balanced approach with a concentration in areas with high economic potential in order to concentrate the operations with a minimum cost and a maximum impact;
- The creation, in the project region, a critical mass of achievements that can have serious and significant "impact" on local development goals;
- Establish local centers of expertise needed to ensure optimal functioning of the MFP;
- Enhance the local know-how and promote the development of local expertise in the food processing industries and natural resources transformation, within the context of promoting rural entrepreneurship;
- The principle of "delegated task" that is to focus on contracting local people with the required capacity for the implementation of the planned activities;
- Introduce innovations to create conditions for gradual transfer of project ownership to local authorities, along with a funding mechanism, management tools and handling the MFP energy services.

Criteria related to beneficiary groups

The configuration should take into account the following elements:

- The existence of a community organization or an association, a women's group or the creation of an association of village women or a coordination grouping associations / groups of women; and recognition of the association in the village; it may be also projects or other administrative structure;
- Autonomy of decision of the women association in managing the platform;
- Setting management committee, democratically elected within the community, based on criteria specific to each village choice;
- The dynamism and motivation of the applicant group with in addition a demonstrated entrepreneurial spirit;
- The needs of populations identified through appropriate analysis of local request in particular the solvency aspect.

The project targets women who have the most need for improved agro-processing services, the project will firstly consider non-electrified villages for which grid electrification is unlikely to occur in the near future. A lack of electricity in these smaller and more dispersed communities makes women's work the most physically arduous and time consuming.

Integrating MFP in the food industries, trade promotion, and the management of natural resources

Agricultural production and increasing its value is a strategic opportunity for local development. In this regard, the scaling of MFP program could better support the dynamics of local economic development.

This is to say that, in connection with the valuing the initiatives of producers and processors in rural areas, access to markets to trade agricultural products and derivatives is a major challenge. In fact, the challenge is about improving and developing an important access to market of these products in a more formal and systematic manner. In this regard, the objective of the energy of the platform to create a rural economy based on local resources processing, requires a fairly substantial organizational system with the capacity to implement and manage such projects. Senegal's experience could serve as an example with reference like structures: the MFP Business Group (GA), the Agro-Food Processing Company (ETAAL) based on value chain approach, the Central Marketing (COMCEN), the Micro and Small Business Area (EMPE), etc. The GA is an umbrella organization composed from 6 to 12 platforms located in the same geographical area and that initiate joint actions together to ensure the sustainability and competitiveness.

The COMCEN mission is an important role in establishing an efficient inter-enterprise economic cooperation based on joint projects and the strengthening of economic and social development at local level.

In order to improve MFP commercial potential, the GA can be used as the key structure as it is shown in the experience of Senegal. The GA is the key structure for the MFP scalability strategy. By bundling up to 10 local MFPs together, the GA provides villages with the opportunity to advance their participation in value chains by improving the packaging of their products at ETAALs and gaining access to market through CENCOMs. This recommendation suggests making the GA the key pivot stakeholder to bridge the gap between MFP communities and the market by linking them to quality buyers and agro-input suppliers. MFP villages could benefit from a streamlined GA structure that could enable access to cheaper capital and tools for increased yields, higher quality management and access to larger markets.

The GA is the best-positioned unit to serve as a financing channel for individual MFPs. As such, this study recommends conceptualizing the GA as a holding company providing specific services (e.g. packaging, commercialization, spare parts) to the MFP for a fee.

Under this model, each MFP producing a surplus will sell to the GA. The GA will then manage packaging through ETAAL and commercialization through CENCOM and redistribute part of the cash flows to the MFPs at the end of the year, reserving a share for maintenance or the purchase of common new productive units such as shea or juice processors. To ensure social benefits remain in line with the program objectives, part of the net revenue will be distributed monthly to the women working at the ETAAL. The GA is meant to make the MFP commercially sustainable, and therefore the subsidies could be more effective if they are targeted and time-bound. It is also necessary to reduce the subsidy level to ensure the GA can be an attractive structure for private partners while limiting the program overall cost. Currently, both the ETAAL and the CENCOM are fully subsidized, except for the land provided by the community, and in some cases, additional equipment.

The GA could be a standalone element of the larger agricultural value chain, able to enter in contractual arrangements with private partners. It will also attract corporate foundations financing interested in supporting innovative ideas with potential to scale up.

Value chain intervention

The MFP program should partner with crop producers involved in sustainable supply and form strategic partnerships with input-suppliers. Also, creating farmers' organizations and cooperatives provide an opportunity to increase the demand for GA and MFP services. These organizations are also critical elements of the value chain to improve farming practices and enhance access to inputs, including seeds and fertilizers. Farmers' organizations

allow for a cohesive unit that can adequately plan, organize, and manage the process of crop production, consolidation, and sale of the agricultural products produced by its members.

Creating a formal partnership between farmers' organization and the GA would ensure sufficient demand for MFP services while improving access to market for small farmers.

Marketing the processed products to make them appealing for the end consumers is very critical to ensure access to market. Capacity building should be considered in order to improve village capabilities for processing, packaging, and labeling of products.

In addition, an agreement between the MFP program and a medium and/or large company to buy MFP products could improve access to market and ensure demand. In order for this agreement to work, the following items must be in place: (i) Consolidate small farmers, (ii) The MFP must approach companies with a clear business case that includes financial statements, logistics and operational details with the clear benefits for the company and the farmers.

Over time, undertake a value chain analysis for each of the crops processed by the MFP.

The sustainability criteria

The sustainability aspect is a major challenge that requires:

- setting up of mechanisms and procedures to ensure the quality of equipment and to ensure optimal operation;
- creating conditions to ensure profitability and resource for equipment renewal;
- designing a strategy to support MFP, and that can help to permanently transit from the initial management methods to a more efficient methods that meet the requirements of the current and future transformation of the MFP programs;
- Taking necessary measures to secure the availability of all required products and material;
- Guaranteeing financial profitability and economic viability of MFP through a stronger entrepreneurial approach; and in addition, changing, lowering the operating costs, diversifying activities, and increasing income among other measures;
- A readjustment of MFP technology to make it even more sustainable, for example through the development of biofuels and the introduction of the solar energy.

Develop tools of monitoring and evaluation to make it possible to track social and economic development in the village and allow real transparency of data. It will help also to make necessary adjustments for better performance, a key factor for the sustainability of the program.

Though, it is important to preserve the positive social impacts of the MFP while improving its financial sustainability. Balancing the platform's enterprise-led future with its origins in poverty alleviation will be a defining endeavor for the program's ongoing development and expansion.

Taking into account the environmental impact (renewable energy)

An environmental impact study of MFP program has been initiated by UNDP / PREP and carried out very recently. The report of this study is therefore the main reference when it comes to environmental impact of MFP. Though, the present report presents some elements to be considered in relation to scaling and upgrading strategies.

Agendas and other initiatives at sub-regional, continental and international level related to sectors of environment and energy should be taken into consideration in the design of MFP programs. Some of the Resolutions are the following:

- Initiative Sustainable Energy for All, United Nations "SE4ALL Action Agenda by 2030",
- White Paper on Regional Policy of ECOWAS and ECCAS on expanding access to modern energy services,
- The BizClim (Business Climate) of the African, Caribbean and Pacific countries (ACP),

- The commitment of the African Union: "The Empowerment and Development of Women in Agenda 2063 of Africa".

For reasons already mentioned earlier in this report, the use of diesel should be phased out, first for cost efficiency reason (MFP will be a more profitable and sustainable enterprise), and second, to protect the environment from carbon emission. Not to mention that non diesel engines are easier to maneuver by the women who operate them. Therefore, a switching should be made to renewable energy such as solar, bio-carburant (jatropha oil), biogas, hydro-energy, or hybrid model. The negative impact on health, as a result of Diesel pollutants is well documented. It is therefore crucial to ensure that stationary engines comply with the standards and the operators are sufficiently protected against these pollutants. In addition, the diesel engines are noisy and the operators should wear proper equipment to limit the noise.

Phasing out of diesel presents other additional advantages: (i) it would increase the attractiveness of the MFP as a sustainable financing option for private investors as well as development funding institutions and donors; (ii) it would open the renewable energy market and provide entrepreneurial opportunities for small-scale distributors and skilled technicians in the respective sector and areas.

The ideal objective based on SE4ALL Initiative, is to reach 100 % renewable by 2030 which imply that all new MFPs installed during the up scaling will be powered by renewable energy and a progressive transition of existing fossil fuels MFPs to renewable over the period 2016-2030.

Other environmental issue is that grain milling dust can be harmful to women health, so it is important to wear protective masks to limit the negative health impact.

Such solutions will firstly reduce the cost of oil due to the consumption of diesel engine and secondly, to optimize the operation of the MFP and minimize potential environmental impacts.

Promoting partnership

As part of the scaling, the development of a consistent and dynamic partnership becomes a special and more important requirement in particular because of the scale of the ambitions of the new vision of access to energy services, and also the increasing role of MFP program in local development. Furthermore, the multi "sectoriality" of MFP induced by this program requires effective involvement of a number of institutional, technical and financial partners, at national, sub-regional and international levels. In fact, establishing a productive partnership is necessary to achieve the scaling objectives. The various partners include:

- Technical partners to assist MFP in the diversification and expansion of their activities in particular through greater integration in the food products market and gaining greater share of new markets;
- Organizations in the sectors of technology, research and development specialized and dedicated in renewable energy and networks development, the efficient use of technologies, etc.
- Financial institutions, and especially Micro Finance Institutions, for appropriate support towards (i) better financial viability through savings and suitable funding mechanism; (ii) establishment of a guarantee fund to facilitate access to micro credit groups, and (iii) special credit system to facilitate the purchase and replacement of equipment which can guarantee sustainability;
- The partnership strategy will require the definition of their level of involvement, their respective responsibilities and specific tasks at national level as well as in assisting the extension of the program to other countries of sub-Saharan Africa.

2.4. Capacity building

A series of capacity building activities will be initiated aimed at strengthening local and national institutions for implementation. This will entail, among other things, the training of trainers on all aspects MFP development, supporting national government institutions in monitoring and evaluating project results, sensitizing local financial institutions about the enterprises, supporting national partners in diversifying income generating opportunities and lastly testing the use of biofuels. It will also include ensuring the governments' policies (particularly their Poverty Reduction Strategies) and budgets provide the appropriate support for up-scaled national MFP programs.

So far, capacity building as crosscutting activity, primarily aimed to boost or develop ownership of the MFP approach by the local people involved in the implementation of the MFP program such as platforms managers, municipalities, service providers, decentralized technical services, etc. The new guidelines lead to the emergence of new skills related to diversification, intensification and the expansion of MFP services. As a result, it is essential to gradually build local expertise so that they are well equipped accordingly.

Considering the requirements of scaling the MFP programs, more should be done to integrate a system of multi-dimensional experts and to intensify capacity building activities of all stakeholders involved in various levels, national, regional and local. A certification system should be considered for technicians to ensure reliability.

In the case of strengthening direct target beneficiaries, the plan to develop their economic activities should include the following services:

Training courses should be a priority, and very essential component of the businesses services assistance.

Training in business management, credit management, marketing and sales techniques should be taught systematically as part of the expansion plans and covering each of the phases of the program: MFP identification and installation, MFP operating and handling, and also management of IGA.

Beneficiary groups will also have the necessary support regarding access to market (marketing and sales technique), business development. Refreshing training should be carried out regularly to keep pace with the evolution and transformation of the MFP enterprise.

The implementation of the capacity building strategy, the training should be followed with advisory and support assistance at least until autonomy is achieved. In addition, specific training can be carried out upon request.

Establishing women's ownership and management:

The approach of the program to ownership of beneficiaries consists of putting women in charge.

It is up to the women group to elects management committee members who will be responsible for overseeing platform operations, scheduling work, distributing revenues and developing a means of addressing any potential confrontations that may arise.

Building women's capacity to operate the multifunctional platform: Women's Associations are trained in managerial and entrepreneurial skills to ensure the technical and economic viability of the platform. Capacity building programs should first focus on basic literacy and farming practices training, with the key goal to boost agricultural productivity and yields in order to increase the surplus.

Provide capacity building related to entrepreneurship and improve access to SME financial products. That is improving villages' knowledge on operational, financial and personal management.

Capacity building of local implementing agencies (NGOs)

The increase in activities as a result of the scaling up of the program requires that the NGO partners have additional resources in terms of skilled human resources and appropriate logistics to meet the challenge of both technical assistance and financial management of MFP as well as diversifying business activities. In this regard, a contract will specify all the provisions that govern the partnership between those agencies and the program, knowing that one of their main responsibilities is to promote and stimulate entrepreneurial spirit among women and expand their skills.

The implementation of such strategy will consist of:

- Identifying and analyzing the needs of the agencies generated by the new challenges of the program;
- Choosing the right options and designing capacity building plans to fill the "gap" identified including exchange of experiences;
- Planning, implementing and evaluating the agencies training program activities;
- Facilitating the networking between agencies and their experts for more efficiency.

III. TECHNICAL ASPECTS

3.1. Possible alternatives in the technology options

The development of MFP during scaling up makes it is essential to have plans of improving the quality of MFP equipment, the technical performance and environmental compliance. To that regard, the following should be identified:

- what is needed to improve technical performance of MFP,
- partners (national technical and research/ development institutes), taking into account the possible agreement for research development,
- the best way to make a general use of the various renewable energies, for example biofuels such as jatropha and others,
- The capacity to measure the effects and impacts of the emission of greenhouse gases.

Regarding the good running of the equipment, all necessary measures should be taken to minimize the delay in waiting for maintenance and repair. Accordingly, (i) the number of trained technicians should be multiplied, (ii) make sure of presence of technicians close to the site of the MFP, (iii) and set up spare parts stores locally.

3.2. The technical configuration of the MFP in target communities

The technical configuration and selection of the MFP basic modules should be tailored to the specific context of target communities, because some components (such as battery charge, the freezer, the welding station, etc.) are not justified in all localities. The configuration should necessarily meet the needs of the beneficiaries as identified by appropriate analysis of local demand and specifically by the participatory feasibility study. Depending on circumstances, the possible configuration options are as follow:

- *The standard MFP enterprise* equipped with food processing equipment and modules adapted to the specific agricultural productions transformation for the village of implantation as well as for neighboring communities;
- *The MFP enterprise with micro grid* (electricity or water network) equipped to be a pre electrification community infrastructure (servicing health centers, schools, markets, places of worship...) or the supply of drinking water and water for small irrigation. This configuration model should take into account, among others aspects: (i) the concentration of socioeconomic infrastructure, (ii) the ability of the community to pay for services provided, (iii) opportunities for partnership between the municipalities and the departments of rural energy, rural water or with the health and education services.

The up-scaling should take into account the research results and the technical and technological innovation proven efficient by experiences in different countries. This can help with larger diversification of services. Anyhow, arrangements should be made to maximize the value chain of technical production.

3.3. The issue with the acquisition of equipment

The quality of the MFP equipment, especially the engine, is referred to as one of the main reason of the poor performance of some MFP: repeated breakdowns, and sometime just stop running, etc. Various solutions have been implemented by some national programs to minimize the problem with mixed results sometime. As part of the expansion of the program, various options can be made to ensure appropriate quality of equipment, which is essential to the efficiency and good performance of the MFP. The options include:

- Choosing a branding, and bundling purchases of a significant number of engines in a given region, country and timely planned. For example, the “Centre Pilote de Technologie” in Guinea has identified a powerful engine considered to be efficient that serves as a reference;
- A direct partnership with a manufacturer (as in the example of Mali) or supplier (duly selected with very specific criteria) for the purchase and / or local assembly. This option has already been experienced by some countries including Senegal and the officials made the trip from the vendor in India;
- A reform, by the government, of the national rules and procedures of tenders in order to facilitate not only the exact specification of all the criteria of the equipment, but also the required control at the delivery and the reduction of procedural delays. In addition, the governments, through their policies, strategies, can provide scaled-up support in technology development and promotion by offering appropriate incentives (e.g. import duties and taxes reduction) to allow greater private sector participation to deliver energy services at reasonable prices;
- Local production: experience has shown that some of the MFP equipment can be made locally, especially the modules. It is therefore entirely appropriate to promote this option which has the merit of presenting advantages in terms of cost reduction, generation of income for technicians and private investors, job creation and also reliability.

In this respect, in some countries, there are national technical institute that have proven their capacity in advanced technology research and development adapted to the technical needs of services and programs like the MFP. For example, there is the “Institut de Technologie Alimentaire” (ITA) in Senegal and the “Centre Pilote de Technologie” in Guinea, and in Burkina Faso: (i) “Zie” Engineering studies Faculty and (ii) IRSAT “Institut de Recherche en Sciences Appliquées et Technologies” which conducted researches on shea butter MFP with the national MFP program. These institutions have a particular advantage because of their prior involvement in the program that helped them to build a serious experience related to the design of equipment, the installation and the kind of appropriate training needed. As a result, they are very familiar with the technical process and the technology needs because of their direct association with various MFP programs in a number of countries in West Africa. For example, the ITA was associated in the micronutrients project in Senegal; the Centre Pilote of Guinea introduced the Chinese engine that is considered to be more efficient than the Indian motor according to a comparative study by the Centre.

Those above mentioned institutes should be taken into account as partners with the MFP programs in the sub-region and the scaling up is a great opportunity to involve them in a productive and dynamic partnership. They can even be considered and as regional institute and have their capacities strengthened accordingly. The regional economic communities (ECOWAS, UEMOA, ECCAS...) can provided their support to such strategy.

3.4. Criteria for selecting of MFP location

The main parameters to consider are:

- In order to optimize scale-up strategies, target villages should be segmented according to their commercial potential, considering that the geographical focus for the program will vary from one country to another, as well as from one village to another;

- In almost all cases, the local authorities should have the capacity to plan, implement and monitor the program;
- These areas should be also appropriate from an agricultural perspective, and host some of the most important farming systems (namely the 'agro-pastoral millet/sorghum' and 'cereal-root crop mix' systems), including the shea nut;
- Rural villages have between 500 and 2,000 inhabitants, as they represent, based on many countries experience, the ideal sized community for a MFP-based agro-enterprise. In fact, villages smaller than 500 inhabitants are less likely to economically support such enterprises while those larger than 2,000 inhabitants often have socio-economic structures which make managing a community-owned enterprise more difficult;
- The MFP enterprises will be segmented to allow for tailored strategies to scale-up and allocate resources. This segmentation will enable MFP enterprises to reach their full commercial potential based on their existing capacities. In addition, this segmentation could be used to attract donors with different objectives and target populations;
- The social indicators reflect the level of individual and social development in the village. If social development in the village is high then the village is more likely to have the capacity to be involved in commercial activities;
- The environmental indicators are related to a set of environmental, infrastructure and productivity conditions. If the village is near a regional hub, has a high crop yield and is already producing surplus;
- The financial indicators relate to each village's ability to successfully sell and profit from selling MFP processed crops;
- the size of the village: efforts should be concentrated primarily on the areas with 500 to 2000 people in order to further optimize the services of the MFP;
- the potential for socio-economic activities in support of sustainable demand, for example: (i) the needs of community infrastructure, (ii) the creditworthiness of the people requesting the MFP;
- the degree of isolation from electricity network services and the prospects for near future development (within 5 years or so);
- the priority to be given to localities in regions or towns most affected by poverty;
- Locations not electrified or have some simplified pre electrification system;
- Locality having a great potential of development because of its geographical position, but is limited due to lack of modern energy services;
- Locality eligible to MFP and meeting the prerequisites for installing and managing sustainable MFP (population size, organizational capacity, etc.);
- Target areas of significant production with a critical mass for processing and marketing;
- Referring to these criteria in selecting areas for MFP installation can help to correct regional imbalances while contributing to inclusive economic growth in vulnerable and underprivileged areas given their level of poverty.

3.5. The issue of ownership of the MFP

The request for acquisition of the platform comes from the village in the name of women's association or directly from the association who then delegates the operational management authority to a management committee. However, the village, or other village association or umbrella organization can get involved in the acquisition of the MFP facilities. It is estimated that the contribution of target beneficiaries' group may vary between 5% and 10% of the cost of the facilities. Anyway, the configuration of the multifunctional platform is set to fit the community's needs.

In some cases, the platform in all its components is the exclusive property of the association of women (women's group). But in some cases and in some localities such ownership has been challenged and the community took over. It should be mentioned that in some MFP, though very few, have been initiated by young or private operators.

The benefits of community ownership (leasing)

- Serving the administrative territory
- Providing electricity to public services
- Facilitate bills payment
- Enable / ensure sustainability

Disadvantages of community ownership

- Interference of some local authorities and some politicians with negative impact on the program performance
- Difficulties in enforcing good practices and a management discipline
- The concept of accountability is rather diluted and the achieving result is not necessarily an objective
- The focus is not that one of profit making (return on investment).

IV. ACTIVITIES AND EXPECTED RESULTS

The decision to expand MFP program both at national and regional level is to increase the number of MFP but especially to maximize the effects and impacts of the program on rural development and particularly for women in line with ODD 2030. The MFP is considered to be an accelerator of ODD with a multiplier effect in providing energy that affects women, girls' education, and the environment in target communities.

What is also the focus of the change of scale is a further integration of MFP in national sectoral policies and the decentralization process, thus, to ensure ownership of targets national and local beneficiaries, and also sustainability of program, through appropriate institutional arrangements.

4.1. Expected results

With scaling up, it is expected that the development of MFP program will have the following results:

- An increase of number of MFP installed but especially maximizing the effects and impacts on the objectives of economic and social development in rural areas, particularly for rural women. Based on a hypothetical approximation, it is expected that around 30 000 and more new innovative MFP enterprises will be installed in different African countries by 2030;
- A greater number of beneficiaries of sociological diversity, especially in vulnerable areas and / or remote ones;
- Greater market value of food products thanks to the performance of the upgraded enterprise MFP;
- A significant reduction in energy poverty in rural areas, particularly for women, including through alternative energies such as biofuel, biogas, solar;
- Wider and improved services offered by the rural community infrastructure providing access to basic social services (water, schools, health centers ...);
- An enhanced and diversified activities associated with increased revenues, driven by a dynamic local entrepreneurship;
- The capacity building plans for stakeholders are developed and implemented; mechanisms and efficient and transparent program management tools are in place and are subject to regular monitoring;

- The entrepreneurial capacity of women managing the MFP is improved and the women are carrying profitable activities independently;
- A significant percentage of enterprise MFP is financially profitable and sustained;
- capacity of MFP to autonomously access to funding through credit from the decentralized financial systems;
- The capacity of implementing partners of the project to provide services tailored to the needs of MFP managers who can evolve, change, and adapt to changes due to the upgrading and scaling up;
- The establishment of NGO networks of regional partners to support more efficiently and effectively the development of women's entrepreneurship in rural areas;
- The emergence of trained technicians' networks, in partnership with technical training centers, provides services tailored to the needs of local populations;
- The capacities for steering, managing and monitoring and evaluating of the program are stimulated at local and central level;
- Further integration of the intervention mechanisms and implementation of the MFP in national sectoral policies and in the decentralization process. The objective is to ensure ownership and sustainability, through sustainable institutional arrangements, facilitated by national and local stakeholders;
- The proposed strategy will help the countries in West Africa and elsewhere achieve their vision of universal access to mechanical power for agro-processing within the next 15 years; thereby helping to enable millions of smallholder farmers, particularly women, to improve their livelihood;
- Help improve the productivity of small-scale food and agro-processing enterprises, while providing roughly 10 million people with access to modern energy services;
- The development of alternatives technologies will improve the technical performance of the MFP;
- The improvement of the economic and financial profitability of investments in income generating activities and productivity in agriculture, processing / food preservation;
- A local economic development and strategic partnerships established with rural communities, with the institutions that support the entrepreneurship around the MFP, or also with decentralized financial systems;
- The objectives of the "White Paper" (ECOWAS and ECCAS) and the SE4ALL (UN) are quite largely achieved;
- The income of rural people, particularly women, has increased by a significant percentage;
- A reduction of at least half the volume of diesel initial consumption;
- Better preservation of natural resources is observed;
- Local conditions of access to social services for the rural population have improved;
- A renewal mechanism of MFP equipment is in place and the sustainability of the services offered is guaranteed thanks to the establishment of a depreciation fund;
- The capacities of municipalities to include access to suitable and sustainable energy services in their municipal development plan to the benefit of rural communities;
- The development of strong partnerships "win win", concluded with microfinance institutions (MFIs), private and / or public structures with the objective of having the MFP play a leading role in the distribution of household energy products and services in a rural area.

4.2. The activities to be performed

To achieve such results, the following key activities will be performed:

- Supporting the installation of 30,000 plus MFP with the vast majority powered by renewable energy;
- building a micro grid and mini - simplified drinking water supply connected to the MFP;
- Opening an appropriate number of spare parts shops in each region;

- The establishment of a functional dialogue structure at central, regional; local as well as at sub-regional level between countries;
- Facilitating the functioning of MFP regional networks and the national network of technicians;
- training in literacy for all members of MFP managing group in operational management of IGA and rural entrepreneurship;
- The communication on the project activities and results.

V.ROADMAP FOR THE IMPLEMENTATION OF SCALING STRATEGY

The implementation of the scaling strategy will imply a large variety of tasks to be undertaken by numerous stakeholders. So, planning the respective involvement of each stakeholder can help the procedure.

Roles and responsibilities of key stakeholders

The government is the lead of the overall activities regarding the national MFP program. As such, one of the responsibilities of the government in the implementation of the scaling is to advocate for the initiative to technical and financial partners for their participation and involvement in the MFP program. The objective is to ensure the achievement of the program's goals. It is the responsibility of the government to ensure firstly, that the program is well integrated: (i) in the national and sector development strategies to fight against poverty, as well as (ii) in the broad orientations and objectives of international initiatives the governments adhere to. The governments should demonstrate that rural energy services is part of its priorities in their Poverty Reduction Strategy and ensure that pro-poor energy investments are fully incorporated in its national budgetary process.

The government is also responsible of the supervision and coordination of the progress of the roadmap. In addition, the governments need to ensure that all the necessary resources and facilities are in place.

Table 2 Road Map Activities/Tasks

Steps	Tasks	Partner responsible
Formulation and adoption of the scaling strategy	Ensuring relevance of the program vis-à-vis the national and sector development strategies, and in relation to Initiatives on Energy and the Environment	Government and public departments in charge
	Ensuring the availability of all resources required for the implementation of the expansion	Government and the MFP program
	Identification of locations and target beneficiaries (communities and women's groups responsible managers)	The MFP program
	Development of TOR and launch the participatory feasibility study based on best practices and lessons learned	The MFP program
	Formulation and adoption of the scaling document and prepare presentation document for advocacy and partners and resources mobilization	Government and the MFP program
	Approval of the program by direct stakeholders at national and local level	Government and local authorities
	Communication and dissemination strategy to stakeholders and advocacy with international partners	Government and the MFP program
Adoption of the road map of the strategy	Determination and clarification of the respective roles of the stakeholders and setting up the institutional framework for supervision, monitoring, management and implementation at local, national and regional level	Government , the MFP program and local authorities
	Setting of supervisory bodies, steering committees and other orientation entities and the management Unit	Government

Steps	Tasks	Partner responsible
Setting the institutional and strategic bodies	Selection of implementing structures and advisory support in target communities	the MFP program and local authorities
	Organization of national workshop to launch program	Government , the MFP program
	Preparation of annual work plan of the program coordination Unit	the MFP program
	Development of mechanisms of economic model of running the program and other methodological tools	the MFP program
Program launching and preparedness	Provision of funds for the implementation of the program by the various contributors	Government and financial and technical partners
	Preparation of calls for expressions of interest for the supply of equipment and materials, and advisory assistance	the MFP program and public technical services
	Development of a monitoring and evaluation plan, quality control and communication strategy	the MFP program and technical partners
	Development of an operational guide to help municipalities assume their responsibilities in the program implementation	the MFP program
	Starting the development of the administrative processes manual including accounting, financial and operations manual	the MFP program and technical partners
	Preparation of curricula and capacity building plans for all persons and entities involved in the program	the MFP program and technical partners
	Carrying the planned trainings	the MFP program and local agencies
	Carrying an awareness campaign targeting communities in order to mobilize them for their contribution to the program through participatory feasibility studies	the MFP program and local agencies
Program implementation	Coordination of the program implementation	Government, the MFP program and technical partners
	Subsequent regular disbursements of funds in accordance with agreed procedures	Government, and funding agencies
	Daily management, monitoring and evaluation of the MFP	the MFP program and local agencies
	Initiation and management of income generating activities	Women groups and local agencies
	Training, advisory support and monitoring of women's groups	the MFP program and local agencies and local authorities
	Technical service, maintenance and repair of equipment	MFP program, local agencies, private sector
	Oversight and strategic direction	Government, MFP program, technical partners
Regional integration	Establishment of liaisons between countries in the sub-regions, and a bridge between the Regional Economic Communities	Regional economic communities, technical partners, Governments
	Coordination of regional policy and the integration of MFP programs in respective regional strategies.	Regional economic communities, technical partners, Governments
	Setting up a regional institutional network to promote the exchange of experiences between national programs	Regional economic communities, technical partners, Governments

Steps	Tasks	Partner responsible
	Providing strategic support and technical advice: supporting member States in the multi-sectoral dialogues, including support for resource mobilization	Regional economic communities, technical and financial partners
Sustainability of the program	Transformation of the MFP program into a national independent agency with an autonomous management	Governments

PART IV COMMON AREAS

I. THE INSTITUTIONAL SETTING

1.1. At country level

1.1.1. *The basic concept*

The implementation of the MFP program, either when upgrading the MFP or scaling up, requires first of all a real political support and a proper organization and attribution of roles and responsibilities among several institutions and services. Indeed, not one single ministry could be in a position to ensure the achievement of program objectives given the multi-sector nature of the MFP program. The respective roles and responsibilities should be clearly defined and agreed by all stakeholders from the time of the formulation of the program.

In fact, the multi "sectoriality" aspect of the MFP program combined with the scaling strategy require an effective involvement of several institutional, technical and financial entities at local, national, sub-regional level. Various public institutions such as ministries (in particular those in charge of the promotion of women, employment, vocational training, environment, energy and agriculture, etc.), and also non-institutional partners like the private sector and microfinance institutions, should take an active part in both the design and in the implementation of the national MFP program.

The proposed institutional arrangements are based on the need for coherence with current programs, policies and strategies and / or in preparation in the country.

The institutional mechanism at the national level is guided by the following principles: (i) aiming at a program with optimal operational autonomy, (ii) the implementation of the "delegated task" and (iii) being opened to partnerships and synergies with cross-sectoral programs and policies, and (iv) taking into account the approach "development of decentralized services."

The institutional framework may be based, inter alia, on:

- the consistent separation of roles and responsibilities in line with program objectives and operational structures;
- the need to design and implement an organization capable first, to achieve the program objectives with greater efficiency and secondly, to establish a solid foundation to ensure the sustainability of the achievements;
- the inclusion in the organizational structure, the various stakeholders involved in the program management;
- a clear attribution of responsibilities related to policy orientation, strategic management and operational implementation;
- experimentation of project management delegation to local authorities;
- greater decentralization of project management to local people;
- an intensification of capacity building measures and technical support to community members involved and beneficiaries of the program.

1.1.2. *The program oversight*

At national level: The coordination mechanism of the Government set for the MFP program is composed of national institutions. The implementation of the program requires a human, institutional, organizational and financial oversight; therefore, there is a need for a strong political commitment at the high level of the government.

The ministry designated to be responsible for the national MFP program varies among the countries. For example, the: ministry of Economic, Finance and Development is in charge in Burkina Faso, in Mali it is the ministry of Women's Affairs, the ministry of Energy and Industry in Senegal, and in Guinea it is the ministry of Industry and Private sector. The MFP program is managed under these ministries as part of their overall responsibility to their national MFP programs.

The designated responsible ministry of the program in some countries is an issue with other ministries. So, it is important to have in place a strong institutional mechanism with an arbitration procedure at the highest level of the State, if necessary. In any case, it will be important to ensure the establishment and effective functioning of decision-making body that are the National Steering Committee of the Program, the Strategic Planning Committee, and COS other oversight bodies.

The host ministry designated for technical supervision of the program ensures the strategic guidance, operational implementation, and in particular:

- Establish mechanisms that distinguish the policy and strategic management and of the operational implementation;
- Establish an efficient funding system that guarantees the participation of donors and which takes into account the national procedures and regulations;
- Install an operational management system, with strong capacities and supported by external technical assistance;
- Develop strategies of diversified partnerships with decentralized authorities, the people in charge of local economic development, vocational training, as well as with local development structures and research-development entities;
- promote the networking of the various professionals and implementing agencies (ALR / CAC) to optimize resources and exchange of experiences among them; and also strengthen and expand local expertise;
- Provide capacity building to local partners of MFP and consolidation of civil society networks of partners and private providers;
- Take advantage of the offer of technical support both domestically and internationally.

The other ministerial departments involved are expected to play a guiding role and support for the implementation of the program in the most concerted and harmonized way possible.

Supervision and decision bodies

Implementation of the project will be coordinated using existing program teams at the local and national levels, which are already staffed by and housed in the lead ministries and their local administrative offices.

Various structures are put in place to ensure the steering and coordination of the implementation of the program. They contribute to guarantee the participation and ownership of the program by local stakeholders. The composition of such bodies should reflect not only the multi-sectoral nature of the program, but also the representativeness of key program partners. Although the names of the various steering entities vary from country to country, their missions are often very similar. They are:

- A supervisory and decision-making body: the Steering Committee (Comité de Pilotage), chaired by the Ministry of institutional anchoring,
- An orientation and strategic leadership entity that complements the steering Committee: the Strategic Orientation Committee (COS),
- A technical body specifically in charge of funding aspects (COFIN) and assisting the Steering Committee.

1.1.3. Program implementation and management

Eventually, through the scaling strategy, it is appropriate that the program gears towards getting transform in an autonomous entity as National Agency. Doing so will help ensure a more autonomous management and guarantee sustainability.

The entity in charge of the operational implementation of the program, including the administrative and program management, is the National Coordinating Unit (NCU) headed by a Coordinator, assisted by a team of experts and support staff. It is in charge of monitoring all the activities including management procedures, partnership, activities of the various stakeholders, monitoring the activities of the women's groups and the overall results and impacts of the program. The Unit will also provide support and advice as needed, and be specifically responsible for feasibility studies, monitoring and evaluation, establishing partnership (technical, financial, commercial and other). It will also ensure a secure and regular flow of information, the necessary training, and the establishment of management tools. The NCU should be guaranteed an optimal level of autonomy. The NCU should be result-oriented.

At the local level

At local level, the institutional arrangements should be determined based on decentralization and diversification of multi-sectoral partnerships. The goal is to lay a solid foundation of a later transfer to local authorities for sustainability purposes.

It will be the responsibility of local administrative offices to coordinate and manage the program. Their function will be to oversee community-level activities such as planning, studies, installations and monitoring and to sub-contract the appropriate NGOs needed to deliver such services. They will also oversee the monitoring and evaluation of the implementation plan on an on-going basis in order to keep the implementation plan aligned with existing demand and to ensure that village level impacts are analyzed in such a way that they inform decision-making processes at the national-level. At the same time, it would be very relevant to experiment with forms of management delegation public service missions related to MFP to private operators.

The model of the MFP's ownership and management

Based on experience in some countries, three types of models can be identified:

- Community (or group)
- Subcontractor
- Private (individual)

Whatever the model used in a given village, it is important to involve the whole community and have a clear agreement on the respective responsibilities. This can be done during the pre-feasibility study that should be participatory including all local stakeholders.

1.1.4. The service providers

The implementation of the program is based on a strategy of "delegated task" in relation with the private sector and civil society and they are an important "pillar" of the program.

The program is implemented through a contractual partnership between the NCU, local implementation agencies (usually NGOs), the Municipality, and the management committees of village groups. This strategy is meant to facilitate the integration of MFP in the local fabric and ensure local ownership, sustainability.

The main providers mainly consist of consulting firms, NGOs acting as Local Relay Agents (ARL), or Support and Advisory Unit Council (CAC). There are also literacy educators and management trainers, installers and repairers technicians as well as equipment suppliers. Their partnership with the program is usually governed by a formal agreement with clearly defined provisions about control and monitoring compliance.

The “ALR” (Agences Locales de Réalisation). They are considered to be “delegate- service provider”. The implementation of the field program activities at the local level is assigned, on a contract basis, to non-governmental agents. These are usually NGOs or associations that have: (i) a good local knowledge of the area covered; (ii) an expertise in social engineering and local economic leadership; (iii) with skills in areas that fit the MFP objectives and approach. The choice of these ALR is done on a transparent basis, and is open to competition. Their mission includes: (i) support to groups and promoters in literacy activities and economic promotion; (ii) help with liaison of beneficiaries with the micro finance institutions; (iii) support to training and capitalization; and (iv) participation in the collection of data destined to the monitoring and evaluation system. A facilitator is appointed to a regular daily monitoring of MFP groups. One of the biggest goals of the mission of the implementation agencies is to ensure the autonomy of women's groups within an optimal period of two years at most.

Equipment suppliers (mills, chassis, engines, and other various equipment). They are often identified through tender or direct negotiations. They are also responsible in some cases, of the installation of such equipment sometime with the help of local technician duly trained by the program.

Artisans: This category includes: masons, welders, mechanics and electricians and electronics engineers. They are responsible for the manufacture, installation, repair and maintenance of MFP. As much as possible, they will be encouraged to form networks at regional and local levels. A stronger partnership with such networks that include an expanded vocational training system will be a critical factor in getting even better technical performance of the MFP.

The capitalization and sharing of technical experience between network members and also among different technical systems, will certainly contribute to better quality services and therefore the sustainability of the program.

Several other experts or groups of professionals will be involved in the implementation of the program like the Economic Interest Groups (GIE) economic developers and many other operators.

Local Districts They are key partners in the implementation of the program. The partnership with local authorities, one of the important factors of sustainability, will facilitate the integration of the program of platforms in the Local Development Plan (LDP) along with the relevant budget lines. They systematically participate in major decisions, especially regarding the choice of MFP to install, preparation of specifications, selection of operators and providers of services. The local authorities also play a leading and essential role in ensuring that the program has all the support it may need from local authorities. Moreover, the rural councils will participate actively in the decision-making and monitoring processes at the local level, in accordance with the provisions of the "Local District's Code". In any case, it will set up a representative consultation committee geared towards ownership and sustainability.

Other possible providers are the private partners that are also involved in the implementation of the rural electrification program through a public / private partnership and/or concession of electrification network.

Banking institutions and micro-finance structures will also play a key role that is critical to the success of the MFP business in term of financial services well adapted to the needs of development and growth of the platform.

A formal partnership with these strategic entities is a great opportunity to create synergy around the implementation of the MFP program and to increase the results and impacts.

1.1.5. At the level of target communities and beneficiaries

Rural population beneficiaries contribute to the implementation of the program in expressing their needs through the feasibility participatory study of the program that is supposed to have been included in local development plans. The Community, including women's groups, can provide the land required to accommodate MFP infrastructure and will fund the construction of the shelter for the equipment.

Women's groups will benefit from all the technical and accounting training needed for capacity building. They will put in place the organizational body in charge of the management of enterprise MFP. In this regard, the groups form a Management Committee that takes care of all the operational aspects of the MFP. The Committee will be regularly monitored by the implementation agency (ALR) to help gradually ensure autonomy of the women group. Besides the Management Committee, other types of bodies may be set up depending on the nature and extent of the enterprise MFP. For example:

- The Electricity cooperatives (COOPEL) set by the Community to manage the mini-grid. It oversees the activities of the network and is responsible for the subscription of new customers, the maintenance of facilities and regular payment by subscribers;
- Committees of Management Water supply network.

Members of each of these bodies should be trained for the technical operation and financial management.

Moreover, the necessary human resources will be mobilized for setting up the village management committees giving priority to women.

1.2. At the sub-regional level between the countries concerned

With the expansion strategy of the MFP program, many more countries at the sub- regional level and elsewhere, further requires (i) setting a proper coordination system between the countries involved, (ii) making sure to incorporate the program into the regional (sub-regional African Communities) and international development of multifunctional platforms. Doing so will develop the exchanges of experience and good practices that will result in greater efficiency in the implementation of the national programs.

Such a strategy will be implemented by setting a joint planning and monitoring regional structure in the form of Regional steering committee embodied into the sub-regional economic communities such as ECOWAS, ECCAS, CEMAC, and UEMOA. It may consist of:

- Creating pool in each sub-regional organization composed of National Coordination Unit;
- Set up a body for dialogue between national programs representatives either from the national steering committee or from the ministry in charge of the supervision of the program

UNDP regional assistance

The UNDP, building on its reputation for neutrality, should keep engaging in a strong emphasis on promoting regional level interventions, working with and through regional institutions as partners in order to produce synergies between partners and countries in the region. UNDP has proven to provide a mechanism for addressing multi-country issues and facilitated engagement with countries that are accustomed to working together, while facilitating the sharing of experiences between countries.

Given its limited resources, the regional program should continue to focus on interventions where a regional approach brings significant value added.

Anyhow UNDP which already provides support to countries in the triple financial, strategic and technology through the Regional Program for Energy and Poverty (PREP), could help to facilitate the integration of the national MFP programs in sub-regional organizations. PREP will continue to pay particular attention to quality assurance activities undertaken and will provide technical expertise, methodological manuals and guides, tools and consistent actions of capacity building.

It will promote within the region: (i) the exchange of experiences, capitalization and dissemination of lessons learned, (ii) the sharing of tools, methodology of intervention, monitoring and evaluation (database program reliable and easily accessible to partners), (iii) promotion of pilot experience and innovative approaches, (iv) advocacy for better policies adaption, strategies and regulatory framework for the development of micro agribusiness industry.

In consideration of the scaling up, some changes may be needed to adapt to the new future context with much more countries to oversee. The option to continue with PREP in its role of regional coordination may need to be adjusted in the context of scaling over the sub-regions.

- Extension of territorial jurisdiction of current setting of PREP to cover not only all of the ECOWAS members countries, but also in Central African region: this will require strengthening the institutional capacity of the current structure
- Opening PREP sub-office wherever necessary like in Addis for Central and Southern Africa.

II.MONITORING AND EVALUATION

2.1. The implementation of the system

The monitoring and evaluation system is considered as a set of tools and methods whose implementation allows periodically assess the progress of the planned activities, firstly, and secondly to measure the level of achievement of results and hence the move towards the objectives. The monitoring and evaluation system will enable ongoing communication between actors within the implementation of the program.

The establishment of a proper monitoring and evaluation mechanism for the program will be based on the experience and lessons learned, and will thus make the necessary adjustments and additions, while ensuring that all the data and information needs are covered.

The objective is to have a process, not only dynamic and systematic, but also reliable and "user friendly" collection, analysis, processing and dissemination of information. It helps to identify problems in order to alert the management bodies, coordination and supervision, both at national and regional level, and thus to propose corrective measures. In addition, the following should be considered: (i) mechanism of regular updating and maintenance, (ii) training / strengthening user capabilities to ensure optimum use and effective results, (iii) a certain discipline in the regularity and reliability of data entry particularly in countries.

Community and local dimension of the program, beyond participatory and iterative approaches, should develop a self - evaluation system at all levels. That will result as a clarifying source, a major learning and capitalization tool.

A dashboard for monitoring must be presented and approved at the start of the program. The monitoring and evaluation system and results sharing across through reporting, must align with the indicators of the logical framework and based on the principle of “Results oriented Management”.

An administrative, accounting and financial management manual will describe precisely the synopsis of the internal control and management reports (operations, budget, physical monitoring and procurement).

Establishing a baseline will be of great importance as a prerequisite for monitoring and subsequent evaluation of the effects and impacts of the program. The results-based management commands that the reporting system is oriented more on periodic monitoring (quarterly, annual) results and effects of the program.

UNDP / PREP has developed a number of monitoring and evaluation tools that will be the reference in view of the upgrade and scaling strategy. Mention should be made about the monitoring and evaluation manual which contains many tools, relevant and diverse including: (i) the programming tools (PTA planning model software), (ii) data collection tools as the "cashier sheets" and "milling sheets", (iii) data synthesis tools such as the tables of monthly expenditure of the MFP, the monthly statement of revenue of the MFP, (iv) tools of self-assessment, (v) reporting tools such as quarterly reporting format and annual report.

Online Observatory and Monitoring Evaluation IT tool: OISE

Under the UNDP- Gates Foundation’s partnership, the UNDP Regional energy-poverty programme (PREP) has set up a “Monitoring-Informatics, Monitoring and Evaluation Tool for Multifunctional Platforms (MFP) that includes four components consistent with the observatory, the data base, the map interface and an online store. This is a response to the scaling up of the MFP initiative that is now being implemented in about 15 countries in Sub-Saharan Africa. It meets both MFP project operational monitoring and evaluation needs as strategic management requirements of national supervision, UNDP and partners. OISE offers a unique environment for monitoring and evaluation of field work, including databases, a map interface, a space-time analysis component data based on GIS, an online store and multimedia content. OISE contributes to the exchange of information and lessons learned at the regional, national and local level, facilitating and ensuring data aggregation and consolidation and results at the village level and for local advisory and support committees.

Within each country, it is the responsibility of a national Steering Committee chaired by a representative from UNDP’s counterpart ministry and composed of all key stakeholders representing the participating partners and other parties concerned, to monitor the general direction of the national MFP program.

At the regional level, UNDP will, through its Regional Energy-Poverty Program based in Senegal, gather information from all four countries to prepare a single annual regional synthesis report, emphasizing common achievements and regional activities geared at capacity development, knowledge sharing and dissemination of project results through advocacy and communication.

The UNDP Regional Centre in Addis-Ababa will also be involved.

UNDP, as a technical partner of the ECOWAS / UEMOA for access by the poor to modern energy services, will play a major role in mobilizing efforts of replicating, sharing lessons learned and the dissemination of the approach and practice, according to the most suitable methods and media.

The reporting

The project will be subject to participatory annual reviews, a participatory mid-term evaluation that will all facilitate any necessary adjustments. An annual evaluation at the end of each year will be also carried out. An independent external final evaluation will be conducted in accordance with the Ministry in charge of the supervisory responsibility of program and also the program partners.

In view of the multi-sector nature of MFP program, it is indicated to conduct thematic evaluation at national and regional level so as to highlight the main program components such as the promotion of women entrepreneurship, energy and poverty reduction, micro industrialization and development of local agricultural products, etc.

The program's financial statements will in turn, be subject to annual audits of accounting and financial control. They will be conducted by an independent firm recruited on the basis of an open tender.

The reporting stages will follow the institutional structure system and above all, should serve for the capitalization of experiences at the regional level.

The main entities involved in the monitoring and evaluation system chain are:

- The first level of monitoring is provided by women's groups members and the local community;
- The ARL (NGOs), in their role as relay structures nearby, are in charge of monitoring and support to enterprise MFP until they are empowered and become autonomous. As such the agencies will collect and analysis data monthly based on the MFP activities, and submit them to the Coordination Unit. If necessary, the ARL will benefit a methodological support for monitoring and evaluation;
- Technicians carry out monitoring in the context of preventive maintenance and repairs on the request of the women's group;
- Monitoring by literacy trainers is related to the identification of beneficiaries to be trained, and the newly literate in order to assess the level of assimilation of the training and how much the trainees can demonstrate and apply their knowledge in the different management tools;
- The Program Coordination Unit monitors the implementation of all activities of the program;
- Monitoring by the Steering Committee is at the strategic level of planning and implementation process;
- Monitoring by the PREP / UNDP help to evaluate the skills transfer level as well as the additional needs of the program for support in order to formulate recommendations that will improve the program effectiveness.

2.2. The functions related to the monitoring and evaluation system

The monitoring and evaluation system should help with the following: i) to help revised/upgrade the M&E system, including the definition of outcome indicators, and ii) to define the list of thematic assessments to be undertaken during the project. Some of the M&E expected functions include:

- Design and use relevant and shared indicators, determine consensual, realistic and achievable goals for the different levels of the chain of results in reference to the logical framework of the program. Preferably, these indicators should be limited to ensure system efficiency and easy to use.
- Establish a database of implementation of the program to facilitate the monitoring of resource mobilization efforts, technical achievements, results achieved by the Program, as well as effects and impacts (medium and long term), induced by the implementation of the MFP program.
- Measure differences from the initial prevision, thus highlight the problematic situations that may undermine the achievement of some results / objectives of the program.
- Submit the monitoring and evaluation information through periodic reports as required, for better information, and accordingly propose the remedies and alternatives for proper decision making to the Coordination Unit, the Steering Committee, or the Ministry in charge, the various technical and financial partners. This will help to improve the impact of the program on its beneficiaries.

The project should also deploy a range of monitoring and evaluation tools such as detailed surveys, to monitor the influence of gender dynamics on the project and vise-versa.

Take steps to upgrade existing knowledge networks, including websites and communication toolkits, to facilitate knowledge codification and sharing among countries.

2.3. Possible indicators of reference MFP program

The monitoring- evaluation system must be aligned with the indicators defined in the logical framework and based on the requirements of the principle of Result oriented management. Many performance and impact indicators should be chosen when designing the MFP program and be part of the logical framework to enable a better lecture of the program performances with much more precision as possible during periodic evaluations.

Some of the indicators are:

Sustainability indicators MFP

- The level of use of the MFP,
- Diversifying the range of products and services,
- The pricing of services in relation to the market price,
- Attendance rates linked to the quality of services,
- Technical control (maintenance and repair),
- The availability of spare parts,
- The level of financial profitability,
- The ability to establish a sinking fund,
- Biofuel tree planting capacity,
- Economic and social autonomy of women.

Performance and impact indicators

Development objective

- Number of beneficiaries localities MFP,
- Number of direct beneficiaries of MFP,
- Number of created women's microenterprises,
- Number of direct jobs generated (related to the company MFP) and indirect jobs,
- Profits made by MFP,
- Number of women accessing credit,
- Credit amount per beneficiary,
- Indices access to social services (health, education ...),
- ODD monitoring indicators in the beneficiary localities MFP.

Activities of the program

- Total installed MFP,
- Total operational MFP,
- Total MFP with / without water and / or without electricity distribution network,
- Total number of independent and autonomous MFP (after 2 years),
- Number of independent and autonomous women MFP management legislation and creation of other income-generating activities,
- Number and nature of partnerships with women's groups,
- Total MFP trained artisans
- Number of spare parts depots
- Total number of women trained in the management of a MFP
- Number of private and community micro enterprises MFP installed and operated at national and regional levels (including regions impacted by the security crisis)

Access to energy services

- Percentage of respective sources and types of energy used
- Access to health facilities, educational and communal energy

- Evolution of the number of services sold MFP

In terms of environmental aspects, the following indicators could be considered:

- Percentage of milling / millers with protective equipment;
- Percentage of operators protected by masks and earplugs
- Percentage of MFP companies that recycle waste oils and residues;
- Percentage of beneficiaries of MFP formed on managing environmental risks;
- Number of beneficiaries trained on the environmental management of oil, batteries and battery users;
- Number of awareness sessions for beneficiaries of MFP on environmental risks.

2.4. Capitalization of good practices and exchange of experiences

Capitalization of experiences is a structuring and contributing factor towards the pursuit of excellence in terms of outcomes and impacts. This is because capitalization of experiences is based on identified lessons learned and best practices during the implementation of the MFP programs. Therefore, the sharing of experiences and methodological, pedagogical and technological knowledge from earlier phases should be a central focus in the implementation of the program implementation especially in the strategy of upgrading and scaling. Indeed, the same way the upgrading of MFP has to draw from the experience of the first generation of MFP, the same way the scaling should build on the results of the upgrade.

The exploitation of the platforms in some villages is dependent on some factors that limit to some degree the economic and technical management. This is why it is necessary to identify operating practices that have yielded good results and share them with others to overcome the limits and improve their functioning. In fact, capitalizing on experiences can help to: (i) learn to improve the results and effects of the program, (ii) optimize operating conditions of MFP and also the implementation of other national projects, (iii) ensure a real transfer of skills to control and manage the project through the entire process and in all phases of the implementation, (iv) sharing experiences between all stakeholders.

Sharing experiences and capitalization activities and methods used as well as the achievements of the program involve:

- the establishment of a network of competence which will focus on topics related to the targeted effects of the program;
- tools such as capitalization booklets and thematic guides to good practice, developed and disseminated to support the sharing of achievements;
- the collection, organization and dissemination of information useful to stakeholders at local, national and sub-regional levels.

UNDP, as a technical partner of the ECOWAS / UEMOA, ECCAS/CEMAC for access by the poor to modern energy services, will play a major role in mobilizing efforts towards sharing lessons and the dissemination of the approach and practice, and the capitalization.

2.5. Communication and visibility for development

Alongside the capitalization, the Program will define from the start a communication strategy backed by various communication media accessible to the various categories of stakeholders of the program.

For reasons of visibility and exchange of experiences, a communication strategy will be developed and a system with a detailed plan will be developed both nationally and in the sub-region. Such strategy will also contribute to the reputation and good image of MFP program; in addition, such communication strategy can be a mobilizing factor of potential technical and financial partners.

The means of communication may include: (i) the organization of visits of national achievements for different stakeholders including the press, as well as exchange visits with other countries (ii) the publication of a biannual newsletter with information and news on MFP programs (achievements, special events, testimonials, comments and contributions ...), (iii) a website which will also host the newsletter, (iv) posters and pamphlets, (v) documentary films, (vi) organization of shows like theatrical performances.

UNDP / PREP, Regional Economic Communities and other partners can provide technical and financial support and any other form of appropriate assistance for the implementation of the communication strategy.

III.THE SUSTAINABILITY ASPECTS OF PROGRAM

The sustainability of the enterprise MFP, in other words that is the ability to keep operating even after the external support has stopped, is the essential for the benefice of all stakeholders involved. This can be a major challenge and to overcome it, some measures are required:

- a set of mechanisms and procedures to ensure the quality of equipment and to ensure optimal technical operation and management;
- adopting a proper strategy and creating conditions to ensure the profitability (reducing cost and increasing revenues) and readiness for equipment renewal;
- the adoption of a strategy of supporting the MFP in all aspects as needed, including transiting whenever necessary, from the initial methods and more efficient ones (type of energy used, technical process, new products, marketing strategy, training, etc.) that meet the requirements of the evolution of the enterprise and its context and environment;
- the systematic research of women's empowerment and autonomy;
- the best integration possible of the program into local and regional development plans.

The program sustainability will depend primarily on certain factors:

On the financial aspects

- Financially, the enterprise should be profitable because, like any business, the platforms are subject to the rules of the market. That said, the experience of existing programs has shown that generally platform managers cover at least their operating expenses, make profits, initiate other income generating activities with their own savings, and even sponsor social activities and community works ;
- In terms of funding the program: (i) a strong commitment and a consistent support (financial, institutional, regulatory, technical, ...) of the government, including integrating the program in the various national and sectoral development plans; (ii) a significant self-funding from the beneficiaries directly from their revenue and saving or indirectly with the support of microfinance institutions;
- The commercial viability based on the MFP capacity to provide services tailored/adapted to the needs of populations; and in addition, to have the capacity to harness the power of the market, diversify business opportunities as well as the range of productive services they can provide so that they can become more efficient;
- Improve their cost structure by reducing the costs and or increasing the income.

On the institutional and organizational aspects

- The degree of organizational empowerment through selection criteria, quality of support and entrepreneurial motivation of the participants and partners.

- The strength and the organizational arrangement of local entities involvement with the required capabilities for facilitation, advocacy for energy services and logistics, and autonomy for resource mobilization.
- Organizational sustainability determined first by the degree of its autonomy to manage and second by the operational capability of the program management unit, given that it is provided with all the resources it need to operate efficiently (human resources, adequate funding, material,...).
- Getting together as a network for mutual activities (e.g. central purchasing, spare parts stocks) will secure maintenance and also the supply of spare parts. In addition, by grouping MFP by region and having technicians to form a network will be contributive to durability.

In terms of stakeholders involvement

- Ownership of stakeholders, in particular women's groups, knowing that the ownership include necessarily the financial capacity and contribution be it through work (building the facility to house the technical equipment) or cash, among other factors.
- The commitment of the Municipalities (local authorities) who are actively involved in the planning, programming the access to modern energy services, and assistance with equipment.
- The integration in the local development process which will now allow local authorities (rural communities in particular), to include the installation of MFP in their budgets.

The training aspects

- The sustainability of the program will depend largely on the capacity of local authorities to progressively control the process of planning, programming and the monitoring of the energy supply services to communities.
- The emergence of an entrepreneurial culture based on performance and cost effectiveness.
- Maximizing the results and expected impacts of MFP program and regular sharing those results with all the stakeholders.

Experience has shown that the implementation strategy and modus operandi of the MFP program contain constituent factors of sustainability. Some of them are:

- The implementation strategy based on "delegated task" principle and the participatory management system facilitate project ownership by the beneficiaries.
- Capacity building of groups contributes to their autonomy.
- Viability of the results achieved is due to the partnership strategy with the implementing agencies (ALR) that are imbedded in the communities and will continue to support those communities even at the end of the funding.
- Maintenance and repair of equipment are handled by local technicians trained by the project and organized in networks with collaboration, in some countries, of the Chamber of professional, which oversees the technicians and artisans.
- Promoting community dialogue and inter-cooperation between communities in the MFP implementation localities, is also a way to involve the beneficiary communities in the management and ownership of MFP. Ultimately, the beneficiaries, through the management committees, the Villagers Development Committees, and the different bodies of local authorities can play a role increasingly important alongside agents of the State decentralized technical services, and NGOs.
- The exchange of good practices and experiences on the basis of studies and surveys, organization of meetings and sharing of experiences and knowledge, at both national and sub-regional, with the technical support UNDP / PPREP.

However, some challenges need to be addressed in order to further ensure the sustainability of the program. They are for example:

- Deficit of managerial and training of village management committees, the illiteracy of some women in the group who manage the platform, and the limited assimilation of certain technical training. Knowing that these factors affect the durability and sustainability of interventions, it is therefore necessary to make appropriate arrangements to compensate these shortcomings by including an advanced literacy and strengthening some training. If necessary, the way of teaching/training should be changed to better adapt to the trainees' characteristics.
- In their support strategy, it is not absolutely sure that the relay agencies (ALR) work with clear and purposeful objective for the optimal empowerment and ownership of women's groups of the MFP within a short ideal timeframe. So, to remedy this, it is necessary to guide the local relay agencies accordingly, and necessary reference should be made clear and explicit about that issue in the partnership contract with the program for sustainability.

IV. PARTNERSHIP STRATEGY AND RESOURCE MOBILIZATION

Transformations and resizing of MFP programs entailed by the scaling as well as the upgrade in the countries and sub-regions will certainly require new partners to match the new needs.

4.1. Partners mobilization

The promotion of partnership is a requirement with regard to: (i) the level of ambition, (ii) the new vision of access to energy services, (iii) the role to be played by MFP in local development and the achievement of ODD. The program has to be successful in creating inter-sectoral synergies to maximize the impact on the objectives of the sectoral policies and programs.

Identification of technical and strategic partners should be based on criteria such as their visions, missions, goals and interests, and their conditions of involvement, (i) firstly at all levels: national, sub -regional, regional, international, and then (ii) their status: private, public, inter -State, bilateral or multilateral. Such activity is a prerequisite since it helps to better identify and select appropriate partners and likely to get involved efficiently in the program, whether as a strategic, technical or financial partner (or all at once).

The next step will consist of submitting the project document that will be the basis of discussion. The partners approach should continue even after the operational start of the program, as long as it is still relevant and needed.

4.1.1. *The partnership at national level*

The strategy will be essentially as follow:

- The entities in the support and advisory role (private sector, civil society, ...) for rural businesses, vocational training and decentralized financing (business centers, artisans and technicians networks, micro finance structures, etc.) can effectively support the rural entrepreneurship promotion and contribute to reducing assistance costs through cost-sharing mechanisms offered by these partners.
- The development of partnerships around the MFP mini-network, the significant commitment of sectoral managers (water, electricity, agriculture, and local government) is a decisive condition for implementation. A partnership with the municipality concerned will facilitate the definition of conditions for sharing of costs between the various stakeholders involved.
- Research organizations and technology development institutes with public or private status at national, regional or international level.

- Development partners at the regional or international level to offer coaching opportunities such as UNDP / PREP, GEF, ENDA, etc.

At national level, it is expected that technical and financial partners of the respective countries, will provide not only financial support necessary for the effective implementation of the program, but also technical expertise to help with the efficiency of the program. In addition, these partners will contribute to the implementation of the program, first, by including it among the axes of their priorities for cooperation with the country, most of all in the gender issue and women promotion, job creation and income generating micro enterprises, sustainable development and energy conservation, as well as food security and agribusiness sector. Joint planning and joint assessments will be carried out for greater efficiency and impact.

As about the governments, the partners will assist in the development of national strategies for development of agribusiness and program design in the context of the national strategies for upgrading and scaling MFP programs. Moreover, it is expected that the partners will support capacity building within ministries, support the monitoring mechanism, for example by providing tools and training in methodologies and database systems.

National entities responsible of partner mobilization

- the Department of technical supervision
- the relevant sectoral ministries
- decentralized structures
- the program coordination unit
- national NGOs.

Partnership at the local level

The program will focus on mobilizing the necessary operators to deliver the services needed by the project's beneficiaries. It includes:

- Local authorities who have played a central role in planning, budgeting and monitoring development activities. These local authorities should have the mandate, and some financing capacity, to work on infrastructure-related activities such as water and electricity networks.
- Local branches of sectoral ministries, agencies and programs, including donor programs, which have the mandate and capacity to provide support to the project team and the beneficiaries in the areas of: (1) literacy training; (2) access to micro-finance; (3) setting up and managing enterprises.
- NGOs that can provide adequate services but can also manage the countries' local administration offices under a sub-contract.
- CBOs and local experts who, on the basis of sub-contracts, can provide direct support to the villages, both in terms of strengthening their capacity and supporting the monitoring of project activities.
- Local artisans, who provide, install and maintain the MFP equipment.
- Micro-finance institutions that provide credit for the purchasing and upgrading of MFPs.

Locally, the support activities of the external partners may be to (i) design and implement assistance to local experts and decentralized public authorities, (ii) periodically conduct consultations with selected local villages to ensure the progress of the implementation of the program.

4.1.2. At sub-regional and international level

UNDP and the Regional Energy Poverty Program (PREP), have been strategic partners of the MFP programs since the first generation. They have been doing that on triple aspects of financial, strategic and technical support,

contributing indeed to national capacity building through knowledge transfer, and regional and sub-regional exchanges, and funding.

It is expected that PREP will certainly continue its assistance in particular ensuring quality of the activities of the program and making available technical expertise, methodological manuals and guides, tools and coherent actions of capacity building. It will also keep promoting within the region: (i) the exchange of experiences, capitalization and dissemination of lessons learned, (ii) the sharing of tools, methodology of intervention and innovative approaches (iii) promotion of innovations, pilot and experimental projects.

In the context of regional policy for the access of the poor to modern energy services, is expected from the sub-regional Economic Communities (ECOWAS, UEMOA, ECCAS, CEMAC, ...) to play a major role in mobilizing necessary efforts to support the scaling strategy, sharing lessons and help with the dissemination of the approach and practice of MFP programs. Their support will focus for example on the development, implementation and monitoring of regional policy on energy access around the development of the MFP. They could contribute in particular to:

- Build capacity in support of the multisectoral policy dialogues;
- Disseminate lessons learned from national experiences in order to use them as models for the upgrade within their member countries;
- Report information related to MFP programs to external partners they are in contact with or can liaise with, including donors for meaningful involvement.

The new opportunities worldwide for energy (Sustainable Energy for All Initiative (SE4ALL)), the environment and climate (Climate Fund Green), among others, offer real partnership prospects for the development of a national program MFP.

SE4All intervenes at the higher level as an umbrella framework for the energy sector. The Action Agenda provides the long-term vision which ensures the overall sector-wide coherence and synergy of the accumulated efforts towards the three goals of SE4All in the country. It naturally serves as the basis for donor co-ordination and assistance on energy and as a reference document for the private sector and civil society.

This initiative aims to mobilize the action of the government, the private and civil society sector around three targets by 2030, namely:

- i. Ensure universal access to modern energy services
- ii. Doubling the global rate of improvement in energy efficiency
- iii. Doubling the share of renewable energy in the global energy mix to at least 30% of energy supply

Also, EU grants to ACP countries (ACP Business Climate unit (BizClim) through the "European Commission / Europe Aid Cooperation Office - ACP-EU Energy Facility gold Water Facility, FAO, IFAD, AfDB, and all other development partners or donors working for the promotion of food security or agri-businesses, offer potential for technical and financial partnership with the MFP program countries at the regional level.

4.1.3. Managing the partnership and the development of synergies

The management of the partnership involves the strategic partnership establishment that defines a common approach, joint programming with some specifics about timing, co-financing mechanisms, and institutional setting. Other provisions will inform about the respective roles and responsibilities of each party in terms of attribution of decentralized cooperation, implementation arrangements and operational monitoring.

The partnerships will be formalized using appropriate legal formats (conventions, protocols, framework agreement), depending on the phase or level of negotiations and the institutional constraints of each stakeholder.

The form of the agreement may vary depending on the status of each entity and also the rules and regulations they have to refer to.

Regarding private structures, the partnership will be established on a transparent basis through a specific contract geared to the production of particular results. The partnership will focus on joint and complementary actions that will unlock and maximize the synergies between the components of the programs. This approach will be based on the expected results of each partner, setting activities, roles and responsibilities in the areas of planning, programming, shared funding, implementation and monitoring and evaluation.

The implementation of the program involving various sectors, this will result in respective share of funding related to the various program partners. In fact, the transversal nature of MFP program promotes sectoral synergies.

4.2. Financial resources mobilization

4.2.1. A diversified approach to resource mobilization

The resource mobilization strategy may consist of a twofold approach: (i) contact the current partners to increase or renew their financial contributions, (ii) identify at the same time new funding agencies.

The implementation of this strategy will require firstly, a communication to the potential partners the results and impacts of the program, and secondly, display of the commitments of partners already supporting the MFP program (such as especially UNDP and the Bill Gates Foundation, and also Luxembourg's cooperation, FAO, IFAD, UNCDF, UNICEF, BOAD, AfDB, IDB, etc.). It may be helpful, during the search, to request the sponsorship of already committed partners who can bring in substantial added value and confidence.

Mobilizing and securing resources require strategic approach and reliable and effective procedures. To this end, a number of actions may be considered:

- At governments' level, they should show evidence of their contributions to the funding of the program in the national budget. The state should cover the program's financing needs up to the limits of its budgetary possibilities (ideally a minimum of 25%). This will be a strong signal that confirms the importance of the program for the government as part of its development priorities;
- Develop a resource mobilization strategy and carry an advocacy initiative, relying in particular on the achievements of past and current partnerships and specifically the program achievement;
- Expand opportunities with technical and financial partners whose cooperation themes are linked to a program's dimensions;
- Develop innovative strategies in addition to the traditional one, such as local authorities and public / private partnership, decentralized cooperation, etc.
- Initiate co-financing strategies with other development programs: women/gender related and rural projects, clean energy as well as vocational training promotion;
- Develop advocacy with multinational private companies in the country (oil companies, international telecommunications companies, mining companies, etc.).

The new opportunities for global energy, environment and climate (Climate Fund Green), among others, also offer real prospects for the development of a national MFP program. In the renewable energies sector, among others partners there are the Society of African Biofuel and Renewable Energy (SABER) and the Regional Program for Development of Renewable Energy and Energy Efficiency (PRODERE) which is a program UEMOA.

UNDP, through the Country Offices and the Regional Energy Project (PNUD-PREP) remains the principal partner of the countries for the scaling-up and upgrading of the MFP. UNDP/PREP is expected to continue to accompany the process of mobilization of technical and financial partners.

It may be efficient for the program in search of partners, to first consider those that have already stepped in to support countries in developing and implementing MFP programs such as: Luxemburg, FAO, UNCDF, UNICEF, BOAD, AfDB.

4.2.2. The private sector, national and international banks

The partners susceptible to be targeted for financial and/or technical support of the program can be: banks, national and international private sector. In addition, there is an opportunity through public-private partnerships, the sub-regional funding institutions (e.g. ECOWAS, UEMOA, ECAC, etc.), and the micro finance institutions.

The private sector is one of the essential pillars of the MFP program notably through its role of provider – implementation agent, installation, maintenance and repair. It is expected that those national and / or international companies to be of certain credibility and have the technical skills and financial capacity as required by their role and responsibilities. To involve the private sector, it is important to develop models that align with the private sector's core business strategies by creating win-win partnerships. To that regard, five areas of private sector intervention to be outlined are:

- Improving access to quality agricultural inputs
- Creating and supporting farmers' groups
- Purchasing equipment to create higher value products
- Setting up purchase agreements
- Supporting local supply of equipment and spare parts

The micro finance institutions can be very strategic partners of the MFP program, most of all, compared to regular commercial banks. The MFP enterprises are indeed a good business opportunity for them considering that they can benefit from the program by offering loan services, and handling savings. The upgrading and scaling program will provide those financial institutions with even more business. The MFP program should get in partnership with selected microfinance institutions based on the suitable conditions they have to offer and also the proximity to the MFP. The social impact, the gender aspect, the service to the community, the critical mass, among other reasons that should be presented to get the best conditions possible for the funding (credit rate, terms of reimbursement, guarantee aspect, etc.).

Getting private sector, national and international banks, other potential financial partners to participate in business operations while supporting the upgrading and scaling strategy of the MFP program, may suppose doing the following:

- Design, in the form of a request to submit to those potential partners, a special presentation document of the program, taking into account their interests, their missions and areas of intervention, as well as their specific abilities. The document should highlight, among others, the good results achieved, the significant impacts, the relevance and the particular strengths of the program including the good management (accountability, integrity and transparency);
- Emphasize all the benefices and the positive impacts (direct and indirect) those partners can get as a result of their involvement in the program, for example: good image and reputation, financial benefits, increase of revenues. The fact that the program is extending not only in a given countries, but also in the sub-region can be an attractive fact;

- Underline the commercial aspects and the profitability of these MFP agribusinesses that may grow to become real pre-industrialization enterprises processing and marketing of agriculture products;
- As much as possible, arrange a meeting with the potential partners and invite them to visit the MFP site;
- List the partners who currently support or have supported the program technically and/or financially;
- Demonstrate the program's ability to comply with the rules and procedures of the partners likely to engage.

Mobilizing local private financing:

In West Africa, it is estimated that there are roughly 44 MFP-based enterprises being operated by private individuals or companies (16 in Mali, 17 in Burkina Faso and 11 in Ghana), with little to no support from the public sector. Their experiences have yet to be assessed and documented. Given their existence and the proven profitability of many other MFP-based enterprises, it is necessary to better understand how and to what extent private individuals and companies can help expand agro-enterprises.

V.FUNDING ARRANGEMENTS

As part of the scaling, the programs will have significant financing needs. Indeed, the project led to a chain costs including in particular the investment costs necessary for the implementation of the program including equipment, costs of operations (for example capacity building of beneficiaries and implementing agencies), and also the costs of operations.

However, such amounts cannot be covered solely by the government and beneficiary groups or by a single donor or development agency; hence the contributions of financial partners and other contributors are indispensable.

5.1. The possible funding sources

National funding resources

To ensure economic and social sustainability of the program (maintenance and renewal of platforms), national contributions should ideally be at least 25% to 50% of program funding requirements. Such level of national stakeholders' financial contribution can demonstrate their determination towards ownership and their preparedness to ensure the sustainability of the program. Some of the national contributors are:

- State (public investment budget) and the decentralized Communities,
- Autonomous public institutions and agencies,
- national private sector and civil society / NGOs,
- Private/public partnership; national banks, local micro finance institutions,
- Contribution of beneficiaries, local communities and municipalities. (e.g.: acquisition and installation of equipment MFP).

The national program can initiate the creation of a guarantee fund as a way to reduce the exposure risk of input-suppliers, and facilitate their involvement in the program.

The program can also provide a loan guarantee to its existing microfinance partners for capital purchases. The program should require that the microfinance institutions decrease the required interest rate, to reflect the limited risk. Alternatively, a guarantee fund could assist in financing equipment providers.

The funding needs consist of the following:

- Participatory feasibility studies,

- Operating costs of the whole system of the MFP: milling, grinding, welding, battery charging, the provision of electricity and water services, will be borne users of the service provided through the settlement of charges to operators,
- Shelters and other facilities construction,
- Setting up a special fund to serve as a fund for the amortization of equipment,
- The cost of the purchase and installation of the equipment,
- The cost of material, logistics, and furniture,
- The cost of training, assisting and facilitating of MFP operations at central and local levels,
- Part of the costs of acquisition and installation of technical equipment (engine, modules ...) as well as social infrastructure and community facilities related to mini network of water/ electricity provision.

International funding sources

The contribution of international assistance will be required to cover the financing needs that the public investment budget of the State and other national funding sources are not able to cover. It is important to mention that the subsidy system could, in the long-term, limit the program in terms of its ability to attract donors and partners, as well as creating a culture in the community of unlimited support from external funding agencies and donors, versus achieving any ownership and sustainability

These funding sources include

- International public aid through multilateral and bilateral cooperation,
- Philanthropic organizations and Foundations,
- Decentralized cooperation,
- Foreign Private Sector, multinational corporation,
- Sub-regional Economic Communities and their financial entities.

Part of the needs that can be funded by external sources

- Part of the costs of acquisition and installation of technical equipment (engine, modules, ...) as well as social infrastructure and community facilities related to mini networks of water and electricity,
- Part of the material and logistics costs necessary for animators,
- Part of the cost of the material, office furniture and logistics of the program management unit,
- Monitoring and evaluation system,
- Strategic and technical assistance as part of the upgrade costs,
- Research and development and knowledge dissemination between African countries involved,
- Coordination and exchange of experience between national MFP program at the sub-regional level.

In the case of MFP of particular environmental impact, and for support to access renewable energy, funding could be mobilized through the Clean Development Mechanism and Carbon Market, with the support of regional structures, the Global Environment Fund (GEF) and the specialized agencies of sub-regional organization such as ECOWAS, UEMOA and ECCAS and CEMAC.

More specifically, in order to leverage the resources of the UNDP/ Bill and Melinda Gates Foundation with other support at the regional level, a specific report focusing both on past success/impacts and good prospects for future achievements of the jointly developed program "Extending the successful model of poverty reduction and the ownership of women in West Africa ", should be developed and submitted to partners such as the Energy Program of Africa, the Multilateral development banks. The presentation may include:

- The benefits of co-financing,
- The positive and strategic impact of the program for a very significant number of women and rural communities,

- The benefits in relation to the environment protection because of the choice of alternative renewable energies, thanks to the upgrade strategy,
- The enthusiasm and the great interest of many countries to adopt the program proving its catalytic nature,
- The nature and the sub-regional and regional scope of the program and the positive effects of the regional vision,
- Efforts and commitment of the respective governments to support the MFP program, as a result of being galvanized by the resolute support of UNDP and Gates Foundation,
- The benefits of upgrading and scaling resulting in reaching a much larger number of beneficiaries, achieve economies of scale, developing synergies, offering renewable energy, making the management, implementation, monitoring and coordination of the MFP program more cost/efficient, etc.,
- Evidence that the program is easy to replicate in other countries (as confirmed by actual experience in many countries), and is presented as an adequate response to the needs and challenges similar in all countries of the region. This shows to what extension the MFP programs “know” no borders in countries and beyond countries and sub-regions, which increases opportunities for potential partners in terms of the geographical areas,
- The evidence of the relevance of the MFP program:
 - Relevant to the missions, objectives, areas of interests of those targeted partners. It should show how much the program is in line with their respective policies and strategies for the development of the countries of MFP program. This includes the environmental and access to energy aspects;
 - Relevant with regard to national and regional priorities as stated in their official documents, as well as in relation to policies and strategies (gender aspects, agribusiness and agro-industry, renewable energy, development of local resources, improvement of lives of rural populations in general, employment, etc.).

5.2. Modalities of the funds management

Various options are possible in the countries for how to well manage external financial contributions. It is rather a question of political decision and so, falls under the sovereign will of the government.

a). The basket fund mechanism

The principle of common basket is part of the Paris Declaration on the effectiveness of public aid for development. In the case of the MFP program, the mechanism can contribute to facilitate the disbursement and reporting (one report for all funding agencies).

The "basket" is an autonomous multi-donor mechanism involving the government and its technical and financial partners. The contributions of different donors abound fund where the resources collected that way become are fungible and cannot target any specific budget lines. The monitoring and the disbursements are the responsibility of the ministry of finances with possible involvement of some of the funding agencies.

This mechanism has been experimented in some countries (Burkina, for example) with more or less success.

b). A standard mechanism

In this case, the channels of the funds in the country are opened, and each financial partner is directly in control of its funding management through its own rules and procedures. In this case, the role of the Ministry of Finance is the one of coordination, considering that other ministries can be also involved in the financial partnership for projects within their department and sector of activities.

c). Direct contribution

If the MFP program is vested with a legal autonomous agency status, it is entitled to receive and manage direct funding destined to the program implementation. In such a case, the national program will assume financial management responsibility vis-à-vis the funding partner and will report to designated government authority.

Financial control

Financial partners need to be reassured about the use of the funds they make available to the beneficiaries, considering that indeed, a good management requires being steadily disciplined, rigorous and transparent. Therefore, MFP funded programs, and any other beneficiaries should be held accountable to monitor closely the use of the funding and to report in compliance with agreement with the funding agency. So regular reports shall be developed and submitted to the technical and financial partners. The frequency of reporting should comply, not only with the financial partner's procedures, but also with "monitoring and evaluation system" set for the MFP programs.

In addition, the implementation of national and international funding will be subject to annual audits with independent auditors selected by the Government and the technical and financial partners.

VI. OVERVIEW OF THE FINANCING PLAN

The size of the program as well as its multi-sectors aspect, require a financial contribution and commitment of numerous diversified sources at national and international levels. The ideal will be of course for the State, to take the lead including in terms the largess possible percentage of the funding needs.

Before launching the program, the government should make sure that all the resources needed for the program to be implemented and reach its planned objectives over time, are guaranteed and to be in place and disbursed timely as required by the work plan.

Table 3 Distribution of funding sources by budget items

Budget items	Funding sources					
	State and public agencies	Beneficiaries Community	National Civil society society/NGO Private sector	Bilateral & Multilateral Agencies		International Private sector /NGOs Foundations
				UNDP	All others agencies	
Estimated percentage of contribution	15 to 50%	5 to 10%	5 to 10%	1 to 5%	25 to 40%	5 to 15%
Equipment						
Construction of facilities		X	X			
MFP equipment (engine accessories) Including modern energy equipment (solar, hybrid, biofuel, biogas).	X		X	X	X	X
Acquisition of modules & Various tools	X	X	X	X	X	X
Installation MFP mini-networks	X	X	X	X	X	
Materials						
Vehicles, Motorcycles	X		X	X	X	X
Office furniture and equipment	X					
Operations						
Feasibility study and other surveys	X			X		
Workshop and meeting for sensitization and communication	X		X	X		
Promotion of entrepreneurship and economic facilitation of communities	X		X	X	X	
Capacity building and various trainings of MFP women group	X		X	X	X	
Capacity building and training of local implementing agencies	X		X	X	X	X
Training of technicians and artisans	X		X	X	X	X
Preparation of manual of administrative, financial and accounting management procedures	X			X		X
Exchanges visits in sub-region countries	X			X	X	X
Operating expenses						

Budget items	Funding sources					
Salaries	X			X		X
Local agencies services	X	X	X	X	X	
Office cost and miscellaneous communication	X			X		
Audit, monitoring & Evaluation	X			X	X	X
Innovation and upgrade	X		X	X	X	X
Scaling up					X	
National level	X	X	X	X	X	X
Sub-regional level	X		X	X	X	
Measures/Activities to ensure environment protection and environmental impact monitoring	X			X	X	X
Design and publication of technical references for equipment selection, installation and maintenance	X		X	X		

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ANNEX I PROGRAM FRAMEWORK

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
Component I: UPGRADING MFP PROGRAM Consolidation of previous results, environmental friendly and improved technical performance, developing real agro-enterprises in micro processing business				
Specific objective 1.1. Preparation phase				
<ul style="list-style-type: none"> Identify / inventory all technical issues related to non-operating MFP, as well as the needs to upgrade; Develop a methodological guide for intervention and technical references (for equipment selection, installation and maintenance of MFP); Design a plan of upgrading over three to five years with specific objective, qualitative and quantitative, including an estimate of the funding required 	<ul style="list-style-type: none"> All of the upgrading components are identified, Related plan, budget and other resources are prepared The upgrading strategy is adopted A methodological guide package is validated and published as a tool of technical installation and maintenance of MFP; 	<ul style="list-style-type: none"> An available upgrade plan and budget An available methodological guide 	Host ministry National program UNDP/PREP	Project documentation and data
Specific objective 1.2 Technical adjustments				
<ul style="list-style-type: none"> Build partnership with the technical and technological institutions, as well as some universities to develop well adapted alternatives technologies, including manufacturing equipments at country/sub-regional level and providing proper training; Repair breakdown MFP, rehabilitate and / or replace old ones; Enlarge and optimize the core modules of old MFP by modifying some technical structures: (i) modify the frame by reducing its length, (ii) design a new configuration in three compartments, (iii) soundproof the equipments allowing both the reduction of noise and smoke pollution; Readjust the MFP technology to make it even more sustainable through the development of renewable energies for greater autonomy from imported fuel; Purchase new good quality equipment as necessary 	<ul style="list-style-type: none"> Productive partnership with various services, agencies, institutes is established in technical and technological sectors in country and in the sub-region; The technical performance of the MFP is improved and efficient (reduction of vibration and breakage); Increased productivity and diversification of small-scale food and agro-processing enterprises, while providing roughly 10 million people with access to modern energy services. Reduction of the pollution caused by MFP and its negative impact on the environment and significant Improved cost/efficiency thanks to the decrease of spending on gasoil consumption 	<ul style="list-style-type: none"> List of technical and technological partners Duration of effective functioning time of the MFP of a given period Percentage of the increased productivity of the MFP Percentage of reduction of the volume and cost of gasoil consumed Evidence of delivery of new equipment 	Host ministry and other sector ministries Program management unit (PMU) Service providers and technicians	??

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
	<ul style="list-style-type: none"> Reliable quality of the equipment and regular functioning of the MFP 			
Specific objective 1.3. Promotion of renewable energy and access to energy services				
<p>The most possible number of MFP or at least 50%, if not 100% by 2030 in countries and sub-regions</p> <ul style="list-style-type: none"> Take necessary steps to align with SE4ALL, White Paper on Regional Policy of ECOWAS and ECCAS, and other international agendas; Identify and test the form of renewable energy appropriate to the country and the local area, including hybrid system; As much as possible, stop the purchase and the use of diesel engines; Extend and generalize the use of renewable energy in old MFP and most importantly in newly installed ones; Design a national action plan towards the promotion of renewable energies including regulation aspect and incentives Take measures to guarantee availability and supply of the various sources of energy, bio-fuel in particular, including trade between countries Establish partnership with national technical institutions, research and training institutes; Promote and develop MFP with micro-grid of electricity and water services. 	<ul style="list-style-type: none"> The objectives of the “White Paper” (ECOWAS) and the SE4ALL (UN) are progressively achieved A reduction of at least half the volume of diesel initial consumption, and a significant increase of MFP using renewable energy; Sources as bio-fuel, biogas are available on a regular basis Income generation for farmers in growing jatropha Changes in the cost structure of the MFP and improvement of cost/efficiency due to the reduction of fuel consumption by 50% to 75% The country dependence on imported and expensive fossil fuels is reduced The negative impact of gasoil use on the physical and human environment is minimized and better preservation of natural resources is observed, A significant reduction in energy poverty in rural areas, particularly for women through alternative energies; local communities and infrastructures have access to electricity and drinkable water. 	<ul style="list-style-type: none"> Number of MFP using renewable energy compared to diesel engines Number of MFP by each category of modern energy Regularity of supply of bio-carburant Quantitative change in the operating cost of the MFP Data on communities fuel consumption showing decrease Percentage of reduction of pollution level Number of communities and areas supplied in electricity and the modern energies; 	<p>Host ministry, ministries of energy and environment</p> <p>Program management unit (PMU)</p> <p>Technology institutes</p> <p>Private sector</p>	<p>Progress and monitoring reports</p> <p>Environmental impact evaluation</p> <p>National import-export annual data</p>
Specific objective 4 Development of IGA in rural areas to enable smallholder women to increase and diversify their income				
<ul style="list-style-type: none"> Take all measures to create a favorable environment for the development of income generating activities through local partnerships around the platform to facilitate its operations as a real rural microenterprise; 	<ul style="list-style-type: none"> Technical, financial, organizational, institutional aspects are enabling IGA to multiply around the MFP; 	<ul style="list-style-type: none"> Number and nature of various constraints lifted including financial conditions offered 	Host ministry Program management unit	Monitoring and progress reports

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
<ul style="list-style-type: none"> Identify new business opportunities and take necessary steps to promote private entrepreneurship and community business around the MFP, backed on food chains with potential for rural women; Promote networking of business initiatives among multiple MFP to achieve optimal level of efficiency; Improve MFP commercial potential and profitability; Supporting producers in the processing and preservation of perishable products 	<ul style="list-style-type: none"> Financial services are tailored to the needs of MFP and micro rural enterprises and accessible to beneficiaries The income of rural people, particularly women, has increased by a significant percentage Enhanced and diversified activities associated with increased revenues, driven by a dynamic local entrepreneurship; local conditions of access to social services for the rural population have improved, The economic and financial profitability of investments in income generating activities and productivity in agriculture, processing / food preservation, have improved; Numerous jobs are created Harvests, local crops and other resources are better valued 	<ul style="list-style-type: none"> Percentage of income increase and number of women beneficiaries Number of women financially autonomous Percentage of profitability increase and the number of women group Number of jobs created The nature variety and volume of local crops processed, transformed 	Beneficiaries ALR Microfinance agencies	
Specific objective 5 : Capacity development: empower women, strengthen human and institutional capacities of national stakeholders				
<ul style="list-style-type: none"> Identify the needs for capacity building for local stakeholders directly involved in the implementation of the program, in particular women groups, local implementing agencies (NGOs), technicians and other operating and coordinating agents of the platform; design a capacity building plan accordingly; Train members of MFP managing group in operational management of IGA , rural entrepreneurship, most of all in literacy including in local language; Update the organizational and technical capacities and knowledge of local implementation agencies and beneficiaries of old MFP (first generation); 	<ul style="list-style-type: none"> All selected stakeholders are equipped with skills and qualifications (literacy, technical and financial management, institutional development and entrepreneurship), required to carry out their tasks and responsibilities effectively; The entrepreneurial capacity of women managing the MFP is improved and the women are carrying profitable activities independently; Mechanisms and efficient and transparent program management tools are in place and are subject to regular monitoring; 	<ul style="list-style-type: none"> Number and variety of stakeholders and services beneficiaries of capacity building, Number of women fully equipped with capacity in entrepreneurship managing MFP and IGA financially sustained Number of women, technicians and implementing agencies equipped 	Program management unit Technical and financial partners, local, national and international	Program monitoring and evaluation reports

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
<ul style="list-style-type: none"> • Create a critical mass of private technicians trained and equipped by the project to help villages with the maintenance and repair that will be paid for by the villages with income generated by the platforms; • Strengthen human and institutional capacities essential to expanding service delivery efficiently to communities; 	<ul style="list-style-type: none"> • Women and local implementation agencies of the MFP first generation, are up-to-date and adjusted to the transformation of the new generation of MFP; • The capacity of implementing partners tailored to the needs of MFP managers who can evolve and adapt to changes due to the upgrading and scaling up. • NGO networks of regional partners to support more efficiently the development of women's entrepreneurship are established in rural areas; • Trained technicians' networks established in partnership with technical training centers; • The capacities for steering, managing and monitoring and evaluating of the program are stimulated at local and central level; 	<p>with appropriate updated skills</p> <ul style="list-style-type: none"> • Number of networks of technicians and level of partnership • Regularity and reliability of entities in charge of steering, managing and monitoring the program 		
<p>Component II: FINANCIAL AND TECHNICAL PARTNERSHIP MOBILIZATION FOR SUSTAINABLE DISTRIBUTION OF HOUSEHOLD ENERGY PRODUCTS AND SERVICES IN A LOCAL COMMUNITIES</p>				
<p>Specific objective 2.1. National level</p>				
<ul style="list-style-type: none"> • Develop a strategic technical and financial partnership to support the implementation and management of MFP enterprise program with: local implementation agencies, entities in the support and advisory role, microfinance and banks, national research centers, development organizations, schools and technical institutes, private institutes of technology, etc. • Develop close partnership with municipalities and local branches of ministries 	<ul style="list-style-type: none"> • Increase in the number of technical and financial partners and significant funding mobilized, including decentralized financial systems ; • A strong partnership ("win win") is developed with microfinance institutions, private and / or public structures; as a result, the MFP can play a leading role in the distribution of energy and services. • A local economic development and strategic partnerships are established with rural communities, with the institutions 	<p>Number and category of partners and agreements signed</p> <p>Nature and importance of technical services and amount of fund mobilized as well as financial products offered by microfinance agencies</p>	<p>Host ministry, and other sector ministries</p> <p>Technical and financial partners at national and international level</p>	<p>Partnership agreements</p> <p>The program budget</p> <p>Monitoring reports</p>

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
<ul style="list-style-type: none"> Establish local centers of expertise needed for optimal functioning of the MFP; Develop of cross-sectors synergy by creating network or association between MFP. 	<p>that support the entrepreneurship around the MFP,</p> <ul style="list-style-type: none"> The program management is more efficient with better performance; 	<p>Value added through the support of partners</p> <p>Level of improvement of the program efficiency</p>	<p>Private sector</p> <p>PMU</p>	
Specific objective 2.2. : Sub-regional level				
<ul style="list-style-type: none"> Establish a specific institutional setting to support, supervise, coordinate and strategically guide member countries in the MFP program development and implementation; Identify and establish partnership with regional frameworks sharing knowledge within UNDP / PREP and sub-regional economic communities; Disseminate lessons learned from national experiences in order to use them as references for the rest of countries in their jurisdiction Report information related to MFP programs to external partners (financial, technical) which the sub-regional economic communities are in contact with or can liaise with. 	<ul style="list-style-type: none"> Regional bodies related to MFP programs and activities are functional and effective Partners are mobilized and supporting actively MFP programs accordingly Policy for the access of the poor to modern energy services strengthened and translated into actions in member countries; The approach and practice of MFP programs are disseminated in sub-regional countries External partners through economic communities are posted about the MFP 	<ul style="list-style-type: none"> Form and missions of regional bodies Number and nature of regional programs Number and category of partners involved in MFP Number of countries with MFP program targeted by the regional dissemination <p>Number and category of external partners involved</p>	<p>UNDP/PREP</p> <p>Sub-regional economic communities</p> <p>Member States</p> <p>PMU</p>	<p>Regional consolidated report</p> <p>National program monitoring</p>
Specific objective 2.3. Sensitization and Communication				
<p>Take required measures to intensify outreach activities in communities, women's groups, local authorities, particular individuals in villages, and other local dynamic working contributors, and specifically, do the following:</p> <ul style="list-style-type: none"> Define from the start a communication strategy backed by various communication media accessible to the various categories of stakeholders of the program both nationally and in the sub-region, with a technical and financial support of partners; Edit and distribute a biannual newsletter about MFP program implementation experience in the various countries; design a website with useful information and data on MFP ; 	<ul style="list-style-type: none"> Increased visibility and the reputation, as well as the good image of MFP program in communities at national and regional level; The MFP is well known to current and potential partners Awareness and interest of potential technical and financial partners is built and they are actively mobilized; 	<ul style="list-style-type: none"> Number and category of people, services and communities, and partners aware of MFP function and impacts Existence of the variety of media 	<p>PMU/UNDP</p> <p>Technical and financial partners</p>	<p>Monitoring report</p> <p>TV and Radio</p>

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
<ul style="list-style-type: none"> Organize visits of national program achievements for different stakeholders 	<ul style="list-style-type: none"> All the people and countries interested in MFP program benefit from exchange of experiences as a result of the communication strategy Extended interest in getting MFP. 	supports used, and number of exchange visits <ul style="list-style-type: none"> Number of new request of MFP 		
Specific objective 2.4. Taking into account the environmental impact				
<ul style="list-style-type: none"> Stop or largely reduce the use of diesel engine (gasoil) to be replaced by renewable energy, and also adopting new techniques to reduce the noise and protect operators from noise and air pollution. Take measure to control and clean oil spilling of the floor Launch a sensitization campaign on the harmful aspect of some of the activities of the MFP on the physical and human environment, and minimize their effects; Train people to be in charge of monitoring environmental risks 	<ul style="list-style-type: none"> Reduction of the harmful effects of operating the MFP in certain conditions (diesel engine pollution, noise, dust,...) and protection of the environment; People operating the MFP are protected from noise, dust and air pollution Decrease of the possibility of health hazards of people operate close to the MFP including clean floor from oil spilled; Beneficiaries are trained to manage environmental risks 	<ul style="list-style-type: none"> Percentage of decrease in the smoke, dust and noise pollution Percentage of operators protected by masks and earplugs Percentage of MFP that recycle waste oils and residues and avoiding spills 	PMU ALR Technicians Women groups	Monitoring reports Environmental impact reports
Specific objective 2.5. Promoting viability and sustainability				
<ul style="list-style-type: none"> Adopt a set of mechanisms and procedures to ensure the quality of equipment and to ensure optimal technical operation and management; Establish an adequate financial mechanism, including depreciation fund, and readiness for equipment renewal, Adopt a proper strategy and create conditions to ensure profitability (reducing cost and increasing revenues) Aim systematically, constantly women's empowerment and autonomy in a shortest time possible Integrate the MFP program into local and regional development plans 	<ul style="list-style-type: none"> A renewal mechanism of MFP equipment is in place and the sustainability of the services offered is guaranteed; Sound financial system is in place and various financial services are available and accessible to the beneficiaries Women group are autonomous and in control of the MFP management, making profit and reinvesting Ownership and sustainability are facilitated by national and local stakeholders through sustainable institutional arrangements. The MFP program is integrated in national and local development policies and strategies, and in the decentralization process. 	<ul style="list-style-type: none"> Duration of MFP functioning in a given period (year) Variety of financial services offered and condition of access. Number of initiative launched and entirely in control of women groups, MFP program listed in development plans 	Host ministry and relevant technical ministry Financial partners PMU/UNDP	National tender procedures Financial services offered Monitoring reports Development plan document

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
<ul style="list-style-type: none"> Promote local expertise and establish local centers of expertise related to the food processing industries and natural resources transformation; Introduce innovations aiming to implement progressive transfer conditions of the program ownership to local authorities, along with the funding mechanisms and the management tools of energy services Transform the status of the MFP program by setting an national agency with optimal degree of autonomy; 	<ul style="list-style-type: none"> A network of local experts fit to provide technical services Municipalities have the capacities to be fully involved the program, showing ownership, including the management of sustainable energy services in their communities; The MFP program is managed by an autonomous national agency 	<ul style="list-style-type: none"> Existence of an effective autonomous agency 		
Specific objective 2.6. Monitoring and Evaluation				
<ul style="list-style-type: none"> Design a monitoring and evaluation mechanism that can capture/ collect all the information and data related to the MFP program implementation, the development and viability of the program, including users' training, as well as a range of monitoring and evaluation tools; Create a database with a periodic update plan and a link between countries; Carry out periodic review of the program (quarterly, mid-term, annual) reviews and annual audit; Identify operating good practices that have yielded good results as well as lessons learned and share them with others to overcome the limits and improve their functioning; 	<ul style="list-style-type: none"> M&E mechanism is designed and users are trained accordingly Monitoring and evaluation activities carried out on a regular basis ((quarterly, mid-term, annual), with participation of stakeholders involved providing information on the program achievements; Improved reliability of data collected; Periodic reports are carried out on time Program implementation progress and experience are shared with all stakeholders and key partners through reports and reviews, thus enabling capitalization 	<ul style="list-style-type: none"> Availability of the M&E plan Availability of M&E technical and financial reports A functional up-to-date database; Programs reflect capitalization of experiences 	UNDP/PREP PMU of National program All national stakeholders involved	
Component III. SCALING UP STRATEGY Achievement of a critical mass of agro-enterprises with a significant impact on development objectives in countries				
Specific objective 3.1 Develop a strategy for replicating MFP-based agro-enterprises				
<ul style="list-style-type: none"> Design a full-scale national MFP programs in different African countries, including selecting potential villages and areas of installation expansion and carry out participatory feasibility study as a prerequisite to designing the scaling up of MFP program 	<ul style="list-style-type: none"> Program document is made available A significant increase of (i) number of localities and countries with MFP installed, (ii) number of new innovative MFP enterprises installed and adapted to the 	<ul style="list-style-type: none"> Number of MFP installed per year, per area, and per country Number of beneficiaries in 	Host ministry Technical and financial partners	National and local development plan

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
<ul style="list-style-type: none"> Consolidate best practices (technical, managerial and methodological) into rural agro-enterprise models and as the basis for expanding full-scale national MFP programs across Sub Saharan countries; 	<p>needs identified (around 30 000 and more by 2030 by a hypothetical approximation);</p> <ul style="list-style-type: none"> A greater number of beneficiaries of sociological diversity, especially in vulnerable areas and / or remote ones, thus Improved livelihood of smallholder farmers Improved performance ensuring maximum impacts and efficiency of respective national MFP programs, in compliance with environment protection requirement, and also ensuring their sustainability 	<p>most vulnerable areas</p> <ul style="list-style-type: none"> Rate and signs of livelihood improvement Percentage of MFP profitable, and sustained 	<p>including UNDP/PREP</p> <p>PMU</p>	<p>Monitoring report</p>
<p>Specific objective 3.2. Develop electricity and water services in rural areas</p>				
<ul style="list-style-type: none"> Expand even more micro grid and mini - simplified drinking water supply connected to the MFP; Generalize and make a systematic use of renewable energy in the most possible number of companies MFP or at least 50%, if not 100% by 2030 in countries and sub-regions; 	<ul style="list-style-type: none"> More and more communities are supplied with electricity and drinkable water services Wider and improved services offered by the rural community infrastructure providing access to basic social services (water, schools, health centers ...); The majority of the MFP are using renewable energies 	<ul style="list-style-type: none"> Percentage of expansion of areas, services and infrastructures supplied with electricity and water Percentage of MFP powered with renewable energy Percentage of improvement of cost structure of MFP 	<p>Host ministry, ministries of Energy and Environment</p> <p>Technical partners</p> <p>PMU/UNDP</p>	<p>Monitoring report</p>
<p>Specific objective 3.3. Ensure regular functioning and proper performance of equipment</p>				
<ul style="list-style-type: none"> Open an appropriate number of spare parts shops in each region; Set up networks of technicians and artisans at national and sub-regional level for an efficient support and optimal functioning of the MFP 	<ul style="list-style-type: none"> Shops supplying spare parts are open locally enabling economies of scale, resulting in lower unit costs per MFP. Greater market value of food products thanks to the technical performance of the upgraded enterprise MFP; 	<ul style="list-style-type: none"> Volume, nature and quality of processed products and revenues generated Number of shops in each area 	<p>PMU</p> <p>Private sector</p> <p>ALR and other service providers</p>	<p>Monitoring reports</p>

OBJECTIVES AND PLANNED ACTIVITIES	EXPECTED OUTPUTS	INDICATORS	Responsible Party	Source
Specific objective 3.4. Setting up an efficient institutional mechanism				
Establish a functional and efficient supervision, management and coordination entities adapted to the new scale and strengthen institutional capacities in country (at both the national and local levels) and at the sub-regional level;	Increased performance and improved efficiency in the project implementation. Improved ownership and guarantee of sustainability.	Rate of the increase of the project performance Number and frequency of initiatives taken by local stakeholders by themselves	Host ministry and other sector ministries UNDP/PREP Economic communities	The program document Economic communities resolutions