Federal Government of Somalia and United Nations Joint Programme for Sustainable Charcoal Reduction and Alternative Livelihoods (PROSCAL)

Cover Page
Country: Somalia
Joint Programme Document

Programme Title: UN Joint Programme for Sustainable Charcoal Reduction and Alternative Livelihoods (PROSCAL).

Joint Programme Outcome(s): PSG 4: Economic Foundations - Somali economy revitalized and expanded with a focus on livelihood enhancement, employment generation, and broad-based inclusive growth

Priority 3: Promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key Natural Resources Management (NRM) institutions.

Expected Outputs(s): Regional Policy Framework for regulating charcoal production and trade agreed and under enforcement; Charcoal Reduction Fund established; Accelerated diffusion of energy efficient and renewable energy technologies underway; Captive plantation for sustainable reduction of charcoal established; LPG market established; diversification of income through increased crop and animal productivity and development of value added products in agriculture and livestock sectors.

Brief Description

This Joint Programme is in response to the UN Security Council resolution 2036 (2012) that seeks international cooperation to ban illegal exports of Charcoal from Somalia. The programme envisages a comprehensive response to support the Security Council resolution. The specific objectives of the programme are four : **1)** Support government in Somalia as well as countries in the Horn of Africa and the region to produce pertinent legal instruments and strengthen enforcement mechanisms at national, regional and local levels; **2)** Promote alternative sources of energy to reduce local charcoal consumption; **3)** Provide alternative livelihoods to the Charcoal Value Chain Beneficiaries (CVCBs) involved in the charcoal production and trade; and, **4)** Country wide reforestation and afforestation to regain the productive potential of the environmentally degraded lands.

The joint programme will build on successful projects executed by UN agencies to support the ban and will use the UN joint programming modality to harmonize approaches, and maximize synergies. To this end, it will emphasize joint work plans, joint monitoring and evaluation of activities and offer a forum for policy dialogue between the governments and all partners on activities related to the ban of charcoal trade in the region. This phase of Joint Programme absorbs the Programme Initiation Phase activities and has been scaled down to the current level of funding.

Programme Duration: 48 months
(April 2016 to March 2020)

Fund Management Option(s):

MPTF and a combination of parallel and pooled funds.
Managing or Administrative Agent (AA): UNDP

Executing Entity: DIM – UNDP, UNEP and FAO.

Proposed Implementing Agencies: Government (Federal and Regional), FAO, UNDP, UNEP, UNSOM, IGAD, IMO, NGOs and CBOs.

Sources of funded budget for Programme:
USD 6,068,329.00

- MPTF/ Sweden* USD 1,167,988.00
- MPTF/Italy USD 1,084,842.00
- MPTF/EUD** USD 3,715,499.00
- UNDP USD 100,000

* Includes USD 583,994 PIP funding

** Includes AA direct fee

Names and Signatures of National Counterparts and Participating UN Organizations

UN organizations	National Coordinating Ministry
Peter de Clercq, Deputy Special Representative of Secretary General/UN Resident Coordinator/ UNDP Resident Representative Signature: _____ Date and Seal	H. E. Sheikh Nur Mohamed Hassan, Minister of Livestock, Forest and Range, Federal Government of Somalia Signature: Date and Seal : 26/08/2017
George Conway, UNDP Country Director Signature: _____ Date and Seal	
Daniele Donati, FAO Country Representative (a.i.) Signature: _____ Date and Seal	
Juliette Biao Koudenoukpo, Director, Regional Office for Africa, UNEP Signature: _____ 20.9.2017 Date and Seal	

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ACRONYMS

AMISOM	African Union Mission in Somalia
CAP	Community Action Plan
CBO	Community-based organisations
CIC	Charcoal Importing Countries
CRF	Charcoal Reduction Fund
CVCBs	Charcoal Value Chain Beneficiaries
DIM	Direct Implementation Modality
EU	European Union
FAO	UN Food and Agricultural Organisation
FGS	Federal Government of Somalia
GCC	Gulf Countries Council
GCPF	Green Charcoal Production Facility
GIS	Geographical Information Systems
HDI	Human Development Index
IASC	Inter Agency Standing Committee
ICRAF	International Centre for Research in Forestry
ICTRC	International Charcoal Trade Regulatory Committee
IDPs	Internally Displaced Persons
IFES	Integrated Food-Energy Systems
IGAD	Inter-Governmental Authority on Development
IJA	Interim Jubaland Administration
ILRI	International Livestock Research Institute
IMO	International Maritime Organization
INGO	International NGO
IUCN	International Union for Conservation of Nature
JPLG	Joint Programme on Local Governance
KWh	Kilo Watt-hours
LDC	Least Developed Country
LOA	Letter of Agreement
LPG	Liquefied Petroleum Gas
m/s	Meters per Second
MEAs	Multilateral environmental agreements
MOU	Memorandum of Understanding
MPI	Multi-dimensional Poverty Index
MW	Mega-Watts
NASA	National Aeronautics and Space Administration
NGO	Non-Governmental Organization
OIC	Organization of Islamic Countries
PDCC	Policy Development Coordination Committee
PES	Payment for Ecosystems Services modality
PNTD	Participatory and Negotiated Territorial Development
PREP	Poverty Reduction and Environment Programme
PROSCAL	Programme for Sustainable Charcoal Reduction and Alternative Livelihoods
RCMRD	Regional Centre for Mapping of Resources for Development
REDD	Reducing Emissions from Deforestation and Forest Degradation

SAFE	Safe Access to Firewood and Alternative Energy
SG	UN Secretary General (SG)
SL	Somaliland
SMEs	Small and Medium-Enterprises
SOREDA	Somaliland Renewable Energy Development Association
SRSG	Special Representative of the Secretary General of the United Nations
SWALIM	Somalia Water and Land Information Management
SWHS	Solar Water Heater System
SWOT	Strengths Weakness Opportunities and Threats
TFG	Transitional Federal Government
UAE	United Arab Emirates
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UNHABITAT	UN Human Settlement Programme
UNSOM	UN Assistance Mission in Somalia
USD	United States Dollar

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1 SITUATION ANALYSIS

Charcoal making and its export from Somalia have been in practice since pre-colonial times to meet local and regional energy requirements and provide livelihoods opportunities for Charcoal Value Chain Beneficiaries (CVCBs). However, the unscrupulous plunder of forest and range resources for charcoal production has been witnessed during the last two decades. The breakdown of state institutions in 1991, protracted conflict, weakening of traditional systems of decision-making, vague tenures or resource ownership, illegal imports of huge quantities of Somali charcoal by neighbouring countries of the region, absence of alternative sources of energy and limited livelihoods options for a large "warring & marginalised" population has led to unsustainable production, trade and use of charcoal. In recent years, charcoal became the most sought after commodity to fuel the war economy with militia groups generating revenue in excess of USD15 million per annum from illegal exports[1]. As such, a multitude of complex issues surround the production of charcoal in Somalia leading to triple threats - in the forms of irreversible environmental degradation, perpetual conflicts and dependence on short-term income from an unsustainable livelihood option. Realisation of these multifaceted issues resulted in imposition of a ban on the import of Charcoal from Somalia by the UN Security Council[2] in February 2012. In 2014, the overall international market value of the charcoal exported in 2013 and 2014 was estimated to be in excess of $250 million[3].

Understanding the peculiar context of charcoal problems in Somalia is as important as coming up with a response strategy to address these problems. The major problems can be grouped into five main areas that broadly provide the basis to contextualise the enormity of charcoal challenges in Somalia. These are:

i) *Environmental un-sustainability challenge;*

ii) *Volatile political situation, insecurity, enforcement and institutional decay challenge;*

iii) *Outstripping Regional demand challenge;*

iv) *Rampant Poverty and lack of livelihoods challenge; and*

v) *Skewed energy mix and outstripping local charcoal demand challenge.*

1.1 Environmental un-sustainability challenge

On land and offshore, Somalia possesses important and some unique natural resources within its varied bio-geographical zones[4]. At the same time, however, the country is not well-endowed with natural resources which means that particular care needs to be taken in their management. This, unfortunately, has not been the case and there is a dismal history of resource over-exploitation for personal or clan-based gains. The most rapid degradation has been of forest and range resources

[1] "Report of the Monitoring Group on Somalia and Eritrea", in response to UN Security Council Resolution 1916 (2012) SC/2011/433 – 18 July 2011.
[2] UN Security Council Resolution 2036 (2012).
[3] "Report of the Monitoring Group on Somalia and Eritrea", October 2014..
[4] UNEP: The State of the Environment in Somalia, 2005.

that provide the raw material production of charcoal in Somalia - extracted predominantly from slow growing dry deciduous bush land and thicket species of *Acacia* and *Commiphora.*

Degraded rangelands due to tree felling to meet the increasing charcoal demand are a common sight across Somalia. The north-east and north-west regions are impacted most due to steep topography and occurrence of frequent flash floods leading to the formation of deep gullies. Land degradation is most advanced around the main ports, water holes and wells, where the diminished carrying capacity of the rangeland no longer supports the feeding requirements of the animal populations. As such, the capacity of denuded rangelands to sustain the pastoral economy is already under irreversible loss threatening the medium to long-term sustainability of pastoral systems. A recent study by Food Agriculture Organisation (FAO) / Somalia Water and Land Management Information System (SWALIM) for Puntland estimates the annual rate of *Acacia bussei* decline at about 5% in Puntland, and this rate seem also to be applicable across Somalia. According to a WSP report, the charcoal output of north-east Somalia in 1996 was estimated to be in the order of 4.8 million sacks [each weighing 25-30 kg]. Producing such a volume, required cutting approximately 2.1 million *Acacia bussei* trees. At an average density of 60 trees per hectare, this translates into a deforestation rate of 35 000 hectares of land per year[5]. Extrapolating the above figures for production of the 10 million sacks of charcoal produced in the South Somalia during 2011 [only export], means felling 4.375 million trees or clearing 72 916 hectares of land. Considering the above mentioned extent of *Acacia bussei* tree felling in Somalia and no re-plantation, this species was placed on the Red List of threatened species in 2009[6] by the International Union for the Conservation of Nature (IUCN).

In a more recent joint study made by SWALIM, JRC-EU and Twente University and covering Jilib area in Southern Somalia, it was estimated that 520,520 trees were cut inside the study area (6,000 km^2) during the period 2011-2013. This alarming figure indicates that in the investigated period the average tree loss is 3.3 % which could be translated in the cut of a tree every 2 minutes. This figure also say that 28,108 tons of charcoal were produced, i.e. 1,041,039 bags with a commercial value of about USD 15.6 million[7].

The increasing loss of the natural resource base throughout Somalia is a key contributing factor in determining the severity of Humanitarian Crises– as evidenced during the most recent drought event to hit the region in 2010, the impacts of which are still in effect today. The centuries old coping strategies employed during periods of drought in the arid/semi-arid climate of Somalia are increasingly becoming impractical as resource depletion removes the natural resource assets which are heavily relied upon during drought events. The evergreen drought-tolerant indigenous vegetation species, that provides feedstock to the pastoralists during drought years, has been lost to the demands for charcoal. The resilience and coping mechanisms of communities and their livestock are currently reduced to a level where even a low-intensity drought cycle forces them to face huge losses and depend on external assistance. The shocks from such natural disasters are unprecedented and the 2010 drought provides the evidence of the severity and magnitude of such events when over 4 million Somalis (40% to 50% of total population) and millions of unaccounted for livestock population were impacted. With Somalia ranked at number 7 out of 233 countries and regions in global ranking

[5]Somalia Report, 2011.Charcoal Trade Stripping Somalia of Trees. www.somaliareport.com.
[6]http://threatenedplants.myspecies.info/sites/threatenedplants.myspecies.info/files/Acacia%20bussei.pdf

to the impacts of the climate change - the losses due to such recurring shocks will only increase in the future unless determined efforts are made to enhance the coping capacities of the large vulnerable population.

1.2 Volatile political situation, insecurity, enforcement and institutional decay challenge

Across the territory of Somalia, a variety of political, militia, clan-based and administrative entities seek to govern. Despite some fourteen attempts made by the international community to sponsor national peace processes, none of the governments that emerged have succeeded in establishing an authority or broad legitimacy among Somalis. At present, Somalia comprises three Federal States [Interim South West Administration (ISWA), Interim Jubaland Administration (IJA), Galmudug Administration (GI)] under the control of the Federal Government of Somalia (FGS), one emerging state from Hiiraan and Middle Shabelle, the semi-autonomous Somali State of Puntland; and, Somaliland, which unilaterally declared itself an independent republic in 1991. While interlinked ethnically and economically, each of these regions has evolved differently with varying levels of stability, development and governance. Large areas of all the regions are ungoverned by formal structures and institutions. Two decades of political instability coupled with protracted infighting has resulted in widespread insecurity. The political instability, statelessness and insecurity has led the local population to turn towards extractive use (or abuse) of natural resources to meet their basic needs, such as charcoal and fuel wood for energy and to earn livelihoods from the illegal export of charcoal.

The political instability also impacts the ownership and sustainable use of natural endowments. In Somali society, pastoral lands have always been deemed a common good – range land is claimed by clans and not individuals so land conflicts in the pastoral setting are usually matters of power struggles between two clans. In cases where one clan gains an upper hand, neighbouring clans can be pushed out of prime range land and lose access to their own water wells and other valuable natural resources. The civil war and state collapse accelerated the struggle for land, replacing title deeds (and traditional mechanisms of land allocations) with the use of semi-automatic weapons as an instrument of choice for appropriating land from weaker groups. For example, land grabbing in the 1990s did not involve militia taking up land-based livelihoods themselves, which is seen as a low-status occupation, but instead involved laying claim to harvests[8]. This practice is also evident in the production and trade of charcoal. The influential traders and militia groups do not engage in the charcoal production process, but instead act as intermediaries in the charcoal "Supply and Demand" chain in order to extort income. The hard labour, local selling and distribution are carried out by the poorer members of society who are considered to be of low status in Somali society. For a bag (25-30kg) of charcoal that sells at USD 12 in the Middle East, only USD 1-2 is paid to the labourer producing the charcoal, while the balance is shared by the traders, militia groups and

[8] Center for Global Development; 2011-12 Rankings of the impacts of Climate Change.
[7] http://faoswalim.org/content/rsm-03-detection-charcoal-production-sites-southern-somalia-using-very-high-resolution

[8] UNDP Human Development Report, Somalia, 1998.

transporters. Similarly, only USD 2 to 3 is shared between the producer and vendor (generally women) for a bag of charcoal that is sold at USD 8 in the local markets of Somalia.

A prohibition was passed in 1969 preventing the export of charcoal and firewood. The prohibition remained loosely implemented and after the onset of civil war, export oriented charcoal production multiplied and has expanded rapidly ever since. The Horn of Africa Relief and Development Organization (Horn Relief) launched a successful campaign to salvage old-growth forests of acacia trees in the North Eastern part of Somalia. The organization trained groups to educate the public on the permanent damage created by the production of charcoal. In 1999, Horn Relief coordinated a peace march in Puntland to put an end to the so-called "charcoal wars." Consequently, in 2000 the Puntland Government prohibited the exportation of charcoal. The Puntland government has since enforced the ban, which has reportedly led to an 80% reduction in charcoal exports from Puntland. However, charcoal production subsequently shifted entirely to South and Central regions of the country. The ban was also imposed by the government in Mogadishu for South and Central regions in 2000, but without any enforcement. In 2010, the Transitional Federal Government (TFG) of Somalia re-imposed the ban considering charcoal trade as a main source of income for the extreme groups and cause of environmental destruction.

In the absence of an effective government, many traditional forms of natural resource management and enforcement mechanisms have been abandoned or are currently ignored. In many instances, this results in the unsustainable exploitation and loss of natural resources, and exacerbates existing socio-economic and political tensions – this is evident for example in the areas surrounding Kismayo[9], a hub of charcoal production, where rapid deforestation occurred. In addition institutional capacities are extremely weak, with governing institutions operating without any policy or legal instruments for sound environmental management. Subsequently there is a need for a comprehensive assessment of institutional capacities, including all traditional and new legal instruments concerned with the management of natural resources. This will enable to accurately determine the degree of support required to build institutional capacity.

1.3 The challenge of outstripping Regional demand

Charcoal production in Somalia has been in existence for centuries, and it has been a widely accepted practice to export charcoal from Somalia to countries of Arabian Peninsula. Between 1991 and 2000, around 90 000 tonnes of total charcoal production was exported to the Gulf Countries per annum, which increased to 250 000 tonnes in 2011[10]. One of the main factors for the increase in charcoal trade was the result of replacement of lost income from the ban on livestock exports from Somalia to Saudi Arabia. The livestock export ban was imposed in 2000 after the outbreak of rift valley fever resulting in poor animal health. Since livestock exports is the mainstay in Somalia's economy - and also as a source of employment, income, foreign exchange, government revenue, and food imports - the ban on livestock prompted households to turn to wood-cutting and charcoal-making to generate income, which accelerated the deforestation. Notably, the livestock ban also resulted in leaving millions of extra un-exported animals on the rangeland, which coupled with frequent droughts [2000, 2008 and 2010], compounded the degradation

[9] Getting the stock piles of charcoal exported out of Somalia from Kismayo has emerged as a major issue after Kenyan/AMISOM forces recovered the port city from Shabaab group in August 2012. The President of Federal Somalia has re-emphasised the need for effective ban on Charcoal Exports from Kismayo.

[10] http://news.bbc.co.uk/2/hi/8345370.stm

process. Saudi Arabia lifted the ban on Somali livestock imports in 2009, and livestock exports resumed, with 4.2 million livestock heads exported in 2010. Unfortunately exports fell again in 2011 due to drought, putting Somali pastoralists under renewed livelihood stress[11].

Until recently the Al-Shabaab group had been safeguarding a well-established supply and demand chain of charcoal trade from Somalia to Gulf Countries in return of "rent" from those using the ports controlled by the group. Charcoal had been termed as "black gold" by the extremist group representing revenues in excess of USD 15 million a year[12]. Somali owned and operated companies, engaged and protected by Al-Shabaab, interfaced with the authorities and markets in the Gulf Countries. The owners of these companies are described as ideological affiliates of Al-Shabaab, who prefer to collaborate with partners who share their ideological orientation. There are also unfounded reports that charcoal from other neighbouring countries were routed to Al-Shabaab controlled ports and labelled as Somali charcoal.

The charcoal trade is also closely linked with the importation of sugar and other commodities to Al-Shabaab controlled areas. Many vessels offload commodities at Kismayo before loading vessel with charcoal for their return journey. According to the UN Sanctions Monitoring Group, estimates of the total volume of sugar imports in southern Somalia were between 20 000 and 40 000 tonnes per year, most of which is imported from the port of Kismayo and smuggled overland to neighbouring countries, particularly Kenya. Import taxes on this trade generated revenue in the range of USD 400 000 and 800 000 per year for Al-Shabaab. Other commodities imported using charcoal vessels include milk powder, vegetable oil, wheat flour (as well as some high value goods such as electronics and vehicles).

The recent advances of the African Union Mission in Somalia (AMISOM), Kenyan, Ethiopian and Somali forces and recovery of areas from the Shabaab group has changed the trade dynamics around charcoal. Backed by the UN Security Council ban, there are already media reports that millions of tonnes of charcoal cargo is lying at the ports or jetties. The port town of Kismayo is reported to have stacked up approximately 4 million charcoal bags (approximately 100 000 tonnes). The newly sworn in President is under immense pressure to side with the businesses behind the charcoal trade, lift the ban on charcoal exports [set by the UN Security Council] and clear the stacked up quantities. This move has been resisted so far and perhaps is an evidence of the fact that the new government in Mogadishu sees it as a window of opportunity to end to the illegal charcoal exports to other countries. For the international community, it is important to support the efforts of the new government through capacity building for enforcement, regional cooperation and securing support from Gulf Countries Council (GCC) to establish alternate businesses to absorb the CVCBs who have been exploited in their efforts to keep up with market demands.

1.4 Rampant Poverty and lack of livelihoods challenge

One third of Somalia's population[13] lives in extreme poverty and the average life expectancy is 47 years. UNHCR estimates that 1.38 million people are displaced and in need of emergency support.

[11] http://www.somaliareport.com/index.php/post/370/Livestock_Exports_Drop_Dramatically_in_2011. Due to drought some 4.5 million livestock heads died in Somaliland during 2011, inflicting a loss of USD 64 million to farmers- http://sabahionline.com/en_GB/articles/hoa/articles/features/2012/08/24/feature-02

[12] The estimates are from the UN monitoring group report to the Security Council (S/2011/433). These are conservative estimates.

[13] Exact population figures for Somalia are not known. Some sources put the extrapolated figures at 8 million and other at 10 million.

One fifth of the population is internally displaced and 2.4 million people are in need of emergency support. Women, youth and children suffer the effects of poverty and conflict disproportionately. One in 10 Somali women is at risk of dying during her reproductive years, 1 young male out of every 5 will be killed by the age of 29, and 1 in 10 children die before their fifth birthday. Somalia ranks 99 out of 104 countries considered in the Multi-dimensional Poverty Index (MPI)- 81.2% people are multi-dimensionally poor. Among Arab states, Somalia has the highest MPI value (51%), followed by Comoros (41%) and Mauritania (35%)[14]. Somalia has one of the lowest Human Development Index (HDI) in the world. Lack of national Government, civil war, frequent droughts and epidemics of diseases are the root causes of widespread poverty.

These figures point towards the gross under-development in Somalia with highly unfavourable living conditions and an overall lack of opportunities to achieve sustainable livelihoods for the major segment of the population. Low development indices also reflect the vulnerability of the population (particularly youth and women) to exploitation by a handful of influential groups and individuals. People are forced to turn towards extremist activities or unsustainable livelihoods options, such as charcoal production, to survive. It is estimated that some 41 000 persons[15] are engaged in the charcoal value chain. Almost all charcoal retail is undertaken by women [earning less than one dollar per day], with some women financing charcoal production in order to supplement their income. The situation indicates the forced adoption of charcoal as a means of a livelihood strategy in the absence of alternate opportunities.

Charcoal Value Chain Beneficiaries (CVCBs) include: producers, labourers, input suppliers, loaders, truck owners, truck drivers, small transporters, creditors, whole-sellers, retailers, exporters, importers, vessels owners, labourers on vessels, stove makers, stove retailers, tool retailers, scrap metal collectors and traders, clan leaders, Government officials, and consumers in Somalia as well as importing countries. The analysis of data collected during the programme formulation indicates that in this chain of beneficiaries, an average 5 persons (mainly young men) burn two trees in about 7 days [2 days for cutting the logs and setting the kiln, 3 days for the kiln to operate and 2 days for packing] and at the end get 5 sacks [each weighing 25 kg] of charcoal. Each sack sells at USD 4 at the production site, which means an income of USD 20 for 5 people for 7 days of work- meaning an income of 50 cents per person per day (assuming that they are fully engaged for 30 days a month in this job). This income is 50% less than the income poverty line set by the World Bank (USD 1 per day). The charcoal collectors (mini truck owners) have to visit several kilns in the area, as the business is spread over the entire range due to the sparse population of trees, to make a full mini-truck load containing about 30 sacks. The transportation charges from kiln to nearby charcoal collection point on the road are USD 1 per sack, which means that truck drivers earn a maximum of USD 30 per truck load. Out of this, the owner has to pay for the cost of fuel (USD 1 per litre), maintenance of the vehicle, charges for the loader and driver. The charcoal that ends up in the local market, main urban areas, is sold by women retailers. These women retailers are at the mercy of whole-sellers who bring charcoal from the rural areas to urban centres and pay only USD 1 per 25 kg of charcoal to the women retailers.

Interviews with the representative beneficiaries (producers, small transporters, loaders and retailers) revealed they enter into the charcoal business due to a lack of alternative livelihood opportunities and not as a matter of choice. People do not engage in charcoal production willingly

[14] UNDP Human Development Report, 2010.

[15] FAO estimates 300 person days of employment / terrajoule of charcoal, which comes to some 8.3 million person days of employment or employment of 41 400 people [at 200 days of employment/person].

as it is a stigmatized income-generating activity which few would admit to engaging in. Rather, charcoal production is a 'last resort', environmentally destructive coping strategy. The cycle of poverty facilitates increased exposure and uptake of *Khat* chewing, joining militia groups and engaging in other social evils. Overcoming these challenges requires providing alternative income-generation opportunities to the "links" in the value chain that comprise subsistence workers or sellers. In parallel, enforcement, awareness and capacity development should be targeted towards the influential "links" in the value chain, such as traders, whole sellers etc., to effectively curtail charcoal production.

1.5 Skewed energy mix and outstripping local charcoal demand challenge

Somalia has untapped reserves of numerous natural resources, including uranium, iron ore, tin, gypsum, bauxite, copper, salt and natural gas. Due to its proximity to the oil-rich Gulf Arab states, the country is also believed to contain substantial unexploited reserves of oil. A survey of North-East Africa by the World Bank and UN, ranked Somalia second to Sudan as the top prospective producer of oil. An oil group listed in Sydney, Range Resources, anticipates that the Puntland region has the potential to produce between 5 to 10 billion barrels of oil. As estimated in 2011, Somalia has 5.66 billion cubic meters of natural gas[16]. Multi-national companies are excited about the prospect of finding petroleum and other natural resources in the country. However, any developments in this sector may not be easy to achieve given the possibilities of eruption of conflicts among Somalis for the control of resources.

Despite being resource rich, Somalia's energy sector is grossly underdeveloped. Biomass resources currently provide over 95% of Somalia's primary energy source for households. The rural and nomadic communities rely on firewood whereas the urban and higher income population rely on charcoal. Over 95% of the charcoal stoves used in Somaliland are inefficient with thermal efficiencies in the range of 18-22% [17]. Charcoal is used as a cooking fuel by 38.8% of the households and 59.8% of people still rely on firewood as a cooking fuel[18]. However in urban areas 73.9% of people use charcoal as a cooking fuel whereas only 21.2% of rural and nomadic population use charcoal as a cooking fuel[19]. Kerosene and Liquefied Petroleum Gas (LPG)[20] are also being used by rich upper middle class households for cooking at a limited scale, with kerosene primarily used by rural and nomadic households as an alternative for firewood. Since 2005, out of the total charcoal production 80% is exported to neighbouring and Middle Eastern countries[21].

Apart from its biomass resources, Somalia also has good solar and wind energy potential. The solar energy resources range from 5 to 7 Kilo Watt-hours (kWh)//m^2/day with over 310 sunny days in a year[22]. However, the use of solar energy is limited with only a small numbers of solar photovoltaic and solar thermal systems. Somalia is also characterized by strong wind regimes suitable for wind energy conversion. The annual average wind speed range from 1.5 to 11.4 Meters per Second (m/s)[23]. Generally wind regimes with speeds above 5 m/s annual average are

[16] www.indexmundi.com
[17] Ministry of Pastoral Development and Environment, Somaliland and Candlelight for Health, Education and Environment, 2004, Impact of Charcoal Production on Environment and the Socio Economy of Pastoral Communities in Somaliland.
[18] AFREPREN/FWD, 2007, Establishment of an Energy Sector Database for Somalia, UNDP Somalia;
[19] AFREPREN/FWD, 2007, Establishment of an Energy Sector Database for Somalia, UNDP Somalia
[20] Mixture of Propane – C_3H_8 and Butane – C_4H_{10} used for cooking and transportation applications
[21] UN and WB, 2006, Somali Joint Needs Assessment: Productive Sectors and Environmental Cluster Report;
[22] Based on remote-sensed energy meteorological data from NASA's Langley Research Centre;
[23] Based on remote-sensed energy meteorological data from NASA's Langley Research Centre

considered to be highly attractive, particularly along coastal areas, for utilization of wind energy. The hydropower potential in Somalia is estimated to be around 100-120 Mega- Watt (MW)[24].

The current charcoal value chain employs production practices that are highly energy inefficient. Consequently there is scope for improvements to make the charcoal value chain more sustainable at the local level. The charcoal production from woody biomass is typically through pit kilns or surface mount kilns,[25] both of which are energy inefficient, with 10% and 20% charcoal conversion efficiency. These kilns could be substituted by improved charcoal production systems which have conversion efficiencies in the range of 35% to 40%. There could also be savings in charcoal handling and transportation to avoid crumbling and pulverization[26].

Analysis of available energy sources, current reliance on biomass and the feasibility for renewable energy interventions, reveals that there is a huge opportunity to diversify energy sources and use and deliver efficiency gains in energy use through reducing reliance on charcoal and firewood and introducing alternative sources of energy such as wind, solar, LPG, biogas, hydro and high efficiency thermal generation and distribution systems.

1.6 Conclusion

The five challenges covered in the situational analysis are the major impediments to effective enforcement of the ban on charcoal trade and production in Somalia. The diagnosis of earlier attempts to enforce a ban suggest that these were partial and did not consider all elements surrounding the unsustainable charcoal trade and production. These attempts exclusively focused on issuing legal instruments banning the trade and production with absolutely no provisions to holistically support the enforcement mechanisms, particularly, in a crisis context prevailing in Somalia. This consequently resulted in an increase in illegal exports of charcoal from Somalia that has become a **regional issue** with major part of the trade volumes ending up in neighbouring countries accessible by sea and land routes. Furthermore, the livelihood of CVCBs was not taken into account, nor were alternative sources of energy provided for the poor communities, particularly women in urban and rural areas who are using charcoal for cooking. There are obvious lessons from the failures of the past, which require a move away from a fragmented approach of imposing bans, to an integrated approach that addresses the root causes of charcoal production at national and regional levels.

Given the complexity of the challenges, it is imperative that the government in Somalia (Federal and Regional), the UN and other key stakeholders and partner, reach swift agreement on a comprehensive set of interventions that are strategic and mutually supportive for reducing charcoal production while promoting improved livelihoods opportunities and natural resource management. A proposed set of interventions are put forward under the Programme Strategy section of this document. These interventions intend to comprehensively address the challenges outlined above and implement interventions that achieve the objectives of the first phase (2015-17) of the programme.

[24]International Renewable Energy Agency (IRENA), 2012, Renewable Energy Country Profile: Somalia
[25] United Nations Environment Programme (UNEP), 2005, The State of the Environment in Somalia: A Desk Study;
[26]Kitui Evans, Undated, Sustainable Charcoal Production and Use: A Systems Approach

2 OBJECTIVES OF THE JOINT PROGRAMME

The overall goal of the programme [hereafter referred as PROSCAL] is to promote energy security and more resilient livelihoods through a gradual reduction of unsustainable charcoal production, trade and use. The programme has four major objectives, namely:

- To mobilize key stakeholders in the region and build institutional capacity among government entities across Somalia for the effective monitoring and enforcement of the charcoal trade ban, the development of an enabling policy environment for energy security and natural resources management;
- To support the development of alternative energy resources; and,
- To facilitate – for stakeholders in the charcoal value chain – transition towards livelihood options that are sustainable, reliable and more profitable than charcoal production.
- To start reforestation and afforestation throughout the country for the rehabilitation of degraded lands.

The interventions planned under the programme would trigger local economic opportunities, and thus reduce poverty, halt environmental degradation, improve energy security, enhance climate and livelihood resilience, promote social equity amongst vulnerable groups (youth, Internally Displaced Persons [IDPs] and women), diversify energy sources, reduce conflict, and promote peace and development.

3 ALIGNMENT WITH NATIONAL PRIORITIES AND INTERNATIONAL COMMITMENTS

The Charcoal Programme contributes to the objectives of the National Development Plan (2017-20) to protect the Natural Resources and reverse the trend of land degradation of productive lands due to unsustainable production of charcoal. In specifics, the plan recommends to put in place policies that help in reducing the charcoal use and production by promoting alternative sources of energy.

The Charcoal Programme is also in line with the New Deal processes culminating in the Somali Compact, which puts sustainable development of natural resources at the forefront of the agenda for revitalizing the economy while protecting the environment. The Compact aims to foster confidence between people, communities, the state and international partners through: transparency; risk sharing; use and strengthening of country systems; strengthening government capacity; and timely and predictable aid.

The plan assumes that promoting the sustainable development and management of natural resources – e.g. developing legal and regulatory frameworks and building capacity in key Natural Resources

Management (NRM) institutions – will significantly contribute to establishing peace and maintaining stability. More specifically, the proposed programme will contribute to following target:

Joint Programme Outcome(s): PSG 4: Economic Foundations - Somali economy revitalized and expanded with a focus on livelihood enhancement, employment generation, and broad-based inclusive growth

Priority 3: Promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key Natural Resources Management (NRM) institutions.

PROSCAL is in response to the strong commitment of the Federal Government of Somalia to address the issues of charcoal with the objectives of stopping the environmental degradation and cutting down the revenues generated by the extremists from trade in charcoal. The TFG, the predecessor to the current government, wrote to the UN Security Council in 2011 seeking support of the international community to help Somalia in banning trade of charcoal from its soils. UN Security Council passed resolution 2036 (2012) that requires the international community to ban trade in charcoal from Somalia.

The complexity around the charcoal issue has many dimensions and implementing solutions to address the charcoal problems surrounding charcoal will contribute to the multiple priority areas set by the government. For instance the enforcement of ban will have direct links with supremacy of law, livelihoods and energy component will be contributing to economic recovery and environmental protection under service delivery. PROSCAL, therefore, is a strategic intervention that encompasses many different dimensions critical for taking Somalia on path of sustainable development and peace building. In addition, PROSCAL will establish clear linkages with a number of multilateral environmental agreements (MEAs) that Somalia has ratified as part of its commitment to address environmental issues.

4 PROGRAMME STRATEGY

The Joint Programme formulation has benefited from a broad consultative process that involved all key stakeholders, including, government institutions in Somalia, heads of diplomatic missions, multi/bi-lateral donors, communities, civil society organizations, private sector, UN agencies, research and academia. The benefit of the wide and extensive consultations is that the resultant strategy/approach responds to multi-faceted challenges linked to unsustainable production and use of charcoal in Somalia.

The programme aims to successfully engage with the government in Somalia, governments of countries in the region, local communities, UN agencies, private sector and other key stakeholders to account for both the demand and supply side of charcoal value chain. The following principles have emerged as essentials for implementation of the programme:

- Strong focus on capacity building across the region to implement a mutually adopted charcoal reduction agreement;
- Setting up an institutional and policy platform with regional governments in Somalia and providing capacity support to the government institutions and local communities for monitoring, enforcement and negotiations;

- Conflict sensitive implementation that considers the needs of vulnerable groups (women, youth and IDPs) engaged in the charcoal value chain and the vested interests of charcoal traders;
- Coordination with existing actors and establishing new partnerships based on comparative advantage;
- Securing a high level of engagement and ownership by national and international partners; and,
- Demonstrating best practices to introduce alternative livelihoods with value addition in other exportable products and technology diffusion for the promotion of alternative sources of energy to improve energy security.

A critical factor for the success of the programme is the establishment of partnerships throughout the implementation period. The objective of bringing sustainable use of charcoal will not be achieved in this phase of programme, but the momentum built through partnership formation will facilitate the effective enforcement of the Security Council Ban, sharing of best practices, technology diffusion, and transition to alternative sources of livelihoods over a longer timeframe.

In specific terms, all the proposed actions for the achievement of the main objectives are grouped into 3 programme components, i.e., capacity building and regional cooperation; development of alternative energy sources; and alternative livelihoods for the CVCBs.

4.1 Component 1: Capacity Building and Regional Cooperation

The seven outputs of Component 1 are clustered into four categories:

i. Development of legal framework and capacity of state institutions to enforce ban;

ii. Regional cooperation to curb trade and promote other Somali exportable products;

iii. Social mobilization and community development; and

iv. Establishment of Charcoal Reduction Fund to support alternative energy and livelihood activities on a sustainable basis. Salient features of each are described as follows:

Development of Legal Framework and Capacity Building to Enforce Ban

4.1.1 Regional Charcoal Policy Framework, Legally Binding Instrument and Rules of Business for Reducing Charcoal Production

There are reports that the movement of charcoal is cross border with consignments exchanged between Somalia, Kenya and Ethiopia. Therefore, it is anticipated that restricting charcoal in Somalia will only shift the charcoal problem to other areas unless a coordinated regional effort is made to curb the charcoal movement. Kenya and Tanzania have already undertaken policy actions to regulate charcoal production. Similar actions need to be taken by Somalia and Ethiopia. It is proposed that UNEP, UNSOM and IGAD take the role for coming up with the regional instrument that serves as a legal binding for the regional countries on charcoal movement and trade. The legally binding instrument will help to regulate charcoal production and its inter-country

movement. Likewise, Gulf Countries Council (GCC) needs to develop a policy framework and guidelines for banning import of charcoal from Somalia. PROSCAL will provide experts to interact with UNSOM, IGAD and GCC to develop such policy frameworks. These legal and policy frameworks will also allow INTERPOL and International Maritime (Organisation) IMO to monitor ports, movements of charcoal in deep seas and take appropriate actions against charcoal importers and shipping lines engaged in this business.

As indicated in the situational analysis, the Somali state institutions are extremely weak and there is no mechanism to control charcoal production and trade[27]. Previous bans have never worked as these were not designed holistically and local communities were not provided any alternative solution for energy and livelihoods. The concerned Federal and Regional Environment Ministries will be provided support of legal experts to formulate rules and regulations to regulate production of charcoal as per carrying capacity of the rangeland. These laws will be enacted by the parliament of Somali Republic and by the council of ministers in Puntland and Somaliland. Such laws will be in accordance with *Xeer*, and will cover the establishment of Charcoal Licensing Offices, allow making of charcoal from invasive *Prosopis juliflora* or other fast growing tree / shrub species, mandatory record keeping at sites and intra-district movement of charcoal, establishment of volunteer task forces for reporting charcoal production and its movement, reflect the needs of vulnerable groups (youth, IDPs and women) and permanent ban on export of charcoal from Somalia. The laws will provide disincentives for charcoal production and promote alternatives [these can be in the form of, charcoal production license fee, increased wages fixed by the Government for charcoal workers, charcoal tax at intra-district check points, forest re-plantation charges, heavy fines for illegal production and trade]. The law will also include incentives for charcoal monitoring, such as financial incentives and security for the members of Charcoal Monitoring Task Forces; and grants / tax exemptions for switching over to alternative energy options [for example, duty free import of solar and wind energy equipment, minimal taxes on LPG and its equipment, security to the private sector to invest and transfer profits to its home country, provision of security to LPG infrastructure, etc.].

An aggressive awareness campaign will be launched to sensitize the government functionaries and communities about the *Xeer* and formal laws to manage charcoal production and use. Besides drafting laws, the PROSCAL will also provide resources to advance the approval process from the newly formed parliament of Somali Republic. It will also provide support for the establishment of model District Charcoal Licensing Offices and their operations. As per need, the programme will provide resources and collaborate with other on-going programme for strengthening forest, police, customs and port authorities to restrict charcoal trade. The on-going programme teams of Access to Justice, Joint Programme on Local Governance and Community Police will be engaged for the effective enforcement and institutional capacity building.

4.1.2 Monitoring of Charcoal Production and Movement in Somalia.

The available information on charcoal production and export is limited and lacks continuity to establish trends over a period of time. The data is also scattered in various reports. It is important that the information regarding export of charcoal from various Somali ports be regularly obtained from police and customs records and other sources. With the pulling out of Al-Shabaab from all

[27] Ministries of Environment in Puntland and Somaliland informed to the Project Formulation Mission in July 2012, that there are only 2-3 officers and vehicles in the Ministries and there is no Forest Guard in place to monitor rangeland / forests.

the main ports, a systematic system of reporting will help to monitor the illegal exports and impose penalties.

To monitor the impact of charcoal production on the natural vegetation, the existing Remote Sensing / Geographical Information System in various institutions will be reviewed and engaged in the satellite monitoring of charcoal production sites. The monitoring will be undertaken by FAO SWALIM. Through very high resolution satellite images, it is possible to identify and count charcoal burning sites and to derive from them the number of trees cut per unit area and the amount of charcoal produced. The PROSCAL strategy proposes to monitor tree felling and production of charcoal by two means: i) field observations made through community activists / clan chiefs, and ii) satellite monitoring. PROSCAL team will regularly analyse satellite imagery of the representative areas and report on changes occurring in vegetation cover and take stock of tree densities. Satellite images will also allow to monitor the activities occurring in the sites were charcoal is stored in stockpiles for export.. The internal production and movement of charcoal (intra-district) will be monitored through the local governments in the districts and regions, and Community Based Organization (CBOs) which will be formed under this programme, and regular field surveys and assessments. Capacities of the various state institutions will be assessed and these will be strengthened as needed. PROSCAL will also support hiring of Forest Guards, who will work closely with the CBOs and local government setup to stop illegal tree felling and collection of revenues at various check points.

4.1.3 Support to the development of enabling policies on Energy, Forestry and Natural Resources Management

The national level policies for the management of forest or rangeland resources and overcoming the energy deficit in Somalia are either non-existent or are outdated. Most of the policy instruments were framed prior to the breakdown of State institutions. These policies have no relevance to the current political and development situation in Somalia. The institutional support that is needed for coming up with the policy regimes and implement policy recommendations is non-existent. Therefore, it is important to include development of key policies within the PROSCAL framework that can establish the foundations for protecting the existing natural resource base and in some cases reversing the trend of unsustainable use of natural resources. PROSCAL will support the formulation of national policies for Sustainable Forest Management and Energy. Key national and regional institutions will be engaged to come up with the policy recommendations. The process will be inclusive that looks into the needs of stakeholders and engages those stakeholders in all phases of policy development. PROSCAL will also provide capacities to the relevant institutions for taking these policies into action.

The coordination of policy development within all relevant sectors will be ensured through the establishment of a Policy Development Coordination Committee (PDCC). Technical training of specialized units with relevant line ministries and training of government staff in drafting and revising policies will allow up-to-date sector policy frameworks to be developed in line with national priorities. In addition, workshops with relevant stakeholders will be held in order to identify key problem areas, prioritizations, solutions and action plans which can support the development of enabling policies.

Regional Cooperation to Curb Trade and Promote Somali Exports

At present the UN Monitoring Group of the UN Security Council is the only office which collects and disseminates information about charcoal trade to the UN Security Council. Likewise, the Federal Government is fully informed about the UN Security Council resolution on charcoal. However, regional cooperation on the subject, to take appropriate actions at the regional level by the concerned countries is lacking as there is no forum to discuss the issue and take necessary actions.

4.1.4 International Charcoal Trade Regulatory Committee at the Regional Level

UN Resident Coordinator Office in Somalia will take the lead in this regard, and call a meeting of the Ambassadors of regional countries. The objective will be to form an 'International Charcoal Trade Regulatory Committee (ICTRC), which will include representation of Charcoal Importing Countries (CIC), neighbouring countries of Somalia, Special Representative of the Secretary General of the United Nations (SRSG),, IGAD, IMO, members of UN Country Team, and UN Resident Coordinator. The terms of reference for the ICTRC will be drafted and agreed upon by all. ICRTC will serve as a forum to provide necessary contact information about charcoal trade actors in respective countries, facilitate issuance of necessary information to the customs and law enforcement agencies in importing countries to curb charcoal trade, facilitate information dissemination to the relevant stakeholders in importing countries, update actions to be taken to curb trade and report progress to UN Security Council.

UNEP, with the support of UNSOM, FAO and UNDP, will take lead to mobilize UN offices and governments in the regional countries to collect data on import of charcoal and other related information in their countries. Further, the importing countries would also be sensitized to prepare strategies to fulfil the need of charcoal by following sustainable approaches.

Besides the charcoal trade ban, ICTRC would also facilitate negotiations among countries to accord preference to Somali agro and livestock-based products for import in their countries and concurrently mobilize funds for the development of agriculture and livestock value chain, as per Good Agricultural Practices (GAP), and scaling up of the PROSCAL activities, such as LPG expansion. As explained in the earlier section, from these negotiations, a regional Charcoal Trade Policy Framework will be developed which will be adopted by all the countries for implementation. IGAD will be engaged during implementation of the programme to develop such a policy framework. The ICTRC will also organize a 'Regional Conference on Charcoal Trade and Degradation of Environment and Livelihoods in Somalia' to highlight the issue and mobilize political, legal and financial support for the programme. The timing of this conference could be during the second year of PROSCAL implementation. Special sensitization workshops will be organized for the stakeholders in their home countries, Nairobi or UAE. In such workshops Somali diaspora, donors and businesses interested in investments in energy, sustainable livelihoods and other sectors in Somalia would also be invited.

As a last resort, the ICTRC may recommend actions to mobilize any appropriate security agency such as IMO, INTERPOL and AMISOM to enforce its recommendations. ICTRC may also consider inviting GCC / Organisation of Islamic Countries (OIC) Representative to participate in its meetings to seek their political / financial assistance. The charcoal programme management team will provide all the necessary technical support to ICRTC.

A communications strategy to facilitate regional cooperation will be developed. Awareness material and short-videos on the subject will be prepared and regularly shared with the concerned Government missions based in Nairobi, and customs, port authorities in CIC, etc., major importers

of charcoal and their carriers. This will also require collection of updated information about the exporters, importers and shipping lines engaged in charcoal business which will be gathered by a consultant deployed by the PROSCAL.

Social Mobilization and Community Development

One of the major reasons of the failure of previous bans imposed by the Somali Governments is because of lack of involvement of local communities. The community support will be achieved through the following interventions:

4.1.5 Increased awareness about the impacts of charcoal on environment and livelihoods

In order to ensure that measures to enforce the ban on charcoal exports, to curb unsustainable production of charcoal and to promote alternative livelihoods awareness-raising and advocacy activities will be carried out. In addition to the regional communications strategy mentioned in 5.1.4, a national awareness campaign targeting government entities will be launched since government ministries, departments, agencies and local government will eventually take the lead in enforcing the ban and cooperating with local communities on reducing the unsustainable production of charcoal.

Awareness-raising materials in all relevant languages – both in printed and video formats – will be distributed to concerned governments along with information about charcoal exporters, importers and shipping line carriers. Furthermore, a programme website will be developed alongside the launching of an Internet-based advocacy campaign. In support of the above activities, two sensitization workshops will be held each year during the implementation of the programme.

4.1.6 Capacity-building of Communities and Local Government Institutions operational in Charcoal Production Districts for enforcement

Establishing the social capital to address the issues of charcoal at the local level is pivotal for the sustainability of PROSCAL. Currently, the development of community-based organisations (CBOs) and their involvement to self-regulate, self-implement and self-monitor charcoal-related issues is not practiced. Local and international NGOs are engaged with local communities but to a very limited scale largely for providing humanitarian support. The PROSCAL staff [both male and female Social Organizers either on PROSCAL pay-roll or contracted NGO staff] will visit the representative demonstration areas and prioritize those villages or urban settlements in which charcoal production and its sale / consumption is substantially high. In focused group meetings, the objectives of the programme, particularly, the negative effects of charcoal production and its trade, and the alternate options in energy and livelihood sectors will be explained, and the households will be organized in the form of CBOs [separate for males, females or joint- depending upon he cultural norms of a community], each comprising of 15 to 20 households. The CBOs will also have representation of minority groups and IDPs depending on the local situation. Each CBO will select its leaders through consensus and its monthly meetings will be held and proceedings recorded. Prior to forming new CBOs, the information on any of the existing CBOs in the area will be collected. In areas with existing CBOs, these CBOs will be sensitised around issues of charcoal and engaged in the implementation of PROSCAL activities.

PROSCAL will impart training to the elected leaders and activists in leadership development, book keeping, conflict resolution, and development of village / rangeland / settlement plans, sustainable natural resource management, and alternate energy and livelihood options that could be available in the area. Training can be conducted or supplemented using FAOs Farmer Field School approach which will allow farmers to adopt innovative practices through learning-by-doing and sharing knowledge with other farmers as well as providing a forum for farmers to debate new observations, experiences and information from outside the community[28].

FAO has expertise on facilitating Participatory and Negotiated Territorial Development (PNTD), a phased approach in which asymmetrical power relations, unequal access to resources and the conflicting interests of a plurality of actors are addressed in order to improve trust among actors, strengthen social cohesion and to ensure that development interventions are economically viable, socially just and culturally appropriate. Using this approach when strengthening or forming CBOs will ensure the inclusion of the most vulnerable households, reduce conflict and increase sustainability[29].

The CBOs forum will be used for the development of village / settlement / pasture plans, identification of relevant PROSCAL interventions specific to the area, provision of start-up grants, resolution of conflicts, and assessment of the PROSCAL achievements. The start-up grants [100% grants] will be provided in CBOs meetings to ensure transparency. Funds will be dispersed on instalment basis, depending upon the progress achieved by the beneficiaries households. The CBOs will also be responsible for the collection of levy on charcoal produced [proposed one dollar per sack initially and then increased incrementally]. The funds collected from this levy will be pooled with the Charcoal Reduction Fund (CRF) [see next section]. PROSCAL staff will also participate in the CBO meetings to guide the development process.

UN Joint Programme on Local Governance (JPLG) support good governance, and the effective and efficient management in regional and district councils, increase public investment in basic services, and strengthen civic awareness and participation in local decision-making and development. The objective is to strengthen the district level organizational structure and the communities to collectively address the issues for better service delivery. With PROSCALs focus on engaging district organisation (government and non-government) to implement local level activities for sustainable use of natural resources, PROSCAL staff / contracted NGOs will interface with JPLG to identify existing local structures and sensitize them on the importance of dealing with natural resources-related issues at the district level. Meetings will be organised with the activists who could champion an effective role for addressing the issues surrounding charcoal at the local district level. New organisations will be formed with representations from the CBOs in areas outside the coverage of JPLG. In a meeting of the leaders of all CBOs in a given district, the office bearers of community organisations will be elected and training provided to them in leadership management, book keeping and development of district development plans. Bi-monthly meetings of the local organisations will be organized with the technical support of the PROSCAL staff. PROSCAL will cover the travel expenditure of its members to the venue of meeting. The PROSCAL will also provide initial seed funds for the local organisations operation.

The purpose of local level actions is to sensitize and bring a behavioural change to minimize conflict and promote peace, regulate charcoal production [allowed only for local consumption] in

[28] http://www.fao.org/ag/ca/CA-Publications/Farmer_Field_School_Approach.pdf
[29] http://www.fao.org/sd/dim_pe2/docs/pe2_050402d1_en.pdf

the district, take appropriate measures to discourage charcoal import / export in the district, plan development at the district level and facilitate promotion of alternative livelihoods and energy options [through CBOs] as envisaged in this document. The local government/communities will also serve as a bridge between the local communities, Government and donors to exchange information, mobilize resources and promote development agenda at the district level.

The communities with support of police/local administration will also enforce heavy levy on the movement of charcoal in/out of district. The rates of proposed taxes will be agreed through consensus between the members of community. Fifty percent of the collected amount will be transferred to the Government exchequer on monthly basis and the remaining 50% will be pooled in Charcoal Reduction Fund (details in subsequent section) and used to cover the cost of enforcement, operational expenditures, and provision of start-up grants to the members of CBOs. PROSCAL will cover the initial cost of setting up and operation [for one year] of FM Radio Station in a district which will serve as a medium of communication and awareness raising. Thereafter, the cost will be borne through fetching advertisements or from CRF.

Establishment of Charcoal Reduction Fund for Setting of Pilot Projects

4.1.7 Charcoal Reduction Fund established at the National Level

The purpose of Charcoal Reduction Fund (CRF), as the name explains, is to provide start-up grants to the poor segment of the society to initiate small businesses which are strategic in nature and aim at the reduction of charcoal production / consumption and generate enough income for descent living. The start-up grants are the first level of financial support that can be utilised by the marginalised workers and women vendors on immediate basis. Such businesses are identified under the following sections on energy and livelihoods. The beneficiaries' analysis indicates that in the charcoal value chain hundreds and thousands of workers are engaged, e.g., producers, loaders, transporters, whole-sellers, retailers, etc. With the reduction of charcoal trade, it is anticipated that a large number of workers will lose their jobs. Except for whole-sellers and transporters, all the other persons engaged in charcoal business are very poor. The retailers are often poor women, making USD 1-2 per day to meet their daily family expenditures. Two thirds of total start-up grants will be allocated for women involved in the Charcoal Value Chain to adopt other livelihoods options. Therefore, it is imperative that seed fund is provided to them for establishing alternate and improved livelihoods. Further, the CRF will also provide financing on cost-sharing basis for the purchase of LPG, biogas and solar equipment to promote infusion at a rapid rate.

Second level of financial support under the CRF will provide substantial amount of funds for the establishment of Micro-Enterprises (MEs) and Small and Medium-Enterprises (SMEs). Establishment of SMEs will be on cost sharing basis and an initial fund of one million dollar is envisaged for this purpose. In the absence of networks of banks in the Somalia, national or international NGOs of good repute will be contracted to act as a facilitator between the CBOs and the programme to manage the CRF. The contracted NGO will explain in detail to the CBOs, the kind of MEs and SMEs which could be established with the assistance from CRF, and will also assess the capacity of CBOs to successfully operate that business. In a meeting of CBOs, its member household will identify the kind of activity that can be undertaken- the precondition is that it leads to the reduction of charcoal production or use. Through a resolution, the CBO will advise the PROSCAL to provide funds to a particular member. Preference will be given to women

entrepreneurs and unemployed youth. The contracted NGO will verify the household's position, ensure its interest, examine the resolution and recommend the PROSCAL to release funds. The funds will be provided to the beneficiary member in the CBO meeting. The CBO and contracted NGO will be responsible to ensure that the funds are used for the purpose. The PROSCAL staff will verify the utilization of funds.

However, for establishing SMEs, grants starting from USD 10 000 to USD 30 000 will be possible but to access this facility a proper business plan will be prepared by the concerned member with the help of contracted NGO or experts hired under PROSCAL. The concerned CBO will recommend the release of grant to local organisations, which in its following meeting will endorse the release of funds. The contracted NGO will arrange release of funds from the project, which will be given to the requesting member in the following CBO meeting. The SME grant will be interest free but refundable in 24 equal instalments. Another pre-condition for accessing the SME grant is that each business set up under this programme should provide jobs to at least 5 persons. Interest free loans of higher amounts on the basis of cost sharing would be considered by the programme under special circumstances, provided the target foreseen is clearly focused to reduce charcoal consumption and business will generate considerable job opportunities for others and contribute in overall economic development.

To access financing from CRF, the contribution of the proponent of the proposal will be 50%. Likewise, the CRF will also provide matching grant of 50% to the households / businesses to purchase any solar equipment so as to promote diffusion of these at a rapid rate. The proponents of the proposals could use their own savings, tap their diaspora or approach Salam Bank to provide the required share of 50%. The programme will work with Salam Bank to facilitate financing to its beneficiaries. The modalities of CRF will be further worked on to establish detailed criteria, governing structures of the fund and financial controls during the first quarter of the PROSCAL implementation.

Since in Somalia culture, loaning on interest is considered as *haram* [religiously un-pure], the communities will not accept to pay interest on loans, which leads to the risk of reduction of the value of CRF overtime. Smaller start-up grants (maximum USD 5 000) are for the poorest segment of the society and are non-refundable. The higher loans are refundable and the returned amount will be awarded to the other potential SMEs, thus CRF will be a kind of revolving fund. Further, CRF would also receive proceeds of tax collections at the district entry / exit points as explained above. To further avert the risk of devaluation of CRF, it is proposed that donors provide a substantial amount of funds as an endowment for each district at the beginning of the project. The anticipated unspent amount of the endowment could be invested by the programme in high interest schemes to earn some income to grow CRF. The CRF will also accrue funds received from carbon credits as explained in Section on Sustainable Livelihoods.

4.2 Component 2: Alternative Energy and Energy Efficiency for the Substitution of Charcoal

Urban centres, due to high population concentration and non-availability of firewood or any other alternative, are the main consumers of charcoal. Over 98% of the urban households use traditional inefficient charcoal stoves, and most of the rural and nomadic population use firewood and

inefficient biomass stoves[30]. It is estimated that diffusion of efficient stoves could reduce 50% consumption of charcoal, and efficient kilns could produce 60% more charcoal, altogether about 80% reduction in wood cutting. Therefore, a two pronged strategy is proposed for the programmatic framework relating to energy:

1. increase the efficiency along the charcoal value chain at the production, transport and energy use stages; and
2. displace and substitute the use of charcoal for energy use within Somalia with alternative energy options.

This strategy will be implemented through a proposed set of alternate energy interventions all of which will place adequate emphasis on:

- rehabilitation and engagement of women and youth who are currently active in charcoal production and use in alternate energy business and provision of vocational[31] and management skills[32] to them; and
- use of self-sustaining enterprise models, such as franchises and innovative financing models for supporting the market and supply chain development.

The aim is to improve the efficiency of charcoal production [from deadwood and invasive species], transport and use augmented by displacement of charcoal with alternative, such as LPG and Solar. This will be achieved through the implementation of following actions

4.2.1 Accelerated Diffusion of Efficient Cook-stoves for Reducing Charcoal Consumption

Pilot efforts to manufacture and sell efficient charcoal stoves and biomass stoves will be undertaken in the 3 regions [Puntland [Qardho], Somaliland [Burao] and South [Mogadishu and Baraawe]. A feasibility study and business and investment plan for the 'Green Stoves' production facility in each region will be prepared. Cook-stove production will be undertaken at large scale with private sector investment and participation. Large cook-stove enterprises will manufacture both efficient charcoal stoves and efficient woodstoves. The enterprises will have functional specialisation and will involve trained clay / ceramics and metal workers with proper equipment and kilns. There will also be an in-house quality control system to ensure high efficiency performance and durability.

The stoves will be labelled and branded as 'Green-stoves[33]' and will be retailed through regular and specialised outlets. An annual production volume of approximately 30 000 efficient stoves is envisaged. Training will be provided to youth and women on metal working, clay moulding, stove assembly, testing and quality control and marketing. Further, small business management, supply chain management and financial management trainings will also be provided to businesswomen who will be involved in cook-stove enterprise. A multi-media campaign encouraging use of efficient cook-stoves will be launched. Initially the businesses will be provided 50% matching

[30] Ministry of Environment, Wildlife and Tourism. LPG Feasibility Study, 2010
[31] Metal working, clay moulding, fabrication, etc.
[32] Small business management, financial management, marketing, supply chain management etc.
[33] Or a more popular and acceptable name.

grant through CRF. Likewise, to accelerate the diffusion of cook stoves, the CRF will cover 50% of the cost at the consumer level, which will be channelled through the cook stove enterprises.

FAO can provide strong support for the provision of fuel-efficient and clean cook-stoves to target households. As a member of the SAFE[34] Reference Group – established in 2012 – FAO responds to the cooking needs of assisted populations in emergency and recovery contexts and aims to increase resilience in disaster-prone areas, and support the transition from emergency to rehabilitation through a focus on the environment and natural resources management, and livelihood activities.

4.2.2 Sustainable and Efficient Production of Charcoal for Local Consumption

The kilns for charcoal production are made using traditional methods, such as the trench kiln or an earth mount kiln. These traditional kilns have a very low yield of charcoal due to their inefficiency [typical yields are in the range of 10-15%]. The charcoal is then collected by trucks which travel from one location to other in search of charcoal. The production of charcoal in all the regions is in an unorganised and geographically dispersed manner in a batch production mode. It is estimated that through efficient kilns, charcoal production could be increased by 60% and better packaging and transport 3%. This translates into the savings of thousands of trees per year.

It is possible to significantly increase the yield of charcoal production to about 60% or more if permanent retort kilns are used. Such a central facility with efficient kilns will be established one in each region [Qardho, Barao and Baraawe[35]] where charcoal production will be carried out at a larger scale and in batches using *Prosopis Juliflora* or other fast growing species.

A feasibility study for an efficient charcoal – 'Green Charcoal' Production Facility' (GCPF) will be conducted which will cover identification of the location of the facility considering raw material and market access. It will also assess the volume of wood available from *Prosopis juliflora* and deadwood in the initial years and from the Energy plantations in the later years and the volumes and numbers of kilns. The study will also develop a business and investment plan and explore private sector participation. It will also evaluate efficient charcoal production technologies[36], in addition to Retort kilns to consider their relevance and estimate the costs of technology transfer/training. The investment for the GCPFs will be provided by the CRF [50% matching grant] and private sector. The GCPFs will be operated and managed by the private sector or CBO. The charcoal produced sustainably and efficiently will be labelled as 'Green Charcoal[37]' and marketed as a superior product.

4.2.3 Establishment of Energy Plantations.

At present there is no energy plantation that is managed on a sustainable basis at district or regional level and felling of trees from rangelands [a common resource] breeds conflicts among communities. The programme will promote growing of energy plantations of fast-growing multi-purpose tree / shrubs species managed on the principle of sustainable use. In each pilot district, the Government land of a considerable size [1 000 to 2 000 acres] close to a village or town will be

[34] Safe Access to Firewood and alternative Energy. *FAO was a member of the Inter-Agency Standing Committee (IASC) Task Force on SAFE which was established in March 2007 with the aim to 'reduce exposure to violence, contribute to the protection of and ease the burden on those populations collecting wood in humanitarian settings worldwide, through solutions which will promote safe access to appropriate energy and reduce environmental impacts while ensuring accountability'.*

[35] Or a more appropriate location closer to the biggest markets.

[36] Such as Lambiotte Retorts, Multiple Hearth Hereshoff Reactors etc.

[37] Or a more appropriate and popular name

selected, and the local communities will be tasked to undertake nursery production and plantation campaigns. The PROSCAL will provide seeds, tools, other inputs and training using the Farmer Field School approach to the members of communities and undertake monitoring of tree plantation and maintenance in collaboration with the CBOs, NGOs and the Government. This will increase household access to diverse sources of energy and income and thus strengthen their resilience to shocks. The PROSCAL may prepare a system of six-monthly cash transfer, based on the number of trees standing [PES- Payment for Ecosystems Services modality], as an incentive for the communities to look after the trees. Depending upon the growth of trees, the CBOs under the guidance of PROSCAL will develop a revolving system of tree harvest and planting, so that the plantation is sustainable and fuel wood and charcoal needs of the community are also met sustainably. The income earned from the charcoal sale will be used for the future operation of kiln, re-plantation and possibly PES. The lessons learnt will be recorded, and such pilots will be scaled up at other suitable locations.

4.2.4 Development of LPG Market and Accelerated Diffusion of LPG as an Alternate Source of Energy.

As explained earlier, a small segment of the urban population use LPG for cooking. In Hargeisa, Somgas is supplying LPG to 4 000 households and in future it plans to cover 30 000, out of a total of 60 000 households. The demand of LPG is very high in Hargeisa. Somgas, the major LPG supplier in Somaliland is planning to strengthen its supply chain by establishing at Berbera, a Jetty for berthing and unloading from LPG tankers and also establishing storage facilities of 1 000 tonnes capacity[38] - all planned to be completed by the end 2013. Somgas is also exploring possibilities of its extended operation in Puntland. In Mogadishu, LPG supply is a remote concept and only recently a private sector company has purchased land and is planning to set up the LPG supply system. Thus [at least presently in Somaliland] there is a scope for expanding the distribution chain for LPG at the retail level and scope to use a franchisee approach to involve businesswomen and youth who are currently involved in the charcoal value chain. The main target, however, is to shift consumers from charcoal to LPG.

The LPG cylinders are available in the market in the sizes of 2, 4, 11 and 22 kg, therefore, the argument that the consumers do not haves purchase power to purchase gas in large quantities is a myth. At present, the one-time cost of 4 kg cylinder is USD 23 and gas regulator is USD 5. The cost of gas for 4 kg is USD 12, which is affordable and refill is costing the same as of monthly expenses on charcoal. With the expansion of LPG supply network, it is expected that the cost of LPG will be further reduced.

It is planned to support the establishment of a number of franchises to be operated by businesswomen and youth who are involved in charcoal business. This is planned to be initiated at a pilot scale in collaboration with Government, Somgas and Salam Bank using a franchise approach and Islamic banking instruments. The franchises will be identified through a competitive selection process, with preference given to businesswomen and youth previously involved in charcoal business. Financial and investment support to franchisees will be provided from the CRF [50% matching grant] supplemented by Salam Bank using Islamic financing instruments. Training and capacity building support through the franchise management on small business management,

[38]Discussions with Somgas General Manager Abdul Karim Musa in July 2012.

financial management and marketing and to employees on safety issues relating to installation, storage and transport of LPG will be provided.

A total of 30 000 LPG gas connections will be supported in Federal States in Southern parts of Somalia, Puntland (PL) and Somaliland (SL).. The feasibility of these women owned 'Green Energy Stores' also retailing the 'green stoves' and renewable energy systems and devices will also be explored. An incentive of 50% of the cost of the LPG stove, cylinder and regulator will be provided to the Green Energy Stores by CRF to be passed on to the customers.

It is anticipated that as Somgas operation is far ahead in Somaliland as compared with the other regions, LPG connection target will be achieved during the first year in Somaliland and 2nd year in Puntland. In Southern parts on Somalia including, South West, Jubaland, Galmudug, Benadir and Hiiraan and Middle Shabelle, private sector will be mobilized to invest in LPG business and then the PROSCAL will proceed with the relevant interventions.

An awareness campaign targeting prospective LPG users will be launched using radio, television, newspapers, mobile phones and pamphlets in Somali language will be launched. It would also use a mobile demonstration van where women will demonstrate cooking regular Somali food and explain safety features. The mobile LPG demo van will visit markets, transport hubs, and community centres in major towns.

4.2.5 Development of Solar Energy Market and Accelerated Diffusion of Equipment.

According to NASA, Somaliland has good solar insolation levels in the range of 5.96 to 6.17 $kWh/m^2/year$[39]with over 360 sunny days in a year. The same situation prevails in other parts of the country. There are only 2 stores one each in Puntland and Somaliland selling solar lamps and water geysers, and according to the owners of these stores, sale is at bare minimum level. This indicates the sorry state of the use of solar energy for meeting thermal and electrical energy needs in the country. All the Governments see potential for applying solar energy to cut down the charcoal consumption. Particularly the Ministry of Mining, Energy and Water Resources, Somaliland is keen to make the installation of Solar Water Heating Systems (SWHS) in hotels and restaurants a requirement.

The SWHs and solar cooker technologies will be introduced at pilot scale in selected areas of each region. The technical approach would be to pre-heat water using Flat Plate SWHS. It is recommended that the SWHS and solar cookers be assembled locally using local technicians and workshops such as Somaliland Renewable Energy Development Association (SOREDA), rather than importing fully assembled kits, so as to create local job market. The technicians [Master Trainers] will be trained in metal work, assembly and maintenance of solar systems. Each SME will be provided 50% matching grant to set up the business, and a transparent mechanism will be developed to provide 50% grant to the buyers of such systems, through the concerned SME. The SMEs will be selected on the basis of their willingness to make available financing for the solar systems manufacturing, interest in innovative solar systems, provision of maintenance services to the clients and maintaining of records of consumers.

Solar cookers for the purposes of demonstration will also be installed at public places, such as hotels, restaurants, mosques, bakeries, schools, hospitals, orphanages, IDP camps, police stations

[39]NASA Langley Research Centre

and prisons[40]. Based on the results of the pilots, a plan for scaling up solar cookers and water heaters will be prepared for the second phase. The organisations / SMEs will be selected on the basis of criteria, such as interest from their management, availability of professionals who can maintain and manage the system and data collection on energy use and savings. Data collection and monitoring protocols will be developed and data on usage, savings, technical and social issues and solutions will be collected.

4.2.6 Introduction of Biogas in locations with heavy loads of biodegradable feedstock:

There is very high potential of using biogas as an alternative source of energy in Somalia. Biogas digesters of varying capacities can be provided at locations that have ample supply of biodegradable feedstock and water. Some of the feasibility studies commissioned by UNDP in 2010-11 showed promising results, particularly in the proximity of slaughter houses of all the major cities of Somalia. The potential at some of the locations is as high as 300 m^3/day of biogas that can be used both for cooking and running the gensets. The community or household level biogas digesters of up to 25 m^3/day capacities are easy to install and maintain. However, introduction of biogas requires awareness campaigns for the users to understand the benefits and also to overcome cultural barriers to shift to biogas. PROSCAL will demonstrate provision of biogas in communities and locations where the acceptance of biogas is higher than the traditional fuels [charcoal and fire wood]. PROSCAL envisages creation of sizeable critical mass of communities using biogas to meet their basic energy needs in Somalia. In addition to an Environmental Impact Assessment being conducted before constructing and installing the plant, a strong training component and market facilitation for establishing local enterprises around biogas technologies will be provided by the PROSCAL.

4.3 Component 3: Alternative and Improved Sustainable Livelihoods

The objective of this component is to transform unsustainable livelihoods related with charcoal production into sustainable livelihoods. Shifting of consumers to LPG and solar technologies and expansion of LPG, and promotion of efficient cook stoves will create opportunities for alternative livelihoods and it is expected that charcoal retailers, transporters and labourers will abandon the charcoal business. In addition, communities will be engaged in the rehabilitation of rangelands, establishing energy plantations [explained in earlier section], and diversification of income opportunities in agriculture and livestock sectors . For this purpose, a two pronged approach will be followed, firstly to provide support to the poor segment of the society to increase their income levels as well as increasing their assets through the improvement of rangelands, crop and animal productivity, and secondly scaling up proven value addition activities and provide support to private sector to boost agro-based industry for export purposes.

[40] Shifting of community kitchens to alternate fuels will make a great deal of reduction of charcoal use. Around 100 kitchens serve AMISOM troops in Mogadishu, which consume about 500 tonnes of charcoal per month. After the ban of Security Council, these kitchens have been shifted to diesel cook stoves (Personal communication, July 2012.

4.3.1 Support for new/existing CBOs and traditional decision-making structures in drafting Community Action Plans to strengthen Natural Resources Management

Traditional forms of natural resource management such as those guided by Xeer and arbitrated by elders have been shown to be environmentally sustainable albeit not necessarily socially inclusive. These structures should thus not be idealized and implementing activities through them should be done with caution using the Participatory and Negotiated Territorial Development (PNTD) approach can ensure that these structures are revitalized in a more socially inclusive and egalitarian form due to the fragile situation in Somalia these traditional structures have in many cases broken down. In order to initiate resilience-building activities at the community level the PROSCAL will – in so far as possible - take existing community-based organisations and structures as the point of departure and driving force for achieving sustainable natural resource management and resilience-building at the community level. The PROSCAL will support existing CBOs or possibly newly-created ones to draft and implement Community Action Plans (CAPs) that will feature rehabilitation of landscapes, establishment of energy plantations and Integrated Food and Energy Systems (IFES).

4.3.2 Diversification of income and asset building for vulnerable households in order to facilitate transition to more resilient and sustainable livelihoods

Frequent disasters, civil war and destruction of national institutions, such as extension systems, have pushed the Somali agro-pastoralist communities to the bare minimum level. Per unit, crop and livestock productivity is very low, and the communities have very limited assets. The PROSCAL will undertake several need assessment studies in animal, crop and horticulture sectors in the programme area. CBOs formed in the programme area will be consulted to identify the households involved in charcoal business and motivate them to engage them in agriculture, horticulture and livestock production. Likewise, the poorest of the poor households in the programme area will also be identified and their training needs assessed. Based on the consultation with local communities, specific interventions will be designed for a particular village.

Creating lasting and viable alternative livelihoods for people requires multi-faceted interventions that support the building of household assets and increased production as well as improving the physical capital needed to provide a source of income. Based on the needs assessment and specific activities agreed upon, the PROSCAL will support the training of households in key areas such as production - guided by Good Agricultural Practices (GAP), processing and marketing.

The PROSCAL will provide high quality seed, inputs, training in crop production and protection, grants for re-stocking of improved animal breeds, improved animal nutrition, etc. Seeds of improved crop, fruits and vegetable varieties will be provided to the selected community members with the condition that they will provide the seeds produced to other members of CBOs, so as to multiply the seed at a rapid rate. The PROSCAL will also provide grants to potential CBO members to establish certified nurseries of various fruit species, such as banana, citrus, etc. In this way, seeds / saplings of improved varieties will reach to maximum number of farmers in a short time. Likewise, bulls or lambs of improved breeds may be provided for future breeding to replace the low yielding breeds. The programme will provide support to communities for technical information dissemination, and also train a force of agricultural and animal health workers. Women in particular, as they are closely associated with livestock activities, will be trained in disease identification and treatment of sick animals. The programme will cover their training costs

as well as provide tool / medicine kits. In summary, the PROSCAL will develop various economically viable models of crops, fruits, vegetables, poultry and livestock production systems which could be adopted by the individual farmers as well as CBOs and will offer technical training and grants.

4.3.3 Reforestation and rehabilitation of degraded ecosystems for environmental conservation and sustainable production of food, fuel and fodder.

Under this output the PROSCAL will promote the production of wood-based fuel, which conserve ecosystems through continuous regeneration and provide continuous amounts of energy for domestic demand, particularly using multipurpose trees and shrub species that also meet fodder demands. The basic problem with the current system of charcoal production is that it is unsustainable, because trees are cut at a much faster rate than the natural re-growth. The problem is further compounded as there is no programme to promote replanting. In Puntland, the Ministry of Environment has established a few plant nurseries from its meagre financial resources.

The PROSCAL team will identify those rangelands which could be rehabilitated, especially those which are already degraded due to charcoal production. The CBOs will be engaged to assist in the identification of target areas, and its members will be trained to undertake the tasks. The interventions envisaged are to establish simple types of Integrated Food Energy Systems (IFES) which are agro-forestry systems that provide food, fodder and fuel. Multi-purpose tree and shrub species will provide energy and other benefits while tuberous roots such as cassava and other crops will provide food and fodder. IFES will be established at the household level while soil conservation, water-harvesting and conservation, shelter belts for dune stabilization; riverine, water catchment and mangrove reforestation will be carried out by the community. Women will be encouraged to raise plant saplings on a cost-sharing basis. The PROSCAL will provide all the inputs [tools, fertilizers, seeds, plastic bags / pots, etc.] and train women and youth to establish businesses of raising plants. As the plants are ready for field plantations, if appropriate the PROSCAL will purchase the saplings and the community members will be engaged to plant them in the field on a cash-for-work basis. The CBOs will also be tasked to care for the young plants in the field. CBO may also seek the help of Forest Guards and police to halt illegal tree felling. The per tree payment rate will be mutually decided by the PROSCAL and CBOs, so that the engaged members have sufficient monthly income. If deemed possible and feasible, the PROSCAL will establish standard operating procedures of the Payment of Ecosystem Services (PES). For private land owners, the PROSCAL will purchase the saplings from nursery owners and provide them free of cost to the farmers so as to upscale the program.

Besides local species, other native or exotic fast-growing, multi-purpose fodder shrubs or tree species will be promoted. The choice of species will be carefully made keeping in view its use and suitability in the given ecosystem.

At present the concept of PES and REDD+ is unknown in Somalia. All governments need initial assistance in identifying potential activities which are applicable for PES and REDD. A possible activity is to conduct ecological and economic analysis of ecosystem services losses and their value through charcoal production in major charcoal production areas – such as Hawd, Sool, and Baraawe, and draft proposals for claiming of carbon credits, tapping financing from REDD and other international funds [e.g., International Climate Initiative, International Life Web Initiative, LDC Climate Fund]. The incomes accrued will be spent on community development programs in

the area. However, the issue of exploring PES and REDD+ options will need to be carefully evaluated.

4.4 Main Actions and Prioritised Interventions

Keeping in view the urgency of the subject to check charcoal trade and implement national actions to reduce local demand of charcoal, the activities mentioned in the Results and Resource Framework (Annex A) are mainly focused on the capacity development of national counterpart ministry, awareness raising, drafting of national and regional policies documents, demonstrate uptake of alternative sources of energy and diversification of income of vulnerable households involved in charcoal value chain. Efforts to mobilise national and international stakeholders to support the programme objectives would also continue. These activities will be scaled up as new funds are mobilised for the programme. Main outputs and associated activities are as follows:

Prioritised Outputs within the Scope of Available Funds	**Activities**
Capacity building of Ministry of Livestock Forest and Range; Line Ministries and NRM/Environment Ministries in Member States MOLFR supported to coordinate and implement inter-ministerial actions for Reducing Charcoal Production, Trade and Use	✓ National expertise to coordinate and implement inter-ministerial actions housed in the ministry ✓ National expertise to support member states for sub-national dialogue on policies and implementation strategies for the reduction of charcoal production and use ✓ Procurement for MOLFR in Mogadishu (Office equipment and furniture) ✓ Coordination meetings and workshops ✓ First meeting of the International Charcoal Trade Regulatory Committee (ICTRC)
Monitoring Systems Established and Strengthened to record Charcoal Production and Movement	✓ Collection of baseline data on tree densities and charcoal burning sites ✓ Collection of charcoal production and export data from Somali, neighbouring and Arab countries. ✓ Training of government staff in data collection and analysis

	✓ Development of a set of monitoring tools ✓ Monitoring of trees density, charcoal burning sites and production dynamics through RS/GIS
Draft National and Regional Policy for Reducing Charcoal Production, Trade and Use	✓ Collate national and international information on similar policies ✓ Establish national committee with secretariat support to develop the national and regional policy ✓ Draft national and regional policy with action plan
National and International Stakeholders Mobilised to Support the Programme Objectives	✓ International Conference for building alliances to curb unsustainable charcoal trade, production and use in Somalia ✓ Awareness raising workshops in main cities and towns ✓ Develop Programme Brochure, website as part of anti-charcoal campaign started ✓ Resources mobilization for the full-scale joint programme
Accelerated Diffusion of Efficient Cook-stoves for reducing Charcoal Consumption	✓ Feasibility study and business and investment plan for the 'Green Stoves' production facility in selected locations ✓ Training of workers and managers of the selected enterprises. ✓ Small grants for setting up businesses around Efficient Cook-stoves
Sustainable and Efficient Production of Charcoal for Local Consumption	✓ Set up of demo projects for sustainable production of charcoal or "Green Charcoal"
Development of LPG Market and its Accelerated Diffusion to Reduce Local Charcoal Consumption	✓ Undertaking feasibility study for setting up LPG Supply, Storage and Marketing Chain in two main cities of

	Somalia through Private Sector Investments ✓ Development and implementation of a franchising model concept for retailing LPG in major towns ✓ Development and implementation of an awareness campaign targeting prospective LPG users.
Biogas introduced as an alternative source of energy in areas with heavy loads of biodegradable feedstock	✓ Provision of technical support for the promotion of biogas ✓ Demonstration of biogas at 1 potential sites
Programme Management	✓ Recruit programme management staff ✓ Detailed work plan prepared, approved and aligned with available budget for the full-scale ✓ Hold first Programme Steering Committee Meeting

4.5 Communication Strategy

The PROSCAL has to communicate with a number of stakeholders for implementation of the programme activities and communication of results, therefore, a communication strategy is built in the programme design. The salient features of communication strategy are the preparation of awareness and advocacy material for various groups [local communities, Somali Government dignitaries, donors, Governments of CIC, etc.] in Somali, English and Arabic languages. Besides printed matter, short video documentaries will also be prepared on the issues and communities at work to show the adaptation of alternatives. Both print and electronic media are very limited in Somalia, whereas radio is still listened regularly and widely, therefore, the PROSCAL will develop radio programs in Somali language for broadcasting through radio stations. The programme also proposes to establish its own FM Radio Station in the PROSCAL districts [in collaboration with diaspora or private sector] to relay the awareness and other educational programs regularly. These days mobile phones are being used by most of the Somalis, thus they could listen to the FM radio programs on their mobile sets regularly without any additional cost. The telecommunication companies would also be contacted to play their role and transmission of short-text messages and traditional Somali poetry and *Xeer* principles for natural resource management. Besides communicating programme activities, radio station and telecomm services could serve as a mean of entertainment and thus can easily cover its operational cost from advertisements.

Communication is very important in order to mobilize the Somali diaspora. For this purpose an expert will be engaged to collect data about the influential diaspora and charcoal importers and

exporters, various NGOs engaged in mobilization of funds for Somalia, Somali think tanks, clan chiefs, women and youth groups, etc. Special awareness and fund mobilization events with dignitaries and celebrities, and sports events will be organized in major diaspora countries to encourage them to take a proactive part in the development of their country. In major diaspora countries, arrangements will be made with local FM radio stations to relay programs on charcoal trade issues and overall development in Somalia to attract the attention of Somali diaspora. Influential clan chiefs will be particularly mobilized to dialogue with Somali charcoal exporters and importers to abandon charcoal trade which is in the best interest of their country.

For the donors and officials of the CIC, special briefing sessions will be organized to keep them abreast of PROSCAL activities and progress. PROSCAL will also organize six-monthly meetings of the ICTRC, and an international conference on charcoal trade during the second year of the PROSCAL to mobilize wider support for the program. IGAD, GCC and UNSOM will always be kept in the loop to keep them informed about the problems encountered and successes achieved.

4.6 Resource Mobilization

Breaking the vicious cycle of charcoal production and trade requires considerable investments in community development, awareness raising, provision of alternative livelihoods and energy options, building the capacity of law enforcement agencies and creating an enabling regional cooperation. Knowing the fact that only the ban and enforcement will not work, PROSCAL has to target hundred and thousands of people engaged in charcoal value chain and the energy consumers which requires a lot of efforts and finances. Therefore, the PROSCAL will adopt a comprehensive resource mobilization strategy to invoke the interest of all major development agencies, diaspora and private sector.

5 BENEFICIARIES

The analysis of charcoal value chain indicates that several thousands of persons are engaged in charcoal business- almost 8.3 million days of employment is earned through charcoal. The beneficiaries include: producers, labourers, input suppliers, loaders, truck owners, truck drivers, small transporters, creditors, whole-sellers, retailers, exporters, importers, vessels owners, labourers on vessels, stove makers, stove retailers, tool retailers, scrap metal collectors and traders, clan leaders, Government officials, and consumers in Somalia as well as importing countries.

The PROSCAL proposes a win-win situation for all the beneficiaries engaged in charcoal value chain as the fundamental purpose of the project is to bring a behavioural change in the society to provide a decent living to all, which is sustainable and respectable. The charcoal producers and retailers make less than one dollar per day from this business. As there is no other job opportunity, the people have adopted this profession. At the end when they see themselves in constant poverty forever, they adopt negative social behaviour and become addict to *Khat* to overcome their frustration.

PROSCAL aims to provide alternative income generation opportunities to all those who are engaged in the value chain. PROSCAL has planned several initiatives for the rehabilitation of rangelands, watersheds, livestock and dairy development, afforestation, water harvesting and conservation sectors, skill development, provision of start up grants for the establishment of MSEs

and SMEs, local governance and community development and cash for work programs. These interventions are specifically targeted for those who are involved in the charcoal value chain. One of the pre-conditions for accessing facility from PROSCAL [skill development training, start-up grant, grants for MEs and SMEs, etc.] is that the former occupation of the beneficiary was engagement in charcoal production, transport or sale. The alternative energy options, such as manufacturing and sale of fuel-efficient charcoal / wood stoves, solar appliances [manufactured locally to create jobs], and provision of LPG and kerosene on large scale will create job opportunities for whole-sellers, retailers, loaders, transporters, etc. Thus the charcoal businesses will turn into clean energy and green livelihood businesses. The charcoal consumers in Somalia will have clean energy which has no side-effects on health and is readily available.

The Government institutions, NGOs and clan-chiefs would also be benefited in terms of their education, capacity building and enhanced image in the society. Above all the biodiversity in the rangelands would be conserved [e.g., bees and important pollinators die / flee from the area due to extensive smoke generated from kiln leading to poor crop / fruit / seed production of cross pollinated species], and natural vegetation restored which would in turn fetch more precipitation and serve as carbon sink. The biggest beneficiaries of PROSCAL will be the *Acacia bussei*, the population of which will be restored in the programme area.

The exporters, importers, labour working at the port and vessels owners will automatically shift to other kind of products, such as agro-based products, LPG, kerosene, etc. The consumers in *CIC* may face a price hike for the time being which will ultimately balance out as the importers find any other country as a source of charcoal and the consumers shift on electricity or natural gas which is abundant over there.

As the PROSCAL is scaled up, it is anticipated that it will result in reducing clan fights on holding charcoal areas. The major economic opportunity in the country resulting from PROSCAL interventions will lead to peace and stability.

6 MANAGEMENT AND COORDINATION

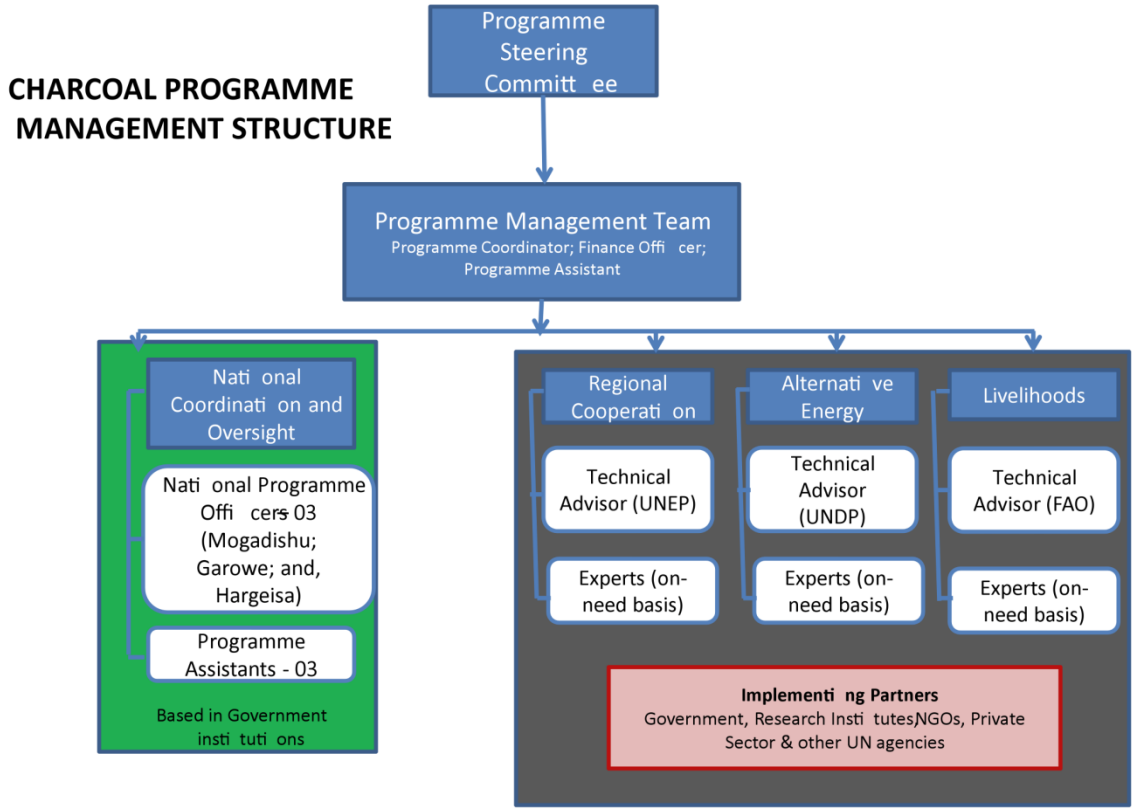
The Joint Programme will offer a coherent and a single framework for the coordination of all activities related to the promotion of sustainable use of charcoal in Somalia. It will emphasize joint work plans, joint monitoring and evaluation of activities and offer a forum for policy dialogue between the Government and all partners on charcoal related issues. The fiduciary arrangement as well as the joint reporting and M&E arrangements will provide flexibility in the management of the programme and drastically reduce the transaction costs while the joint reporting and joint monitoring will simplify the implementation of programme activities. In order to ensure ownership and leadership of national stakeholders all coordination and management structures will be co-chaired by key national institutions. For the overall programme the main focal institution for the UN will be the Ministry of Livestock, Forest and Range, Federal Government of Somalia.

At the operational level, the proposed programme will require strong management and coordination system. The implementing partners and UN agencies will work closely with government to achieve the desired programme results under each component. UNDP will act as the administrative agent for the UN MPTF to receive the funds from the donors and channel these funds to government implementing partners and UN participating agencies under pass through

mechanisms in line with the programme work plans and procedures for inputs mobilisation for the UN assisted initiatives. The option of parallel financing outside the UN MPTF will also be open in cases where the participating agencies receive funds directly from donors to undertake activities specific to the programme. Furthermore, there will be additional supervision support and coordination needs at both national and district levels which have to be met for the programme to be successful. This will be done through structures supported by UN agencies, including the UN-JPLG programme. To ensure coherence and accountability in the management and coordination of the Joint Programme, following structures will be established:

6.1 Programme Management Team

The programme will be implemented under Direct Implementation Modality (DIM). The programme team will seek guidance for its implementation from the Programme Steering Committee. The Programme Management Team (PMT) will comprise of Programme Coordinator; Finance Officer; Senior Technical Advisors for the three components of the programme; and, three national officers. The Senior Technical Advisors will be appointed and hosted by the lead UN agencies (UNEP, FAO and UNDP) and Programme Coordinator and Finance Officer will be based in UNDP offices in Mogadishu. All the key positions for the programme will be nominated/recruited jointly by the Ministry of Livestock, Forest and Range and UN participating agencies. National officers will work closely with government focal ministry for day-to-day coordination and providing technical support to the government for the oversight of the programme implementation. The PMT will be responsible for preparing the JP consolidated annual and quarterly work plan, M&E plans with indicators that will be used by the Government and UN agencies to monitor progress. Performance will be reviewed semi-annually against the work plan targets. The PMT will serve as the Secretariat for the Programme Steering Committee. The Programme Management Structure is represented in the Figure 1 below.



Further, for undertaking special studies and finding solutions to specific problems / geographical areas, technical assistance of specialized UN Agencies will be sought for which an allocation has been made in the budget. Gender balance will be kept in the selection of the PMT staff. The TORs for the PMT members are in Annex D.

6.2 Programme Steering Committee (PSC)

Programme Steering Committee will be established to provide strategic guidance on policy issues related to the implementation of the JP. It will be chaired by the Minister of Livestock, Forest and Range and may be co-chaired by UN Resident Coordinator.

The Steering committee will make all the strategic, policy and political decisions related to PROSCAL. The steering committee will perform the following tasks:

- Review and approve the Joint Program Document and annual work plans.
- Reviews and approves progress reports budget revisions/reallocations, and evaluation reports, notes audit reports, and if needed initiates investigations.
- Endorsement of plans and budgets
- Sets allocation criteria, allocates resources based on priorities

- Provide directives for cross institutional actions that are necessary for the attainment of the objectives of the programme nationally, with regional governments and the CIC of the gulf
- Advocacy to secure support and additional funding
- Discuss High Level policy issues related to the implementation of the Programme
- Provide overall strategic guidance and oversight to the Programme
- Reviews implementation progress and address problems.
- Ensure that the Joint Programme is fully linked to national priorities, policies and coordinated with Government interventions.

The Minister of Livestock, Forest and Range and UN Resident Coordinator will co-Chair the PSC. Initial membership of PSC will include: UNEP Regional Director (Regional office for Africa); Representative from the Office of the Prime Minister; Ministry of Energy and Water; Ministry of Agriculture, Ministry of Planning and International Cooperation; UNDP Country Director; FAO Representative/Officer-In-Charge; Representatives of relevant donors; other UN participating agencies and partner NGOs. The PSC co-Chairs will co-opt members from other organisations on need basis. The co-Chairs will also notify any technical committees on the recommendation of PMT to overcome issues of technical nature during the course of implementation. Programme Coordinator will act as the ex-officio member secretary of the PSC. Exact composition of the PSC will be determined during the inception workshop.

The PSC will meet quarterly and will report to the SDRF through PSG4 SWG on Natural Resource Management. The agenda and supporting documents will be circulated one weeks in advance of the meeting. The regular agenda items will include: presentations on PROSCAL work plan, progress achieved, problems encountered and situation of charcoal trade and actions taken by the stakeholders to curb the illegal trade. The Federal and Regional Governments will report the actions taken to curb the charcoal export and law enforcement. Any bottlenecks in programme implementation faced by the government, partner NGOs or programme management team will be discussed and resolved under the directives of the PSC.

6.3 Role of UN agencies

The activities to be under taken using the UN MPTF funding available with UN agencies will be clearly highlighted in the annual and quarterly work plans of PROSCAL to avoid duplicating the funds allocations for the same activities. The lead coordination UN agencies and government counterparts for each component will decide on the priority needs of the programme. Preparation of draft work plans and budgets will be the responsibility of the Programme Coordinator. All the implementing partners (government institutions, NGOs, UN agencies) engaged in the programme implementation will submit quarterly progress report to the Programme Coordinator. The main role of UN agencies under the joint programme will be as follow:

- Programmatic management of aspects for which each agency is responsible
- Produce six-monthly technical and financial monitoring reports to the PMT
- Contracting and management of implementers in consultation with the government counterparts

- Contracting, management and supervision of consultants in consultation with the government counterparts

6.4 Fund Management Arrangements

The UN MPTF programme document template states that the Joint Programme for Sustainable Charcoal Reduction and Alternative Livelihoods will follow the fund management modality according to the UNDG Guidelines on UN Joint Programming. The UNDP MPTF Office, serving as the Administrative Agent of the Somalia UN MPTF, as set out in the Memorandum of Understanding (MOU) for Somalia UN MPTF will perform the following functions:

- Receive contributions from donors that wish to provide financial support to the Programme;
- Administer such funds received, in accordance with this MOU;
- Subject to availability of funds, disburse such funds to each of the Participating UN Organizations in accordance with instructions from the governing body (Programme Steering Committee) taking into account the budget set out in the Programme Document, as amended in writing from time to time by the Programme Steering Committee;
- Consolidate financial reports, based on submissions provided to the Administrative Agent by each Participating UN Organization (PUNO), and provide these to each donor that has contributed to the Programme Account, to the Programme Steering Committee, PUNOs, and the SDRF Steering Committee;
- Provide final reporting, including notification that the Programme has been operationally completed;
- Disburse funds to any PUNO for any additional costs of the task that the Programme Steering Committee may decide to allocate in accordance with Programme Document.

Each Participating UN Organization assumes complete programmatic and financial accountability for the funds disbursed to it by the Administrative Agent and can decide on the execution process with its partners and counterparts following the organization's own regulations. PUNOs will establish a separate ledger account for the recipient and administration of the funds disbursed to them by the Administrative Agent. PUNOs are entitled to deduct only their indirect costs (7%) on contributions received.

The Joint Programme may provide funding flexibility for un-earmarked funding outside the UN MPTF from non-traditional donors required to deliver on the program target results. Any information about parallel financing received and used to undertake the activities of Joint Programme will be shared by the participating UN agencies as part of the progress reports on the work plan.

The overall responsibility of administering the fund will be with UNDP in the role of admin agent. UNDP will also be responsible, through the Programme Management Team, for preparing common consolidated work plans and budgets, specifically for timely disbursement of funds and supplies, and for coordinating technical inputs from all the participating UN agencies and implementing partners. UNDP will be accountable for the submission of technical and financial reports to the joint programme coordination mechanism, government and donors.

6.5 Reporting

Each participating UN organization will prepare reports in accordance with its financial regulations and rules and operational policy guidance. Reports will be shared with the PMT. To the extent possible, reporting formats will be harmonized.

The PMT shall prepare consolidated narrative progress and financial reports consisting of the reports submitted by participating UN agencies and implementing partners, and shall provide these consolidated reports to Program Steering Committee, donors that contribute to the joint programme account, in accordance with the Memorandum of Understanding (MOU) for Somalia UN MPTF timetable established in the Letter of Agreement signed with the donor.

Notwithstanding the above, administrative, monitoring and reporting functions will include, inter alia, submission of regular quarterly substantive/technical reports; financial monitoring and reporting; and annual evaluation and reporting of results, including results against outcome indicators articulated in the Joint Programme document.

6.6 Monitoring & Evaluation and Audit

Monitoring & Evaluation: The programme will be reviewed twice a year. A consolidated M&E framework will be prepared by the PMT at the commencement of JP implementation. All signatories to the joint programme document, including the government, UN agencies, donors and CSO Groups will participate in monitoring and contribute to the Annual Review.

Audit: Consistent with current practice, audits of the joint programme will be conducted in accordance with the respective UN organizations' requirements. The audits conducted by UNDP's internal and/or external auditors will be considered acceptable to donors contributing to the pool.

6.7 UN and other Agency Coordination and Implementation

As explained in Section 5.4, the services of specialized UN Agencies will be solicited during the programme implementation. The PROSCAL will prepare a detailed proposal of the technical experts required in the area of agriculture, rangeland, watershed and water management and value chain development of agriculture, livestock and dairy products, support for the development of private sector and trade of agro-based products from Somalia to other countries.

One of the requirements of the programme is to monitor charcoal burning, felling of trees and their re-growth (if any) more frequently, e.g., on six-monthly or yearly basis. Such information is important for the programme to monitor the geographical area of charcoal production sites and the trees density in it. It is foreseen that SWALIM (FAO Somalia) will be responsible for the RS/GIS activities. The Regional Centre for Mapping of Resources for Development (RCMRD) based in Nairobi has also available expertise for monitoring land degradation through RS/GIS techniques and its services could also be sought for the purpose. Likewise, services of International Centre for Research in Agro-Forestry (ICRAF) and International Livestock Research Institute (ILRI) could also be capitalized by engaging their experts in undertaking studies and programme implementation where necessary.

UNEP is one of the major players in environmental monitoring, particularly in negotiations at various forums. The charcoal trade / regional cooperation component will be implemented by UNEP. The programme will also benefit from UNEP expertise for the development of regional charcoal policy framework and its approval / adoption by the regional Government. Likewise, IMO / AMISOM, at the request of the government, will be engaged to monitor and halt trade at the Somali seaports and in deep sea.

GCC will also be approached to influence its members to stop import of charcoal from Somalia, and mobilize its members support for scaling up programme activities.

6.8 NGO / CBO Implementation

Somalia based NGOs and International Non-Governmental Organisations (INGOs) having credible operation in Somalia will be engaged to facilitate the identification of high problem areas, interested communities, their sensitization, awareness, training and other activities as envisaged in PROSCAL. These NGOs will be responsible for the implementation of pilot projects. As the implementation starts, NGOs will be invited to submit their credentials for assessment of their capacity and interest. An open and transparent mechanism will be followed for selection, which includes advertisement in the local media as well as internet. Thereafter, the selected NGOs will be requested to submit formal technical and financial proposals to undertake the given tasks and work awarded to the best. The NGOs will work closely with the PROSCAL Field Teams, Clan Chiefs and would encourage CBOs / clans to self-implement the projects under NGOs supervision so that their capacity is also built.

6.9 Government Implementation

The Government institutions are envisaged to play a significant role to implement the activities, particularly planned under the first component. The concerned Government Ministries and Institutes will update or prepare new policies for environment and natural resource management, curb charcoal trade and promote private sector development. Thereafter, the policies will be converted into rules of business which will be approved by the concerned highest authority. The Programme's Legal / Policy Expert will play a key role to help the Government Ministries to develop policies and rules of business. The ministries of environment, agriculture, livestock, and women development will play a key role in PROSCAL implementation.

Thereafter, the role of Police, Law and Justice Departments and Port Authorities comes in, to enforce the laws. UNDP through its Governance Programme is providing substantial assistance for building the Police, Law and Justice Departments. Likewise, FGS may need further support, in the form of increased intelligence in the area to monitor charcoal movement or monitoring of sea near Somali ports, etc., to enforce rules to halt charcoal export. The Programme Team will make an assessment of the situation and prepare a separate proposal to mobilize, UNSOM, IMO, AMISOM or any other agency as deemed fit by the Security Council and the Government.

7 IMPLEMENTATION CHALLENGES DUE TO REGIONALISATION

The biggest implementation challenge in Somalia is to offset regional imbalances that are bound to happen due to different regional and federal states and governments. In light of the significant differences in context and institutional capacities across Somalia, the PROSCAL will pursue a regionally differentiated approach to programming in Jubaland, South West, Galmudug, Benadir, Puntland and Somaliland. This will mean implementing the programme differently in each region and ensuring that the interventions are specifically tailored to meet the needs of each region, and that these interventions are appropriate and relevant to the community needs. Regional strategies and implementation modalities will be detailed in annual work plans. These strategies will be reviewed and updated on an annual basis, taking into account the changing political dynamics. In each region the activities will be implemented by various UN Agencies, local communities and the Government institutions in collaboration with partner NGOs, selected after their rigorous capacity assessments. Awareness raising, capacity building of the relevant institutions to monitor charcoal production and trade, and enforcement of ban will be across all the regions.

8 RISKS

The proposed programme is of high importance to conserve the ecosystems of Somalia. PROSCAL is also of high importance to provide adequate support to ensure that the recommendations of the Security Council are complied with and the people of Somalia enjoy better livelihood and alternate energy options. SWOT analysis clearly indicates that the proposed programme has strengths [UNSC resolution which prohibits international trade of charcoal from Somalia; appreciable donor support as indicated by the Nairobi based donors; and UNDP, UNEP and FAO financial and technical support], and offers several opportunities to capitalize on the support of FGS and Regional States and Administartions, vibrant private sector, effective NGOs network which could be used to implement activities; possibilities of export of livestock, dairy, agriculture and fisheries products; and possibilities of promoting solar and wind energy. The main weaknesses such as no effective Government control in Somalia and clan disagreements / fighting on the control over natural resources; and threats such as overall deteriorating security situation, involvement of clans in charcoal trade, frequent drought, and high initial costs of various renewable energy options. Thus a number of risks are foreseen which could hamper the implementation of activities. The risks and mitigation measures to be taken into account are as follows:

I. **Deteriorated security situation in Somalia**: Security could be a threat to the programme performance, however, as Government is becoming effective and it control over more areas is expanding, it is anticipated that the risk level will be reduced. However, all the programme activities will be implemented by the local communities, clan chiefs and local NGOs, in consultation with the concerned Government institutions and under the security protocols established by the UN. The Field Teams in the 3 regions will comprise of national professionals who could freely move in the programme area. International staff will be placed on need basis and thus not very much exposed to any security risk. UNDSS and Special Protection Units are fully operational to address the security issues.

II. **Lack of interest of clans in reduced charcoal production due to anticipated monetary loss:** This is not a risk in general, as the clans may be losing income from one side due to reduced charcoal production / trade but will be making financial gains because of other business development. Further, awareness and social pressures from other communities to adopt modern means of income generation and energy, rather than performing activities which are not respected in the community, will contribute to avert the risk.

III. **Involvement of politically influential clans in charcoal export:** There could be some politically influential clans engaged in charcoal trade and they may not be cooperative. However, as the export ban is supported by the highest officials of the Regional Governments and UNSOM / SRSG, possibilities are that such exporters will abandon charcoal trade voluntarily and adopt some other export business. Further, as there will be no or reduced demand from importing countries, the risk will be nullified.

IV. **Lack of Government capacity to enforce the charcoal ban:** The existing capacity of Government is extremely low to effectively enforce the trade ban on charcoal. The programme aims to develop its capacity to formulate laws to curb charcoal trade, sensitize the custom, and law enforcement authorities about the issue and provide operational funds for the purpose. Further, the programme may recommend Government to call the support of Security Council to enforce illegal trade, if it does not stop.

V. **Lack of interest of charcoal importing countries:** This risk is of low intensity as after the approval of the Security Council resolution, the CIC are taking more interest in the issue and are even willing to provide finances for development in Somalia. They are already providing substantial amount of financing for humanitarian aid. Lifting of the ban on livestock import from Somalia by Saudi Arabia is a good gesture to support the Somali economy. Increased income opportunities due to the lifting of ban are likely to divert the charcoal producers to their traditional livestock industry. Availability of other means of energy is not an issue in the CICs. However, for smaller amounts of charcoal needs for *shisha*, the charcoal could be produced locally or imported from elsewhere.

VI. **Climate change may affect the livelihoods critically:** Keeping in view the intensity of previous droughts, it is perceived that climate change may affect the survival of livestock and humans in future. It is predicted that Somalia will be among the few countries which will face water shortages by 2025. The PROSCAL will support the activities in water harvesting and conservation and efficient use of water for agriculture, and make communities resilient to the effects of climate change. PROSCAL also intends to diversify the income sources of poor communities, rather than sticking only to the traditional pastoral activities which are highly vulnerable to drought. Such initiatives by PROSCAL will serve as models to prepare communities for minimizing climate change effects.

VII. **Donor fatigue to provide further financial assistance:** Donors are providing assistance to Somalia for the last two decades on humanitarian grounds and some are fully engaged as of now. There is likely possibility that some donors may have already committed their funds for other activities. However, regular sensitization and need to comply the Security Council resolution would motivate the donors to address the charcoal issues on priority. The PROSCAL also aims to mobilize Somali diaspora to invest in business development to help promote technologies to reduce charcoal consumption.

9 BUDGET

The total allocation for this phase is USD 2,233,334. Additional funds will be mobilised to ensure that the objectives of the full-scale Joint Programme are achieved. The total funding required for the full-scale programme is USD 23.6 million. Programme activities included in this phase of implementation will be absorbed into the subsequent revisions of the document as soon as the additional commitments from the donors are realised. Resource mobilisation and the scope of activities with any subsequent revisions of the programme will be presented to Programme Steering Committee for approval. The proposed distribution of available funds is as follows:

Distribution of Available Funds by Components and Outputs

Outputs	Budget (USD)	% of Total
Component 1: Capacity Building and Regional Cooperation		
MOLFR and NRM/Environment Ministries in Member States Supported to coordinate and implement inter-ministerial actions for Reducing Charcoal Production, Trade and Use	560,000	
Monitoring Systems Established and Strengthened to record Charcoal Production and Movement	600,000	
Draft National and Regional Policy for Reducing Charcoal Production, Trade and Use	100,000	
National and International Stakeholders Mobilised to Support the Programme Objectives	299,226	
Total (Component 1)	1,559,226	**66.5%**
Component 2: Alternative Energy and Energy Efficiency for the Substitution of Charcoal		
Accelerated Diffusion of Efficient Cook-Stoves for reducing Charcoal Consumption	170,000	
Sustainable and Efficient Production of Charcoal for Local Consumption	150,000	
LPG Market developed for its accelerated Diffusion to replace Local Charcoal Production	70,000	
Biogas introduced as an alternative source of energy in areas with heavy loads of biodegradable feedstock	144,842.21	

Outputs	Budget (USD)	% of Total
Total (Component 2)	**534,842.21**	**22.9%**
Component 3: Alternative and Sustainable Livelihoods for Charcoal Value Chain Beneficiaries (CVCBs)		
Diversification of income and asset building for vulnerable households in order to facilitate transition to more resilient and sustainable livelihoods		
Total (Component 3)		0%
Component 4: Programme Management		
Programme Management	249,000	10.6%
TOTAL (Components 1 to 4)	**2,343,068.21**	**100%**

Annex A: Project Logical Framework

JP/Project title: Joint Programme for Sustainable Reduction of Charcoal and Alternative Livelihoods (PROSCAL)

Fund Outcome to which the JP/project will contribute:	*To take from the Somalia UN MPTF Results Framework / Somalia Compact Result Framework* **PSG 4: Economic Foundations** - Somali economy revitalized and expanded with a focus on livelihood enhancement, employment generation, and broad-based inclusive growth **Priority 3:** Promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key Natural Resources Management (NRM) institutions.
COMPONENT 1:	**Capacity Building and Regional Cooperation**

Output	**Indicators**	**Baseline data**	**Current value (incl. reference date)**	**Final targets**	**Indicative Activities**	**Means of verification**	**Assumptions**
Output 1.1 MOLFR and NRM/Environment Ministries in Member States Supported to coordinate and implement inter-ministerial actions for Reducing Charcoal Production, Trade and Use	Office of the focal points for charcoal programme in the Ministry of Livestock, Forest and Range (MOLFRD) and NRM/Environment Ministries in Member States strengthened	Limited and dispersed capacities in the MOLFR		Adequately resourced unit established in the MOLFR	Activity 1.1.1 House national expertise in MOLFR and focal ministries in member states to coordinate and implement inter-ministerial Activity 1.1.2 Procurements for MOLFR and focal ministries of Member States:- Office equipment and furniture Activity 1.1.3 Coordination meetings and workshops Activity 1.1.4 Hold first meeting of the ICTRC	Progress Reports	The Federal Government focal Ministry is able to coordinate national actions.
	Number of briefings, workshops, coordination meetings held by the MOLFRD	No capacity development or coordination activities carried out so far		At least 3 briefing, coordination meetings or workshops held in six months		Progress reports from MOLFR	
	First meeting of the International Charcoal Trade Regulatory Committee held	No high-level forum exists to focus on charcoal issues and take policy level decisions		At least two meetings of ICTRC held		Agenda and minutes of the meeting	National and International Policy Makers are in support of addressing the

							challenges around charcoal production and trade.
Output 1.2 Monitoring Systems of Charcoal Production, Reporting and Movement in Somalia	▪ Updated / online charcoal production and trade reports ▪ Sustained reduction in charcoal export ▪ Increasing Vegetation Index	2012: open trade of charcoal, no enforcement capacity and political will; SWALIM study in Jilib area (2011-2013); SWALIM study in Badhaadhe area (2006-2012)		2017: Updated / online charcoal trade information; Maps identifying charcoal production areas and dynamics; quantification of amount of tree loss; Vegetation Index maps on annual basis; zero trade of charcoal from Somalia	Activity 1.2.1 - Collect baseline data on tree densities and charcoal burning sites Activity 1.2.2 - Collect charcoal production and export data from Somali, neighbouring and Arab countries. Activity 1.2.3 - Train government staff in data collection and analysis Activity1.2.4 - Develop a set of monitoring tools Activity 1.2.6 - Monitoring of trees density, charcoal burning sites and production dynamics through RS/GIS	Progress reports; Change assessment maps; Tabular data on charcoal production sites	Availability of qualified human resources will impact on the monitoring of charcoal production sites and the collection of charcoal export data; National and International institutions will be responsive and able to share updated data in a timely fashion;
Output 1.3 Draft National and Regional Policy for Reducing Charcoal Production, Trade and Use Draft	Draft National and Regional Policy Document	No National or Regional Policy Exist to reduce charcoal production, trade and use		Draft policy document available with the federal government	Activity 1.3.1 - Collate national and international information on similar policies Activity 1.3.2 - Establish national committee with secretariat support to develop the national and regional policy Activity 1.3.3 - Draft national and regional policy with action plan	Draft policy document	Federal Government and Governments of Member States lead the stakeholders consultations

							on drafting of policies.
Output 1.4 National and International Stakeholders Mobilised to Support the Programme Objectives	International conference on Somalia Charcoal Reduction Programme held	No alliances or partnerships exist to support implementation of the Joint Programme		At least 2 strategic alliances formed to support Somalia in addressing the charcoal issues	Activity 1.4.1 - International Conference for building alliances to curb unsustainable charcoal trade, production and use in Somalia Activity 1.4.2 - Awareness raising workshops in main cities and towns Activity 1.4.3 - Develop Programme Brochure, website as part of anti-charcoal campaign started Activity 1.4.4 - Resources mobilization for the full-scale joint programme	Conference report	Main regional beneficiaries agree to take time bound actions and support Somalia in its efforts to reduce charcoal use.
	Awareness raising workshops held in main towns and cities of Somalia	Low level of understanding on the possible actions to address charcoal issues		At least five workshops held in main cities/towns		Awareness material; workshop reports	
	Programme Brochure, website and anti-charcoal campaign started	Masses are unaware of the Federal Government and UN Joint Efforts to curb charcoal trade and use		Print and electronic media engaged for mass awareness		Programme Brochure, website and awareness campaign strategy note	
	Funds mobilised from potential donors and development partners for the full-scale joint programme	Available funds are not sufficient to implement the Joint Programme in its entirety		Donors support confirmed to meet the total Programme budget		Funds earmarked from donors to MPTF and letters of commitment	
COMPONENT 2:	**Alternate Energy**						
Output	**Indicators**	**Baseline data**	**Current value (incl. reference date)**	**Final targets**	**Indicative Activities**	**Means of verification**	**Assumptions**
Output 2.1 Accelerated Diffusion of Efficient Cook-Stoves for reducing Charcoal Consumption	Feasibility study and business and investment plan for the 'Green Stoves' production facility in selected locations conducted	Existing cook-stoves are energy inefficient		At least three communities groups using Green Stoves	Activity 2.1.1 Conduct Feasibility study and business and investment plan for the 'Green Stoves' production facility in selected locations Activity 2.1.2 Train workers and managers of the selected enterprises on Green Stoves	Feasibility studies; Communities plans	The buy-in from local communities may be slow on these concepts; traditional stoves may be

	Workers and managers at selected locations trained on enterprises around Green Stoves	Existing cook-stoves are energy inefficient		At least three enterprises established on Green Stoves	Activity 2.1.3 Provide Small grants for setting up businesses around Efficient Cook-stoves	Training reports	seen as a better option due cultural attachment. The access to some of the areas with high levels of production of charcoal may not be accessible limiting the demo sites with efficient charcoal production systems being setup in areas with better access Somalia is able to attract foreign investments and companies from the Gulf States to setup LPG business in main urban centers The conditions for proper functioning
	Small grants for setting up businesses around Efficient Cook-stoves disbursed	No alternative sources of income for persons benefiting from charcoal value chain		Small grants to setup three enterprises		Reports; undertaking by the entrepreneurs; disbursement reports	
Output 2.2 Sustainable and Efficient Production of Charcoal for Local Consumption	Demos for production of "Green Charcoal" setup with the local communities/ individual currently involved in unsustainable production of charcoal	Current practices of charcoal production are unsustainable and inefficient		Three demo on sustainable charcoal production established	Activity 2.2.1 Setup demo for production of "Green Charcoal" with the local communities/ individual currently involved in unsustainable production of charcoal	Progress and assessment reports; agreements with communities/ individuals engaged for Green Charcoal production	
Output 2.3 LPG Market developed for its accelerated Diffusion to replace Local Charcoal Production	Feasibility study and detail design for setting up LPG Supply, Storage and Marketing Chain in two main cities of Somalia through Private Sector Investments	LPG as an alternative source for cooking and heating is not being used in main cities making charcoal and biomass the only source to meet basic energy needs		Feasibility and detail design for promotion of LPG in two main urban centers on PPP model completed	Activity 2.3.1 Undertake feasibility study for setting up LPG Supply, Storage and Marketing Chain in two main cities of Somalia through Private Sector Investments Activity 2.3.2 Develop and implement franchising model concept for retailing LPG in major towns Activity 2.3.3 Develop and implement an awareness campaign targeting prospective LPG users	Feasibility and detail design	
	Franchising model concept for retailing LPG in major towns developed	Retailers in value of charcoal are women with no other option for making their livelihoods		Promotion of LPG to provide franchise to current retailers of charcoal in main cities as an alternative source of income.		Business models in feasibility studies for the establishment of franchise	

	Awareness campaign targeting prospective LPG users developed and implemented	Prospective consumers of LPG have concerns on safety and cultural barriers to transition from charcoal to LPG		Enhanced understanding and safety concerns settled amongst urban population on the use of LPG		Awareness material; progress reports	of biogas plants are fulfilled, i.e., availability and supply or feedstock and water to create anaerobic conditions even after the project has ended
Output 2.4 Biogas introduced as an alternative source of energy in areas with heavy loads of biodegradable feedstock	Technical support for the promotion of biogas provided	Low level of technical expertise on setting up Biogas digester for meeting household level energy needs		On-the-job training of nationals during technical studies to initiate local level capacity building	Activity 2.4.1 Provide technical support for the promotion of biogas Activity 2.4.2 Construct and operationalise biogas plant at 1 potential site as demo	Technical report; Design / layout of the biogas digester on selected location	
	Biogas digester at 1 potential site operational	Biogas potential not being tapped for meeting household level energy needs		Medium size biogas digester setup to demonstrate biogas as a potential source to replace charcoal where feasible		Progress report	
COMPONENT 4:	**Programme Management**						
Output	**Indicators**	**Baseline data**	**Current value (incl. reference date)**	**Final targets**	**Indicative Activities**	**Means of verification**	**Assumptions**
Output 4 Programme Management	Programme Management Staff	Full time programme management staff is not in place		Programme management staff on-board	Activity 4.1 Recruit programme management staff and establish Programme Management Unit to be headed by National Coordinator Activity 4.2 Detailed work plan prepared, approved and aligned with available budget	Programme management selection report	
	Complete detailed work plan for the full-scale programme	Work plan with expected budget		Work plan aligned with the available budget		Detailed work plan	

Annex B: Work Plan and Budget

Work plan of: **Joint Programme for Sustainable Reduction of Charcoal and Alternative Livelihoods**

Duration of the JP/Project: **22 Months, April 2016 – December 2017**

Specific Objectives of the Fund: Promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key Natural Resources Management (NRM) institutions.												
Expected products of the JP/project	Key activities	Calendar (by activity)								Geographic area	Responsible Participating Organization	Planned budget (by product/ activity)
		Q1	Q2	Q3	Q 4	Q1	Q 2	Q3	Q4			
COMPONENT 1: Capacity Building and Regional Cooperation												
Output 1.1												
MOLFR and focal ministries in Member States supported to coordinate and implement inter-ministerial actions for Reducing Charcoal Production, Trade and Use	Activity 1.1.1 House national expertise in MOLFR and focal ministries in member states to coordinate and implement inter-ministerial		X	X	**X**	**X**	**X**	**X**	**X**	Federal level	MOLFR and UNDP	250,000
	Activity 1.1.2 Procurements for MOLFR and focal ministries of Member States: - Office equipment and furniture			X		**X**				Federal level	MOLFR and UNDP	270,000
	Activity 1.1.3 Coordination meetings and workshops		X	X		**X**	**X**		**X**	Federal level	MOLFR, UNDP, UNEP, FAO	10,000
	Activity 1.1.4 Hold first meeting of the ICTRC					**X**				Federal level	MOLFR, UNDP, UNEP, FAO	30,000
Output 1.2												
Monitoring Systems of Charcoal Production, Reporting and	Activity 1.2.1 Collect baseline data on tree densities and charcoal burning sites				**X**						MOLFR, UNEP, FAO	**5,000**

Movement in Somalia	Activity 1.2.2 Collect charcoal production and export data from Somali, neighbouring and Arab countries.					**X**	**X**	**X**			MOLFR, UNEP, FAO	115,000
	Activity 1.2.3 Train government staff in data collection and analysis						**X**	**X**			MOLFR, UNEP, FAO	40,000
	Activity1.2.4 Develop a set of monitoring tools						**X**				MOLFR, UNEP, FAO	90,000
	Activity 1.2.6 Monitoring of trees density, charcoal burning sites and production dynamics through RS/GIS				**X**	**X**	**X**	**X**	**X**		MOLFR, UNEP, FAO	350,000
Output 1.3												
Draft National and Regional Policy for Reducing Charcoal Production, Trade and Use	Activity 1.3.1 Collate national and international information on similar policies					**X**				Federal level	MOLFR, UNDP, UNEP, FAO	-
	Activity 1.3.2 Establish national committee with secretariat support to develop the national and regional policy					**X**	**X**			Federal level	MOLFR, UNDP, UNEP, FAO	-
	Activity 1.3.3 Draft national and regional policy with action plan						**X**			Federal level	MOLFR, UNDP, UNEP, FAO	100,000
Output 1.4												
National and International Stakeholders Mobilised to Support the Programme Objectives	Activity 1.4.1 International Conference for building alliances to curb unsustainable charcoal trade, production and use in Somalia					**X**				Federal level, Regional Governments	MOLFR, UNEP, UNDP, FAO, UNSOM	200,000
	Activity 1.4.2 Awareness raising workshops in main cities and towns		X	X	**X**	**X**	**X**	**X**	**X**	Federal and state level	MOLFR, UNDP, UNEP, FAO	64,226
	Activity 1.4.3 Develop Programme Brochure, website as part of anti-charcoal campaign started				**X**					Federal level	MOLFR, UNDP, UNEP, FAO	15,000
	Activity 1.4.4 Resources mobilization for the full-scale joint programme		X	X		**X**	**X**	**X**	**X**	Federal level	MOLFR, UNDP, UNEP, FAO	20,000

COMPONENT 2: Alternate Energy												
Output 2.1												
Accelerated Diffusion of Efficient Cook-stoves for reducing Charcoal Consumption	Activity 2.1.1 Conduct Feasibility study and business and investment plan for the 'Green Stoves' production facility in selected locations					**X**				Selected Locations (to be coordinated with output 9)	MOLFR, UNDP	20,000
	Activity 2.1.2 Train workers and managers of the selected enterprises on Green Stoves					**X**	**X**			Selected Locations (to be coordinated with output 9)	MOLFR, UNDP	20,000
	Activity 2.1.3 Provide Small grants for setting up businesses around Efficient Cook-stoves						**X**	**X**	**X**	Selected Locations (to be coordinated with output 9)	MOLFR, UNDP	130,000
Output 2.2												
Sustainable and Efficient Production of Charcoal for Local Consumption	Activity 2.2.1 Setup demo for production of "Green Charcoal" with the local communities/ individual currently involved in unsustainable production of charcoal					**X**	**X**	**X**	**X**	Selected Locations (to be coordinated with output 9)	MOLFR, UNDP	150,000
Output 2.3												
LPG Market developed for its accelerated Diffusion to replace Local Charcoal Production	Activity 2.3.1 Undertake feasibility study for setting up LPG Supply, Storage and Marketing Chain in two main cities of Somalia through Private Sector Investments				**X**	**X**				Mogadishu and Kismayo	MOLFR, UNDP	15,000
	Activity 2.3.2 Develop and implement franchising model concept for retailing LPG in major towns					**X**	**X**	**X**		Mogadishu and Kismayo	MOLFR, UNDP	40,000
	Activity 2.3.3 Develop and implement an awareness campaign targeting prospective LPG users					**X**	**X**	**X**		Mogadishu and Kismayo	MOLFR, UNDP	15,000
Output 2.4												
Biogas introduced as an alternative source	Activity 2.4.1					**X**				Location to be decided (potential sites are	MOLFR, UNDP	20,000

of energy in areas with heavy loads of biodegradable feedstock	Provide technical support for the promotion of biogas									slaughter houses in Mogadishu or Kismayo)		
	Activity 2.4.2 Construct and operationalise biogas plant at 1 potential site as demo						**X**	**X**		Location to be decided (potential sites are slaughter houses in Mogadishu or Kismayo)	MOLFR, UNDP	124,842.68
COMPONENT 4: Programme Management												
Output 4												
Programme Management	Activity 4.1 Recruit programme management staff and establish Programme Management Unit to be headed by National Coordinator		X	X						Federal and state level	MOLFR, UNDP, UNEP, FAO	249,000
	Activity 4.2 Detailed work plan prepared, approved and aligned with available budget			X						Federal and state level	MOLFR, UNDP, UNEP, FAO	-
Total planned budget												**2,343,068.21**

Notes:
1. PIP phase funds managed by UNDP.
2. Allocated amounts are inclusive of GMS and other overhead costs that each Participating UN agency will apply.

Annex C: Budget Distribution by UN Participating Agencies

Expected products of the JP/project	Key activities	Component Lead UN Agency	**Budget (USD)**			
			UNEP	UNDP	FAO	Total
COMPONENT 1: Capacity Building and Regional Cooperation						
MOLFR and focal ministries in Member States supported to coordinate and implement inter-ministerial actions for Reducing Charcoal Production, Trade and Use	Activity 1.1.1 House national expertise in MOLFR and focal ministries in member states to coordinate and implement inter-ministerial	UNEP		250,000		250,000
	Activity 1.1.2 Procurements for MOLFR and focal ministries of Member States: - Office equipment and furniture	UNEP		270,000		270,000
	Activity 1.1.3 Coordination meetings and workshops	UNEP		10,000		10,000
	Activity 1.1.4 Hold first meeting of the ICTRC	UNEP		30,000		30,000
Monitoring Systems Established and Strengthened to record Charcoal Production and Movement	Activity 1.2.1 Collect baseline data on tree densities and charcoal burning sites	UNEP			5,000	5,000
	Activity 1.2.2 Collect charcoal production and export data from Somali, neighbouring and Arab countries.	UNEP			115,000	115,000
	Activity 1.2.3 Train government staff in data collection and analysis	UNEP			40,000	40,000
	Activity 1.2.4 Develop a set of monitoring tools	UNEP			90,000	90,000
	Activity1. 2.6 Monitoring of trees density, charcoal burning sites and production dynamics through RS/GIS	UNEP			350,000	350,000
Draft National and Regional Policy for	Activity 1.3.1 Collate national and international information on similar policies	UNEP				-

Reducing Charcoal Production, Trade and Use	Activity 1.3.2 Establish national committee with secretariat support to develop the national and regional policy	UNEP				-
	Activity 1.3.3 Draft national and regional policy with action plan	UNEP		100,000		100,000
National and International Stakeholders Mobilised to Support the Programme Objectives	Activity 1.4.1 International Conference for building alliances to curb unsustainable charcoal trade, production and use in Somalia	UNEP		200,000		200,000
	Activity 1.4.2 Awareness raising workshops in main cities and towns	UNEP		64,226		64,226
	Activity 1.4.3 Develop Programme Brochure, website as part of anti-charcoal campaign started	UNEP		15,000		15,000
	Activity 1.4.4 Resources mobilization for the full-scale joint programme	UNEP		20,000		20,000
COMPONENT 2: Alternate Energy						
Accelerated Diffusion of Efficient Cook-stoves for reducing Charcoal Consumption	Activity 2.1.1 Conduct Feasibility study and business and investment plan for the 'Green Stoves' production facility in selected locations	UNDP		20,000		20,000
	Activity 2.1.2 Train workers and managers of the selected enterprises on Green Stoves	UNDP		20,000		20,000
	Activity 2.1.3 Provide Small grants for setting up businesses around Efficient Cook-stoves	UNDP		130,000		130,000
Sustainable and Efficient Production of Charcoal for Local Consumption	Activity 2.2.1 Setup demo for production of "Green Charcoal" with the local communities/ individual currently involved in unsustainable production of charcoal	UNDP		150,000		150,000
LPG Market developed for its accelerated Diffusion to replace Local Charcoal Production	Activity 2.3.1 Undertake feasibility study for setting up LPG Supply, Storage and Marketing Chain in two main cities of Somalia through Private Sector Investments	UNDP		15,000		15,000
	Activity 2.3.2 Develop and implement franchising model concept for retailing LPG in major towns	UNDP		40,000		40,000

	Activity 2.3.3 Develop and implement an awareness campaign targeting prospective LPG users	UNDP		15,000		15,000
Biogas introduced as an alternative source of energy in areas with heavy loads of biodegradable feedstock	Activity 2.4.1 Provide technical support for the promotion of biogas	UNDP		20,000		20,000
	Activity 2.4.2 Construct and operationalise biogas plant at 1 potential site as demo	UNDP		124,842.21		124,842.21
COMPONENT 4: Programme Management						
Programme Management	Activity 4.1 Recruit programme management staff and establish Programme Management Unit to be headed by National Coordinator	UNDP		249,000		249,000
	Activity 4.2 Detailed work plan prepared, approved and aligned with available budget	UNDP				-
Programme Initiation Phase (PIP) Funds			-	683,994	-	683,994
Additional Funds			-	1,059,074.68	600,000	1,659,074.21
TOTAL			-	**1,743,068.68**	**600,000**	**2,343,068.68**
CONTRIBUTIONS BY DONORS						
					Sweden/ MPTF	1,158,226.68
					Italy / MPTF	1,084,842.00
					UNDP	100,000

Notes:
1. PIP phase funds managed by UNDP.
2. Allocated amounts are inclusive of GMS, MPTF Administrative Agent fee and other overhead costs that each Participating UN agency will apply.
3. UNDP is the lead agency for component 1 of the programme. However, UNEP will provide technical inputs during the implementation of activities to be delivered in Somalia through UNDP and FAO.

Annex B: Budget by Participating UN Organization (ALL DONORS), using UNDG Budget Categories

CATEGORIES	*Sweden and Italy Contributions (USD)*			*EUD Contributions (USD)*			*TOTAL (USD)*		
	UNDP	*FAO*	*TOTAL*	*UNDP*	*FAO*	*TOTAL*	*UNDP*	*FAO*	
1. Staff and other personnel costs	264,163	226,794	490,957	583,554	169,227	752,781	847,717	396,021	**1,243,738**
2. Supplies, Commodities, Materials	0	29,109	29,109	18,344	20,382	38,726	18,344	49,491	**67,835**
3. Equipment, Vehicles and Furniture including Depreciation	79,000	11,000	90,000	40,336	11,677	52,013	119,336	22,677	**142,013**
4. Contractual Services	909,934	142,872	1,052,806	1,351,791	10,616	1,362,407	2,261,725	153,488	**2,415,213**
5. Travel	65,000	48,001	113,001	25,478	36,185	61,663	90,478	84,186	**174,664**
6. Transfers and Grants to Counterparts	0	0	0	0	955,413	955,413	0	955,413	**955,413**
7. General Operating and Other Direct Costs	217,481	102,972	320,453	79,007	135,694	214,701	296,488	238,666	**535,154**
Sub-Total Project Costs	**1,535,578**	**560,748**	**2,096,326**	**2,098,510**	**1,339,194**	**3,437,704**	**3,634,088**	**1,899,942**	**5,534,030**
8. Indirect Support Costs **	107,490	39,252	146,743	146,896	93,744	240,639	254,386	132,996	**387,382**
TOTAL	**1,643,068**	**600,000**	**2,243,069**	**2,245,406**	**1,432,938**	**3,678,344**	**3,888,474**	**2,032,938**	**5,921,412**

* Budgets must adhere to the UNDG Harmonised Budget Categories as approved by the High Level Committee on Management (HLCM) and Chief Executives Board for Coordination (CEB).

**Indirect support cost should be in line with the rate of 7%, as specified in the Somalia UN MPTF TOR and MOU and SAA, Section II- Financial Matters.

Programme for Sustainable Reduction of Charcoal and Alternative Livelihoods (PROSCAL)

Project Document for Delegation of European Union to Somalia

Contracting Authority: Delegation of European Union to Somalia

General information

Title of the Call for Proposals	Not Applicable	
Name of the lead applicant	United Nations Development Programme	
Number of the proposal[41]	Not Applicable	
Title of the action	Programme for Sustainable Reduction of Charcoal and Alternative Livelihoods (PROSCAL)	
Location of the action	Somalia (with geographical focus on Benadir, towns and cities of Federal Member States and Somaliland)	
Duration of the action	36 months	
Beneficiaries	The direct beneficiaries of the Programme are marginalised young men and women engaged in the Charcoal Value Chain and vulnerable communities that form IDPs/returnees proportion of Somalia's population. These include: producers, labourers, input suppliers, loaders, truck owners, truck drivers, small transporters, retailers, labourers on vessels, stove makers, stove retailers. At the upstream policy and capacity development level Government of Somalia, Regional Governments and International Organisations will benefit from the Programme	
Budget[42]	EU funds (EUR)	EU funds (USD)
	3,500,000	3,715,499

[41] For restricted procedures only; when the Contracting Authority has evaluated the concept note it informs the lead applicant of the outcome and allocates a proposal number.
[42] Refer to Annex B for contributions by outputs.

This proposal covers EUD contribution for the Federal Government of Somalia and UN Joint Programme for Sustainable Reduction of Charcoal and Alternative Livelihoods (PROSCAL) in Somalia. This proposal includes activities with a proposed budget of Euro 3.5 million from the European Union and available funding of USD 1,659,074 from other donors.

The focus of this proposal is on outputs related to awareness raising, monitor charcoal production and movement, substitutions of charcoal with other energy sources, increase energy efficiency in charcoal production and use and alternative sources of livelihoods for the charcoal value chain beneficiaries.

Programme for Sustainable Reduction of Charcoal and Alternative Livelihoods (PROSCAL)

1.0 BACKGROUND

Charcoal making and its export from Somalia have been in practice since pre-colonial times to meet local and regional energy requirements and provide livelihood opportunities for Charcoal Value Chain Beneficiaries (CVCBs). However, the unscrupulous plunder of forest and range resources for charcoal production has been witnessed during the last two decades. The breakdown of state institutions in 1991, protracted conflict, weakening of traditional systems of decision-making, vague tenures or resource ownership, illegal imports of huge quantities of Somali charcoal by neighbouring countries, absence of alternative sources of energy and limited livelihood options has led to unsustainable production, trade and use of charcoal.

In recent years, charcoal became the most sought after commodity to fuel the war economy with militia groups generating revenue in excess of USD15 million per annum from illegal exports[43]. As such, a multitude of complex issues surround the production of charcoal in Somalia, leading to a triple threat: irreversible environmental degradation, perpetual conflict and dependence on short-term income from an unsustainable livelihood option. These threats led the UN Security Council[44] to impose a ban on the import of charcoal from Somalia in February 2012. In 2014, the overall international market value of the charcoal exported in 2013 and 2014 was estimated to be in excess of $250 million[45].

Understanding the peculiar context of charcoal problems in Somalia is as important as coming up with a strategy to address these problems. The major problems can be grouped into five main areas:

vi) Environmental un-sustainability;

vii) Volatile political situation, insecurity, enforcement and institutional decay;

viii) Challenge of outstripping regional demand;

ix) Rampant poverty and lack of livelihoods opportunities; and

x) Skewed energy mix and challenge of outstripping local charcoal demand.

1.1 Environmental un-sustainability

On land and offshore, Somalia possesses important - and in some cases unique - natural resources within its varied bio-geographical zones[46]. Particular care must be taken in their management. However, Somalia has a dismal history of resource over-exploitation for personal or clan-based gains. The most rapid degradation has been of forest and range resources that provide the raw

[43] "Report of the Monitoring Group on Somalia and Eritrea", in response to UN Security Council Resolution 1916 (2012) SC/2011/433 – 18 July 2011.
[44] UN Security Council Resolution 2036 (2012).
[45] "Report of the Monitoring Group on Somalia and Eritrea", October 2014..
[46] UNEP: The State of the Environment in Somalia, 2005.

material for charcoal production in Somalia - extracted predominantly from slow-growing dry deciduous bush land and thicket species of *Acacia* and *Commiphora.*

Degraded rangelands, due to tree felling to meet the increasing charcoal demand, are a common sight across Somalia. The north-east and north-west regions are impacted most due to steep topography and occurrence of frequent flash floods leading to the formation of deep gullies. Land degradation is most advanced around the main ports, water holes and wells, where the diminished carrying capacity of the rangeland no longer supports the feeding requirements of the animal populations. As such, the capacity of denuded rangelands to sustain the pastoral economy is already facing irreversible losses, threatening the medium to long-term sustainability of pastoral systems. A recent study by the Food Agriculture Organization of the United Nations (FAO)/Somalia Water and Land Management Information System (SWALIM) estimates the annual rate of *Acacia bussei* decline at about 5% in Puntland. According to a WSP report, the charcoal output of north-east Somalia in 1996 was estimated at 4.8 million sacks (each weighing 25-30 kg). The production of this volume requires the cutting of approximately 2.1 million *Acacia bussei* trees. At an average density of 60 trees per hectare, this translates into a deforestation rate of 35 000 hectares of land per year[47]. Extrapolating the above figures for production of the 10 million sacks of charcoal produced in southern Somalia in 2011 (only export), means felling 4.375 million trees or clearing 72 916 hectares of land. Considering the above-mentioned extent of *Acacia bussei* tree felling in Somalia and no re-plantation, this species was placed on the Red List of threatened species in 2009[48] by the International Union for the Conservation of Nature (IUCN).

In a more recent joint study (published March 2014) by SWALIM, JRC-EU and Twente University covering Jilib area in southern Somalia, it was estimated that 520,520 trees were cut inside the study area (6,000 km^2) during 2011-2013. This alarming figure indicates that the average tree loss during the investigated period is 3.3 % - equivalent to one tree being cut every 2 minutes. It also indicates that 28,108 tonnes of charcoal were produced, i.e. 1,041,039 bags with a commercial value of about USD 15.6 million[8].

The increasing loss of the natural resource base throughout Somalia is a key contributing factor in determining the severity of humanitarian crises. The centuries old coping strategies employed during periods of drought in the arid/semi-arid climate of Somalia are increasingly impractical, as the depletion of resources removes the natural assets which are heavily relied upon during drought. The evergreen drought-tolerant indigenous vegetation species that provide feedstock to the pastoralists during drought years have been lost as a result of the demands for charcoal. The resilience and coping mechanisms of communities and their livestock are currently reduced to a level where even a low-intensity drought cycle can cause huge losses and force them to depend on external assistance. The shocks from such natural disasters are unprecedented; the 2010 drought provides evidence of the severity and magnitude of such events when over 4 million Somalis (40% to 50% of the total population) and millions of heads of livestock were impacted. With Somalia

[47]Somalia Report, 2011.Charcoal Trade Stripping Somalia of Trees. www.somaliareport.com.
[48]http://threatenedplants.myspecies.info/sites/threatenedplants.myspecies.info/files/Acacia%20bussei.pdf

[8] http://faoswalim.org/content/rsm-03-detection-charcoal-production-sites-southern-somalia-using-very-high-resolution

ranked at number 7 out of 233 countries and regions in the global ranking[49] of the impacts of the climate change, the losses due to such recurring shocks will increase in the future unless concerted efforts are made to enhance vulnerable populations' coping capacities.

1.2 Volatile political situation, insecurity, enforcement and institutional decay

Across Somalia, a variety of political, militia, clan-based and administrative entities seek to govern. Despite some 14 attempts by the international community to sponsor national peace processes, none of the governments that emerged have succeeded in establishing an authority or broad legitimacy among Somalis. The situation is improving since 2012, with a Federal Government recognised by the international community and Somalia being supported to rebuild from the effects of civil war. At present, Somalia comprises three Federal States (South West, Jubaland, Galmudug); one emerging state from Hiiraan and Middle Shabelle; the semi-autonomous Somali State of Puntland; and Somaliland, which unilaterally declared itself an independent republic in 1991.

While interlinked ethnically and economically, each of these regions has evolved differently with varying levels of stability, development and governance. Large areas of all the regions are ungoverned by formal structures and institutions. Two decades of political instability coupled with protracted infighting has resulted in widespread insecurity. This has led the local population to turn towards extractive use (or abuse) of natural resources to meet their basic needs, such as charcoal and fuel wood for energy and to earn livelihoods from the illegal export of charcoal.

The political instability also impacts the ownership and sustainable use of natural resources. In Somali society, pastoral lands have traditionally been deemed a common good – rangeland is claimed by clans rather than individuals, so land conflicts in the pastoral setting are usually matters of power struggle between two clans. In cases where one clan gains an upper hand, neighbouring clans can be pushed out of prime rangeland and lose access to their own water wells and other valuable natural resources. The civil war and state collapse accelerated the struggle for land, replacing title deeds (and traditional mechanisms of land allocation) with the use of semi-automatic weapons to appropriate land from weaker groups.

Land grabbing in the 1990s did not involve militia taking up land-based livelihoods themselves, which are seen as low-status occupations, but instead involved laying claim to harvests[50]. This practice is also evident in the production and trade of charcoal. Influential traders and militia groups do not engage in the charcoal production process, but instead act as intermediaries in the charcoal supply and demand chain in order to extort income. The hard labour, local selling and distribution are carried out by the poorer members of society who are considered to be of low status. For a bag (25-30kg) of charcoal that sells for USD 30 in the Middle East, only USD 1-2 is paid to the labourer producing the charcoal, while the balance is shared by the traders, militia

[49] Center for Global Development; 2011-12 Rankings of the impacts of Climate Change.
Center for Global Development; 2011-12 Rankings

groups and transporters. Similarly, only USD 2 to 3 is shared between the producer and vendor (generally women) for a bag of charcoal that is sold at USD 15 in Somalia's local markets.

A prohibition was passed in 1969 preventing the export of charcoal and firewood. However, it remained loosely implemented and after the onset of civil war, export-oriented charcoal production multiplied and has expanded rapidly ever since. In the absence of an effective government, many traditional forms of natural resource management and enforcement mechanisms have been abandoned or are currently ignored. In many instances, this results in the unsustainable exploitation and loss of natural resources, and exacerbates existing socio-economic and political tensions – this is evident for example in the areas surrounding Kismayo[51], a hub of charcoal production, where rapid deforestation has occurred. In addition, institutional capacities are extremely weak, with governing institutions operating without any policy or legal instruments for sound environmental management. Subsequently there is a need for a comprehensive assessment of institutional capacities, including all traditional and new legal instruments concerned with the management of natural resources. This will enable to accurately determine the degree of support required to build institutional capacity.

1.3 The challenge of outstripping regional demand

Charcoal production in Somalia has been in existence for centuries, and its export from Somalia to countries on the Arabian Peninsula has been a widely accepted practice. Between 1991 and 2000, around 90 000 tonnes of charcoal were exported to the Gulf Countries per annum, which increased to 250 000 tonnes in 2011[52]. A key factor in the increased trade in charcoal was the ban on livestock exports from Somalia to Saudi Arabia, as many Somalis sought to replace lost income. The livestock export ban was imposed in 2000 after the outbreak of Rift Valley Fever which resulted in poor animal health. As livestock exports are the mainstay of Somalia's economy - and source of employment, income, foreign exchange, government revenue, and food imports - the ban on livestock prompted households to turn to wood-cutting and charcoal-making to generate income, which accelerated the deforestation. Notably, the livestock ban also resulted in millions of un-exported animals remaining on the rangelands. This, coupled with frequent droughts (2000, 2008 and 2010), compounded the degradation process. Saudi Arabia lifted the ban on Somali livestock imports in 2009, and in 2010, 4.2 million heads of livestock were exported. Unfortunately, livestock exports fell again in 2011 due to drought, putting Somali pastoralists under renewed livelihood stress[53].

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[10] Charcoal exported out of Somalia from Kismayo has emerged as a major issue after Kenyan/AMISOM forces recovered the port city from Shabaab group in August 2012. The President of Federal Somalia has re-emphasised the need for effective ban on Charcoal Exports from Kismayo.

[52] http://news.bbc.co.uk/2/hi/8345370.stm

[53] http://www.somaliareport.com/index.php/post/370/Livestock_Exports_Drop_Dramatically_in_2011. Due to drought some 4.5 million livestock heads died in Somaliland during 2011, inflicting a loss of USD 64 million to farmers- http://sabahionline.com/en_GB/articles/hoa/articles/features/2012/08/24/feature-02

Until recently, Al-Shabaab safeguarded a well-established supply and demand chain of charcoal trade from Somalia to Gulf Countries in return for "rent" from those using the ports under their control. Charcoal was termed as "black gold" by the extremist group, representing revenues in excess of USD 15 million a year[54]. Somali-owned and operated companies, engaged and protected by Al-Shabaab, interfaced with the authorities and markets in the Gulf Countries. The owners of these companies are described as ideological affiliates of Al-Shabaab, who prefer to collaborate with partners who share their ideological orientation. There are also unfounded reports that charcoal from other neighbouring countries was routed to Al-Shabaab-controlled ports and labelled as Somali charcoal. The charcoal trade is also closely linked with the importation of sugar and other commodities to Al-Shabaab controlled areas. Many vessels offload commodities before loading vessel with charcoal for their return journey.

The recent advances of the African Union Mission in Somalia (AMISOM), Kenyan, Ethiopian and Somali forces and recovery of areas from Al-Shabaab has changed the dynamics in the charcoal trade. An October 2016 UN Monitoring Group report[55] indicates that Al Shabaab have even been cut out of a share of the proceeds from charcoal exports following a breakdown of the existing revenue-sharing agreements. Although Al Shabaab has now reportedly resorted to even banning charcoal production in its areas of influence, the production, trade and export of charcoal still continue.

For the international community, it is important to build capacity for enforcement, regional cooperation and securing support from Gulf Countries Council (GCC) to establish alternate businesses to absorb the CVCBs who have been exploited in their efforts to keep up with market demands.

1.4 Rampant poverty and lack of livelihoods opportunities

According to the World Bank, income per capita in Somalia is estimated at USD 435, making it the fifth poorest country in the world. One third of Somalia's population[56] lives in extreme poverty and the average life expectancy is 51 years. Women, youth and children suffer the effects of poverty and conflict disproportionately. One in 10 Somali women is at risk of dying during her reproductive years, 1 young male out of every 5 will be killed by the age of 29, and 1 in 10 children die before their fifth birthday. Somalia ranks 99 out of 104 countries considered in the Multi-dimensional Poverty Index (MPI)- 81.2% people are multi-dimensionally poor. Poverty and conflict has caused widespread displacement in Southern regions of Somalia. According to Population Survey, 1.1 million (9%) of total population of Somalia is internally displaced with one third living in Mogadishu and other towns and cities in South of Somalia[57].

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[54] The estimates are from the UN monitoring group report to the Security Council (S/2011/433). These are conservative estimates.

[55] http://www.un.org/ga/search/view_doc.asp?symbol=S/2016/919.

[56] Somalia Economic Update, 2015 – The World Bank Group.

[57] Population Estimation Survey 2014, FGS-UNFPA.

These figures point towards the gross under-development in Somalia with highly unfavourable living conditions and an overall lack of opportunities to achieve sustainable livelihoods for a large segment of the population. Low development indices also reflect the vulnerability of the population (particularly youth and women) to exploitation by a handful of influential groups and individuals. People are forced to turn to extremist activities or unsustainable livelihood options, such as charcoal production, to survive. It is estimated that some 41 000 persons[58] are engaged in the charcoal value chain. Almost all charcoal retail is undertaken by women (earning less than USD 1 per day), with some women financing charcoal production in order to supplement their income.

Charcoal Value Chain Beneficiaries (CVCBs) include: producers, labourers, input suppliers, loaders, truck owners, truck drivers, small transporters, creditors, whole-sellers, retailers, exporters, importers, vessels owners, labourers on vessels, stove makers, stove retailers, tool retailers, scrap metal collectors and traders, clan leaders, government officials, and consumers in Somalia as well as importing countries. The analysis of data collected during the programme formulation indicates that in this chain of beneficiaries, an average five people (mainly young men) burn two trees in about seven days – two days for cutting the logs and setting the kiln, three days for the kiln to operate, and two days for packing – in order to obtain five sacks of charcoal, each weighing 25 kg. Each sack sells for USD 4 at the production site, which means an income of USD 20 for five people for seven days of work (or USD 0.5 per person per day, assuming that they are fully engaged for 30 days per month in this job). This income is 50% less than the income poverty line set by the World Bank (USD 1 per day). The charcoal collectors (mini-truck owners) have to visit several kilns in the area, as the business is spread over the entire range due to the sparse distribution of trees, to make a full mini-truck load containing about 30 sacks. The transportation charges from kiln to nearby charcoal collection point on the road are USD 1 per sack, which means that truck drivers earn a maximum of USD 30 per truck load. Out of this, the owner has to pay for the cost of fuel (USD 1 per litre), maintenance of the vehicle, charges for the loader and driver. The charcoal that ends up in the local market, mainly in urban areas, is sold by women retailers who are at the mercy of whole-sellers that bring charcoal from the rural areas to urban centres and pay the retailers only USD 1 per 25 kg of charcoal.

Interviews with the representative beneficiaries (producers, small transporters, loaders and retailers) revealed that they enter into the charcoal business due to a lack of alternative livelihood opportunities and not as a matter of choice. People do not engage in charcoal production willingly as it is a stigmatized income-generating activity which few would admit to engaging in. Rather, charcoal production is a 'last resort', environmentally destructive coping strategy. The cycle of poverty facilitates increased exposure and uptake of *Khat* chewing, joining militia groups and engaging in other social evils. Overcoming these challenges requires providing alternative income-generation opportunities to the "links" in the value chain that comprise subsistence workers or

[58] FAO estimates 300 person days of employment / terrajoule of charcoal, which comes to some 8.3 million person days of employment or employment of 41 400 people [at 200 days of employment/person].

sellers. In parallel, enforcement, awareness and capacity development should be targeted towards the influential "links" in the value chain, such as traders, whole-sellers, etc. to effectively curtail charcoal production.

1.5 Skewed energy mix and the challenge of outstripping local charcoal demand

Somalia has untapped reserves of numerous natural resources, including uranium, iron ore, tin, gypsum, bauxite, copper, salt and natural gas. Due to its proximity to the oil-rich Gulf Arab states, the country is also believed to contain substantial unexploited oil reserves. A survey of North-East Africa by the World Bank and UN, ranked Somalia second to Sudan as the top prospective producer of oil. An oil group listed in Sydney, Range Resources, anticipates that Puntland has the potential to produce between 5 to 10 billion barrels of oil. As estimated in 2011, Somalia has 5.66 billion cubic meters of natural gas[59]. Multi-national companies are excited about the prospect of finding petroleum and other natural resources in the country. However, any developments in this sector may not be easy to achieve given the possibilities of eruption of conflicts among Somalis for the control of resources.

Despite being resource rich, Somalia's energy sector is grossly underdeveloped. Biomass resources currently provide over 95% of Somalia's primary energy source for households. The rural and nomadic communities rely on firewood whereas the urban and higher income population rely on charcoal. Over 95% of the charcoal stoves used in Somaliland are inefficient with thermal efficiencies in the range of 18-22%[60]. Charcoal is used as a cooking fuel by 38.8% of the households and 59.8% of people still rely on firewood as a cooking fuel[61]. However, in urban areas 73.9% of people use charcoal as a cooking fuel whereas only 21.2% of rural and nomadic population use charcoal as a cooking fuel[62]. Kerosene and Liquefied Petroleum Gas (LPG)[63] are also being used by rich upper-middle class households for cooking at a limited scale, with kerosene primarily used by rural and nomadic households as an alternative for firewood. Since 2005, 80% of the total charcoal production is exported to neighbouring and Middle Eastern countries[64].

The current charcoal value chain employs production practices that are highly energy inefficient. Consequently, there is scope for improvements to make the charcoal value chain more sustainable at the local level. The charcoal production from woody biomass is typically through pit kilns or surface mount kilns,[65] both of which are energy inefficient, with 10% and 20% charcoal

[59] www.indexmundi.com
[60] Ministry of Pastoral Development and Environment, Somaliland and Candlelight for Health, Education and Environment, 2004, Impact of Charcoal Production on Environment and the Socio Economy of Pastoral Communities in Somaliland.
[61] AFREPREN/FWD, 2007, Establishment of an Energy Sector Database for Somalia, UNDP Somalia;
[62] AFREPREN/FWD, 2007, Establishment of an Energy Sector Database for Somalia, UNDP Somalia
[63] Mixture of Propane – C_3H_8 and Butane – C_4H_{10} used for cooking and transportation applications
[64] UN and WB, 2006, Somali Joint Needs Assessment: Productive Sectors and Environmental Cluster Report;
[65] United Nations Environment Programme (UNEP), 2005, The State of the Environment in Somalia: A Desk Study;

conversion efficiency. These kilns could be substituted by improved charcoal production systems which have conversion efficiencies in the range of 35% to 40%. There could also be savings in charcoal handling and transportation to avoid crumbling and pulverization[66].

Analysis of available energy sources, current reliance on biomass and the feasibility for renewable energy interventions, reveals that there is a huge opportunity to diversify energy sources and use and deliver efficiency gains in energy use through reducing reliance on charcoal and firewood and introducing alternative sources of energy such as wind, solar, LPG, biogas, hydro and high efficiency thermal generation and distribution systems.

The five challenges covered above are the major impediments to effective enforcement of the ban on charcoal trade and production in Somalia. The diagnosis of earlier attempts to enforce a ban suggest that these were partial and did not consider all elements surrounding the unsustainable charcoal trade and production. These attempts exclusively focused on issuing legal instruments banning the trade and production with no provisions to holistically support the enforcement mechanisms, particularly in a crisis context prevailing in Somalia. This consequently resulted in an increase in illegal exports of charcoal from Somalia that has become a regional issue, with major part of the trade volumes ending up in neighbouring countries accessible by sea and land routes. Furthermore, the livelihood of CVCBs was not taken into account, nor were alternative sources of energy provided for the poor communities, particularly women in urban and rural areas who are using charcoal for cooking. There are obvious lessons from the failures of the past, which require a move away from a fragmented approach of imposing bans, to an integrated approach that addresses the root causes of charcoal production at national and regional levels. A set of interventions are put forward under this programme that intend to comprehensively address the challenges outlined above. Given the complexity of the challenges, a set of interventions are put forward under this programme. These interventions intend to comprehensively address the challenges outlined above with support of the European Union.

2.0 OBJECTIVES OF THE PROGRAMME

The overall goal of the Programme for Sustainable Charcoal Reduction and Alternative Livelihoods (PROSCAL) is to promote energy security and more resilient livelihoods through a gradual reduction of unsustainable charcoal production, trade and use in Somalia. The overall programme has the following objectives:

- To mobilize key stakeholders in the region and build institutional capacity among government entities across Somalia for the effective monitoring and enforcement of the charcoal trade ban, the development of an enabling policy environment for energy security and natural resources management;
- To support the development of alternative energy resources;

[66]Kitui Evans, Undated, Sustainable Charcoal Production and Use: A Systems Approach

- To facilitate – for stakeholders in the charcoal value chain – a transition towards livelihood options that are sustainable, reliable and more profitable than charcoal production; and
- To start reforestation and afforestation throughout the country for the rehabilitation of degraded lands.

The programme's planned interventions would trigger local economic opportunities, and thus reduce poverty, halt environmental degradation, improve energy security, enhance climate and livelihood resilience, promote social equity amongst vulnerable groups (youth, internally displaced persons [IDPs] and women), diversify energy sources, reduce conflict, and promote peace and development.

3.0 PROGRAMME METHODOLOGY

The Programme formulation has benefited from a broad consultative process that involved all key stakeholders, including government institutions in Somalia, heads of diplomatic missions, multi/bilateral donors, communities, civil society organizations, private sector, UN agencies, research and academia. The benefit of the wide and extensive consultations is that the resultant strategy/approach responds to multi-faceted challenges linked to unsustainable production and use of charcoal in Somalia.

The programme aims to successfully engage with the Government in Somalia, governments of countries in the region, local communities, UN agencies, multi/bilateral partners, private sector and other key stakeholders to account for both the demand and supply side of charcoal value chain. The following principles have emerged as essentials for implementation of the programme:

- Strong focus on capacity building across the region to implement a mutually adopted charcoal reduction agreement;
- Setting up an institutional and policy platform with regional governments in Somalia and providing capacity support to the government institutions and local communities for monitoring, enforcement and negotiations;
- Conflict sensitive implementation that considers the needs of vulnerable groups (women, youth and IDPs) engaged in the charcoal value chain and the vested interests of charcoal traders;
- Coordination with existing actors and establishing new partnerships based on comparative advantage;
- Securing a high level of engagement and ownership by national and international partners; and
- Demonstrating best practices to introduce alternative livelihoods with value addition in other exportable products and technology diffusion for the promotion of alternative sources of energy to improve energy security.

A critical factor for the success of the programme is the establishment of partnerships throughout the implementation period. The proposed investments under this programme will build momentum

to take actions for effective enforcement of the Security Council Ban, sharing of best practices, technology diffusion, and transition to alternative sources of livelihoods.

To achieve the Joint Programme objectives, all proposed interventions have been grouped into three programme components:

1. Capacity building and regional cooperation
2. Development of alternative energy sources
3. Alternative livelihoods for Charcoal Value Chain Beneficiaries

Funding from the European Union will contribute to selected outputs under each of the three components. These outputs are detailed below, and are referenced according to their place within the overall charcoal programme framework (see the log frame attached as Annex A).

3.1 Component 1: Capacity Building and Regional Cooperation

3.1.1 Improved awareness about environmental degradation and loss of livelihoods due to charcoal trade (Output 1.5 of PROSCAL)

Awareness raising and advocacy activities will be carried out in Mogadishu and across all member States of the Federal Government and Somaliland in order to ensure that measures to enforce the ban on charcoal exports, curb unsustainable production of charcoal and promote alternative livelihoods are effective. In addition to the regional communications strategy, national awareness campaigns targeting government entities will be launched since government ministries, departments, agencies and local government will eventually take the lead in enforcing the ban and cooperating with local communities on reducing the unsustainable production of charcoal.

Awareness-raising materials in all relevant languages – both in printed and video formats – will be distributed to concerned governments along with information about charcoal exporters, importers and shipping line carriers. Furthermore, a programme website will be developed alongside the launching of an Internet-based advocacy campaign. In support of the above activities, two sensitization workshops will be held each year during the implementation of the programme.

3.2 Component 2: Alternative Energy and Energy Efficiency for the Substitution of Charcoal

Urban centres, due to high population concentration and non-availability of firewood or another alternative, are the main consumers of charcoal. Over 98% of the urban households use traditional inefficient charcoal stoves, and most of the rural and nomadic population use firewood and inefficient biomass stoves[67]. It is estimated that diffusion of efficient stoves could reduce by 50% the consumption of charcoal, and efficient kilns could produce 60% more charcoal, altogether about 80% reduction in wood cutting. Therefore, a two-pronged strategy is proposed for the programmatic framework relating to energy:

[67] Ministry of Environment, Wildlife and Tourism. LPG Feasibility Study, 2010

3. Increase the efficiency along the charcoal value chain at the production, transport and energy use stages.
4. Displace and substitute the use of charcoal for energy use within Somalia with alternative energy options.

This strategy will be implemented through a proposed set of alternate energy interventions all of which will place adequate emphasis on:

- rehabilitation and engagement of women and youth who are currently active in charcoal production and use in alternate energy business and provision of vocational and management skills to them; and
- use of self-sustaining enterprise models, such as franchises and innovative financing models for supporting the market and supply chain development.

These models will be implemented in Mogadishu, Kismayo and Baidoa through EU support. IDPs and returnees will be prioritised while undertaking these activities.

The aim is to improve the efficiency of charcoal production (from deadwood and invasive species), transport and use augmented by displacement of charcoal with alternative, such as LPG and solar. This will be achieved through the implementation of the following actions.

3.2.1 Accelerated diffusion of efficient cook-stoves for reducing charcoal consumption (Output 2.1 of PROSCAL)

Pilot efforts to manufacture and sell efficient charcoal stoves and biomass stoves will be undertaken in the 3 locations (Mogadishu, Kismayo and Baidoa). A feasibility study and business and investment plan for the 'Green Stoves' production facility in each location will be prepared. Cook-stove production will be undertaken with private sector investment and participation. The enterprises will have functional specialisation and will involve trained clay / ceramics and metal workers with proper equipment and kilns. There will also be an in-house quality control system to ensure high efficiency performance and durability. The pilot in Mogadishu will be IDPs focussed. Training would be imparted to the selected persons from IDPs in manufacturing and setting up production facility that can supply energy efficient stoves to IDPs camps and local market. Start-up grants will be given to IDPs for setting up of these enterprises on sustainable basis.

The stoves will be labelled and branded as 'Green-stoves[68]' and will be retailed through regular and specialised outlets. An annual production volume of approximately 10 000 efficient stoves is envisaged. Training will be provided to youth and women on metal working, clay moulding, stove assembly, testing and quality control and marketing. Further, small business management, supply chain management and financial management trainings will also be provided to businesswomen who will be involved in cook-stove enterprise.

[68] Or a more popular and acceptable name.

3.2.2 Sustainable and efficient production of charcoal for local consumption (Output 2.2 of PROSCAL)

The kilns for charcoal production are made using traditional methods such as the trench kiln or earth mount kiln. These traditional kilns have a very low yield of charcoal due to their inefficiency (typical yields are in the range of 10-15%). The charcoal is then collected by trucks which travel from one location to another in search of more charcoal. The production in all the regions is unorganised and geographically dispersed in a batch production mode. It is estimated that through efficient kilns, charcoal production could be increased by 60% and better packaging and transport by 3%. This translates into the savings of thousands of trees per year.

It is possible to significantly increase the yield of charcoal production to about 60% or more if permanent retort kilns are used. Such a central facility with efficient kilns will be established, one in three locations (exact location to be decided as part of project inception) where charcoal production will be carried out at a larger scale and in batches using *Prosopis Juliflora* or other fast growing species.

A feasibility study for an efficient charcoal 'Green Charcoal' Production Facility (GCPF) will be conducted, covering identification of the location of the facility considering raw material and market access. It will also assess the volume of wood available from *Prosopis juliflora* and deadwood in the initial years and from the energy plantations in the later years and the volumes and numbers of kilns. The study will also develop a business and investment plan and explore private sector participation. It will also evaluate efficient charcoal production technologies[69], in addition to retort kilns to consider their relevance and estimate the costs of technology transfer/training. The studies and trainings will lead to setting up of one GCPF. The location will be decided as part of the feasibility study. t Charcoal produced sustainably and efficiently will be labelled as 'Green Charcoal[70]' and marketed as a superior product.

3.2.3 Development of LPG market and accelerated diffusion of LPG as an alternate source of energy (Output 2.4 of PROSCAL)

A small segment of the urban population use LPG for cooking. In Hargeisa, Somgas is supplying LPG to 10 000 households. The demand of LPG is very high. Thus, there is a scope for expanding the distribution chain for LPG at the retail level and scope to use a franchisee approach to involve businesswomen and youth who are currently involved in the charcoal value chain. The main target, however, is to shift consumers from charcoal to LPG.

It is planned to support the establishment of a number of franchises to be operated by businesswomen and youth who are involved in charcoal business. This is planned to be initiated at a pilot scale in collaboration with Government and private sector using a franchise approach and Islamic banking instruments. The franchises will be identified through a competitive selection process, with preference given to businesswomen and youth previously involved in charcoal business. Financial and investment support to franchisees will be provided from the programme. Training and capacity building support through the franchise management on small business

[69] Such as Lambiotte Retorts, Multiple Hearth Hereshoff Reactors etc.

[70] Or a more appropriate and popular name

management, financial management and marketing and to employees on safety issues relating to installation, storage and transport of LPG will be provided.

A total of 10 000 LPG gas connections will be supported in Federal States in Mogadishu. The feasibility of the women owned 'Green Energy Stores' also retailing the 'green stoves' and renewable energy systems and devices will also be explored.

An awareness campaign targeting prospective LPG users will be launched using radio, television, newspapers, mobile phones and pamphlets in the Somali language. It will also use a mobile demonstration van where women will demonstrate cooking regular Somali food and explain safety features. The mobile LPG demo van will visit markets, transport hubs, and community centres in major towns.

3.2.4 Introduction of Biogas in locations with heavy loads of biodegradable feedstock (Output 2.6 of PROSCAL)

There is very high potential of using biogas as an alternative source of energy in Somalia. Biogas digesters of varying capacities can be provided at locations that have ample supply of biodegradable feedstock and water. Some of the feasibility studies commissioned by UNDP in 2010-11 showed promising results, particularly in the proximity of slaughter houses of all the major cities of Somalia. The potential at some of the locations is as high as 300 m^3/day of biogas that can be used both for cooking and running the gensets. As part of EU supported activities, the feasibility for Mogadishu slaughter house would be reviewed to setup the biogas plant. The actual operation of the biogas plant will be on public private partnership (PPP) model, where Mogadishu municipality and interested private sector entity would enter into a contract specifying their roles, conditions of matching investments, revenue sharing and performance indicators for the private sector. Biogas plant to be setup in Mogadishu is likely to have high demonstration impact for replicating this technology in other towns and cities of Somalia.

3.3 Component 3: Alternative and Improved Sustainable Livelihoods

The objective of this component is to transform unsustainable livelihoods related with charcoal production into sustainable livelihoods. The shifting of consumers to LPG and solar technologies and expansion of LPG, and promotion of efficient cook-stoves, will create opportunities for alternative livelihoods and it is expected that charcoal retailers, transporters and labourers will abandon the charcoal business. European Union funding will be utilized for livelihood diversification activities, as outlined below, in order to support poor segments of society to increase their income levels and increase their assets. This will complement other activities under Component 3 —, including the improvement of rangelands, scaling up of proven value-addition activities and provision of support to the private sector to boost agro-based industry for export purposes.

3.3.1 Diversification of income and asset building for vulnerable households in order to facilitate transition to more resilient and sustainable livelihoods (Output 3.2 of PROSCAL)

Frequent disasters, decades of conflict and the destruction of national institutions, such as extension systems, have had a devastating impact on Somalia's agropastoralist communities. Crop and livestock productivity per unit is very low, and communities have very limited assets. PROSCAL will undertake baseline assessments of existing livelihood strategies and associated production systems in the livestock, crop and horticulture sectors in the programme area. CBOs in the programme area will be consulted to identify the households involved in the charcoal value chain (including production, transport and marketing) and motivate them to engage households in agriculture, horticulture and livestock production. The poorest households in the programme area will also be identified and their training needs assessed. Based on consultation with local communities, specific interventions will be designed for particular villages.

Creating lasting and viable alternative livelihoods for people requires multi-faceted interventions that support the building of household assets and increased production as well as improving the physical capital needed to provide a source of income. PROSCAL will provide high-quality seeds (of improved crop, fruit and vegetable varieties) and other inputs to the selected community members who will then be expected to provide the seeds produced to other members of CBOs so as to multiply the seeds at a rapid rate. PROSCAL will also support to CBO members to establish certified nurseries of various fruit species, such as banana, citrus, etc. In this way, seeds/saplings of improved varieties will reach more farmers in a short time. Based on the needs assessment and specific activities agreed upon, PROSCAL will support the training of households on production, Good Agricultural Practices (GAP), processing and marketing of crops, livestock, forestry and fisheries, as well as micro-enterprise and management skills.

The programme will also provide support to communities for the dissemination of technical information, and train a force of agricultural and animal health workers. Women in particular, as they are closely associated with livestock activities, will be trained on disease identification and treatment of sick animals. The programme will cover their training costs as well as provide tool/medicine kits. In summary, the PROSCAL will develop various economically viable models of crops, fruit, vegetables and livestock production systems which can be adopted by the individual farmers as well as CBOs, and will offer technical training.

The activities under this output will be carried out in Jilib District (Middle Juba Region) and Kismayo District (Lower Juba Region). Given the high concentration of IDPs and returnees in these areas (particularly Kismayo), these groups will also be integrated into the alternative livelihood value chains and their skills will be built through this component's various trainings.

4.0 BENEFICIARIES

The analysis of the charcoal value chain indicates that several thousand people are engaged in the charcoal business - almost 8.3 million days of employment are earned through charcoal. The beneficiaries include: producers, labourers, input suppliers, loaders, truck owners, truck drivers, small transporters, creditors, whole-sellers, retailers, exporters, importers, vessels owners, labourers on vessels, stove makers, stove retailers, tool retailers, scrap metal collectors and traders, clan leaders, Government officials, and consumers in Somalia as well as importing countries.

The PROSCAL proposes a win-win situation for all the beneficiaries engaged in the charcoal value chain, as the fundamental purpose of the programme is to bring a behavioural change in the society to provide a decent living to all which is sustainable and respectable.

PROSCAL aims to provide alternative income generation opportunities to those who are engaged in the charcoal value chain (production, transport or sale). The alternative energy options, such as manufacturing and sale of fuel-efficient charcoal/wood stoves, solar appliances (manufactured locally to create jobs), and provision of LPG and kerosene on a large scale will create job opportunities for whole-sellers, retailers, loaders, transporters, etc. Thus the charcoal businesses will turn into clean energy and green livelihood businesses. The charcoal consumers in Somalia will have clean energy which has no negative health side-effects and is readily available. The EU funding will help in implementing interventions for awareness raising at the national level and promotion of alternative sources of energy and livelihoods in Baidoa, Kismayo and Mogadishu. These locations are gaining stability and locals are getting greater sense of security. Additionally, these areas are also hosting locations for the IDPs and recipients of returning refugees. The planned activities with EU funds will have specific activities to benefit IDPs and returnees. The baseline assessments and studies planned under each activity will highlight specific needs of the IDPs and returnees, with quantified indicators for their inclusion. Some of the activities, like setting up of Green Stoves enterprise in Mogadishu, is primarily be at one of the IDPs camp in Mogadishu.

The Government institutions, NGOs and clan chiefs will also benefit in terms of their education, capacity building and enhanced image in society. Above all, the biodiversity in the rangelands will be conserved (e.g. bees and important pollinators die/flee from the area due to extensive smoke generated from kilns, leading to poor crop/seed production of cross-pollinated species), and natural vegetation restored which would in turn fetch more precipitation and serve as carbon sink. PROSCAL will also contribute to the restoration of *Acacia bussei* in the programme area.

The exporters, importers, labour working at the port and vessels owners will automatically shift to other kind of products, such as agro-based products, LPG, kerosene, etc. The consumers in *CIC* may face a price hike in the immediate term, but this will ultimately balance out as the importers find other sources of charcoal and consumers shift to electricity or natural gas.

As PROSCAL is scaled up, it is anticipated that it will result in reducing clan fights on holding charcoal areas. The major economic opportunity in the country resulting from PROSCAL interventions will lead to peace and stability.

5.0 MANAGEMENT AND COORDINATION

EU support is a parallel contribution to the Joint Programme with established management and coordination arrangement. The Joint Programme offers a coherent and a single framework for the coordination of all activities related to the promotion of sustainable use of charcoal in Somalia. It emphasizes on joint work plans, joint monitoring and evaluation of activities and offer a forum for policy dialogue between the Government and all partners on charcoal related issues. The fiduciary arrangement as well as the joint reporting and M&E arrangements provide flexibility in the management of the programme and drastically reduce the transaction costs while the joint reporting and joint monitoring simplify the implementation of programme activities. In order to ensure ownership and leadership of national stakeholders all coordination and management structures are co-chaired by key national institutions. For the programme the main focal institution for the UN will be the Ministry of Livestock, Forest and Range, Federal Government of Somalia.

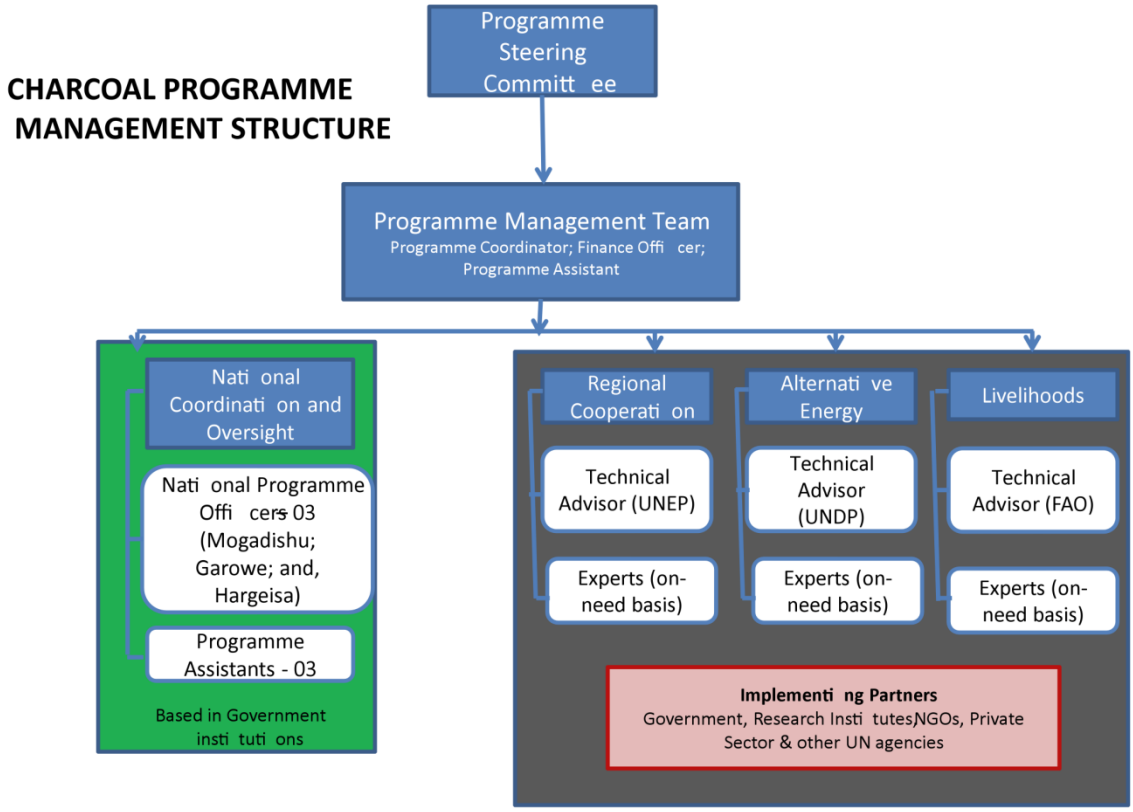
At the operational level, the proposed programme requires strong management and coordination system. The implementing partners and UN agencies work closely with government to achieve the desired programme results under each component.

The financing from EU will support implementation of activities mentioned in this proposal. Furthermore, there is additional supervision support and coordination needs at both national and district levels which have to be met for the programme to be successful. This will be done through structures supported by UN agencies, including the UN-JPLG programme. To ensure coherence and accountability in the management and coordination of the Joint Programme, following structures will be established:

5.1 Programme Management Team

The programme is being implemented under Direct Implementation Modality (DIM). The programme team seeks guidance for its implementation from the Programme Steering Committee. The Programme Management Team (PMT) comprise of Programme Coordinator; Finance Officer; Senior Technical Advisors for the three components of the programme; and, three national officers. The Senior Technical Advisors will be appointed and hosted by the lead UN agencies (UNDP and FAO) and Programme Coordinator and Finance Officer will be based in UNDP offices in Mogadishu. All the key positions for the programme will be nominated/recruited jointly by the Ministry of Livestock, Forest and Range and UN participating agencies. National officers will work closely with government focal ministry for day-to-day coordination and providing technical support to the government for the oversight of the programme implementation. The PMT will be responsible for preparing the JP consolidated annual and quarterly work plan, M&E plans with indicators that will be used by the Government and UN agencies to monitor progress. The PMT will also build synergies with on-going projects and programmes in the areas of energy and natural

resources management. A coordination platform will be established for this purpose by the Programme Coordinator. Key development partners, such as, ADRA, CARE, ADESO, other relevant government, non-government and international organisations will be invited to this platform to share the information on their respective initiatives as well as identify areas of collaboration across different initiatives. This will help in drawing lessons and replicate already tested best practices during implementation of the Programme. Performance will be reviewed semi-annually against the work plan targets. The PMT will serve as the Secretariat for the Programme Steering Committee. The Programme Management Structure is represented in the Figure 1 below.



5.2 Programme Steering Committee (PSC)

The Steering committee will make all the strategic, policy and political decisions related to PROSCAL. The committee will perform the following tasks:

- Review and approve the Joint Program Document and annual work plans.
- Reviews and approves progress reports budget revisions/reallocations, and evaluation reports, notes audit reports, and if needed initiates investigations.
- Endorsement of plans and budgets

- Sets allocation criteria, allocates resources based on priorities
- Provide directives for cross institutional actions that are necessary for the attainment of the objectives of the programme nationally, with regional governments and the CIC of the gulf
- Advocacy to secure support and additional funding
- Discuss High Level policy issues related to the implementation of the Programme
- Provide overall strategic guidance and oversight to the Programme
- Reviews implementation progress and address problems.
- Ensure that the Joint Programme is fully linked to national priorities, policies and coordinated with Government interventions.

The Minister of Livestock, Forest and Range and UN Resident Coordinator will co-Chair the PSC. Initial membership of PSC will include: UNEP Regional Director (Regional office for Africa); Representative from the Office of the Prime Minister; Ministry of Energy and Water; Ministry of Agriculture, Ministry of Planning and International Cooperation; UNDP Country Director; FAO Representative/Officer-In-Charge; Representatives of relevant donors; other UN participating agencies and partner NGOs. The PSC co-Chairs will co-opt members from other organisations on need basis. The co-Chairs will also notify any technical committees on the recommendation of PMT to overcome issues of technical nature during the course of implementation. Programme Coordinator will act as the ex-officio member secretary of the PSC. Exact composition of the PSC will be determined during the inception workshop.

The PSC will meet quarterly and will report to the SDRF through PSG4 SWG on Natural Resource Management. The agenda and supporting documents will be circulated one weeks in advance of the meeting. The regular agenda items will include: presentations on PROSCAL work plan, progress achieved, problems encountered and situation of charcoal trade and actions taken by the stakeholders to curb the illegal trade. The Federal and Regional Governments will report the actions taken to curb the charcoal export and law enforcement. Any bottlenecks in programme implementation faced by the government, partner NGOs or programme management team will be discussed and resolved under the directives of the PSC.

6.0 RISKS

The Programme is of high importance to conserve the ecosystems of Somalia. PROSCAL is also of high importance to provide adequate support to ensure that the recommendations of the Security Council are complied with and the people of Somalia enjoy better livelihood and alternate energy options. The Programme has many strengths, e.g. UN Security Council resolution which prohibits international trade of charcoal from Somalia; potential donor support as Somalia gets a fragile state status; and UNDP and FAO technical support. The programme also offers several opportunities to capitalize on the support of FGS and Regional States and Administrations, vibrant private sector, effective NGOs network which could be used to implement activities; possibilities of export of livestock, dairy, agriculture and fisheries products; possibilities of promoting alternative sources of energy and energy efficient technologies. The main weaknesses such as no effective Government control in Somalia and clan disagreements / fighting on the control over natural

resources; and threats such as overall deteriorating security situation, involvement of clans in charcoal trade, frequent drought, and high initial costs of various renewable energy options. Therefore, it is important to highlight the risks that may have negative impact on programme implementation. The risks and mitigation measures to be taken into account are as follows:

I. **Deteriorated security situation in Somalia (Medium)**: Security could be a threat to the programme performance, however, as Government is becoming effective and it control is expanding, it is anticipated that the risk level will be reduced. As a mitigation measure, the programme activities will be largely implemented with the engagement of local communities, clan chiefs and local NGOs, in consultation with the concerned Government institutions and under the security protocols established by the UN. The Field Teams will comprise of national professionals who could freely move in the programme area. International staff will be placed on need basis and thus not very much exposed to any security risk.

II. **Lack of interest of clans in reduced charcoal production due to anticipated monetary loss (Low):** This is not a risk in general, as the clans may be losing income from one side due to reduced charcoal production / trade but will be making financial gains because of other business development. Further, awareness and social pressures from other communities to adopt modern means of income generation and energy, rather than adopting activities which are not respected in the community, will contribute to avert the risk.

III. **Involvement of politically influential clans in charcoal export (Low):** There could be some politically influential clans engaged in charcoal trade and they may not be cooperative. However, as the export ban is supported by the highest officials of the Regional Governments and UN/ SRSG, possibilities are that such exporters will abandon charcoal trade and adopt some other export business. Further, as there will be no or reduced demand from importing countries, the risk will be nullified.

IV. **Lack of Government capacity to enforce the charcoal ban (Medium):** The existing capacity of Government is extremely low to effectively enforce the trade ban on charcoal. The programme aims to develop its capacity to formulate laws to curb charcoal trade, sensitize the custom, and law enforcement authorities about the issue and provide operational funds for the purpose. Further, the programme may recommend Government to call the support of Security Council to enforce illegal trade.

V. **Lack of interest of charcoal importing countries (Low):** This risk is of low intensity as after the approval of the Security Council resolution, the CIC are taking more interest in the issue and are even willing to provide finances for development in Somalia. They are currently providing substantial amount of financing for humanitarian aid.

VI. **Climate change may affect the livelihoods critically (Medium):** Keeping in view the increasing intensity and frequency of droughts, it is perceived that climatic events will impact the Somalia's population and their mainly natural resources dependent livelihoods (agriculture and livestock). Unsustainable charcoal production adds to this risk as productive potential of land resources decreases because of wide scale deforestation. The activities under the programme will help in raising awareness about negative impacts of charcoal production and its contribution in reducing resilience of communities and eco-systems against climatic extreme events.

VII. **Donor fatigue to provide further financial assistance (Low):** Donors are providing assistance to Somalia for the last two decades on humanitarian grounds. There is possibility that some donors may have already committed their funds for other activities. However, regular sensitization would motivate the donors to address the charcoal issues on priority.

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
Output 1.1. Improved awareness about environmental degradation due to charcoal trade (Output 1.5 of PROSCAL)																				
Activity 1.1.1. Preparation of awareness and advocacy materials in English, Arabic and Somali languages																				
Activity 1.1.2. Collection of data regarding exporters, importers and shipping lines engaged in charcoal trade																				
Activity 1.1.3. Dissemination of information about charcoal exporters, importers and shipping lines																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
Activity 1.1.4. Development and maintenance of programme website																				
Activity 1.1.5. Internet-based advocacy campaign in English and Arabic																				
Activity 1.1.6. Organization of sensitization workshops [2 per year]																				
Output 2.1. Accelerated diffusion of efficient cook stoves for reducing charcoal consumption (Output 2.1 of PROSCAL)																				
Activity 2.1.1. Feasibility study and business and investment plan for the 'Green Stoves' production facility																				
Activity 2.1.2. Selection of cooperatives / CBOs and small businesses engaged in																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
manufacturing and selling of efficient cook-stoves																				
Activity 2.1.3. Training of workers and managers of the selected enterprises.																				
Activity 2.1.4. Establishment of a quality assurance system consisting of cook stove standards, testing, certification and labeling																				
Activity 2.1.5. Establishment of a transparent mechanism for provision of 50% grant to the efficient cook stove purchasers and disbursement of grant																				
Activity 2.1.6. Development and implementation of an awareness and marketing campaign																				
Activity 2.1.7. Market studies on the level of use, quality, price differential, and efficiency of																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
conversion and availability of efficient cook-stoves																				
Output 2.2. Sustainable and Efficient Production of Charcoal for Local Consumption (Output 2.2 of PROSCAL)																				
Activity 2.2.1. Feasibility study and establishment of an efficient charcoal – 'Green Charcoal' production facility																				
Activity 2.2.2. Training of charcoal production facility employees on kiln operation practices, quality control during production, inspection of finished products, and proper packaging and its transport.																				
Activity 2.2.3. Development of an attractive packaging/logo for 'Green Charcoal' and implementation of awareness and																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
publicity campaign targeting charcoal users																				
Activity 2.2.4. Assessment of the experience with 'Green Charcoal' and development of plans for scaling up the pilot efforts to cover the requirements of major urban areas.																				
Output 2.3. Development of LPG market and its accelerated diffusion to reduce local charcoal consumption (Output 2.4 of PROSCAL)																				
Activity 2.3.1. Development and implementation of a franchising model concept for retailing LPG in major towns																				
Activity 2.3.2. Provision of initial cost of 4 kg gas cylinders, regulators and first fill of gas to the poorest of the poor households to promote use of LPG.																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
Activity 2.3.3. Development and implementation of an awareness campaign targeting prospective LPG users.																				
Activity 2.3.4. Assessment of the experience with LPG and development of plans to roll out the franchise model to cover all major urban areas.																				
Activity 2.3.5. Advocacy to ban the use of charcoal in institutions																				
Output 2.4. Biogas introduced as an alternative source of energy in areas with heavy loads of biodegradable feedstock (Output 2.6 of PROSCAL)																				
Activity 2.4.1. Provision of technical support for the promotion of biogas																				
Activity 2.4.2. Provide biogas as a substitute to charcoal/ fire wood to 400 households																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
Activity 2.4.3. Demonstration of biogas at Mogadishu slaughter house.																				
Activity 2.4.4. Development and implementation of an awareness campaign to overcome cultural barriers to the use of biogas as a cooking fuel.																				
Activity 2.4.5. Study on the assessment of performance of biogas digesters																				
Output 3.1. Diversification of income and asset building for vulnerable households in order to facilitate transition to more resilient and sustainable livelihoods (Output 3.2 of PROSCAL)																				
3.1.1 Baseline assessment of existing livelihood strategies and associated production systems																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
3.1.2 Community mobilization and awareness, selection of beneficiaries and identification of enterprises to be supported																				
3.1.3 Training on production, GAP, processing and marketing of crops, livestock, forestry and fisheries and micro-enterprise and management skills (e.g. book-keeping and accounting)																				
3.1.4 Facilitate formation of micro-enterprise schemes that can encourage livelihood diversification by stimulating employment opportunities and skills/knowledge enhancement (hand and bone crafts, milk processing and marketing, frankincense, myrrh honey and fodder)																				
3.1.5 Provision of high quality seeds, other inputs, ~~grants for restocking of animals~~, ~~grants~~ for setting up certified fruit tree																				

7.0 PLAN OF WORK

Output / Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M 10	M 11	M 12	Q5	Q6	Q7	Q8	Q9	Q 10	Q 11	Q 12
nurseries and establishment of agriculture input/output stores																				
Activity 3.1.6 Construction and rehabilitation of productive assets such as water/irrigation infrastructure, post-harvest handling facilities, market infrastructure and facilities																				

Activity is conducted

Milestone

8.0 SUSTAINABILITY AND EXIT STRATEGY

The execution and sustainability of any programme in a conflict country is always a big question mark. To overcome the bottlenecks, PROSCAL has been designed to lay its foundation at the grassroots level by working with the local communities and clan chiefs to revive and practice their centuries old *Xeer* system to share the grazing lands and water points. Policing is not seen as an effective solution, however, the capacity building of local institutions to provide technical information and guidelines is built in the project. Monitoring of rangelands and movement of charcoal at district entry/check points is planned to be conducted jointly by the local CBOs and concerned Government functionaries, such as Forest Guards. Joint monitoring will ensure transparency and utilization of revenues in the programme area. Examples are there in many countries, where such actions ensured sustainability.

The charcoal producers are forced to produce charcoal because they do not have any other income generation activity, and the in-country consumers are using charcoal because they do not have any other form of available energy. Logically, if actions are taken to provide better livelihoods to the producers and economical and easily available energy to the consumers, then PROSCAL is sustainable. In this document, the actions are planned to address these two dimensions of charcoal production and inland consumption simultaneously and thus ensure sustainability.

The programme will focus on creating vibrant businesses in alternate energy (mainly local manufacturing) with the provision of technical information and revolving funds. Somali diaspora and private sector (mainly funded by diaspora) will be mobilized and offered businesses in energy, livestock- and agro-based products to stimulate the economy which would help to sustain the interventions. Preference for Somali products in Gulf countries, achieved through dialogues with them, will also make a difference in private sector interest in livestock, and agro-based sectors. PROSCAL will provide a forum to promote this trade. Experiences from other countries indicate that whenever the consumers were switched to renewable energy, the success of programme rested in the provision of equipment on discounted prices. PROSCAL will provide equipment at discounted prices or use cash-for-work for growing trees to attract the charcoal producers and consumers. This modality will also help to ensure sustainability of interventions.

From the very beginning of the programme, NGOs will be involved for community mobilization and development of businesses, which could continue to perform after the completion of PROSCAL with contributions of donors, diaspora and marketing of products made by communities and thus sustain interventions.

It is envisioned that when the number of charcoal producers are engaged in some other income generating activity; cheap energy is available; Somali diaspora is engaged to take actions against charcoal exporters and importers; and afforestation campaigns are on the rise using cash-for-work modality; the tree density in the degraded lands will be restored thus leading to environmental sustainability. Climate change may shed its negative effects; however, the communities resilient in water conservation and harvesting, dryland farming and tree plantation would be able to avert the climate change associated risks.

The exit strategy of PROSCAL is based on::

i. Establishment of legal / policy framework for charcoal and natural resource management,
ii. Community mobilization and organization,
iii. NGOs implementation with community participation, and
iv. Establishment of Charcoal Reduction Fund (CRF).

10 Annex A: Logframe matrix of the project

Component 1: Capacity Building and Regional Cooperation							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
Output 1.1. Regional Charcoal Policy Framework and Legally Binding Instrument, within the concept of international policy on charcoal National Promulgation and Rules of Business for Reducing Charcoal Production	▪ Approved comprehensive policy ad laws by the government ▪ Awareness material disseminated	2012: no law exists to regulate charcoal production and export and private investments in energy sector; export seen as a mean of revenue generation; low awareness about the issue		2018: Enactment and enforcement of charcoal policy / laws by government; no charcoal export from Somalia; and sustainable production of 'Green Charcoal' for minimal local consumption; policy for private sector investment developed and adopted	Activity 1.1.1. Drafting of comprehensive polices / laws for restricting charcoal production and trade; and encouraging private sector investments in energy and livelihoods sectors Activity 1.1.2. Advancement of the policy/laws approval process	Progress Report; Policy Document	Federal Government and Governments of Member States lead the stakeholders consultations on drafting of policies.
Output 1.2 Monitoring Systems of Charcoal Production, Reporting and Movement in Somalia	▪ Updated / online charcoal production and trade reports ▪ Sustained reduction in charcoal export ▪ Increasing Vegetation Index	2012: open trade of charcoal, no enforcement capacity and political will; SWALIM has capacity to monitor		2017: Updated / online charcoal trade information; Vegetation Index maps on annual basis; zero trade of charcoal from Somalia	Activity 1.2.1 Collection of baseline data on tree densities and charcoal burning sites Activity 1.2.2 Regular collection of charcoal production and export data from Somali, neighbouring and Arab countries. Activity 1.2.3 Training of government staff in data collection and analysis Activity 1.2.4 Develop a set of monitoring tools	Progress reports; Change assessment maps; Tabular data on charcoal production sites	Availability of qualified human resources will impact on the monitoring of charcoal production sites and the

Component 1: Capacity Building and Regional Cooperation							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
					Activity 1.2.6 Monitoring of Vegetation Index, Acacia bussei tree densities and charcoal burning sites through RS/GIS		collection of charcoal export data; National and International institutions will be responsive and able to share updated data in a timely fashion;
Output 1.3. Support to the development of enabling policies on Energy, Forestry and Natural Resources Management	▪ Key national policies on natural resources management developed ▪ Natural resource base offered greater protection	2012: National level policies on forestry and natural resources management outdated or non-existent		2017: Solid policy framework on natural resources management established and specific policies implemented	Activity 1.3.1 Establish a Policy Development Coordination Committee (PDCC) covering the relevant sectors Activity 1.3.2 Establish/strengthen existing specialized technical units for the relevant sectors Activity 1.3.3 Provide continuous formal and on-the-job training of national staff in revision/drafting of policies Activity 1.3.4 Organize stakeholder workshops Activity 1.3.5 Drafting, production and dissemination of policy including sensitization of the public		

Component 1: Capacity Building and Regional Cooperation							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
Output 1.4. Establishment of an International Charcoal Trade Regulatory Committee (ICTRC) at the regional level to restrict charcoal trade and promote regional cooperation	▪ Number of meetings of ICTRC held ▪ Number of countries revised rules of charcoal trade and banned its import ▪ Six-monthly report on charcoal trade ▪ Number of private sector companies establishing businesses in Somalia ▪ Funds mobilized from Arab countries and OIC for energy and livelihood projects in Somalia ▪ Number of persons attended sensitization workshops and regional conference	2012 No ICTRC or regional cooperation; unreliable charcoal trade data,; limited Arab countries investment in Somalia		2017 ICTRC established and fully functional; updated reliable data on charcoal trade; significant reduction in charcoal trade; GCC / OIC investment in Somalia increased in energy and livelihoods enterprises in Somalia; Arab countries financial support for PROSCAL	Activity 1.4.1. Organization of the ICTRC consisting of representation of concerned Ambassadors, GCC / OIC, IGAD, UNSOM and UNCT Activity 1.4.2. Drafting of the TORS of ICTRC and its action plan Activity 1.4.3. Organization of six-monthly meetings of ICTRC to review the status of charcoal export and possible investment in Somalia Activity 1.4.5. Organization of a 'International Conference on Charcoal Trade and Degradation of Environment and Livelihoods in Somalia'	Agenda and minutes of the meeting	National and International Policy Makers are in support of addressing the challenges around charcoal production and trade.
Output 1.5. Improved awareness about environmental degradation and loss of livelihoods	▪ Nature and kind of awareness material produced ▪ Number of sensitization workshops /	2015: Systematic awareness campaigns targeting various	Zero campaigns, workshops/ seminars and website (2015)	2019: One communication and awareness raising strategy and action plan adopted;	Activity 1.5.1. Preparation of awareness and advocacy materials [printed matter, videos] in English, Arabic and Somali languages	Communications and Awareness Raising Document; Workshops/ Seminars	Financial resources may only be sufficient to undertake priority

Component 1: Capacity Building and Regional Cooperation							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
in Somalia due to charcoal trade	seminars special events organized ▪ Number of persons participated in sensitization workshops and regional conference ▪ Number of hits on charcoal sensitization website	audience not in practice; No workshops or seminars held with specific theme on charcoal issues in Somalia; No website or portal with all information on charcoal		11seminars/ workshops, 3 video documentaries, 5 facts sheets and 1 one publication study completed as awareness raising and advocacy tools	Activity 1.5.2.Collection of data regarding exporters, importers and shipping lines engaged in charcoal trade Activity 1.5.3. Dissemination of information about charcoal exporters, importers and shipping line carriers to the concerned Governments Activity 1.5.4. Development of programme website Activity 1.5.5. Internet-based advocacy campaign in English and Arabic Activity 1.5.6. Organization of sensitization workshops [2 per year]	reports; Programme website	awareness related activities of the overall strategy
Output 1.6. Capacity building of Communities and Local Government Institutions operational in Charcoal Production Districts for enforcement	▪ Number of male and female CBOs formed and fully functional ▪ Number of CBO members [gender disaggregated data] ▪ Level of community savings / contribution ▪ Number of initiatives implemented by CBOs	2012:Low level of awareness about charcoal issue; limited experience of cooperatives; local NGOs actively engaged but very limited when compared with the scale of problem		2017: High level of awareness; 300 fully functional CBOs [100 per region]; projects implemented by CBOs	Activity 1.6.1. Development of awareness material [print, electronic, NRM poetry, SMS messages] in Somali language and its dissemination Activity 1.6.2. Formation of CBOs and organization of monthly meetings Activity 1.6.4. Training of activists and government staff Activity 1.6.5. House national expertise in MOLFR and focal ministries in member states to coordinate and implement inter-ministerial Activity 1.6.6: Procurements for MOLFR and focal ministries of Member States:- Office equipment and furniture.	Progress Reports	The Federal Government focal Ministry is able to coordinate national actions

Component 1: Capacity Building and Regional Cooperation							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
Output 1.7. Establishment of Charcoal Reduction Fund for Setting up of Pilot Projects	▪ CRF established and fully operational ▪ Number of beneficiaries served by CRF [gender disaggregated data] ▪ Amount of funds disbursed ▪ Income in CRF through innovative means of investments and sale of carbon credits	2012: No financing facility available for community-based projects		2017: CRF fully functional, at least disbursing USD 4 million per year	Activity 1.7.1. Opening of CRF account in SC, SL and PL Activity 1.7.2. Preparation of detailed guidelines for the operation of CRF Activity 1.7.3. Identification and assessment of possible MSE, and SMEs Activity 1.7.4. Sensitization of community members about the possible financial support from CRF Activity 1.7.5. Establishment of pilot project by communities with the NGO support Activity 1.7.6. Joint monitoring of the state of enterprises established Activity 1.7.7. Marketing of the products of CBOs by NGOs Activity 1.7.8. Monitoring of charcoal production and consumption		

Component 2: Alternative Energy Sources							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
Output 2.1. Accelerated diffusion of efficient cook-stoves for reducing	▪ Businesses established and functional ▪ Number and share of households using	2012: Low adoption of efficient cook-stoves; no businesses producing and	2015: One EU funded pilot project promoting fuel efficient cook-stoves in	2019: Higher levels of efficient cook-stove adoption (15,000 in total), twelve businesses	Activity 2.1.1. Feasibility study and business and investment plan for the 'Green Stoves' production facility in each region. Activity 2.1.2. Selection of cooperatives / CBOs and small businesses engaged in	Project reports; Fact sheets on the businesses established; third party	The buy-in from local communities may be slow on these concepts;

Component 2: Alternative Energy Sources							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
charcoal consumption	efficient cook-stoves ▪ Reduction in the consumption of charcoal ▪ Number of people employed in the efficient cook-stoves sector ▪ Number and share of persons previously active in charcoal chain employed in improved cook-stove sector	retailing cook-stoves; high levels of charcoal use; and women and youth heavily engaged in charcoal production and trade.	Northern Regions of Somalia; Fuel efficient cook stoves distribute to IDP camps as one time support, without sustainable production and supply chain of such stoves.	established for production and sale of efficient cook-stoves; significant reduction in levels of charcoal use; women and youth engaged in cook-stove production and sales	manufacturing and selling of efficient cook-stoves. Activity 2.1.3. Training of workers and managers of the selected enterprises. Activity 2.1.4. Establishment of a quality assurance system consisting of cook stove standards, testing, certification and labelling. Activity 2.1.5. Establishment of a transparent mechanism for provision of 50% grant to the efficient cook stove purchasers. Activity 2.1.6. Development and implementation of an awareness and marketing campaign. Activity 2.1.7. Market studies on the level of use, quality, price differential, and efficiency of conversion and availability of efficient cook-stoves in the market.	monitoring reports.	traditional stoves may be seen as a better option due cultural attachment.
Output 2.2. Sustainable and efficient production of charcoal for local consumption	▪ Reduction in the share of live trees used for charcoal production ▪ Viable business model established for production of green charcoal ▪ Number and share of persons [gender disaggregated] previously active in charcoal chain	2016: Charcoal production in sporadic and unorganised manner; efficiency and yield of charcoal production low; significant reduction of live trees being cut down for	Open kiln used for charcoal production are inefficient; Every 2.5 minutes 1 tree is cut for charcoal making in South of Somalia (FAO-SWALIM, 2014)	2019: Charcoal production in an organised and high efficiency manner demonstrated at one location; high Efficiency and yield in	Activity 2.2.1. Develop a feasibility study for an efficient charcoal – 'Green Charcoal Production Facility' for 5 regions and Somaliland. Activity 2.2.2. Training of charcoal production facility employees on kiln operation practices, quality control during production, inspection of finished products, and proper packaging and its transport. Activity 2.2.3. Development of an attractive packaging/logo for 'Green	Project reports; Fact sheets on the businesses established; third party monitoring reports; reports on alternative livelihoods	The access to some of the areas with high levels of production of charcoal may not be accessible limiting the demo sites with efficient charcoal production

Component 2: Alternative Energy Sources							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
	employed in green charcoal facility	charcoal production; and women and youth heavily involved in charcoal production		charcoal production demonstrated; demonstration of sustainable charcoal production using invasive species, Energy plantations and deadwood; Women and youth involved in green charcoal production.	Charcoal' and implementation of awareness and publicity campaign targeting charcoal users. Activity 2.2.4. Assessment of the experience with 'Green Charcoal' and development of plans for scaling up the pilot efforts to cover the requirements of major urban areas.		systems being setup in areas with better access
Output 2.3. Energy Plantations managed sustainably to meet the local demand of charcoal and fuel wood	▪ % of area allocated by communities and Govt. for plantation ▪ Business plan for operation of sustainable plantation and charcoal production developed ▪ No. of trees planted / standing per year	2012: no energy plantations		2017: 3 energy plantations, one in each region	Activity 2.3.1 Conduct survey and environmental and socio-economic baseline of pilot districts and select pilot sites, in collaboration with the Government and local communities Activity 2.3.2 Training in silvicultural techniques using the Farmer Field Schools (FFS) approach Activity 2.3.3 Establishment of tree nurseries for energy plantations		

Component 2: Alternative Energy Sources							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
	▪ Quantity of charcoal produced per year ▪ No. of persons employed				Activity 2.3.4 Support communities in developing plantation management plans Activity 2.3.5 Establish demonstration site Activity 2.3.6 Distribution of seeds, tools and other inputs		
Output 2.4. Development of LPG market and its accelerated diffusion to reduce local charcoal consumption	▪ No. of LPG businesses established ▪ No. of LPG connections provided ▪ Quantity of LPG used ▪ No. of persons [gender disaggregated] employed	2016: 10,000 households using LPG stoves in Northern regions of Somalia; Almost negligible users of LPG stoves in main urban centers in the South; The supply chain of LPG is inconsistent; No storage facilities of LPG exist on major ports of Mogadishu or Kismayo	2016: Approximately 10,000 households using LPG stoves in Somaliland and parts of Puntland; LPG storage facilities yet to be operational for consistent supply to the local market	2019: Higher levels of LPG availability and a robust supply chain, 25,000 new LPG connections and 18 green energy businesses; significant reduction in levels of charcoal use; and women and youth employed in the LPG sector	Activity 2.4.1. Development and implementation of a franchising model concept for retailing LPG in major towns Activity 2.4.2. Provision of initial cost of 4 kg gas cylinders, regulators and first fill of gas to the poorest of the poor households to promote use of LPG. Activity 2.4.3. Development and implementation of an awareness campaign targeting prospective LPG users. Activity 2.4.4. Assessment of the experience with LPG and development of plans to roll out the franchise model to cover all major urban areas. Activity 2.4.5. Advocacy to ban the use of charcoal in institutions	Project reports; Feasibility studies for public private partnerships for LPG supply and marketing Employment statistics reports	Somalia is able to attract foreign investments and companies from the Gulf States to setup LPG business in main urban centers
Output 2.5. Development of solar energy market and	▪ No. of solar energy businesses established	2012: Limited, only two rudimentary		2017: Medium 30 enterprises selling solar equipment; 150	Activity 2.5.1. Provision of technical support for the establishment of SMEs in solar energy		

Component 2: Alternative Energy Sources							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
accelerated diffusion of solar energy equipment to reduce local charcoal consumption	▪ No. of solar water geysers and solar cookers sold ▪ Response of beneficiaries about solar technologies	stores selling solar equipment		public institutions using solar water geysers; 6 000 households and commercial enterprises using solar water geysers; solar cooking demonstrated at 30 sites; increase in demand of solar systems	Activity 2.5.2. Promotion of SWHS and solar cookers as substitute of charcoal energy. Activity 2.5.3. Demonstration of solar cookers at 10 sites in each region. Activity 2.5.4. Development and implementation of an awareness campaign for SWHSs and solar cookers. Activity 2.5.5. Study on the assessment of performance of SWHs and solar cookers.		
Output 2.6. Biogas introduced as an alternative source of energy in areas with heavy loads of biodegradable feedstock	▪ No. of HHs benefiting from biogas for their cooking and electric power needs ▪ No. municipalities involved in the O&M of the large biogas digesters and associated network ▪ Response of beneficiaries about biogas	2012: Limited, only one biogas project nearing completion across Somalia	2015: Only one biogas project nearing completion across Somalia	Waste from 2 slaughter houses being used as feedstock for large biogas digesters maintained by the local councils/municipalities; 400 households using biogas; increase in demand of biogas digesters; 150 locals trained in the construction/ installation of biogas digesters	Activity 2.6.1Conduct survey and environmental and socio-economic baseline to select pilot sites in collaboration with the Government and local communities Activity 2.6.2. Provision of technical support for the promotion of biogas Activity 2.6.3 Design, construction and installation of bio-gas plants Activity 2.6.4. Provide biogas as a substitute to charcoal/ fire wood to 4 500 households Activity 2.6.5. Demonstration of biogas at 5 slaughter houses. Activity 2.6.6. Development and implementation of an awareness campaign	Project reports; Copies of agreements with the municipalities; Number or trainings and persons trained	The conditions for proper functioning of biogas plants are fulfilled, i.e., availability and supply or feedstock and water to create anaerobic conditions even after the project has ended

Component 2: Alternative Energy Sources							
Outputs	**Indicators**	**Baselines**	**Current value (incl. reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
				and associated networks	to overcome cultural barriers to the use of biogas as a cooking fuel. Activity 2.6.7. Study on the assessment of performance of biogas digesters installed during the first 18 months of the programme		

Component 3: Alternative Livelihoods for Charcoal Value Chain Beneficiaries							
Outputs	**Indicators**	**Baselines**	**Current value (incld. Reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
Output 3.1. Support for existing CBOs/traditional decision-making structures or newly formed CBOs in drafting CAPs to increase resilience, support sustainable livelihoods and strengthen natural resources management	▪ Number of elders and community members trained in PNTD ▪ Number of CAPs developed for supporting livelihood activities and natural resources management	2012: CBOs not organized or non-existent Lack of community planning for sustainable use of natural and financial resources		2017: CBOs functional and drafting of CAPs completed	Activity 3.1.1 Mobilization of elders and strengthening of traditional decision-making structures or formation of new CBOs to enhance community level planning Activity 3.1.2 Train community members in development processes and the PNTD approach Activity 3.1.3 Support the formulating of CAPs including a strong component on Natural Resources Management		
Output 3.2. Diversification of income and asset building for	▪ Number of farmers also engaged in charcoal	2012: Products sold at low price without	2012: Products sold at low price without	50 farmers cum charcoal producers in Southern	Activity 3.2.1 Baseline assessment of existing livelihood strategies and associated production systems	Project reports; Training reports IP reports	Selection of farmers cum charcoal producers may

Component 3: Alternative Livelihoods for Charcoal Value Chain Beneficiaries							
Outputs	**Indicators**	**Baselines**	**Current value (incld. Reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
vulnerable households in order to facilitate transition to more resilient and sustainable livelihoods	production adopting GAP ▪ Number of farmers who have started new micro-enterprises with value products ▪ % increase in income per household ▪ Number of persons who have abandoned charcoal production ▪ No. of vegetable kits distributed ▪ No. of tree seeds kits distributed ▪ No. of fodder production kits distributed ▪ ▪ No. of drip irrigation kit provided ▪ No. of post-harvest kit supplied ▪ No of fodder shed constructed	any value addition Zero	any value addition	Regions of Somalia practicing GAP; at least 500 farmers currently engaged in charcoal production adopted GAP 4000 vegetable kits 4000 tree seed kits 4000 fodder production kits 200 drip irrigation kits 200 post-harvest kits 3 fodder sheds 2 honey houses	Activity 3.2.2 Community mobilization and awareness, selection of beneficiaries and identification of enterprises to be supported Activity 3.2.3 Training in production, processing and marketing of crops, livestock, forestry and fisheries and micro-enterprise and management skills (e.g. book-keeping and accounting) Activity 3.2.4 Facilitate formation of micro-enterprise schemes that can encourage livelihood diversification by stimulating employment opportunities and skills/knowledge enhancement (hand and bone crafts, milk processing and marketing, frankincense, myrrh honey and fodder) Activity 3.2.5 Provision of high quality seeds, other inputs, grants for restocking of animals, grants for setting up certified fruit trees nurseries and establishment of agriculture input/output stores Activity 3.2.6 Construction and rehabilitation of productive assets such as water/irrigation infrastructure, post-		require a rigorous procedure with additional time and resources investments when compared to selection of farmers that are not engaged in charcoal production.

Component 3: Alternative Livelihoods for Charcoal Value Chain Beneficiaries							
Outputs	**Indicators**	**Baselines**	**Current value (incld. Reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
	▪ No. of honey houses constructed				harvest handling facilities, market infrastructure and facilities		
Output 3.3. Reforestation and rehabilitation of degraded ecosystems for environmental conservation and sustainable production of food, fuel and fodder	▪ Number of plant nurseries established ▪ Number of saplings sold per month and planted ▪ Number of activists engaged in planting and amount paid in remuneration ▪ Number of standing trees per hectare ▪ Estimated quantity of wood harvested ▪ PROSCAL registered with international bodies to claim carbon credits	2012: No tangible reforestation or rangeland rehabilitation scheme; and limited efforts by the Government for re-plantation; Deforestation and degradation at highest level, and no proposal about claiming carbon credits		2017: 3 pilots of sustainable rangeland management established [each of 2 000 ha] each in SC, PL and SL; and PROSCAL registered with international forums to claim carbon credits for reducing charcoal for local and international consumption;	Activity 3.3.1 Baseline survey and participatory mapping of sites for rehabilitation and Integrated Food Energy Systems (IFES) Activity 3.3.2 Establishment of tree nurseries for rehabilitation and IFES Activity 3.3.3 Distribution of tools and inputs at household and community level Activity 3.3.4 Training in silvicultural and soil and water conservation techniques Activity 3.3.5 Planting of appropriate species for simple IFES and environmental protection through cash-for-work schemes Activity 3.3.6 Construct soil and water conservation structures Activity 3.3.7 Create and launch public awareness raising campaigns using national media on reforestation and environmental conservation		

Component 3: Alternative Livelihoods for Charcoal Value Chain Beneficiaries							
Outputs	**Indicators**	**Baselines**	**Current value (incld. Reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
					Activity 3.3.8 Development of proposals to claim carbon credits		
Output 3.4. Improved local and export-oriented value chains in agriculture, horticulture, poultry, livestock and fisheries in target communities	▪ Number of trade fairs organized ▪ Number of commercially oriented organizations formed or strengthened ▪ Foreign investment in value addition of various products ▪ Export of agriculture / horticulture and livestock and dairy products enhanced ▪ Number of business models developed	2012: Few if any commercially oriented organisations in existence Market-related infrastructure undeveloped Limited export of agricultural items		2017: Commercially oriented organisations are connected in profitable agriculture value chains Upgradingmarke t infrastructure Export of Somali agricultural products	Activity 3.4.1 Analysis of potential internal and external markets for prioritized agricultural products, current marketing practices and constraints along the value chain, grading and standard requirements Activity 3.4.2 Establish certification and control systems and enhance access to Market Information Systems (MIS) Activity 3.4.3 Support the strengthening of existing and formation of new commercially oriented organizations through training in entrepreneurship and marketing Activity 3.4.4 Development of small- and medium-scale business models with support to farmers from the CRF Activity 3.4.5 Improve and expand market-related infrastructure Activity 3.4.6 Create/strengthen Commodity Boards and encourage their cooperation with the Chamber of Commerce and Trade and promote a PPP		

Component 3: Alternative Livelihoods for Charcoal Value Chain Beneficiaries							
Outputs	**Indicators**	**Baselines**	**Current value (incld. Reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
					framework in order to increase the visibility of markets, and strengthen the supply chain of selected commodities Activity 3.4.7 Organization of trade fairs and awareness creation about Somali value products		
Programme Management							
Output 4. Efficient programme management in place	▪ Various strategies developed and implemented ▪ Timely production of programme quarterly, annual, review and evaluation reports ▪ MIS system in place since the initiation of PROSCAL ▪ Above 90% delivery of funds during each year ▪ Success stories referred by other donors, media and UN Agencies in their reports ▪ Amount of funds mobilized for the PROSCAL ▪ Satisfaction by charcoal beneficiaries and	2012: Programme start year		2017: Programme fully operational achieving targets as stipulated; and document for second phase developed and approved before the closure of Phase I	Activity 4.1. Recruitment of staff and consultants Activity 4.2. Organization of Programme inception workshops in SC, PL and SL Activity 4.3. Development of detailed quarterly and annual work plans in ATLAS Activity 4.4. Development of a manual for data collection and reporting as per indicators identified in this document Activity 4.5. Development of programme management information system and website Activity 4.6. Development of detailed gender mainstreaming, fund mobilization and exit strategies Activity 4.7. Organization of fund mobilization and advocacy events to mobilize Somali diaspora Activity 4.8. Production of quarterly, annual and terminal financial and technical reports as per schedule		

Component 3: Alternative Livelihoods for Charcoal Value Chain Beneficiaries							
Outputs	**Indicators**	**Baselines**	**Current value (incld. Reference date)**	**Targets**	**Indicative Activities**	**Sources and means of verification**	**Assumptions**
	consumers, measured at 0 to 10 scale through a beneficiary survey				Activity 4.9. Organization of external programme review in second year Activity 4.10. Organization of external programme review during third year of the programme Activity 4.11. Development of programme document for the second phase		

The implementing organizations may amend the activities, outputs, all the indicators and the related targets, baselines and sources of verification described in this logical framework in accordance with Article 9.4 of the General Conditions. Any change must be explained in the reports, whenever possible anticipatively. In case of doubt it is recommended to check beforehand with the Contracting Authority that the proposed modifications do not impact the basic purpose of the action.

BUDGET FOR THE ACTION

SOMALIA UN MPTF PROJECT BUDGET*	
Joint Programme for Sustainable Charcoal Reduction and Alternative Livelihoods (PROSCAL)	
CATEGORIES	***Total Amount (USD)***
1. Staff and other personnel costs	1,166,071
2. Supplies, Commodities, Materials	295,265
3. Equipment, Vehicles and Furniture including Depreciation	339,674
4. Contractual Services	2,130,809
5. Travel	172,546
6. Transfers and Grants to Counterparts	410,886
7. General Operating and Other Direct Costs	516,838
Sub-Total Project Costs	**5,032,089**
8. Indirect Support Costs **	352,246
TOTAL	**5,384,335**

TOTAL EU contribution (maximum), USD	**3,715,499**
TOTAL NON-EU contribution, USD	**1,668,836**

**Indirect support cost should be in line with the rate of 7%, as specified in the Special Conditions