



FAO/GLOBAL ENVIRONMENT FACILITY
PROJECT DOCUMENT



PROJECT TITLE: Integrating Climate Resilience Into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas Through the Farmers Field School Approach.	
PROJECT SYMBOL: GCP/BKF/054/LDF	
Recipient Country: Burkina Faso	
Resource Partner: Global Environment Facility/Least Developed Country Fund (GEF/LDCF)	
FAO project ID: 617677	GEF/LDCF/SCCF Project ID: 5014
Executing Partner(s): Ministry of Agriculture and Food Security (MASA), in connection with the Ministry of Aquatic and Animal Resources (MRAH), the Ministry of Environment and Sustainable Development (MEDD) and other national partners.	
Expected EOD (starting date): September 2014	
Expected NTE (End date): August 2018	
Contribution to FAO's Strategic Framework¹	<ul style="list-style-type: none"> a. Strategic objective/Organizational Result: (SO-2), Sustainable Agricultural Production Systems. b. Regional Result/Priority Area: Priority 1 for Africa, Increase production and productivity of crops, livestock and fisheries c. Country Programming Framework Outcome: (1) strengthening resistance amongst vulnerable populations to food and nutritional insecurity and (2) improving the revenue of the rural population through improved productivity in agro-sylvo-pastoral systems and fisheries.
GEF Focal Area/LDCF/SCCF: Climate Change (Adaptation)	
GEF/LDCF/SCCF Strategic Objectives:	
CC-A – 1: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level.	
CC-A – 2: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level.	
CC-A - 3: Promote transfer and adoption of adaptation technology.	
Environmental Impact Assessment Category (insert √): A B C √	
Financing Plan: GEF/LDCF/SCCF allocation:	USD 3.81 million
<u>Co-financing:</u> MASA (2.07m in grant; 2m in kind) MRAH (0.6m in grant; 0.7m in kind) FAO (5.45m in grant; 8.55m in kind) Bioversity International (in-kind)	USD 4.075 million USD 1.3 million USD 14 million USD 60,000

¹ For projects operated by country offices, it is necessary to link projects in FPMIS at OR level. For all other projects, linkage at product/service level is necessary

Subtotal Co-financing:	USD 19,435,000
Total Budget:	USD 23.245 million

EXECUTIVE SUMMARY

West Africa remains one of the poorest regions in the world despite recent progress and a rich natural resource base. It is also one of the regions that is forecasted to be the most affected by climate change. Projections based on latest models suggest that there will be significant increases in temperature, a possibility of reduced rainfall, an increased variability in rainfall and more likelihood of storms and other climatic events.

Burkina Faso is a water-scarce, land-locked West African country with a population of approximately 16.6 million. The country is considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Poverty level suggest a low adaptation capacity and limited resilience to shock for large parts of the population and the economy. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources – as these are the sectors the most vulnerable to climate change.

More than 80% of the Burkinabe population is involved in livestock raising to some extent – either as the principal economic activity or as a secondary activity. There are many diverse livestock raising systems, ranging from the highly transhumant to intensive and sedentary. Accordingly, animal husbandry is an important source of food security, national revenue and exports. However, climate change is forecasted to have direct negative impacts on pastoral activities. Temperature increases and rainfall decreases may result in: (i) drastic reduction in overall pasture size and degradation of remaining pasture; (ii) deficits in fodder and food production; and (iii) deficit of water supply for cattle. In turn, this could result in disease, death, lower productivity and a threat to rural development. These climatic factors exacerbate existing challenges related to demographic pressures and governance.

In response to the above challenges, the objective of this Project is *'to enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS.'*

The following four Outcomes were identified in order to deliver the above-mentioned Objective:

The first Outcome is *Awareness and knowledge on climate-resilient agro-pastoral practices (including adoption of new varieties and cultivars and adapted soil and water management) established at national and regional levels.* This Outcome builds a foundation on which grass-roots and operational climate change adaptation measures can be developed and implemented through the subsequent Outcomes.

The second Outcome is *Broad adoption by agro-pastoralists of financially sustainable, gender-sensitive climate-resilient agro-pastoral practices and technologies.* This Outcome encompasses the development of climate resilient and climate change adapted practices and measures and their extension to agro-pastoralist communities across Burkina Faso. The practices are to be developed in a participatory manner through the project but they may include:

- Integrated crops/trees/livestock production systems with transhumant populations;
- Integrated crops/trees/livestock production systems with sedentary populations;
- Use of the *Diversity Field Flora* approach to secure land management benefits;
- Improving land tenure security in order to deliver land management benefits;
- Micro-finance as a modality to support climate resilient adaptation practices; and

- Farmers using of up-to-date, accurate farmer-oriented weather and climate information.

The third Outcome is the *Implementation of sectoral plans and local development plans that contribute to climate change resilience for agro-pastoral and agricultural communities*. This Outcome leads to the institutionalization of the successes achieved and lessons learnt through the former two Outcomes. In particular it focusses on the sustainability of project impacts.

The fourth Outcome, the *Monitoring and Evaluation and Information Dissemination*, covers the monitoring and evaluation of progress and results, based on a system of targets and indicators.

The Project strategy rests on three principal pillars. The first is to develop and operationalize an innovative, integrated, farmer/herder-oriented approach to extension. This will be achieved through the strengthening and upscaling of the '*Field Schools*' approach - notably by complementing existing farmer field schools in Burkina Faso with *agro-pastoralist* field schools. This builds on a broad and successful experience in East Africa. The second strategic pillar is the testing of successful approaches across a range of geographically and socio-economically diverse circumstances, thereby increasing the likelihood of successful dissemination. The third strategic pillar is to collaborate with, and influence, a series of large-scale rural development programmes projects in Burkina Faso. This will lead to the broad adoption of the technologies and approaches developed through this Project.

Directly, the Project will support at least 26,000 herder-farmers to develop and implement new approaches, practices and technologies that increase climate resilience. Directly, the Project will contribute to improved natural resource management over: at least 5,000 hectares of extensively grazed rangelands; at least 5,000 hectares of semi-intensively grazed rangelands; and at least 5,000 hectares of agricultural land.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACMAD	African Center of Meteorological Application for Development
AGPME	Agricultural Plant and Production and Protection Division (FAO)
AGRYMET	A specialised Regional Centre under CILSS
AMAT	Adaptation Monitoring and Assessment Tool (of GEF)
APFS	Agro-Pastoral Field Schools
AWP/B	Annual Work Plan and Budget
BH	Budget Holder (of FAO)
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CCAFS	Climate Change, Agriculture and Food Security
CILSS	Permanent Interstates Committee for Drought Control in the Sahel
CNSA	National Food Security Council
COGEL	Local Environment Governance Consolidation Project
DFE	Diversity Field Fora
DGDPA	General Department for Animal Production
DGEAP	General Department for Rangelands and Rangelands Management
DGESS	General Department for Sectoral Studies and Statistics
DGFOMR	General Department for Training and Rural Organizations
DGM	General Department for Meteorology
DGPER	General Department for Promoting the Rural Economy
DGPV	Department for Vegetable/Plant Production
DGSV	General Department for Veterinary Services
DVRD	Debarment for the Extension, Research, and Development
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	An FAO web-based platform for disseminating and visualizing country level data related to food production, agriculture and hunger.
FE	Final Evaluation
FFS	Farmer Field School
FPMIS	Field Project Management Information System
GCM	Global Circulation Models
GCU	GEF Coordination Unit (of FAO)
HDI	Human Development Index
IGETI	Improving Gender Equality in Territorial Issues
INERA	National Institute for Environment and Agricultural Research
IPCC	Inter-governmental Panel on Climate Change
IPTA	International Project Technical Advisor
IUCN	International Union for Conservation of Nature
IW	Inception Workshop
LAIF	Local Investment Fund for Adaptation to Climate Change
LoAs	Letters of agreements
LTO	Lead Technical Officer (of FAO)
LTU	Lead Technical Unit (of FAO)
M&E	monitoring and evaluation
MASA	Ministry of Agriculture and Food Security
MEAHEA	Ministry of Water, Water Management and Sanitation
MEDD	Ministry of Environment and Sustainable Development
MEF	Ministry of the Economy and Finance
MRA	Ministry of Animal Resources (former name)

MRAH	Ministry of Aquatic and Animal Resources
MRSI	Ministry of Scientific Research and Innovation
NAPA	National Adaptation Program of Action (of Burkina Faso)
NARS	National Agricultural Research Services
NCU	National Coordination Unit
NPC	National Project Coordinator
NTFPs	Not-Timber Forest Products
P/SNVACA	National Extension Programme/System
PAFASP	Agro-Sylvo-Pastoral Value Chain Support Programme
PAPSA	Improving agricultural productivity and food security Project
PASF	Harmonized Program of Support to the Forestry Sector
PCD	Commune Development Plans
PIR	Project Implementation Review
PNA	National Adaptation Plan
PNB	National Bio Digester Program
PNSR	National Rural Sector Programme
PNTD	Participatory and Negotiated Territorial Development
PPG	Project Preparation Grant (of GEF)
PPR	Project Progress Report
PSAN-BF	National Food Security and Nutrition Programme in Burkina Faso
PSC	Project Steering Committee
PTF	Project Task Force
RBM	Results-based-management
RF	Results Framework
SCADD	Accelerated Growth and Sustainable Development Strategy
SEAGA	Socio economic and gender analysis
SHARP	Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists
SLM	Sustainable land management
SNC	Second National Communication
TCID	FAO Investment Centre Division – Office of the Director
TOR	Terms of Reference
UEA	Agriculture support units
UNDAF	United Nations Development Assistance Framework
ZATA	Agricultural technical support zones
ZEPESA	Supporting Zebu Peul Development in the Sahel

SECTION 1 – RELEVANCE AND GENERAL CONTEXT

1.1 INTRODUCTION

Burkina Faso, Climate and Climate Vulnerability

1. Despite recent progress and a rich natural resource base, West Africa is one of the poorest regions in the world and one of the regions that is forecasted to be the most affected by future climate change. Already, during recent decades, climate variability has led to serious challenges in terms of food production, food security, poverty alleviation and socio-economic development. In the West Africa region, future global climate change threatens to magnify existing climate variability and to have major direct impacts on sustainable development.
2. Burkina Faso is a land-locked West African country with a population of approximately 16.6 million (World Bank website, 2012 figures) and a surface area of 274,000 km². It has land borders with Mali, Côte d'Ivoire; Ghana, Togo, Benin and Niger (see Map in Figure 1). Burkina Faso is characterized by a dry tropical climate which alternates between a short rainy season and a long dry season. Broadly speaking, the country can be divided into three Climatic Zones (see Map below in Figure 1): (i) the Sahel zone, with average rainfall between 300-600mm/year, and less than 45 rainy days per year (ii) the Sudan-Sahel zone with 600-900mm of rainfall/year and 50-70 rainy days (iii) the Sudan-Guinea zone with 900-1200 mm/year, and 85-100 rainy days.

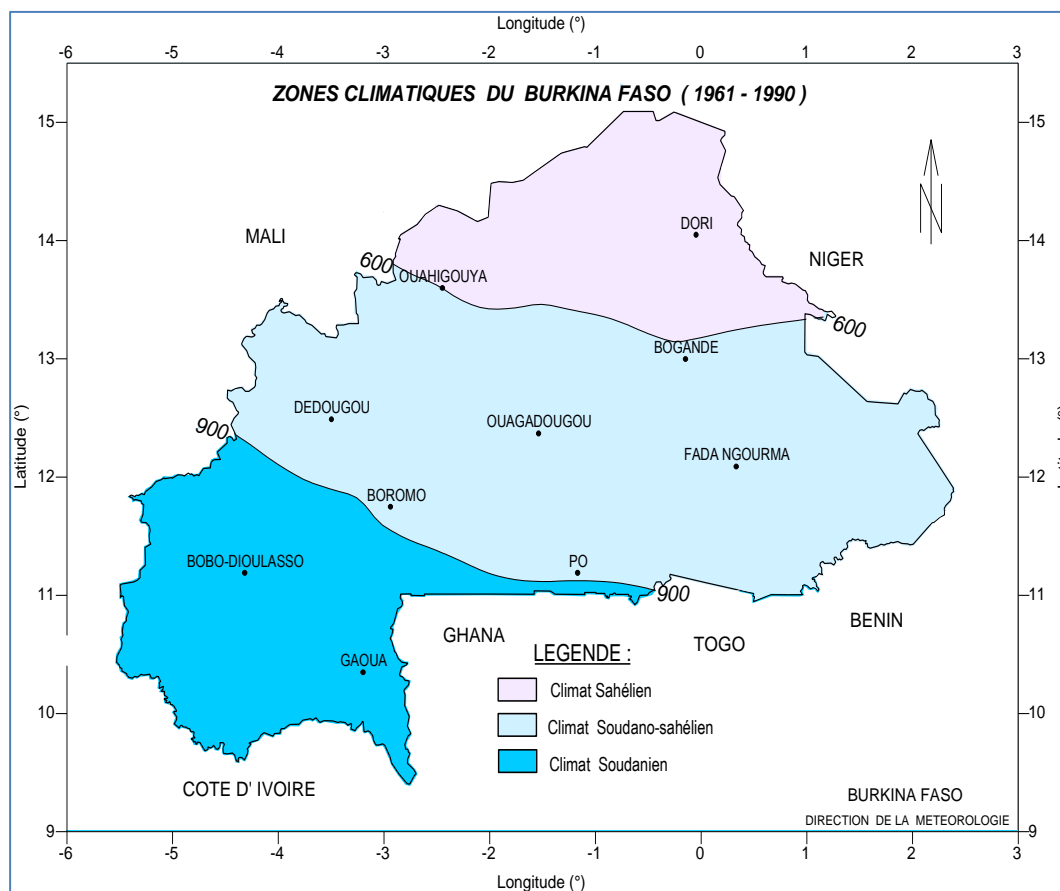


Figure 1: Map of Climatic Zones in Burkina Faso

3. Burkina Faso is a water scarce country with only 906 m³ of freshwater available per person per year (FAOSTAT²). Further, given the high evapo-transpiration rates, large parts of the country have highly limited water supplies for most of the year. Moreover, the Sahel has one of the world's most variable climates - few other places share the same climate variability that characterises this region. The impact of these large fluctuations has been exacerbated recently by the occurrence of some of the most severe and dramatic droughts of the last hundred years. Lying in the Sahel and within the confines of the Sahara, Burkina Faso's climate is prone to strong seasonal and annual variations. The harsh baseline climate and the high variability contribute greatly to climate stress, both localised and national. As a result, in Burkina Faso, seasonal variation in water availability is large and droughts frequently devastate rural areas. Finally, the dry areas have been expanding in recent years - the Isohyets in Figure 1 have moved almost 200km southwards over the past 30 years.³
4. Models of climate change for the Sahelian region of Africa suggest that climate change may lead to increased temperatures and increased variability in rainfall. The results could be water shortages and decreasing agricultural productivity. However, there is no consensus across the various climate models on parameters for Burkina Faso. The key findings of some of the models are introduced in the following paragraphs.
5. IPCC (1997)⁴ forecasts a 10% drop in rainfall by 2050 and a 1.4 - 1.6°C rise in temperature by 2050. These would both amplify drought risks and evaporation and reduce agricultural yields.
6. The Burkina Faso National Adaptation Program of Action (NAPA, 2007) anticipates that Burkina Faso shall experience:
 - a 0.8°C rise in average temperature by 2025 and a 1.7°C rise by 2050;
 - a relatively low drop in rainfall of -3.4% by 2025, and -7.3% by 2050. The decrease in rainfall would be coupled with a very strong seasonal and inter-annual variability of climatic factors.
7. Later, the Second National Communication (SNC, *draft* 2010) provides the most up-to-date official projections for the entire country. These forecast an increase in average maximum temperatures of 0.9 ° C by 2025 and 1.5° C by 2050. These temperature increases will follow the current inter-seasonal variations: the months of February, March, April and May will remain the hottest, while June, July, August and September are the cooler months. A similar tendency is forecasted for minimum temperatures. The SNC also provides rainfall projections (based on data and analysis in the 2007 IPCC report). These suggest intermediate decreases of rainfall of 3.2% by 2025 and 6.5% by 2050.
8. More recently, more detailed climate modelling was undertaken by the University of Cape Town Climate Sciences Analysis Group within the framework of the PPG of a GEF/UNDP Project⁵. This study undertook a downscaling of climate projections in order to generate locally relevant data/projections from Global Circulation Models (GCMs) – using a total of 8 GCMs. With regards to temperature, the models exhibited close correlation for Burkina Faso: at the national level all the models indicated rising average temperatures. For one scenario, the modelled temperature increases are 1 to 2°C by 2021-2050 and 2-3.5°C by 2071-2100. However, the models show much less agreement on rainfall – and the *average* across these models shows *little change in rainfall in 2021-2050* (i.e. a change of only -2 to +4 percent compared to the average for 1970-2000).

² FAO. 2013. FAO Country Profiles: Burkina Faso. Available from <http://www.fao.org/countryprofiles/index/en/?iso3=BFA> (Accessed November 2013).

³ Sources: NAPA, GFDRR website

⁴ *The Regional Impacts of Climate Change: An Assessment of Vulnerability*

⁵ “*Reducing vulnerability of natural resource dependent livelihoods in two landscapes at risk of the effects of climate change in Burkina Faso: Boucles du Mouhoun Forest Corridor and Mare d’Oursi Wetlands Basin*”

9. To summarise:

- All studies agree that there will be significant increases in temperature;
- This in turn will contribute directly to water shortages;
- There is little agreement on changes in rainfall, but the majority of models suggest there will be decreases;
- Based on past history, climate variability (inter-annual, seasonal and spatial) will contribute to water shortages and climate-induced land degradation. Climate variability may increase due to temperature rises.

10. Burkina Faso is particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. It is one of the poorest countries in the world - GDP/capita is estimated at US\$660. The poverty rate in Burkina Faso was estimated at 46% in 2009 and the country ranked 183 (out of 186) in the Human Development Index (HDI) in 2012.⁶ These levels of poverty strongly suggest a low adaptation capacity and limited resilience to shock for large parts of the population and the economy. Demographic change – with population growth rates around 3% - also contribute to vulnerability.

11. Burkina Faso's vulnerability is also a function of the high dependence on primary food production and natural resources - the sectors the most vulnerable to climate change. Over two thirds of the population are rural. Agriculture, livestock-raising and agro-forestry contribute approximately 34% of the GDP. Moreover, they employ over 80 % of the active population, and are the principal contributing factor to food security for the vast majority of the population.

12. As mentioned above, Burkina Faso's climate is characterized by strong inter-annual rainfall variability. Since 1974, there has been an enhanced recurrence of dry years and prolonged drought, which have had severe negative effects on livelihood. The last episode in 2009–2010 led to a severe food crisis, followed by favourable precipitation for the 2010–2011 cropping season. Another CC-related disaster occurred during the rainy season of 2007, when severe flooding, coupled with international price increases, caused a strong impact on food security in rural households.

13. Climate variability and climate change also have an impact on biomass and biomass potential. Estimates related to forestry/biodiversity indicate that biomass potential will diminish from 200 million m³ in 1999 to only 110 million m³ in 2050 (Shaw, 2012⁷). Climate change impacts will affect the existence of certain species of fauna and flora, as well as migration patterns of species that move from Sahelian regions to Sudanese regions. This will also have direct impacts on pastoral activities - temperature increases and rainfall decreases may result in: (i) drastic reduction in overall pasture size and degradation of remaining pasture; (ii) deficits in fodder and food production; and (iii) deficit of water supply for cattle. In turn, this could result in reduced husbandry production and a reduced supply of all cattle related products (Ministère des Ressources Animales, MRA, 2005). Increased climate variability and its consequences (drought, floods, locust invasions, etc.) may also lead to significant cattle mortality and to the economic ruin agro-pastoral producers from the Sahelian region, as already happened during the droughts of the 1970s and 1980s.

The Agriculture and Livestock Sectors

14. According to FAOSTAT 2011 figures, the country's land resources are divided as follows: cultivated land 117,650 km², (i.e. 42 % of the national land); permanent meadows and pastures 60,000 km² (21 %); forest land 55,890 km² (22 %) ; other land - buildings, homesteads, roads etc (0.2 %). The World Database on Protected Areas reports that protected areas 39,369 km² (14 %);

⁶ Source: World Bank website, 2021 figures. Population growth rate estimated at 3%.

⁷ Shaw, R., 2012. *Community Based Disaster Risk Reduction*. Bingley: Emerald Group Publishing

It should be noted that this distribution of land is not static: between 2001 to 2011 the area of agricultural land increased by 5% and the area of forests decreased by 2% (Source: FAOSTAT). It is noted that grazing lands include fallows, marginal land and reserved land (i.e. land not yet cultivated). Satellite analysis data (1986 to 2006) showed that the forest land was progressively converted to croplands at an annualized rate of 0,96 %, while the population density shifted from 17 inhabitants per km² in 1986 to 30 inhabitants per km² in 2006. Analysis revealed that the population size change is correlated with this land cover change (Ouedraogo et al., 2010).

15. Agriculture, livestock-raising and agro-forestry contribute approximately 34% of the national GDP⁸ and account for the employment of 90% of the active population in Burkina Faso⁹. Livestock represents 24.7% of the agricultural GDP¹⁰. Moreover, more than 80% of the Burkinabe population is involved with livestock raising to differing degrees – either as the sole economic activity, or as the principal economic activity, or as a secondary activity (mostly secondary to agriculture)¹¹. Almost all rural people that are classed as ‘farmers’ or ‘agriculturalists’ are also involved in livestock raising to some extent. Accordingly, animal husbandry is an important national source of revenue, cattle export represents a 9.6% share of income from total exports for example¹². Livestock products account for between 19 and 25% of Burkina Faso’s exports, making it the second biggest source of foreign currency after cotton¹³. Furthermore, livestock is almost exclusively under the management of small-holders, who represent the poorest groups of society. Three quarters of pastoralists and two thirds of mixed farmers are regarded as poor. As such, developing the livestock sector and enhancing its value would work towards alleviating national poverty¹⁴.
16. Livestock numbers have also been growing in recent years. In 2011, there were 8.56 million cattle, 21.2 million sheep/goats, 1.1 million donkeys, 2.2 million pigs and over 38 million chickens. On average these numbers have been growing at 5.6% per annum, although there are great differences from year to year and for different animals.¹⁵
17. Diverse ecological, cultural and social systems mean the livestock production systems in Burkina Faso show great diversity. However, in terms of numbers, most livestock raising uses traditional practices and technologies. These are low-input systems either without the use of concentrates (i.e. agro-industrial by-products) or only using such inputs in emergencies when forage is scarce in order to save weak animals. Vaccination is uncommon, even for well-known diseases.¹⁶
18. These traditional systems include transhumant systems¹⁷, the sedentary village systems and the sedentary agro-pastoral systems.¹⁸ These traditional approaches account for 90% of meat

⁸ CIA, 2013. *The World Factbook*. [online]. Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/uv.html> [Accessed 31 March 2014]

⁹ CIA, 2013. *The World Factbook*. [online]. Available at: <https://www.cia.gov/library/publications/the-world-factbook/fields/2048.html> [Accessed 31 March 2014]

¹⁰ FAO-AGAL, 2005. *Livestock Sector Brief*. [online] Available at: <https://www.cia.gov/library/publications/the-world-factbook/fields/2048.html> [Accessed 31 March 2014]

¹¹ Kagone, H., 2001. *Burkina Faso Country Pasture/Forage Resources Profile*. [online]. FAO. Available at: <http://www.fao.org/ag/agp/AGPC/doc/Counprof/BurkinaFaso/burkinaFeng.htm> [accessed 28 March 2014].

¹² FAO-MAFAP, 2013. *Burkina Faso MAFAP Policy Brief*. [online] Available at: <http://www.fao.org/docrep/017/aq199e/aq199e.pdf> [Accessed 31 March 2014]

¹³ Leonard, D. K., 2005. *Navigating the Livestock Sector: The Political Economy of Livestock Policy in Burkina Faso PPLPI Working Paper No 28* University of California at Berkeley and Food and Agriculture Organization. Available at: <http://www.fao.org/ag/againfo/programmes/en/pplpi/docarc/wp28.pdf> [Accessed 31 March]

¹⁴ FAO-AGAL, 2005. *Livestock Sector Brief*. [online] Available at: <https://www.cia.gov/library/publications/the-world-factbook/fields/2048.html> [Accessed 31 March 2014]

¹⁵ Source: PPG report “Appui a la Composant: Elevage Institutionnel”, E. Vokouma (2011)

¹⁶ Source: “Country Pasture/Forage Resource Profiles, Burkina Faso”, FAO (2006)

¹⁷ Transhumance is defined as a pattern of regular movement between areas according to the season, whereas migration is a specific movement to a new area

production and 95% of milk production (Vokouma, 2011) in Burkina Faso. Finally, 86.5% of stock raisers utilise mobile livestock methods (as opposed to sedentary or intensive).

19. Transhumance Numerically, the most important transhumant system is the *Fulani* – accounting for over 70 percent of the country’s cattle. In this system, herds may be single species or mixed, associating small ruminants with cattle. Typically, several people are in charge of a herd, generally paid shepherds or young family members - the main part of the family group stay at home. A given herd often contain the cattle of several owners with a single herder in charge; a herd may also be the property of an individual or family.
20. In the Sahelian and north-Sahelian, the availability of forage varies greatly in both time and space. In such a context of risk, the strategy adopted by herders is mobility. It is especially common among such ethnic groups as the Gouronsi, the Lobi and Dagari. The aims of stock-rearing in this system are more socio-cultural (funerals, dowries and such) than economic, with a subsequent poor management of the herds. It is noted that there are regulations governing transhumance at both national and sub-regional level in West Africa.
21. The sedentary agro-pastoral system. This is the system used by farmers who put their crop residues to economic use by feeding them to livestock. Most ethnic groups and social and professional categories practice it (farmers, civil servants, traders). Two components can be distinguished in this system: sedentary and integrated stock raising. Cattle are herded on the fringes of the crop land by a family member or a paid Fulani. In the cropping season the night pen is outside the crop land and feed is based on natural grazing on the village lands or between villages. Integrated stock-rearing brings together and houses all the stock at the homestead and has numerous interactions with the crop sector. They comprise draught and pack animals (oxen, asses and horses) and small ruminants (sheep and goats). In the dry season the stock are fed supplementary rations of conserved forage; crop residues and hay.
22. Sedentary village system. This system is recognised among farmer-stock keepers and sometimes pastoralists who have become sedentarised. It is especially common among such ethnic groups as the Gouronsi, the Lobi and Dagari.
23. The system of planned Pastoral Zones. Introduced in the 1990’s, the strategy behind these zones is to sedentarise the transhumant Fulani, to guarantee secure land rights for pastoral activities and improve herd productivity and rationalise the management of natural resources. Stock-raisers officially installed in these zones benefit from a strong extension input and a strong network of livestock infrastructure (water points, vaccination pens, sale points for inputs, small milk collection units, etc.). These zones are subject to strict management regimes, governed by a Specifications Note and a Management Plan. At present there are 26 such zones operational in Burkina Faso, covering 730,960 hectares, and a further 160 are planned (covering 1,264,589 hectares). See Appendix 9. Despite these efforts, the productivity of livestock in the planned pastoral zones does not differ significantly from elsewhere.¹⁹
24. Community Pastoral Zones. These Zones are established at the commune level, for use by families in the commune, all year round, subject to locally established conditions and regulations. Typically, a Community Pastoral Zone serves 1-3 villages, the local families use the zones to feed livestock at the same time as tending to agricultural activities. I.e., this is not associated with transhumance, but with more sedentary lifestyles. The system of Community Pastoral Zones was introduced to strengthen management and protect forage resources from degradation.
25. As in all countries of West Africa, livestock-raising in Burkina Faso faces a series of challenges. Most notable amongst these are: rangeland degradation, low productivity, loss of rangeland to

¹⁸ Source: “Country Pasture/Forage Resource Profiles, Burkina Faso”, FAO (2006)

¹⁹ Source: “Country Pasture/Forage Resource Profiles, Burkina Faso”, FAO (2006)

agriculture, conflicts with farmers and conflicts with migrating herds. For example, it is reported that 105,000 to 250,000 hectares of land are degraded each year (Vokouma, 2011). The factors behind these challenges include overstocking, poor technology and limited management techniques. However, climate change and climate variability are also major factors - they directly lead to degradation and loss of rangelands, and these in turn contribute to the other challenges. Drought, unreliable rainfall, flash floods and high temperatures are the climatic factors that contribute to rangeland degradation, and each of these is forecasted to be exacerbated by global climate change.

1.2 RATIONALE

1.2.1 Baseline situation and projects

26. The Government of Burkina Faso, over the past decade, has developed an array of policies, strategies, programmes, plans and projects to support rural development and address natural resource related challenges in rural areas. Three of the central pillars of this are:

- The *General Code for Local Government* which was adopted in 2005. This involves the transfer of development-related competencies and responsibilities from central government to local actors. This decentralization is a key national strategy, receiving highest level support and significant funding. It has resulted in the creation of 13 administrative regions and 302 rural communes;
- The *Accelerated Growth and Sustainable Development Strategy* (SCADD, 2010). This is the principal document for guiding development in Burkina Faso and replaces the former Poverty Reduction Strategy. It places an emphasis on the agricultural, pastoral and agro-pastoral systems. It also places an emphasis in adapting to climate variability and climate change;
- *The National Rural Sector Programme* (PNSR, 2010). This has been developed as a tool to implement the SCADD. It includes a focus on the following strategic orientations: (i) the improvement of food and nutrition security and sovereignty in a context of climate change, desertification and demographic growth; (ii) the increase of the income of rural populations based on facilitated access to markets, modernisation of family-run estates, professionalization of actors, product transformation, diversification and the promotion of agro-sylvo-pastoral activities (including water and wildlife management) and the emergence of a dynamic private sector; (iii) sustainable development and natural resources management; (iv) the development of partnerships between actors of the rural sector.

27. In order to operationalize the above, a vast number of programmes and projects are being implemented or are under preparation, mostly with support from international development and technical partners. The most pertinent that also form the baseline and co-financing of the current project are introduced in Table 1 (please refer to Table 3 for a comprehensive overview of programmes and projects the current project will collaborate with). Table 1 comprises of programmes and projects that are either national in scope or have a similar geographical coverage as the present proposed Project – hence in each case there is a geographical complementarity. It is noted that some of the projects are scheduled to end within the next two years, however, it is anticipated that the government will either extend these, or initiate replacement projects.

Table 1: Introduction to Related Baseline Projects and Programmes in the Agriculture and Livestock Raising Sectors

Title	Description	Lead Agency	Funding and planned implementation period
Agriculture			
National Extension System (SNVACA) and Annual	The System has five main components: <ul style="list-style-type: none"> • Increase production and agricultural productivity; 	Ministry of Agriculture and Food Security (MASA)	\$4 million annually, starting 2013 (and subject to annual revisions).

Title	Description	Lead Agency	Funding and planned implementation period
Programmes (PNVACA)	<ul style="list-style-type: none"> Strengthen the capacity of stakeholders (staff of extension services and public and private support organizations); Promote adequate and appropriate technologies from research and disseminate; Encourage partnerships between actors; M&E. 		Confirmed co-financing \$ 2,000,000 (Component 1, 2, 3 and 4)
National Food Security and Nutrition Programme in Burkina Faso (PSAN-BF)	The PSAN-BF aims to contribute to improving food and nutrition security in Burkina Faso and to achieving the MDGs by 2015, as part of the SCADD ²⁰ . More specifically, the Programme contributes to the achievement of MDGs 4 and 5 "reduce mortality in children under five years" and "improve maternal health"; and to strengthening institutional arrangements and food security policy.	National Food Security Council (CNSA) and MASA (funding from the European Development Fund).	€25 million for 2013–2018 (provisionally) Confirmed co-financing \$ 2,075,000 (Component 1 and 2)
Livestock			
National Bio Digester Program – Phase 2 (PNB 2)	The overall objective of the PNB is to contribute to the improvement of socio-economic and environmental living conditions of rural and peri-urban populations through the introduction of biogas digesters. The goal is to stimulate the emergence and development of a viable bio-digester construction sector and market. The first phase (2009-2013) supported the construction of over 4,000 digesters and established the foundations of a market. Phase 2 has the same overall objective and aims to increase the results numerically.	Ministry of Aquatic and Animal Resources (MRAH)	2014 – 2017, €15.845.153 Confirmed co-financing \$ 400,000 (Component 1 and 2)
Ouagadougou Peri-Urban Dairy Sector Development Project	The Project Objective is to enhance the dairy value chain through improving production and productivity. The project will cover genetic improvement, improved health services, animal feeding, milk collection and processing.	MRAH	2013 – 2017, \$27 million. Confirmed co-financing \$ 350,000. (Component 2)
Improving Zebu Azawak Raising and Sustainable Pasture Land Management	The objective is to improve the genetic material of the zebu Fulani, to improve the zebu selection procedure, to reinforce the breeders, and to improve	MRAH	USD 8 million, initially planned to end in 2016. Confirmed co-financing \$ 550,000 (Component 1, 3 and

²⁰ The Accelerated Growth and Sustainable Development Strategy – described later in this document

Title	Description	Lead Agency	Funding and planned implementation period
Project	market capability.		4)
Multi Sectoral			
Food and Nutrition Security Programme in Burkina Faso (PSANBF)	<p>This FAO support, with funding from the European Union, contributes to the PSAN-BF. It aims to contribute to improving food and nutrition security in Burkina Faso and the achievement of MDG 1 by 2015, as part of the SCADD.</p> <p>It aims to improve food and nutrition security to develop people's resilience and incomes, and increase the availability of food access for poor rural people (especially women and youth). The two operational components are: (i) access to non-timber forest and agro-pastoral production means increased, and (ii) marketing and accessibility of agricultural production increased.</p>	FAO	<p>\$20 million. 2013 – 2016²¹.</p> <p>Confirmed co-financing \$ 13,000,000 (Component 1 and 2)</p>
Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso	<p>The project has the following objectives:</p> <ul style="list-style-type: none"> • Increase household incomes through the production, processing and marketing of NTFPs – notably enhancing the economic position, role and work of women in the household; • Improve food and nutrition security of beneficiaries through the consumption of quality NTFPs; • Contribute to the fight against the degradation of natural resources through protection, restoration and natural regeneration. 	FAO	<p>\$5 million. 2012 – 2016²²</p> <p>Confirmed co-financing \$ 1,000,000 (Component 1 and 2)</p>
Bioversity International	Bioversity International is implementing several projects, mostly covering several West African countries, aiming generally, to improve the availability and use of diverse seeds and other planting materials to reduce vulnerability and improve food security for smallholders in vulnerable ecosystems.	Several, notably the National Institute for Environment and Agricultural Research (INERA).	There are several related ongoing initiatives. Notably: “Diversity Field Fora, with the objective of reducing the risk of crop failure for poor farmers through enhancing traditional seed systems in Sahelian West Africa’ financed by IFAD

²¹ As a food security project, there is a strong chance there will be a follow-up project of a similar nature.

²² Latest implementation status reports indicated that this project will probably be extended beyond the initial closing date into 2017.

Title	Description	Lead Agency	Funding and planned implementation period
			Confirmed co-financing \$ 60,000 (Component 2)

28. The list in Table 1 presents a small selection of the ongoing and planned rural sector development initiatives in Burkina Faso. There are many other projects and programmes supported by the government and international development partners. In addition, there are many initiatives supported by the private sector and local NGOs. It is anticipated that many new projects will start up during the period 2016 – 2017.
29. The strategy of this proposed Project is to link into the projects listed in Table 1 – and into new projects that start-up during Project implementation. A more detailed description of the concerned projects, their linkages and additional reasoning aspects are provided in Section 2.

1.2.2 Challenges

30. The above strategies, programmes and projects represent a real opportunity to achieve sustainable rural development in Burkina Faso, in particular for the large number of rural people engaged in integrated livestock/cropping/forestry activities. However, these programmes and projects face several common challenges which, in the baseline, will undermine their effectiveness and impact. These challenges were assessed and analysis through the PPG studies and are summarized as follows.
31. **Local capacity to implement projects is very limited.**²³ There is a good institutional and policy framework at the national level and a good technical capacity. However, at the local (regional, provincial and commune) level there is insufficient capacity to support and implement policies and projects. This applies to both the technical units under the local authorities and to locally based natural resource managers. Given the present impetus in Burkina Faso to decentralize and transfer roles and responsibilities to local stakeholders, this limited capacity is a major challenge to sustainable development. As a result, in the short-term, many programmes and projects continue to be implemented in a top-down manner, and this undermines effectiveness and sustainability.
32. This lack of capacity can be seen in many ways. It can be seen in the lack of technical and managerial capacity of local authorities. It can be seen in the lack of organizational capacity amongst resource users. It is also a lack of knowledge of best practices. It can also be seen in the lack of the needed inputs and materials for agriculture and livestock raising.
33. A related important issue is the scarce capacity to capture local farmer knowledge and local innovations, and to capitalize upon these. For example, there is little capacity to support farmers/herders as they assess/validate/adopt their own innovations or other small scale technologies.
34. **Climate change.** As seen in the earlier sections, climate change threatens to undermine rural development in Burkina Faso.
35. The livestock-raising sub-sector is already characterized by a strong competition for access to and the use of natural resources. There is a scarcity of the factors of production – which is mainly

²³ See, notably, the PPG Studies: (i) “*Rapport Composant 1: Pilotage des pratiques culturelles améliorées résiliente au changement climatique dans le cadre du mandat du CONEDD et des plans action des SDR/PNSR*»; (ii) «*Intégration de la résilience climatique dans la production agro-pastorale pour la sécurité alimentaire dans les zones rurales vulnérables à travers l’approche ‘champs-école-paysan’ et les champs de diversité* » and ; (iii) «*Rapport de la Sous Composante Institutionnelle* ».

caused by the combined effects of climate variability and population pressure. This has already led to outbreaks of tension in some places. Specifically, climate related challenges – drought and heat – have contributed to the emergence of animal diseases, to floods and storms, and to further shortages of nutrition and water. These challenges lead directly to economic losses across the livestock sub-sector - primarily related to the exit of capital, reduced productivity and increased production costs. This has major consequences for the resilience of poor households in rural areas.²⁴

36. Likewise, recent advances and development in the agriculture sub-sector in Burkina Faso are in danger of being lost or reversed by climate change. In particular, the high spatio-temporal variability in rainfall causes pockets of drought even in the rainy season, as well as heavy rains and floods in other areas. The probable shortening of the rainy season is also a factor. The frequency and intensity of wind and sand storms may increase. Moreover, as temperatures continue to increase, some vulnerable animal and plant species may disappear or become less productive. These climate change impacts are expected to contribute to extensive damage to crops and undermine productivity.²⁵
37. The programmes and projects listed in Table 1 are not fully adapted to climate change, and many are not adapted at all. In most cases the programme/project design documents do identify climate change as a threat, and these documents do list some of the direct impacts of climate change. However, they do not include a thorough analysis of climate change nor of its specific impacts. Moreover, they do not identify specific measures to adapt to climate change or to increase climate resilience.
38. **The prevalence of sectoral approaches as opposed to cross-sectoral or holistic approaches.**²⁶ The vast majority of natural resource users in Burkina Faso are agro-sylvo-pastoralists, and this is an increasing trend. Hence, individuals and communities engage in a complex and diverse but inter-related set of activities to exploit the range of natural resources at their disposal in order to meet nutritional and livelihood needs. In fact, this adoption of integrated agro-sylvo-pastoralists systems by rural people in Burkina Faso is, in itself, a response to climate variability.
39. However, support programmes and systems for rural areas mostly adopt a single sector approach – including most of the programmes and projects listed in Table 1. Hence, they treat natural resource users as either ‘farmers’, or ‘pastoralists’ or ‘forest users’. All support programmes should be holistic, in recognition of the integrated nature of the livelihoods of resource users. This would lead to increased efficiencies, and would respect the geographical and seasonal constraints of resources users.
40. **Limited experience with integrated tools.** This is linked to the previous challenge. One consequence of almost all support programmes and systems adopting a single sector approach is the lack of experience of and knowledge of integrated tools. The local technical units in Burkina Faso do not have access to integrated resources assessment tools, integrated planning and management tools, nor to knowledge of specific integrated practices (e.g. resource conservation techniques). Hence they are not able to extend these approaches to the needy communities.
41. **Other** the challenges listed above affect all areas of Burkina Faso. In addition, there are many site-specific challenges, which are important in some geographical or cultural contexts. The most important of these are:

²⁴ National Climate Change Adaptation Plan – Livestock Raising Sector (Government of BKF, 2013)

²⁵ National Climate Change Adaptation Plan – Agriculture Sector (Government of BKF, 2013)

²⁶ See, notably, the PPG studies: “*Component 2, sub-component 2, Agro-Pastoral Field Schools*” and “*Appui a la composante Elevage Institutionnel*”

42. **Access to micro-credit**.²⁷ Access to reasonable micro-credit remains a challenge for many rural people across Burkina Faso, especially those involved predominantly in livestock raising. The factors behind the weak access to credit include (i) the high risk nature of lending to smallholders in vulnerable areas; (ii) the low profitability of lending to smallholders combined with high operational costs and difficulties in achieving economies of scale; (iii) the presence of others actors (e.g. projects, programs, NGOs, etc.) that provide, on a temporary basis, grants for similar activities and (iv) more generally, the absence of a credit history or even a bad credit history at intervention sites.
43. **Insecure land tenure**. This is notably a problem for livestock-raisers, and is particularly a problem for women involved in livestock-raising. The lack of secure land tenure and resource rights largely prevents communities from effectively engaging in income generating activities, e.g. trading of beef and non-forest products. It also acts as a disincentive to investing in ecosystem resilience. This also negatively affects external efforts to support the value chain for livestock products. This situation is aggravated by local communities' lack of knowledge and awareness of existing laws and regulations related land tenure.
44. **Lack of agro-meteorological information**.²⁸ Despite the recent investments in developing the hydro-meteorological network, the availability of reliable, timely, pertinent information on weather forecasts is insufficient. This system to provide agro-meteorological information in Burkina Faso is undermined by a shortage of equipment, poor equipment maintenance mechanisms, shortage of trained staff at many levels, a supply-oriented approach, and a lack of coordination amongst the government departments involved in collecting data, preparing forecasts and disseminating information.
45. The above challenges will undermine the broad efforts being undertaken to support rural people, such as those supported by the projects and programmes listed in Table 1.
46. This Project's strategy is to act directly to address these challenges by supporting groups of farmers-herders and building the capacity from the farmer-herder communities upwards. This strategy is elaborated in detail in Section 2 below.

1.2.3 Additional Reasoning

47. In the baseline, the ongoing implementation of many large scale rural development and pastoral support projects and programmes, and the previous adoption of the FFS approach in Burkina Faso (through the SNVACA), provide entry points for addressing climate change considerations when supporting agro-pastoralist communities. This constitutes a cost-effective opportunity to finance the additional costs of adaptation using the LDCF funds.
48. **With the additional financing from the LDCF**, the proposed intervention will (i) develop the basic foundations for mainstreaming climate change adaptation across activities in the agro-pastoralists sectors; (ii) develop the tools and capacities for actually delivering in a cost-effective manner climate change support to agro-pastoralist communities; (iii) directly deliver support to a sizeable number agro-pastoralist communities; (iv) mainstream climate change support into a number of large scale initiatives that deliver rural development support to agro-pastoralist communities and; (v) ensure sustainability by integrating into key policy initiatives and ensuring lessons are learnt and disseminated.

²⁷ See PPG report "*Fonds d'Investissement Local pour l'Adaptation aux Changements Climatiques*".

²⁸ See PPG report "*Sub-Component Agro-Meteorology*".

49. Component 1: Introduction of improved climate-resilient agro-pastoral practices in the framework of the National Adaptation Programme (PNA) and the National Rural Sector Programme (PNSR)

LDCF and co-financing funds are used to develop a large core of trained managers and implementers in the agricultural and pastoral sectors, to develop a series of best practices documents, and to develop a strategy for operationalizing APFS across Burkina Faso. As a result, the basis for the wide-scale rolling out and upscaling of climate change adapted agro-pastoral practices will have been established.

In the baseline, FAO co-financing (\$4.2 million through projects GCP/BKF/055/EC and OSRO/BKF/203/SWI): will provide:

- Advocacy and awareness raising to a large number of managers and practitioners on: (i) increasing access to non-timber forest and agro-pastoral production and (ii) marketing and increasing accessibility to improved agricultural production
- Awareness raising on (i) NTFP in support of food security and (ii) Protecting and safeguarding forest resources.

In the baseline, MRAH co-financing (\$350,000) will cover the costs of (i) research into new construction methodologies under the programme 'Bio digesteur' and (ii) training on sustainable development and poverty issues under the project 'Zebu Azawak'.

LDCF (\$600,000) funds are used specifically to train the top and middle managers of rural development and extension programmes and projects, and ensure they are able and willing to integrate climate change adaptation, and that they are supportive of the integrated APFS approach. LDCF funds will target the personnel of the FAO and MRAH initiatives (see above bullet points), as well as other partners.

LDCF funds are also to be used to develop a strategy for developing/implementing APFS across Burkina Faso, and for developing maps and best practice documents. These are all tools that will be used when implementing the APFS approach.

50. Component 2: Improving agro-pastoral practices through Field Schools (FS) in the framework of on-going FAO-supported projects and other MRAH, MASA and MEDD's "projets sous tutelle"

The baseline consists of a range of activities, initiatives, projects and programmes to support rural communities, farmers and agro-pastoralists. These all aim at poverty reduction and improving agricultural productivity and production. This includes all extension activities in the four target regions of the Project. In the baseline, these activities do not adequately cover climate change, they do not support integrated approaches, and are not optimal when compared to the FFS approach.

In the baseline, MASA (\$1.91 million) will provide staff, logistical support, equipment and materials to support training for 100's of Field Schools as well as facilitators over the four years of the project (through the ongoing SNVACA and PNVACA).

In the baseline, MRAH (\$500,000) will provide: (i) training under its 'Bio-digestor programme'; (ii) support to resolve land tenure issues and improve resource management under the 'Zebu Azawak programme'; and (iii) support to increasing productivity and value chain management under the 'Periurbaine ouaga milk production sector project'.

In the baseline, FAO (\$9.8 million, through projects GCP/BKF/055/EC and OSRO/BKF/203/SWI): will provide (i) training on increasing access to non-timber forest and agro-pastoral production; (ii) training on marketing and increasing accessibility to improved agricultural production; (iii) training on producing and transforming NTFP; (iv) training on developing rural entrepreneurs; (v) training on enterprise management, and; (vi) training on NTFP harvesting, storage and processing techniques.

LDCF funds of \$2,316,400 are allocated to this Component. These will be used to develop a Field School approach and all the necessary tools that ensure climate change adaptation is addressed, and to ensure that the Field School approach is appropriate to agro-pastoral communities. LDCF funds will also be used to develop some specific mechanisms, such as micro-finance, agro-meteorological support services, resolving land tenure issues and diversity field flora.

LDCF funds will also be used to facilitate dialogue with a range of partners (notably the ones listed above: MASA, MRAH and FAO) and thereby lead to broader adoption of the successful tools by a range of partner programmes and projects.

Biodiversity (\$60,000) will contribute to covering the additional costs, as they directly target adaptation to climate change. Biodiversity is to provide training and capacity building for Diversity Field Fora, support to designing a community gene banks management and related training, development of incentives to support to small seed suppliers to provide diverse planting material and inputs to the national policy development process to support the supply.

51. Component 3: Mainstreaming climate change resilient agro-pastoral and agricultural systems into sectoral policies and into local development plans - in conformity with the PNA and the PNSR

This Component will ensure sustainability by integrating the project results and best practices into key policy initiatives. The baseline includes (i) poor coordination across extension services to rural areas; (ii) the SNVACA which is not adapted to climate change and does not reach agro-pastoralist communities, and (iii) Local Development Plans (PCD) that on the whole are not adapted to climate change.

In the baseline, over the four years of the project, MASA will provide \$1.9 million of support to this component. This will notably be through:

- support to the multi-sector coordination mechanisms. This support will be mostly in the form of staff and logistical support at national, regional and provincial level;
- the development/adoption of improved extension approaches (revisions and strengthening of the SNVACA). This will be mostly through consultative processes, staff time, equipment and logistical support across the extension services over four years; and
- support to local planning in approximately 50 communes. This will be in the form of staff time and travel costs covering 50 communes over four years.

In the baseline, over the four years of the project, MRAH will provide \$350,000 of support to this component. This will be through its extension services and network, both in terms of supporting the multi-sectoral coordination mechanisms, and also ensuring the MRAH extension systems adopt the climate change adapted APFS approach.

LDCF funds will provide support to overcome the three weaknesses listed above. It will provide technical support, support to consultation, and best practices to a value of \$500,000, ensuring CC-A is adopted through these policies.

52. Component 4: Project monitoring and evaluation

This Component will support project implementation based on results based management and will reinforce the application of project lessons learned into future operations by the executing partners (MASA and MRAH).

Over the four years of the project, MASA will provide staff time and equipment to a value of \$75,000 as part of its existing systems to monitor FFS and extension services. Likewise, MRAH will provide staff time and equipment to a value of \$75,000 as part of its existing systems to monitor FFS and extension services. In addition, MRAH will provide staff time to the value of \$25,000 in order to support the collection of lessons learnt and their dissemination.

LDCF will provide \$165,000. This will be used to cover: i) the design and operation of the project's M&E system based on results-based management, providing systematic information on progress in meeting project outcome and output targets; ii) the conduction of mid-term review and final project evaluation, including the adjustment of project implementation and sustainability strategies to recommendations; and iii) the systematization and dissemination of five specific best practices and lessons learned, and the related publications.

1.3 FAO'S COMPARATIVE ADVANTAGES

53. The Food and Agriculture Organization (FAO) is the lead United Nations (UN) agency for agriculture, fisheries, forestry and rural development. Its mandate is to offer member states the

policy and technical capability to raise their levels of nutrition, improve agricultural productivity, better the lives of rural populations and contribute to the growth of the world economy while safeguarding natural resources.

54. The proposed Project is aligned with the FAO's comparative advantage in the area of capacity building, providing technical analysis and assessments in relevant areas such as rangelands degradation, sustainable crop and animal production, land/rangeland management, policy support, and agro-biodiversity conservation. The FAO has considerable technical experience and many field projects in a number of areas covered under this project (climate change adaptation, forage production, grasslands management, agriculture production, food security, agro-biodiversity, capacity building, development of community based capabilities, sustainable land management and rural development).
55. FAO has had an active programme in Burkina Faso since 1961, working to improve food security and nutrition. In that time, FAO's technical assistance has focussed primarily on (i) institutional and policy support and capacity building (ii) provision and dissemination of information and scientific techniques (iii) implementation of technical cooperation projects that also incorporate research and lesson learning and (iv) supporting resource mobilization. The Project is directly aligned to these approaches.
56. Globally, FAO has recently adopted a strategic framework for the period 2013-2017, and this Project addresses the priorities established under Strategic Objective 2 (SO-2), Sustainable Agricultural Production Systems. Specifically in Burkina Faso, the FAO has a significant project portfolio with a major focus on food security and sustainable production systems, and this includes important projects in livestock management. The recently approved Burkina Faso Country Programme Framework (2013 – 2015) includes three priority intervention areas, and this Project contributes notably to the first two, i.e.: (1) strengthening resistance amongst vulnerable populations to food and nutritional insecurity and (2) improving the revenue of the rural population through improved productivity in agro-sylvo-pastoral systems and fisheries.
57. The Field School approach is a pillar of this proposed Project. This approach is notably used for all capacity building activities in the Project. FAO has significant experience and a comparative advantage on supporting Field Schools approaches in the region and in Burkina Faso – where FAO first introduced this approach in the early 1990's. Both in Burkina Faso and in the region, FAO is implementing several projects with significant Field School components - it can thus draw on a large pool of expertise and experience. The FAO's Department of Agriculture and Consumer Protection recently completed a global review of 20 years of Farmer Field School (FFS) experience (available at <https://dgroups.org/fao/ffs-eforum2>). This global review will lead to the elaboration of a FFS-efficiency monitoring system and facilitate the access to additional funding for Field School-based activities under a results-based framework, including in Burkina Faso.
58. FAO has also expanded the Field School approach to cover agro-pastoral communities, i.e. the Agro-Pastoral Field Schools (APFS). In Africa, this was first developed in Uganda in the early 2000's, and is now ongoing in over 10 countries.
59. FAO's comparative advantages also lie in its in-house technical expertise in virtually every discipline related to rural development and its capacity to respond to the needs of member countries. These areas include, among others, policy and strategy development, crop and livestock development, forestry, agriculture and food security information systems, early warning systems, agribusiness and enterprises, sustainable land management and planning, forestry, climate change adaptation, and livestock and fisheries systems. The FAO has promoted and facilitated the coordination between different governmental institutions and relevant stakeholders, all involved in rural development. This advantage and role enhances even more the comparative advantages of the FAO in Burkina Faso.

1.4 PARTICIPANTS AND STAKEHOLDER ANALYSIS

60. A detailed analysis of governmental stakeholders is provided in Appendix 7 (part 1). The key government stakeholders are:

- Ministry of the Economy and Finance (MEF), responsible notably for the coordination of internationally supported projects;
- Ministry of Agriculture and Food Security (MASA), notably responsible for providing policy and technical support to rural areas on agriculture, including through the national extension system. MASA also implements many programmes and projects and is responsible for food security and nutrition;
- Ministry of Fishery and Animal Resources (MRAH), notably responsible for providing policy and technical support to rural areas on livestock raising. MRAH also implements many programmes and projects;
- Ministry of Environment and Sustainable Development (MEDD), notably responsible for implementing the UNFCCC and coordinating adaptation to climate change, including through the provision of technical support to rural areas;
- Ministry of Scientific Research and Innovation (MRSI), notably responsible for assessing, identifying and promoting new approaches and technology;
- Ministry of Water Supply and Sanitation (MEAHEA), responsible for water infrastructure in rural areas;
- General Department for Meteorology (DGM), responsible for the collection of meteorological data and the provision of forecasts. It has also taken a lead on climate change forecasting and modelling, working with regional partners such as the African Center of Meteorological Application for Development (ACMAD) and AGRYMET (a specialised Regional Centre under CILSS responsible for agro-meteorology, hydrology and meteorology and related issues);
- Regional Governments, responsible for sustainable development in the concerned Region, including the coordination/implementation of support projects and the provision of policy and technical support;
- Regional and Provincial technical departments of national line ministries, provide technical support to rural populations.

61. A description of the mandates, responsibilities and roles in this project is provided in Appendix 7 (part A).

62. A vast number of NGOs and CSOs are active in activities related to extension and providing capacity building to local communities across Burkina Faso, many active in remote and rural areas. In general, these have a base in the regional capital, as well as possibly in the nation's capital. A list and description is provided in Appendix 7 (part 2).

Beneficiaries

63. The main project beneficiaries are herder-farmer families. The Project will bring benefits to at least 26,000 such families across the following four Regions; Sahel, Eastern, West Central and North Central. The Project will focus activities into a select group of communities and sites across these four regions. The target sites have not yet been identified; they will be identified and selected through a participatory process based on agreed criteria in the first stages of project implementation of the Project (see Outcome 2, Output 2.1). However, general information on the age structure, socio-economic situation, main economic situation, religion, ethnic groups and languages in the four Regions is provided in Appendix 10.

64. In general, three types of farmer/herder communities will benefit: (i) communities based around transhumant livestock-raising systems. These are predominantly in the Sahel and Eastern Regions; (ii) communities based around semi-intensive, non-transhumant, livestock-raising systems. These are predominantly in the West Central and North Central Regions and; (iii) communities based on agriculture having existing farmer field schools. These communities are in more fertile areas with more reliable climates.
65. FAO has developed a series of tools to ensure the full participation of vulnerable and indigenous groups and these will be used in the Project. Likewise, the full participation of women and the addressing of gender inequality will be core aspects of the Project, for example through the use of socio-economic and gender analysis (SEAGA) tools.

1.5 LESSONS LEARNED FROM PAST AND RELATED WORK (INCLUDING EVALUATIONS)

66. The key innovation of this Project is to enhance and strengthen support systems to farmers, pastoralists and agro-pastoralists using the Field School approach. The Project builds on many lessons learnt, both from other countries and from Burkina Faso

From Other Countries

67. FAO recently undertook an assessment of support mechanisms to agro-pastoral communities²⁹, focussing on other countries, notably in East Africa. See Table 2 for a summary of the lessons learnt that are pertinent and will be applied in this Project.

Table 2: Lessons Learnt from East Africa

Lesson learnt	Approach suggested
The importance of a holistic livelihood programme (including within a Disaster Risk Management framework)	<ul style="list-style-type: none"> • Knowledge of the area; • Household Economy Analysis ; • Mapping of key productive infrastructure, migratory routes, geospatial distribution of community animal health workers, veterinary supply points, markets etc.
The need to include planning based on natural resources and socio-economic settings	<ul style="list-style-type: none"> • Catchment-based approach.
The importance of the quality of capacity building process	<ul style="list-style-type: none"> • Institutionalization should be done carefully and systematically ensuring that the requisite structure for quality assurance exists and is well embedded in the overall national extension services delivery system.
The importance of reinforcing the appropriate use of legal instruments by stakeholders and communities	<ul style="list-style-type: none"> • Necessary instruments for arbitration purposes including simple constitutions, bylaws, formal registration with the local administration and functional leadership.
Gender	<ul style="list-style-type: none"> • Socio economic gender analysis tools to articulate appropriate interventions; • Consider distance to training; • Affirmatively mainstreaming activities that reduce on their labour burden.
Production intensification practices	<ul style="list-style-type: none"> • Integrated production and pest management; • Post-harvest handling; • Safeguarding biodiversity; • Diversification of farming system.
Livestock nutrition and health	<ul style="list-style-type: none"> • Locally available feed resources, forage preparation &

²⁹ *Supporting Communities in Building Resilience through Agro Pastoral Field Schools* (FAO, 2013)

	<p>preservation;</p> <ul style="list-style-type: none"> • Tree nurseries and appropriate tree planting; • Community Animal Health Workers; • Approach for trans-boundary animal diseases.
Rangeland rehabilitation	<ul style="list-style-type: none"> • Community rehabilitation; • Over sowing with legumes in pasture swards; • Appropriate bush and tree pastures.
Livelihoods	<ul style="list-style-type: none"> • Markets and market information; • Resilience fund; • Seed/grain banks; • Income generating activities.
Land management	<ul style="list-style-type: none"> • Resource sharing agreements; • Conflict management; • Rational utilisation; • Community action plans; • Self-assessment and monitoring; • Valorise customary institutions; • Community managed disaster risk reduction.
Strategic partnerships	<ul style="list-style-type: none"> • Research, Local Governments, Customary institutions, Specialized NGOs and resident NGOs/CBOs.
Early warning system	<ul style="list-style-type: none"> • Community based sentinels; • Use of various communication channels (electronic, radio).

68. Many, although not all, of the above are pertinent to the situation in Burkina Faso. During project implementation, the above lessons learnt will be applied as appropriate in this Project, through a constant exchange of information and the shared use of expertise.

69. FAO also has a range of ongoing related initiatives in West Africa, and constant lesson-exchange and information sharing will be established with these. This includes:

- *Reducing Dependence on POPs and other Agro-Chemicals in the Senegal and Niger River Basins through Integrated Production, Pest and Pollution Management (EP /INT/606/GEF);*
- *Supporting competitiveness and sustainable intensification of African cotton sectors through capacity development on Integrated Production and Pest Management (GCP /RAF/482/EC);*
- *Integrating climate resilience into agricultural production for food security in rural areas of Mali (GCP /MLI/033/LDF).*

70. FAO is currently developing several other projects in the region, many with support from GEF, and constant lesson-exchange and information sharing will be established with these.

From Burkina Faso

71. FAO and other partners have been supporting the farmer field schools approach in Burkina Faso for more than one decade. This has proven to be a successful approach. Moreover, it has been readily adopted by national partners (notwithstanding the weaknesses and barriers listed in the previous section). Due in part to the support from FAO, the Field School approach has now been adopted and institutionalized into the national extension system (SNVACA – see Section 2 for more details). This decade of experience, with FAO, government and other partners, has generated a vast fountain of knowledge and lesson learning, to which the proposed Project will be fully linked.

72. Moreover, many national and international partners have been working on natural resource management in Burkina Faso for several decades, introducing and testing new and modified approaches, practices and technologies. The focus in almost all cases has encompassed efforts to increase climate resilience, and to respond to climate related threats to natural resources. In

addition, connected to these initiatives, there have been many research and learning mechanisms to collect information and learn lessons on these approaches, practices and technologies. This has led to a great understanding of what systems are successful, where and when and under what circumstances. One example of such findings is provided in Appendix 8.

73. Two of the key actors in the lesson learning are the National Institute for Environment and Agricultural Research (INERA) and The Permanent Interstates Committee for Drought Control in the Sahel (CILSS). As partners in this Project, together with FAO, CILSS and INERA will ensure that all captured knowledge and experience can be brought to bear on this Project, as appropriate.

With Regards to Diversity Field Fora (DFF)

74. Another important lesson learnt is the importance of traditional systems for learning and capturing and managing relevant knowledge.
75. Notably, with regards to seeds, currently, between 92-99% of the seed needs of farmers are covered by an informal system amongst local farmers. Most of these locally grown varieties have been collected over many years and passed from generation to generation. Many of these local varieties are adapted and productive - even in marginal conditions where improved varieties may struggle to reach their production potential. Moreover, it is often observed that, despite the effort of extension services to introduce improved varieties, farmers prefer to use their traditional or local varieties.
76. Although this is a vast resource of seeds and knowledge, this risk-based conservatism does restrict the import of better seeds or technologies. Clearly, if the quality of farmer's traditional seeds could be improved, agricultural production would raise accordingly. This is one area where the Diversity Field Flora (DFF) aims to make improvements.
77. The DFF initiative is involved in developing information systems to enable indigenous and local communities to gain access to information and locally-adapted plant material. It also creates mechanisms for capturing and sharing knowledge at the local, national and international levels. It has also been strengthening farmers' skills and knowledge on quality seed production through short training courses in Burkina Faso, Mali and Niger.

1.6 LINKS TO NATIONAL DEVELOPMENT GOALS, STRATEGIES, PLANS, POLICY AND LEGISLATION, GEF/LDCF AND FAO STRATEGIC OBJECTIVES

Alignment to national development goals and policies

78. Over the past decade, Burkina Faso has developed a comprehensive framework of laws, policies, strategies, programmes and action plans addressing rural development and the agriculture and pastoral sectors specifically. The Project is firmly in line with this framework. Notably, it is in line with and contributes to the following:

Laws

- Code on Animal Health (1989);
- Law on Pastoralism (2002);
- Law on Agricultural Land and Tenure Reorganization in Burkina Faso Law (2012);

Decrees

- 2007-407/PRES/PM/MRA (2007) on the creation, attribution, composition and functioning of a national transhumance Committee ;

- N° 2007-408/PRES/PM/MRA/MAHRH/MATD (2007) on water resource use for pastoral purposes;
- No. 2007-410/PRES/PM/MRA/MFB (2007) on the general conditions for the attribution, occupation and exploitation of Pastoral Zones;
- N° 2007-415/PRES/PM/MRA/MAHRH/MATD/SECU/MFB/MEDEV/MCE/MID/MECV (2007) on pastoral user rights;
- No. 2007-416/PRES/PM/MRA/MAHRH/MTD/MEDEV/MECV (2007) on modalities to identify and establish pastoral ranges and other lands for livestock raising.

Development policies and strategies

- *Accelerated Growth and Sustainable Development Strategy* (SCADD, 2010). This is the principal document for guiding development in Burkina Faso and replaces the former Poverty Reduction Strategy. It places an emphasis on the agricultural, pastoral and agro-pastoral systems. It also places an emphasis in adapting to climate variability and climate change;
- *The National Rural Sector Programme* (PNSR, 2010). Developed as an implementation tool for the SCADD, it includes a focus on the following strategic orientations: (i) the improvement of food and nutrition security and sovereignty in a context of CC, desertification and demographic growth; (ii) the increase of the income of rural populations based on facilitated access to markets, modernisation of family-run estates, professionalization of actors, product transformation, diversification and promotion of agro-sylvo-pastoral activities – including and water wildlife), and the emergence of a dynamic private sector; (iii) sustainable development and natural resources management; (iv) the development of partnerships between actors of the rural sector following defined roles and responsibilities, and the strengthening of their capacities;

Sectoral Policies, Plans and Programmes

- National Policy for Sustainable Development of the Livestock Sector, 2010 – 2025 (2010);
- Livestock Raising Sub-Sector Action Plan and Investment Programme, 2010 - 2015 (2010);
- National System of Agricultural Extension (SNVACA, 2010) ;
- National Programme for Development of Pastoral Livestock Raising (PNDP, 2013);
- Pilot Programme for Seven Pastoral Zones (PIP, 2013).

Alignment with the National Adaptation Program of Action

79. Burkina Faso finalized its National Adaptation Programme of Action (NAPA) in 2007. The preparation of the NAPA was a participatory identification and prioritization process. The NAPA identified the following vulnerable sectors: agriculture, water, livestock and forests/biodiversity. The NAPA also identified the most vulnerable groups to be the poor in rural areas, notably the women, the youth and the small-scale producers. This Project responds directly and comprehensively to those urgent needs as identified and expressed in the NAPA.
80. Specifically, the NAPA identified 12 priority actions to be implemented immediately, covering the vulnerable groups in the four above-mentioned vulnerable sectors. This Project will contribute to the following five amongst the 12 priority actions: (i) strengthening of the early warning systems for food security; (ii) forage plant production and building of food reserves; (iii) development and sustainable management of natural resources and vegetation; (iv) protection of pastoral lands; and (v) securing agricultural production through the use of appropriate technological packages.
81. Burkina Faso is currently finalizing a National Adaptation Plan (PNA), which will consist of 13 sectorial plans, including one for agriculture, one for the environment and natural resources, and one for livestock raising/animal husbandry. The draft sectorial PNA are now available. The team responsible for developing this proposed Project worked in close consultation with the teams

involved in the preparation of the concerned PNA sectorial plans, and this Project is fully in line with the approaches and priorities set out in the PNA.

Alignment with GEF focal area and/or LDCF/SCCF strategies

82. The project has been prepared fully in line with guidance provided by GEF and the LDCF Trust Fund. The project is fully in line with the guidance from '*Programming Paper for Funding the Implementation of NAPA's under the LDC Trust Fund*' (GEF/LDCF 2006). Firstly, in line with GEF/LDCF (2006)³⁰, this project was identified and conceived through the participatory NAPA process in Burkina Faso. Moreover, it was designed to be consistent with, and supportive of, national development strategies, and with the PNA.
83. Second, the project addresses the urgent and immediate activities identified in the NAPA, and is in line with the priority sectors identified in GEF/LDCF (2006)³¹ at a global basis. Notably, this project focuses on the food security, agriculture and community development sectors. Third, this project is designed to be an integral part of, and to give support to, the ongoing development process in Burkina Faso³². Hence, it has been developed with key stakeholders at all levels in the agriculture, livestock-raising and agro-forestry sectors, and it is fully consistent with existing plans and policies in these sectors.
84. Finally, this project has been designed to address the additional costs imposed on development by climate change³³. As such, the project builds on a sizeable baseline and enjoys significant co-financing from government and other partners. The project only supports activities that would not be necessary in the absence of climate change. In the calculation of the Additional Costs, the simplified sliding scale has been adopted, in line with GEF/LDCF (2006)³⁴.
85. Specifically, the Project will support GEF/LDCF objectives CCA-1, CCA-2 and CCA-3, with a particular focus on CCA-3, in accordance with FAO's comparative advantages. Moreover, the GEF/LDCF/SCCF "*Adaptation Monitoring and Assessment Tool*" (AMAT) has been used in the design of the Project's results framework. AMAT indicators are to be used to measure progress toward achieving the outputs and outcomes established at the portfolio level under the LDCF/SCCF results framework.
86. Finally, this Project will also contribute indirectly to climate change mitigation and to preventing land degradation processes by strengthening sustainable land management (SLM) and land management approaches, and by improving capacity to more effectively coordinate actions across all the ministries of the rural development sector in Burkina Faso.

Alignment with FAO Strategic Framework and Objectives

87. The project is aligned with FAO's new 2014 – 2017 Strategic Objective 2 (SO2): *Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner*. The project is also aligned with *Burkina Faso Country Programme Framework (2013 – 2015)*, contributing to the first two of the three priority intervention areas in the framework.
88. The Project fits precisely within the mandate of FAO in Burkina Faso as defined in the United Nations Development Assistance Framework (UNDAF). This fit is both in terms of thematic interventions and in terms of building synergies. Notably, it supports UNDAF Outcome 1,

³⁰ Article: 8.1 (b).

³¹ GEF/LDCF, 2006, Article: 12.

³² GEF/LDCF, 2006, Articles 13 and 14.

³³ GEF/LDCF, 2006, Articles 18 and 19.

³⁴ GEF/LDCF, 2006, Articles 27-30.

contributing to the following four products under Outcome 1: (i) national structures are better equipped to formulate, implement and monitor sectoral policies and programmes consistent with the MDGs and with the SCADD; (ii) vulnerable populations, particularly women and young people, can take advantage of market access, decent employment, energy services (new and renewable), and credit, and undertake viable income-generating activities; (iii) national structures and local communities practise an integrated approach to sustainable management of natural resources and take into account the effects of CC through adaptation and mitigation; (iv) the national authorities and local communities are better prepared and respond effectively to emergencies and natural disasters.

89. The FAO Representation in Burkina Faso is staffed with technical and operational personnel and can mobilize complementary national and international technical expertise within the pool of projects it manages and provide in-country support for the execution of the proposed project.

SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

90. As seen in Section 1.2 above, within a comprehensive legal and policy framework, there is a large number of strategies, programmes and projects either underway or planned that represent a real opportunity to achieve sustainable rural development in Burkina Faso, in particular for the large number of rural people living on integrated livestock/cropping/forestry activities. This could lead to improved livelihoods, increased food security, improved natural resource bases and overall an increased resilience to climate change. However, the programmes and projects face a series of challenges which, in the baseline, will undermine their effectiveness and impact. These challenges were described in the past Section and can be summarized as: limited local capacity to implement projects; sectoralized approaches and limited experience with integrated tools; and insufficiencies regarding micro-credit, land tenure and agro-meteorological information.
91. Another key challenge faced by the baseline programmes and projects is the absence of adequate practices and measures to adapt to climate change and to increase resilience to climate change. In essence, most programmes and projects were designed to support rural development, and climate change is considered as a risk. The climate change risk is not analysed in depth, and climate change is not mainstreamed into the design of the baseline programmes and projects. Furthermore, the baseline activities are not using the most up-to-date and accurate information and knowledge about climate change in their design and implementation.
92. In order to respond to these challenges, the strategy to this Project has three components:
- *Developing and operationalizing an innovative, integrated, farmer/herder-oriented approach to extension.* This will be achieved through the strengthening and upscaling of Field Schools, notably by complementing existing Farmer Field Schools with Agro-Pastoralist Field Schools (APFS) (elaborated in detail below). The Field School entry point will provide a focus for organizational strengthening, and for empowering local communities with the skills and capacity to address development challenges. The Field School approach will make climate resilience, adaptation to climate change and reversing resource degradation central pillars of the livelihoods of the communities. As a result of this approach, operational measures and practices to adapt to climate change will be developed and promoted across a large number of agro-pastoralist communities in Burkina Faso;
 - *Testing approaches across a geographically and socio-economically diverse set of circumstances.* Activities will take place in four Regions and will work with three general categories of farmer/herder communities. This diversified approach will ensure a maximum

number of lessons are captured. It will also ensure that collectively the tests are highly credible;

- *Promoting and supporting the FFS and APFS to engage with, collaborate with and influence large-scale rural development programmes projects.* Through the APFS and FFS, the Project will empower communities to engage with, and ultimately influence, the large-scale rural development projects that are implemented in their vicinity. This will lead to multiplier effect: the targeted rural development projects will then contribute to increasing climate resilience and supporting integrated crop/livestock/tree systems.

93. These three components of the Project strategy are described in detail in the following sections.

2.1.1 The Integrated FFS and APFS Approach

94. The Farmer Field School (FFS)³⁵ is an approach to extension that is based on the concepts and principles of people-centred learning, and was developed as an alternative to the conventional, top-down, extension approaches. It uses innovative and participatory methods to create a learning environment, including learning networks, in which the land users have the opportunity to learn for themselves about particular production problems, and ways to address them, through their own observation, discussion and participation in practical learning-by-doing field exercises. The approach can be used to enable farmers to investigate, and overcome, a wider range of problems, including soil productivity improvement, conservation agriculture, control of surface runoff, water harvesting and improved irrigation.

95. The FFS approach was originally developed for training rice farmers on integrated pest management in Southeast Asia. The farmers meet every week from planting to harvest, to check on how the crops are growing, look at the amount of moisture in the soil, count the numbers of pests and numbers of beneficial creatures such as earthworms and spiders. They do experiments in the field. Over the years, FFS has evolved to be used on many crops, to address many issues, in many geographical settings across the world. Basically, a group of farmers gets together in one of their own fields to learn about their crops and things that affect them. They learn how to farm better by observing, analysing and trying out new ideas on their own fields. They are supported by a Facilitator, who is trained and may be responsible for more than one FFS. The Facilitators are trained by Master Trainers, through the use of detailed curriculum and training modules. The Facilitators also ensure that a range of top-level scientific expertise is brought to FFS through the Master Trainers and the training modules. The FFS are therefore an ideal approach for linking field to extension services to scientific research, with, most importantly, information and knowledge flowing equally in all direction.

96. The Facilitator of a farmer field school is normally an extension worker or another farmer who has ‘graduated’ from another field school³⁶. The Facilitator guides the group, helps them decide what they want to learn and to think of possible solutions, and advises them if they have questions. The farmers draw on their own experience and observations, and make decisions about how to manage the crop. During a cropping season, the supported group is required to hold two or more open field days to show other farmers what they are doing.

97. The farmers also host exchange visits for members of other field schools, and visit the other field schools themselves. This allows them to share ideas and see how others are dealing with similar problems. At the end of the cropping season, the farmers “graduate”: i.e. they receive a certificate from the field school organizer. The members are then qualified to start a new field school as a facilitator. The curriculum of the field schools includes team building and organization skills, as well as covering special topics suggested by the field school members themselves. The field

³⁵ Source: www.fao.org; FAO 2013 (op cit.)

³⁶ His/her competency is based on field experience and update training and not necessarily on formal training. Notably, in West Africa there is not diplomas, there is no graduation document, nor graduation procedure

schools are a way for farming communities to improve their decision making skills and to stimulate local innovation for sustainable agriculture. The emphasis is on empowering farmers to implement their own decisions in their own fields³⁷.

98. FFS is essentially an empowering approach. A typical FFS will have 15-25³⁸ members, who, through the FFS experience become empowered to identify, analyse and understand challenges and mobilize solutions. This organizational capacity can be applied to many challenges, not just productivity. Notably, the organizational capacity can be applied throughout the value chain – to credit and other financing modalities, to processing, to marketing, and to sales and investments.
99. In Burkina Faso, the FFS approach was introduced by FAO in the mid 1990's. Since, a diverse set of technical partners have supported various forms of FFS in Burkina Faso.

The FFS approach in Burkina Faso has led to the strengthening of technical capacities of at least 180,000 producers in 600 communities per year throughout the country (Programme d'activités annuelles MASA/DGPV/DVRD, 2013). As a result, the yields of rice, cotton and vegetable crops have increased by between 10% and 200%, depending on the crop and location, while generally there has been a reduction in imported chemical inputs, particularly chemical pesticides – these have been substituted by introducing practical measures to use bio-pesticides and botanical extracts. Key topics include how to improve soil fertility management (water and nutrient retention, nutrient balances, and soil structure) through balanced use of chemical fertilizers with inputs of plant residues and composted organic materials. Other topics include the value of leguminous cover crops for food and forage, basic principles of seed selection, planting practices, weed control, and post-harvest issues.

100. To date, the FFS have been introduced in all 13 regions of the country and are present in 42 of the 45 national provinces, thereby covering all three agro-ecological zones considered vulnerable by NAPA.
101. The FAO and other partners have worked closely with the Department for Vegetable/Plant Production (DGPV) of the Ministry of Agriculture. The success of the approach is recognized by the Government of Burkina Faso and it is now being institutionalized through integration into the **National System of Agricultural Extension** («*Système national de vulgarisation et d'appui conseil – SNVACA*»). That is, in the agriculture sector, FFS is now one of the main tools for extension in Burkina Faso.
102. Despite these successes and improvements, the FFS approach in Burkina Faso currently faces several challenges. An important challenge is that the FFS approach in Burkina Faso – as in other parts of West Africa - has until now almost uniquely focussed on a single crop/field approach. The FFS work typically on a single crop in single, small, plot of land. This approach applies appropriately to agriculturalists who focus on a limited number of crops, especially cash crops. However, a great number of farmers in Burkina Faso implement a form of integrated crop/livestock/tree systems. In many cases, their central activity is livestock-raising, and many crops are produced for animal feed. They may also grow many important crops for subsistence. The standard FFS model is not applicable for such farmers because: (i) the technical needs are different, with a need for technical support to livestock raising and to the different crops; (ii) the social approach is different - the livestock and the animal herd and the grazing land are the focus of the approach, and not a small plot of land, and; (iii) as the technical demands are more diverse, the institutional approach needs to ensure that a diverse range of technical support is available to farmers from national agencies and experts. For example, this could include expertise on animal husbandry and rangeland rehabilitation.

³⁷ As mentioned above in West Africa there is no graduation process or certificate. However, a Facilitator can only start a new FFS if s/he has completed a cycle

³⁸ Although mostly limited to 20 in Burkina Faso.

103. A second challenge is that the current system does not adequately address climate change. Although the SNVACA does include modules and training on climate change, it is based on an incomplete understanding of the implications and alternatives. There is a shortage of trainers and facilitators with knowledge of climate change, and a shortage of channels for delivering climate change knowledge to Field Schools.
104. A further challenge is that although FFS has been officially adopted as the extension approach in Burkina Faso, the actual understanding of FFS amongst decision-makers and policy-makers is limited. For example, amongst policy-makers, inadequate attention is paid to: (i) ensuring a bottom-up approach; and (ii) ensuring sustainability, notably through follow-up sessions and constant M&E. Financial sustainability is also a problem, and the FFS in Burkina Faso remains over-reliant on international development partners and NGOs.
105. Solutions to these challenges have been found in other parts of Africa, notably in East Africa. In Uganda, a form of Farmers Field School programmes based on crop–livestock production and land and water management, including disaster and risk management, and a holistic catchment-based approach has been developed.³⁹ The programme has developed community action plans jointly with the pastoralists and agro-pastoralists in order to develop measures that minimize the effects of climate variability on livelihoods. The programme also introduces sustainable crop production intensification, community animal health, natural resource management and alternative revenue generation, within a single Field School approach. It promotes increased use of local landraces, in recognition of their potential for increasing resilience against the vagaries of climate. The schools also provide animal disease surveillance and diagnostic services complementing the dramatic shortage of veterinary services in the region. In a bid to improve animal nutrition and to increase health and resistance of livestock, forage trees legume have been planted, and grasslands oversown with legumes to improve their nutritional value for livestock. Finally, vegetable production and beekeeping have been introduced as alternative livelihood sources.
106. This approach, known as the “Agro-Pastoral Field Schools” i.e. APFS⁴⁰ approach, provides an excellent platform for fostering capacity building and supporting agro pastoralists (males and females) and rural communities in the adoption of more climate-resilient agricultural technologies and livelihoods practices.
107. In Uganda, it has been demonstrated that the APFS approach is particularly adapted to field learning activities that require specific practical hands-on management skills and conceptual understanding over time. The training integrates various topics in a local agro-ecosystem specific context, and involves disseminating new technologies and practices while building on the local experience, such as the ones related to climate resilience, by involving farmers in local technology transfer processes.
108. The APFS have been shown to be flexible in that they can respond to local demands or problems as they are identified. They are based on an “experiential learning cycle” (with duration of 18 months or more, during which farmers’ groups are followed and supported on a weekly basis). During the APFS, groups of farmers/herders are encouraged to meet at regular intervals to go through tailored learning sessions in the fields so as to study the “how and why” of a given context, to identify problems, to consider different options for problem solving and implement the best available solution. The learning process is systematic and guided by a situation-specific but holistic curriculum that follows the natural cycles of the subject. The method of interaction is non-formal and is based on field observations and group discussions, as well as simple experiments, drawings, models, fables and other such tools.

³⁹ See ‘Field Schools for agro-pastoralists’ in “*Mountain Farming Is Family Farming: A contribution from mountain areas to the International Year of Family Farming 2014.*” (FAO, 2013)

⁴⁰ See PPG report: “Sub-Component 2 – Agro Pastoral Field Schools

109. The integral learning-by-doing, validation and experimentation approach facilitates the adaptation of the technologies to local agro-ecological contexts, including accounting for climate risks and production practices and the adoption by farmers in the wider area. Farmers participating in the APFS also gain organizational skills, knowledge and practical skills that carry over beyond the end of the project, thus setting a solid base for resilience and sustainability.
110. A key strategy of this Project is to introduce and develop the APFS approach, in complement to the existing FFS approach, in Burkina Faso. This project will work with agro-pastoralist communities as well as with the extension services for agriculture and livestock-raising. It will work with experts on adaptation to climate change and climate resilience. The Field School approach is a process of information, partnership building, reflection, assessment, prioritization, planning, addressing needs at various levels (farm, community, district, national).

2.1.2 Testing in Diverse Sites: the Project Intervention Area and the Project Sites

111. The Project will test approaches across a geographically and socio-economically diverse set of circumstances. Activities will take place in four Regions and will work with three general categories of farmer/herder communities. These are described in detail in Appendix 10 and are summarized in the following paragraphs. References are provided in detail in Appendix 10.

Regions

112. A recently conducted sensitivity analysis indicates that the Sahel zone is the most exposed to climate risks. Livestock raising and related livelihoods will be particularly affected. The Sudan-Guinea zone (South west) is considered the least vulnerable in Burkina Faso.⁴¹ For this reason, this Project will focus activities into four regions (three in the Sahel, and one in the Sudan-Sahel). I.e: the project will focus its activities into the following four Regions: Sahel, Eastern, West Central and North Central (see Map in Figure 2).

⁴¹ National Climate Change Adaptation Plan – Livestock Raising Sector (Government of BKF, 2013)



Figure 2: Map showing the location of the four intervention Regions in Burkina Faso

113. The Sahel Region region has a high population of livestock and is composed of four provinces: Seno, Oudalan, Yagha and Soum. The provinces of Seno, Soum and Oudalan are further to the north and are characterized by a Sahelian climate with an average annual rainfall of less than 400 mm. While Yagha, within the Sudano-Sahelian zone, has an average annual rainfall of between 400 and 600 mm. All four provinces are characterized by the presence of tree species less than seven meters high and a grassy carpet of herbaceous steppe. Tiger bush, characterized by thick vegetation of shrubs and bushes, is poorly represented, and mainly limited to the provinces of Soum and Oudalan. Gallery forests are found along the rivers and ponds in the provinces of Seno, Soum and Oudalan.

114. APFS activities in the Sahel can be implemented in the two existing Planned Pastoral Zones of Ceekol-Naggé and Sambonay. Previous studies (Kiema, 2012) in Ceekol-Naggé have shown a very low carrying capacity in most pasture units. The study revealed an average biomass production in most units of 329.5 ± 1541.7 kg DM/ha/year⁴². The capacity, deduced from forage production, of all grazing units was an average of 0.225 ± 0.144 TLU/ha/year and in particular for the low lying areas it was only 0.048 ± 0.055 TLU/ha/year⁴³ in the gritty glaze. These values indicate that there is a need to develop the area in order to get a strong and secure livestock production in a relatively small area (Kiema, 2012). Communities have reported an increasing migration southwards towards Fada-Gourma because the standing ligneous trees of the Acacia species have no fodder.

115. The Eastern Region is composed of five provinces: Gourma, Gnagna, Komondjari, Tapoa and Kompienga. The region is a destination and/or a transit zone for many transhumance populations

⁴² Dry matter per hectare per year.

⁴³ Standard unit of livestock

that migrate with their cattle. This often causes tensions between farmers and pastoralists, particularly during the rainy season. Although this region has the second highest surface area in the country and one of lowest population densities⁴⁴, the population growth rate is 2.9% per year which is higher than the national average. The population growth, particularly in the southern provinces, is due to the high immigration from the north (where there is increasing erosion, lack of trees and vegetation cover, and low soil infertility). This growth threatens to escalate degradation of natural resources as the migrants and transhumance population bring with them unsustainable natural resource management practices, such as cutting down trees and “slash and burn”.

116. APFS activities in the region can be implemented in the Planned Pastoral Zone of Tapoa-Boopo that stretches across the provinces of Gourma and Tapoa. This Zone hosts pastoralists from the provinces of Komondjari and Yagha as well as from neighbouring Niger. Currently, close to 60 percent of the transhumant community comes from Niger. The Zone lies near the town of Matiacoali.
117. The Central West Region borders with Ghana. The climate system varies with latitude. The provinces of Boulkiemdé and Sanguié are subject to the North-Sudanian climate with an average annual rainfall of between 600 and 1000 mm, while the provinces of Sissili and Ziro are subject to the south Sudanese climate with an average annual rainfall exceeding 1000 mm. In general, there has been an irregular and poor distribution of rainfall throughout the Region in recent decades. This negatively influences the development of agro-forestry-pastoral activities. The climatic conditions and subsequent livelihood practices have exacerbated degradation.
118. The vegetation of the Central West region is characterized by three main vegetation types of undulating intensity from north to south with bushland, savannah and gallery forests or woodlands. The most common tree species include *Butyrospermum paradoxum*, *Parkia biglobosa*, *Lanea microcarpa*, *Acacia albida*, *Tamarindus Indu* and *Adansonia digitata* among others. The grass cover is essentially dominated by *Andropogon gayanus*. Other common species include *Butyrospermum parkii*, *Parkia biglobosa*, *Anogeissus leiocarpus*, *Pterocarpus erunaceus*, *Burkea Africana*, *Asoberlinia doka*, *Tamarindus indica*, *Croospterix febrifuga*, *Andansonia digitata*, *Combretum* sp.
119. APFS activities may be implemented in farming areas that face degradation of vegetation, lack of drinking water points and cattle tracks. These factors are obstacles to the agro-pastoral prosperity. To contain land degradation and to secure pastoral activities, in 1985 a Pastoral Zone covering 40,000ha was established, located in the Departments of Bieha and Cassou. Land pressure in this area is now very high and this may be negatively impacting pastoral activities. The area also has many small Pastoral Community Zones – a key tool for sustainable rangeland and land management. APFS activities can be conducted within these pastoral community zones in each commune in close collaboration with stakeholders.
120. The Central North Region has a typical vegetation characterized by shrub steppe in the north which progresses into wooded steppe, then bush land and ultimately savannah in the south. Forest resources include a fairly diverse floristic composition covering an area of more than sixty thousands (60,000) hectares. Three livestock production systems exist:
 - Transhumant system: characterized by cyclical migration in search of pasture, water points and salt licks. This type of farming is especially for cattle, goats and sheep;
 - Agro-pastoral systems: characterized by a sedentary livestock-raising and farming. This mainly applies to small ruminants; and,
 - Semi-intensive system: is the least practiced in the region and mainly involves milk production and the fattening of cattle and sheep.

⁴⁴ 26.2 inhabitants/km²

121. The practice of farming in the North Central region is faced with the quite common problem of cattle rustling. In addition to these difficulties, it must be emphasized that access to markets and the lack of infrastructure constrain development. The Region is characterised by an extensive production system that, due to degradation, has become more subsistence farming. It is a low input system that is essentially dependent on weather conditions and yields are generally low. The Region is also faced with overexploitation of natural resources due to human action and erratic weather conditions that have significantly reduced the natural potential of the region. As a result of the accelerated degradation of vegetation and soil, there has been a significant decrease or disappearance of certain plant and animal species, and a drying up of rivers and lakes in the region.
122. Unlike the Sahel region, there are no formal Planned Pastoral Zones in the Central North region but there are recognized pasture areas at the village level (i.e. Pastoral Community Zones). These areas of pasture are tacitly negotiated between different users. However, in reality, the grazed areas are often heavily degraded with very low carrying capacities necessitating rehabilitation to recover land and potential pasture lands.

Project Intervention Sites

123. Identification of Interventions Sites The Project will focus on communities and sites across the four regions. These communities and regions will be identified and selected through a participatory process based on agreed criteria (this process is described under Outcome 2, Output 2.1). The Project will work with a target 500 Field Schools in 500 communities across the four Regions.

Field School Communities

124. The project will work with the following three types of Field School communities:
125. Communities based around transhumant livestock-raising systems. These are predominantly in the Sahel and Eastern Regions. Livestock-raising is characterized by cyclical migration in search of pasture, water points and salt licks - especially for cattle, goats and sheep. The community activities are spread out over a vast area and the herders travel for long periods with the livestock. Other members of the community are involved in food production (for human consumption and animal feed). The community may also be involved in rangeland regeneration activities.
126. Since the 1960's the government has been establishing the series of Planned Pastoral Zones to support these communities. These Zones are subject to strict management regimes, governed by a Specifications Note and a Management Plan. At present, 26 of the Zones are operational, covering 761,000 hectares, and a further 160 are planned (covering 1.625 million hectares). In principal, live-stock-raisers officially installed in these Zones benefit from a strong extension input and a strong network of livestock infrastructure (water points, vaccination pens, sale points for inputs, small milk collection units and so on).
127. Communities based around semi-intensive, non-transhumant, livestock-raising systems. These are predominantly in the West Central and North Central Regions. Although livestock-raising is the predominant economic activity, the communities are not transhumant and the areas covered by herds are smaller. However, economic (and cultural) life is centred around the herd, not the agricultural land or cultivation activities. Grazing is typically structured around *communal pastoral zones*, managed at the commune level. Land for animal feed and food production is also specified in the communal land maps and plans.
128. Communities based on agriculture These communities are in more fertile areas with more reliable climates and are able to perform agricultural work, notably cultivate rice, cow-pea, peanut and vegetables. However, all the farmers also have livestock – as a source of additional income

and food security. Moreover, the livestock numbers are generally increasing. In most cases, these communities already receive FFS support through the national system (SNVACA), and some may have had previous support from FAO projects or other international partners. However, the previous extension support was crop-focused, it did not address the ecosystem in an integrated manner, and it did not support the livestock raising activities. It focused on a small plot of land managed by the Field School. Moreover, in many cases the FFS have become inactive and are in need of re-energizing.

129. In such communities, the project will strengthen the existing approach to FFS. It will ensure climate resilience plays a central role in the Field School and the community becomes climate resilient. It will include integrated technical support to cover areas such as the introduction of adapted crop varieties, land management, water management, catchment protection, and increased biodiversity and animal husbandry. It will provide organizational support, directly assisting communities to address issues such as land tenure, micro-credit, and improving the role of women. It will assist the Field School to link-into commune planning and development processes and obtain greater levels of development support.

2.1.3 Multiplying the Climate Resilient Approach through Baseline Projects

130. Building on the work with APFS and FFS, the Project will empower communities to engage with, and ultimately influence, the large-scale rural development projects that are implemented in their vicinity. This will ensure the large-scale rural development projects are more responsive to local needs, and are more successful. Through this strategy, this Project will generate a multiplier effect: the targeted rural development projects will then contribute to increasing climate resilience and supporting integrated crop/livestock/tree systems.

131. As discussed in Section 1.2.1, the Burkina Faso Government and development partners are implementing a series of rural development and sectoral projects across Burkina Faso, including in the Regions supported through this Project (see Table 1). These projects will deliver development support to communities. Table 1 list programmes and projects that have a strong geographical complementary with the present Project. The most pertinent of these projects are:

- The Improving Agricultural Productivity and Food Security Project (PAPSA);
- The National Food Security and Nutrition Programme in Burkina Faso (PSAN-BF) – with diverse components supported by MASA, FAO and other partners;
- The Participatory Management of Natural Resources and Rural Development (NEER-TAMBA) Project;
- The Integrated Central Plateau Rural Development Project (PRDI);
- The Bio Digester Programme;
- The Ouagadougou Peri-Urban Dairy Sector Development Project;
- The Improving Zebu Azawak Raising and Sustainable Pasture Land Management Project;
- The Supporting Zebu Peul Development in the Sahel (ZEPESA) project;
- Harmonized Program of Support to the Forestry Sector (PASF);
- The Local Environment Governance Consolidation Project (COGEL);
- The Agro-Sylvo-Pastoral Value Chain Support Programme (PAFASP);
- The Project on Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso.

132. This Proposed Project will support APFS and FFS. The Project will help and empower the Field School to engage into the above-listed projects. It will ensure that the integrated, climate resilient, participatory approaches that are developed through this Project are mainstreamed through the above-listed projects, thereby having a significant multiplier effect, and ensuring that a far larger community indirectly benefits from the adaptation benefits.

Technologies to be Introduced

133. As mentioned previously, national and international partners have been working on natural resource management in Burkina Faso for several decades, introducing and testing new and modified approaches, practices and technologies. Many of these have focussed on increasing resilience to climate variability and climate change. One example is provided in Appendix 8.
134. Hence, it is an assumption of this proposed Project that most agricultural and pastoral technologies (agricultural methods, species/varieties/livestock management methods) are available in Burkina Faso and are mostly understood in a technical sense – at least by the scientific community. However it is accepted that there are barriers to their uptake by local communities and farmer groups. By working with and empowering the local communities and farmer groups (through an innovative approach), this Project will directly increase the uptake of appropriate agricultural and pastoral technologies.

2.2 PROJECT OBJECTIVE

135. The objective of the Project is *‘to enhance the capacity of Burkina Faso’s agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS’.*

Objective Indicator

136. The indicator is the number of hectares benefitting from improved sustainable land management and therefore improved resilience and adaptation to climate change. The targets are:
- 5000 hectares of extensively grazed rangelands (including 800 hectares of naturally assisted regeneration);
 - 5000 hectares of semi-intensively grazed rangelands; and,
 - 5000 hectares of agricultural land, used for the cultivation of crops for human consumption (focusing in dry crops) and crops for animal feed.
137. The Project is to be implemented through three technical Components.⁴⁵
138. Component 1 is *the introduction of improved climate-resilient agro-pastoral practices in the framework of the National Adaptation Programme (PNA) and the National Rural Sector Programme (PNSR).* This can be considered as laying the groundwork for the other components of the Project. This component covers issues such as awareness raising, training high level people, partnership building, strategy development and preparation of background technical and academic guidance documents that can guide and support technical activities in later components. A great deal of the focus is at the national level as well as at the level of the four participating regions.
139. Component 2: is the *‘improving agro-pastoral practices through Field Schools (FS) in the framework of on-going FAO-supported projects and other MRAH, MASA and MEDD’s “projets sous tutelle”.*’ Under this component, the innovative APFS and FFS will be developed, tested and upscaled, leading to direct benefits to hundreds of poor and marginalized communities across the four Regions. The focus is the community level.
140. Component 3 is *the mainstreaming climate change resilient agro-pastoral and agricultural systems into sectoral policies and into local development plans - in conformity with the PNA and*

⁴⁵ There is a fourth, non-technical, component “project monitoring and evaluation”

the PNSR. This is the institutionalization of the enhanced Field School approach - as needed through national/sub-national policy, programmes, institutions, budgets, and coordination mechanisms. This will aim to ensure the sustainability of the project's impacts, at all levels.

2.3 EXPECTED PROJECT OUTCOMES, INDICATORS AND TARGETS

141. In order to deliver the above-mentioned Objective, and in line with the three Components, there are three Outcomes:

Outcome 1 Awareness and knowledge on climate-resilient agro-pastoral practices (including adoption of new varieties and cultivars, and adapted soil and water and animal management) established at national and regional levels.

142. Outcome 1 builds the foundation on which the grass-roots and operational climate change adaptation measures can be developed and implemented through Outcome 2.

Indicator

143. *The indicator⁴⁶ is the number of partners committed to contributing to implementation of FFS/DFP Strategy.* This Strategy is first developed under this Outcome. If partners commit to it, that will indicate that it is a well-prepared strategy, and that the Project's work with regards to awareness raising, building knowledge and partnership building has been successful.

The baseline is that 14 potential partners have been identified (see list under Output 1.1 description below). The target is for at least 50% of the partner programmes to enter into a written commitment to supporting implementation of FFS/DFP Strategy by Project end.

Outcome 2 Broad adoption by agro-pastoralists of, financially sustainable, gender sensitive climate-resilient agro-pastoral practices and technologies.

144. The practices (all to be developed through the Field School approach) to be adopted are likely to include:

- Integrated (crops/trees/livestock) production systems with transhumant populations;
- Integrated (crops/trees/livestock) production systems with sedentary populations (through both new and modified Field School);
- Use of Diversity Field Flora approach to secure land management benefits;
- Improving land tenure security in order to deliver land management benefits;
- Micro-finance as a modality to support climate resilient adaptation practices;
- Farmer use of up-to-date, accurate farmer-oriented weather and climate information.

145. Outcome 2, the largest of the Outcomes in terms of scope, is the development and extension of climate resilient and climate change adapted practices and measures with agro-pastoralist communities across Burkina Faso.

Indicators

146. Two indicators have been selected⁴⁷:

⁴⁶ Indicators are cited in this section. For details of baseline values, targets and milestone, see resources framework in Appendix 1.

⁴⁷ Note, these all form part of the LDCF AMAT indicator framework

147. (1). % of targeted groups adopting adaptation technologies by technology type (disaggregated by gender). Preliminary baseline figures and targets are provided for this indicator. These preliminary figures will be verified/enhanced through the community assessments in Output 2.1.

The baseline figures are provided for four villages in two regions, for two technologies, as follows:

Region	Percentage adopting			
	Composting pits		Livestock fattening	
	Men	Women	Men	Women
Central North	30.1	0	0	16.5
Sahel	14.8	0	3.1	6.1

The target is to increase this by 100%.

148. (2). Types of adaptation technologies transferred to targeted groups.

The baseline is (i) 16 types of climate resilient, *agricultural* technologies are widely adopted ⁴⁸ (ii) There is negligible adoption of climate resilient technologies in the *livestock* sector. The target is to have at least **five** new types of livestock technologies (or management practices) adopted and being utilised.

Outcome 3 Implementation of sectoral plans and local development plans that contribute to climate change resilience for agro-pastoral and agricultural communities.

149. Outcome 3 is the institutionalization of the successes achieved and lessons learnt through Outcome 2. Outcome 3 focusses in particular on the sustainability of project impacts.

Indicators

150. Four indicators have been selected⁴⁹:

151. (1) *Adaptation actions implemented in national/sub-regional development frameworks (no. and type)*. National development frameworks are considered.

Baseline, with regards to livestock, is that there are **no** CC-A actions implemented.

Target is for two national livestock related *policy* initiatives (i.e. SNVACA and one other) to be implementing CC adaptation activities by the end of the Project.

152. (2) *Development frameworks that include specific budgets for adaptation actions (list type of development framework and briefly describe the level of the action)*. Commune development plans (PCD) are considered.

At baseline, **none** have a budget for livestock related CC adaptation actions.

The Target is to have 50 PCD with a budget for livestock related CC adaptation actions

153. (3) *Number and type of targeted institutions with increased adaptive capacity to minimize exposure to climate variability*. The institutions may include commune, provincial and regional

⁴⁸ These are: Stone barriers ; filtering dykes ; grassy strip ; contour ploughing; embankment protection; windbreaks/shelterbelts; subsoiling; scarification under wet conditions; zai holes; half-moons; fertilization using a drip irrigation system; composting and use of compost; conservation agriculture; agro-forestry.

⁴⁹ Note, these all form part of the LDCF AMAT indicator framework

government agencies, as well as partner-projects, and non-governmental organizations or civil society organizations;

Baseline: Technical departments in Regional governments, provincial governments and communal governments have basic understanding of climate change and are not able to apply to their work.

Target: In at least 2 regions, 2 provinces and 10 communes, technical departments are applying climate change knowledge in their work related to livestock raising.

154. (4) *Number of staff trained on technical adaptation themes – (disaggregated by gender).*

Baseline: Technical staff in concerned Regional governments, provincial governments and communal governments have had no formal training on climate change;

Target: At least one staff member in 4 Regional governments, 4 provincial governments and 20 communal governments have received training related to climate change and integrated crop/animal/tree management systems.

2.4 PROJECT OUTPUTS AND ACTIVITIES

155. Project Outputs and Activities lead to three substantive Outcomes. Outputs under Outcome 1 build the foundation for all technical activities under Outcome 2. Outputs under Outcome 1 develop tools such as manuals and maps, they train managers who will then become supportive of the programme of actions in Outcome 2, and they develop an implementation strategy.

156. Outputs under Outcome 2 are the main technical implementation of the Project. They undertake a full cycle of participatory support to communities through the Field Schools. This starts with the participatory identification of sites, through the training of several layers of technical and organizational participants, through the identification and then implementation of climate adaptation actions in each Field School – leading to community level adaptation and resilience. The anticipated scope of actions to be implemented under Outcome 2 is very broad, it includes technical, organizational, institutional and financial support measures. Local capacity building is integral to all actions. In Outcome 2.

157. Outcome 3 focuses on the institutionalization of successes under Outcome 2 and paves the way for dissemination in later years. It focusses developing individual and organizational capacity at national and regional level, in order to establish the capacity and platforms for sustainability and replication.

OUTCOME 1

Output 1.1 Core group of managers (national/regional) with knowledge of improved climate-resilient agro-pastoral practices.

158. This Output focuses on planners and decision-makers from the agricultural and agro-pastoral sub-sectors. This will include key persons in MASA and in MRAH. It will include key persons in the four target Regions. It will also include the Project Coordinator and lead technical people in the following national programmes and projects: PNVACA, PSAN-BF, PNSA, PAPSA, NEER-TAMBA, PRDI, PNB2 Program, Ouagadougou Peri-Urban Dairy Sector Development Project, Improving Zebu Azawak Raising and Sustainable Pasture Land Management Project, ZEPESA, PASF, COGEL, PAFASP, and Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso.

159. The understanding and consequent support of these stakeholders will facilitate activities in Outcome 2 and facilitate subsequent dissemination of lessons learnt.

Baseline

160. In the baseline, the key decision-makers and planners have a basic awareness of climate change. They also have a basic understanding of the Field School approach, but limited to the traditional crop/plot focused approach. They are not aware of the full potential of Field Schools.

With Project support

161. With LDCF support through this project, the key decision-makers and planners will develop a thorough understanding of climate change, but more importantly of how it relates to their work, and of how to integrate climate change adaptation into their work and their work-programmes. Moreover, they will have a detailed understanding of Field Schools, including integrated Field School approaches that are appropriate for agro-pastoral communities. As a result of this increased understanding, these key decision-makers and planners will promote climate change adaptation and integrated Field School approaches, and will be open to integrating these measures into their projects and programmes.

162. Activities will include: defining the concerned stakeholders; holding an initial information and awareness raising workshop; and providing training to at least 60 managers.

Output 1.2

a) Map⁵⁰ of best practices, of climate resilient cultivars/varieties, and of institutional support mechanisms collected from across the sub-Region;

b) An agreed series of best practices and of appropriate varieties/cultivars to be used in BKF. Prepare an inventory of climate resilient BPs and climate resilient varieties/cultivars.

163. This Output aims to collect information on climate resilient practices, varieties, cultivars, breeds and livestock and rangeland management practices and support mechanisms that are pertinent to the Project intervention area and publish it in the form of electronic/non-electronic publications. This Output is an important foundation for future activities, both in Outcome 1 and Outcome 2. Hence, this Output shall be prepared very early in the workplan, well within the first year.

Baseline

164. In the baseline there are several organizations (e.g. INERA, CILSS) collecting related information and several documents providing case studies. However, there are no publications that (i) focus on the Project intervention area (ii) focus adequately on agro-pastoralist needs (most work has been done on agriculture crops and practices) (iii) are comprehensive (iv) are accessible in a format suitable for farmer-herders (most work has been done for academic purposes).

With Project support

165. The alternative will be user-friendly publications, both electronic and traditional, with a focus on climate resilience, on the Project intervention area and on the needs of agro-pastoralist. This will consist of maps and inventories. There will be language versions. Electronic versions will be updated regularly.

166. Activities will include: (i) preparation of an inventory of past and present support mechanisms to agro-pastoralists, with details of success factors; (ii) preparation of draft inventories and hold four regional workshops to validate the inventories; finalise the maps/inventories; and (iii) publish/disseminate through a catalogue and an on-line e-catalogue.

⁵⁰ This is referring to a simple map for illustrative purposes, no need for high technology GIS type approaches.

Output 1.3 A strategy for the adaptation of the FFS approach and the introduction of Diversity Field Flora (DFF).

167. This Output will define how the Project's work on developing Field Schools will build on the significant previous and ongoing work on Field Schools in Burkina. This Output will define the institutional and technical strategies for Outcome 2, the strategies for developing partnerships, and the approach to sustainability and upscaling.

Baseline

168. In the baseline, the Field School approach in Burkina Faso is focussed on the agriculture sector and is focussed on a small number of important crops. The standard approach whereby the School focusses learning activities on a relatively small land-plot has been adopted by the Government extension systems. In the baseline, there is some attention to climate change, but it is limited to the health and productivity of a small number of crops.

With Project support

169. This Output will be a strategy to test and develop an integrated, holistic Field School approach. This approach will notably be highly appropriate to agro-pastoralist communities, it will have a thorough approach to climate change adaptation by addressing overall eco-system resilience and conservation/sustainable use of agro-pastoral biodiversity, it will be flexible to match the diverse set of socio-economic-cultural and geographical circumstance. Gender will be fully mainstreamed into the approach.

170. Activities will include:

- An analysis of the gaps and opportunities for improving knowledge management;
- A gender assessment of Field Schools in Burkina Faso and the project intervention area, related to FFS/DFF;
- Four regional workshops to raise awareness of the integrated, holistic FFS approach;
- Prepare in a participatory manner a draft strategy for FFS/DFF and negotiate with partners;
- Hold annual regional meetings to review and updated the strategy as appropriate.

OUTCOME 2

Output 2.1 Intervention zones, partners and partner-communities identified.

171. Under this Output a series of participatory studies and assessments ranging from the Region down to household level will lead to a detailed definition of the project beneficiaries and of their needs related to climate resilience.

Baseline

172. In the baseline, communities across the Project Intervention Area do not benefit from adequate extension or technical support. In the baseline, general climate resilience assessments are undertaken at the regional level, and commune level assessments are undertaken in some communes. However, these baseline assessments are mostly too general, covering all aspects of the socio-economy, and do not provide sufficient understanding as a basis to design interventions in agro-pastoralism.

With Project support

173. The Project will support a series of participatory assessments. First, at regional level, in each of the four Regions, workshops will be held to define the most appropriate intervention zones in the region (this activity combined with the regional workshops in Output 1.3). In both Sahel and Eastern Regions, this is likely to be one of the existing Planned Pastoral Zones. For both Central West and Central North Regions, this is likely to be a contiguous area including both small Pastoral Zones and Communal Pastoral Zones.

174. The identification of the project intervention zones will be undertaken by applying commonly agreed criteria and conditions, such as:

- Social acceptance;
- Absence of serious or long-standing social conflicts;
- Availability of planting material and other inputs;
- Active support from the provincial technical services;
- Commitment of local government agencies;
- Availability of potential partners (including the identified co-financing partners) – including the availability of local NGOs or associations to participate in implementation;
- The presence of large scale rural development projects for up-scaling;
- Technical factors, such as the number of livestock and trends, the availability of tree forage, the degree of environmental degradation, the animal disease situation; and availability of water points.

175. The choice of areas will also ensure diversity in geographical coverage and climatic conditions, and avoid duplication with similar initiatives.

176. After the identification of the most appropriate intervention zones in each of the four Regions, a rapid climate change resilience assessment will be undertaken of all the communities using the natural resources in the identified zones. This will lead to the identification of partner communities in each zone – i.e. to the identification of a total of approximately 26,000 farmer-herder families that will be the beneficiaries of Outcome 2. Subsequently detailed climate resilience assessment will be undertaken of the farmer-herder families, using, inter alia, the following tools where appropriate:

- Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP). This is a tool for the self-assessment of the climate resilience of farmers and pastoralists;
- TOP-SECAC. This is a tool kit with 11 tools to be used at various stages including the analysis of vulnerability and adaption capacities;
- Improving Gender Equality in Territorial Issues (IGETI). This is an approach to improving gender equality in issues related to territory;
- Socio-Economic and Gender Analysis (SEAGA). This is an approach that places great emphasis on the importance of the linkages between economic, environmental, social and institutional patterns;
- Participatory and Negotiated Territorial Development (PNTD). This participatory land delimitation approach seeks to support community tenure security⁵¹ and is based on participation and raising awareness on people's rights and their local customary use of natural resources.

Output 2.2 Master Trainers for APFS and FFS

⁵¹ The approach is described in the document “Participatory land delimitation: An innovative development model based upon securing rights acquired through customary and other forms of occupation” Land Tenure Working Paper 13, FAO, 2009.

177. Under this Output, a cadre of APFS and FFS Master Trainers will be prepared. These Master Trainers will use the training material from Output 2.3 to train the Facilitators under Output 2.4.

Baseline

178. In the baseline, there are Master Trainers for Field Schools in Burkina Faso. In the baseline, they do not receive sufficient refresher training and so it is a challenge for them to keep abreast of the latest technological developments, notably related to climate change. Moreover, in the baseline, the Master Trainers in Burkina Faso are only trained in the farmer-field approach focussing on a single crop and a small plot, they do not have the skills and knowledge related to integrated agro-pastoralist systems and communities.

With Project support

179. The Project will establish ten (10) highly qualified Master Trainers fully capable of training Facilitators in all aspects of FFS, APFS and DFF. At least three (3) of the Master Trainers will be women.

180. Given that the APFS is innovative to Burkina Faso, there is a lack of the required skills and knowledge. Hence, an International Project Technical Advisor (IPTA) will be recruited to work half time on the Project. It is most likely that the IPTA will be from East Africa and have worked on similar projects in East Africa. It is also highly likely that the IPTA will be shared with the LDCF project “*Strengthening resilience to climate change through integrated agricultural and pastoral management in the Sahelian zone in the framework of the Sustainable Land Management approach*” in Mali, which has very similar technical requirements and is due to start at approximately the same time.

181. The IPTA will take the lead in developing APFS and FFS training modules which cover crop/livestock/tree integration approaches. Climate change, adaptation and climate resilience will be fully mainstreamed through these modules. The IPTA will then take the lead in providing training to the Master Trainers. If possible, visits to similar processes in Mali and/or East Africa will be organized.

182. The project will organize a comprehensive capacity building system for the implementation of the adapted FFS/APFS. The capacity building will be designed to cover all needed technologies and approaches required for the project area. The training will predominantly focus on use of adapted varieties, soil and water management, land management, agro-pastoralism and livestock management, animal health, and it will be provided by national experts in collaboration with local research personnel. In order to facilitate exchange learning, an exposure visit to APFS in Uganda or another East Africa country may be facilitated.

Output 2.3 CCA and other best practices integrated into APFS and FFS curricula/training

183. The Output will be a revised curricula and training modules for Field School. These will cover the range of integrated crop/livestock/tree systems, from those which have agriculture and cultivation of a small number of crops as the main economic activity, to extensive, semi-transhumant livestock raising systems with limited crop cultivation mostly for animal feed.

Baseline

184. In the baseline, the SNVACA has a FFS curricula and a complete set of training modules, prepared based on support provided by FAO in the 1990’s and early 2000’s. Again, this material focuses on the farmer-field approach and it applies to single crops and to small plots of land. A

module on climate change exists but need to be expanded to include a wider range of resilient activities. In the baseline, the curriculum/modules are rarely updated.

With Project support

185. A revised curricula and modules will be prepared covering the range of integrated crop/livestock/tree systems currently existing in the four Regions. For example, there will be modules covering: rangeland soil fertility, soil erosion protection, composting techniques, pit manure, organic manure through crop residues, the use of leguminous crops, grassland rehabilitation, and introduction to NTFP, etc.⁵² They will also cover animal husbandry. The database, maps and inventories from Output 1.2 will be a basis for much of the technical material in these training modules.

186. The revised modules will have gender mainstreamed. With regards to climate change, the likely effects of climate change will be integrated into each and every module.

Output 2.4 APFS and FFS Facilitators trained in integrated crop/livestock/tree systems

187. Under this Output, under the supervision of the IPTA, the Master Trainers (from Output 2.2) will train approximately 1000 Facilitators, using the curricula/material from Output 2.3.

188. This is an ongoing process, the facilitators will be trained in small groups, before starting their work as facilitators with FFS and APFS.

Baseline

189. In the baseline, there is a large number of Facilitators for Field School in Burkina Faso. In the baseline, they are only trained in the farmer-field approach focussing on a single crop and small plot; they do not have the skills and knowledge related to agro-pastoralist systems and communities.

With Project support

190. The Project will train at least 1000 Facilitators. At least 30% of these will be women. The vast majority (at least 80%) will be new facilitators, i.e. farmer-herders who have not received training before. These new facilitators will be identified through the assessment processes in Output 2.1. There will be a small number of existing facilitators, who will have their skills/knowledge enhanced and upgraded to cover integrated approaches, agro-pastoral activities and climate change resilience.

191. All facilitators will be trained to work on integrated crop–livestock–tree production systems, addressing intrinsically ecosystem, land and water management, and addressing broader socio-community issues such as product diversification, gender, land tenure, etc.

Output 2.5 Pastoralist/farmers trained and implementing new practices

192. Under this Output, the facilitators (from Output 2.4) will train at least 26,000 farmer-herders on the implementation of new, climate-resilient, integrated crop–livestock–tree systems.

Baseline

⁵² Other possibilities include: Cover crops, climate stress-tolerant cultivars/species of cereals, legumes, and dual purpose forage crops for human and animal consumption, new varieties and cultivars and adapted soil and water management practices, improving dryland cereals and dryland crops production.

193. In the baseline, the farmer-herders in the project intervention area do not benefit from extension support.

With Project support

194. The farmer-school approach to training will be used. Each Facilitator will work with a small group (15 – 30) of farmer-herders over a period to plan, prioritize, assess, design, implement, and validate activities, and so overcome local development challenges and improve production and livelihoods. Through this approach, the Facilitator will demonstrate and hand-over practices, tools, methods, cultivars, breeds and varieties.

195. Each farmer-herder group is faced with a unique set of challenges and has access to a unique set of natural resources. Hence the measures to be introduced will be unique to each group. However, in general, three categories of farmer group can be defined:

(i) Agro Pastoral Field Schools

196. In these communities, the main activities will be:

- On the job training of pastoralists by Facilitators over a period of 18 months. In reality each group will be supported by 2-3 Facilitators, including one responsible for animal husbandry and one responsible for agricultural production. For the many pastoralists that are semi-transhumant, as they will be typically be moving with their herds, the location of the Field School will also move with the herd.
- Under the supervision of the Facilitators, the farmer-herders will implement new practices such as:
 - crop/trees/livestock cycle management integrated into transhumant communities⁵³;
 - crop/trees/livestock cycle management integrated into sedentary communities⁵⁴;
 - grassland rehabilitation undertaken through the use of local species and improved local⁵⁵ cultivar (with high palatability and productivity) based on community knowledge;
 - community guardianship over grassland and bushland species in rehabilitated areas, over a two year period.;
- The preparation of APFS community action plans. These plans will set out the targets, planned activities and resource needs of the APFS. These plans will be linked to existing Commune Development Plans (PCD) as they exist.

(ii) Farmer Field Schools

197. In these communities, the main activities will be:

- On the job training of farmers by Facilitators over a period of 12 months;
- Under the supervision of the Facilitators, the farmers will implement new climate resilient practices such as: the introduction of adapted varieties and cultivars; practices in FFS soil

⁵³ Typical practices to be considered are: rangeland soil fertility, soil erosion protection, composting techniques, pit manure, organic manure through crop residues, the use of leguminous crops, grassland rehabilitation, introduction to NTFP, cover crops, use of local climate stress-tolerant cultivars/species of cereals, legumes, dual purpose forage crops for human and animal consumption, improving dryland cereals and dryland crops production.

⁵⁴ Ditto

⁵⁵ Local = seeds obtained from local farmers/herders who use traditional collection and preservation systems

erosion protection, composting techniques, pit manure, organic manure through crop residues, the use of leguminous crops, introduction to NTFP, etc. small animal husbandry. Other techniques may include: cover crops, climate stress-tolerant cultivars/species of cereals, legumes, new varieties and cultivars and adapted soil, water management practices improving dryland cereals and dryland crops production;

- The preparation of FFS community action plans. These plans will set out the targets, planned activities and resource needs of the APFS. Where possible, these plans will be linked to existing PCD.

(iii) Diversity Field Flora

198. DFF are a specific form of Field School with the specific objective of protecting and enriching the species and genetic diversity available to farmer-herders through the Region (See Box 1).

The Diversity Field Fora (DFF) approach builds on the concept of farmer field schools. The DFF approach was developed in low-heritability environments in West Africa to strengthen the capacity of farmers to analyze and manage their own crop plant genetic resources (Bioversity International 2008). Low-heritability environments are environments where it is difficult to establish seedlings and breed adaptive varieties due to crop-growing environments being quite heterogeneous, and to environmental conditions, such as unpredictability, or the uncertainty in seasonal distribution of rain (such as in the Sahel). The participatory approach generates options that farmers are able to use instead of technology transfer from outside sources.

The DFF consists of men and women organized in teams (usually 25-30 people) by gender to assess crop genetic diversity. The farmers' groups test both improved and local cultivars. Farmers are trained in seed multiplication, and seeds of the selected cultivars are multiplied and disseminated within and outside the groups. The approach takes into account that any differences in the selection criteria between women and men. Through weekly meetings, farmers are informed about international and national conventions/legislations relevant to exchange of plant genetic resources [for example, the Convention on Biological Diversity (CBD), and the International Treaty on Plant Genetic Resources for Food and Agriculture], and national seed regulations.

The informal seed system is used to supply an evolving diversified gene pool through farmer exchange and selection to enable a continued adaptation to changing conditions. The DFF approach provides a forum for farmers to exchange ideas about the use, management, selection, and conservation of crop genetic diversity, and offers training opportunities that produce a new paradigm for partnerships among farmers, researchers, and extension services (Smale et al. 2009).

Box 1: Introduction to Diversity Field Flora

199. A recently completed DFF project⁵⁶ in Burkina Faso undertook baseline surveys, trained more than 70 farmers on quality seed production, organized 3 DFF, and selected several cultivars for testing. Building on this work, in selected communities, this Project will

- Select CC-adapted local seeds for testing and undertake the testing;
- Identify and introduce local seeds to be used in the FFS and in the APFS;
- Establish a local community gene banks. This gene bank, overseen by a local community, will demonstrate a low-cost, sustainable way for conserving genes of locally available species.

Output 2.6 Dissemination of climate-resilient APFS and FFS approaches

⁵⁶ “Reducing the risk of crop failure for poor farmers through enhancing traditional seed systems in Sahelian West Africa”, implemented by *Bioversity International* of the International Plant Genetic Resources Institute (IPGRI).

200. Under this Output, the Project will enter into operational partnerships with a range of rural development, pastoral and agro-pastoral projects and programmes. Through these partnerships, the Project will disseminate the APFS and FFS approaches (i.e. those developed through Outputs 2.1 – 2.5). This Output will lead to climate resilient, integrated agro-pastoral practices being utilized and developed through a range of initiatives. This will achieve the broader adoption of successful Field School approaches.

Baseline

201. The baseline consists of the following ‘partner project’ projects and programmes: PNVACA, PAPSA, NEER-TAMBA, PRDI, Bio Digester Program, Ouagadougou Peri-Urban Dairy Sector Development Project, Improving Zebu Azawak Raising and Sustainable Pasture Land Management Project, ZEPESA, PASF, COGEL, PAFASP, PSANBF⁵⁷ and Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso.⁵⁸

202. Depending on the timing of the Project start-up, this baseline may have evolved, with new potential partners existing, but some of the older initiatives having been completed and so partnerships not possible. Accordingly, the project will undertake a rapid assessment to scope out potential new partners at the outset. This will not affect co-financing, as the co-financing only include initiatives scheduled to run until 2017 or later.

203. Initial institutional collaboration with many of these partner projects has been secured prior to this Project start-up in the form of co-financing.

With Project support

204. The Project will undertake a negotiation with the planners and decision-makers of each of the partner projects. The Project will undertake an analysis of the workplans of each partner project and identify entry points for FFS/APFS. It will also identify collaboration points – possibilities for joint inputs, joint activities or joint outputs. The Project will negotiate and secure collaboration agreements with each of the partner projects. This will lead to the implementation of joint activities in order to disseminate climate-resilient APFS and FFS approaches. Ultimately, funds from the partner projects will be used to upscale the APFS and FFS approach.

205. Possible collaboration could include:

- The FFS and APFS groups supported by this Project through Outputs 2.1 – 2.5 are empowered to participate in the partner project activities, and so apply the knowledge they have learnt through the Field School group to the implementation of the partner project;
- The Master Trainers and/or training material prepared under this Project (under Outputs 2.2 and 2.3) are adopted and used by the partner projects, thereby immediately replicating the practices introduced by this Project.

Output 2.7 Improved availability of information on weather for local agro-pastoral communities

⁵⁷ Both MASA and FAO supported components

⁵⁸ For the projects that are counted as co-financing, they are all expected to run well into 2017 and later. However, some of the other ‘baseline’ (but not co-financing) projects may end before 2017, depending on implementation rates. During the initial Project implementation, a rapid assessment of potential partners will take place, and new partnerships will be developed.

206. Based on previous experience in Burkina Faso and other countries, it is expected that many of the Field School supported by this Project (Outputs 2.1 – 2.5) will identify the lack of adequate agro-meteorological information⁵⁹ as an obstacle to climate resilience. For the concerned Field School, this will be listed in the community action plans prepared under Output 2.5.⁶⁰

Baseline

207. The baseline includes some capacity in DGM to collect meteorological data and provide agro-meteorological information. In the baseline, however, the forecasts it prepares are not always optimal and not tuned to the needs of farmer-herders. In addition, DGPV is involved in the collection of rainfall data and the distribution of rainfall data bulletins. However this represents a duplication with DGM and is therefore an inefficient use of resources. In the baseline, INERA has capacity to interpret agro-meteorological information to be used by farmers, but is not sufficiently interacting with farmers in the baseline. INERA also coordinates the field activities⁶¹ funded by the *Research Program on Climate Change, Agriculture and Food Security* (CCAFA⁶²). Despite all this, farmer-herders do not have good access to the weather forecasts and information that is available.

208. In the baseline, DGM collaborates closely with the African Center of Meteorological Application for Development (ACMAD and AGRYMET).

With Project support

209. The Project will demonstrate how the accurate provision of agro-meteorological information to farmer-herders is useful. The Project will demonstrate a *demand-driven* approach to developing/providing this information - with forecasts driven by the demands of the end-users (i.e. the farmer-herders).

210. For those FFS/APFS that identify improved agro-meteorological information as a key need, the activities will include:

- Identification of the agro-meteorological information needs of the FFS/APFS;
- Preparation of a joint plan of action to respond to the needs by a DGM/DGPV/INERA working group;
- Training and capacity building of DGM, DGPV and INERA in order to respond to farmer-herder needs;
- Preparation of local agro-meteorological information by DGM/DGPV/INERA;
- Facilitators are trained by DGM/DGPV/INERA staff to provide information to FFS/APFS members;

⁵⁹ In terms of climate information, farmers' needs include:

- Before the beginning of the season, the interpretation of the agro-meteorological crop risk analysis to assess the most suitable crop(s) for the region based on crop water requirements.
- Before the beginning of the season, the interpretation of the statistical analysis of rainfall for the determination of the best planting date(s) for the region.
- Before the beginning and before the end of season, seasonal information to adapt to the various situations due to the uncertainty inherent in the seasonal forecasts, and put in place contingency plans for multiple possible scenarios.
- Throughout the season, continuous weather forecasts to better adapt farmers' practices, with a particular focus on forecasts of weather extreme events such as drought, heavy rains and strong winds.

⁶⁰ For a complete analysis, see PPG report "*Sub-Component Agro-Meteorology*"

⁶¹ CCAFS in Burkina Faso: <http://ccafs.cgiar.org/where-we-work/west-africa/burkina-faso-yatenga>

⁶² CCAFS: www.ccafs.cgiar.org

- Under the supervision of Facilitators, the FFS/APFS receive agro-meteorological information and determine ways to use the forecast.

211. It is anticipated that ACMAD will be a partner in implementation, supporting some of the training provided under this Output.

Output 2.8 Secured land assets

212. For many of the Field Schools supported by this Project (Output 2.1 – 2.5), insecure land tenure and insecure access to land assets will be identified as an obstacle to climate resilience. For the concerned Field School, this will be listed in the community action plans prepared under 2.5. In particular, this may apply to women farmers and herders.

With Project support

213. The Project will utilise the innovative Participatory and Negotiated Territorial Development (PNTD) approach. This participatory land delimitation approach seeks to support community tenure security and is based on participation and raising awareness on people’s rights and their local customary use of natural resources.

214. A key step in this approach is the initial sensibilization process, providing information on people’s rights to land and other resources and on what their territory is. The sensitization takes vulnerable groups’ (women, youth elderly) point of view into consideration through their participation in creating maps. These maps are later socialized and discussed for coherence of information given by the different groups and a final map is jointly created. Next, the consultation process is used to confirm the communal land’s boundary (e.g. with neighbors, with the national register). Once all these activities are approved, a series of letters of agreement are produced. With these materials a “land delimitation package” is prepared for the approval of the concerned administrative bodies. The process aims towards a full land diploma for recognition of customary land rights. The entire process might take between 3 to 4 weeks.

215. Hence, for those FFS/APFS that identified land tenure as a key need, the activities will include:

- Local consultations on land rights focusing on gender roles;
- Selection of communities interested in securing land assets;
- Fifty land rights awareness events at local level;
- Land delineation packages prepared and presented for local government approval

Output 2.9 Local Adaption Investment Fund (operational and financially sustainable)

216. For many of the Field Schools supported by this Project (Outputs 2.1 – 2.5), lack of access to micro-credit will be an obstacle to climate resilience. For the concerned Field School, this will be listed in the community action plans prepared under Output 2.5.⁶³

Baseline

217. The community action plans (2.5) will identify a series of small investments that should have a high rate of return. These investments would greatly increase climate resilience. However, in the baseline, farmer-herders in vulnerable areas do not have access to formal financial services for various reasons (these include the weakness of the individual’s savings, the lack of collateral, the

⁶³ For a complete analysis, see PPG report “*Fonds d’Investissement Local pour l’Adaptation aux Changements Climatiques.*”

perceived high risk, and the low profitability of the proposed activities). Hence, the small investments to increase resilience cannot be implemented.

With Project support

218. In order to achieve its objectives, the Project shall establish a Local Investment Fund for Adaptation to Climate Change (LAIF). One Fund shall be established in each Region. The funds will operate on a revolving loan basis. The funds will provide access to credit for small herder - farmers in the intervention sites, in order to support adaptation to climate change.

219. For the concerned FFS/APFS, activities will include:

- Undertake detailed design of approach to LAIF;
- Select the concerned communities based on (i) investment needs identified in FFS/APFS community action plans (2.5) and (ii) community capacity to save and borrow;
- Establish LAIF based on FFS/APFS community action plans;
- Operationalize the Fund.

220. The total LDCF investment in these Funds is \$200,000. At project start-up, the structures and modalities of the Funds are unknown. These have to be determined in a participatory manner and in response to the prioritization undertaken by the FFS and APFS. This design will therefore be done early in the second implementation year. However, all GEF and FAO rules regarding micro-credit, micro-finance, revolving funds, administration, etc will be **strictly** adhered to.

221. Hence the LAIF or revolving fund will be established in Year 2, in order to support investments to take place in Years 3 – 5. During Year 1, the location and operating structure and rules of the Fund will be established, based on a thorough review of needs and options. It may be located within an existing bank, either as a separate revolving fund or within standard credit lines. It may be established as a stand-alone structure – in which case sustainability and exit strategies will be prepared.

OUTCOME 3

Output 3.1 A five-Ministry CC-A coordination mechanism for extension to integrated livestock and cropping systems

Baseline

222. In the baseline, all rural development Ministries (i.e. MASA, MRAH, MEDD, MEAHEA and MRSI) have their own extension systems, using their own approaches and extension materials. This causes inefficiencies, and worse, it can be a cause of confusion. As a result, many communities do not receive adequate extension services.

223. Of the existing extension systems, the most important system is the SNVACA under MASA. MEDD, typically, provides extension by sub-contracting local service providers, including the local affiliates of MASA and MRAH. However, recently, MEDD has directly provided some services, notably relate to NTFP.

With Project support

224. With respect to agro-pastoralists, and notably with a focus on the Project intervention area in the four Regions, the Project will develop a coordination mechanism to oversee the development of coherent, coordination extension approaches for the four regions.

225. Activities will include:

- Negotiation with the five concerned ministries;
- Development of a protocol, to be signed by the five concerned ministries, to guide collaboration on extension;
- Annual coordination sessions.

Output 3.2 Strengthened National Extension System (SNVACA) – incorporating APFS approach and strengthening approach to climate change

Baseline

226. The SNVACA is one of the few in Africa that is centred on a participatory Field School approach. The SNVACA is implemented through the annual PNVACA, with an annual budget of approximately \$4 million. However, it is not well adapted to agro-pastoralism, and its coverage of climate change is inadequate, especially in agro-pastoral communities.

With Project support

227. The Project activities will strengthen the SNVACA, by incorporating the APFS approach and greatly improving the approach to climate change and climate resilience.

228. Activities will include:

- Collecting and analysing the lessons and findings from Outcomes 1 and 2;
- Contribute to the strengthening of the current national extension system (i.e. to the SNVACA);
- A national workshop to review the proposals to strengthen the existing SNVACA;
- Submit proposals to MASA and other concerned ministries.

Output 3.3 Commune development plans updated to account for climate resilience across agro-pastoral activities

229. Based on the FFS and APFS community action plans developed under 2.5, the existing Commune Development Plans (PCD) will be modified and updated in order to properly address climate change resilience in the agro-pastoral sub-sector.

Baseline

230. In the baseline, all communes across Burkina Faso have prepared PCD, in line with the ongoing decentralization process. Moreover, general Guidelines on adaptation to climate change have been prepared, and many PCD were prepared using these Guidelines. However, these Guidelines are not adequate to cover climate change adaption of specific sub-sectors and specific geographical sites. Moreover, in many cases, the PCD are not fully implemented, due to shortage of funds.

With Project support

231. The Project will support this Output in a number of Communes in the Project intervention area, based on the contents of Field School community action plans, the commitment of Commune partners, and the needs. The target is to undertake these activities in 40% of all Communes in which this Project is active.

232. The Project will integrate the community action plans and the PCD. It will provide further justification and detail for key activities and strategies in the PCD. It will use this as a basis for mobilizing resources to PCD implementation to support activities that increase climate resilience amongst agro-pastoral communities

233. Activities will include:

- Collect lessons learnt and needs identified from the FFS and APFS (notably through Output 2.5);
- Review PCD and propose revisions and detailed investment proposals;
- Lobby Commune level and Regional decision-makers, notably the Departments of Economy and Finance;
- Undertake resource mobilization activities at communal and regional levels, in order to mobilize resource to climate resilient interventions.

OUTCOME 4

Output 4.1 System for systematic collection of field-based data to monitor project outcome indicators operational

234. The National Project Coordinator (NPC) will be responsible for preparing a Project Progress Report (PPR, six-monthly) in close cooperation with the Project Steering Committee (PSC) and the International Project Technical Advisor (IPTA). The PPR includes the project results framework with project output and outcome indicators, baseline and six-monthly target indicators, the monitoring of the risk matrix (and the identification of potential risks and mitigation measures to reduce risks).

235. Annually, the Lead Technical Officer (LTO) in FAO will prepare the Project Implementation Report (PIR). The PIR includes the project results framework with project output and outcome indicators, baseline and yearly target indicators, the monitoring of the risk matrix (and the identification of potential risks and mitigation measures to reduce risks). The LTO will be supported by the NPC and IPTA.

Output 4.2 Midterm and final evaluation conducted

236. After 18 months of project implementation, a mid-term project review will be conducted by an external consultant, who will work in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.

237. At the end of project implementation, a final project evaluation will be conducted by an international external consultant under the supervision of the FAO Independent Evaluation Office, in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.

Output 4.3 Project-related “best-practices” and “lessons-learned” for enhanced adaptation to climate risk of the agricultural sector are disseminated via publications, project website and others

238. In the first year of implementation, a website will be established for sharing the Project’s experiences and lessons learned. The website will be maintained and updated by Project staff during Project implementation. After project implementation, it will be hosted by FAO on behalf of the Government.

239. Over the course of the Project, at least five publications will be issued on the Project's best practices and lessons learned. All publications will be uploaded to the Project website, and will be distributed (limited) through printed copies to local partners and government staff.

2.5 GLOBAL ENVIRONMENTAL BENEFITS/ADAPTATION BENEFITS

240. The project will generate significant adaptation benefits to poor rural communities in Burkina Faso.

241. Directly, the Project will support at least 26,000 herder-farmers to develop and implement new approaches, practices and varieties/cultivar that increase climate resilience. The Project will also contribute directly to organizational strengthening in these communities – leading indirectly to improvements in terms of gender, land tenure, access to and use of agro-meteorological information and access to credit. As a result 26,000 families, therefore approximately 150,000 people, will benefit from increased resilience to climate change.

242. Directly, the Project will contribute to improved natural resource management practices as follows:

- 5,000 hectares of extensively grazed rangelands;
- 5,000 hectares of semi-intensively grazed rangelands;
- 5,000 hectares of agricultural land, used for the cultivation of crops for human consumption (focusing in dry crops) and crops for animal feed.

243. Directly, the project will also:

- Support naturally assisted regeneration of 800⁶⁴ hectares of currently highly degraded rangelands. This regeneration will decrease the pressure on land (thereby contributing to globally significant sustainable land management) and increase the supporting environment for biodiversity;
- Support protection and sustainable use of the genetic resources in selected local crop and pasture species through the use of Diversity Field Flora (see Box 1). Through this, globally significant species and varieties will be protected. Activities may lead to increased productivity and competitiveness of local food staple crops (sorghum, millet, fonio, cowpea, and bambara groundnut) through participatory plant breeding for low heritability. Also, selected dual usage varieties of maize, soya, and andropogon will be used. Wild species selection might also be tested. Finally, at least one community gene bank will be established in the Sahel region based on the experiences developed by the DFF in other part of the country.

244. Indirectly, it is expected that the project will have the following replication and multiplier effects:

- By supporting a revision of the SNVACA, the project will indirectly influence the extension system in use across Burkina Faso. Notably, it is expected that, as a result of these interventions, the SNVACA will (i) better integrate climate change adaptation, thereby contributing greatly to overall adaptation across the agriculture sector (ii) adopt more integrated ecosystem approach, as opposed to focussing on individual crops. This will lead to improved land management, reduced land degradation and likely to the conservation of some species and unique varieties.
- By empowering Field School groups, and by supporting diffusion to neighbouring communities, the project will indirectly influence the implementation of many rural development projects, particularly in the agriculture sector (see list in Table 1). This should

⁶⁴ Included in the 5,000 hectares listed above.

have a strong multiplier effect in terms of increasing resilience to climate change and climate variability. Although no specific indicators in terms of people/hectares impacted are available, these processes will be monitored.

2.6 COST EFFECTIVENESS

245. Cost effectiveness is a concept that is built-in to the programmatic strategy of the GEF/LDCF. In projects like this, GEF/LDCF finances the ‘additional costs’ of achieving climate change adaptation, meaning the activities of the partners in the baseline cover most of the basic development and agro-pastoral issues. For this Project, this means that the FAO/GEF/LDCF project builds on top of a large baseline of agriculture, food security and livestock-raising projects. With a baseline and co-financing of approximately \$20 million, the FAO/GEF/LDCF costs are approximately 15% of the entire Project costs. That means, for every \$1 invested, FAO/GEF/LDCF gains almost \$6 of impact.
246. Cost-effectiveness is also at the heart of FAO’s strategy to supporting rural development in sub-Saharan African countries, including Burkina Faso. The proposed project design is expected to be highly cost-effective since it builds on existing Farmers Field Schools’ structures that are already operational across Burkina Faso, and on ongoing activities with similar objectives and synergies with existing programmes.
247. The proposed Project also builds directly on from previous collaboration between FAO and Burkina Faso on FFS. Since 1996, FAO has been supporting FFS in Burkina Faso, and has created a core capacity of technical expertise and experience. This includes legal and technical capacity in the government as well as the cadre of FFS experts that have worked on previous FAO projects. By building on these past initiatives, the project capitalizes upon this FAO previous work.
248. Moreover, the FFS approach in itself has demonstrated its cost-effectiveness in many contexts, including in Burkina Faso. It is a demonstrated cost-effective manner to deliver high quality technical advice to a large number of communities. Notably, under Outcome 2 of this Project, for approximately \$2 million of FAO/GEF/LDCF funds, direct benefits will reach a minimum of 26,000 farmer-herders. This is less than \$77 per farmer-herder.
249. In the preparation of a similar project in Mali⁶⁵, a comparison of costs for FFS and standard training approaches to extension was undertaken. Although not directly transferable to this project, the finding was that “*building upon 400 existing FFS and 233 experienced facilitators (for crops such as rice, cotton and “maraichage”)* will save 251 540 USD in training costs alone and 220 000 USD in FFS operation over the project cycle”. Although not a solid economic analysis, this does strongly indicate the cost-effectiveness of the FFS approach.
250. A critical way to achieving this cost-effectiveness with FFS is through collaboration with local partners. FAO will channel funds from the project to local authorities and NGOs that are already active in similar activities in the project intervention area. Hence there will be few start-up costs and few costs related to the mobilization of expertise from outside the region or country.
251. Several alternative designs and approaches were considered for cost-effectiveness during project design. These alternatives included focusing on providing more hardware, or on focusing all capacity development efforts on national government agencies, or by FAO directly providing extension services to farmer-herders. Ultimately, it was decided that these approaches would not have as much impact per input, hence the selected focus of transforming agriculture and livestock-raising through the FFS approach was selected. This approach underlies Outcome 2.

⁶⁵ See Project document: *Integrating climate resilience into agricultural production for food security in rural areas of Mali*

252. The Project also intends to minimize the use of international consultants where national expertise is available. This will reduce the travel costs and the costs of consultancy fees. Notwithstanding, where international expertise is unique or exceptionally credible, it will be utilized. For example, given the innovative nature of the project related to agro-pastoral field schools, expertise on this will be sought from the East Africa and International Project Technical Adviser position established. However, this key position will be shared with a similar FAO/GEF/LDCF project starting up in Mali – thereby making significant savings to this Project’s budget.

2.7 INNOVATIVENESS

253. The most important innovation brought by the project is the APFS approach, as previously used in East Africa, to West Africa and to Burkina Faso. Although FFS have been successfully used in Burkina Faso for some time, they have focused on single crops and small land plots, notably at the expense of integrated approaches or approaches that cover livestock raising.

254. The successful APFS used in East Africa adopts an holistic method to extension and community support. For example, the article “*Farmer Field Schools in rural Kenya: a transformative learning experience*” (Duveskog et al., 2010) reveals the significant impacts demonstrated by a personal transformation; changes in gender roles and relations, customs and traditions, community relations, and an increase in the economic development of households. Further, Friis-Hansen et al., 2012⁶⁶, suggests that the most significant impact of innovative FFS could be viewed in terms of building the capacity of local people to make choices and make decisions that ultimately lead to an increased uptake of agricultural innovations, access to services and market access, as well as collective action. A major conclusion of the study is that agricultural development programs should focus more on the processes of empowering farmers as opposed to the technical solutions that characterize most programs, in order to create an appropriate mix of technological and social advancements for a development process that is sustainable in the nature. Finally, the recent FAO publication, “*Supporting communities in building resilience through APFS*”, explores potentials for the success story in Uganda to be converted to a framework for policy recommendations.

255. A second innovation is the development of Diversity Field Fora (DFF) within a coherent Field School framework including both FFS and APFS. The DFF approach involves local farmer-herders in the conservation of globally significant biodiversity, through the testing of economically viable methods that also yield benefits to local people. Thus, the DFF will help to preserve indigenous grassland species, local protected varieties and locally developed cultivars. This approach is largely untested in Burkina Faso. This is overall innovative for Burkina Faso.

256. The Project also introduces several new climate resilience related tools, many for the first time in Burkina Faso:

- SHARP is a scheme for farmer and herders to self-assess their climate resilience. It has been developed in collaboration with the University of Leeds, UK, and has been tested in various FAO FFS/APFS projects in Senegal, Uganda, and Mali. The tool is integrated in the FFS/APFS curricula and is being used in various FAO GEF projects working in land degradation and in climate adaptation through FFS/APFS. The scheme takes place within the initial FFS/APFS community dialogues and baseline assessments and allows an assessment of climate resilience during different phases of project implementation.
- TOP-SECAC is a tool kit with 11 tools that can be used at various stages, such as analysis of vulnerability and adaption capacities, planning of adaptation actions, and their monitoring and

⁶⁶ “The Empowerment Route to Well-being: An Analysis of Farmer Field Schools in East Africa” (2011)

evaluation. It is being developed jointly by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) West Africa, the International Union for Conservation of Nature (IUCN), and the National Agricultural Research Services (NARS). It has been piloted in Burkina Faso, but only to a minor extent and with the involvement of few partners.

- The Participatory and Negotiated Territorial Development (PNTD) approach. This participatory land delimitation approach seeks to support community tenure security.⁶⁷ The approach is based on participation and raising awareness on people's rights and their local customary use of natural resources. Again, this is the first time this approach has been used in a similar context in Burkina Faso.

SECTION 3 – FEASIBILITY (FUNDAMENTAL DIMENSIONS FOR HIGH QUALITY DELIVERY)

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

257. Environmental considerations are made on an Outcome by Outcome basis in the following paragraphs.

258. *Outcome 1 Awareness and knowledge on climate-resilient agro-pastoral practices (including adoption of new varieties and cultivars and adapted soil and water management) established at national and regional levels.*

259. Activities under this Outcome consist of training, analysis, consultation and awareness raising. There will be no direct negative impacts on the environment. In many cases, activities will focus on methods, measures and practices that are designed to enhance environmental capital in target areas, and so will tend towards a positive environmental impact.

260. *Outcome 2 Broad adoption by agro-pastoralists of financially sustainable, gender sensitive climate-resilient agro-pastoral practices and technologies.*

261. Certain activities under this Outcome aim at identifying, developing and disseminating improved methods, measures and practices for agro-pastoralists. This will include the sustainable use of rangelands and rangelands regeneration – which both tend to have positive environmental impacts. It will also include the promotion of new economic practices, such as NTFP, that should lessen current unsustainable pressures on environmental resources. It may include the introduction of more productive breeds/cultivars/varieties, as well as measures to conserve important genetic biodiversity. These measures should tend to improve ecosystem resilience. Under no circumstances will intensive agricultural or animal husbandry be introduced, and all introductions will be fully in line with carrying capacities and environmental limits. In the event that non-indigenous breeds/cultivars/varieties are introduced, this will first be subject to FAO's rigorous assessment process.

262. *Outcome 3 Implementation of sectoral plans and local development plans that contribute to climate change resilience for agro-pastoral and agricultural communities.*

263. Activities under this Outcome consist of training, analysis, lobbying, consultation and awareness raising. There will be no direct negative impacts on the environment. Activities aim to promote and institutionalize methods, measures and practices that should have a positive impact

⁶⁷ The approach is described in the document "Participatory land delimitation: An innovative development model based upon securing rights acquired through customary and other forms of occupation" Land Tenure Working Paper 13, FAO, 2009.

on the natural resource base and on environmental capital and so improve resilience to climate change. Hence there should be a positive impact on the environment.

264. *Outcome 4 Project implementation based on results-based management and application of project lessons learned in future operations facilitated.*

265. No environmental impacts can be anticipated from activities under this Outcome.

266. Hence, based on the above assessment of the Project Outcomes, no adverse environmental or social impacts are likely. The Project therefore conforms to FAO's pre-approved list of projects that are excluded from a detailed environmental assessment (i.e. Category 'C'). On the contrary, the project and the LDCF resources invested are expected to have positive impacts on farmer systems, on rangelands and on the sustainable use of pastoral resources, thereby creating some global environmental benefits. Notably, it should contribute to the conservation and sustainable use of genetic agro-biodiversity.

3.2 RISK MANAGEMENT

3.2.1 Risks and mitigation measures

267. Please see the detailed risk table provided in Appendix 4.

3.2.2 Fiduciary risk analysis and mitigation measures

268. Not required, as this is not a Nationally Executed Project (NEX).

SECTION 4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

a) General institutional context and responsibilities

269. The project will be executed by the Food and Agriculture Organization of the United Nations (FAO) with the technical support of the Government, of the Regions, and of the Provinces. Details of this support are provided in the following sections. Local NGOs and Associations will also play a key role as service providers (secondary stakeholders) for the targeted communities? These agencies are introduced in the following paragraphs.

270. The *Ministry of Agriculture and Food Security* (MASA) is responsible for providing policy and technical support to rural areas on agriculture in Burkina Faso, including through the national extension system. MASA is mainly responsible for developing and regulating activities in the agricultural sector and providing technical support. MASA's primary role is to formulate appropriate agricultural policies, planning and monitoring, and evaluation within the overall national development framework.

271. The key technical departments in MASA are

- General Department for Sectoral Studies and Statistics (DGESS), responsible for coordination and planning all projects in the Agriculture/Food security sector;
- General Department for Promoting the Rural Economy (DGPER), responsible, for example, for supporting micro-finance and identifying vulnerable families;
- General Department for Plant Production (DGPV), responsible for the national extension system (SNVACA);
- General Department for Training and Rural Organizations (DGFOMR);
- Regional Departments of Agriculture and Food Security – in each Region these are responsible for operationalizing the national strategies and policies;
- Provincial Departments of Agriculture and Food Security – in each Province these are responsible for supporting rural people and providing technical assistance;
- Agricultural Technical Support Zones (ZATA) – providing technical support at the level below the Province;
- Agricultural Technical Support Units (UEA) – the most local level for providing technical support to communities (i.e. villages).

272. The *Ministry of Fishery and Animal Resources* (MRAH), notably responsible for providing policy and technical support in rural areas on all issues related to livestock raising and fisheries. The key technical departments in MRAH are:

- General Department for Sectoral Studies and Statistics (DGESS), responsible for coordination and planning all projects in the Agriculture/Food security sector;
- General Department for Rangelands and Rangelands Management (DGEAP);
- General Department for Animal Production (DGDPA);
- General Department for Veterinary Services (DGSV);
- There are also Regional, Provincial, Zonal and local support units, as with MASA.

273. The *Ministry of Environment and Sustainable Development* (MEDD) is responsible for implementing the UNFCCC and coordinating adaptation to climate change, including through the provision of technical support to rural areas. Key stakeholders within MEDD are the Permanent Secretary of the National Council for Environment and Sustainable Development, the General Department of Forests and Fauna, and the National NTFP Agency. The *Ministry of Scientific*

Research and Innovation (MRSI) is responsible for identifying and promoting new approaches and technology. The *Ministry of Water, Water Management and Sanitation* (MEAHEA) is responsible for water infrastructure in rural areas. The *General Department for Meteorology* (DGM), responsible for the collection of meteorological data and the provision of forecasts and climate change models.

274. In this Project, at the grass-roots level, support to farmer-herders through the Field School approach will mostly be delivered by local NGO and Associations that are already active in the concerned areas. Twenty such NGOs and Associations have been identified and were beneficiaries of training in previous FAO FFS projects (see Appendix 7, Part 2). The Regional Direction of MASA, MRAH, and MEDD will also contribute to the project implementation and to the monitoring at a local level.

b) Coordination with other ongoing and planned related initiatives

275. Coordination will be assured by the FAO office in Burkina Faso and by the other members of the Project Steering Committee (see below), notably MASA, MRAH and MEDD. MASA and MRAH will ensure coordination with national initiatives, whereas FAO will facilitate coordination with internationally supported initiatives and with initiatives in other countries in West Africa. Regular meetings between MASA, MRAH, MEDD and FAO and the Project National Coordinating Unit (see below) will monitor coordination and seek ways to optimize it. One Project staff member will be responsible for coordination through her/his ToR.

276. This Project will be implemented in close collaboration with a large number of partner projects (see notably Outputs 1.1 and 2.6). Coordination with all of these is important. These partner projects fall into three categories: (i) baseline and collaboration projects. These are the related projects and programmes in Burkina Faso that this Project will directly collaborate with, through either co-financing arrangements or through inter-connected workplans (these latter to be developed during Project implementation); (ii) GEF and LDCF projects in Burkina Faso that have related objectives and are being implemented in parallel. Coordination will focus mostly on information and lesson exchange, although opportunities for connecting workplans will be sought during Project implementation; (iii) related FAO projects across the region. Coordination will focus on exchanging lessons and sharing inputs and sharing technical expertise.

277. The forms of coordination with each of these is elaborated in the following paragraphs.

Baseline and Collaboration projects

278. The Project will enter into some form of coordination with each of the initiatives listed in Table 3 below. The form of coordination is listed in the right hand column.

Table 3: Approach to Coordination and Collaboration

Project title and description:	Approach to coordination
<p>National Extension System (SNVACA) and Annual Programmes (PNVACA) with MASA</p> <p>This has five main components: strengthen stakeholder capacity (extension workers and public and private support organizations); promote good agricultural practices and research and development; integrated management of land fertility; promoting consultation and encouraging partnerships; and M&E.</p>	Cofinancing agreement
<p>National Food Security and Nutrition Programme in Burkina Faso (PSAN-BF) with MASA</p> <p>The PSAN-BF aims to contribute to improving food and nutrition security in</p>	Cofinancing agreement

Burkina Faso and to achieving the MDGs by 2015, as part of the SCADD ⁶⁸ . More specifically, the Programme contributes to the achievement of MDGs 4 and 5 "reduce mortality in children under five years" and "improve maternal health"; and to strengthening institutional arrangements and food security policy.	
Improving agricultural productivity and food security Project (PAPSA) with MASA The objective is to improve the capacity of poor producers to increase food production and to ensure improved availability of food products in rural markets. Specifically, project activities will focus on building the capacities of service providers, as well as strengthening agricultural input supply delivery systems.	A negotiation process to determine joint activities and shared workplan.
Participatory Management of Natural Resources and Rural Development (NEER-TAMBA) with MASA The overall aim is to improve the living conditions and incomes of rural populations in the poorest area of the Project. Specifically, it aims to support recipients to build and strengthen their autonomy and ability to play a leading role development.	A negotiation process to determine joint activities and shared workplan.
Integrated Central Plateau Rural Development Project (PRDI) with MASA The overall aim is to contribute to food security and poverty reduction in rural areas by improving security and development of agro-pastoral and fishing activities, all taking into account environmental protection.	A negotiation process to determine joint activities and shared workplan.
Bio Digester Program Phase 2 (PNB2) with MRAH The overall objective of the PNB is to contribute to the improvement of socio-economic and environmental living conditions of rural and peri-urban populations through the introduction of biogas digesters. The goal is to stimulate the emergence and development of a viable bio-digester construction sector and market. The first phase (2009-2013) supported the construction of over 4,000 digesters and established the foundations of a market. Phase 2 has the same overall objective and aims to increase the results numerically. PNB works with the same agro-pastoral communities as the Proposed LDCF project. It works on the livestock sector value chain. Through its training and technological support, it helps increase the climate resilience of the agro-pastoral communities, hence contributing to the overall objective of the Proposed LDCF project.	Cofinancing agreement
Ouagadougou Peri-Urban Dairy Sector Development Project with MRAH The Project Objective is to enhance the dairy value chain through improving production and productivity. The project will cover genetic improvement, improved health services, animal feeding, milk collection and processing	Cofinancing agreement
Improving Zebu Azawak Raising and Sustainable Pasture Land Management Project with MRAH The objective is to improve the genetic material of the zebu Fulani, to improve the zebu selection procedure, to reinforce the breeders, and to improve market capability.	Cofinancing agreement
Supporting Zebu Peul Development in the Sahel (ZEPESA) with MRAH The project aims at the rehabilitation of pastoral resources and grazing land areas while focusing on the promotion of the Azawak Zebu.	To be defined
Harmonized Program of Support to the Forestry Sector (PASF) with MEDD This provides national support to; (i) participatory forest management (ii) development of non-timber forest products and the value chain (iii) adaptation to climate change (iv) institutional support to the environment and natural resources	A process to identify joint areas of concern, followed by a negotiation process to determine joint

⁶⁸ The *Accelerated Growth and Sustainable Development Strategy* – described later in this document

sector	activities and shared workplan.
<p>Local Environment Governance Consolidation Project (COGEL) with MEDD.</p> <p>This project aims to strengthen the capacities of the local community actors and local authorities to manage risks and opportunities related to natural resource management. It includes a focus on climate change.</p>	A negotiation process to determine joint activities and shared workplan. Possibilities to collaborate in particular with regards to implementing Local development plans (PCDs).
<p>Agro-Sylvo-Pastoral Value Chain Support Programme (PAFASP) with MASA</p> <p>The project aims to develop the supply chain and to adapt products for international markets, with a view to diversifying the agricultural economy. The project objective is to double the total volume of exports on the international market for four products with a strong component on improving technical, economical, and market capacities and a component related to the creation of an institutional and policy-enabling environment for value chain creation.</p>	A negotiation process to determine joint activities and shared workplan.
<p>Food and Nutrition Security Programme in Burkina Faso (PSANBF) (with FAO, EU and national partners). This is support to the National programme (PSANBF) described above in the table.</p> <p>The project aims to contribute to improving food and nutrition security in Burkina Faso and the achievement of MDG 1 by 2015, as part of the SCADD. It aims to improve food and nutrition security for people's resilience and incomes, and the availability of food access of poor rural people (especially women and youth). The two operational components are: (i) access to non-timber forest and agro-pastoral production means increased, and (ii) marketing and accessibility of agricultural production increased.</p>	Cofinancing agreement
<p>Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso (with FAO, Government of Switzerland, and national partners)</p> <p>The project has the following objectives: increase household incomes through the production, processing and marketing of NTFPs – notably enhancing the economic position, role and work of women in the household; improve food and nutrition security of beneficiaries through the consumption of quality NTFPs; contribute to the fight against the degradation of natural resources through protection, restoration and natural regeneration. This cover four regions, including North Central and West Central.</p>	Cofinancing agreement

279. A key part of the baseline is the work of ACMAD and AGRYMET on meteorology and on climate modelling, forecasting and prediction. The work of ACMAD and AGRYMET provides a back-up support and context to most climate-resilience work across West Africa. DGM and other Burkinabe stakeholders are collaborating closely with ACMAD and AGRYMET. This collaboration will continue through the project, and facilitate the flow of accurate information and high quality technical support to this Project.

GEF Natural Resource Management Projects in Burkina Faso

280. Contacts have been established with the UNDP Country Office in Burkina Faso, with which the FAO Burkina Faso and the MASA have a long-standing record of cooperation. The UNDP in Burkina Faso is responsible for three LDCF Projects:

- *Strengthening Adaptation Capacities and Reducing the Vulnerability to Climate Change in Burkina Faso.* This project, the first LDCF project in Burkina Faso, is now almost complete. It

set out to enhance Burkina Faso's resilience and adaptation capacity to climate change risks in the agro-sylvo-pastoral sector. It demonstrated best practices in climate resilient agro-pastoral production for sustainable improvement of food security. The proposed Project will learn from this project and build on its experiences.

- *Strengthening Climate Information and Early Warning Systems in Africa for Climate Resilient Development and Adaptation to Climate Change: Burkina Faso.* This recently started project will address the existing network of weather/climate monitoring infrastructure and help build technical and operational capacities to efficiently produce and deliver targeted forecasts for planning and decision-making. One component of the project will be used to improve weather, climate and environmental monitoring. A second component will be used to strengthen/develop national systems to package forecast warnings based on user-needs and to effectively disseminate warnings and other relevant information and data to assist decision-making processes. This Project will therefore lead to improved availability, in general, of weather forecasts (including seasonal). Another aim is to provide farmers with an adapted system, even adapted to the individual level, with early warning meteorological information. Under Output 2.7 of this proposed Project, a joint workplan will be developed with this project to avoid duplication and ensure synergies.
- *Reducing vulnerability of natural resource dependent livelihoods in two landscapes at risk of the effects of climate change in Burkina Faso: Boucles du Mouhoun Forest Corridor and Mare d'Oursi Wetlands Basin.* This pipeline project aims to reduce local communities' vulnerability to the additional risks posed by climate change and build their resilience. This includes some work in the Sahel Region. At the outset of the proposed Project, the National Coordinating Unit (NCU) see below, will hold a joint workshop with the project's office and develop joint activities as appropriate. A joint meeting of the two project steering committees will be held, at least once.

FAO Network for FFS across Africa.

281. The Pastoral Field School approach was introduced into East Africa in 2001. It has since been replicated and disseminated across several African countries (see Map in Figure 3).

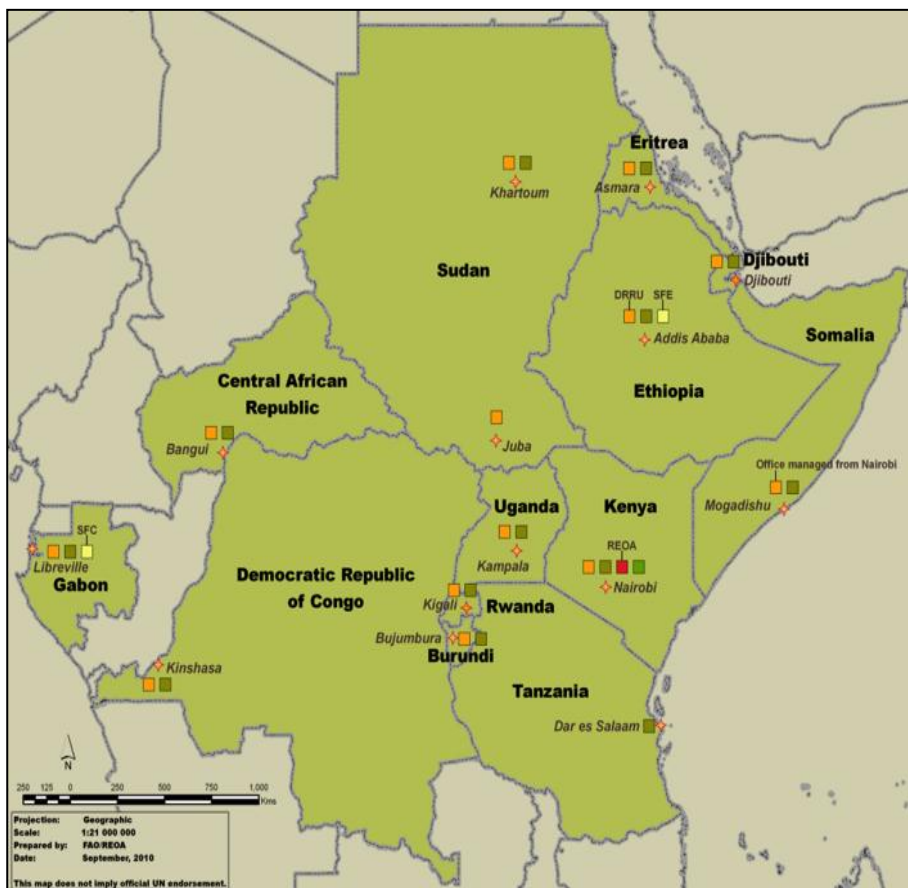


Figure 3: Map Showing Location of Pastoral Field Schools in East Africa

282. The present Project will collaborate notably with FAO Agro-pastoral Field School’s activities in the Horn of Africa. The initial exchange will be held between Burkina Faso and Ethiopia. For example, Ethiopia may provide master trainers for the start-up of the APFS activities in Burkina Faso. Notably the present Project will collaborate with the following:

- *Improving Food Security and Diversification of Livelihood Opportunities for Communities in Karamoja* (OSRO/UGA/101/EC, US\$3.5 million);
- *Strengthening Resilience and Adaptive Capacity of Agro-Pastoral communities and the Local Government to Reduce Impacts of Climate Risk on Livelihoods in Karamoja*, (GCP /UGA/042/UK, US\$12 million).

283. It will also collaborate with the related FAO projects in Mali and Angola:

- *Integrating climate resilience into agricultural production for food security in rural areas of Mali - GCP /MLI/033/LDF* . This project started in 2011 and is introducing climate resilience in the FFS curricula and developing coordination between FFS and decentralized planning;
- *Strengthening resilience to climate change through integrated agricultural and pastoral management in the Sahelian zone in the framework of the Sustainable Land Management approach - GCP /MLI/039/LDF*. This will support the introduction of the climate resilient APFS; and,
- *“Land rehabilitation and rangelands management in smallholders agro-pastoral production systems in south western Angola”*. This project, in Angola, is paving the road for the introduction of land tenure rights Field School modules.

284. Figure 4 provides a map of FAO projects financed by GEF and LDCF that support the APFS approach.

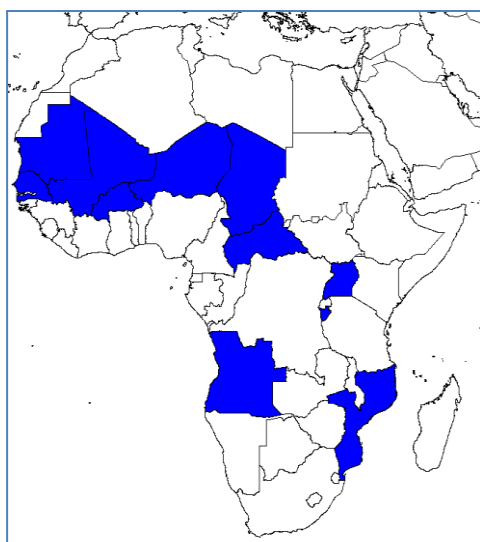


Figure 4: Map Showing Location of FAO APFS GEF Initiatives Across Africa

4.2 IMPLEMENTATION ARRANGEMENTS

a) Roles and responsibilities of the executing partners

285. The Food and Agriculture Organization of the United Nations (**FAO**) will be the GEF Agency responsible for supervision and provision of technical guidance during the project implementation.

In addition, the FAO will act as executing agency, and will deliver procurement and contracting services to the project using the FAO’s rules and procedures, as well as financial services to manage GEF LDCF resources. The technical execution of the project will be supported by the Government of Burkina Faso represented by the Ministry of Agriculture and Food Security (MASA).

286. The Project Steering Committee (**PSC**), involving the FAO, co-financers, each of the key Ministries, and a representative of each of the four participating regional Governments, will play a key role in supporting execution. The PSC will provide oversight, technical support and coordination. At the regional level, Regional Steering Committees (**RSC**) will also provide oversight, technical support and coordination for activities and actors in the region.
287. **Lead project implementing partners:** the MASA will be the main partner for project implementation and will be involved in implementation of activities across all components. The other governmental implementation partners include agencies under the MASA, the MRAH and its agencies, the MEDD and its agencies, MRSI, MEAHEA, INERA. As special emphasis has been placed on developing partnerships with related public/private regional development agencies or “filières” – support agencies, farmers’ organization, local NGOs and women groups (some of which are already involved in FFS). Many of these will also be involved as implementation partners.
288. The details of the technical involvement of each of these is listed in Table 4 below.
289. The Project will achieve a number of key outputs through letters of agreements (**LoAs**)⁶⁹. This letter will be elaborated and signed between the FAO and collaborating partners (service provider). The service provider will then be administratively managed by the FAO Burkina Faso. Funds received by the service provider under an LoA will be used to execute the project activities in conformity with the FAO’s rules and procedures. The respective LoAs are listed under the “Contracts” budget line of the project budget. Proposed and tentative LoAs are summarized in Table 4 below.

Table 4: Issues to be Covered under Letters of Agreement

Output	Activity (to be covered under the LoA)	Service provider
1.1	Training of core group of managers	INERA or international NGO
1.2	Support best practices and variety/species mapping	To be determined (MRSI)
1.3 and 1.2	Organization of two initial meetings per region to prepare adaptation strategy and one annual meeting per region to support the strategy and select the FS location	MASA
2.1 – 2.5	Support improved fodder and natural grass production	DFP/Bioversity/INERA and Local NGO or association (see Appendix 7, Part 2)
2.2 and 2.5	Organization of training of Master trainers	MASA (in collaboration with scientific partners to be identified, and international experts paid separately by the project)
2.2 and 2.4	Improve community based health services through training of APFS participants and vaccinations	MRAH in collaboration with Local NGO or association (see Appendix 7, Part 2)
2.3	Support redesign/revision of Field School curricula and training materials	MASA, and Scientific institution to be determined, and Local NGO or association (see Appendix 7, Part 2)
2.4 - 2.6	Support commercialization of NTFP products to improve revenues	MEDD/National NTFP Agency in collaboration with FAO baseline experts
2.4 –	Study to improve local technologies for	Scientific partners – to be determined

⁶⁹ “Protocole” in French

2.5	production and packaging of natural products	
2.5	Study of non-livestock local forest/grassland products	MASA
2.5	Establishment and training for management of a community seed bank in Sahel	DFF/Bioversity/INERA
2.5	Support fodder shrub and trees management for livestock feeding	Local NGO or association (see Appendix 7, Part 2)
2.5	Establish FS and community action plan	Local NGO or association (see Appendix 7, Part 2)
2.5	Participatory rehabilitation through fodder local and wild species (CSO/NGOs)	Local NGO or association (see Appendix 7, Part 2)
3.2	Support to Strengthen SNVACA	MASA
3.3	Support to commune development plans	MASA, MRAH and Local NGO or association (see Appendix 7, Part 2)
2.5 and 2.6	Support environmental and monitoring sustainability of community action plans	MASA and MEDD local services
2.7	Agro-meteo stations and setup (3 regions)	DGM
2.7	Data collection and data transfer system (3 regions)	DGM
2.7	Contract with radio for agro-meteo forecast (3 regions)	DGM
2.9	Design and support establishment of local adaptation fund	Micro credit institutions - to be determined

b) The FAO's role and responsibilities, as the GEF Agency (and as an executing agency, when applicable), including delineation of responsibilities internally within the FAO

290. The Food and Agriculture Organization of the United Nations **FAO** will be the GEF Agency responsible for supervision and provision of technical guidance during the project implementation. In addition, the FAO will act as executing agency, and will deliver procurement and contracting services to the project using the FAO's rules and procedures, as well as financial services to manage GEF resources. The technical execution of the project will be supported by the Government of Burkina Faso, represented by the Ministry of Agriculture and Food Security (MASA) in close cooperation with the Ministry of Environment and Sustainable Development (MEDD) and the MAHR.

291. **Executing Responsibilities (Budget Holder).** Under the FAO's Direct Execution modality, the FAO Representative in Burkina Faso will be the Budget Holder (BH) of this project. The BH, working in close consultation with the Lead Technical Officer (LTO), will be responsible for a timely operational, as well as administrative and financial management of the project. The BH will head the multidisciplinary Project Task Force (see below) that will be established to support the implementation of the project and will ensure that technical support and inputs are provided in a timely manner. The BH will be responsible for financial reporting, procurement of goods and contracting of services for project activities in accordance with FAO rules and procedures. Final approval of the use of GEF resources rests with the BH, also in accordance with FAO rules and procedures.

292. Specifically, working in close collaboration with the LTO, the BH will: (i) clear and monitor annual work plans and budgets; (ii) schedule technical backstopping and monitoring missions; (iii) authorize the disbursement of the project's GEF resources; (iv) give final approval of procurement, project staff recruitment, LoAs, and financial transactions in accordance with the FAO's clearance/approval procedures; (v) review procurement and subcontracting material and documentation of processes and obtain internal approvals; (vi) be responsible for the management

of project resources and all aspects in the agreements between the FAO and the various executing partners; (vii) provide operational oversight of activities to be carried out by project partners; (viii) monitor all areas of work and suggest corrective measures as required; (ix) submit to the GEF Coordination Unit, the TCID Budget Group semi-annual budget revisions that have been prepared in close consultation with the LTO (due in August and February); (x) be accountable for safeguarding resources from inappropriate use, loss, or damage; (xi) be responsible for addressing recommendations from oversight offices, such as Audit and Evaluation; and (xii) establish a multi-disciplinary FAO Project Task Force to support the project.

293. **FAO Lead Technical Unit (LTU)**. The Plant Production and Protection Division of the Department of Agriculture, Ecosystem Management team (AGPME) at FAO HQ will be the LTU for this project and will provide overall technical guidance in its implementation.

294. **FAO Lead Technical Officer (LTO)**. The team leader of the ecosystem management team of the Agricultural Plant and Production and Protection Division (AGPME) will be the LTO for this project. Under the general technical oversight of the LTU, the LTO will provide technical guidance to the project team to ensure delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force. The Project Task Force is thus composed of technical officers from the participating units (see below), operational officers, the Investment Centre Division/GEF Coordination Unit and is chaired by the BH. The primary areas of LTO support to the project include:

- review and ensure clearance by the relevant FAO technical officers of all the technical Terms of Reference (TOR) of the project team and consultants;
- ensure clearance by the relevant FAO technical officers of the technical terms of reference of the Letters of Agreement (LoA) and contracts;
- in close consultation with MASA, lead the selection of the project staff, consultants and other institutions to be contracted or with whom an LoA will be signed;
- review and clear technical reports, publications, papers, training material, manuals, etc.;
- monitor technical implementation as established in the project results framework;
- review the Project Progress Reports (PPRs) and prepare the annual Project Implementation Review (PIR).

295. Within FAO, a multidisciplinary **Project Task Force (PTF)** will be established by the BH which is mandated to ensure that the project is implemented in a coherent and consistent manner and complies with the organization's goals and policies, as well as with the provision of adequate levels of technical, operational and administrative support throughout the project cycle. The PTF comprises of the BH, Lead Technical Unit (AGPM) and the GEF Coordination Unit.

296. **FAO GEF Coordination Unit in Investment Centre Division** will review and approve project progress reports, annual project implementation reviews, financial reports and budget revisions. The GEF Coordination Unit will provide project oversight, organize annual supervision missions, and participate as a member in the FAO Project Task Force and as an observer in the project steering committee meetings, as necessary. The GEF Coordination Unit will also assist in the organization, as well as be a key stakeholder in the mid-term and final evaluations. It will also contribute to the development of corrective actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project. The GEF Coordination Unit will in collaboration with the FAO Finance Division, request the transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

297. The **Investment Centre Division Budget Group (TCID Budget Group)** will provide final clearance of any budget revisions.

298. The **FAO Finance Division** will provide annual Financial Reports to the GEF Trustee and, in collaboration with the GEF Coordination Unit and the TCID Budget Group, call for project funds on a six-monthly basis from the GEF Trustee.

c) Project technical, coordination and steering committees

299. See Organization Chart in Figure 5 below.

300. **The FAO** will be the GEF implementing and executing agency.

301. A **Project Steering Committee (*Comité de Pilotage, PSC*)** will be established and chaired by the MASA. It will be comprised of representatives MRAH, MEDD, MRSI, MEAHEA, FAO, a representative of each of the four participating Regions, and two NGO representatives (to be self-selected from the list in Appendix 7, Part 2). The National Coordinator (see below) will be the Secretary to the PSC.

302. The PSC will ensure:

- oversight and assurance of technical quality of outputs;
- close linkages between the Project and other ongoing projects and programmes relevant to the project;
- timely availability and effectiveness of co-financing support
- sustainability of key Project outcomes, including up-scaling and replication; and,
- effective coordination of Government partner work under this Project.

303. The PSC will also approve the six-monthly Project Progress and Financial Reports and the AWP/B.

304. The members of the PSC will each assure the role of Focal Point for the Project in their respective agency. Hence the Project will have a Focal Point (i) in each concerned national ministry and (ii) in each of the four Regions. As Focal Point in their agency, the concerned PSC member they will (i) technically oversee activities in their sector (ii) ensure a fluid 2-way exchange of information and knowledge between their agency and the project (iii) facilitate coordination and a linking between the project activities and the workplan of their agency and (iv) facilitate the provision of co-financing to the Project.

305. A **National Coordination Unit (*Coordination Nationale, NCU*)** will be established. The NCU will be hosted by MASA. The NCU will be led by the National Project Coordinator (NPC), a full-time Project position, in close collaboration with a half-time International Project Technical Advisor (IPTA). The NCU will be comprised of a small core group of operational and technical staff, namely: the NPC; the IPTA; an Field School M&E expert, a Knowledge Management and Communications officer, and a full-time Financial/Administrative Officer.

306. In each of the four participating regions, a Regional Coordinators will be recruited, full-time, and housed in the concerned Regional Departments for Agriculture. The Regional Coordinators, although out-posted, are full-time members of the NCU and report to the NPC.

307. Terms of Reference of all NCU staff is provided in Appendix 6.

308. The NCU staff will be recruited by the project and report (through the NPC) to the BH. The NCU will carry out its functions in line with FAO rules and regulations.

309. The following are some of the key functions of the NCU:

- to technically identify, plan, design and support all activities;
- to liaise with government agencies and to regular advocate on behalf of the Project;
- to prepare the Annual Work Plan and Budget (AWP/B);
- to be responsible for day-to-day implementation of the project in line with the AWP;
- to ensure a results-based approach to project implementation, including maintaining a focus on project results and impacts as defined by the Results Framework (RF) indicators;
- to coordinate project interventions with other ongoing activities;
- to monitor project progress;
- to be responsible for the elaboration of FAO PPRs⁷⁰ and the annual PIR⁷¹, and;
- to facilitate and support the midterm review and final evaluation of the Project.

310. The NCU will also be supported by a series of national and international consultants to provide short term inputs to the Project. These will be finalised during the project implementation.

311. **National Project Coordinator (NPC)** will lead the NCU and work closely with the FAO office and MASA. The NPC reports to the BH on operational issues and to the LTO on technical issues. The NPC is a full-time position. The NPC will lead and organize the day-to-day execution of the project. The NPC will also take the lead in communications with government agencies and advocacy. The NPC will also be responsible for providing technical advice and guidance in his/her area of technical expertise. The NPC will report regularly on Project progress in line with the FAO procedures, and will develop and submit semi-annual PPRs and annual PIRs. In addition to technical and substantive duties, the NPC will:

- Oversee creation of a participatory monitoring system for the Project's work;
- Ensure real-time monitoring of Project progress and the alerting of MASA, BH and the LTO to potential problems that could result in delays in implementation;
- Help identify consultant candidates and work with the BH to ensure their timely recruitment;
- Ensure the Project's effective and efficient work with stakeholders in the pilot areas;
- Help organize and supervise consultant inputs;
- Oversee creation of the Project's approach to managing and sharing knowledge, and to identifying and disseminating lessons learned;
- Communicate, advocate and engage in policy dialogue;
- Coordinate activities with cofinancers donors and other projects related to FFS.

312. The NPC will also take a lead in the organization and technical implementation of many activities.

313. **International Project Technical Adviser (IPTA)** will directly support the NPC and the NCU and ensure best international technical and management practices are integrated into the Project work plan and activities. The IPTA reports to the BH on operational issues and to the LTO on technical issues. The IPTA is a half-time position. The IPTA will be an internationally recognized expert on livestock raising in sub-Saharan Africa and will have significant experience with extension systems and with the agro-pastoral field school approach. For these reasons, it is most likely s/he will be from East Africa.

314. The IPTA will support all aspects of the day-to-day execution of the Project. IPTA will support the NPC in reporting on Project progress, and will contribute to the development of semi-annual PPRs and annual PIRs. In addition the IPTA will:

⁷⁰ Project Progress Report

⁷¹ Project Implementation Review

- Ensure latest and best international practices and approaches are reflected in the design and planning of Project Activities;
- Design and propose a participatory monitoring system for the Project's work;
- Support real-time monitoring of Project progress and the alerting of the BH and the LTO to potential problems that could result in delays in implementation;
- Help identify consultant candidates, especially international candidates;
- Support design of the Project's work with stakeholders in the pilot areas;
- Help organize and supervise consultant inputs;
- Propose an approach to managing and sharing knowledge, and to identifying and disseminating lessons learned;
- Provide on-the-job capacity development to all members of the NCU;
- Communicate, advocate and engage in policy dialogue.

315. **Technical Partners** (*partenaires techniques regionaux*) and local **service providers** (*prestataires de service locaux*) will provide technical services to the Project in line with letters of agreement (see Table 4 above).

316. The following local government agencies will play key roles in the coordination and implementation of the Project:

- Regional Departments responsible for agriculture and animal resources (*Directions Regionales*). These will be responsible for supporting/monitoring activities at the regional level. This includes ensuring integration with the activities of partner projects. It also includes coordination with policy development/implementation at the regional level;
- Provincial Departments responsible for agriculture and animal resources (*Directions Provinciaux*) – Responsible for supporting/monitoring activities at the provincial level. This includes ensuring integration with the activities of partner projects. It also includes coordination with policy development/implementation at the regional level;
- Zonal technical support services for agriculture and animal resources (*service departementaux* or ZAT) –will provide technical support;
- Communes councils – responsible for coordination and technical support at the commune level. They are also responsible for the integration of Field School approach into the PCD.

d) Organizational chart

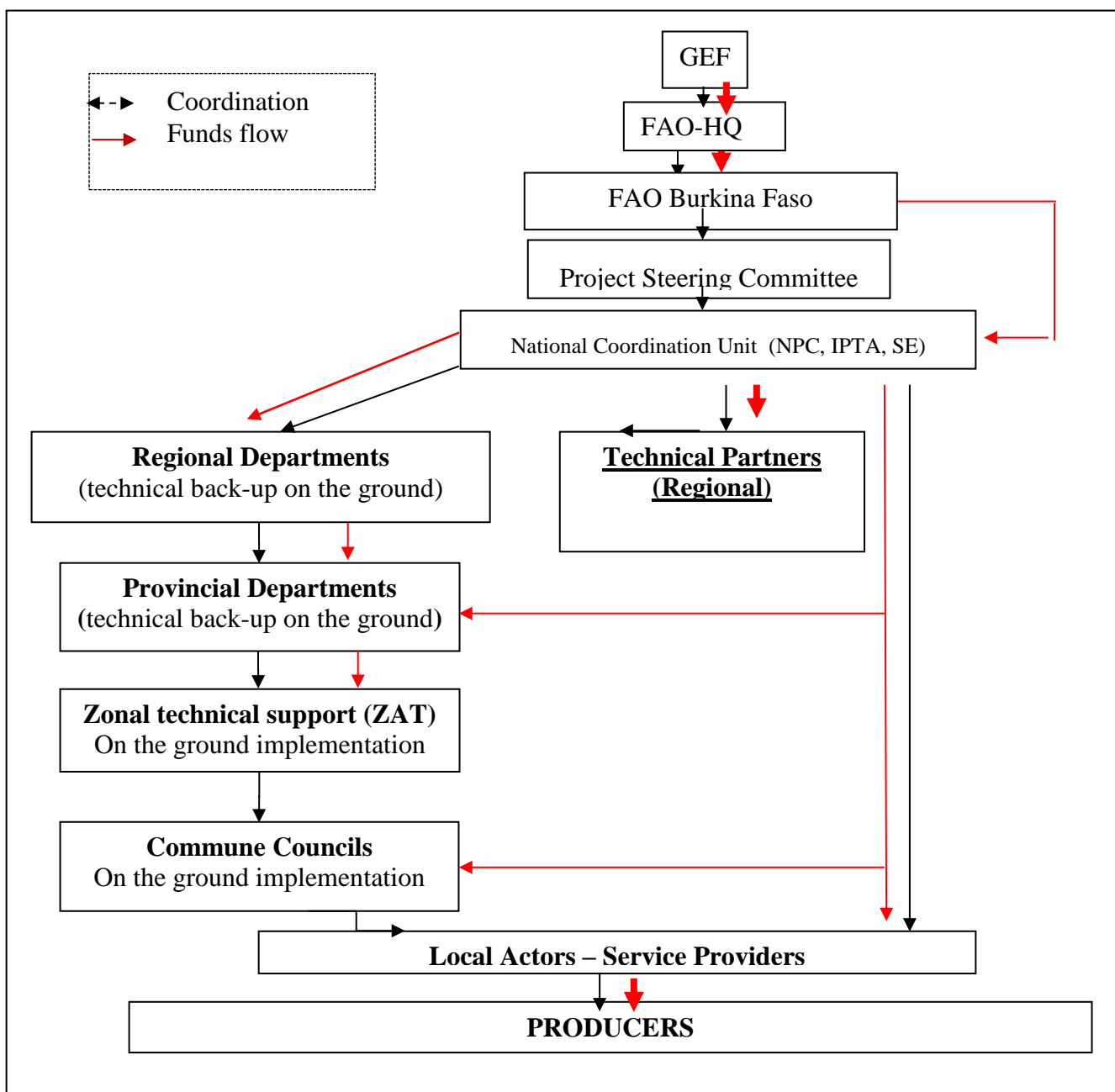


Figure 5: Implementation Arrangements, Fund Flows and Coordination

4.3 FINANCIAL PLANNING AND MANAGEMENT

4.3.1 Financial plan (by component and by co-financier)

317. The total cost of the project will be US\$23,245,000 to be financed through a US\$ 3,810,000 GEF grant and US\$19,435,000 in co-financing from: (i) MASA (US\$4,075,000); (ii) MRAH (US\$1,300,000; (iii) FAO (US\$14,000,000; (iv) Bioversity International (US\$60,000). Table 5 below shows the cost by component and by sources of financing. The FAO will, as the GEF Agency, only be responsible for the execution of the GEF resources and the FAO co-financing.

Table 5: Summary of Financial Contributions (all figures in US\$)

Component/output	MASA + SE_CNESA	MRAH	FAO Burkina	Bioversity	Total Co-financing	% Co-financing	GEF	% GEF	Total
Component 1: Introduction of improved climate-resilient	-	350,000	4,200,000	-	4,550,000	88%	600,000	12%	5,150,000
O 1.1 Core group of managers (national/regional) with knowledge of improved climate-resilient agro-pastoral practices	-	250,000	4,200,000	-	4,450,000	96%	200,000	4%	4,650,000
O 1.2 a) Map of best practices, of climate resilient cultivars/varieties, and of institutional support mechanisms collected from across the sub-Region. b) An agreed series of best practices and of appropriate varieties/cultivars to be used	-	50,000	-	-	50,000	20%	200,000	80%	250,000
O 1.3 A strategy for the adaptation of the FFS approach and the introduction of DFF	-	50,000	-	-	50,000	20%	200,000	80%	250,000
Component 2: Improving agro-pastoral practices through	2,110,000	500,000	9,800,000	60,000	12,470,000	84%	2,330,997	16%	14,800,997
O 2.1 Intervention zones, partners and partner- communities identified.	240,000	-	-	-	240,000	62%	150,001	38%	390,001
O 2.2 Master Trainers for APFS and FFS	240,000	-	-	10,000	250,000	55%	203,801	45%	453,801
O 2.3 CCA and other best practices integrated into APFS and FFS curricula/training (continuous)	240,000	-	-	10,000	250,000	70%	106,996	30%	356,996
O 2.4 APFS and FFS Facilitators trained in integrated crop/livestock/tree systems	240,000	-	-	20,000	260,000	51%	250,000	49%	510,000
O 2.5 Pastoralist/farmers trained and implementing new practices	240,000	500,000	9,800,000	10,000	10,550,000	93%	756,200	7%	11,306,200
O 2.6 Dissemination of climate-resilient APFS and FFS approaches	240,000	-	-	10,000	250,000	71%	100,000	29%	350,000
O 2.7 Improved availability of information on weather for local agro-pastoral communities.	240,000	-	-	-	240,000	44%	300,000	56%	540,000
O 2.8 Secured land assets	240,000	-	-	-	240,000	55%	200,000	45%	440,000
O 2.9 Local Adaptation Investment Fund (operational and financially sustainable)	190,000	-	-	-	190,000	42%	264,000	58%	454,000
Component 3: Mainstreaming SLM into agricultural and e	1,700,000	350,000	-	-	2,050,000	80%	500,000	20%	2,550,000
O 3.1 A five-Ministry CC-A coordination mechanism for extension to integrated livestock and cropping systems	400,000	-	-	-	400,000	89%	50,000	11%	450,000
O 3.2 Strengthened National Extension System (SNVACA) – incorporating APFS approach and strengthening approach to climate change	600,000	175,000	-	-	775,000	79%	200,000	21%	975,000
O 3.3 Commune development plans updated to account for climate resilience across agro-pastoral activities	700,000	175,000	-	-	875,000	78%	250,000	22%	1,125,000
Component 4: Project Monitoring and dissemination	75,000	100,000	-	-	175,000	51%	165,000	49%	340,000
O 4.1 System for systematic collection of field-based data to monitor project outcome indicators operational	75,000	75,000	-	-	150,000	74%	53,600	26%	203,600
O 4.2 Midterm and final evaluation conducted	-	-	-	-	-	0%	91,100	100%	91,100
O 4.3 Project-related “best-practices” and “lessons-learned” for enhanced adaptation to climate risk of the agricultural sector are disseminated via publications, project website and others	-	25,000	-	-	25,000	55%	20,300	45%	45,300
Project Management	190,000	-	-	-	190,000	47%	214,004	53%	404,004
Total Project	4,075,000	1,300,000	14,000,000	60,000	19,435,000	84%	3,810,000	16%	23,245,000

4.3.2 GEF/LDCF/SCCF inputs

318. The GEF funds will finance inputs needed to generate the outputs and outcomes under the Project. These include: (i) local and international consultants for technical support and Project management; (ii) support to designing and establishing an improved approach to Field School, incorporating APFS, in Burkina Faso; (iii) support to direct monitoring activities; (vi) support through LoA/contracts with technical institutions and service providers supporting the delivery of

specific Project activities on the ground; (v) international flights and local transport and minor office equipment; and (vi) training and awareness raising material. GEF resources will also finance publications for awareness raising and education on adaptation best practices.

4.3.3 Government inputs

319. The government (MASA, MRAH) will provide in-kind co-financing consisting mainly of staff time, office space and utilities, and support for local travel.

320. The government will also provide cash co-financing through the parallel, partner projects. As described in previous sections, these are:

- MASA: the National Extension System (SNVACA) and its Annual Programmes (PNVACA) (\$2 million);
- MASA: the National Food Security and Nutrition Programme in Burkina Faso (PSAN-BF) (\$2.075 million);
- MRAH: through The Bio Digester Program; the Ouagadougou Peri-Urban Dairy Sector Development Project, and; the Improving Zebu Azawak Raising and Sustainable Pasture Land Management Project (\$1.3 million).

4.3.4 FAO inputs

321. The FAO will provide technical assistance, support, training and supervision of the execution of activities financed by GEF resources. The GEF project will complement and be co-financed by several projects and activities implemented by the FAO Representation in Burkina Faso funded by the FAO Technical Cooperation Programme and by various donors through trust fund arrangements. These are described in previous sections and include:

- Through its contribution (financed by the EU) to the National Food and Nutrition Security Programme in Burkina Faso (i.e. PSANBF) (\$13 million);
- Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso (\$1 million).

322. The FAO Burkina Faso office will also provide in-kind support over the lifetime of the project.

4.3.5 Other co-financiers inputs

323. *Bioversity International*, a member of the Consultative Group on International Agricultural Research (CGIAR) will provide support to the development of DFF in Output 2.5 (\$60,000). This support will be provided through the project: *Reducing the risk of crop failure for poor farmers through enhancing traditional seed systems in Sahelian West Africa*. This will contribute to the identification of valuable local species and varieties/hybrids, to determining conservation measures, and to support rangeland rehabilitation through Field Schools.

4.3.6 Financial management of and reporting on GEF/LDCF/SCCF resources

Financial Records

324. FAO shall maintain a separate account in United States dollars for the project's LDCF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations

operational rate of exchange on the date of the transaction. FAO shall administer the project in accordance with its regulations, rules and directives.

Financial Reports

325. FAO-Burkina Faso as the BH shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

- Details of project expenditures on a component-by-component and output basis, reported in line with project budget codes as set out in the Project Document, as at 30 June and 31 December each year.
- Final accounts on completion of the project on a component and output-by-output basis, reported in line with project budget codes as set out in the Project Document.
- A final statement of account in line with FAO Oracle project budget codes, reflecting actual final expenditures under the project, when all obligations have been liquidated.

326. The BH will submit the financial reports for review and monitoring by the LTU and the FAO GEF Coordination Unit. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

Budget Revisions

327. Semi-annual budget revisions will be prepared by the BH in consultation with the FAO Representation in Burkina Faso in accordance with FAO standard guidelines and procedures.

Responsibility for Cost Overruns

328. The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the project budget under any budget subline provided the total cost of the annual budget is not exceeded.

329. Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget subline over and above the 20 percent flexibility should be discussed with the FAO GEF Coordination Unit with a view to ascertaining whether it will involve a major change in project scope or design. If it is deemed to be a minor change, the BH shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.

330. Savings in one budget subline may not be applied to overruns of more than 20 percent in other sublines even if the total cost remains unchanged, unless this is specifically authorized by the FAO GEF Coordination Unit upon presentation of the request. In such a case, a revision to the project document amending the budget will be prepared by the BH.

331. Under no circumstances can expenditures exceed the approved total project budget or be approved beyond the NTE date of the project. Any over-expenditure is the responsibility of the BH.

Audit

332. The project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

333. The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the governing bodies of the Organization and reporting directly to them and an internal audit function headed by the Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of interest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.4 PROCUREMENT

334. The Budget Holder, in close collaboration with the National Project Coordinator, the Lead Technical Officer and the Budget and Operations Officer will procure the equipment and services provided for in the detailed budget in Appendix 5, in line with the Annual Work Plan and Budget and in accordance with FAO's rules and regulations.

335. Prior to commencement of procurement, the BH, in close consultation with the National Project Coordinator and the Lead Technical Unit (LTU), will complete the procurement plan for all services and equipment to be procured by FAO.

336. The procurement plan shall be updated every 12 months and submitted to and cleared by the FAO Budget Holder and LTO with the AWP/B and annual financial statement of expenditures report for the next instalment of funds.

4.5 MONITORING AND REPORTING

4.5.1 Oversight and monitoring responsibilities

337. The monitoring and evaluation (M&E) tasks and responsibilities clearly defined in the project's detailed Monitoring Plan (see below) will be achieved through: (i) day-to-day monitoring and supervision missions of Project progress (NCU); (ii) technical monitoring of indicators (NCU); (iii) Field School-level monitoring activities (by project M&E experts and local technical services); (iv) midterm and final evaluations (independent consultants and FAO Evaluation Office); and (v) continual oversight, monitoring and supervision missions (FAO).

338. During the Inception Phase of the GEF Project, the NCU will set up a project progress monitoring system strictly coordinated with subsystems in each of the four Regions. Participatory mechanisms and methodologies for systematic data collection and recording at the level of the Field School will be developed in support of indicators, monitoring and evaluation. During the inception workshop (see section 4.5.3 below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the project's Results framework indicator targets and their means of verification, and assumptions and risks with all project stakeholders; (ii) review of the M&E indicators and their baseline; (iii) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions; and (iv) clarification of the respective M&E tasks among the Project's different stakeholders, (v) finalization of the first results-based annual work plan and budget, (vi) prepare financial reporting procedures and obligations, (vii) schedule of PSC meetings.

339. One of the main outputs of the Inception Phase will be a detailed monitoring plan, agreed upon by all stakeholders and based on the monitoring and evaluation plan summary presented in section 4.5.4 below.
340. The Inception Phase will conclude with the holding of an Inception Workshop (IW) organized by the NCU. The IW will: (a) assist all stakeholders to fully understand and take ownership of the Project; (b) review and confirm/finalize Project indicators and results framework with stakeholders; (c) Review the Project's first AWP with results-based annual budget; (d) discuss the roles, functions, and responsibilities within the Project's decision-making structures; (e) review a detailed M&E work plan and budget based on the M&E plan summary presented in Table 6, below. The first PSC meeting will be held within the two months of the IW.
341. The day-to-day monitoring of the Project implementation will be the responsibility of the NPC with support from the IPTA and the M&E expert, driven by the preparation and implementation of an Annual Work Plan and Budget (AWP/B) followed up through six-monthly Project Progress Reports (PPRs). The preparation of the AWP/B and six-monthly PPRs will represent the result of a unified planning process between the main project partners. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with local stakeholders and coordinated through the NCU and service providers and facilitated through project planning and progress review workshops. These inputs would be consolidated by the respective Service Provider Managers before forwarding them to the IPTA and to NPC who will consolidate the information into a draft AWP/B and PPRs. An annual project progress review and planning meeting should be held with the participation of all involved service providers. Subsequently, the AWP/B and PPRs are submitted to the local and national PSC for approval (AWP/B) and Review (PPRs) and to FAO for approval. The AWP/B will be developed in a manner consistent with the project's Results Framework to ensure adequate fulfilment and monitoring of project outputs and outcomes.
342. Following the approval of the Project, the Project's first year AWP/B will be adjusted (either reduced or expanded in time) to synchronize with an annual reporting calendar. In subsequent years, the Project workplan and budget will follow an annual preparation and reporting cycle as specified in section 4.5.3 below.

4.5.2 Indicators and information sources

343. The project's Results Framework (RF) indicators will be the main reference point for M&E of Project outcomes including contributions to adaptation benefits (see Appendix 1). The RF's indicators and means of verification will be applied to monitor Project performance and impact. Data collected will be of sufficient detail to track outputs and outcomes and flag Project risks early on, using FAO's monitoring procedures and progress reporting formats. The NCU will link each AWP/B to the RF indicators to ensure that Project implementation maintains a focus on achieving the impact indicators as defined. A key element to this will be the elaboration and monitoring of output target indicators in each AWP/B that cumulatively lead to outcome level results. Output targets will be monitored on a semi-annual basis and outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations.
344. In line with GEF requirements, the AMAT indicators will be measured and reported three times – at project outset, project mid-term and project end.
345. The main sources of information to support the M&E programme will be: (i) participatory progress monitoring and workshops with beneficiaries; (ii) on-site monitoring of Field School

training and activities; (iii) PPRs prepared by the NCU; (iv) consultants reports; (v) participants training tests and evaluations; (vi) mid-term and post project impact and evaluation studies completed by independent consultants; (vii) financial reports and budget revisions; (viii) PIR prepared by the LTO supported by the BH and the NCU; and (ix) FAO supervision mission reports.

4.5.3 Reporting schedule

346. Specific reports that will be prepared under the M&E program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) co-financing Reports; and (vii) Terminal Report. In addition, assessment of Climate Change Adaptation through use of the LDCF/SCCF Adaptation Monitoring and Assessment Tool (AMAT) will be undertaken during midterm and final project evaluation (against the baseline to be completed during project inception).

Project Inception Report

347. After approval of the Project an inception workshop will be held. Immediately after the workshop, the NPC will prepare a Project Inception Report in consultation with the FAO LTO, BH and national partners.

348. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan based on the monitoring and evaluation plan summary presented in section 4.5.4 below. The draft inception report will be circulated to FAO and the Project Steering Committee for review and comments before its finalization, no later than three months after project start-up. The report should be cleared by the FAO BH, LTU and the FAO GEF Coordination Unit and uploaded in FPMIS by the LTU.

Results-Based Annual Work Plan and Budget (AWP/B)

349. The draft of the first AWP/B will be prepared by the NPC in consultation with the Project Task Force and reviewed at the project Inception Workshop. Government of Burkina Faso inputs will be incorporated and the NPC will submit a final draft AWP/B within two weeks of the IW to the BH. For subsequent AWP/B, the NPC will organize a project progress review and planning meeting for its assessment. Once comments have been incorporated, the BH will circulate the AWP/B to the LTO and the GEF Coordination Unit on a no-objection basis prior to uploading in FPMIS by the BH. The AWP/B must be linked to the project's Results Framework indicators so that the project's work is contributing to the achievement of the indicators. The AWP/B should include detailed activities to be implemented to achieve the project outputs and output targets and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The AWP/B should be approved by the Project Steering Committee.

Project Progress Reports (PPRs)

350. The NPC will prepare six-monthly Progress Reports (PPRs) and submit them to the FAO LTO and the BH no later than 31 July (covering the period January through June) and 31 January (covering the period July through December). The first semester six month report should be accompanied by the updated AWP/B. The PPRs are used to identify constraints, problems or

bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the Project Results Framework. The FAO LTO and BH will review the progress reports, collect and consolidates eventual FAO comments from the LTU, the GEF Coordination Unit, and the BH Office and provide these comments to the MASA. When comments have been duly incorporated the LTU will give final approval and submit the final PPR to the GEF coordination Unit for final clearance. Thereafter the BH will upload final documents in FPMIS.

Annual Project Implementation Review (PIR)

351. The LTU, with support from the NPC/IPTA and BH will prepare an annual Project Implementation Review (PIR) covering the period from July (the previous year) through to June (current year). The PIR will be submitted to the FAO GEF Coordination Unit for review and approval no later than 10 September. The FAO GEF Coordination Unit will upload the final report on FAO FPMIS and submit it to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The FAO GEF Coordination Unit will provide the updated format when the first PIR is due.

Technical Reports

352. Technical reports will be prepared to document and share Project outcomes and lessons learned. The drafts of any technical reports must be submitted by the NPC to the BH who will share it with the LTU for review and clearance and to the FAO GEF Coordination Unit for information and eventual comments, prior to finalization and publication. Copies of the technical reports will be distributed to the PSC and other project partners as appropriate. The final reports will be posted on the FAO FPMIS by the LTU.

353. The drafts of any technical reports must be submitted by the NPC/IPTA or executing partners to the BH who will share it with FAO LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of the reports. The BH will upload the final cleared reports onto the FPMIS. Copies of the technical reports will be distributed to the national executing partners and other Project partners as appropriate. These will also be posted on the Project website and FAO FPMIS.

Co-financing Reports

354. The BH, with support from NPC/IPTA, will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by the Government of Burkina Faso and other partners. The NPC, with support from the IPTA will compile the information received from the executing partners and transmit in a timely manner to the LTO and BH. The report covers the period from July (the previous year) through to June (current year). The format and tables to report on co-financing can be found in the PIR.

GEF/LDCF/SCCF AMAT Tracking Tool

355. Following the GEF policies and procedures, the tracking tool for climate change adaptation area will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation or final completion report.

Terminal Report

356. Within two months of the Project completion date, the NPC, with the technical support of the IPTA, will submit to the BH and LTO a draft Terminal Report. The Report will include a list of

outputs detailing the activities undertaken under the Project, lessons learned and any recommendations to improve the efficiency of similar activities in the future. This report will specifically include the findings of the final evaluation as described above. The main purpose of the final report is to give guidance at the ministerial or senior government level on the policy decisions required for the follow-up of the Project and to provide the donor with information on how the funds were utilized. The terminal report is accordingly a concise account of the main products, results, conclusions and recommendations of the Project, without unnecessary background, narrative or technical details. A final project review meeting should be held to discuss the draft terminal report before it is finalized by the BH and approved by the FAO LTU and the GEF Coordination Unit.

4.5.4 Monitoring and evaluation plan summary

357. The Table 6 below provides a summary of the main M&E reports, responsible parties and timeframe.

Table 6: Summary of M&E Related Costs

Type of M&E Activity	Responsible Parties	Time-frame	Estimate of costs
Inception Workshop (IW)	NCU, supported by the LTO, BH, and GEF Coordination Unit (GCU)	Within three months of project start up	Workshop costs combined with costs of 2.1 Workshop preparation: staff time USD 3,500 (completed by NPC and IPTA)
Surveys to determine AMAT baseline values	NCU and service providers	Within three months of project start up	Covered under costs of 2.1
Project Inception Report	NCU, LTO, BH, and GCU	No later than one month post IW.	USD 2,500 (completed by NPC and IPTA)
Field based impact monitoring	NCU, MASA and other relevant agencies – including regional and provincial - to participate.	Periodically - to be determined at inception workshop.	USD 45,800
Supervision visits and rating of progress in PPRs and PIRs	LTU/LTO, other participating units and GCU	Annual or as required	The visits of the LTO and the GCU will be paid by GEF agency fee. The visits of the NPC and IPTA will be paid from the project travel budget
Project Progress Reports	NCU, with inputs from MASA, PSC members and other partners	Semi-annual	USD 13,000 (completed by NPC and IPTA)
Project Implementation Review report	NCU supported by the LTO and cleared and submitted by the GCU to the GEF Secretariat	Annual	Paid by GEF agency fee
AMAT	NCU supported by the LTO	Project start-up, mid-Term and project end.	0 Data is collected by the NCU.
Co-financing Reports	NCU, FAO Burkina Faso	Annual	USD 3,000 (completed by NPC and IPTA)

Type of M&E Activity	Responsible Parties	Time-frame	Estimate of costs
Technical reports	NCU, LTO & Participating Units	As appropriate	USD 9,200 best practices publication and technical data available to the public
Mid-term Evaluation	External Consultant, FAO Office for Evaluation in consultation with the project team including the GCU and other partners	At mid-point of project implementation	USD 40,000 for independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Final evaluation	External Consultant, FAO independent evaluation unit in consultation with the project team including the GCU and other partners	At the end of project implementation	USD 40,000 for external, independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Terminal Report	NPC, LTO, TCSR Report Unit	At least two months before the end date of the Execution Agreement	USD 8,000 (completed by NPC and IPTA)
Total Budget			USD 165,000

4.6 PROVISION FOR EVALUATIONS

358. An independent mid-term evaluation will be undertaken after two years of project implementation. The review will determine progress being made towards achievement of objectives, outcomes, and outputs, and will identify corrective actions if necessary. It will, inter alia:

- review the effectiveness, efficiency and timeliness of project implementation;
- analyse the effectiveness of implementation and partnership arrangements;
- identify issues requiring decisions and remedial actions;
- identify lessons learned about project design, implementation and management;
- highlight technical achievements and lessons learned; and
- propose any mid-course corrections and/or adjustments to the implementation strategy as necessary.

359. An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE will identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This Evaluation would also have the purpose of indicating future actions needed to expand on the existing Project in subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities responsible for the management of other project partners.

360. Some critical issues to be evaluated in the midterm and final evaluations will be: (i) institutional adoption and support for the new approaches introduced by the Project; (ii) the functioning and effectiveness of the APFS network and of the inter-institutional coordination mechanism in developing and implementing integrated planning in support of farmer-herder communities; (iii) the level of capacities and involvement of local staff in terms of improved management effectiveness and land management plan implementation capability; (iv) the level of involvement of farmers and herders in project activities and commitment to follow-up.

361. The Terms of Reference (TOR) for the Final Evaluation team (one international and one national consultant) will be prepared in close consultation with the NPC, the FAO BH, LTO and GEF Coordination Unit, and under the ultimate responsibility of the FAO Office of Evaluation, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Independent Evaluation Office. The TOR and the report will be discussed with and commented upon by the project partners.

4.7 COMMUNICATIONS AND VISIBILITY

362. Giving high visibility to the project and ensuring effective communications in support of the Project's message is to be addressed through a number of activities that have been incorporated into the Project design. These include: (i) the recruitment of one NCU staff member responsible (inter alia) for communications and knowledge management; (ii) the preparation of documents and communication tools that capture the Project's economic, ecological and social benefits; (iii) several regional and national workshops to raise awareness and lobby, and; (iv) several awareness raising activities.

363. These inputs and activities will be integrated into the Project Workplan, and, as such, will come out of the Project's technical activities rather than be stand-alone activities. Notably, under Component 2, the support to Field Schools will include: (i) communication and training materials, (ii) preparation and dissemination of material regarding added value to the commercialization of livestock and non-livestock products, (iii) demonstration material to increase the visibility of the use of local and wild species for food and fodder, (iv) multiple training workshops including local institutions, stakeholders and populations in the project intervention areas, that will raise awareness among participants, (v) dissemination of results of gender-disaggregated assessments and selected community maps, and (vi) and preparation of APFS videos and spots. Also, a project website will be established that will issue periodic project newsletters and help disseminate specific publications on "best practices and lessons learned".

SECTION 5 – SUSTAINABILITY OF RESULTS

5.1 SOCIAL SUSTAINABILITY

364. The Project introduces and adopts a predominantly ‘bottom up’ approach, empowering local communities and increasing their ability to participate in economic activities and to take ownership over their natural resources. Moreover, the participatory and didactic approach adopted at the grass-roots is conducive to avoiding elite capture and to minimizing any marginalization at the community level. Further, the Project respects and strengthens existing decision-making processes at all levels. These aspects should ensure that, although the Project introduces new approaches and technologies, they do not lead to social dis-function or to negative social impacts. On the contrary, they are designed to strengthen social capital, providing a good basis for social sustainability. This is notably through Outputs 2.5 – 2.9.
365. The Project directly aims to complement existing programmes that improve local livelihoods and improve food security. That is, the Project will help local communities to engage in these existing programmes, and this engagement should continue after the Project finishes, another aspect of social sustainability. The Project has several strategies to support this community engagement with existing programmes: it strengthens community organizational capacity; it develops micro-credit mechanisms; it supports local communities to access local PCDs and national development financial resources. Moreover, many Project activities will make a direct contribution to economic development of the communities. All these things tend towards social sustainability.
366. The Project will also help strengthen the system of Field Schools, creating new schools in some areas and strengthening existing schools in other areas. These Field Schools have previously demonstrated their sustainability in Burkina Faso, and they benefit from a range of partnerships with institutional partners (with Government, with local NGOs and with international development partners). Hence, the support to Field Schools through the project should be a sustainable achievement.
367. The Project will work with and in local languages, using appropriate media, as required.
368. The Project utilizes new tools to ensure participation in efforts to increase resilience to climate change. These tools include TOP-SECAP, SHARP and PNTD. These are all designed to ensure social integration and support at the local level, and to contribute to project sustainability.
369. Gender The project has a strong gender focus. In Output 2.1 the project will apply the *Improving Gender Equality in Territorial Issues* (IGETI) tool that allows for a gender sensitive, stakeholder priorities’ analysis (Output 2.1). The analysis is based on a Socio-Economic and Gender Analysis (SEAGA) approach that places great emphasis on the importance of linkages between economic, environmental, social and institutional patterns that influence the context in which development activities are undertaken. The SEAGA focuses on understanding gender roles, responsibilities and relations, and how they are managed in different communities. The approach also analyses the influence exerted on economic and social opportunities by factors such as age, ethnicity, religion, etc. all of which are fundamental in understanding livelihood strategies. The approach addresses the plight of the poor, weak, marginalized and disadvantaged men and women of all ages who are considered a priority and are ensured a voice. The SEAGA considers the active participation of all actors essential for sustainable development, because it recognizes asymmetries of power within households and structures of power. This includes institutions and how they influence people’s capacity to play an active role in development, ensuring that their voices are heard. All these methodologies will support the negotiations undertaken through PNTD at later stages.

370. Several other activities under the other Outputs have a gender focus. The awareness raising, the preparation of training material and the training of Master Trainers and Facilitators all have modules focused on women and women's role. Outputs 2.5 – 2.7 cover the provision of technologies, and the market inclusion for various community activities with the aim of increasing revenue and increasing food security, notably for women. The community based action plans to be prepared under Output 2.5 will have women components and will have gender issues mainstreamed throughout. Output 2.8, focusing on strengthening on land security, and the use of PNTD, also has a strong focus on women.

5.2 ENVIRONMENTAL SUSTAINABILITY

371. As the vast majority of the population in the project intervention areas depend directly on natural resources for their livelihoods, the main problem addressed by the project is the ongoing degradation of natural resources, notably of grazing land, but also of forest land, water resources and of land used primarily for crop cultivation. That is, the project is fundamentally about strengthening the natural resource base, increasing environmental capital, and therefore increasing ecosystem resilience and therefore supporting the climate resilience of the local communities. Several aspects illustrate this:

- The Field School approach being promoted under this project is based on integrated farming systems, whereby cropping/grazing/tree harvesting are undertaken in combination, in order to optimize production, to reduce the removal of nutrients from the land, and to maximise the return of nutrients to the land. This approach also optimizes the level of inputs to agriculture – i.e. the practices of irrigation, pesticide use, fertilizer use are all minimal and finely adapted to needs and to the sustainable use of land. It also ensures that livestock stocking levels are based on scientifically determined carrying capacities;
- Many of the project intervention areas currently consist of large areas of already degraded grazing land due to CC effect. In those areas, the aim of the project is to reverse land degradation. This includes several efforts to regenerate rangelands and to assist the natural regeneration of rangelands. Several approaches will be tested under Outcome 2. These approaches build on indigenous knowledge and the use of indigenous species and varieties/cultivars;
- Many of the project intervention areas also include degraded agricultural land, due to over-exploitation and inadequate management and CC. The project will introduce alternatives and technological improvements to reverse this land degradation tendency;
- The large body of training material to be developed by the Project will only cover environmentally sustainable practices and measures. This will include low-input farming, conservation agriculture techniques, sustainable land management, water conservation measures, etc.;
- The Project supports the conservation of genetic diversity through the DFF approach, and through activities to conserve local seeds, and through support to establishing community seed banks.

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

372. Economic As discussed in previous sections, a main focus of the Project is economic sustainability. The project will introduce methods, measures, practices and technologies that contribute to the economic development of the targeted agro-pastoralist communities. Accordingly, some 26,000 farmers will benefit from increased knowledge and increased ability to generate revenue in a sustainable manner, and in a manner resilient to climate change. Moreover, the changes introduced by the project will be developed in a participatory manner and will respect

local needs, local resources and local capacity. Hence, the local communities will be able to sustain the economic improvements after the Project. This is mostly the focus of Outcome 2.

373. Moreover, by strengthening the existing extension system, and by strengthening the capacity of technical agencies (both governmental and non-governmental), the Project creates an institutional capacity that can continue to support local communities after the Project has been completed (this is mostly through Outcomes 1 and 3, but also some activities in Output 2.2 and 2.3).

374. Financial. On the whole, the economic improvements introduced by the Project (see previous two paragraphs) will contribute to the financial sustainability of many of the Project interventions. However some aspects of the Project require specific attention in terms of financial sustainability.

375. First, the provision of support by the government agencies to remote communities across Burkina Faso is costly, and in many cases the government has not been able to effectively do this in the past, due to financial constraints. This relates notably to (i) the provision of extension services to farmer-herder communities and (ii) the provision of accurate, up-to-date, relevant meteorological information. The Project supports both of these during its lifetime, however, it is also necessary to ensure that these can continue *after* the Project is completed. With regards to the former (provision of extension support), the Field School approach to extension introduced by the Project is low-cost and is relatively easy to maintain, with early gains. Previous experience, including in Burkina Faso, demonstrates that with limited governmental input the structure can continue to function and sustainability should be achievable. However, it has to be noted that, into the future, the introduction of additional technologies through the Field School system may require resources beyond the means of the current government system.

376. With regards to the latter (provision of meteorological information), this is known to pose a challenge in Burkina Faso. Ideally the project would demonstrate the usefulness of such information to farmer-herders, and would help develop a demand-driven approach whereby farmer-herders demand and pay for information from the meteorological agencies. This would not only ensure the financial sustainability of the information services, it would also ensure that the information generated by the meteorological agencies responds to the real needs of the farmer-herders. Currently, the government is not in favour of such a demand-driven approach, and this is considered a risk (see Appendix 4).

377. Finally, lessons learnt from similar Projects in the past show that, whereas it is relatively straightforward to identify, in a participatory manner, the required investments needed to improve resource management, often the financial capacity is not present and there is no way to make the actual investments. Hence, participatory planning processes lead to low-cost investment plans, but the necessary investments do not take place. The Project has two strategies in place to address this. First, by developing community action plans, and ensuring they are firmly integrated into existing Communal (and Regional) development planning (see Outputs 2.5 and 3.3), the Project will directly assist the mobilization of available resources to the investments that are identified by farmer-herders in order to increase resilience to climate change. Second, under Output 2. 9, the Project will establish the Local Adaptation Investment Fund (LAIF). The Project will establish this revolving fund, and create the institutional capacity for managing it on a sustainable basis. The LAIF shall be established in each of the four Regions. This will provide access to small-scale credit for herder -farmers in the intervention sites, in order to support adaptation to climate change. The benefits of this Fund shall be tested within the lifetime of the Project, and the local communities will have the capacity to maintain it – hence it should be sustainable. This is a sustainable way to support the small-scale investments identified as essential through the Project.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

378. The Project will develop capacity at many levels that will contribute to the overall body of capacity related to Field Schools and extension systems in Burkina Faso. This capacity will all be aligned to, and integrated into, existing organizations, both governmental and non-government, and so will have a sustained use after the Project. The project will not support new structures, or support organizations on issues for which they do not currently have a mandate.
379. The Project builds up the Field School approach, an approach that is proven in supporting communities. This approach has been successful in many West African countries and has been formally adopted by the government in Burkina Faso. The project will support capacity to operationalize and implement the approach, hence this capacity will respond to a proven need and will provide capacity that has proven useful and effective in the past.
380. The Project will build the capacity of planners and technical decision makers on climate resilient approaches to agro-pastoralism (Output 1.1). It will develop materials that can be used for training, awareness raising and dissemination (Outputs 1.2 and 2.3), and which (based on past experience) will continue to be used after the Project. The Project also builds capacity of regional and provincial governmental and non-governmental agencies on supporting extension systems (Outputs 2.1 and 2.7). Outputs 2.2 – 2.5 will establish a system, and develop materials, for supporting extension in Burkina Faso. Moreover, under these Outputs, the Project will directly train more than 26,000 farmers, facilitators and master trainers. In each case the training will be designed in a participatory manner to respond to the needs and resources of the beneficiaries, it will be focussed, demand-driven, needs-driven training. The recipients of the training will be well placed to immediately apply the contents of the training to their work. By making the training useful, there is strong reason to believe it will be used. Finally, Outputs 3.1 and 3.2 will include training and awareness raising for national level technical experts and decision-makers – suitable efforts will be made to ensure that the most pertinent participants are involved, and they will be helped to apply the contents of the training to their work.

5.5 APPROPRIATENESS OF TECHNOLOGIES INTRODUCED

381. The project will test, validate and promote local knowledge-based technologies (agricultural and pastoral measures and practices) to increase sustainability and diversify production. These will be based on past experience and should therefore be locally appropriate.
382. However, the project will also introduce, or refine, an innovative approach to extension (i.e. the Field School approach). Similar approaches are already used throughout Burkina Faso, and have been developed across much of Africa. Close monitoring will take place to ensure these approaches are appropriate to the Project Intervention area in Burkina Faso.

5.6 REPLICABILITY AND SCALING-UP

383. Output 2.6 and Outcome 3 focus on replication and scaling up.
384. Under Output 2.6, the Project will enter into operational partnerships with a range of rural development, pastoral and agro-pastoral projects and programmes. Through these partnerships, the Project will disseminate the APFS and FFS approaches that are to be developed through Outputs 2.1 – 2.5. Hence, Output 2.6 will lead directly to climate resilient, integrated agro-pastoral practices being utilized and developed through a wide range of initiatives and across a broader geographical area.
385. Outcome 3 is the institutionalization of the successes achieved and the lessons learnt from Outcome 2. Outcome 3 focusses in particular on the sustainability of project impacts. First, under

Output 3.1, the Project will develop a coordination mechanism for extension across the four regions, and this extension mechanism will be the vehicle for promoting the technologies developed in the Project. Under Output 3.2, the Project will incorporate the APFS approach into the national extension system (SNVACA), thereby directly assisting its replication across the country where appropriate. Finally, in Output 3.3, the Project will integrate the community action plans (developed by the project under Output 2.5 and integrating Field School approaches with climate resilience) into the formal PCD processes in concerned Communes. This will be used as a basis for mobilizing resources to PCD implementation to support activities that increase climate resilience amongst agro-pastoral communities.

APPENDICES

APPENDIX 1: RESULTS MATRIX

Table 1: Summary table of key indicators

Objective/Component	Indicators	Assumptions
<p><u>Global Environmental Objective:</u> To enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS</p>	<p>The number of hectares benefitting from improved sustainable land management and therefore improved resilience and adaptation to climate change. The targets are:</p> <ul style="list-style-type: none"> • 5,000 hectares of extensively grazed rangelands (including 800 hectares of naturally assisted regeneration); • 5,000 hectares of semi-intensively grazed rangelands; and, • 5,000 hectares of agricultural land, used for the cultivation of crops for human consumption (focusing in dry crops) and crops for animal feed. 	
<p><u>Component 1:</u> Introduction of improved climate-resilient agro-pastoral practices in the framework of the National Adaptation Programme (PAN) and the National Rural Sector Programme (PNSR)</p>	<p>No. of partners committed to contributing to implementation of FFS/DFP Strategy.</p>	<p>The National Adaptation Plan (PNA) and the PNSR become the principal reference tools for interventions of all CC actors in Burkina Faso, and the actors are all informed.</p>
<p><u>Component 2:</u> Improving agro-pastoral practices through Field Schools (FS) in the framework of on-going FAO-supported projects and other MRAH, MASA and MEDD's "<i>projets sous tutelle</i>"</p>	<p>(AMAT Indicator 3.1.1.) % of targeted groups adopting adaptation technologies by technology type (disaggregated by gender).</p> <p>(AMAT Indicator 3.1.1.1.) Types of adaptation technologies transferred to targeted groups.</p>	<p>The activities respond to the real needs of producers (including women).</p> <p>The diversity of the intervention areas is sufficient to provide full information on APFS and FFS.</p>

	NOTE: for the above two indicators, preliminary baseline figures and targets are available – these will be verified during the community assessments in Output 2.1	
<p><u>Component 3:</u> Mainstreaming climate change resilient agro-pastoral and agricultural systems into sectoral policies and into local development plans - in conformity with the PNA and the PNSR</p>	<p>(AMAT Indicator 1.1.1): Adaptation actions implemented in national/sub-regional development frameworks (no. and type).</p> <p>(AMAT Indicator 1.1.1.1): Development frameworks that include specific budgets for adaptation actions (list type of development framework and briefly describe the level of the action)</p> <p>(AMAT Indicator 2.2.1). No. and type of targeted institutions with increased adaptive capacity to minimize exposure to climate variability (describe number and type).</p> <p>(AMAT Indicator 2.2.1.1). No. of staff trained on technical adaptation themes (per theme) – (disaggregated by gender)</p> <p><i>The adaptation themes to be covered are/include (and disaggregated by gender).</i></p> <ul style="list-style-type: none"> • Improved resilience of agricultural systems ; • Erosion control/soil water conservation 	<p>All rural development departments and the civil sector partners (business and non-profit) are able to be informed of their roles and their involvement in the project (through awareness workshops, information and training).</p>
<p><u>Component 4:</u> Project monitoring and evaluation</p>	<p>Progress in achieving project outputs and outcomes.</p>	<p>It is possible to merge project monitoring with Field School monitoring.</p>

Table 2: Detailed results framework

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Component 1: Introduction of improved climate-resilient agro-pastoral practices in the framework of the National Adaptation Programme (PNA) and the National Rural Sector Programme (PNSR)								
<u>Outcome 1</u>								
Awareness and knowledge on climate-resilient agro-pastoral practices (including adoption of new varieties and cultivars, and adapted soil and water and animal management) established at national and regional levels.								
<u>Outcome 1, Indicator 1.1</u> No. of partners committed to contributing to implementation of FFS/DFF Strategy.	1.1. Partners are decision-makers in the following national programmes and projects: PNVACA, PAPSA, PSAN-BF, NEER-TAMBA, PRDI, PNB2, Ouagadougou Peri-Urban Dairy Sector Development Project, Improving Zebu Azawak Raising and Sustainable Pasture Land Management Project, ZEPESA, PASF, COGEL, PAFASP, PSANBF (FAO) and Helping Households Vulnerable to Malnutrition and Climate Change Through NTFP Value Chain Development in Burkina Faso. In the baseline, they have no	1.1 50% of partner programmes have a written commitment to supporting implementation of FFS/DFF Strategy.	100% of partners have awareness raised.	1.1 FFS/DFF Strategy prepared and under implementation by Project and co-financers.	1.1 50% of partner programmes sign agreement to implement FFS/DFF Strategy.	-	Project copies of agreements	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
	commitment to FFS or DFF approach.							
Output 1.1 Core group of 60 senior managers (national/regional) with knowledge of improved climate-resilient agro-pastoral practices.	CC and pastoralism are increasingly integrated, but neither is integrated into the FFS	60 senior manager trained in climate-resilient agro-pastoral practices	Managers identified	10 trained	60 trained	-	Project reports	NCU
Output 1.2 a) Map of best practices, of climate resilient cultivars/varieties, and of institutional support mechanisms collected from across the sub-Region. b) An agreed series of best practices and of appropriate varieties/cultivars to be used in BKF.	BP information exists in FAO and INERA but needs to be updated and needs to focus in the integration of crops/livestock/trees	Up-to-date, agreed, inventories and maps exist, and are broadly circulated and widely accessed	3 sub-inventories (best practices; climate resilient cultivars/varieties; and of institutional support mechanisms)	Catalogues and e-catalogues published	-	-	Publications	NCU
Output 1.3 A strategy for the adaptation of the	FFS integrated through SNVACA. No systematic approach to APFS and	Negotiated strategy for rolling out FFS,	Gaps, weaknesses and gender situation	Strategy formulated and approved by	-	-	Project reports	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
FFS approach and the introduction of DFF.	DFF	APFS and DFF across four regions	understood	concerned stakeholders				

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting																			
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection																		
<p>Component 2: Improving agro-pastoral practices through Field Schools (FS) in the framework of on-going FAO-supported projects and other MRAH, MASA and MEDD's "projets sous tutelle"</p> <p>Outcome 2 Broad adoption by agro-pastoralists of, financially sustainable, gender sensitive climate-resilient agro-pastoral practices and technologies.</p> <p>The practices (all to be developed through the FS approach) to be adopted include:</p> <ul style="list-style-type: none"> • Integrated (crops/trees/livestock) production systems with transhumant populations; • Integrated (crops/trees/livestock) production systems with sedentary populations (through both new and modified FS); • Diversity Field Flora; • Secured land tenure • Micro-finance modality for climate resilient adaptation practices; • Provision of up-to-date, accurate farmer-oriented weather and climate information. 																										
<p>Outcome 2, Indicator 2.1 (AMAT Indicator 3.1.1) % of targeted</p>	<table border="1"> <thead> <tr> <th rowspan="3">Region</th> <th colspan="4">Percentage adopting</th> </tr> <tr> <th colspan="2">composting pits</th> <th colspan="2">livestock fattening</th> </tr> <tr> <th>Me</th> <th>Wome</th> <th>Me</th> <th>Wome</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Region	Percentage adopting				composting pits		livestock fattening		Me	Wome	Me	Wome						100% increase	n/a	20% increase	n/a	100% increase	Project surveys to be undertake three	NCU
Region	Percentage adopting																									
	composting pits		livestock fattening																							
	Me	Wome	Me	Wome																						

Outputs, indicators and targets	Baseline					Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting		
							Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection	
groups adopting adaptation technologies by technology type (disaggregated by gender). NOTE: preliminary baseline figures and targets are provided – these will be verified through the community assessments in Output 2.1)		n	n	n	n								
	Central North	30.1	0	0	16.5								
	Sahel	14.8	0	3.1	6.1								
Outcome 2, Indicator 2.2 (AMAT Indicator 3.1.1.1.) Types of adaptation	16 types of climate resilient, agricultural technologies are widely adopted. ¹ There is negligible adoption of climate resilient technologies in <i>livestock</i> sector.					At least five new types of livestock technologies (or management	n/a	1 new technology being utilized.	n/a	At least five types of livestock technologies (or	Project surveys to be undertaken three times, at	NCU	

¹ These are: Cordons pierreux ; Digue filtrante ; Bande enherbée ; Aménagement en courbe de niveau ; Protection des berges ; Brise-vent ; Bouli ; Sous-solage ; Scarifiage en humide ; Zai agricole ; Demi-lune ; Fertilisation avec le système Goutte à goutte ; Compostage et utilisation du compost ; Agriculture de conservation ; Agroforesterie

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
technologies transferred to targeted groups. NOTE: preliminary baseline figures and targets are provided – these will be verified through the community assessments in Output 2.1)		practices) are being utilised.				management practices) are being utilised.	outset, after two years, and at end.	
<u>Output 2.1</u> Intervention zones and 500 partners and partner-communities identified.	N/a	500 partner farmer/pastoralist communities are fully assessed and participating	In the 4 intervention regions, the zones of intervention are identified and agreed by all	CC resilience/vulnerability assessments completed for 500 farmer group communities. Twenty TOP-SECAC/SHARP collaborative pilots conducted	-	-	Project reports	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
<u>Output 2.2</u> 20 Master Trainers (at least 30% women) for APFS and FFS selected and trained.	No master trainers for APFS/ FFS trainers lack understanding of integrated approach and climate change	10 APFS Master trainers/10FFS Master trainers (at least 30% women)	Training modules finalized.	10 APFS Master trainers/10FFS Master trainers (at least 30% women)	-	-	Project reports	NCU
<u>Output 2.3</u> CCA and other best practices integrated into APFS and FFS curricula/training (continuous)	No APFS modules. FFS modules do not address CC.	FFS and APFS training modules finalized (with at least 30% focussing on women's activities).	-	FFS and APFS training modules finalized (with at least 30% focussing on women's activities).-	-	-	Project reports	NCU
<u>Output 2.4</u> 500 APFS and FFS facilitators (40% women) trained in integrated crop/livestock/tree systems.	FFS facilitators lack understanding of integrated approach and climate change. No APFS facilitators.	500 FFS/APFS facilitators (40% women)	-	250 FFS/APFS facilitators (40% women)	250 FFS/APFS facilitators	-	Project reports	NCU
<u>Output 2.5</u> 26,000 Pastoralist/farmers trained and	n/a	26,000 pastoralist farmers trained and	-	6,000	10,000	10,000	Community based action plans	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
implementing new practices		implementing new practices					Project reports	
<u>Output 2.6</u> Dissemination of climate-resilient APFS and FFS approaches.	n/a	8 major partner projects (sous-tutelle) adopt and disseminate new practices	-	8 Agreements signed.	3 major partner projects (sous-tutelle) adopt and disseminate new practices	5 major partner projects (sous-tutelle) adopt and disseminate new practices	Signed Agreements Project reports	NCU
<u>Output 2.7</u> Improved availability of information on weather for local agro-pastoral communities (100 FFS) .	Lack of capacities does not allow performing weather and climate forecasts at local level Weak collaboration among DGM, DGPV and INERA exists	Agromet. tools fine-tuned in 100 FFS and climate information disseminated and used in four regions	-	DGM's capacities increased DGM products coordinated with DGPV and INERA. Agromet. inputs integrated and tested in selected FFS (50).	Agromet. inputs are integrated in selected FFS (50).		Tools description report; Testing results report; Training material; List of participants in each module,	DGM, DGPV, INERA NCU
<u>Output 2.8</u> Secured land	Women do not have secure access to land	Local governments	-	Fifty land rights	Fifty land delineation	Packages approved	Local government	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
assets (50 land delineation packages approved).	Land access is not secured.	approve 50 land delineation packages.		awareness raising events (PNDT)	packages submitted to local governments		nt documents . Project reports	
<u>Output 2.9</u> Local Adaption Investment Fund (operational and financially sustainable) benefitting at least 50 APFS/FFS.	Access to finance and credit limits adoption of good measures	At least 50 APFS/FFS are accessing adequate credit.	-	Fund designed	Fund capitalised and operating (covering at least 50 FS)	Fund continues to operate	Fund foundation documents . Project reports	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Component 3: Mainstreaming climate change resilient agro-pastoral and agricultural systems into sectoral policies and into local development plans - in conformity with the PNA and the PNSR								
<u>Outcome 3</u>								
Implementation of sectoral plans and local development plans that contribute to climate change resilience for agro-pastoral and agricultural communities.								
<u>Outcome 3, Indicator 3.1</u> (AMAT Indicator)	With regards to livestock, there	Two national livestock related	0	0	1	2	Modified policy	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
1.1.1): Adaptation actions implemented in national/sub-regional development frameworks (no. and type).	are no actions implemented.	<i>policy</i> initiatives (SNVACA and one other) are implementing adaptation activities.					document, modified SNVACA. Project reports	
<u>Outcome 3, Indicator 3.2</u> <u>(AMAT Indicator 1.1.1.1):</u> Development frameworks that include specific budgets for adaptation actions (list type of development framework and briefly describe the level of the action)	The PCD have no budget allocated to agro-pastoral climate adaptation activities.	50 PCD have budget allocation to climate adaptation.	0	0	15	35	Modified PCD Project reports	NCU
<u>Outcome 3, Indicator 3.3</u> <u>(AMAT Indicator 2.2.1).</u> No. and type of targeted institutions with increased adaptive capacity to minimize exposure to climate variability (describe number and type).	Technical departments in Regional governments, provincial governments and communal governments have basic understanding of climate change and are not able to apply to their	In at least 2 regions, 2 provinces and 10 communes, technical departments are applying climate change knowledge in their work related to livestock raising.		FFS have developed community action plans (Outcome 2) and are engaging with regional, provincial and commune technical		In at least 2 regions, 2 provinces and 10 communes, technical departments are applying climate change knowledge in their work related to livestock raising.	Project reports.	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
	work.			agencies.				
<p><u>Outcome 3, Indicator 3.4</u></p> <p>(AMAT Indicator 2.2.1.1). No. of staff trained on technical adaptation themes (per theme) – (disaggregated by gender)</p> <p><i>The adaptation themes to be covered are/include (and disaggregated by gender).</i></p> <ul style="list-style-type: none"> • Improved resilience of agricultural systems; • Improving land fertility and productivity; • Erosion control/soil water conservation. 	Technical staff in concerned Regional governments, provincial governments and communal governments have had no formal training on climate change.	At least one staff member in 4 Regional governments, 4 provincial governments and 20 communal governments have received training related to climate change and integrated crop/animal/tree management systems.	-	Staff identified and awareness raised.		At least one staff member in 4 Regional governments, 4 provincial governments and 20 communal governments have received training related to climate change and integrated crop/animal/tree management systems.	Project reports.	NCU
<u>Output 3.1</u>	MASA, MRAH,	A five-ministry	Negotiation	Protocol	Protocol	-	Protocol	NCU

Outputs, indicators and targets	Baseline	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
A five-Ministry CC-A coordination mechanism for extension to integrated livestock and cropping systems	MEDD, MSRI and MEAHEA have separate extension approaches/there is a non-functioning coordination mechanism	permanent coordination mechanism assures a common approach to extension to integrated livestock and cropping systems	and information exchange completed	signed	implemented		Project reports	
Output 3.2 Strengthened National Extension System (SNVACA) – incorporating APFS approach and strengthening approach to climate change	SNVACA being implemented through annual programmes. It does not cover livestock or integrated systems, and is inadequate for climate change.	SNVACA modified to incorporate fully APFS and climate change	-	-	Lessons collected from Outcomes 1 and 2.	SNVACA modified to incorporate fully APFS and climate change	Modified SNVACA Project reports	NCU
Output 3.3 50 Commune development plans updated to account for climate resilience across agro-pastoral activities	Many PCD have climate change activities, but they are not well formulated and are mostly not being implemented.	50 PCD modified	-	-	Lessons collected from Outcomes 1 and 2.	50 PCD modified to incorporate fully APFS and climate change. Resource mobilization underway.	Modified PCD Project reports	NCU

Outputs, indicators and targets	Baseline ¹	Target	Milestones towards achieving output and outcome targets				Data Collection and Reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsible for Data Collection
Component 4: Project monitoring and evaluation								
Outcome 4.1								
Project implementation based on results-based management and application of project lessons learned in future operations facilitated								
Outcome 4, Indicator 4.1 Progress in achieving project outputs and outcomes	No outputs achieved.	All outputs, outcomes and targets achieved.	10%	20%	40%	100%	Project reports	NCU
Output 4.1 System for systematic collection of field-based data to monitor project outcome indicators operational			Two six-monthly progress reports prepared. (one PPR and one PIR)	Two six-monthly progress reports prepared. (one PPR and one PIR)	Two six-monthly progress reports prepared. (one PPR and one PIR)	Two six-monthly progress reports prepared. (one PPR and one PIR)	Project reports	NCU
Output 4.2 Midterm and final evaluation conducted					Report	Final evaluation report	Project reports	NCU
Output 4.3 Project-related “best-practices” and “lessons-learned” for enhanced adaptation to climate risk of the agricultural sector are disseminated via publications, project website and others			Website established			Publications (2)	Project reports	NCU

¹ Value in the case of quantitative indicators and description of situation in the case of qualitative indicators. Please insert the year of the baseline

APPENDIX 2: WORK PLAN (RESULTS BASED)

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Introduction of improved climate-resilient agro-pastoral practices in the framework of the National Adaptation Programme (PAN) and the National Rural Sector Programme (PNSR)																		
Output 1.1 Core group of managers (national/regional) with knowledge of improved climate-resilient agro-pastoral practices.	1.1.1 Define involved stakeholders;	MRAH, MASA																
	1.1.2 Organize information and awareness raising workshop;	MASA – PNVACA																
	1.1.3 Train 60 managers in 7 partner's agricultural or pastoral projects on climate-resilient practices;	MASA – PNVACA																
Output 1.2 a) Map of best practices, of climate resilient cultivars/varieties, and of institutional support mechanisms collected from across the sub-Region. b) An agreed series of best practices and of appropriate varieties/cultivars to be used in BKF.	1.2.1 Prepare an inventory of climate resilient BPs and climate resilient varieties/cultivars;	MASA/INERA																
	1.2.2 Prepare an inventory of support mechanisms to agro-pastoralists	MASA																
	1.2.3 Four regional workshops to validate the inventories	MASA, MRAH																
	1.2.4 Publish and disseminate a catalogue and create an on-line e-catalogue.	MASA																
Output 1.3 A strategy for the adaptation of the FFS approach and the introduction of DFF	1.3.1 Analyse gaps and opportunities for improved knowledge management;	MASA – PN VACA																
	1.3.2 Analysis of gender sensitivity related to FFS/DFF;	MASA																
	1.3.3 Four regional workshops on raising awareness of FFS approach;	MASA – PNVACA																
	1.3.4 Generate and negotiate (with partners) a draft strategy for FFS/DFF;	MASA, MRAH																
	1.3.5 A regional annual meeting held and updated of the strategy if appropriate	MASA																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 2: Mainstreaming climate change resilient agro-pastoral and agricultural systems into sectoral policies and into local development plans - in conformity with the PNA and the PNSR																		
<u>Output 2.1</u> Intervention zones, partners and partner-communities identified.	2.1.1 4 Regional workshops to define intervention zones (combine with 1.3.3);	MRAH		■														
	2.1.2 Rapid resilience assessment of the communities in the interventions zones;	MRAH			■	■												
	2.1.3 Negotiate participatory selection of partner-communities (PNTD)	MRAH				■	■											
	2.1.4 Resilience assessment of farmers and herders in the partner communities (possibly using TOP-SECAC and/or SHARP).	MRAH					■	■										
<u>Output 2.2</u> Master Trainers for APFS and FFS	2.2.1 Recruit pastoral-CCA expert (as IPTA);	FAO	■															
	2.2.2 Prepare Master Training modules for APFS and FFS - addressing climate resilience through crop/livestock/tree integration ;	MRAH MASA PNVACA		■	■													
	2.2.3 Training of new and recycled Master Trainers undertaken (30% women)	MRAH MASA PNVACA				■	■	■										
<u>Output 2.3</u> CCA and other best practices integrated into APFS and FFS curricula/training	2.3 1 FFS/APFS modules prepared (e.g. soil fertility, soil erosion protection, compost, pit manure, organic manure through crop residues, leguminous crops, grassland rehabilitation) (30% focusing on women activities) (based on Component findings on best practices and varieties)	MRAH			■	■	■					■				■		
<u>Output 2.4</u> APFS and FFS facilitators trained in integrated crop/livestock/tree systems	2.4.1 Capacity building of Facilitators (30% women)	MRAH/MASA			■	■	■					■				■		
<u>Output 2.5</u> Pastoralist/farmers trained and implementing new practices	APFS																	
	2.5.1 Facilitators train pastoralists (1,5 years)	MRAH							■	■	■	■	■					

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2.5.2 Pastoralists implement new practices	MRAH																
	FFS																	
	2.5.3 Facilitators train farmers (1 year)	MASA																
	2.5.4 Farmers implement new ACC practices, introduce adapted varieties and cultivars, and prepare community action plans	MASA																
	DFF																	
	2.5.5 CC-adapted local seeds selected in DFF	MASA/INERA																
	2.5.6 Local seeds introduced in FFS/APFS	MASA/MRAH																
2.5.7 Local community gene banks established	MASA																	
<u>Output 2.6</u> Dissemination of climate-resilient APFS and FFS approaches.	2.6.1 Negotiation with partner projects on collaboration;	MRAH																
	2.6.2 Implementation of joint activities, in collaboration with partner projects, in order to disseminate climate-resilient APFS and FFS approaches.	MRAH/MASA																
<u>Output 2.7</u> Improved availability of information on weather for local agro-pastoral communities.	2.7.1 Identification of the agro-meteorological information needs of the FFS/APFS;	DGM																
	2.7.2 Testing of agro-meteo information in 10 pilot FS	DGM																
	2.7.2 Preparation of a joint plan of action to respond to the needs by a DGM/DGPV/INERA working group;	DGM																
	2.7.3 Training and capacity building of DGM, DGPV and INERA in order to respond to farmer-herder needs;	DGM																
	2.7.4 Preparation of local agro-meteorological information by DGM/DGPV/INERA;	DGM																
	2.7.5 Facilitators are trained by DGM/DGPV/INERA staff to provide information to FFS/APFS members;	DGM/MASA																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2.7.6 Under the supervision of Facilitators, the FFS/APFS receive agro-meteorological information and determine ways to use the forecast.	DGM																
<u>Output 2.8</u> Secured land assets	2.8.1 Local consultations on land rights focusing on gender roles	MASA																
	2.8.2 Selection of communities interested in securing land assets	MASA/MRAH																
	2.8.3 Fifty events for land rights awareness creation organized at a local level using PNDR	MASA																
	2.8.4 Land delineation packages prepared and presented for local government approval	MASA																
<u>Output 2.9</u> Local Adaptation Investment Fund	2.9.1 Design approach to LAIF;	MASA																
	2.9.2 Select community based on (i) investment needs identified in FFS/APFS community action plans (2.5.2) (ii) community capacity;	MASA																
	2.5.3 Establish LAIF based on FFS/APFS community action plans;	MASA																
	2.5.4 Operationalize the Fund.	MASA																
Component 3: Mainstreaming climate change resilient agro-pastoral and agricultural systems into sectoral policies and into local development plans - in conformity with the PNA and the PNSR																		
<u>Output 3.1</u> A five-Ministry CC-A coordination mechanism for extension to integrated livestock and cropping systems	3.1.1 Develop protocol to guide collaborative extension;	MASA, MRAH, MEDD																
	3.1.2 Coordination session held (annual)	MASA, MRAH, MEDD																
<u>Output 3.2</u> Strengthened National Extension System (SNVACA) – incorporating APFS approach and strengthening approach to climate change	3.2.1 Collect lessons learnt from Outcomes 1 and 2;	MASA																
	3.2.1 Contribute to strengthening of current SNVACA	MASA																
	3.2.3 National workshop	MASA																
<u>Output 3.3</u> Commune development plans updated to account for climate resilience across agro-pastoral activities	3.3.1 Collect lessons learnt and needs identified from FFS and APFS work in Outcome 2.1 ;	MEDD																
	3.3.2 Review and propose revisions to PCD (40% of	MEDD																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	communes worked in);																	
	3.3.3 Lobby communal and regional decision-makers;	MASA, MRAH, MEDD																
	3.3.4 Undertake resource mobilization activities at communal and regional levels.	MASA, MRAH, MEDD																
Component 4: Project monitoring and evaluation																		
Output 4.1 System for systematic collection of field-based data to monitor project outcome indicators operational	4.1.1 Finalise indicators	MASA PNVACA																
	4.1.2 Design data collection and reporting system	MASA PNVACA																
	4.1.3 Undertake regular data collection	MASA PNVACA																
Output 4.2 Midterm and final evaluation conducted	4.2.1 Mid-term evaluation	FAO																
	4.2.2 Final Evaluation	FAO																
Output 4.3 Project-related “best-practices” and “lessons-learned” for enhanced adaptation to climate risk of the agricultural sector are disseminated via publications, project website and others	4.3.1 Establish web-site	MASA																
	4.3.2 Prepare publication	MASA, MRAH																
	4.3.3 Prepare publicity material	MASA, MRAH																

APPENDIX 3: RESULTS BUDGET



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APPENDIX 4: RISK MATRIX

Risk	Risk level	Description and Management Measure
Limited partnership-building constrains project implementation	M	<p>Partnerships are required to ensure project success. This includes partnerships across the government agencies responsible for agriculture, livestock, water and environment. It also includes partnerships between NGOs and government and between local and national organizations.</p> <p>The Project includes many activities to develop partnerships, including workshops, consultations, awareness raising (Outcome 1) and joint work on Project follow-up (Outcome 3). Under Outcome 2, most activities take place at local level, with involvement of provincial and communal agencies, where it is known that partnerships are more straightforward and this risk should not apply at this level.</p>
Seed shortages owing to climate variability shock, prolonged droughts, and/ or pest and disease outbreaks with risk of project crop/grassland failure	M	<p>Pest and disease outbreaks owing to climate variability may cause risk of crop/grassland failure during the project.</p> <p>The project will address this risk by systematically linking the adoption of CCA measures as well as fostering community-level field observation capacities to reduce seed multiplication failures, particularly with specialized seed multiplying farmers.</p>
Security crisis in Mali and northern Niger leads to insecurity in Burkina Faso and/or to a greater influx of migratory herds.	M	<p>Increased influx of migratory herds may increase pressures on rangelands and lead to conflicts in some of the project areas.</p> <p>Conflict sensitive programming will be mainstreamed into the APFS to address resource management and sharing. Efforts will be made with all stakeholders to establish secure mobility corridors and pasture belts and so reduce the impact on natural resources on protected areas.</p> <p>The situation will be monitored. If necessary, emergency/security plans will be developed by the project stakeholders including FAO and the responsible ministries. Collaboration will be established from the outset with similar projects in Mali and Niger to facilitate communications.</p>
Limited capacity of local and institutions	L	<p>Burkina Faso is undergoing a decentralization process, and limited capacity (in provincial and regional technical services) is known to be a constraint.</p> <p>Government capacity is not likely to represent a high risk for the project because the capacity for FFS activities and the projects is already in place. However, the risk of lack of capacities will be mitigated by mobilizing and articulating the capacity of different actors, projects, programmes and bilateral agencies to work intensively with government and gradually transfer skills to government counterparts.</p>

<p>Reluctance to participate in the project activities by agriculturalists and/or by pastoralists.</p>	<p>L</p>	<p>Farmer and herder stakeholders may be hesitant to participate. The risk of reluctance of stakeholders is considered low, as FFS are widely distributed and well known in the country. Nevertheless, this situation will be monitored, and if there are signs that it will lead to challenges, the project strategy will be revised to ensure more focus on awareness raising and communication with local farmers and herders.</p>
<p>Certain project interventions (e.g. provision of agro-meteorological information) are not implemented on a financially sustainable basis.</p>	<p>L</p>	<p>Accurate agro-meteorological information is expensive to produce. Moreover, it is often prepared in a top-down, supply driven manner and not adapted to needs of farmer-herders. Overall, this only threatens one Output (2.8) and so the overall risk is considered low. However the situation will be monitored. The Project will introduce, at a policy debate level, the idea of demand driven meteorological information that farmer-herders are willing to pay for.</p>
<p>High costs and difficulties in intervening in remote locations undermine project impact.</p>	<p>Low</p>	<p>The Project intervention area (the four regions) is very large and transport infrastructure is very limited. Hence it may be costly, impractical to intervene across the area. This is considered low risk. First, the nature of this project is to deal largely with livestock-raisers, many of whom are semi-transhumant, hence difficulties in reach project stakeholders are integral to the project and overcoming these is part of the project design. Moreover, this only applies to a small percentage of project site. Finally, the project will often work with/through locally active organizations and this will increase outreach and lower costs.</p>
<p>Local institutions are slow to agree on project activities.</p>	<p>L/VL</p>	<p>Local departments may hesitate to participate due to the innovative nature of the project and/or the need to cooperate with a broad range of partners. However, based on recent experience in Burkina Faso, this risk is considered very low. The situation will be monitored and a strategy developed if needed.</p>

APPENDIX 5: PROCUREMENT PLAN

To be finalized by project inception

APPENDIX 6: TERMS OF REFERENCE (TORS) OF KEY PERSONNEL

This Appendix provides Terms of reference for the following:

Nationally recruited staff and consultants:

- National project coordinator
- Climate change trainers
- Organization capacity building national expert
- Expert in territorial diagnosis, local agreements and land management plans
- Gender, territorial diagnosis, and land management expert
- Monitoring and evaluation expert
- Local activities advisors (4)
- Support to resilience assessment at a field level
- Expert in fodder and natural grass production
- Agro-meteo experts
- Participatory policy expert and PNTD
- Expert in investment plans and microcredit and FS
- Web page expert and publications
- Driver

Internationally recruited staff and consultants:

- International project technical advisor
- Operations and field administration officer (part time)
- Organization capacity building expert
- Best practice expert
- International expert tenure security and PNTD
- International expert in assessment of resilience against desertification in agric and past areas (SHARP/TOPSECAC)
- International policy advisor
- Mid term review consultants

National Project Coordinator

1. Scope

This position is full time for the first two years of the project, and part time during the second two years. Total input: 34 months.

Under the supervision of: FAOR, LTO

Reporting to: FAOR, LTO

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels

suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

In response to this challenge, the objective of this Project is *'to enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS.'*

3. Objective

To ensure the smooth running of the project and the timely provision of high quality inputs as needed.

4. Tasks

The NPC will be responsible for the operational planning, management and monitoring of all projects' activities, as indicated in the project documents. The NPC will provide technical, logistics and managerial support and ensure a good implementation of the activities in line with the project result framework, work plan and approved budget. This will include:

Manage National Coordination Unit

- Prepare annual and quarterly workplans and prepare ToR for all inputs;
- Lead process to mobilize NCU staff, project consultants and sub-contracts;
- Lead process to finalize 'letters of agreement' with implementation partners;
- Ensure all NCU staff and all consultants fully understand their role and their tasks, and support them in their work;
- Oversee day-to-day implementation of the project in line with the workplans;
- Organise regular planning and communication events, starting with inception mission and inception workshop;
- Oversee preparation and implementation of M&E framework;
- Oversee preparation and implementation of Project communication and knowledge management frameworks;
- Prepare progress reports and all monitoring reports. This includes the six monthly Progress report and the annual Project Implementation Review.

Lead interactions with stakeholders

- Liaise with government agencies;
- Regularly advocate on behalf of the Project to partners;
- Coordinate project interventions with other ongoing activities, especially those of co-financers and other GEF projects;
- Regularly promote the project and its outputs and findings on a national, and where appropriate, regional stage.

Technical support

- Oversee development of the approach to APFS in Burkina Faso

- Support development of project strategic approach;
- Assure quality of project activities and project outputs;
- Support development of project capacity building strategies, and preparation of training materials;
- Take the lead in designing and technically supporting all activities under Outcomes 1 and 3 of the Project.

5. Qualifications

- Higher degree related to rangelands management;
- At least ten years' experience in the Burkina rangelands managements sector;
- At least five years' experience working with local communities in the rangelands management sector in Burkina Faso;
- Demonstrated previous experience working with the field school approach to extension or with similar approaches;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential.

National Climate Change Trainers

1. Scope

This position is for 24 months during the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

In response to the this challenge, the objective of this Project is *'to enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS.'*

3. Tasks

- Assist the project management in programming the technical assistance that will be provided through the component 1;

- Assess all project training and capacity building activities, identify entry points for integrating climate change, and develop material in order to integrated climate change;
- Review and revise training programmes for managers;
- Ensure that updated best practices are transferred in a simple and concise manner into training material and training activities;
- Undertake field visit and provide examples on how FFS could drive CCA practices and climate resilience in partners programmes

4. Qualifications and Selection criteria:

- Higher degree related to resource management or climate change science;
- At least five years working on climate change related issues in Burkina faso;
- Experience working with local communities in the rangelands management sector in Burkina Faso;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential.

National Expert on Organizational Capacity Building

1. Scope

This position is full time for the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

In response to the this challenge, the objective of this Project is *'to enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS.'*

3. Tasks

The expert will support the following activities:

- Preparation of training action plans to improve managerial capacity to address CC in projects and programmes

- Organize and follow up trainings
- Preparation of capacity building operation plans
- Define training define periods of operation
- Modify and adapt, capacity building plans
- Organize capacity building events

4. Qualifications and Selection criteria:

- Higher degree related to institutional development, policy or organizational development;
- At least ten years working on organizational development in Burkina Faso;
- Experience working with government agencies responsible for management of natural resources (at least five years);
- Experience working with local communities in climate change or rangelands management sector in Burkina Faso;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential.

National Expert on Territorial Diagnosis, Local Agreements and Land Management Plans

1. Scope

This position is for 30 months spread over the entire Project (when actually employed). Under the supervision of: IPTA, NPC
Reporting to: IPTA, NPC

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

In response to the this challenge, the objective of this Project is *'to enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS.'*

3. Tasks

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Undertake a socio-economic diagnosis of the four regions provinces;
- Ensure participation of farmers/pastoralists and customary associations in Component 2 and increased multi-community scale decision-making where appropriate;
- Support training planning and implementation related to Component 2, including training of local leaders and training of organization;
- Provide guidance and support to project team regarding the participatory development of plans on environmental issues and gender;
- Support the start-up of the plans and provide guidance for successful implementation.

4. Qualifications and Selection criteria:

- Advanced post-graduate degree in rural sociology, agronomy, or a related discipline.
- At least five years of professional experience in land tenure possibly in agro-pastoral areas;
- Experience in conducting multi-stakeholder consultations;
- Experience working in rural areas and in collaboration with local communities.

National Expert on Gender, territorial Diagnosis, and Land Management

1. Scope

This position is for 30 months during the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Tasks

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Conduct assessments among rural women's groups, using a gender approach;
- Help ensure gender is mainstreamed into the APFS Strategy;
- Establish a profile of pastoral' and farmers' women needs to meet current short-term objectives, the plans of both men and women to realise these objectives;

- Assess needs for external support to overcome existing economic and institutional constraints at local level;
- Assess options for improving women's access to updated information and revise, on a demand-driven basis;
- Assess existing training modules and propose additions/modifications to assist women's groups in revitalizing their activities in the context of their current economic, social and cultural environment;
- Actively participate in the land management planning phase and the land tenure related activities;;
- Submit a final report highlighting achievements, the objectives and needs of the target beneficiaries, and recommendations for the follow-up of project activities.

4. Qualifications and Selection criteria:

- Higher degree related to gender or participatory development issues;
- At least five years working on gender development or land ownership issues in Burkina Faso;
- Experience working with government agencies responsible for management of natural resources (at least five years);
- Experience working with local communities in climate change or rangelands management sector in Burkina Faso;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential.

Monitoring and Evaluation Expert

1. Scope

This position is for 12 months during the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Objective

To provide ongoing support to all Field School activities (FFS and APFS) and ensure they remain technically accurate and optimal

4. Tasks

- Contribute to preparing the Project workplan and strategic documents;
- Prepare a framework for monitoring the development of APFS and FFS in Burkina Faso;
- Identify indicators to follow FFS/APFS progress and design a system for collecting data;
- Constantly collect data on the development of FFS/APFS, and of the Project's contribution to FFS and APFS in Burkina Faso;
- Prepare regular information notes and briefing notes to contribute to information and advocacy campaigns.

5. Qualifications

- Higher degree related to rangelands management;
- At least five years' experience in the Burkina rangelands managements sector;
- At least three years' experience working with local communities in the rangelands management sector in Burkina Faso;
- Demonstrated previous experience working with the field school approach to extension or with similar approaches;
- Demonstrated previous experience working with the monitoring field schools or similar extension approaches;
- Previous experience working on with international partners on related issues;
- English language skills preferential.

Local Activities Advisers

1. Scope

- Full time for the entire duration of the Project (hired at the third month of the project, each for 11 months per year based on FAO rules).
- Four Positions, one each located in the Regional government offices in the four participating Regions.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Objective

To ensure the activities in the Region are technically of high quality, are firmly anchored into the local sustainable development processes, and are firmly contributing to the overall Project objective.

4. Tasks

- Provide advice on all activities to take place at the local level;
- Ensure full coordination with local government agencies and all similar activities taking place in the region;
- Channel information to/from project management and local partners;
- Organize the planning phase and promote the development / implementation of plans and arrangements related to environmental and gender issues;
- Support and organize capacity building to strengthen existing organizations;
- Where necessary, support the activities required for the emergence of new organizations;
- Where possible, create linkages between project activities and other activities being implemented, financed by government or development partners;
- Provide technical support to Provincial and Communal government agencies.
- Help draft TOR for local partners;
- Organize and conduct community dialogue on the concepts and principles of APFS towards the selection of the community facilitator;
- Support service providers for the establishment of APFS;
- Support and technically supervise activities for the ecosystem based pilot rehabilitation (e.g. water point rehabilitation and management, strengthen the local environmental friendly non-livestock production system, support local product commercialization, improvement livestock production value chains, and establish a network of ethno-veterinaries);

5. Qualifications

- Higher degree related to rangelands management;
- At least five years’ experience working with local communities in the rangelands management sector in Burkina Faso;
- Demonstrated and full knowledge of agricultural and rangelands issues in the Region;
- Knowledge of concerned local languages.
- Previous experience working with international partners and national government agencies/programmes.
- English language skills are preferential.

National Expert on Support to Resilience Assessment at Field Level

1. Scope

Full time for the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Objective

To develop and help roll out the SHARP methodology.

4. Tasks

- Based on training received by international experts, support field level assessment of resilience actions to be undertaken in the establishment of APFS (assessment of APFS baseline situation, and development a community action plan) through the duration of the project;
- As necessary, review and modify the assessment methodology in order to (i) adapt to local circumstances (ii) provide information needed for GEF LDCF AMAT indicators;
- Report data from SHARP and TOP-SECAC to the international expert, working in close collaboration with the FFS training expert, the local consultants, and the service providers;
- Support farmers in the undertaking of their self-assessment and the use of best practices based on their resilience self-assessment;
- Support FS Master trainers and facilitators in the use self-assessment information;
- Support community decision-making to change their activities and practices in response to self-assessment;
- Support the design of FS curricula including SHARP as appropriate based on project experience.

5. Qualifications and Selection criteria:

- Higher degree related to natural resources management, preferably rangelands management;

- At least five years working on climate related issues in rangelands in Burkina faso;
- A demonstrated understanding of the barriers to increasing climate resilience;
- Experience working with government agencies responsible for management of natural resources;
- Experience working with local communities in climate change or rangelands management sector in Burkina Faso;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential

National Expert on Fodder and Natural Grass Production

1. Scope

36 months during the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

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3. Tasks

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Support all activities related to use and rehabilitation of grassland species under Outcome 2

In the framework of Outputs 2.1 – 2.4 the expert will:

- Support the grassland analysis and the selection of species for the research and improvement;
- Support the activities of grassland establishment and the experimentation system used in research centres for grasses adaptability and palatability in place in two selected APFS groups and compared with research results;

- Undertake APFS training regarding grassland establishment and improvement as appropriate
- Support the participatory monitoring of grassland established and guardianship system;
- Help design and establish regeneration zones, including system to monitor impact;
- Coordinate the activities between the APFS and the Research structures;

In the framework of Output 2.5 the expert will:

- Support the activities of natural grassland establishment and the experimentation system for grasses adaptability and palatability in place in two selected APFS groups and compared with research results;
- Support selected APFS through participation in the selection of local seeds, and in the establishment of local seed systems;

Additionally:

- Provide guidance in tinning, seed soil bank, seedling, manure, and legume species introduction
- Support the participatory monitoring of grassland established and guardianship system

4. Qualification and experience required:

- Advanced university degree in agriculture, agricultural economics, geography, rural development or natural resources.
- At least 2 year project management
- Experience in monitoring and evaluation
- Good knowledge of GIS
- Experience in grasslands management, including use of local and wild species.

National Agro-Meteorological Experts

1. Scope

42 months during the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Tasks

- Monitor agro-meteorological activities;
- Support and monitor the introduction of agro-meteorological data, concepts and activities into the FS curricula and training;
- Monitor functioning of the automatic provision of agro-meteo data;
- Guide, provide training and ongoing support to FS Master trainers and facilitators in the field use of agro-meteorological data;

4. Qualifications and Selection criteria:

- Higher degree related to meteorology;
- At least ten years working on meteorology in Burkina Faso;
- Experience working with government agencies responsible for management of natural resources (at least five years);
- Experience working with local communities in climate change or rangelands management sector in Burkina Faso;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential

National Expert on Participatory Policy and PNTD

1. Scope

Full time during the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Tasks

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Support participatory policy formulation including organization of consultation workshops;
- Conduct a study to analyse by-laws;
- Establish and facilitate a regular dialogue mechanism between the public, civil society, and private sector around the policy agenda. The mechanism for dialogue should be structured to build institutional knowledge;
- Preparing drafts of policies including new APFS policies and related platform;
- Support communities and regions in the preparation of investment plans;
- Support activities to mobilize investment into the investment plans, including for example organizing meetings and negotiations with donors;
- In consultation with project and Government personnel, preparing one document proposing integration of CC-A into MASA and MRAH plans, programmes, and projects;

4. Qualifications

- An advanced degree in a field relevant to the above assignment (natural resource management, economics, environmental policy, agriculture and land management);
- Good working knowledge of national policy processes and policy language;
- Familiar with community-based natural resource management and social land management issues;
- Good understanding of national policies and agreements related to sustainable land management;
- Experience with participatory policy preparation;
- Ability to organize and facilitate workshops and meetings;

National Expert on Investment Plans and Microcredit and FS

1. Scope

18 months of inputs spread over the entire Project (when actually employed).

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Tasks

- Prepare inventory of micro-credit facilities in the four regions;
- Oversee study assessing the existing micro-credit facilities in the four regions;
- Participate in process to design LAIF;
- Monitor microcredit activities and their active introduction in FS curricula and training;
- Monitor functioning of the microcredit in the FS;
- Support FS Master trainers and facilitators in the training on use of microcredit for community action plans;
- Support the design of FS curricula including micro-credit if appropriate.

4. Qualifications and Selection criteria:

- Higher degree related to micro-finance;
- At least ten years working on the development of micro-finance mechanisms in Burkina Faso;
- At least ten years working on the implementation (operations) of micro-finance mechanisms in Burkina Faso;
- Experience working with local communities in climate change or rangelands management sector in Burkina Faso is preferable;
- Previous experience working on with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- English language skills preferential

National Web page and Publications Expert

1. Scope

4 months spread over the entire Project (when actually employed).

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

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3. Tasks

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Design a draft web page using FAO format and technical specification
- Update and maintain webpage
- Prepare communications strategy
- Prepare publications for dissemination

4. Qualifications

- At least one year experience in web page preparation using FAO standards and regulation

Driver

1. Scope

Two drivers for the entire Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

2. Context

Standard FAO driver TOR

3. Tasks

The driver will be responsible, but not limited, to perform the following tasks and duties:

- Maintain the project vehicles in clean and good conditions
- Responsible for the day by day maintenance for the vehicles
- Daily update of vehicle log books
- Transport staff and/or equipment within the duty station and to/from other locations
- Meets official personnel at the airport and facilitates immigration and customs formalities as required

4. Qualifications

- At least three year experience as driver

International Project Technical Advisor

1. Scope

This position is half-time for the entire duration of the Project.

Reports to: FAO and LTO

Internationally recruited.

2. Context

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3. Objective

To technically oversee the introduction and testing of the APFS approach into Burkina Faso and to directly support its uptake and broad adoption in a high quality manner.

4. Tasks

- Together with the NPC, lead the elaboration of the Project strategy and the strategy to develop and roll out APFS in Burkina Faso;
- Support the NPC in the preparation of all workplans and TOR;
- Prepare a plan to monitor and to guide the development and rolling out of APFS in Burkina Faso;
- Lead the preparation of the APFS training material for high level stakeholders, for master trainers and facilitators;
- Lead the regular training events for high level stakeholders and for master trainers;
- Support the training for facilitators;
- Take the lead in designing and technically supporting all activities under Outcome 2 of the Project;
- Contribute directly to all technical activities, notably:
 - Negotiations with partners and development of joint workprogrammes;
 - Analysis of legislative material, training material, etc ;
 - Finalization of progress reports
- Lead the project output based monitoring and evaluation system;
- Oversee the finalization of all project technical outputs, including lessons learnt tools and related documentation.

5. Qualifications

- Higher degree related to rangelands management or livestock raising;
- At least ten years' experience working with local communities in the rangelands management sector in Burkina Faso or similar environment;
- At least five years of experience working with the field school approach in agro-pastoral areas;
- Demonstrated academic results (eg papers published) on field schools and agro-pastoral areas;
- Demonstrated commitment to participatory natural resource management techniques;
- Previous experience in Burkina Faso an asset;
- French language skills are preferential.

Operations and Field Administration Officer

1. Scope

This position is part-time, approximately equivalent to 29 months over the entire duration of the Project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

Internationally recruited.

2. Context

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3. Objective and Tasks

Under the direct supervision of the NPC and in consultation and close coordination with the FAO Budget Holder, the FAO Operations and Administrative Officer will have the following responsibilities and functions:

1. Ensure smooth and timely implementation of project activities in support of the results-based work plan, through operational and administrative procedures according to FAO rules and standards;

2. Coordinate the project operational arrangements through contractual agreements with key project partners;
3. Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreement with relevant project partners;
4. Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required;
5. Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator;
6. Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
7. Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
8. Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
9. Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required;
10. Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate;
11. Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner,
12. In consultation with the FAO Evaluation Office, the LTU, and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, and provide inputs regarding project budgetary matters;
13. Provide inputs and maintain the FPMIS systems up-to-date;
14. Undertake any other duties as required.

4. Qualifications

- University Degree in Economics, Business Administration, or related fields.
- Five years of experience in project operation and management related to natural resources management, including field experience in developing countries.
- Proven capacity to work and establish working relationships with government and non-government representatives.
- Fluency in English is an asset.
- Knowledge of FAO's project management systems.

Organizational Capacity Building Expert

1. Scope

Approximately 50 days of inputs.
 Under the supervision of: IPTA, NPC
 Reporting to: IPTA, NPC
 Internationally recruited.

2. Context

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3. Tasks

The expert will support and train local staff in the following activities:

- Support the rapid start-up of the project training activities;
- Prepare training plan for senior managers on CCA (Output 1.1);
- Prepare detailed capacity building plans, including details of timing, targets, responsibilities and costs;
- Develop capacity of national project staff and consultants on how to interpret, adapt and develop capacity building plans;
- Develop adaptive management capacity of national project staff and consultants – i.e. capacity to undertake periodic adjustments of the capacity building plans.

4. Qualifications

- Master's Degree or higher in Organizational Development, from an internationally recognised university;
- At least ten years of experience in undertaking organizational analyses in different countries, including in the francophone West Africa region;
- Track record of making a difference through organizational development;
- Demonstrated capacity to provide training on organizational development;
- Fluency in French and English.
- Knowledge of FAO's project management systems is preferable.

Best Practices Expert

1. Scope

Approximately 9 months of input spread across the four year implementation period.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

Internationally recruited.

2. Context

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3. Objective and Tasks

- Oversee and supervise the process to identify best practices based on existing globally accepted methods and through discussions with project management;
- Develop a document providing a concise technical description of best practices based on existing globally accepted methods;
- Provide examples of results obtained by climate resilient practices in completed and ongoing projects and activities, including, where relevant, the sampling designs employed;
- Provide an analysis of the advantages and limitations of each method, with respect to scientific validity, reliability and replicability, information obtained (especially indicators), practicability and operational considerations, cost (per unit area), and cost-effectiveness;
- Provide an assessment of potential value of each observed best practice to this project;
- Provide main references (publications, projects, activities) of the analytical method used.
- Support the preparation of the publication and collect comments from partners

4. Qualifications

- Postgraduate Degree or equivalent in agriculture, veterinary, land management or related disciplines with least 10 years relevant work experience
- Ability to interact with local stakeholders and flexibility to collect data in different form;
- Demonstrated ability to speak and write professionally in English and local language
- Ability to work independently with strong sense of initiative, discipline and self-motivation
-

International Expert on Tenure Security and PNTD

1. Scope

Approximately 6 months of input spread across the four year implementation period.
Under the supervision of: LTO, IPTA, NPC
Reporting to: IPTA, NPC
Internationally recruited.

2. Context

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3. Objective and Tasks

- Support planning of all training under Outcome 2;
- Support all activities related to tenure security and PNTD, notably under Outcome 2;
- Ensure thorough mainstreaming of gender issues into all planning and tenure related activities;
- Provide training to FS facilitators, local leaders;
- Provide training on the organization of the PNTD;
- Support and train national experts in order to undertake a socio-economic diagnosis of the project areas and results disseminated;
- Undertake appropriate action to ensure integration between land tenure actions and APFS, including: organization of meetings, ensuring the participation of APFS in community meetings, etc.;
- Ensure M&E data collection in collaboration with local managers.

4. Qualifications

- Advanced post-graduate degree in rural sociology, agronomy, or a related discipline;
- Several years of work experience in one or more of the above fields preferably in land tenure, use planning and management, land resources management, natural resources management, soil and water conservation and agriculture, and PNTD;
- Complete understanding of the concept of tenure governance and sustainable land management;
- Experience using PNTD in the context of FFS is an advantage;
- Sound research experience and publication in land tenure using FAO methods;
- Experience in conducting multi-stakeholder consultations.

International Expert on Assessing Resilience to Climate Change and Climate Vulnerability in Agro-Pastoral Areas (SHARP/TOPSECAC)

1. Scope

16 months, 4 months each year.

Under the supervision of: LTO, IPTA, NPC

Reporting to: IPTA, NPC and LTO

Internationally recruited.

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

In response to the this challenge, the objective of this Project is *'to enhance the capacity of Burkina Faso's agricultural and pastoral sectors to cope with climate change, by mainstreaming Climate Change Adaptation (CCA) practices and strategies into on-going agricultural development initiatives and agricultural policies and programming and upscaling of farmers adoption of CCA technologies and practices through a network of already established FFS.'*

3. Objective and Tasks

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Designing and developing the self-assessment methodology;
- Training national experts in the use of the self-assessment methodology;
- As possible, support farmers and pastoralists to self-assess resilience actions to be undertaken in the establishment of APFS including: assessment of APFS baseline situation, and development a community action plan (taking into consideration and collaborating with the FFS training expert, the local consultants, the service providers, and other technical experts);
- Support farmers in the understanding of their self-assessment to undertake ecosystem based pilot rehabilitation, as appropriate;
- Ensure that self-assessment information feeds into community decision making in order to support changes to activities and practices, regarding (i) water point rehabilitation and management; (ii) strengthening the local environmental friendly production system (including livestock and non-timber forestry products) and to (iii) improving rangelands and livestock feeding lands (iv) animal health and (v) livestock production value chains;
- Support an analysis of local technologies and practices, to be carried in collaboration with members of FFS, and that can subsequently help inform the FFS curriculum on issues related to climate resilience;
- Provide a database from which future governmental projects and programmes will be able to draw to improve meet local needs.

4. Qualifications and Selection criteria:

- Advanced university degree in engineering, agriculture, or natural resources;
- Level and relevance of experience regarding climate related environmental risk and farmers/pastoralists resilience, including the SHARP tool;
- Level and relevance of experience in assessment of FFS, with emphasis on APFS, in Africa;
- Recognised expert in participatory activities in Africa;
- Level of experience in training smallholders in self-assessment, including the LADA local method;
- Capacity to manage tasks in a systematic and efficient manner with judgment, analysis, independence and initiative;
- Capacity to communicate clearly both verbally and in writing;
- Demonstrated ability to establish good working relationship and team spirit both inside the Organization and with external partners such as government officers, UN partners, donors or NGOs;
- Ability to use computer software such as MS Office and other project management software and database.

International Policy Advisor

1. Scope

Approximately 6 months of input during the project.

Under the supervision of: IPTA, NPC

Reporting to: IPTA, NPC

Internationally recruited.

2. Context

Burkina Faso is a water scarce considered particularly vulnerable to climate change due to its socio-economic, climatic and geographical circumstances. Notably, persistent poverty levels suggest a low adaptation capacity. Burkina Faso's vulnerability is also due to the high dependence on primary food production and natural resources. Notably, more than 80% of the Burkinabe population is involved in livestock raising to some extent. However, climate change is forecasted to have direct negative impacts on pastoral activities.

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3. Objective and Tasks

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Prepare a framework for assessing policy related to climate change and agro-pastoral activities;
- Design a process for assessing policy related to climate change and agro-pastoral activities;
- Support a team in the assessment of agricultural and pastoral policy, in a participatory manner;
- Review findings from the 4 regions and other grassroots activities, and ensure policy assessment is consistent;
- As appropriate, assess the following and their influence and impact on current and future pastoral practices and develop recommendations:
 - Livestock extension existing land tenure policies and arrangements;
 - past and present trends of agro-pastoral investments;
 - customary land conservation practices.
- Support a participatory process to review the current responsibilities and capacities of the relevant Government departments, non-Government and private institutions, and make appropriate recommendations in their role for the implementation of the pertinent agro-pastoral policy;
- Ensure climate change adaptation and climate resilience are considered in policy interventions;
- Plan, design and propose draft policy recommendation in collaboration with MASA and MRAH, and draft and/or review appropriate regulations to support the implementation of CC-A investments;
- With the support of the MASA and MRAH, participate in and conduct at least two national stakeholder participatory consultations as part of the policy development process.

4. Qualifications and Selection criteria:

- An advanced degree in a field relevant to the above assignment (natural resource management, economics, environmental policy, agriculture and land management);
- Good working knowledge of national policy processes and policy language;
- Familiar with community-based natural resource management and social land management issues;
- Good understanding of international policies and agreements related to sustainable land management
- Ability to organize and facilitate workshops and meetings;

EXTERNAL EVALUATION TEAM – 6 Weeks

Internationally recruited.

Under the ultimate responsibility of FAO Office of Evaluation, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Evaluation Office and in close consultation with the Project Coordinator, the FAO budget holder (AGPM), the FAO Lead Technical Unit the external evaluation team will three months prior to the terminal review meeting of the project partners conduct an independent final evaluation. The final evaluation will review project impact, analyse sustainability of results

and whether the project has achieved its adaptation objectives and benchmarks. The evaluation will furthermore provide recommendations for follow-up actions.

The evaluation will, inter alia:

- a. review the effectiveness, efficiency and timeliness of project implementation;
- b. analyse effectiveness of implementation and partnership arrangements;
- c. identify issues requiring decisions and remedial actions to insure sustainability of project outcomes and outputs;
- d. identify lessons learned about project design, implementation and management;
- e. highlight technical achievements and lessons learned; and
- f. Prepare a final evaluation report.

Some critical issues to be evaluated in the midterm and final evaluations will be:

- (i) progress in improving grassland status and palatability;
- (ii) the functioning and effectiveness of the APFS network and of the inter-institutional coordination mechanism in developing and implementing integrated planning in support SLM for grassland areas and addressing key biodiversity threats;
- (iii) the level of capacities and involvement of local staff in terms of improved management effectiveness and land management plan implementation capability;
- (iv) the level of involvement of farmers and herders in land management models.

Requirements: The team should include professionals specialized in grassland land degradation and pastoralism and with demonstrated experience in project evaluation. They must have 10 years of professional experience in the field. Previous working experience in the region, as well as experience in project coordination with international bodies, will be especially valuable.

Languages: French/English

Duration: 2 consultants (international and national) for 6 weeks each

APPENDIX 7: STAKEHOLDER ANALYSIS

Part 1: Governmental Stakeholders

Agence/organisation	Mandat pertinent au Projet	Role dans le Projet
Ministère de l'Agriculture et de la Sécurité Alimentaire		
Direction Générale des Etudes et Statistiques Sectoriels	<ul style="list-style-type: none"> • Coordination et planification de tous les projets dans le secteur ASA 	<p><u>Contributions amenées au Projet</u></p> <ul style="list-style-type: none"> • Apporter un aide à déterminer les co-financements <p><u>Bénéfices tirées du Projet</u></p> <ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement de capacité
Direction Générale de la Promotion de l'Economie Rurale	<ul style="list-style-type: none"> • Contribuer à l'organisation et à la professionnalisation des acteurs • Elaborer les comptes d'exploitations agricoles et analyser les performances des filières agricoles • Contribuer à l'amélioration de la productivité des filières agricoles 	<ul style="list-style-type: none"> • Apporter un aide à déterminer les soutiens que le projet va apporter aux communautés (dans le cadre d'Objectif « Faim Zero ») • Détermination des familles vulnérable • Valorisation des arts culinaires • Appui à la mise en place des fonds revolving • Bénéficiaire des formations et de renforcement de capacité
Direction Générale des Productions Végétales	<ul style="list-style-type: none"> • D'assurer l'appui-conseil aux producteurs et aux institutions rurales ; • * De veiller à l'adaptation des innovations et des technologies aux besoins des différentes régions et des producteurs ; • De veiller à la traduction et à la diffusion des techniques modernes de production à travers les canaux appropriés de 	<ul style="list-style-type: none"> • Assurer la coordination avec le SNVACA et l'intégration du Projet dans le SNVACA ; • Cofinancement (SNVACA) • Bénéficiaire des formations et de renforcement de capacité

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
	vulgarisation et d'encadrement <ul style="list-style-type: none"> • Coordonner la mise en œuvre du SNVACA • DGPV also collects information regarding rainfall and publishes it in the form of a decadal bulletin. 	<ul style="list-style-type: none"> • Bénéficiaire d'un SNVACA amélioré
Direction générale du Foncier de la formation et de l'organisation du monde rural (DGFOMR)	Opérationnalisation au niveau régional des stratégies et des politiques nationales sur le foncier	<ul style="list-style-type: none"> • Faciliter les actions visant la sécurisation de la terre • Bénéficiaire des formations et de renforcement de capacité
Directions Régional de l'Agriculture et de la Sécurité Alimentaire	<ul style="list-style-type: none"> • Opérationnaliser au niveau régional des stratégies et des politiques nationales dans le secteur ASA. • Supervision des Direction Provinciaux. 	<ul style="list-style-type: none"> • Contribution des experts (par. ex. des facilitateurs et des maitre-formateurs) ; • Créer des liens opérationnels avec des autres projets sous sa tutelle. • Bénéficiaire des formations et de renforcement de capacité
Directions Provinciaux de l'Agriculture et de la Sécurité Alimentaire	<ul style="list-style-type: none"> • Soutien techniques, dans le secteur ASA, aux autorités locaux et aux paysans. 	<ul style="list-style-type: none"> • Contribution des experts (par. ex. des facilitateurs et des maitre-formateurs) ; • Créer des liens opérationnels avec des autres projets dans la province ; • Bénéficiaire des formations et de renforcement de capacité. • Bénéficiaire surtout d'un système (manuels, agents, protocol) d'extension fortement amélioré et résilient aux changements climatiques.
Zone d'Animation Technique Agricole	<ul style="list-style-type: none"> • Soutien techniques, dans le secteur ASA, aux autorités locaux et aux paysans. 	<ul style="list-style-type: none"> • Contribution des agents de terrain et des connaissances locaux;

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
		<ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement de capacité ; • Bénéficiaire surtout des outils et des approches(BP) améliorés et résilients aux changements climatiques.
Unité d'Encadrement Agricole	<ul style="list-style-type: none"> • Soutien techniques, dans le secteur ASA, aux paysans. 	<ul style="list-style-type: none"> • Contribution des agents de terrain et des connaissances locaux; • Bénéficiaire des formations et de renforcement de capacité ; • Bénéficiaire surtout de l'introduction des nouveaux outils et des approches (BP) améliorés et résilients aux changements climatiques.
Ministère des Ressources Animaux et Halieutiques		
Direction Générale des Etudes et Statistiques Sectoriels	<ul style="list-style-type: none"> • Coordination, planification et suivi évaluation de tous les projets dans le secteur RAH 	<p><u>Contributions amenées au Projet</u></p> <p><input type="checkbox"/> <input type="checkbox"/> Apporter un appui pour la détermination des cofinancements</p> <p><u>Bénéfices tirées du Projet</u></p> <p><input type="checkbox"/> Bénéficiaire des formations et du renforcement des capacités techniques</p>
Direction Générale des Espaces et des Aménagements Pastoraux	<ul style="list-style-type: none"> • Evaluation des ressources pastorales • Suivi de la transhumance 	<ul style="list-style-type: none"> • Fournir des données sur les ressources pastorales • Bénéficiaire d'un appui (tout genre) dans le monitoring du pâturage
Direction Générale des productions Animales	<ul style="list-style-type: none"> • Appui au développement des filières pro pauvres résilientes aux chocs climatiques 	<ul style="list-style-type: none"> • Œuvrer à l'identification des promoteurs respectant les conditions d'élevage (alimentation, hygiène, etc) qui serviront

Agence/organisation	Mandat pertinent au Projet	Role dans le Projet
	<ul style="list-style-type: none"> Appui en termes d'encadrement et d'appui conseil des bénéficiaires sur les bonnes pratiques d'élevage 	<p>de modèle expérimental et d'encadrement pour les autres promoteurs</p> <ul style="list-style-type: none"> Exploiter les acquis de l'initiative Eleveur leader pour « assoir » l'approche CEP dans les zones d'intervention du projet <p>Bénéficiaire des formations et du renforcement des capacités techniques</p>
Direction Générale des Services Vétérinaires	<ul style="list-style-type: none"> Renforcer le dispositif de surveillance des maladies animales sur le territoire 	<ul style="list-style-type: none"> Assurer la couverture sanitaire des troupeaux pour une meilleure valorisation des bonnes pratiques d'élevage Bénéficiaire des formations et du renforcement des capacités techniques
Directions Régional de Ressources Animaux et Halieutiques	<ul style="list-style-type: none"> Opérationnaliser au niveau régional des stratégies et des politiques nationales dans le secteur RAH. Supervision des Direction Provinciaux. 	<ul style="list-style-type: none"> Contribution des experts (par. ex. des facilitateurs et des maitre-formateurs) ; Créer des liens opérationnels avec des autres projets sous sa tutelle. Bénéficiaire des formations et de renforcement de capacité
Directions Provinciaux de Ressources Animaux et Halieutiques	<ul style="list-style-type: none"> Soutien techniques, dans le secteur RAH, aux autorités locaux et aux paysans Promotion pour l'intégration des bonnes pratiques d'élevage dans les exploitations. 	<ul style="list-style-type: none"> Contribution des experts (par. ex. des facilitateurs et des maitre-formateurs) ; Créer des liens opérationnels avec des autres projets dans la province ; Bénéficiaire des formations et de renforcement de capacité. Bénéficiaire surtout d'un système (manuels, agents, protocole) d'extension fortement amélioré et résilient aux changements

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
Zone d'Animation Technique Elevage	<ul style="list-style-type: none"> • Soutien techniques, dans le secteur RAH, aux autorités locaux et aux paysans. 	climatiques. <ul style="list-style-type: none"> • Contribution des agents de terrain et des connaissances locaux; • Bénéficiaire des formations et de renforcement de capacité ; • Bénéficiaire surtout des outils et des approches (BP) améliorés et résilients aux changements climatiques.
Unité d'Encadrement Elevage	<ul style="list-style-type: none"> • Soutien techniques, dans le secteur RAH, aux paysans. 	<ul style="list-style-type: none"> • Contribution des agents de terrain et des connaissances locaux; • Bénéficiaire des formations et de renforcement de capacité ; • Bénéficiaire surtout de l'introduction des nouveaux outils et des approches (BP) améliorés et résilients aux changements climatiques.
Ministère de l'Environnement et du Développement Durable		
Secrétariat Permanent du Conseil National de l'Environnement et du Développement Durable	<ul style="list-style-type: none"> • Point focal FEM • Point focal CCNUCC • Division des conventions 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> • Rendre le Plan National d'Adaptation conforme au souci de promotion des CEP • Appui à l'institutionnalisation des CEP dans les structures de vulgarisation, les plan et programmes, les structures de capitalisation • Facilitation de l'élaboration des projets ACC par les acteurs et de leur financement • Vulgarisation du système d'assurance

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
		<p>climatique au niveau des producteurs bénéficiaires</p> <p><u>Bénéfices tirées du Projet</u></p> <ul style="list-style-type: none"> • Appui pour renforcer le système de capitalisation des acquis en matière de CC • Appui au SP/CONEDD pour intégrer les CC dans des plans locaux de développement • Appui au SP/CONEDD pour la duplication de bonnes pratiques d'adaptation en matière de foresterie développées par d'autres projets et associations partenaires du MEDD
Direction Générale des Etudes et Statistiques Sectoriels	<ul style="list-style-type: none"> • Coordination et planification de tous les projets dans le secteur EDD 	<ul style="list-style-type: none"> • Mise à disposition des stratégies et outils permettant d'amener tous les projets et programmes à intégrer le CC dans leurs Prodocs • Bénéficiaire des formations et de renforcement de capacité
Direction Régionale de l'Environnement et du Développement Durable (DREDD)	<ul style="list-style-type: none"> • Opérationnaliser au niveau régional des stratégies et des politiques nationales dans le secteur EDD. • Supervision des Direction Provinciaux. 	<ul style="list-style-type: none"> • Contribution des experts (par. ex. des facilitateurs et des maitre-formateurs) ; • Créer des liens opérationnels avec des autres projets sous sa tutelle. • Bénéficiaire des formations et de renforcement de capacité
Les Directions Générales (DG Forêts et faune, Agence des Produits	<ul style="list-style-type: none"> • Gestion durable des ressources naturelles à travers, l'identification, le test et la promotion de la duplication de bonnes pratiques 	<p><u>Contributions amenées au Projet</u></p> <ul style="list-style-type: none"> • Accompagnement à l'identification des pratiques convenables selon les sites

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
Forestiers non ligneux)	<ul style="list-style-type: none"> • Valorisation durable des écosystèmes et de leurs ressources 	<ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement de capacité.
Ministère de la Recherche Scientifique et de l'Innovation		
(ANVAR)	<ul style="list-style-type: none"> • suivie et évaluation de l'état de valorisation des résultats de la recherche et de l'innovation au Burkina Faso • établissement de liens de coopération nationale et internationale en matière d'échanges d'expériences dans le domaine de la valorisation des résultats de la recherche et des innovations 	<p><u>Contributions amenées au projet</u></p> <ul style="list-style-type: none"> • Contribution à la diffusion des techniques de renforcement de la résilience climatique dans la production agricole et pastorale • Mise à disposition de l'information scientifique et technologique disponible <p><u>Bénéfices tirés du projet</u></p> <ul style="list-style-type: none"> • Partage d'information sur les techniques de renforcement de la résilience climatique dans la production agricole et pastorale • Tribune de communication pour l'ANVAR pour diffuser les résultats de la recherche
Institut National de l'Environnement et de Recherches Agricoles	<ul style="list-style-type: none"> • Génération, mise à disposition de résultats de la recherche 	<p><u>Contributions amenées au Projet</u></p> <ul style="list-style-type: none"> • Mise à disposition et contribution à la diffusion des techniques de renforcement de la résilience climatique dans la production agricole et pastorale • Mise à disposition de l'information scientifique et technologique disponible <p><u>Bénéfices tirées du Projet</u></p> <ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement de capacité.

Agence/organisation	Mandat pertinent au Projet	Rôle dans le Projet
Institut National de Sciences des Sociétés	<ul style="list-style-type: none"> Génération, mise à disposition de résultats de la recherche 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> Mise à disposition de l'information scientifique et technologique disponible <u>Bénéfices tirées du Projet</u> <ul style="list-style-type: none"> Bénéficiaire des formations et de renforcement de capacité.
Ministère de l'Eau, des Aménagements Hydraulique, et de la Assainissement		
DGESS	<ul style="list-style-type: none"> Coordination et planification de tous les projets dans le secteur EHA 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> Contribuer à la mise en place des actions dans le domaine de l'eau, de l'hydraulique et de l'assainissement <u>Bénéfices tirées du Projet</u> <ul style="list-style-type: none"> Bénéficiaire des formations et de renforcement de capacité, Capitalisation des acquis antérieurs et futurs du CEP/GIPD
Ministère de la Promotion de la Femme et du Genre		
Secrétariat Permanent du Conseil National pour la Promotion du Genre (SP-CONAP-Genre)	Secrétariat Permanent du Conseil National pour la Promotion du Genre (SP-CONAP-Genre)	Secrétariat Permanent du Conseil National pour la Promotion du Genre (SP-CONAP-Genre)
Divers		
Ministère de l'Economie et des Finances	<ul style="list-style-type: none"> Coordination de la coopération internationale, coordination des projets et programmes au niveau national 	<ul style="list-style-type: none"> Membre Comité de Pilotage Signataire de la convention au compte du gouvernement
Direction Régionale de l'Economie et de la Planification	<ul style="list-style-type: none"> Coordination des projets et programmes au niveau régional Structure chargée de la mise en œuvre au niveau régional du Plan Communal de Développement Structure chargé du suivi technique de la mise en place du 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> Plan communal de Développement Plan Annuel d'Investissement

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
	PCD	<u>Bénéfices tirées du Projet</u> <ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement des capacités du comité de suivi, des organes de gestion
Direction-Générale de la Météorologie	<ul style="list-style-type: none"> • Coordination, Génération et planification des données et information agro météorologique. 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> • Mise à disposition de données agro météo • Renforcement de capacités des différents partenaires • Coordonner le traitement et la diffusion de l'information agro météo <u>Bénéfices tirées du Projet</u> <ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement de capacité
Conseiller Régional	<ul style="list-style-type: none"> • Organe dirigeante de la collectivité régional 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> • Plan Régional de Développement • Plan Communal de Développement • Plan Annuel D'Investissement <u>Bénéfices tirées du Projet</u> <ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement des capacités du comité de suivi, des organes de gestion
Chambre Régional de l'Agriculture	<ul style="list-style-type: none"> • Assurer la participation des représentants des acteurs des maillons production aux dialogues et négociations sur les politiques et stratégies sectorielles; • stimuler la professionnalisation des acteurs des filières agricoles ; • Contribuer à la formation professionnelle des principaux acteurs des filières agricoles. 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> • Appui à la collecte de l'information sur les CEP dans le cadre de l'élaboration et la mise à jour de la cartographie des CEP du Burkina Faso • Contribuer à la formation professionnelle des principaux acteurs des filières

Agence/organisation	Mandat pertinent au Project	Role dans le Projet
		agricoles, <ul style="list-style-type: none"> • Implication des structures décentralisées <u>Bénéfices tirées du Projet</u> <ul style="list-style-type: none"> • Bénéficiaire des formations et de renforcement de capacité
Secrétariat Permanent de Coordination des Politiques Sectorielles Agricoles (SP-CPSA)	<ul style="list-style-type: none"> • Coordination et suivi de la mise en œuvre de la politique agricole par l'organisation de la mise en place des structures d'exécution des plans d'actions (comités de pilotage, d'orientation, de supervision ou interprofessionnels et cellules de gestion) et des autres mesures adoptées en vue de l'application de la politique agricole; • Appui aux DGESS et aux autres Directions Centrales compétentes des Ministères impliqués dans le développement rural dans l'élaboration des politiques sectorielles; • Suivi de la mise en cohérence des projets et programmes de développement avec les dispositions de la politique nationale des secteurs agricoles • Evaluation de l'impact global des politiques sectorielles agricoles. 	<u>Contributions amenées au Projet</u> <ul style="list-style-type: none"> • Elaboration de la cartographie des CEP, leur mise à jour, leur exploitation, leur diffusion et leur prise en compte permanente dans le système de suivi évaluation du PNSR et du volet développement rural de la SCADDD ; • Appui à la mise en place d'un cadre permanent de concertation entre les structures de vulgarisation des départements du développement rural et de la recherche et analyse des résultats de la vulgarisation à travers la cartographie des CEP et autres outils ; <ul style="list-style-type: none"> • <u>Bénéfices tirées du Projet</u> Bénéficiaire des formations et de renforcement de capacité

Part 2: Local NGOs and Associations

REGIONS		NOM	SIEGE	ACTIVITES PRINCIPALES	ROLE DANS LE PROJET
Sahel	1	Association Noodé-Noodum « ONG A2N, prêt à servir »	Dori	Promouvoir des bonnes pratiques en matière d'éducation, de gouvernance et de Gestion des Ressources Naturelles en vue d'influencer les politiques de développement ; contribuer et s'engager pour le bien-être économique, social et culturel durable des populations de la zone d'intervention.	<ul style="list-style-type: none"> - Gestion des ressources naturelles - Sécurité alimentaire - Appui au développement local - Appui aux organisations locales - Formation, information, communication Santé animale, champ école agropastorale,
	2	UFC (Union Fraternelle des Croyants)	Dori	Seno	Participation à l'encadrement /accompagnement des producteurs
	3	AGED (Dori	Identification d'initiatives à financer et accompagnement des producteurs formés	Participation à l'encadrement /accompagnement des producteurs
	4	REACH-Italia (ONG Italienne)	Dori	Aménagement et Gestion des Espaces pastorales, promotion d'espèces herbacées (<i>pennisetum sp.</i> , <i>panicum sp.</i>	Contribuer à l'introduction de légumineuses fourragère dans les pâturages. L'amélioration des pâturages naturels
Est	1	ANSD/GI (Association Nourrir Sans Détruire /Groundswell international)	Ouagadougou	Agroforesterie, RNA, RD, Diagnostic participatif etc.	Responsabilisé pour conduire certaines activités de son expertise
	2	ARFA (Association pour la Recherche et la Formation en Agroécologie)	Fada	Développement de l'agro-écologie dans le gourma et la province du Zandoma.	Sensibilisation aux CC et identification d'initiatives à financer, accompagnement des producteurs formés- Gourma, Komandjari, Zandoma
	3	APRG (Association pour Promotion Rurale au Gulmu)	Fada	Agriculture, alphabétisation	Participation à l'encadrement des producteurs
	4	ABF (Association Base	Fada	Micro finance, environnement	Participation à l'encadrement des

REGIONS	NOM	SIEGE	ACTIVITES PRINCIPALES	ROLE DANS LE PROJET
	Fandima)			producteurs
5	Tin-Tua (Développons-nous, nous-mêmes)	Fada	Accompagner le processus d'autopromotion en portant une attention particulière aux femmes et aux jeunes.	Rechercher, adopter et diffuser en milieu paysan des technologies appropriées dans les domaines de la lutte contre la désertification, de l'amélioration de l'habitat, de la santé, de l'élevage traditionnel, de l'artisanat, de la sécurité alimentaire.
6	Helvetas (Organisme de coopération suisse)	Ouagadougou	Lutte contre la crise globale de l'eau, information sur l'eau et l'hygiène. Appui au collectivité qui cherche à améliorer leurs conditions de vie dans les pays pauvres du Sud.	Gestion de l'eau et de la fertilité des sols en CEP -Gourma,
7	SOCOMA_UNPC-B/AICB	Fada	Société cotonnière	Conduite de CEP/BPA dans un système à base de coton dans la région de l'Est

REGIONS	NOM	SIEGE	ACTIVITES PRINCIPALES	ROLE DANS LE PROJET
Centre-Nord	1 ADRK (Association pr le Développement de Kaya)	Kaya	Agriculture,	-Participation à l'encadrement/accompagnement des producteurs
	2 AMSP (Association Minim Song Panga)	Kaya	Agriculture, RD	- Participation à l'encadrement/accompagnement des producteurs
	3 ODE (Office de Développement des Eglises Eévangéliques)	Ouagadougou	Développement économique, social culturel du peuple Burkinabè	Introduction et évaluation de technologies d'adaptation aux CC, expérience en conduite de CEP
	4 ATAD (Alliance Technique d'Assistance au Développement)	-	-	-

	5	ACCIR-FERT (Association de coopération interrégionale Appui d'un groupe de céréaliers français)	Kaya	Appui aux producteurs pour la gestion de la fertilité de sols ; développement de techniques CES.	Identification d'initiatives à financer et accompagnement des producteurs formés
	6	SP CONAGREP (Secrétariat permanent de la commission nationale de Gestion des ressources phylogénétiques)	Ouagadougou	Collection d'écotypes locaux et évaluation participative de variétés améliorées de cultures. Appui aux producteurs semenciers.	Gestion des champs de diversité dans les quatre régions
Centre-Ouest	1	FEPASI (Fédération des Producteurs Agricoles de la Sissili)	Léo	Sissili	Encadrement, formation des producteurs
	2	ONG-IDE	Koudougou	Appui aux activités maraichères	Développement du système goutte à goutte ;développement de système goutte à goutte au bénéfice des femmes ; fourniture de kit d'irrigation
	3	CREDO (Christian and Relief Development)	Ouagadougou	Développement économique, social culturel et sécurité alimentaire	Sensibilisation sur le CC, introduction et évaluation de technologies d'adaptation aux CC
	4	SOFITEX_UNPC-B/AICB	Bobo-Dioulasso	Société cotonnière	Conduite de CEP/BPA dans un système à base de coton

APPENDIX 8: EXAMPLE OF LESSONS LEARNT RELATED TO NRM PRACTICES IN BURKINA FASO

Adapted from « *Etat Des Lieux Des Savoirs Locaux Au Burkina Faso: Ethnobotanique Et Medecine Traditionnelle Pratique Et Systemes Cultureux Ethnozoologie Et Sante Animale Habitats, Materiaux Locaux Et energie Artisanat, Arts Du Feu Et Pratiques Funeraires* », prepared by Réseau de Gestion des Connaissances au Burkina (2006)

Pratiques et Systèmes cultureux

Près d'une vingtaine de pratiques ou systèmes cultureux y sont recensés :

1. Les fossés antiérosifs de diversion et d'infiltration ;
2. Le zaï
3. Les demi-lunes
4. Les diguettes antiérosives
5. Les digues filtrantes
6. Le sous-solage
7. Le scarifiage
8. Le labour
9. Le buttage et billonnage
10. La jachère
11. La mise en défens
12. Le paillage
13. Les amendements organiques
14. Le fumier d'étable (poudrette de parc)
15. Le fumier des fosses fumières
16. Le compost
17. Les lisiers et purins

- 18. Le reboisement
- 19. Le tapis herbacé
- 20. Les bandes enherbées

Ces pratiques et techniques peuvent être regroupées en techniques mécaniques, biologiques, agroforestières et culturales, avec pour chaque catégorie ses atouts et ses faiblesses.

Atouts et faiblesses des techniques mécaniques de LCD au BF

Techniques	Atouts	Faiblesses
« Zaï »	<ul style="list-style-type: none"> - augmentation des rendements agricoles ; - restauration de la végétation ; - travail en saison sèche ; - augmentation de l'infiltration de l'eau. 	<ul style="list-style-type: none"> - durée des temps de travaux ; - inadaptation aux sols sableux ; - Efforts physiques importants ; - disponibilité de matière organique et transport ; - nécessité de travaux associés : cordons pierreux.
Demi-Lune	<ul style="list-style-type: none"> - absorption de l'eau de ruissellement ; - lutte contre l'érosion ; - augmentation des rendements agricoles ; - restauration de la végétation 	<ul style="list-style-type: none"> - gros efforts de main d'œuvre ; - formation pour les courbes de niveau ; - disponibilité de matière organique ; - sécurité foncière ;
Cordons pierreux	<ul style="list-style-type: none"> - augmentation des rendements agricoles ; - restauration de la végétation ; - travail en saison sèche ; - infiltration 	<ul style="list-style-type: none"> -rareté et éloignement des pierres ; Insuffisance des moyens de transport ; - nécessité de la main d'œuvre ; - entretien ; - engorgement en année pluvieuse
Diguette en	<ul style="list-style-type: none"> - conservation de l'eau ; 	<ul style="list-style-type: none"> - nécessité d'un entretien

terre	- facilité de réalisation	constant ; Faible efficacité ; - nécessité de gros matériels (tracteur) ; - engorgement
Digue filtrante	- augmentation des superficies cultivables ; - lutte contre l'érosion ; - ralentissement de l'écoulement des eaux et sédimentation	- coût de réalisation très élevé ; - fort besoin de main d'œuvre abondante

Atouts et faiblesses des techniques biologiques

Techniques	Atouts	Faiblesses
Paillage	- protection du sol ; - revégétalisation ; - réduction de l'évaporation ; - stimulation de l'activité biologique ; - augmentation de la porosité du sol ; - amélioration de la fertilité du sol ; - augmentation des rendements.	- disponibilité limitée des résidus ; - problème de transport
Mise en défens	- protection des parcelles contre les animaux et l'homme ; - régénération du couvert végétal ; - réduction du ruissellement et de l'érosion ; - augmentation du bilan hydrique.	- pas d'effet sur les sols nus et encroûtés ; - gestion nécessaire ; - mesures complémentaires (travail du sol) ; - aménagement régional ou de bassin versant ; - négociation entre les populations riveraines.

Atouts et faiblesses des techniques agroforestières

Techniques	Atouts	Faiblesses
Reboisement, Végétalisation ligneeuse	<ul style="list-style-type: none"> - restauration du couvert végétal disparu - impact positif sur le sol et le fourrage naturel 	<ul style="list-style-type: none"> - concurrence avec les activités agricoles ; - difficultés de mise en défens ou d'entretien ; - mauvaise qualité des plants ; - eau insuffisante en saison sèche ; - lenteur des cycle de développement ; - taux de survie faible
Bandes enherbées	<ul style="list-style-type: none"> - stabilisation des ouvrages mécaniques CES ; - lutte contre l'érosion et l'ensablement ; - production de biens et services (fourrage, matériaux de construction) 	<ul style="list-style-type: none"> - disponibilité limitée de souches d'herbes ; - forte emprise sur le sol ; - dégâts par le bétail ; - concurrence avec les cultures situées à proximité
Tapis herbacé	<ul style="list-style-type: none"> - régénération du couvert végétal ; - production de fourrage ; - protection du sol 	<ul style="list-style-type: none"> - technique coûteuse ; - nécessité d'un sous-solage (mécanisation) ; - main d'œuvre pour la collecte des semences ; - difficultés de mise en défens ou d'entretien
Brise-vent et Haies vives	<ul style="list-style-type: none"> - protection contre l'érosion éolienne ; - fixation du sol ; - protection contre les animaux. 	<ul style="list-style-type: none"> - empiètement sur les parcelles ; - organisation collective ; - entretien (mise en défens) ; - concurrence avec les

		activités agricoles.
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Atouts et faiblesses des techniques culturales

Techniques	Atouts	Faiblesses	Observations
Ensemble des techniques de travail du sol qui créent une fissuration visant à augmenter la porosité totale des horizons superficiels du sol : labour, scarifiage, sous-solage, etc.	<ul style="list-style-type: none"> - Infiltration de l'eau, Réduction de l'évaporation, - Amélioration de la structure du sol, - Meilleur enracinement, - Bonne absorption des éléments nutritifs 	<ul style="list-style-type: none"> - Investissements élevés en travail du sol en sec motorisé, - Sous-solage peu appliqué en raison des coûts de tractorisation, - Fréquence des croûtes après chaque pluie avec risque d'érosion. 	<ul style="list-style-type: none"> - Recherches entreprises pour réduire les coûts par usage de la traction animale et par la technique du scarifiage à sec. - Recherches pour déterminer l'impact du sous-solage dans l'aménagement des espaces sylvopastoraux.

APPENDIX 9: PLANNED PASTORAL ZONES – BOTH EXISTING AND POTENTIAL

These tables were prepared in PPG report “Appui a la Composant: Elevage Institutionnel”, E. Vokouma (2011)

9.A. – Existing and Functioning “Planned Pastoral Zones”

N°	Nom zone pastorale	Départements/ Communes	Provinces	DRRA	Superficie (ha)	N° arrêté délimitation	Plan de gestion	Cahier des charges Spécifique	Matérialisation des limites
01	Barani	Barani	Kossi	Boucle Mouhoun	48.924	2000-32 du 21/07/2000		2009	Pare feu Balises
02	Toéni	Toeni	Sourou		19.000	-	2004	2006	Pare feu Balises (2006)
03	CEZIET	Samorogouan	Kéné Dougou	Hauts-Bassins	124 000	2000-40 du 21/07/2000		2009	
04	Diassaga/Gossi amandara				600	2001-14 du 28/03/2002			
05	Saho	Boni			Tuy	2.800	2001-16 du 28/03/2002	2004	2002
06	Gadéghin	Mogtédo	Ganzourgou	Plateau Central	6.000	2000-33 du 21/07/2000	2004		
07	Mankarga V7	Boudri			6.270	2000-36 du 21/07/2000	2004		
08	Silmiougou	Zougo			420	2000-42 du 21/07/2000			
09	Yagma		Kadiogo	Centre	50				
10	Gaongho-Sud	Kombissiri	Bazèga	Centre Sud	6.762	2000-34 du 21/07/2000			
11	Luili-Noberé	Béré	Zoundwéogo		3.700	2000-35 du 21/07/2000		2006	Balise
12	Niassa	Gogo			19.000	2000-37 du	2005	2006	Balise

N°	Nom zone pastorale	Départements/ Communes	Provinces	DRRA	Superficie (ha)	N° arrêté délimitation	Plan de gestion	Cahier des charges Spécifique	Matérialisation des limites
						21/07/2000			
13	Sondré-Est	Bindé			16.459	2000-43 du 21/07/2000		2006	Balise
14	Zone Sud Ouest	Nobéré			32 000				Balise
15	Guiaro	Guiaro	Nahouri		9.500	2001-15 du 28/03/2002	2004	2006	Pare feu Balises (2006)
16	Gassanaye	Banh	Lorum	Nord	30.000	-	2005		
17	Tapoa-Boopo	Matiacoali	Gourma	Est	95.000	2003-59 du 28/10/2003	2003		Balise partielle
18	Kabonga	Pama/Soudougui	Kompienga / Koulpélogo		41 000	2004-38 du 02/08/2004	2003	2004	Balise partielle
19	Nouhao	Bané/Bittou/Lalgaye/Ouargaye	Boulgou/ Koulpélogo	Centre Est/Est	95.000	2000-38 du 21/07/2000	2010 +	2001	Pare feu
20	Doubégué/ Tcherbo	Bagré/Boussouma/Garango			7 125				
21	Yarkanré	Gounghin	Kouritenga		1.850	-	2003		
22	Sambonaye	Dori	Séno	Sahel	37.500	2000-39 du 21/07/2000	2006	2012	
23	Ceekol Nagge				27 500	-	2006	2012	
24	Sidéradouougou	Sidéradouougou/	Comoé	Cascades/ Hauts-Bassins	51 000	2000-41 du 21/07/2000	2006	2006	Balise
25	Yallé	Bieha/Cassou	Sissili/Ziro	Centre Ouest	40.000	Raabo n° An VI-0093 du 13/06/1989	2005		
26	Djigoué		PONI	Sud-Ouest	9 500	-			
	Total				730 960	18	14	13	11

9.B. – Potential “Planned Pastoral Zones”

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
01	SAHEL	Séno	Dori	4 espaces de pâture identifiés (Damtchadi, Malbo, Peoukoye et Bouloye-Thiouly)		Identification faite par les producteurs, mais sans appui de projet à cause de la clôture du projet.
02				Kougari	20 000	Espace non borne
03				Soumboulou	21 000	Délimitation à la peinture blanche, implantation de bornes
04				Péta Kolé		Délimitation peinture blanche, sous solage, diguettes en terre, reboisement collectif et implantation de bornes
05			Sampèlga	Makaladjo	2 400	implantation de bornes
06			Seytenga	Séno Tchondi	24 000	Délimitation à la peinture blanche, implantation de bornes
07						Kiral
08			Falagountou	Belgou-Ekou-Kargounol	4 800	Délimitation à la peinture blanche, implantation de

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
						bornes
09				Wiboria_Haini-Salla		Délimitation à la peinture blanche, sous solage, diguettes en terre, reboisement collectif et implantation de bornes
10				Wiboria-Gomo-Salla		
11			Gorgaji	Tchekaw		Délimitation à la peinture blanche, scarifiage, élaboration de règles de gestion, Création d'un barrage
12				Leeba		
13				Gountoudjé		
14			Bani	Gangaol		
15				Sud de Bani		
16 ¹		Soum	Djibo	6 espaces de pâture ont été identifiés	4900	
17			Nassoumbou		2 500	
18					10 000	Balisages (500ha)
19			Tongomael		600	Non balisée
20			Pobé Mengao		400	Non balisée
21					2 500	Non balisée
22			Koutoukou		3 000	Non balisée
23			Baraboulé/Diguel	Kouyé	30 000	Négocié, sans bornage
24		Oudalan	Déou	Zone du forage Christine	30 000	Négociée, Peinture
25				Béli	15 000	Négociée, Peinture
26			Oursi	Zone de Zermakoye	20 000	Négociée, Peinture, levés

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
						GPS
27				Zone de Gonadaouri Bangonadji	15 000	Négociée, Peinture, levés GPS
28			Gorom Gorom	Nord- Est	10 000	Négociée, Peinture, levés GPS
29				Sud- Ouest	8 000	Existence d'un (01) boulis et de 03 parcs de vaccination
30				Sud- Est	7 000	2 parcs de vaccination
31			Gorom – Gorom	Nord – Ouest	4 000	02 parcs de vaccination
32				Ouest	7 000	1 parc de vaccination
33			Tin Akoff	Tin- Akoff Tinzalayane	27 000	
34				Tin – Akoff Massifigui	30 000	1 parc de vaccination
35				Massifigui Kacham Est	12 000	
36				Massifigui Rafnamane	80 000	
37			Markoye	Markoye Hinawas	700	
38				Konsi Salmossi	500	
39				Markoye Darkoye Warara	2 000	
40			Oursi	Oursi alentours	10 000	1 parc de vaccination
41				Soukoundou	10 000	
42				Djalafanka	5 000	1 parc de vaccination
43		Yaagha	Boundore	3 espaces de pâture identifiés Wuro Djako/Kankantiari		Bornage fait par PGRN/SY
44				Denga Kali		
45				Boundore/Karmama		

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
46			Mansila	3 espaces de pâture identifiés (Hamdallaye Mansila/Banga Tefaré/Soféri)		Bornage fait par PGRN/SY
47						
48						
49			Tibabé	4 espaces de pâture identifiés (Tchitali, Batibougou/Aligaga Batibougou/Kourori, et Dinallaye/Wuro Soutibe)		Bornage fait par PGRN/SY
50						
51						
52						
53			Sebba	3 espaces de pâture identifiés (Moussougou, Bagnaba1/Mantabina et Tambiri/Sambagou)		Bornage fait par PGRN/SY
54						
55						
56			Solhan	3 espaces de pâture identifiés (Koigourol/Nabanningou- Wanatarangou, et Bakotou)		Bornage fait par PGRN/SY
57						
58						
59						
60						
61	Tankougounadié	4 espaces de pâture identifiés (Kiena/Baham/Balgabou ga, Tankougounadie/Kiéri, Tankougounadie/Kankan tiari/Wurodjako, et Denga/Kéli)		Bornage fait par PGRN/SY		
62						
62	CENTRE SUD	Bazèga		Kayao		Zone potentielle

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
63	EST	Gourma	Fada	Tipalga	2 100	Négociée,
64				Diabatou	9 000	Négociée, levés GPS, forum tenu
65				Dampari Namougou	6 000	Négociée, Peinture, levés GPS, puits pastoraux.
66				Komangou	4 800	Négociée, Peinture, levés GPS
67				Kpentchangou	6 000	Négociée, Peinture
68				Bomona	2 500	Négociée, Peinture
69				Gnimpiana/Natiaboani	1 500	Négociée
70				Natiaboani/Biougou	5 000	Négociée
71				Nagaré	1 200	Négociée, Peinture
72				Kpentouangou	3 200	Négociation en cours
73			Diabo	Baléré/Boumpa	5 000	Négociation en cours
74			Yamba	Goundoukoagou	1 200	Négociée, Peinture, forum tenu
75				Moalo	1 500	Négociée, levés GPS
76			Tibga	Modré	2 500	Négociée, Peinture, levés GPS
77				Nagbangou	1 500	Négociation en cours
78			Diapangou	Balga	6 000	Négociation en cours
79				Wakou	800	Négociation en cours
80			Matiacoali	Piéga	6 500	Négociée
81				Oubrinou	400	Négociée, Peinture
82				Yitibari	35 000	Négociée, Peinture
83				Our Seni	15 000	Négociation en cours
84				Boutoanou	800	Négociation en cours
85				Datougou	400	Négociée

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
86				Tiasséri	20 000	Négociation en cours
87				Boulgou/Nagnindougou	25 000	Négociée
88				Ouro Aou	30 000	Négociation en cours
89				Tapoa Benli	15 000	
90				Yéritagui	15 000	
91		Kompienga	Pama	12 espaces de pâture identifiés (Nadiagou, Mamanga, Tindangou, Koalou, Tibadi, Oumpougndeni, Kabonga1, Kabonga2, Folpodi, Kalmama, Pkadiari, et Kompienbiga)		Négociation, Peinture et levés GPS pour certains, Négociation en cours pour d'autres
92			Kompienga	3 espaces de pâture identifiés (Kompienga, Diabiga et Kpankpage)		Négociation, Peinture et levés GPS réalisés pour tous
93			Madioari	Madjoari		Négociation en cours
94		Tapoa	Diapaga	Tanoua		Négociation en cours
95				Mamangou Boudiéri		Négociation en cours
96			Tambaga	2 espaces de pâture identifiés (Pentinga et Yirini)		Négociée, Peinture
97			Partiaga	Fodonga	30 000	Négociée forum tenu, Arrêté
98				Tawori	6 000	Négociée
99				Mardaga		Négociée, Peinture

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS	
100				Nadiabonly	42 000	Négociée arrêté et 97 partiellement balisée	
101			Tansarga	3 espaces de pâture identifiés (Kogoli – Bamboa – Tiapagali, Baka – Tiapagali et Tansarga – Kogoli)		Négociation en cours	
102							
103							
104			Botou		Afini Tanoa Kogoli		
105		Komondjari	Gayeri	Piéli	16 010	Zone intervillageoise, Négociée, Peinture	
106				Fouada	-	Zone intervillageoise	
107				Djora	22 174	Zone intervillageoise, Négociée, Peinture	
108			Bartiebougou	Bartiebougou	4 391	Zone intervillageoise, Négociée, Peinture	
109			Foutouri	Tankoualou	3 228	Zone intervillageoise, Négociée, Peinture	
110				Foutouri	4 391	Zone intervillageoise, Négociée, Peinture	
111		Gnagna	Bilanga	Brinaï	70	Négociation en cours	
112				Botou (Yora)	25 000	Négociation en cours	
113			Piela/ Bogande	Bakin	1 500	Négociée, Peinture	
114				Korindiaka	1 500	Négociée, Peinture partielle	
115				Gori (Gassin)		Négociée, levés GPS	
116				Dimboari	1 500	Négociée, Peinture partielle	
117				Sorgou	5 000	Négociée, Peinture en cours	

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
118			Liptougou	Kokou	30 000	Négociée, Peinture en cours
119			Liptougou	Liptougou	10 000	Négociée, Peinture en cours
120			Liptougou	Tambiga	15 000	Négociée, Peinture en cours
121			Liptougou	Dinalaye	10 000	Négociée, Peinture en cours
122			Liptougou	Kpenkpen	5 000	Négociée, Peinture
123			Liptougou	Nassourou	-	Négociation en cours
124			Manni	Yarga	10 000	Négociée, Peinture
125			Manni	Koulfouo	15 000	Négociation en cours
126			Manni	Obadé	1 500	Négociation en cours
127			Manni	Miapienga		Négociation en cours
128			Coala	Boukargou	16 000	Négociation en cours
129			Coala	Ganta	35 000	Négociée
130			Bogande	Gnimpéma	15 000	Négociée
131			Bogande	Babsa	2 000	Négociée
132			Bogande	Gassin	25 000	Négociation en cours
133			Bogande	Dapili	1 500	Négociée
134			Bogande	Samou	2 400	Négociation en cours
135			Bogande	Samou Folga	9 100	Négociation en cours
136			Bogande	Youaka	1 500	Négociation en cours
137			Bogande	Namountergou	2 000	Négociée et aménagée
138			Thion	Werin	2 900	Négociée
139			Thion	Kindibuoma	1 500	Négociée
140			Thion	Diaka	1 000	Négociée

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS	
141	HAUTS-BASSINS	Kenedougou	Djigouera	Kléni	700	Délimitée, Zone envahie par les agriculteurs	
142				Sérékeni	1 500	Délimitée, Zone envahie par les agriculteurs	
143				Kayan	Niénan Djonkéle	2 900	Délimitée, Zone envahie par les agriculteurs
144		Tuy		Bekuy			
145				Fouzan			
146		Houet		Faramanan / Kayan	Tigan	525	Négociée, non délimitée
147				Karangasso/Sambla	Sourgoudinga	1 000	non délimitée, en négociation
148	SUD-OUEST	Noumbiel		Bambassou	53 000	Zones traditionnelles d'élevage n'ayant pas bénéficié d'intervention de la DGEAP	
149					Kpèrè	33 000	
150		Bougouriba		Nabalé		Zone délimitée à la peinture par le biais du PNGT	
151		Ioba		Bouni		Zone délimitée par VARENA mais peu connue par la DGEAP	
152					Zambo	15 000	
153	BOUCLE DU	Banwa		Tansila-Dokuy	40 000	Zone de pâture en hivernage pour le cheptel de la zone	

N°	REGIONS	PROVINCES	DEPARTEMENTS/ COMMUNES	ZONES PASTORALES	SUPERFICIE (Ha)	OBSERVATIONS
154	MOUHOUN			Lekoro	9 000	Zone de pâture en hivernage pour le cheptel de la zone
155	NORD	Passoré/Zondoma	Yako/Boussou	Tibin/Boussou		
156	CASCADES	Comoé		Djéfoula Tiemberla	5 000	Zone GEPRENAF
157	CENTRE-EST	Koulpélogo		Comin-Yanga	55 000	Projet inscrit dans ARECOPA
158		Kourittenga	Tensobentenga	Tensobentenga		
159		Boulgou		Sablogo	30 000	
160	CENTRE NORD	Sanmatenga	Dablo	10 aires de pâture dans 10 villages (Dablo, BawénéDaké, Dou, Dofi, Guelkoto, Kougpela, Loada, Zambila, Terko)	100	
161	CENTRE OUEST	Ziro	Dalo	Zone de pâture de Tiaré	1 500	
Estimated total :					1 264 589	

APPENDIX 10: INTRODUCTORY DESCRIPTION OF THE FOUR REGIONS

1 La Région de l'Est¹

Introduction

La région de l'Est est située à l'extrême Est du Burkina Faso entre 0°30' et 2°20' de longitude Est et 10°45' et 13°45' de latitude Nord. Elle est limitée au Nord-Est par la République du Niger, au Nord par la région du Sahel, à l'Ouest par la région du Centre-Est et du Centre Nord, au Sud par les Républiques du Bénin et le Togo. Elle est composée de cinq provinces : Gourma, Gnagna, Komondjari, Tapoa et Kompienga. Elle constitue la région la plus vaste du pays avec une superficie de 46 807 km² (soit 17% du territoire national) et compte parmi celles qui ont la plus faible densité de la population. Elle est également la deuxième plus élevée du pays, mais a aussi l'une des plus faibles densités de population au Burkina².

Certaines provinces (particulièrement Gourma et Tapoa) sont parmi les moins peuplées du pays et donc les moins détériorées. La pluviométrie annuelle dans la région orientale varie entre 600 mm et 900 mm. Elle abrite de grandes réserves de faune du pays. Cette région est considérée comme une région de production de céréales avec comme cultures principales le sorgho et le millet en rotations. Les arachides sont également prépondérantes. Au cours des dernières années, la pénétration des cultures de rente telles celle du coton a fait une entrée remarquée, sa présence est principalement due à des incitations politiques aux paysans.

Agriculture et élevage des animaux sont les principales activités économiques. Le chiffre d'affaire de ces deux activités a contribué à hauteur d'environ 60 % du revenu total des ménages dans la région de l'Est, les 40 % restant étant assurés par diverses activités non agricoles telle l'utilisation des produits forestiers, le commerce, etc. Plus de 80 % de la population vit de l'agriculture, qui repose essentiellement sur la production céréalière.

Les caractéristiques communes de l'activité agricole dans l'Est sont les suivantes :

- -La pluviométrie augmente du nord au sud, ce qui permet des cultures plus diversifiées, la production de maïs et de coton étant plus importante dans le sud.
- -La fertilité du sol et la pratique de la jachère diminue lorsqu'on remonte du Sud vers le Nord.
- Le système agricole est basé sur les pratiques traditionnelles de l'agriculture extensive qui utilise principalement des outils à main. Les services de vulgarisation gouvernementaux ont facilité l'introduction de variétés végétales améliorées, ainsi que l'accès aux intrants agricoles, particulièrement due à la tendance accrue de la culture du coton comme culture de rente.

L'élevage est la deuxième activité économique la plus importante. Elle est pratiquée par tous les groupes ethniques et contribue en moyenne à hauteur de 19 % au revenu des ménages dans la région.

¹ Ce rapport utilise des parties du travail d'Adama Sienou pour le PPG «Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the Farmers Field School approach» (GCP /BKF/077/LDF).

² Tiré de : « Association des Régions du Burkina Faso » (ARBF). Consultable sur : .

L'est du Burkina constitue également une destination et / ou une zone de transit pour de nombreux éleveurs nomades (pasteurs) qui migrent avec leurs troupeaux vers les pays voisins, ce qui accrue les tensions entre agriculteurs et éleveurs, en particulier pendant la saison des pluies

Bien qu'il existe de nombreux groupes et d'organisations d'agriculteurs, très peu d'entre eux sont autonomes ou en mesure d'entreprendre un processus efficace de développement. Le faible niveau de capacité organisationnelle et le manque de coordination entre un grand nombre de services de développement et d'organisations travaillant dans la région de l'Est sont des facteurs limitatifs majeurs à une action efficace pour l'amélioration de la sécurité alimentaire et le développement d'une agriculture écologique. Le Burkina Est fait face à d'autres contraintes qui affectent tant le système de production que les moyens de subsistance, ainsi que la base des ressources naturelles et l'efficacité des organisations locales.

Les systèmes de production agricole et animale utilisent encore les pratiques traditionnelles qui, avec la croissance démographique, dégradent la base des ressources naturelles. L'utilisation des méthodes écologiques et des innovations et technologies permettant une conservation des ressources est encore très limitée. Les initiatives de développement et leur coordination en ce sens sont insuffisantes dans un environnement où les besoins humains et la pression exercée sur les ressources naturelles augmentent rapidement.

La pression humaine s'explique par une augmentation rapide des populations humaines et animales dans la région, la migration de personnes venant d'autres régions, et l'utilisation massive des techniques d'agriculture sur brûlis. En conséquence, la base des ressources naturelle connaît une dégradation progressive mais régulière, ce qui réduit la productivité de l'agriculture et de l'élevage et augmente les tensions entre les différents groupes (pasteurs, paysans...) vivant dans la région.

La zone pastorale de la Tapoa - Boupo située dans la province du Gourma et de la Tapoa , région de l'Est reçoit chaque année des éleveurs venant de la province de la Komondjari et Yagha ainsi que des pasteurs provenant du Niger voisin. Selon les communautés, environ 60% des communautés d'agro-pasteurs vivant à l'intérieur de la zone sont en provenance du Niger. Le ministère de l'Environnement et du Développement Durable a un projet en cours destinée à la récolte du bois, qui projette de diviser la zone en blocs pour une meilleure utilisation des ressources de subsistance.

II Agriculture

Les principales cultures au Burkina oriental sont le sorgho, le mil, le maïs et le riz. Les rendements diffèrent énormément d'une année sur l'autre à cause des conditions météorologiques dont les effets peuvent être spectaculaires – en positif ou en négatif– puisque la majorité de ces cultures dépendent de la pluie pour leur approvisionnement en eau, et donc leur croissance. Lors du recueil de ces données, on distingue d'ailleurs les rendements de maïs et de riz selon qu'ils ont été ou non irrigués artificiellement. La production de mil dans la région Est Burkina oriental représente 8.2% du total national.

Cultures Principales et rendements au Burkina Oriental

	2005	2006	2007	2008	2009	2010	2011
Arachides		25,007.					
	34,613. 93	67	28,706. 85	64,485. 06	35,693. 81	41,712. 76	28,715. 80

Fonio	No data	No data	No data	No data	No data	No data	No data
Mais	28,063.77	28,857.38	35,152.45	67,107.13	59,000.38	100,827.05	60,184.56
Mais Irrigué	44.90	65.28	57.66	238.90	155.25	237.50	384.00
Mil	85,642.87	69,928.31	56,002.11	111,677.48	88,899.32	99,101.34	67,919.42
Niébé	31,385.63	28,555.31	16,297.55	48,880.45	27,810.99	51,954.42	26,441.60
Pois Bambara	2,784.09	1,173.08	1,294.12	2,502.91	1,289.13	2,976.61	439.07
Riz	3,301.29	5,609.15	4,269.96	12,291.04	15,363.80	20,043.49	17,547.49
Riz Irrigué	2,160.75	2,422.75	3,117.11	6,247.84	8,363.20	8,457.00	7,378.10
Sorgho Blanc	143,140.13	117,019.04	131,026.01	272,190.29	130,381.72	184,899.45	123,547.09
Sorgho Rouge	17,706.18	12,441.16	15,726.28	50,274.20	34,183.18	61,686.12	28,461.97
Sésame	2,697.69	2,057.82	1,778.43	5,647.20	3,962.54	18,382.84	6,901.22

Table 1. Rendements des Cultures Primaires dans la région Est Burkinabé de 2005 à 2011, exprimées en millions de tonnes (adapté de CountryStat¹).

III Elevage

Nombre de tête et type d'élevage dans la région de l'Est pour l'année 2008.

L'élevage occupe le second rang après l'agriculture dans les activités socioéconomiques. Il constitue un point d'appui important de l'économie. L'élevage est soutenu par l'existence d'infrastructures pastorales (cinq marchés à bétail dont un d'envergure internationale, des parcs de vaccination, des laiteries, des pistes, etc). Le potentiel de production pastorale de la région demeure important et au regard de ses capacités actuelles de production et des perspectives d'évolution, la région de l'Est pourrait être une zone d'élevage d'embouche en ce sens qu'elle pourrait recevoir les jeunes ruminants de la zone du sahel car disposant de nombreux points d'eau et d'importantes capacités de charge animale. En tant que zone de production, la région de l'est peut être une zone d'intensification et d'association agriculture élevage car une grande partie de la région est bien arrosée et elle est caractérisée par une faible densité (23 habitants/km²). L'élevage bovin représentait 11.4% des effectifs nationaux en 2008. En raison des potentialités naturelles (pâturage naturel abondant et de valeur nutritive supérieure ; possibilité de constitution de stocks de foin de bonne qualité), la région présente des coûts de production relativement faibles dans le domaine de l'élevage. Outre l'importance

¹ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD010&tr=21>

de l'élevage, l'implantation d'infrastructures pastorales dans la région représente un atout supplémentaire¹.

La zone pastorale de Kabonga a été définie par l'arrêté 2004/38 du MHRA dans le département de Pama de la province de la Kompiega et dans le département de Soudougui de la province de Koulpelogo est couvre 51.000 hectares².

Une deuxième zone pastorale existe dans cette région. Il s'agit de la zone pastorale de Tapoa-Boopo, définie par l'arrêté 2003/59 dans le département Matiacoali dans la province du Gourma, qui couvre 95 000 hectares.³

Type d'animaux	Traditionnel	Transhumant	Intensif
Asins	117,603.00	2,536.00	8,099.00
Bovins	735,507.00	201,936.00	39,162.00
Camelins	1,907.00	110.00	82.00
Equins	2,096.00	140.00	266.00
Ovins et Caprins	1,292,431.00	133,398.00	48,561.00
Pigeons	56,742.00	[..]	5,062.00
Pintades	1,000,667.00	[..]	16,890.00
Porcins	72,251.00	[..]	8,254.00
Poules	2,145,116.00	[..]	38,713.00

Table 2. Type d'élevage dans la région de l'Est, en millions (adapté de CountryStat.org⁴)

Animaux Abattus entre 2004 et 2008 dans la région du Sahel

Le nombre d'animaux abattus dans la région orientale entre 2004 et 2008 n'a cessé de croître toutes catégories confondues. L'abattage des asins a plus que doublé, tandis que celui des bovins, caprins, ovins et porcins a gagné 64%, 74%, 79% et 73% respectivement.

		Années				
		2004	2005	2006	2007	2008
Ani mau	Asins	1,158.00	1,456.00	1,792.00	1,928.00	2,652.00

¹ Tiré de : « Association des Régions du Burkina Faso » (ARBF). Consultable sur : <http://www.regions-bf.org/index.php/les-regions/lest>

² Ministère des Ressources Animales, Arrêté conjoint 2004/38 portant sur la délimitation de la zone à vocation pastorale de Kabonga.

³ Ministère des Ressources Animales, Arrêté conjoint 2003/59 portant sur la délimitation de la zone à vocation pastorale de Tapoa-Boopo.

⁴ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233RGA1RGPH15&tr=381>

Bovins	9,256.00	13,122.00	12,409.00	12,375.00	14,370.00
Caprins	64,312.00	80,217.00	80,316.00	85,521.00	86,478.00
Ovins	17,599.00	22,046.00	17,766.00	18,880.00	22,334.00
Porcins	8,383.00	10,245.00	8,389.00	10,338.00	11,501.00

Table 3. Animaux abattus entre 2004 et 2008 dans la région de l'Est, exprimés en millions¹.

Alimentation Animale

Le tableau ci-dessous montre la situation globale vis-à-vis du fourrage dans la zone agro-écologique nord-Soudanienne dont la région de l'Est fait partie. Cette région a une capacité de charge limitée, et a pratiquement atteint sa limite en termes de ses pâturages réels/potentiels. De plus, la région toute entière est en sous-stocks au niveau des pâturages disponibles. Ce tableau ne tient pas compte des résidus de récolte qui sont une source de fourrage de haute qualité très recherchée pour équilibrer les besoins en protéines des bêtes. Les fourrages ligneux les plus appétants dans la zone Soudanienne sont les *Pterocarpus erinaceus*, *Azelia africana*, *Khaya senegalensis*, *Gardenia ternifolia* and *Combretum spp*. Les résidus de culture jouent un rôle important dans le calendrier de l'alimentation (Kagone, 2006²).

Type de Pâturage	Surface en ha	Capacité de charge maximale ha/UBT/an	Pâturage potentiel en UBT	Pâturage réel en UBT	Stock %
Nord Soudanien	6 806 600	2.5	2 722 640	2 433 820	89.4

Table 4. Pâturage réels et potentiel dans la zone Nord-Soudanienne Burkinabé.

IV Données Socio-économiques

Recensement

La population de la province de l'Est est de 1 137 744 habitants en 2006, ce qui représente 8.7% de la population totale.³ Elle est en queue de peloton en terme économique avec 40.9 % de la population de la région vivant en dessous du seuil de pauvreté Burkinabé qui s'élève à 82 672 FCFA, ce qui la place au huitième rang dans le domaine (sur 13). La quasi-totalité de la population est rurale totalisant non moins de 93.4% de la population de la région⁴.

La densité moyenne est de 26,0 habitants au Km², ce qui peut sembler faible au regard de la moyenne nationale qui s'élève à 51.8 habitants au Km² mais ce chiffre masque d'importantes

¹ Tiré de FAO CountrySTAT: Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD045&tr=21>.

² Kagone., H., 2006. Country Pasture / Forage Resources profiles Burkina Faso. FAO, Rome. Consultable sur : <http://www.fao.org/ag/AGP/AGPC/doc/counprof/PDF%20files/Burkina-English.pdf>.

³ Ministère de l'Economie et des Finances, 2007. La région de l'Est en chiffres. Institut national de la statistique et de la démographie. Consultable sur: http://www.insd.bf/fr/IMG/pdf/Estl_09_06.pdf.

⁴ Ministère de l'Economie et des Finances, 2006. Recensement général de la population et de l'habitation, (RGPH-2006). Consultable sur: http://www.insd.bf/fr/IMG/pdf/monographie/monographie_est.pdf.

disparité d'étalement des populations entre les différentes zones de la région. Ce chiffre est en constante augmentation, en raison des migrations provenant du Nord du pays, attisées par l'érosion galopante, le manque d'arbres et de couvert végétal et l'infertilité des sols.

La population de la région Est est encore plus jeune que la population du pays : 50% de la population a moins de 20 ans, l'âge moyen s'élève à 20 ans contre 21.7 ans pour la moyenne nationale.

Groupes Ethniques

Les principales ethnies sont les Gourmantché, les Mossi, les Yana, les Peulh, les Haoussa et quelques autres minorités. Dans la région de l'Est, les musulmans sont les mieux représentés avec 38,2 % de la population contre 30,7% pour les animistes et 17,9 % pour les catholiques et 11,2% pour les protestants. Les sans religions et les autres religions sont faiblement représentés. Ce constat est également observé au niveau de chaque province. Par ailleurs, on observe que dans la province de la Tapoa, plus de la moitié de la population a déclaré lors du recensement qu'elle pratiquait encore la religion animiste. Ces données viennent confirmer le caractère conservateur de la tradition dans la région de l'Est¹.

2. La Région Centre Nord²

Introduction

La région Centre-Nord couvre 18212 km², ce qui représente 6,6% de la superficie totale du pays et la classe 7ème en termes de superficie. Sa population en 2005 était estimée à 1 136 793 928 personnes représentant 8,86% de la population du Burkina Faso.

Dans l'ensemble, les valeurs d'évapotranspiration (PET) observées au cours de la période 1974-2003 restent élevées dans la région du Centre-Nord avec un total de plus de deux mètres d'eau par an en moyenne. En 2003, selon les données de la DSAP / DGPSA / MAHRH, les zones dégradées étaient estimées à 24 % et celles récupérées sont estimées à 5 %. La vitesse de dégradation est plus élevée à Bam (42%) qu'à Sanmatenga (27 %), la plus faible étant à Namentenga (10 %).

La végétation de la région du Centre-Nord se caractérise en trois familles principales. Du nord au sud, les steppes arbustives ont progressivement cédé la place à la steppe boisée, la brousse et la savane. Les ressources forestières ont une composition floristique assez diversifiée et couvrent une superficie de plus de soixante mille (60.000) hectares. La région du Centre-Nord connaît une surexploitation des ressources naturelles due à l'action humaine, et la persistance de conditions météorologiques réduit de manière significative le potentiel naturel de la région. Nous observons généralement une dégradation progressive de la végétation et des sols, et par conséquent une diminution ou disparition de certaines espèces de la faune ainsi que le tarissement précoce des cours d'eau et des barrages dans la région.

¹ Op. cit.

² Ce rapport utilise des parties du travail d'Adama Sienou pour le PPG «Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the Farmers Field School approach» (GCP /BKF/077/LDF).

La région du Centre-Nord est essentiellement une zone agro-pastorale. Cette activité occupe 89 % de la population active. La production de cultures de rente dans le Centre-Nord concerne principalement les arachides mais la production régionale ne représente que 4,8% de la production nationale. Bam et du Sanmatenga sont les deux premières provinces pour la production de légumes avec des rendements supérieurs à la moyenne nationale. Ces deux provinces sont connues comme étant les principales productrices de haricots commercialisés dans le pays avec 48 pourcent des haricots Burkinabé provenant de cette région.

Le système de production est extensif et dépend essentiellement des conditions météorologiques, il s'agit là principalement d'agriculture de subsistance qui utilise très peu d'intrants ou de moyens modernes de production. Dans toute la région, les rendements sont faibles et ce pour chaque culture concernée. Les pertes durant trois années consécutives représentent 15,3% de la production totale. Le bilan céréalière a un déficit régional de 21 812 tonnes. L'élevage de moutons (49,3 %), de bovins (46,8 %) et de caprins (55,6 %) est assez bien développé dans le Sanmatenga et du Namentenga.

L'élevage dans le Centre-Nord est caractérisé par la prédominance de trois systèmes :

- - Système transhumant : est caractérisé par la migration cyclique à la recherche de pâturages, de points d'eau et de pierres à sel à lécher. Ce type d'agriculture concerne surtout les bovins, les chèvres et les moutons ;
- - Système agro - pastoral : est caractérisé par une agriculture sédentaire, s'applique principalement aux petits ruminants ;
- - Système semi-intensif : le moins pratiqué dans la région ; concerne principalement l'engraissement de bovins et d'ovins et la production laitière.

La pratique de l'agriculture dans la région du Centre-Nord est confrontée au problème de vol de bétail assez fréquent dans les provinces. En plus de ces difficultés, il faut souligner l'accès aux marchés et le manque d'infrastructures.

Contrairement à la région du Sahel, il n'y a pas de zones pastorales formelles. Les zones de pâturages se trouvent souvent au niveau des villages, où elles sont tacitement négociées entre les différents utilisateurs. Dans la région du centre-nord, les zones pâturées sont beaucoup dégradées, ce qui nécessite une action forte pour les « récupérer ».

Agriculture

Les principales cultures au Sahel Burkinabé sont le mil, le niébé, le riz et le sorgho, les arachides et le maïs. Les rendements diffèrent énormément d'une année sur l'autre à cause des conditions météorologiques dont les effets peuvent être spectaculaires – en positif ou en négatif– puisque la majorité de ces cultures dépendent de la pluie pour leur approvisionnement en eau, et donc leur croissance. Lors du recueil de ces données, on distingue d'ailleurs les rendements de maïs et de riz selon qu'ils ont été ou non irrigués artificiellement. La production de mil dans la région Centre-Nord Burkinabé représente 7.75% du total national.

	2005	2006	2007	2008	2009	2010	2011
Arachides	15,01	11,441.	9,721.70	20,605.	19,125.	21,741.	14,188.
	4.92	57		95	56	20	95
Fonio	14.36	9.17	19.20	0.00	0.00	0.00	0.00

	2005	2006	2007	2008	2009	2010	2011
Mais	12,68 5.53	8,107.70	5,799.18	10,662. 65	8,743.94	15,272. 75	12,089. 96
Mais Irrigué	22.00	36.15	6.70	13.50	61.90	73.50	1,685.00
Mil	107,5 07.72	77,400. 13	63,462.2 1	76,738.3 5	58,130.4 5	84,314.0 0	64,231. 69
Niébé	62,75 3.60	42,523. 64	26,716. 69	70,754. 99	39,966. 42	80,577. 30	61,032. 71
Pois Bambara	5,503. 89	3,732.34	2,395.06	6,473.15	3,592.80	7,754.09	3,323.39
Riz	1,819. 47	2,580.74	1,525.26	5,248.70	4,657.69	6,097.53	6,809.88
Riz Irrigué	1,498. 46	2,347.65	1,508.75	4,289.42	3,680.90	5,373.50	5,777.57
Sorgho Blanc	71,78 5.92	125,280. 39	126,658. 95	179,592. 43	135,773. 50	210,765. 64	105,106. 16
Sorgho Rouge	44.00	1.50	6,751.49	3,710.84	843.67	3,005.35	2,061.60
Sésame	2,187. 41	1,589.68	224.79	646.76	633.51	1,281.86	2,881.75

Table 1. Rendements des Cultures Primaires dans la région Centre-Nord du Burkina de 2005 à 2011, exprimées en millions de tonnes (adapté de CountryStat¹).

Elevage

L'élevage au Centre-Nord est basé sur une utilisation intensive des ressources naturelles, principalement les pâturages, le recours aux intrants extérieurs agricoles et industriels est limité. Les bovins présents dans la région représentent 6.7% du total national. Le tableau ci-dessous représente le nombre de têtes et le type d'élevage pratiqué dans la région du Centre-Nord tels que recensés en 2008 par Country Stat. Il apparaît ici très clairement que l'élevage traditionnel est le plus couramment pratiqué dans la région du Centre Nord, loin devant l'élevage transhumant ou intensif, particulièrement en ce qui concerne les bovins, asins (ânes), camelins (chameaux), ovins et caprins.

Type d'animaux	Traditionnel	Transhumant	Intensif
Asins	64,933.00	1,081.00	14,657.00
Bovins	340,569.00	63,496.00	41,113.00
Camelins	904.00	52.00	72.00
Canards	17,437.00		458.00

¹ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD010&tr=21>

		[..]	
Dindons	672.00		37.00
		[..]	
Equins	1,300.00	60.00	359.00
Ovins et Caprins	968,183.00	66,466.00	54,064.00
Pigeons	34,766.00		3,319.00
		[..]	
Pintades	510,250.00		7,280.00
		[..]	
Porcins	35,533.00		9,551.00
		[..]	
Poules	1,322,986.00	[..]	20,582.00

Table 2. Type d'élevage dans la région du Centre-Nord, en millions (adapté de CountryStat.org¹).

Animaux Abattus entre 2004 et 2008 dans la région du Centre-Nord

Le nombre de bovins abattus dans la région du Centre-Nord est resté très stable entre 2004 et 2008; le nombre de caprins abattus a augmenté d'un tiers tandis que celui des porcins a connu une baisse faible mais régulière.

		Années				
		2004	2005	2006	2007	2008
Animaux Abattus	Asins	288.00	314.00	260.00	336.00	400.00
	Bovins	6,068.00	7,596.00	7,872.00	7,627.00	6,248.0
	Caprins	50,747.00	74,584.00	63,710.00	74,917.00	72,033.00
	Ovins	18,798.00	16,169.00	13,139.00	15,295.00	16,390.00
	Porcins	5,321.00	6,784.00	5,557.00	6,956.00	8,027.00

Table 3. Animaux abattus entre 2004 et 2008 dans la région Centre-Nord, exprimés en millions.

Alimentation Animale

Le tableau ci-dessous montre la situation globale vis-à-vis du fourrage dans la zone du Centre-Nord. Cette province se trouve dans la région globale dénommée « Sud-Sahélien ». La région Sud-Sahélienne est assez bien pourvue, ce qui explique son attrait pour les transhumants. Ce tableau ne tient pas compte des résidus de récolte qui sont une source de fourrage de haute qualité très recherchée pour équilibrer les besoins en protéines des bêtes. Les fourrages ligneux les plus appétants sont l'*Acacia spp.* et le *Pterocarpus lucens* dans la

¹ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233RGA1RGPH15&tr=381>

zone sahélienne. Les résidus de culture jouent un rôle important dans le calendrier de l'alimentation (Kagone, 2006¹).

Type de Pâturage	Surface en ha	Capacité de charge maximale ha/UBT/an	Pâturage potentiel en UBT	Pâturage reel en UBT	Stock %
Sud-Sahélien	2 767 800	5.0	55 560	1 098 870	198.5

Table 4. Pâturage réels et potentiel au Centre-Nord Burkinabé.

IV. Données Socio-Economiques

Recensement

La population de la province Centre-Nord est de 1 154 952 d'habitants en 2006, ce qui représente 8.8% de la population totale.² C'est une des régions les plus pauvres du pays en terme économique avec 34% de la population de la région vivant en dessous du seuil de pauvreté Burkinabé qui s'élève à 82 672 FCFA. La quasi-totalité de la population est rurale totalisant non moins de 92% de la population de la région³.

La région Centre-Nord comptabilise 8.8 pourcent du total de la population nationale ; la densité de population est de 61,1 habitants au Km², ce qui peut sembler élevé au regard de la densité nationale qui est de 51,8 habitants au Km², mais ce chiffre masque d'importantes disparité d'étalement des populations entre les différentes zones de la région⁴. La population du Centre-Nord est aussi jeune que la population du pays : 57.5% de la population a moins de 20 ans, l'âge moyen s'élève à 21.1 ans contre 21.7 ans pour la moyenne nationale.

Groupes Ethniques

Les musulmans sont majoritaires dans la région avec 59.7% de la population, les animistes représentent 23.6% et 13.9% pour les catholiques. En règle générale, le Mooré est la langue la plus parlée (88%), en deuxième vient le Fulfuldé (9%), les autres langues sont très minoritaires.

Les principales ethnies de la zone sont les Mossi (qui sont de loin le groupe le plus important), suivis des Peulh, des Dogon, des Kurumba et de quelques autres⁵.

¹ Kagone., H., 2006. Country Pasture / Forage Resources profiles Burkina Faso. FAO, Rome. Consultable sur : <http://www.fao.org/ag/AGP/AGPC/doc/counprof/PDF%20files/Burkina-English.pdf>.

² Ministère de l'Economie et des Finances, 2007. La région Centre-Nord en chiffres. Institut national de la statistique et de la démographie. Consultable sur : http://www.insd.bf/fr/IMG/pdf/CentreNord_09_06.pdf.

³ Ministère de l'Economie et des Finances, 2006. Recensement général de la population et de l'habitation, (RGPH-2006). Consultable sur: http://www.insd.bf/fr/IMG/pdf/monographie/monographie_centre_nord.pdf

⁴ Op. cit.

⁵ FAOWATER, Cartographie des Zones Socio-Rurales, Burkina Faso, 2010. Consultable sur : http://www.fao.org/nr/water/docs/BFA_LZ_analysis.pdf.

3 Le Sahel¹

I Introduction

Le Sahel Burkinabé représente 11,7% du territoire total du pays, il est situé à l'extrême nord du pays. La région du Sahel est composée de quatre provinces (Seno, Oudalan, Yagha et Soum). Il existe deux types d'environnement en fonction de la latitude. Les provinces du nord de Séno, Soum et de l'Oudalan sont caractérisées par un climat sahélien avec une pluviométrie moyenne annuelle inférieure à 400 mm. Les provinces du sud de Yagha dans la zone soudano-sahélienne ont une pluviométrie moyenne annuelle entre 400 et 600 mm.

Le Sahel Burkinabé connaît généralement deux saisons: une saison pluvieuse (de mi-juin à mi-septembre), et une saison sèche (de mi-septembre à mi-juin) caractérisée par des températures généralement élevées, atteignant parfois 46°C en avril à l'ombre. La saison pluvieuse se caractérise par de très faibles précipitations qui sont très irrégulièrement réparties dans le temps et l'espace. Ces précipitations sont souvent très violentes et courtes et produisent de graves dégâts à l'agriculture (inondations, érosions, etc.).

Les types de végétation suivants sont distingués dans la région, ils sont tous à majorité composés d'arbres et de steppes arbustives. Les arbres de moins de 7 mètres de haut sont présents dans les quatre provinces. La brousse tigrée est mal représentée et se localise uniquement dans le nord de la région, principalement dans les provinces de Soum et de l'Oudalan où elle abonde, ce qui s'explique par sa caractéristique sahélienne. La brousse tigrée se compose principalement par une épaisse végétation d'arbustes et de buissons.

Les forêts galeries (situées le long des rivières et des étangs) sont très mal représentées, on les retrouve principalement dans les provinces de Soum et de l'Oudalan. Les steppes herbacées sont présentes dans toute la région, il s'agit ici d'un tapis d'herbe généralement associé aux régions boisées se composant de petits arbres et d'arbustes épars. L'agriculture traditionnelle est encore pratiquée dans le Sahel. Le niveau d'équipement est faible, peu d'intrants sont utilisés et l'agriculture est très extensive. En raison de la faiblesse des rendements (céréales et cultures de rente) et des conditions climatiques, l'activité agricole n'attire pas les investissements ni l'équipement. Le matériel agricole moderne n'est pas popularisé dans la région. Le fait que le sol soit sablonneux peut expliquer en partie cela. Cependant des charrettes tirées par les ânes sont largement utilisées pour le transport du fumier, des cultures et des personnes.

La région du Sahel est connue comme une zone de reproduction, accueillant un grand nombre d'animaux. Les pâturages naturels, l'eau et des soins vétérinaires sont des facteurs clés de l'activité pastorale. On estime que les pâturages en toutes saisons s'élèvent à 3.382.000 hectares, ceux de la saison sèche à 133 000 ha, et ceux de la saison des pluies à 99 300 ha, sans compter les résidus de récolte. L'achèvement de plusieurs puits pastoraux peut améliorer la situation vis à vis des ressources en eau lors de la saison sèche. Les soins vétérinaires sont à peu près assurés grâce à un bon réseau dans la région, d'ailleurs le reste des maladies animales est minime par rapport à d'autres régions.

¹ Ce rapport utilise des parties du travail d'Adama Sienou pour le PPG «Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the Farmers Field School approach» (GCP /BKF/077/LDF).

Des études antérieures (Kiema et Zampaligré, 2013¹) dans les zones pastorales de Ceekol – Nagge - utilisées ici à titre d'exemple représentatif - ont montré une très faible capacité dans la plupart des unités de pâturage. La production de biomasse dans la plupart des unités est comprise entre 1541,7 ± 329,5 kg MS / ha / an. La capacité déduite de la production de fourrage est faible pour toutes les unités de pâturage. Il est en moyenne de 0,225 ± 0,144 UBT / ha / an - se plaçant seulement à 0,048 ± 0,055 UBT / ha / an dans les glacis gravillonnaires. Ces valeurs indiquent qu'il est nécessaire de développer la région pour obtenir une production animale solide et soutenable dans une zone relativement petite (Ibid).

Nos observations ont montré que les pâturages secs ont disparu dans toutes les régions, ce qui affame les bêtes. De plus, les arbres ligneux comme les *Acacia sp.* n'ont pas du tout le fourrage ce qui force les animaux à entreprendre une petite transhumance vers les provinces de Gourma plus au sud.

II Agriculture

Les principales cultures au Sahel Burkinabé sont le mil, le niébé, le riz et le sorgho. Les rendements diffèrent énormément d'une année sur l'autre à cause des conditions météorologiques dont les effets peuvent être spectaculaires – en positif ou en négatif– puisque la majorité de ces cultures dépendent de la pluie pour leur approvisionnement en eau, et donc leur croissance. Lors du recueil de ces données, on distingue d'ailleurs les rendements de maïs et de riz selon qu'ils ont été ou non irrigués artificiellement. La production de mil au Sahel Burkinabé représente 15% du total national.

Cultures Principales et rendements au Sahel Burkinabé

	2005	2006	2007	2008	2009	2010	2011
Arachides	1,580.45	1,202.08	1,094.17	2,623.15	1,772.44	2,307.65	1,409.5
Fonio	11.50	10.06	9.39	0.67	1.26	0.00	0.00
Mais	2,309.24	1,196.65	3,156.63	2,382.14	946.35	1,879.25	1,064.95
Mais Irrigué	[.]	[.]	19.20	181.07	0.00	0.00	0.00
Mil	241,192.40	210,627.04	182,742.38	143,161.26	117,657.29	169,033.74	125,383.01
Niébé	37,430.03	34,308.97	3,322.34	11,355.98	11,798.21	21,986.74	15,486.72
Pois Bambara	442.75	521.30	441.78	909.61	394.81	979.24	767.42
Riz	574.04	570.43	705.79	1,113.18	1,337.81	1,513.73	1,438.2

¹ Kiema, A., et Zampaligré, N. 2013. « State of Ligneous resources of four pastoral zones of Burkina Faso : Sideradougou, Nouaho, Barani and Ceekol Nagge ». *International Journal of Innovative Agriculture & Biology Research* 1 (2):1-19. Consultable sur: <http://seahipub.org/wp-content/uploads/2013/10/IJIABR-S-1-2013.pdf>.

Riz Irrigué	567.00	565.40	705.79	1,079.56	1,337.81	1,288.55	1,438.27
Sorgho Blanc	55,783.21	48,576.50	78,582.24	63,115.59	51,328.68	62,351.24	52,565.00
Sorgho Rouge	10,354.74	7,634.94	3,240.23	733.49	3,485.65	168.34	1,318.28
Sésame	1,324.48	597.84	443.23	318.07	1,389.10	1,859.84	4,240.47

Table 1. Rendements des Cultures Primaires au Sahel de 2005 à 2011, exprimées en millions de tonnes (adapté de CountryStat¹).

III Elevage

Nombre de tête et type d'élevage dans la région du Sahel pour l'année 2008.

La zone sahélienne étant la région la moins industrialisée du Burkina Faso, les activités socio-économiques des populations reposent essentiellement sur l'exploitation des ressources naturelles. La région du Sahel est réputée zone d'élevage par excellence. Les effectifs des bovins représentaient 20 % des effectifs nationaux en 2008. Le tableau ci-dessous représente le nombre de têtes et le type d'élevage pratiqué dans la région du Sahel tel que recensé en 2008 par Country Stat. Il apparaît ici très clairement que l'élevage traditionnel est le plus couramment pratiqué au Sahel, loin devant l'élevage transhumant ou intensif, particulièrement en ce qui concerne les bovins, camelins (chameaux), ovins et caprins. L'élevage traditionnel consiste principalement en un élevage au sein du village, où les animaux sont bien souvent libres de divaguer, sauf en saison des pluies ou la mise au piquet est plus fréquente. Il s'agit d'un élevage extensif utilisant peu ou pas du tout d'intrants. A l'inverse, l'élevage transhumant est très mobile, mais se déplace chaque année entre des lieux de pâturage saisonniers bien définis, les éleveurs transhumants peuvent aussi se livrer à une forme d'agriculture non sédentaire. A l'inverse, les systèmes d'élevage intensifs sont caractérisés par un haut niveau d'investissement en infrastructures d'élevage, une utilisation importante d'intrants alimentaires et vétérinaires. Les animaux sont maintenus en permanence à l'intérieur du bâtiment d'élevage et ne dépendent que peu des ressources naturelles.

Type d'animaux	Traditionnel	Transhumant	Intensif
Bovins	573,767.00	51,109.00	11,647.00
Camelins	8,308.00	460.00	101.00
Canards	10,886.00	[..]	521.00
Dindons	579.00	[..]	118.00
Equins	1,506.00	111.00	171.00

¹ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD010&tr=21>.

Type d'animaux	Traditionnel	Transhumant	Intensif
Ovins et Caprins	1,070,663.00	64,679.00	23,078.00
Pigeons	33,980.00	[..]	3,082.00
Pintades	330,617.00	[..]	6,891.00
Porcins	4,639.00	[..]	294.00
Poules	688,968.00	[..]	17,851.00

Table 2. Type d'élevage dans la région du Sahel, en millions (adapté de CountryStat.org¹)

Animaux Abattus entre 2004 et 2008 dans la région du Sahel

Le nombre de bovins et de caprins abattus dans la région du Sahel n'a cessé de croître entre 2004 et 2008, gagnant 44 pourcents pour les bovins et 57 pourcents pour les caprins. Le nombre d'ovins abattus entre ces deux années est resté stable, alors que celui des porcins a diminué de presque moitié.

		Années				
		2004	2005	2006	2007	2008
Animaux Abattus	Asins	11.00	0.00	1.00	0.00	16.00
	Bovins	3,234.00	6,589.00	6,601.00	6,411.00	7,323.00
	Caprins	53,533.00	96,201.00	86,405.00	83,460.00	94,052.00
	Ovins	6,902.00	10,267.00	8,964.00	9,465.00	13,019.00
	Porcins	559.00	739.00	803.00	738.00	1,007.00

Table 3. Animaux abattus entre 2004 et 2008 dans la région du Sahel, exprimés en millions².

Alimentation Animale

Le tableau ci-dessous montre la situation globale vis-à-vis du fourrage dans la zone sahélienne. La région du Sahel est assez bien pourvue, ce qui explique son attrait pour les transhumants. Ce tableau ne tient pas compte des résidus de récolte qui sont une source de fourrage de haute qualité très recherchée pour équilibrer les besoins en protéines des bêtes. Les fourrages ligneux les plus appétants sont l'*Acacia spp.* et le *Pterocarpus lucens* dans la zone sahélienne. Les résidus de culture jouent un rôle important dans le calendrier de l'alimentation (Kagone, 2006³).

Type de Pâturage	Surface ha	Capacité de charge	Pâturage potentiel en	Pâturage réel en UBT	Stock %
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¹ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233RGA1RGPH15&tr=381>

² Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD045&tr=21>

³ Kagone., H., 2006. Country Pasture / Forage Resources profiles Burkina Faso. FAO, Rome. Consultable sur : <http://www.fao.org/ag/AGP/AGPC/doc/counprof/PDF%20files/Burkina-English.pdf>.

		maximale ha/ UBT/an	UBT		
Sahélien	1 467 800	5.0	293 560	759 382	258.7

Table 4. Pâturage réels et potentiel au Sahel Burkinabé.

IV Données Socio-économiques

Recensement

La population de la province du Sahel est de 936 612 habitants en 2006, ce qui représente 7.1% de la population totale.¹ Elle est parmi les régions les plus pauvres du pays en terme économique avec 37,2 % de la population de la région vivant en dessous du seuil de pauvreté Burkinabé qui s'élève à 82 672 FCFA. La quasi-totalité de la population est rurale totalisant non moins de 93.5% de la population de la région.

La densité moyenne est de 34,0 habitants au Km², ce qui peut sembler faible au regard de la moyenne nationale qui s'élève à 51.8 habitants au Km² mais ce chiffre masque d'importantes disparités d'étalement des populations entre les différentes zones de la région². La population du Centre-Nord est aussi jeune que la population du pays : 57% de la population a moins de 20 ans, l'âge moyen s'élève à 21.6 ans contre 21.7 ans pour la moyenne nationale.

Groupes Ethniques

Plusieurs groupes ethniques habitent la région : les plus importants sont les Kel Tamachek (Touareg et Bella) dans l'Oudalan, les Peuls (Djelgobé, Gaobé, Lipatko, Yagha et Rimaïbé) dans l'Oudalan, le Séno et le Yagha et les Gourmantchés dans le Séno et Yagha (Ganaba ; Ouadba et Bognounou, 2005)³.

D'abord la colonisation, puis l'avènement du régime politique d'exception de 1983 au Burkina Faso, a créé des conditions favorables à l'émancipation des populations des groupes ethniques vivant en zone sahéenne. Les relations de dépendances entre groupes ethniques (Sonraï-Mallébé, Peul-Rimaïbé et Touareg-Bella) ont été définitivement abolies. Les sujets jadis soumis à une forme d'esclavage étaient aussi astreints aux tâches artisanales de confection d'outils, de meubles, et autres objets pour les anciens maîtres. De nos jours ces castes sont spécialisées dans l'artisanat du bois et des peaux pour la vente au marché.⁴

L'incertitude qui perdure au niveau des droits fonciers et des droits d'accès à l'eau a toujours été une source de conflit entre les deux pays. L'activité économique principale des groupes semi-nomades présents dans la région reste l'élevage camelin, caprin, bovin et ovin et leurs déplacements continus à la recherche d'eau et de pâturages les amène à traverser la frontière, qui, traditionnellement, ne représente rien pour eux. Avec la sécheresse qui affecte la région depuis 2005, les éleveurs Peul et Tamasheq du Burkina Faso conduisent régulièrement de grands troupeaux au Mali à la recherche d'eau, faisant craindre un renouveau des conflits qui ont affecté la région depuis les années 1970.

¹ Ministère de l'Economie et des Finances, 2007. La région du Sahel en chiffres. Institut national de la statistique et de la démographie. Consultable sur: http://www.insd.bf/fr/IMG/pdf/Sahel_09_06.pdf

² Ministère de l'Economie et des Finances, 2006. Recensement général de la population et de l'habitation, (RGPH-2006). Consultable sur: http://www.insd.bf/fr/IMG/pdf/monographie/monographie_sahel.pdf

³ Ganaba, S., Ouadba, J.-M., Bognounou, O., 2005. «Exploitation traditionnelle des végétaux spontanés en région sahéenne du Burkina Faso». *Vertigo* : 6(2). Consultable sur : [://vertigo.revues.org/2783](http://vertigo.revues.org/2783).

⁴ Op. cit.

4. La Région Centre-Ouest¹

I. Introduction

La région couvre une superficie de 21853 km², soit environ 8% du territoire national. La région du Centre-Ouest partage une frontière avec le Ghana et avec six autres régions Burkinabé.

On retrouve deux types de climat dans la région Centre-Ouest. Le système climatique varie en fonction de la latitude. Ainsi, la majorité des provinces ainsi que Boulkiemdé Sanguié sont soumis au climat du Nord - Soudan avec une pluviométrie moyenne annuelle comprise entre 600 et 1000 mm, tandis que la majorité des provinces de la Sissili et du Ziro est soumis au climat du Sud-Soudan avec une pluviométrie annuelle moyenne supérieure à 1000 mm . En général, les pluies sont irrégulières et elles ont été mal réparties sur le territoire de la région au cours des dernières décennies. Ceci influence négativement le développement de l'agro foresterie pastorale. Les conditions climatiques (précipitations plus faibles , érosion ...) et l'action humaine (pression démographique, surexploitation des terres , etc ..) ont malheureusement une grande influence sur la dégradation .

La végétation de la région Centre-Ouest se caractérise en trois familles principales. Du Nord au Sud, on retrouve respectivement la brousse, la savane et les forêts galeries et régions boisées.

Les espèces d'arbres les plus courantes sont : *Butyrospermum paradoxum* , *Parkia biglobosa* , *Lanea microcarpa* , *Acacia albida* , *Tamarindus Indus* , *Adansonia digitata* . etc . La couverture herbeuse est dominée par l'*Andropogon gayanus*. Les espèces végétales (toutes familles confondues) les plus communes sont : *Butyrospermum parkii* , *Parkia biglobosa* , *Anogeissus leiocarpus* , *Pterocarpus erunaceus* , *Burkea Africana* , *Asoberlinia doka* , *Tamarindus indica* , *Crostopterix febrifuga* , *Andansonia digitata* , *Combretum sp.*

Le coton est produit pour l'exportation. Les principales cultures sont le sorgho, le mil , le maïs , l'arachide et le sésame. L'élevage dans la région centrale est caractérisé par la prédominance de deux systèmes :

- - Le système extensif nomade traditionnel caractérisé par la migration cyclique à la recherche de pâturages, de points d'eau, de nourriture et de pierres à lécher. Ce type d'agriculture est pratiqué principalement par les groupes Peuls dont les troupeaux sont à majorité composés de zébus Peuls et de divers croisements de ceux-ci ; ils ont de plus en plus tendance à se sédentariser.
- -Le système extensif sédentaire traditionnel caractérisé par l'intégration de l'agriculture et de l'élevage - ou agro-pastoralisme - qui se compose le plus souvent d'un troupeaux de bovins, de petits ruminants, d'ânes, de porcs, de chevaux, volailles...

L'agriculture dans cette région est confrontée à la dégradation de la végétation , le manque de points d'eau potable et pistes à bétail . Ces facteurs sont parfois des obstacles à la prospérité de cette activité. Pour contenir la dégradation des terres et à sécuriser les activités pastorales ,

¹ Ce rapport utilise des parties du travail d'Adama Sienou pour le PPG «Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the Farmers Field School approach» (GCP /BKF/077/LDF).

en 1985, une zone pastorale de 40000 hectares a été créée. Elle se trouve dans les comtés de Bieha et Cassou. La pression sur les terres dans cette région est très élevée ce qui peut avoir un impact négatif sur les activités pastorales si des règlements ne sont pas mis en place à court terme.

Agriculture

Les principales cultures dans la région Centre-Ouest du Burkina Faso sont le mil, le niébé, le riz et le sorgho, les arachides et le maïs. Les rendements diffèrent énormément d'une année sur l'autre à cause des conditions météorologiques dont les effets peuvent être spectaculaires – en positif ou en négatif – puisque la majorité de ces cultures dépendent de la pluie pour leur approvisionnement en eau, et donc leur croissance. Lors du recueil de ces données, on distingue d'ailleurs les rendements de maïs et de riz selon qu'ils ont été ou non irrigués artificiellement. La production de mil dans la région Centre-Nord du Burkina Faso représente 8% du total national.

	2005	2006	2007	2008	2009	2010	2011
Arachides	18,942.56	18,590.00	15,194.40	28,823.46	40,516.18	42,897.08	38,141.01
Fonio	No data	No data	No data	No data	No data	No data	No data
Maïs	37,639.26	46,076.44	27,103.41	74,168.38	82,957.91	88,542.54	103,173.55
Maïs Irrigué	17.00	53.63	120.40	0.00	149.50	395.65	563.80
Mil	105,115.33	96,162.38	86,737.26	104,623.75	68,178.64	73,003.47	66,554.73
Niébé	43,974.26	41,087.33	14,343.75	50,534.76	53,895.67	58,059.18	39,054.24
Pois Bambara	4,400.37	4,412.19	1,277.05	4,597.22	2,728.06	4,957.64	3,322.30
Riz	2,308.27	1,620.94	3,792.88	8,307.94	7,370.57	10,218.39	6,234.08
Riz Irrigué	521.13	481.52	1,048.10	2,622.22	4,980.74	5,205.00	3,319.74
Sorgho Blanc	145,810.45	138,559.20	127,383.87	193,956.71	150,850.81	152,186.57	135,095.26
Sorgho Rouge	55,854.15	43,660.96	42,404.49	35,119.22	38,328.73	49,967.83	43,162.36
Sésame	216.21	197.06	344.58	2,042.51	1,352.59	3,151.67	3,069.97

Table 1. Rendements des Cultures Primaires dans la région Centre-Ouest du Burkina de 2005 à 2011, exprimées en millions de tonnes (adapté de CountryStat¹).

¹ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD010&tr=21>

Elevage

L'élevage au Centre-Ouest est basé sur une utilisation intensive des ressources naturelles, principalement les pâturages, le recours aux intrants extérieurs agricoles et industriels est limité. Les principaux animaux de ferme élevés dans la région sont les bovins, les moutons, les chèvres, les cochons et des ânes. Les bovins présents dans la région représentent 7.76% du total national en 2009. Le tableau ci-dessous représente le nombre de têtes et le type d'élevage pratiqué dans la région du Centre-Ouest tels que recensés en 2008 par Country Stat. Il apparait ici très clairement que l'élevage traditionnel est le plus couramment pratiqué dans la région du Centre-Ouest, loin devant l'élevage transhumant ou intensif, particulièrement en ce qui concerne les bovins, asins (ânes), camelins (chameaux), ovins et caprins.

La zone pastorale de Yallé a été définie par l'arrêté RAABO numéro : AN-VI0093/FP/MAT/PSSI du MHRA dans le département du Biéha de la province de Sissili et couvre 40.000 hectares¹.

Type d'animaux	Traditionnel	Transhumant	Intensif
Asins	94,612.00	646.00	4,244.00
Bovins	306,860.00	79,215.00	14,770.00
Camelins	1,685.00	12.00	39.00
Equins	1,265.00	35.00	62.00
Ovins et Caprins	892,651.00	38,989.00	16,691.00
Pigeons	37,315.00	[..]	1,489.00
Pintades	817,525.00	[..]	10,998.00
Porcins	212,791.00	[..]	7,215.00
Poules	1,809,106.00	[..]	31,461.00

Table 2. Type d'élevage dans la région du Sahel, en millions (adapté de CountryStat.org²)

Animaux Abattus entre 2004 et 2008 dans la région du Sahel

Le nombre de bovins, caprins, ovins et porcins abattus dans la région du Centre-Ouest n'a cessé de croître entre 2004 et 2008, faisant des bons de 73 pourcents, 76 pourcent, 85 pourcents et 55 pourcents respectivement³.

Années				
2004	2005	2006	2007	2008

¹ Ministère des Ressources Animales, 1989. Arrêté RAABO numéro : AN-VI0093/FP/MAT/PSSI portant sur la délimitation de la zone à vocation pastorale de Yallé.

² Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233RGA1RGPH15&tr=381>

³ Tiré de FAO CountrySTAT. Consultable sur : <http://countrystat.org/home.aspx?c=BFA&ta=233SPD045&tr=21>

Animaux Abattus	Asins	82.00	1,119.00	1,479.00	1,845.00	1,986.00
	Bovins	4,396.00	6,102.00	6,177.00	5,739.00	6,027.00
	Caprins	44,805.00	61,731.00	56,983.00	52,589.00	58,531.00
	Ovins	19,870.00	25,642.00	23,879.00	21,169.00	23,101.00
	Porcins	17,461.00	23,299.00	19,967.00	22,257.00	31,264.00

Table 3. Animaux abattus entre 2004 et 2008 dans la région du Centre-Ouest, exprimés en millions.

Alimentation Animale

Le tableau ci-dessous montre la situation globale vis-à-vis du fourrage dans la zone agro-écologique nord-Soudanienne dont la région Centre-Ouest fait partie. Cette région à une capacité de charge limitée, et a pratiquement atteint sa limite en termes de ses pâturages réels/potentiels. De plus, la région toute entière est en sous-stocks au niveau des pâturages disponibles. Ce tableau ne tient pas compte des résidus de récolte qui sont une source de fourrage de haute qualité très recherchée pour équilibrer les besoins en protéines des bêtes. Les fourrages ligneux les plus appétant dans la zone Soudanienne sont les *Pterocarpus erinaceus*, *Azelia africana*, *Khaya senegalensis*, *Gardenia ternifolia* and *Combretum spp.* Les résidus de culture jouent un rôle important dans le calendrier de l'alimentation (Kagone, 2006¹).

Type de Pâturage	Surface en ha	Capacité de charge maximale ha/UBT/an	Pâturage potentiel en UBT	Pâturage réel en UBT	Stock %
Nord Soudanien	6 806 600	2.5	2 722 640	2 433 820	89.4

Table 4. Pâturage réels et potentiel dans la zone Nord-Soudanienne Burkinabé.

IV Données Socio-économiques

Recensement

La population de la province du Centre-Ouest est d' 1 186 566 habitants en 2006, ce qui représente 8.5% de la population totale.² Avec 41,3 % de la population de la région vivant en dessous du seuil de pauvreté Burkinabé qui s'élève à 82 672 FCFA, la région se classe au huitième rang (sur 13) pour la pauvreté globale. La grande majorité de la population est rurale totalisant 87% de la population de la région.

¹ Kagone., H., 2006. Country Pasture / Forage Resources profiles Burkina Faso. FAO, Rome. Consultable sur : <http://www.fao.org/ag/AGP/AGPC/doc/counprof/PDF%20files/Burkina-English.pdf>.

² Ministère de l'Economie et des Finances, 2007. La région de l'Est en chiffres. Institut national de la statistique et de la démographie. Consultable sur : http://www.insd.bf/fr/IMG/pdf/Centre-Ouest_09_06.pdf

La densité moyenne est de 28,5 habitants au Km², ce qui est faible au regard de la moyenne nationale qui s'élève à 51.8 habitants au Km² mais ce chiffre masque d'importantes disparités d'étalement des populations entre les différentes zones de la région¹. La population du Centre-Ouest est aussi jeune que la population du pays : 58.6% de la population a moins de 20 ans, l'âge moyen s'élève à 22 ans contre 21.7 ans pour la moyenne nationale.

Groupe Ethniques

Les Gurunsi et les Mossés constituent les deux principales ethnies de la région du Centre Ouest. Leurs traditions et leurs coutumes ont fini par créer une symbiose culturelle surtout au Boulkiemdé. Mais les Mossés, véritable peuple de conquérants ont conservé le pouvoir politique tandis que les Gurunsi sont demeurés les chefs de terres conservant ainsi le pouvoir culturel et religieux.

L'organisation traditionnelle Mossés

La région du Centre Ouest fait partie de la région coutumière de "Nin Taoré" ou "Taolongo" c'est à dire les territoires à l'ouest de Ouagadougou. L'organisation politique de l'empire du Mogho comme l'atteste Claudette Savonnet-Guyot² repose sur plusieurs niveaux à savoir : le niveau suprême (le royaume), la province, le canton et le village².

« Dans le royaume du centre, il existe, entre le niveau suprême - royaume - et le village, deux niveaux intermédiaires : « le canton » et la province pour adopter des équivalents sémantiques approximatifs. Toutefois si le canton est une véritable circonscription administrative groupant plusieurs villages, et à la tête de laquelle se trouve un « Kombere », la province, elle, n'a pas trouvé d'inscription territoriale. Par suite, le chef de province n'est pas vraiment le chef d'une circonscription administrative, mais le supérieur hiérarchique, le « répondant » et l'interlocuteur auprès du roi d'un certain nombre de chefs de canton ».

Les mossés du Centre Ouest, plus rependus dans la province du Boulkiemdé, sont organisés en dix cantons. Ce sont : le canton de Lallé, le canton du Konkistenga, le canton de Nanoro, le canton de Sourgou, le canton de Sabou, le canton de Thyou, le canton de Ramongho, le canton de Poa, le canton de Kokologo et le canton de Bingo.

L'organisation traditionnelle Gurunsi

En pays gurunsi, le pouvoir traditionnel est exercé par deux autorités aux fonctions différentes :

- -le pouvoir politique et religieux détenus par le chef de village,
- -le pouvoir de la terre et du patrimoine ancestral aux mains du chef de terre.

Le chef de village détient le pouvoir politique qui est matérialisé par un fétiche. Il est chargé de l'administration quotidienne, de la gestion et de l'arbitrage des conflits d'ordre politique et social des membres du village ou ceux des villages qui sont sous son autorité. Il est aidé en cela par le conseil des anciens ou sages, constitué des chefs des différents lignages du village, ou des responsables de chaque quartier.

¹ Ministère de l'Economie et des Finances, 2006. Recensement général de la population et de l'habitation, (RGPH-2006). Consultable sur: http://www.insd.bf/fr/IMG/pdf/monographie/monographie_centre-ouest.pdf

² Claudette Svonnet Guyot : « *Etat et société au Burkina. Essai sur le politique africain* » Editions Karthala. 1986.p89.

Quant au chef de terre, il est investi de l'autorité religieuse issue d'une divinité locale. C'est à lui qu'incombe la gestion du système foncier, la célébration des cultes et le règlement de litiges. Il assume donc la responsabilité de médiateur entre la terre et les hommes. Toute demande d'installation dans le village, de terre pour l'exploitation agricole, est soumise à son autorisation. Il arrive parfois que dans un village les deux pouvoirs soient gérés par un seul individu.

Le pouvoir coutumier (politique et religieux) se conserve dans les familles descendantes du premier occupant des lieux.

Comme partout ailleurs, on constate de nos jours, une dégradation poussée du pouvoir politique traditionnel. Cependant, dans la région du Centre Ouest, traditions et coutumes occupent encore une place importante dans la vie collective ou individuelle¹.

¹ Ministère de l'Economie et du Développement, Burkina Faso, 2005. *Cadre Stratégique de Lutte Contre la Pauvreté*. <http://www.matd.gov.bf/INFOROUTES/cslp/centre-ouest.pdf>.