

## Plan Vivo project validation report

Rehabilitation and sustainable management by AGED of degraded pastures in the Sahel region of Burkina Faso.





## Contents

1.	Results of the validation	4
ı	Effective and Transparent Project Governance	12
(	Carbon Benefits	18
i	Ecosystem benefits	29
i	Livelihood Benefits	
2.	Post site visit addition	37
3.	References	38
4	Annexes	42

## **Abbreviation list**

A2N	:	Association Nodde-Notto
AGED	:	Association pour la gestion de l'environnement et le
		développement (English: Association for the Management of
		Environment and Development)
CVD	:	Council Village Development (CVD)
DPEEVCC	:	Provincial Directorate for the Environment, Green Economy
		and Climate Change
DPRAH	:	Provincial Directorate of Animal and Fish Resources
GHG	:	Greenhouse gas
NRM	:	Natural Resources Management
IPCC	:	Intergovernmental Panel on Climate Change (IPCC)
NTSC		National Tree Seed Centre
NTFPs		Non-timber forest products
NGO	:	Non Governmental Organisation
PGRN-SY	:	Natural Resources Management Project in the Séno and
		Yagha
PSB/GTZ	:	Burkina Faso Sahel Program GTZ Funding
PDD	:	Project Design Document
WSC		Water and Soil Conservation

Photo 1 of cover: Millet growing system on sandy soils Photo 2 of cover: Managed site with a sign in Bossey Etage

NB: The fourth village, Sambonay, was included in the project after the consultant's field visit

#### 1. RESULTS OF THE VALIDATION

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**Project Name:** Rehabilitation and sustainable management by AGED of degraded pastures in the Sahel region of Burkina Faso.

### **Project Description:**

Burkina Faso is located in the heart of western Africa, between latitudes 9 ° 02 'and 15 ° 05' North and longitudes 02 ° 02' East and 05 °03' West (Figure 1). It is divided into two phyto-geographical areas (the Sahel area and the Sudanese area) and divided into four phyto-geographical sectors on the basis of climate, vegetation and fauna (Fontès et Guiko en 1995).

Burkina Faso belongs to a climate zone characterized by a significant rainfall deficit, harsh nature and a fragile natural environment at risk (FAO, 2007). Specifically, the northern part of Burkina Faso is under a Sahelian climate, characterized by low rainfall and varying temperatures.

Livestock farming and extensive agriculture are practised. These factors inflict on the Sahelian ecosystems an increasingly pronounced degradation of the plant resources and emphasize water and wind erosion (Bénié et al., 2005). The deterioration of plant resources in the Sahel is characterized by the dynamics of herbaceous and woody species in two extreme situations: the first situation results in a selective regression of plant species such as *Pterocarpus lucens, Maerua crassifolia, Andropogon gayanus* etc. and the second by an expansion of other species such as *Acacia tortilis, Cassia obtusifolia, Schoenefeldia gracilis, Zornia glochidiata* etc.

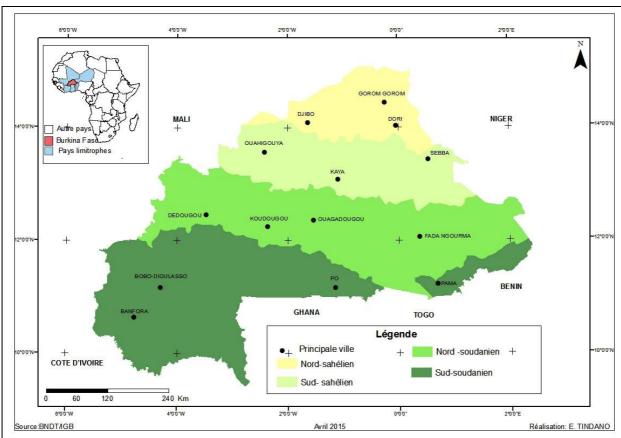


Figure 1: Distribution of phyto-geographical areas of Burkina Faso Source : BNDT/IGB/ Field data in Tindano 2014 (2016)

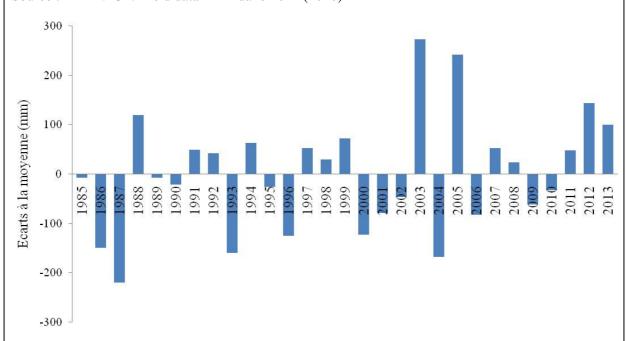


Figure 2: Variation of deviations from mean rainfall (477.89 mm) from 1985 to 2013 in Dori. . Source: DGMN, 2015 in Kadéba (2016)

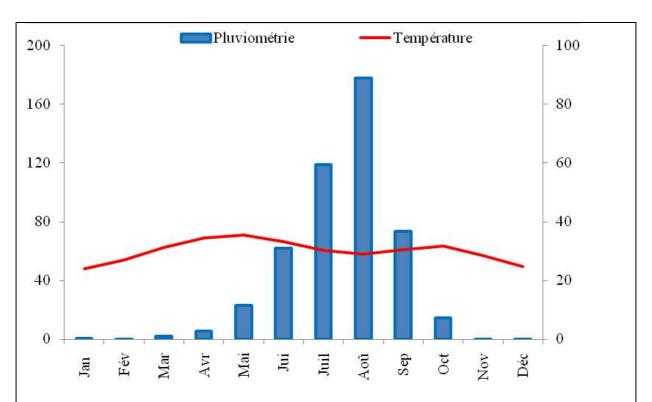


Figure 3: Ombrothermal diagram of the 1985-2013 average values of the Gourouol catchment ((Source : DGMN, 2015 in Kadéba (2016)

The main types of soils are:

- Ferralitic soils occupying the dunes. These soils have morphological and analytical characteristics giving them a good water holding capacity and high mineral wealth;
- Hydromorphic soils occupying the lower parts of the terrain and having an average content of organic matter and nitrogen. These soils are suitable for rain fed irrigated rice farming and/ or for gardening.
- Saline soils that occupy the glaze, rocky outcrops and hardpan; these are medium or shallow soils.

The dominant nature of the sandy soils of the Sahel implies that the culture of millet (*Pennisetum glaucum*) and cowpea (*Vigna unguiculata*) is dominant. There are also isohumic soils, raw mineral soils, little developed soils, soils for Mull, sesquioxides soils, vertisols and paravertisols.

The vegetation of the north Sahelian sector is constituted by steppes, striped bush, fur-lined and thin riparian cords. In this sector, the steppe vegetation type is dominant. It occupies the plains, the temporarily flooded depressions, the dunes and the sandbars, the shallows and the inselbergs (Ganaba, 2008). The dominant species in this sector are *Acacia tortilis*, *Balanites aegyptiaca*, *Leptadenia hastata* and *Acacia Senegal*. At inselbergs, there are: *A. tortilis*, *Pterocarpus lucens*, *Commiphora africana*, *L. hastata* and *A. senegal* (Tindano et al., 2011 and 2016).

Burkinabe Sahelian population is composed of ethnic groups that arrived in successive waves: the Foulsé, Gourmantché, Fulani, Tuareg and Sonraï. It is characterized by a high mobility both within and outside of the country. The dominance of ethnic groups will influence the form of management of the natural resources of the considered territory.

In the Sahel, land use is essentially pastoral and traditionally transhumant. The Sahelian farming is totally dependent upon the allocation of pastures and of the water which affects access points of

pastures.

However, forage resources in quantity and quality are widely dispersed in space and fluctuating in time. Joint research of fodder and water causes a mobility of pastoralists and their herds of greater or lesser importance or it causes to trim some tree fodder. This mobility is dependent on the distribution in time and space of the rainfall, which affects more or less the safe recovery of pastures. Nature therefore condemns pastoralists "to follow the rains" and to chase announced pastures (Grouzis 1984). The Sahel region is most often shared between livestock and agriculture. Livestock and agricultural activities are intertwined and difficult to separate from each other. The increase in the Sahelian livestock related to health progress of livestock and to population growth results in an increasing pressure on pastures.

The Project Design Document Plan Vivo relates to the carbon credits generated by the activities of recovery and sustainable management of degraded pastures by AGED in séno province in Burkina Faso. AGED coordinates the project. The project is developed under the supervision of program BKF / 017 "Project for Improvement of Livestock Zebu Azawak and sustainable management of pastoral resources" implemented by the Ministry in charge of animal resources. This project "Recovery and sustainable management of degraded pastures by AGED in the Sahel region of Burkina Faso" aims to reverse the degradation of pastures and promote the sustainable management of grazing lands in the Sahel region of Burkina Faso. It uses the Plan Vivo standard as a framework to link the ecosystem services generated by rural communities to payment mechanisms and markets. CO2logic shares knowledge and supports the development of the Plan Vivo file.

The intervention consists of restoring degraded pastures in the Burkinabe Sahel with the close cooperation of local rural communities by restoring the structure, productivity and diversity of the pastures that have disappeared since the great drought of 1984. It aims to increase the productivity of herbaceous grassland and woody vegetation for the benefit of breeders and farmers. Sustainable pastures management is supported through the development of local land charters that will build the capacity of communities to develop appropriate mechanisms for use control of pastures. This project is located in the Sahel, in the northern part of Burkina Faso. It concerns three villages in the province of Seno and the urban commune of Dori: Djigo, ToukaBayel and ToukaKorno. It has a crediting period of thirty years and a 10-year payment period. Funding was granted for the implementation of activities. Certificates will be issued ex post after an annual report by the Plan Vivo Foundation. After each successful monitoring period, payments will be made to participants. The certified carbon benefits resulting from the activity is 59 t CO2 / ha.

#### List of Documents Reviewed:

The list of documents reviewed consist in the Project Design Document (PDD) submitted by AGED as well as additional documents associated with the project document and the reference scenario, that is the national legislation, guidelines for installation of the RFP, the approved methodology, the clarifications concerning the requirements of the determination and scientific publications.

AGED, 2016. Rehabilitation and sustainable management by AGED of degraded pastures in the Sahel region of Burkina Faso. Plan Vivo Project Design Document (PDD), 72p.

Municipality of Dori, 2015. Inter-village local land charter of the municipality of Dori, Burkina Faso, 21p.

AGED, 2015. Overview of Plan Vivo project "Rehabilitation and sustainable management by AGED of degraded pastures in the Sahel region of Burkina Faso"

Municipality of Dori, 2015. Meeting minutes of community meetings of the village of Djigo, 2p.

Municipality of Dori, 2015. Meeting minutes of community meetings of the village of Touka Bayel, 2p.

Municipality of Dori, 2015. Meeting minutes of community meetings of the village of Touka Korno, 2p.

INERA, 2014 et 2015. Rapports techniques d'état d'avancement du Protocole d'accord entre l'INERA et le Projet Azawak : Suivi scientifique des sites de récupération de terres dégradées réalisées par le Projet BKF/017 « Azawak Ressources Pastorales » notamment dans les communes de Gorom-Gorom, Markoye, Dori et Bani.

KINOME, 2015. « Mise en place d'un système de quantification des stocks de carbone dans le cadre du Projet Plan Vivo : récupération et gestion durable des pâturages dégradés au Sahel Burkinabé »

#### Visited sites

The project has a single technical specification: "wooded areas and only one land use system" this means that the Ecosystem Restoration is eligible for Pan Vivo accreditation.

This is a project that involves community activities and land managed by these communities.

The project takes place in 3 villages of the municipality of Dori in the province of Séno. The sites visited are listed in Table 1 below.

The villages of Djigo (21km from Dori) and Touka Bayel (35km) and Touka Korno (26km) are all inhabited by the Peul, the Bella and the Sonrai. The latter two are inaccessible during the rainy season due to the numerous lowlands.

The population of these villages is mainly young (people 0-18 years more than half) with women also exceeding half of the total population in each village (Table 1).

Table 1: Summary of the demographics data in the villages where the project is implemented

Villages	Number of households	Men	Women	Total	% Women	0-14 years	15-64 years	65 years or more	Age N.D.
Djigo	254	499	536	1 035	51,79	440	536	52	7
Touka Bayel	392	829	973	1 802	54,00	814	901	85	2
Touka Komo	129	283	308	591	52,12	232	329	29	1
Sambonay	278	760	752	1 512	49,74				

The visited sites are recorded on the following Table 2.

Table 2: Summary of the characteristics of rehabilitated sites visited for validation

Municipality	Village	Number of proposed rehabilitated sites	Number of visited sites for validation	Number of p participating meetings	
				H	F
	Djigo*	3	3	23	25
Dori	Touka Bayel	3	3	25	43
DOLL	Touka Korno	4	4	42	31
	Sambonay	6	0		

<sup>\*</sup> Market day in Dori

#### List of people interviewed:

Different resource people representing the technical services of the municipality, local authorities and development agencies (NGOs and projects) were interviewed. The list of interviewees is reported in Table 3 below.

Order Number	Structure	Address/Address	Name and surname	Date
1.	AGED	Antenna supervisor	Bokoum Assane	
2.		Animator	Gadiaga Hama	14/07/ 2016
3.	DPEEVCC/ Séno	Provincial Director ad interim	Tianhoun Gustave	
4.	DPRAH/Séno	Provincial Director	Yé Abidiasse	15/07/2016
5.	A2N	Project Coordinator Ceekol Nagge	Maiga Amadou Nouhoun	
6.	PLCE/BN	National coordinator	Dicko Oumarou	16/07/2016
7.	Town house/Gorom	Mayor	Diallo Aziz	18/07/ 2016
8.	Gorom	2nd Deputy Mayor	Cissé Boubacar	

### Description of field visits (including list of sites visited and individuals/groups interviewed):

The visited sites have been reworked for water and soil conservation (WSC) using the half-moons technique thanks to the Delphino plow to restore degraded lands, to vegetate barren land, to improve pastoral resources and to fix greenhouse gas (GHG).

Structuring cavities complies with technical standards (size of cavities, spacing, ...). However, some issues of orientation of the site rehabilitation work with respect to the slope of the terrain may appear on certain sites with variable slopes (case of Touka Bayel). The considered principle is having one general slope orientation for the half-moon basins. Instead, we recommend to follow nature with its multiple orientations.

On the other hand, soils are relatively more silty and often rocky in depth, which can affect the water infiltration and regeneration of vegetation.

Woody and herbaceous species are seeded in the half-moons through with collected seeds by the community and purchased seeds by AGED from the National Center for Forest Seeds or seeds coming from the digestive tract of animals and contained in animal manure. The seeds acquired biological pretreatment and a high adaptability to the dryness of seedlings that have germinated. However, we observed a nonhomogeneous superficial distribution between plant species and between quantities within and between sites

The woody and herbaceous regenerations have relatively homogeneous sizes and spaces on some sites. The woody and herbaceous densities may vary due to the type of soils of the sites and the orientation of the half-moons in relation to the slope.

The visited rehabilitated sites are relatively new and carried out in the period 2013 to 2014. The woody and herbaceous regenerations are located in the vicinity of the half-moon basins and in the half-moon basins as well as on the beads of earth with variable sizes in all the sites.

The main tree species encountered are: Acacia tortilis, Balanites aegyptiaca, Ziziphus mauritiana, Acacia nilotica, Leptadenia hastata. With regard to herbs there are: Cassia obtusifolia, Schoenefeldia gracilis, Alysicarpus ovalifolius, Bracharia distichophylla, Euphorbia hirta, Cucumus melo. In the Seno province, the rare species that appeared in the recovered sites are mainly Acacia nilotica. The dominant feature of Seno sites is the high prevalence of Cassia obtusifolia and the presence of these rods in dry sites (given the recent age of development of the implementation). There is also a relative

importance of Schoenefeldia gracilis in the rehabilitated sites.

With three weeks of dry period during the evaluation period, the developed sites and shallows are the only areas that still have vegetation for grazing animals; which resulted in a livestock consolidation and pressure on woody and herbaceous regenerations.

# Results of the consultation of stakeholders (comments and criticisms, identified negative impacts, perception of the actors).

The exchanges with producers in all affected villages indicate that there is no land problem because the site belongs to the village and was appointed during the General Assembly of the village with the agreement of all members (CVD Chief village, women, youth, men) with the participation of representatives from surrounding villages for information. The dispositions are in line to the local land charter of the municipality. Inter-villages local land charter of the commune of Dori was developed to secure rehabilitated sites. It was validated by the municipal council on September 7th 2015. It is already implemented pending the adoption of the decree of application and dissemination by the media with the projection of a national language translation.

Each village has put in place a monitoring committee for the rehabilitated sites. It consists of 6 people including 2 women and 4 young people in Touka Bayel for example. Any offense should be subject to payment of a fine. An assessment will be made of the performance of the committee and in case of failure, the offending member will be replaced; the work of this committee is voluntary.

Discussions have shown a strong control and consensual acceptance of the rules on the management of rehabilitated sites defined in land charters in all three villages by all sectors of rural communities (CVD, youth, women, village chief) and involvement of all the ethnic groups and village leaders. A certain availability for accompanying measures by technical municipal and state structures also appears.

AGED is composed and conducted by agents from the Burkinabe Sahel Programme who have gained experience and natural resources management in the context of local conventions of PSB / GTZ and PSB / PB that became PGRN-SY. The successes and failures of local conventions (RIGRN) defined in the 2000s by the PSB / GTZ in Oudalan (Kishi Beiga) and SY-PGRN in Seno and Yagha serve as examples of local management of natural resources (NR). What makes that land charters defined under Plan Vivo serves as an example to other communities not involved in the Plan Vivo project.

### Validation Opinion:

After this validation, I confirm that the project complies with the Plan Vivo Standard. I conifirm that the rural villages of Djigo, Touka Bayel and Touka Korno are informed of the Plan Vivo project, they are aware of the sustainable protection of resources generated by the recovery of degraded lands, they have developed a consensual land charter known by all and by the surrounding villages and they know that the land of the reclaimed site cannot be claimed anyone. All groups (men, women, youth, traditional leader, Imam) attended the exchange meeting with the validation mission, affirmed that the rehabilitated sites could not be claimed by any other person and are organized to apply the local land charter with the support of the municipality, technical services of the state and the NGO AGED. I also confirm that the legal, statutory and local customary premises have been respected and that the interests of local socio-cultural and ethnic groups have been taken into account.

Scientific verification reveals a consistency in the documentary sources that are adapted to the environment. However, a few corrections are proposed and summarized in Table 4 below.

Table 1. Summary of major and minor Corrective Actions

Theme	Major CARs	Minor CARs	Observations

Governance		Accountability and organization of Dori antenna on project management and monitoring sites	Better coordination between the Coordination based in Ouagadougou and antenna in Dori.
Carbon		Reseeding of half- moons without tree plants of the rehabilitated sites. Inventory method should be harmonized with the one used by NGOs. Straight plot in the form of 2 diagonal transects Representative location of plots to monitor the evolution of wood resources Recommended period for the annual inventory between October and December with 3 people (one that notes and two for measurements)	Sowing with a pick woody seeds with two people to do 4 ha / day.  A plot for 20 ha introduces a bias.  Linear transects joining the diagonals and marking this outline for the following years
Livelihoods	Add relevant socio- economic monitoring indicators	Negative impacts of the project: return of wild carnivores, injuries to animals in sites	Improvement indicators: number of livestock, calving rate of cattle, number of emigration, number of NRM conflicts The return of wild carnivores (jackals, hyenas) can reduce the number of cattle Number of injured animals / year in the new sites rehabilitated in the beginning of rainy season

*Table 5 – Conformity report* (Delete Yes/No as appropriate)

Theme	Compliance of draft report	Compliance of final rapport
Governance	Yes	Yes
Carbon	Yes	Yes
Ecosystem	Yes	Yes
Means of subsistence	No	Yes

Ensuring that the pro-	1. Effective and Transparent Project Governance			
Lusuring mui me bro	ject meets requirements 3.1-3.16 of the Plan Vivo Standard (2013)			
A. Requirement	<ul> <li>1.1 Administrative capabilities</li> <li>Is there a legal and organisational framework in place that has the sufficient capacity and a range of skills to implement all the administrative requirements of the project? Aspects of this framework may include:</li> <li>1.1.1 A legal entity (project coordinator) that is able to enter into sale agreements with multiple producers or producer groups for carbon services</li> <li>1.1.2 Standard sale agreement templates for the provision of carbon services</li> <li>1.1.3 Systems for maintaining transparent and audited financial account able to the secure receipt, holding and disbursement of payments to producers</li> <li>1.1.4 All necessary legal permissions to carry out the intended project activities</li> <li>1.1.5 Mechanisms for participants to discuss issues associated with the design and running of the project</li> <li>1.1.6 Procedures for addressing any conflicts that may arise</li> <li>1.1.7 Ability to produce reports required by Plan Vivo on a regular basis and communicate regularly with Plan Vivo</li> </ul>			
B. Guidance Notes for Validators	<ul> <li>Organisational and administrative capacity may be demonstrated through:</li> <li>A record of managing other projects - especially those involving the receipt, safeguarding and management of funds and disbursement of these to small-holders/community groups</li> <li>Project staff who can explain the legal status of the organisation and its management and financial structure i.e. how funds will be held and transferred - backed up by evidence of setting up bank accounts and record-keeping systems etc.</li> <li>The views of others who have worked with the organisation in the past (such as government, other project partners or other NGOs)</li> <li>A visibly efficient and functioning office with all necessary staff</li> </ul>			
C. Findings (describe)	The Association for Management of the Environment and Development (AGED) is a Burkinabe NGO registered under No. 2001/002 / MATD / PSENO / HC / DR of 31 May 2001. It has its origins with the will of the Governments of Burkina Faso and of the Federal Republic of Germany to sustain the outcomes of the natural Resource Management (NRM) project initiated in 1989 by the Burkinabe Sahel Programme with the financial support of GTZ (PSB / GTZ). Reflections on the possible alternatives to sustain the project achievements led to the constitution of the Association for Management of the Environment and Development (AGED). It was in 2003 that AGED gets the status of NGO followed by the review of its objectives.  Its headquarters are in Ouagadougou. The association oversees activities in the Dori antenna. The antenna of the Sahel based in Dori includes the Coordinator, and 2 support staffs, a secretary and three guards and it covers the provinces of Seno.  The animator, Gadiaga Hama, who accompanied us on field trips has a good			

command of animation, a good knowledge of the environment and easy contact with rural communities. The Coordinator is also known in the town of Dori with a good facilitation experience in PSB projects. This enables the mobilization and strong participation of rural communities in the work of rehabilitation and in the land securing of degraded land.

Thus in 2014, AGED has performed the following activities and programs:

- Alliance Program ecosystems of Burkina Faso;
- Project "Dori Green City";
- Security Project Food and Nutrition (SAN) in Burkina Faso;
- Project Water, Sanitation and Hygiene for Malian refugees in Burkina Faso;
- Project MEAL-S;
- Project Improvement of child care under 5 years severely malnourished child in Burkina Faso;

The NGO has realized the following services and support consultance during 2014:

- Azawak Project;
- Technical support and capacity building of actors-Project in September;
- Literacy Program;
- Assistance for the implementation of actions of environmental and social preservation in the context of the MOAD;
- IEC in the region of the Mouhoun;
- Partnership and organizational management of the AGED;
- Partnership and networking;
- organizational management and community life.

The implementation rate of the 2014 activities is 96% of what has been programmed. This execution rate is rising compared to the 94% recorded in 2013 (AGED, 2014). AGED has also produced numerous reports including the report of activities 2014 (AGED, 2014) and project implementation reports (AGED, 2012; AGED 2014 AGD, 2015), demonstrating a good capacity of reporting for the Plan Vivo project.

To ensure good governance in the management of PSE funds, the project coordinator based in Dori will open an account at UBA for payments that will be subsequently sent to the credit union accounts of the 3 villages. Withdrawals from these accounts is co-signed by the coordinator AGED and two representatives of the Council Village Development (CVD) of the villages involved.

Financial audits have certified the accounts for the project "Dori town green" for the period from 30 April 2012 to 30 April 2013, and for the project ECOSYSTEM ALLIANCE Project "Adapting to changing climates and improvement of livelihoods and ecosystems" in the provinces of Seno from 1 January to 31 December 2013. The audits have been certified by the Office of Financial Audit & Chartered Accounting Komboïgo and Associates (KAFECKA).

Conflict resolution mechanisms are provided in the inter village land charter of Dori. It was validated by deliberation (2015/09) by the communal Council of Dori the 7th of September 2015. It stipulates in Article 23 that any violation of this local land charter should be reported to the "Village Commission on

		Tenure Conciliation".		
		Article 24 of the charter states that any violation is punishable by a deposition of minutes, drawn according to the nature of the violation to the relevant services. In case of absence or immediate unavailability of the competent Technical Departmental Service, the "Village Commission on Tenure Conciliation" and the Rural Land Service / Bureau Domanial (SFR / BD) will establish the facts denounced by all appropriate means.		
		Article 25 states that full regulation or conciliation or non-conciliation is punishable by a deposition of minutes drawn up by the "Village Commission on Tenure Conciliation".		
		Finally Article 26 concludes that if the offender complies with the sanctions provided by the charter, the dispute is conducted at the village level. Otherwise, the file is forwarded to the competent authority together with any useful evidence. With the recent establishment of communal councils and pending the establishment of the local authority management and conflict resolution ("Village Commission on Tenure Conciliation"), the CVD perform the duties relating thereto.		
		Moreover, pending the implementation of the Rural Land Service (SFR) the planning and land management commission is responsible for performing the functions related thereto.		
D.	Conformance	Yes No No N/A		
Е.	Corrective Actions (describe)	N/A		
F.	AGED response	N/A		
G.	Status			
A.	Requirement	1.2 Technical capabilities  Is the project, through its staff or partners, able to provide timely and good quality technical assistance to producers and/or communities in planning and implementing the productive, sustainable and economically viable forest management, silvicultural and agroforestry actions proposed for the project and for any additional livelihoods activities that are also planned?		
В.	Guidance Notes for Validators	<ul> <li>Technical capabilities may be determined through:</li> <li>Discussions with project staff who should be able to define clearly who is responsible for the provision of technical support</li> <li>Interviews with project staff to demonstrate that they are familiar with the content of project technical specifications e.g. species to be planted, spacing requirements, management systems and any potential issues</li> <li>Feedback from farmers/communities who have been supported in the past</li> <li>On-site evidence of project activities (possibly from other projects) that</li> </ul>		

		have benefited from technical support			
C.	Findings (describe)	The technical team of the project is based in the Antenna of Dori and consists of a Coordinator, the Head of Antenna, an engineer in rural engineering and WASH, 2 animators, an accountant and a secretary and resource persons able to technically and scientifically support the team when needed. The team has a work experience related to the rehabilitation of degraded land and community outreach.			
		<ul> <li>The team leads for example an Alliance Program for the Ecosystems of Burkina Faso with the following activities:</li> <li>Awareness, training and RNA kit staffing of local actors on the Assisted Natural Regeneration (RNA);</li> <li>Organization of RNA activities (Identification and delimitation of degraded sites to recover);</li> <li>Realization of mechanized work like subsoiling of the identified sites; Seeding of the sites for forage production and revegetation;</li> <li>Capacity building activities for the involved actors with the implementation of management committees for the the rehabilitated sites;</li> <li>Installation of processors of non-timber forest products (NTFPs) of GVF.</li> <li>The technical team has 1 Vallerani tractor that carried out the half-moons for</li> </ul>			
		the Plan Vivo project and that offers quality services. Visited facilities meet the technical standards of mechanized recovery of degraded lands.			
		AGED has already provided some technical support and capacity building for communities involved in the Plan Vivo project. They recognized among other awareness-raising and training on the collection and processing of seeds. Furthermore, CVD were trained in the management of funds, conflict management, planning and inventory, assessment and monitoring of their rehabilitated sites.			
		The AGED NGO is engaged in the continuing support of the organized communities in raising awareness, monitoring the regenerated plant resources and the implementation of the management plan.			
D.	Conformance	Yes X No N/A			
E.	Corrective Actions (describe)	N/A			
F.	AGED response	N/A			
G.	Status				
A.	Requirement	1.3 Social capabilities Is the project, through its staff or partners able to demonstrate an understanding			
		of the social conditions of the target groups/communities and likely			

implications of the project for these? This might include:

- 1.3.1 A demonstrated ability to select appropriate target groups through stakeholder analysis and to understand the implications of the project for specific groups e.g. poor, women, socially disadvantaged etc.
- 1.3.2 Groups/communities that are well-informed about the Plan Vivo System and the nature of carbon and ecosystem services
- 1.3.3 Local groups/communities that can demonstrate effective self-governance and decision-making
- 1.3.4 Well-established and effective participatory relationships between producers and the project coordinator
- 1.3.5 Demonstrated ability to establish land-tenure rights through engaging with producers/communities and other relevant organisations
- 1.3.6 Ability to consult with and interact with producers/communities on a sustained basis through participatory 'tools' and methods
- 1.3.7 Established system for conflict resolution

## B. Guidance Notes for Validators

Social capabilities may be determined through:

- Records/minutes/photographs of community meetings and training workshops etc.
- Project staff able to explain (in line with PDD) how land tenure is checked by the project
- Project staff and communities able to explain how communities/target groups were selected and involved in the development of the project and in the choice of activities
- Project staff able to demonstrate that they are familiar with the communities/target groups and able to interact with them easily through meetings facilitated during the validation
- Meetings held with specific target groups e.g. women, socially disadvantaged etc.

# C. Findings (describe)

Numerous meetings and actions of information, awareness and training were conducted by AGED (AGED, 2014). For example in the context of the implementation of the project "Dori Green City" in 2014, several achievements have been recorded such as:

The implementation of actions of RNA, the Zai and half moons on degraded sites identified by the beneficiaries with the technical support of AGED. These activities were supported in their implementation by WFP. 4449 vulnerable households among them, 1799 were represented by women, were assisted in the form of Cash For Food (CFF) and Cash For Work (CFW) (photo 3). In total, 152 205 800 FCFA and 30 030 tonnes of food were distributed to these vulnerable households. The WFP support with food and CFW gained lots of interest in some villages.



Photo 3: Participation of women in land use transformation activities (AGED

		2014)			
		The coordinator and facilitators have a proven experience in animation and technical realization of the rehabilitation of degraded land.			
		The staff of AGED showed that they were familiar with the communities / target groups and were able to easily interact with them through lively meetings. Meetings were held in all villages during validation. For example, during exchanges between AGED with the people of the village of Touka Korno, it emerged the need to hold regular quarterly meetings and extraordinary meetings with central concerns for the management of recovered sites. Given the demands for payment for ecosystem services (PES) and community benefits, the village is unanimous on this issue. These meetings will be an opportunity to verify the on field-actions, to plan future actions and hear the concerns of the various social strata in the distribution of PSE funds. The capitalization of these meetings and various activities are transferred to the NGO AGED that coordinates the implementation of the Plan Vivo and record it in reports.			
	Conformance	Yes No N/A			
Е.	Corrective Actions (describe)	N/A			
F.	AGED response	N/A			
G.	Status				
A.	Requirement	1.4 Monitoring and Reporting capabilities  Does the project have an effective monitoring and reporting system in place that can regularly monitor progress and provide annual reports to the Plan Vivo Foundation according to the reporting schedule outlined in the PDD?  1.4.1 Accurately report progress, achievements and problems experienced  1.4.2 Transparently report sales figures and demonstrate resource allocation in the interest of target groups			
В.	Guidance Notes for Validators	<ul> <li>Monitoring and reporting systems and capabilities may be determined through:</li> <li>Staff and participating communities able to explain the monitoring system (how each of the indicators in the PDD will be monitored)</li> <li>Records of any monitoring already undertaken e.g. baselines or other information</li> <li>Project staff showing an understanding of the importance of annual reporting to Plan Vivo as a requirement for issuance of certificates</li> <li>Demonstrated ability to produce simple reports (e.g. for other projects)</li> </ul>			

C.	Findings (describe)	The monitoring system is based on organizational self assessment. Local land charter (defined in the Plan Vivo) is defined with the establishment of management structures. For example, in Touka-Korno, there is the establishment of a 5-person oversight committee with two people each morning on the field and possibly in the evening. Furthermore, women who are going to bring food to their husbands in the fields, can inform of any negative action on sites as well as shepherds of grazing animals nearby. So, in case a transhumance installs in the vicinity of rehabilitated sites, the ax is removed until his departure.			
		Annual inventories of resources will be made on the basis of permanent plots to evaluate the evolution of the wealth and wood density on the rehabilitated sites in order to provide the necessary information for the an annual report as it is done every year by the Regional Coordination of AGED.			
		The reporting is a form of monitoring of internal assessment which simplifies the results of activities conducted by AGED. The NGO has a system of programming and annual reporting of its activities and implements report of projects in execution (AGED, 2014).			
D.	Conformance	Yes No N/A			
Е.	Corrective Actions (describe)	N/A			
F.	AGED response	N/A			
G.	Status				

Theme Ensuring that the pro	2. Carbon Benefits  Dject meets requirements 5.1-5.20 of the Plan Vivo Standard (2013)	
A. Requirement	Have the carbon benefits been calculated using recognised carbon accounting methodologies and/or approved approaches and are the estimates of carbon uptake/storage conservative enough to take into account risks of leakage and reversibility?	
B. Guidance Notes for Validators	<ul> <li>Check the carbon accounting methodology used including:</li> <li>The level of understanding of the methodology used amongst technical project staff</li> <li>Whether all references and sources of information are available (include copies with the validation report if possible)</li> <li>Whether the carbon accounting models are clear and transparent i.e. are the spreadsheets available and readily understandable? Can project staff answer and explain any technical questions about these?</li> </ul>	

		Are local experts able to comment on the accounting methodology and on			
C.	Findings (describe)	the sources of information used?  The carbon benefits were calculated using recognized carbon accounting methods and/or approaches approved by references to many studies on the Sahel region and on the average growth in Sahelian woody. The estimates sequestration / carbon storage are also conservative enough by taking in account the ecological risks. On the other hand, the risk of leakage minimized because previously there were no operations on the rehabilitate sites. Reversibility is also minimized by the consensus around the implementation of the local land charter and the support of technical accommunal services.			
		The numerous meetings between CO2logic, the project AZAWAK and AGED the project coordinator, allowed for a good understanding of the methodology used to calculate the carbon sequestration as well as the one used for the annual tracking assessment of the evolution of wood biomass by the technical staff of AGED.			
		Carbon spreadsheets are given in the PDD and easily understandable and carbon accounting models are understood by AGED.			
		Local experts including the National Forestry Research approved sources of information used and the results obtained in terms of inventory, density simulation and carbon sequestration. Besides studies are underway to supply information on the potential of carbon sequestration levels of aerial and underground parts of Sahelian woody.			
D.	Conformance	Yes X No N/A			
Е.	Corrective Actions (describe)	Adapting the inventory methods for woody population monitoring to the harmonized habits of the NGO AGED while ensuring the reduction of potential bias.			
F.	AGED response	The initial forest inventory approach provided an inventory of circular plots of 1% of the total area of all sites. This approach has the disadvantage that it does not sufficiently take into account the diversity of the sites that are characterized by different soil types.			
		As a consequence, it was decided to take the approach of linear plots as 2 diagonal transects. This new approach, of inventory method of woody population monitoring, is adapted to the habits of AGED and includes:			
		<ul> <li>Define diagonal transect the first year from GPS codes;</li> <li>Count the number of half-moons located along the two diagonal transects and the number of tree-plants in the basin of the half-moons, and the direct bead around each half-moon on the transect;</li> <li>Minimum count of 1% of the half-moons of a site (number of half-moons per hectare reference: 300 (240 to 360));</li> <li>Record the number of half-moons without any treeplants.</li> <li>The period for the annual inventory is October after the rainy season.</li> </ul>			

G.	Status			
Α.	Requirement	2.2 Baseline		
		Are the carbon benefits of the project measured against a clear and credible		
		carbon baseline (for each project intervention)?		
В.	<b>Guidance Notes</b>	Check the baseline scenario in the technical specifications of the PDD:		
	for Validators	• Check that baseline measurements have been carried out and information		
		properly recorded		
		• Check that the information from the baseline matches that in the PDD/Technical specifications and corresponds to the situation on the		
		ground (by discussing with local experts and others)		
C.	Findings	Several reference studies were cited and used for this calculation and exchanges		
	(describe)	with experts mentioned in the PDD have been done. A modeling guide helped		
		to set up a carbon stock quantification system in the Plan Vivo Project: rehabilitation and sustainable management of degraded pastures in the Sahel		
		Burkinabe. It allows updating CO2fix modeling parameters depending on the		
		sites. The tool is designed to help developers to easily update the CO2fix		
		modeling tool. In this context, the main parameters are:		
		The density / species. Estimated average densities of wood		
		Technical specification of the biomass module for the site, woody growth table,		
		etc.		
D	Conformance			
		Yes No N/A		
		Yes No N/A		
E.	Corrective Actions	Given that 1 ha of land contains about 360 half-moons and that there are		
	Corrective			
Е.	Corrective Actions (describe)	Given that 1 ha of land contains about 360 half-moons and that there are mortality risks related to climate conditions, it would be appropriate to reduce the density of woody from 300 tree-plants / ha to 260-280 adult trees.		
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	Guidance Notes for Validators  Findings (describe)	Assess whether the project simply owes its existence to legislative decrees or to commercial land-use initiatives that are likely to be economically viable in their own right i.e. without payments for ecosystem services.  Also, assess whether without project funding there are social, cultural, technical, ecological or institutional barriers that would prevent project activities from taking place.  This project does not result from any legislation or regulation indicating the rehabilitation of degraded pasture land, but rather results from recommendations of scientific research results. Moreover, there is no financial, social, cultural, scientific technical and institutional barrier to the implementation of this project. The benefits of this carbon project are additional.		
		These benefits would not be generated without the project. This is why CO2logic is involved in the project formulation. The activities supported by the project would not have occurred if payments and financial benefits did not encourage people to sustainable management of developed sites and especially their supervision.		
D.	Conformance	Yes No N/A		
Е.	Corrective Actions (describe)	N/A		
F.	AGED response	N/A		
G.	Status			
A.	Requirement	2.4 Permanence Are potential risks to the permanence of carbon stocks identified in the project technical specifications and are effective and feasible mitigation measures included in the project design?		
В.	Guidance Notes for Validators	Assess whether members of the community/producers are aware that they will enter into formal sale agreements with the project coordinator and that they therefore need to comply with the monitoring and mitigation requirements of the project.  Check whether the risk buffer proposed in the PDD and technical specifications for each intervention (that will be deducted from the saleable carbon of each producer) conforms to the recommended percentages in the Plan Vivo Standard or other Plan Vivo documentation. Check with Plan Vivo if this is unclear.		
C.	Findings (describe)	The different risks were identified in the PDD while indicating the level of risk, defining the mitigation strategy and assigning a score indicating its importance.  Those are:  • For the land ownership: land tenure disputes and conflicts caused by the project goals / activities with local communities / organizations  • At the financial level: the financial plan of the project		

- At the technical level: the capacity of the coordinator
- At the managerial level: project management, management of unexecuted activities, poor record keeping, relevant staff with skills and expertise, damage to trees due to grazing and damage due to trees fraudulent cuts (transhumance).
- At the economic level: financial failure caused by improper or fluctuating carbon prices or inability to attract buyers
- At the political level: the external pressure to engage in unsustainable practices.
- At the social level: community disputes over land tenure, disputes caused by a conflict between the purpose or activities of the project with communities and local organizations.
- At the practical social level: the incidence of forest fires.
- At the ecological / climatic level: extreme weather events particularly: droughts, pests, diseases and rodents.

During the validation mission, the finding that the three weeks of drought have caused great pressure on rehabilitated sites by animals, encourage us to recommend raising the level of risk associated with extreme weather events according to the following table 6.

Table 6: carbon leakage risk synthesis

Risk factors	Level of risk	Mitigation strategy	Score
Land tenure			
Land tenure	Low	Local land charter based on the new Law on Rural Land formalizes agreements based on local customs and land use. The site selection criteria are: the absence of known land disputes and the lack of mining sites in the neighbourhood of the selected sites.	0.05
Disputes caused by conflicts project / goals / activities with local communities / organizations	Low	Participatory planning and further consultations with stakeholders during the lifetime of the project. Local land charter provides procedures to manage land conflicts.	0.05
Financial			
Financial plan of the project	Medium	The initial costs of restoring degraded	0.1

		pastures are already subscribed by the BKF program / 017. Monitoring costs should be covered by the sale of Plan Vivo certificates.	
Technical			
Capacity of the coordinator	Low	There is a long experience of the project coordinator in assisting local communities in the process of restoring degraded pastures.	0.05
Ability to achieve the annual wood inventories	Low	Discuss and choose a method for inventory used by NGOs (AGED)	0.1
Management			
Management of unexecuted activities	Medium	Close monitoring of the project by the coordinator to ensure effective management (e.g. reseeding campaigns).	0.1
Poor report keeping	Low	Robust procedures and surveillance.	0.1
Relevant staff with skills and expertise	Medium	Careful selection of project staff and training. Support for the staff.	0.2
Tree damage due to grazing	High	No specific protection of trees and plants is necessary because direct seeding limits the damage to the plant after grazing.	0.4
Damage trees because of fraudulent cuts (transhumance)	Medium	Surveillance increased by the use of crossing corridor by transhumants with animals	0.1

Financial failure caused by improper or fluctuating carbon prices or inability to attract buyers	Low	The Lux Dev cooperation was presented as interested buyer. CO2logic could help the project coordinator to sell certificates if necessary.	0.05
External pressure to engage in unsustainable practices	Low	Restoration of degraded pastures is vital to these communities as farming is one of the main activities of the area. Transhumance is organized by the local land charter. The project coordinator will assist CVD in monitoring grazing sites rehabilitated by local land charters.	0.05
Social Community disputes over land tenure	Low	Local land charters foresee procedures to manage land conflicts.	0.05
Disputes caused by a conflict between the objective or project activities with communities and local organizations	Low	Participatory planning and further consultations with stakeholders on the project's lifetime	0.05
Fire Impacts of forest fire	Low	Not so relevant in the project area	0.05
Ecological/climati c factors extreme weather	High	Droughts are not	0.4
events particularly: droughts	111511	unknown in the Sahel but all species are from the Sahel and therefore very resistant to	V.T

				drought.	
		Pests, diseases and rodents	Medium	Not so relevant in the Sahel zones with pastures	0.1
		Total		•	2.0
		years unless there is only those sites browill be accessible by	s a long drought as ought food for the a by the pastoral code	it was the case thin the case thin the case the	s during the first two s year. In that case, years, pastures sites e rules of local land t in the access rights
D.	Conformance	Yes x	No	N/A	
Е.	Corrective Actions (describe)	N/A	,	,	
	AGED response				
G.	Status				
<b>A.</b>	Requirement	2.5 Leakage Have potential sources of leakage been identified and are effective and feasible mitigation measures in place for implementation?			
В.	Guidance Notes for Validators	<ul> <li>Check the sources of By discussions of Assess whether addressing leaks</li> <li>Assess whether</li> </ul>	of leakage and the eff with local experts, the rethere is a good age amongst project	fectiveness of mitigate project coordinate understanding of participants sures proposed are	
C.	Findings (describe)	and cattle grazing edeak sources is nil significant the planned verificant elsewhere. Furtherm for a decade of acticulated wood from a can not increase the	especially grazing gance the site was baregetation rehabilitationer, previous expersion on the ground, in rehabilitated land. To operating pressure excludes the exploit	oats. The risk of learn for thirty years a con. So it can not have induced of rehabilitation of the rehabilitation of in the adjacent areas tation of wood in the	athering of firewood takage and potential and wasn't exploited are pressure transfer on of degraded land communities rarely these degraded sites is. The application of the rehabilitated sites avolved.

D.	Conformance					
		Yes x	No		N/A	
Ε.	Corrective	N/A				
L.	Actions	IV/A				
	(describe)					
F.	AGED response	N/A				
G.	Status					
	D =	2 ( T 1 114 1 1		, •		
Α.	Requirement	<b>2.6 Traceability and d</b> Are carbon sales from t			rdad in a	datahasa?
		Are the project interver				
		(including regional or n				
		place to avoid double c		,		
В.	Guidance Notes	Check the possibility	of double c	ounting and wh	ether the	carbon sales are
	for Validators	traceable by:				
		• Discussions with l	_			
		(including any natio	_			
		• Understanding the and keeping record			•	
		transparent (through		•		•
C.	Findings	This project is the first				
	(describe)	counting. There is a u				
		carbon to Plan Vivo acc	cording to co	ntract procedure	s provide	d in the Standard.
		The registry of produc	ction and sa	les will be held	by AGI	ED for records to
		ensure traceability of o				
D.	Conformance					
		Yes	No		N/A	
E.	Corrective	N/A	-1		l	
	Actions					
	(describe)					
F	AGED response	N/A				
•	response	14/11				
~	G					
G.	Status					
A.	Requirement	2.7 Monitoring				
		Does the project have a				
		does it seem to be an ef		m for monitoring	g the cont	inued delivery of
		the ecosystem services	!			

		Does the project coordinator prescribe and record corrective actions where			
		monitoring targets are not met and are these effectively followed up in			
		subsequent monitoring?			
В.	<b>Guidance Notes</b>	Check whether the monitoring plan is effective and likely to be fully			
	for Validators	implemented:			
		• Assess the level of understanding of project staff and participating			
		communities of the monitoring system and ensure that the montiring			
		responsibilities are matched by sufficient capacity			
		• Are the selected indicators (covering all aspects of monitoring) SMART?			
		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `			
		I.e. Specific, Measurable, Achievable, Relevant and Time-bound?			
		• Do the selected indicators properly measure impacts of the project or are			
		they only able to measure inputs/activities?			
		• Are communities effectively involved in monitoring and do they			
		understand their role?			
C.	Findings	AGED planned a regular monitoring in close collatboration with the CVD			
	(describe)	including 2 representatives who were trained in assessment and monitoring of			
		natural resources, to determine the performance of the recovery of pasture sites.			
		Circular plots were planned within 25m and have been provided in the PDD.			
		INERA used a wood inventory method focused on rectangular plots of 1			
		hectare which the location may introduce a strong bias and can be impractical			
		for the NGO. To reach a consensual and adapted approach, it would be			
		appropriate to apply the linear plot method with transect by AGED that has the			
		advantage to cross diagonally all the recovered surface.			
		People are aware of the financial benefits (payment PES) if there is proper			
		management of woody plant resources. The fact that the sites are a pastoral area			
		since the village exists, contributes to the chances of securing land of the			
		rehabilitated sites. The implementation of the project has a community meaning			
		above individual interests. Finally, there is a consensus from the social			
		components of the village on the conservation area as shown in the village			
		development plan. Site monitoring committees were set up in the villages.			
		The defined indicators are the plant density of trees and the diversity of specific			
		tree species (defined as a minimum of 5 tree seedlings per species per hectare)			
		are representative. However, accuracy is essential to specify the performance			
		indicator relative to the density (if it is independent of timber size, or if there is			
		a tree that is to say a timber 7m high). The performance indicators are part of			
		PES model agreement between AGED and CVD.			
D.	Conformance				
		Yes No N/A			
Ε.	Corrective	Specify in the PDD that it is feet per hectare instead of trees per ha			
	Actions	Specify in the 100 that it is feet per nectare instead of trees per na			
	(describe)				
	,				
F.	AGED response	The description of the indicator on the density was changed in the PDD:			
	F	number of trees per ha by number of tree plants per ha.			

G.	Status			
A.	Requirement	2.8 Plan Vivos		
		Are the <i>plan vivos</i> (or land management plans) clear, appropriate and consistent		
		with approved technical specifications for the project? Will implementation of the plans cause producers' overall agricultural production or revenue potential		
		to become unsustainable or unviable?		
В.	<b>Guidance Notes for Validators</b>	Where small-holder farmers have prepared individual <i>plan vivos</i> , check a		
	ioi vanuators	sample of these on the ground (in the company of the farmer) to determine whether they have really been prepared by the farmer and what the farmer		
		expects to be the results of implementation.		
		For community-projects managing a common (forest) resource, check the		
		management plan for the forest area and assess the extent to which target		
		groups within the community have been involved in preparing it (especially women and disadvantaged groups) and the extent to which its future impacts		
		have been discussed and agreed.		
C.	Findings (describe)	In all the villages, communities interviewed claim to have developed land charters and to have implemented reclaimed site monitoring committees. This		
	(describe)	is already a form of management even if it is not formalized in management		
		plan. This local land charter involves all target groups including women and		
		youth, traditional and religious authorities and was approved by the municipality of Dori. It is a management tool that can be reviewed. Indeed, the		
		rehabilitated sites are freely accessible to all pastoralists in the village, the		
		surrounding villages and transhumance pastoralists (except normally for the		
		first two years after the rehabilitation work). The community must ensure to reduce the number of animals based on the level of pastoral resources. The		
		community target groups were involved in its preparation (particularly women		
		and disadvantaged groups) as evidenced by the report of the meetings in every village (municipality of Dori, 2015).		
		We must not only build awareness, but also build the organizational capacity of farmers in order to have sustainable grazing resources of reclaimed spaces.		
<b>D</b>	C. f.			
υ.	Conformance	Yes No N/A		
Ε.	Corrective	N/A		
	Actions			
	(describe)			
F.	AGED response	N/A		
G.	Status			

Th	ieme	3. Ecosystem benefits					
En	suring that the	project meets requirements 2.1-2.4 of the Plan Vivo Standard (2013)					
	Requirement	3.1 Planting native and naturalised species					
		Are the planting activities of the project restricted to native and naturalised					
		species? If naturalised species are being used are they invasive and what effects					
		will they have on biodiversity? Have the species been selected because they will					
		have clear livelihoods benefits?					
В.	Guidance	Check this using a number of sources:					
	Notes for	<ul> <li>Visual observations of local tree-growing practices</li> </ul>					
	Validators	<ul> <li>Discussions with communities and project staff</li> </ul>					
		Discussions with local experts (forestry and biodiversity experts)					
		• Published information (refer to this in the validation report if used)					
C.	Findings (describe)	A <i>naturalized species</i> qualifies as any foreign species, non-native, that is well established in a biotope, a region This especially refers to the geographical location, and there is thus either a non-native species, a species transferred, etc A <i>naturalized species</i> (or introduced) becomes invasive when found in a territory where it was not present and when it disrupts the biodiversity already established in that territory.					
		Seeding activities have focused on herbaceous and woody native species. No non-native species were used. Herbaceous species that regenerate are annual and for forage and they play a social and economic role for milk production, growth and productivity of livestock (cattle, goats, donkeys, camels) and wildlife. <i>Cassia obtusifolia</i> is harvested as a food plant during the lean seoson and the rods are used for making seccos used by households or sold in the market for residential construction.					
		Trees play a vital role in the lives of Sahelian populations constituting not only a relay forage for herbaceous pastures during the dry season but also a stable fodder resources throughout the annual cycle and it is less dependent on rainfall distribution of the previous season. In addition, they provide a food supplement and are used as lumber, timber, medicines by resident populations (Lykke et al, 2004).  **Balanites aegyptiaca** germs more quickly on seeded sites, but dies in the event of prolonged drought. **Acacia tortilis** which dominates on rehabilitated sites is not intrusive even if it is not well appreciated by Sahelian farmers in crop fields (Ganaba et al. 2005). The **Acacia Senegal** gum tree plays an important socioeconomic role in the Sahel. These plants are all fodder and have multiple use. These plants can not change the woody and herbaceous biodiversity of the region.					
D.	Conformanc						
	e	Yes No No N/A					
Е.	Corrective Actions (describe)	N/A					
F.	AGED response	N/A					

G.	Status				
A.	Requirement	3.2 Ecological impacts			
		Have the wider ecological impacts of the project been identified and considered			
		including impacts on local and regional biodiversity and impacts on watersheds?			
В.	Guidance	Check this using a number of sources:			
	Notes for Validators	• Visual observations of the environment in the project area			
	v alluators	Discussions with communities and project staff     Discussions with local experts (environmental experts)			
		• Discussions with local experts (environmental experts)			
C	Findings	Published information (refer to this in the validation report if used)  Feelegies indicators, that will be manifered and reported by ACED and			
C.	(describe)	Ecological indicators that will be monitored and reported by AGED and communities in the resource surveys are: the number of woody species; the number of herbaceous species; the number of wildlife species.			
		Performance indicators are relative to the number of tree plants per hectare and must be reduced from 300 to 260 in relation to the woody regeneration rate and recognized animal pressures.			
		Positive indicators (nesting birds in the sites,) and negative (number of livestock killed by wild animals,) will be useful in assessing the changes in biodiversity.			
		Untreated seeded or reseeded seeds are resistant to environmental conditions for several years before germinating and have thus all adaptive characteristics towards the aridity of the environment. Indeed, these plants have a normal taproot that allows them to adapt to water shortage unlike nursery plants that do not have normal pivot. Seedlings will create vegetation that will cover the soil, reduce global warming and protect them.			
		The women recognize to have water in half-moons cavities. The permeability of the structure of the cavity slope remains functional several years even if it becomes covered after some time.			
		It is noted that certain rare species appear to develop in the conditions of the half-moons as <i>Bauhinia rufescens</i> , <i>Acacia nilotica</i> and <i>Cassia italica</i> .			
		The rehabilitated sites can attract wild animals like jackals and hyenas, as well as birds with many nesting. Rats also can multiply if the cutting or grazing grass is not practiced on the rehabilitated sites.			
		The structure and soil fertility will evolve with input from animal organic matter (manure) from the infiltration of water and vegetation development. There is an important development of <i>Cassia obtusifolia</i> during the first two years in the sites. Disadvantaged groups find their advantages in picking leaves of <i>Cassia obtusifolia</i> whose young leaves are eaten boiled in households and / or sold to the market so that children from Dori to town looking for these kind of leaves in the shallows or rehabilitated areas.			
		The rods are harvested for making mats. Food gathering of leaves of <i>Corchorus tridens</i> is done to make sauce; <i>Eragrostis tremula</i> are gathered to make brooms and and <i>Panicum laetum</i> (wild fonio) for food.			
		Other non-timber forest products for consumption and sale are: Fruit of <i>Balanites aegyptiaca</i> , <i>Ziziphus mauritiana</i> , <i>Acacia Senegal Gum / laeta, branches of Cassia italica</i> for pharmacopoeia care.			

		The rehabilitated sites may constitute relief areas in particular for elderly people.					
		The rehabilitated areas reduce transhumance movements to some herds of the village making available animal droppings in parks, fields and developed sites. The concentration of animal waste in the sites can be collected to fertilize the fields, it can also constitute pottery work for artisans.					
		Medicinal plants like Cassia italica, Euphorbia hirta appear on the new rehabilitated sites.					
D.	Conformanc e	Yes	No	N/A			
Е.	Corrective Actions (describe)	N/A					
F.	AGED response	N/A					
G.	Status						

Theme	4. Livelihood Benefits				
Ensuring that to Standard (2013	Ensuring that the project meets requirements 4.1-4.14, 7.1-7.5 and 8.1-8.10 of the Plan Vivo Standard (2013)				
A. Requiremen	Has the project undergone a producer/community-led planning process aimed at identifying and defining sustainable land-use activities that serve the community's needs and priorities?				
B. Guidance I for Validate	Assess this by discussions with project staff and communities and by looking at any records of the planning process. It may be useful to conduct a time-line exercise with communities to understand the planning process that has taken place.				
C. Findings (describe)	In all exchange meetings at village level, community groups participating in the project are represented by the Village Development Council (CVD). With the recent elections and the establishment of municipal councils in July 2016, the CVD's were renewed in all the villages and will continue the activities initiated by the CVD who served previously in special communal delegations. The Village Development Council was established in 2007 by Decree No. 2007-032 / PRES / PM / MATD) as an official authority to give the village a unique and formal structure to organize and develop local initiatives.				
	Rural Communities of involved villages acknowledge having participated in the development of the project through several local meetings involving all members of the community. They were involved in the process of decision making on sites to rehabilitate, the selection of species for seeding, the sharing of benefits arising from PES scheme and managing the use of developed land. They decided which tree and herbaceous species were introduced on the rehabilitatted sites and how sites should be managed on the basis of local land charters. The sharing and awareness sessions have helped local communities to understand the objective of the rehabilitation of degraded pastures and to participate in decisions and to be responsible for the selection of species and the management of these sites.				
	The consultation procedure has used the "focus group" technique because in the dominant Fulani culture, the women and the girls are not authorized to speak publicly before the men and the elderly. For this, the participants were grouped into homogeneous groups to promote free and conscious expression, to gather opinions and improve the consideration of the concerns of vulnerable groups. After the exchange of the focus groups, the views were shared in plenary session and a consensus was reached in the process of decision making. This approach has ensured that, for example, women's needs were taken into account when selecting tree and grass species for rehabilitated pastures. This step allowed the direct participation of women with men in exchange meetings of project validation in all the villages, the principle being that nobody should speak for the other or engage in a decision without its opinion.				
D. Conforman	Yes X No No N/A				

Е.	Corrective Actions (describe)	N/A
F.	AGED response	N/A
G.	Status	
	Requirement	4.2 Socio-economic impact assessment/monitoring plan Is there a robust socio-economic impact assessment and monitoring plan in place that can measure changes against the baseline scenario?
В.	Guidance Notes for Validators	Discuss with project staff and communities to understand how the baseline assessment was conducted and how the socio-economic monitoring plan developed out of this. Assess in particular:  • Whether the livelihoods indicators can effectively monitor socio-economic changes taking place  • The extent to which women, disadvantaged people and other social groups have been involved in the project processes and whether the selected indicators will enable impacts on them to be determined  • Whether any groups in the community are likely to be adversely affected by the project and whether there are any mitigation meausures in place to addres this
C.	Findings (describe)	The NGO AGED more than the rural communities is aware of the content of the surveys that will be carried out in the sample households on the socioeconomic indicators. Indeed, the notion of indicators is not well understood by the local populations who nevertheless will agree to give useful information to inform about the impacts of the project on living conditions.  As no household survey and referential resources have been conducted as baseline before the project intervention, investigations should be conducted in villages with similar basic conditions that are not included in the scope of the project.
		Socio-economic indicators: Socio-economic indicators are used for the household and the village. The socio-economic indicators identified for the household and the village allow for effective monitoring of socio-economic changes taking place. However, these indicators are numerous enough to inquire. It would be interesting to target the most relevant ones.  The indicators at the household level could be: The number of goats (grazing shrubs and affecting the regeneration)
		The number of improved cookstoves  The indicators at the village level could be: The amount of milk produced per cow The number of cows calving The number of households with herds left in transhumance

		But there are also negative impacts to report with measurement indicators. The number of animals injured in the rehabilitated sites  The number of animals eaten by wild animals				
		Carbon payments could be used to reinvest in seeding sites, solve other socio-economic problems of the village for example the creation and / rehabilitation of water points (boreholes), improve other socio-economic conditions of the village (acquire improved stoves to reduce the pressure on wood resources).				
D.	Conformance	Yes No N/A				
E.	Corrective Actions (describe)					
	AGED response	The chosen indicators are:  (i) Livelihoods:  - Annual revenue  - Income-generatings activities from the herbaceous products (eg Sekko from the stems of Cassia Tora.)  - Income-generatings activities from non-timber forest products  - Annual expenditure on education and health  - Materials used for homes  - Access to food during the lean season  - Use of medicinal species  - Temporary Transhumance  - Number of dead animals  - Calving rate in cattle  - Need purchase fodder  - Number of goats  - Calving rate in cattle  (ii) Village:  - Number of conflicts in NRM  (iii) Negative Impacts:  - Return of wild carnivores				
G.	Status					
Α.	Requirement	4.3 Sale agreements and payments  Does the project have clear procedures for entering into sale agreements with producers/communities based on saleable carbon from <i>plan vivos</i> ?  Does the project have an effective and transparent process for the timely administration and recording of payments to producers?				
В.	Guidance Notes for Validators	Check the systems that are being proposed by the project and make an assessment of whether these are fully functional already or whether they can be made functional when required? Are communities/producers aware of the system and do they understand it? Are documents and materials readily available to producers/communities?				

C.	Findings (describe)	Communities / producers gradually learn about carbon offset system which is a first in Burkina Faso but are aware that they can not only improve their pastoral resources. They can get better organized to manage their plant resources but also receive funding to fight against poverty.				
		The project has clear procedures for concluding sales contracts with producers / communities on the saleable carbon-based Vivos plans at a density of tree plants / ha minimum required over the 30 years.				
		A model PES payment contract together with the village development council of each village involved has been elaborated. The contract describes the roles and responsibilities of the parties to the contracts. It also describes the terms and conditions governing the production of ecosystem services and payment for these services related to the seeding activities and sustainable management of the recovered sites.				
		The documents and materials are readily available to producers / communities as an Excel spreadsheet.				
D.	Conformance	Yes No N/A				
Е.	Corrective Actions (describe)	N/A				
F.	AGED response	N/A				
G.	Status					
<b>A.</b>	Requirement	<b>4.4 Benefit sharing and equity</b> Will the project have livelihoods benefits for the local community? Are these benefits likely to accrue to all community members and/or are benefits targeted at particular groups within the community? What other actions is the project taking to ensure that disadvantaged groups e.g. women, landless households, poor people will benefit from sales of Plan Vivo certificates?				
В.	Guidance Notes for Validators	<ul> <li>Whilst there may be livelihoods benefits resulting from the project, it is critical to ensure that benefits are equitably shared. This can be assessed by:</li> <li>Checking whether a local stakeholder/well-being analysis has been conducted to identify socio-economic groupings in the community</li> <li>Assessing the level of governance of local groups (are issues of equity and benefit sharing discussed during meetings?)</li> <li>Discuss with a small sample of households from different socio-economic groups to determine their level of understanding of the benefits they are likely to get from the project.</li> </ul>				
C.	Findings (describe)	The level of governance on equity and benefit-sharing issues was discussed during the meetings and the validation mission learned that disadvantaged groups find value in the benefits of the rehabilitated sites, like non-timber forest products, the use of water within the half-moons, etc				

		Accounts opened at the credit union bank of Dori allow to put the income payments of local communities that manage resources. The system works with deposit checks.  PES payments will be used to reinvest in seeding the sites, to solve other socio-economic problems of the village like the creation and / rehabilitation of water points.  The exchanges with the communities indicate that they are informed of the conditions of carbon payment and have decided that the CVD will organize meetings to decide on the usage of the funds resulting from the fines of surveillance of the recovered sites like funds coming from PES via the project coordinator AGED.  The possible uses of the funds will are among others constructing infrastructure to improve socio-economic conditions by creating a literacy center, enrolling girls, reducing wood consumption through the acquisition of improved stoves				
D.	Conformance	Yes x	No		N/A	
E.	Corrective Actions (describe)	N/A				
F.	AGED response	N/A				
G.	Status					
The	Γhe Validator: GANABA Souleymane					
		()				

Date:

12 october 2016

Signature:

### 2. POST SITE VISIT ADDITION

#### AREA TO BE ADDED POST SITE VISIT

Geographical and Socio-Economic description of the site to be added to the existing project area

The fourth village, Sambonaye, was included in the project after our first field visit. However, we give an opinion on its conformity as it presents the same baseline, the same floristic composition of the vegetation of the managed parcels, the same socio-economic characteristics and the same reference zone of the project area.

Description of the village of Sambonaye:

#### a) Geographical situation:

The village of Sambonaye is located to the north-east at 35km of Dori chief town of the province of the Séno, this village is adjacent to Kargounol and Taka to the East; To the west to Goudebo; To the north to Belgou and Gassel; To the northwest to Gaigou, to the south to Selbo, Mamassiole, Bafele and to the South-East to Kriyollo.

### b) Climate

There are two types of season:

- a dry season from October to June (8 to 9 months), with extreme temperature variations ranging from 40 ° C to 45 ° C during the day and up to 33 ° C to 27 ° C in the Night. During this period, the landscape becomes very arid;
- a shorter rainy season beginning in June-July (3-4 months) and ending in September-October. The vegetation becomes generous and the landscape impressive. Streams and bodies of water (ponds and other water reservoirs) are overflowing.

#### c) Natural resources

- Water: The village of Sambonaye has important surface water resources. These water points dry
  up in the dry season. The intermittent nature of streams coupled with their continuous silting
  makes it difficult to provide water to livestock during the dry season. Its density and flow
  regime depend on rainfall that has an irregular distribution in time and space. There is a dam in
  the village, which attracts many transhumants.
- Vegetation: The area is a pastoral enclave for livestock, particularly for transhumant pastoralists. The vegetation is characterized by the steppe trees and shrub with strong degradations. The main species are: Acacia radiana, Acacia nilotica, Acacia seyal, Prosopis juliflora, Azadirachaindica, Balanites aegyptiaca, Zizyphus mauritana, etc. These natural species are of great use because foliage and / or fruit serve as fodder for feeding livestock

#### d) Rural population

The results of the last General Population and Housing Census (RGPH) 2006 show that Sambonaye had 278 households distributed as follows: 760 men, 752 women, that is 49.74% women with a total estimated population of 1512

This population is composed mainly of the Peulh, the Bella and the Gourmantchés. Their activity is based on breeding, agriculture and gold mining.

The population is Muslim.

### **REFERENCES**

Bambara D. (2016) : Changements climatiques en zones Centre et Nord du Burkina Faso : comparaison entre savoirs locaux et connaissances scientifiques, adaptation par les composts. Thèse de doctorat de l'Université de Ouagadougou , Spécialité : Sciences Biologiques Appliquées, Option : Botanique et Phytoécologie, 173p.

Burkina Faso (2010): DECRET N°2010-\_400\_/PRES/PM/MAHRH/ MRA/MECV/MEF/MATD portant modalités d'élaboration et de validation des chartes foncières locales.

Burkina Faso (2009): LOI N° 034-2009 / AN PORTANT REGIME FONCIER RURAL. www.gouvenement.gov.bf

CILSS (2009) : Récupération des sols fortement dégradés à des fins sylvopastorales : Une évaluation quantitative des aménagements mécaniques à partir de la charrue Delfino réalisés par l'ONG REACH au Burkina Faso. CILSS FERSOL, Ouagadougou, 34 p.

Commune de Gorom-Gorom (2015) : Charte foncière locale inter villageoise de la commune de Gorom-Gorom. Délibération 2015/07/CM/GG, 10p.

Commune de Markoye (2015) : Charte foncière locale de la commune de Markoye. Délibération 2015/07/CM/M, 8p.

Conedera M., Bomio-Pacciorini N. Bomio-Pacciorini P Sciacca S., Grandi L. Boureima A. Maria Vettraino A. (2010): Reconstitution des écosystèmes dégradéssahéliens. Bois et Forêts des Tropiques, 2010, 304 (2) 61-71.

Enete A.A. & Onyekuru A.N., 2011, Challenges of agricultural adaptation to climate change: empirical evidence from southeast Nigeria. Tropicultura, 29(4), 243-249 FAO, 2007

Fontès J. et Guinko S., 1995. Carte de la végétation naturelle et de l'occupation du sol, Burkina Faso. + notice explicative 67p.

Ganaba S. (2005). Impact des aménagements de conservation des eaux et des sols sur la régénération des ressources ligneuses en zone sahélienne et nord soudanienne du Burkina Faso. Vertigo 6 (2) | septembre 2005

Ganaba S. (2008): *Caractérisation, utilisation, tests de restauration et gestion de la végétation ligneuse au Sahel, Burkina Faso.* Thèse de Doctorat d'Etat ès Sciences Naturelle. Université Cheikh Anta-Diop n°117. Faculté des Sciences et Techniques, 287 p.

Grouzis M. (1988) : Structure, productivité et dynamique des écosystèmes écologiques sahéliens (mare d'Oursi, Burkina Faso). Thèse de doctorat d'Etat ès-Sciences Naturelles, Univ. Paris Sud, Editions de l'ORSTOM. Collections ETUDES et THESES, 336p.

Grouzis M., Nizinski J., Akpo E. (1991): IVe Congrès International des Terres de Parcours Montpellier – France – 22-26 Avril 1991, « L'arbre et l'herbe au Sahel : Influence de l'arbre sur la structure spécifique et la production de la strate herbacée, et sur la régénération des espèces ligneuses »

IFN2 (2015) : Equations allométriques d'estimation des volumes de bois et de la biomasse foliaire des arbres.

INERA (2014 et 2015): Rapports techniques d'état d'avancement du Protocole d'accord entre l'INERA et le Projet Azawak: Suivi scientifique des sites de récupération de terres dégradées réalisées par le Projet BKF/017 « Azawak Ressources Pastorales » notamment dans les communes de Gorom-Gorom, Markoye, Dori et Bani.

IPCC (2003): Good Practice Guidance for Land Use, Land-Use Change and Forestry. Penman J., Gytarsky M., Hiraishi T., Krug, T., Kruger D., Pipatti R., Buendia L., Miwa K., Ngara T., Tanabe K., Wagner F. (Eds).Intergovernmental Panel on Climate Change (IPCC), IPCC/IGES, Hayama, Japan. <a href="http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf\_contents.html">http://www.ipcc-nggip.iges.or.jp/public/gpglulucf\_gpglulucf\_contents.html</a>

IPCC 2007. Bilan 2007 des Changements climatiques, rapport du groupe d'experts intergouvernemental sur l'évolution du climat, rapport de synthèse. [En ligne : http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\_syr\_fr.pdf (Accès le 15/01/2013)].

Kadéba A., Nacoulma BMI, Ouédraogo A., Bachmann Y., Thiombiano A., Schidt M., Boussim IJ., (2015): Land covers change and plants diversity in the Sahel: A case study from northern Burkina Faso. In Ann. For. Res. 58(1): 109-123, 2015.

Kadéba A. (2016): Dynamique spatio-temporelle de la végétation sahélienne: Analyse des modifications et des indicateurs de la dégradation des terres (Burkina Faso, Afrique de l'Ouest)» Thèse de doctorat de l'Université Ouaga 1 Professeur Joseph Ki-Zerbo, UFR/SVT, 126p.

Kambiré HW, Djenontin INS, Kaboré A, Djoudi H, Balinga MPB, Zida M et Assembe-Mvondo S. (2015): La REDD+ et l'adaptation aux changements climatiques au Burkina Faso: causes, agents et institutions. Document occasionnel 123. Bogor, Indonésie: CIFOR.

Kiéma A., Nianogo A.J., Ouedraogo T. (2008): Effets des cordons pierreux sur la régénération d'un pâturage naturel de glacis au sahel [Effect of rock bunds on the regeneration of the vegetation of a natural pasture on open glacis in the Sahelian region of Burkina Faso]. Cahiers d'Agriculture 17(3): 281-288.

Kiéma A., Nanogo JA., Kaboré-Zoungrana CI., Jalloh B. (2012) : Effets des demi-lunes associées au scarifiage sur les productions fourragères en région sahélienne du Burkina Faso

KINOME (2015): « Mise en place d'un système de quantification des stocks de carbone dans le cadre du Projet Plan Vivo : récupération et gestion durable des pâturages dégradés au Sahel Burkinabé »

Lykke A.M., Kristensen M.K., Ganaba S. 2004 – Valuation of local use and dynamics of 56 woody species in the Sahel. Biodiversity and Conservation 13:1961-1990, 2004.

MBow C., Chhin S., Sambou B et Skole D. (2013): Potential of dendrochronology to assess annual rates of biomass productivity in savanna trees of West Africa. In Dendrochronologia 31 (2013) 41–51.

MECV (2006): Revue scientifique sur l'état de la dégradation des terres au Burkina Faso

MECV (2007) : « Programme d'action national d'adaptation à la variabilité et aux changements climatiques (Pana du Burkina Faso) » http://unfccc.int/resource/docs/napa/bfa01f.pdf

MEF (2008): Recensement général de la population et de l'habitation de 2006 – RGPH-3

MRA (2005) : « Initiative Elevage Pauvreté et Croissance (IEPC) » http://hubrural.org/IMG/pdf/burkina iepc.pdf

PNUD (2012) : « Rapport National sur le Développement Humain Burkina Faso 2012 » <a href="http://www.bf.undp.org/content/burkina\_faso/fr/home/library/human\_development/rapnatdh1">http://www.bf.undp.org/content/burkina\_faso/fr/home/library/human\_development/rapnatdh1</a> 2/

Pagot J., (1985): L'élevage en pays tropicaux. Éditions Maisonneuve et Larose, Collection techniques Agricoles et productions tropicales.

Poupon H. (1980): Structure et dynamique de la strate ligneuse d'une steppe sahélienne au nord du Sénégal. Paris : ORSTOM, 1980, (115), 351 p. (Travaux et Documents de l'ORSTOM; 115). Th. Sc. nat. : Paris Sud. Orsay : 1979/09/26, ISBN 2-7099-0562-0.

Saidou O., Douma S., Djibo AZ et Fortina R. (2010): Analyse du peuplement herbacé de la station sahélienne expérimentale de Toukounous (Niger) : composition floristique et valeur pastorale. Sécheresse 2010; 21(2):154-60

Sanou Y. et al. (2008): Zones d'Importances pour la Conservation des Oiseaux (ZICO) du Burkina Faso Statuts et Tendances 2008

Tindano E., Ganaba S. et Thiombiano A. (2011). <u>Rocky Woody Vegetation Diversity and Structure in the Oursi Dam Area, Northern Burkina Faso</u>. *ISESCO Journal of Science and Technology* 7 (12): 15-28.

Tindano E. (2016): Diversité floristique, phytosociolgie et dynamique de la végétation ligneuse des inselbergs suivant un gradient climatique nord-sud au Burkina Faso. Thèse de doctorat de l'Université de Ouagadougou, Spécialité : Sciences Biologiques Appliquées, Option : Botanique et Phytoécologie, Spécialité : Sciences Biologiques Appliquées, Option : Botanique et Phytoécologie, 127p.

Zizka A., et al. (2015): Traditional plant use in Burkina Faso (West Africa): a national-scale analysis with focus on traditional medicine

## 3. ANNEXES

### **Pictures**



Picture 1 : Vallerani tractor of AGED for the mechanical work of the half-moons



Picture 2 : Germination of *Cassia obtusifolia* on rehabilitated sites after 1 year



Picture 3 : Old stems and annual regeneration of *Cassia obtusifolia* on rehabilitated site



Picture 4 : Impression of the physiognomy of a rehabilitated site in July 2016

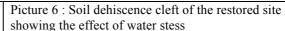




Picture 5 : Regeneration of *Balanites aegyptiaca* in a half-moon bead



Picture 7 : Community meeting with the rural village of Touka Bayel





Picture 8 : Strong female presence during the community meeting of the village of Touka Bayel



Picture 9 : Cooked leaves of *Cassia obtusifolia* used as food during the lean period



Picture 10 : Community meeting with the rural village of Touka Korno

### Timeline of the evaluation mission of the Plan Vivo project of AGED

Thursday 14/7: 12h -14h: Travel Gorom-Gorom - Dori

15h - 17h : Briefing with the Coordinator and the AGED project team

Friday 15/7: 6h30 -7h: Travel to Djigo 7h - 8h: Visit of the sites

8h -10h: Community meeting with the village of Djigo

10h -10h30 : Travel Djigo – Dori

14h -15h: interview with the representative of the Provencial Directorate for the Environment, Green Economy and Climate Change

15h -16h: interview with the Provencial Director of Animal Resources

16h15 - 17h : interview with the Coordinator of the project Ceekol Nagge de Nodde-Notto

Saturday 16/7: 6h30 -7h: Travel to Touka Bayel

7h -7h30: Visit of the sites

7h30-9h: Community meeting with the village of Touka Bayel

9h-9h30: Travel to Touka Korno

9h30-10h30: Visit of the sites

10h30 – 12h30 : Community meeting with the village of Touka Bayel

16h-17h: Interview with the Coordinator of PLCE

Sunday 17/7: Morning: Synthesis and analysis of the collected data

16h-17h: Interview with the Coordinator of AGED

Monday 18/7: 8h30-9h30: Debriefing at AGED

9h30-10h: Interview with the Mayor of the municipality of Dori

As from 10h: end of mission and return to Ouagadougou

## **Presence lists**

# Presence list community meeting with the village of Djigo on July 15, 2016

N° order	Name and surname	Sex	
		Men	Women
1.	Amadou Madou	+	
2.	Barry Sadikou amadou	+	
3.	Boukacar Hamadou	+	
4.	Cissé Maliki Hama	+	
5.	Diallo Aïssatou Hamidou		+
6.	Diallo Anata Hamidou		+
7.	Diallo Boureima Oumarou	+	
8.	Diallo Mamoudou Amadou	+	
9.	Diallo Soumaïla Alladji	+	
10.	Dicko Amadou hama	+	
11.	Dicko Abdoulaye Hama	+	
12.	Dicko Aïssatou		+
13.	Dicko Aissatou Hassane		+
14.	Dicko Aïssatou Issouf		+
15.	Dicko Amadou	+	
16.	Dicko Amadou Boureima	+	
17.	Dicko Amadou Hama	+	
18.	Dicko Anata Hama		+
19.	Dicko Balkissa Hamidou		+
20.	Dicko Fadima Alou		+
21.	Dicko Fadima Amadou		+
22.	Dicko Fadima Amadou		+
23.	Dicko Fadima Hama		+
24.	Dicko Fadima Hamidou		+
25.	Dicko Fadima Mamoudou		+
26.	Dicko Fadima Mamoudou		+
27.	Dicko Hadima Amadou		+
28.	Dicko Hadjatou		+
29.	Dicko Hadjatou Abdouramane		+
30.	Dicko Hadjatou Amadou		+
31.	Dicko Hadjatou Amadou		+
32.	Dicko Hadjatou Hama		+
33.	Dicko Hadjatou Mamoudou		+
34.	Dicko Hama Amadou	+	
35.	Dicko Hama Hamidou	+	
36.	Dicko Hama Hassane	+	
37.	Dicko Hamadou Oumarou	+	
38.	Dicko Hamidou Guédé	+	
39.	Dicko Hamidou Mamoudou	+	
40.	Dicko Kadidja Amadou		+
41.	Dicko Mairama Hama		+
42.	Dicko Mairama Hamidou		+
43.	Dicko Mamoudou Hamidou	+	

44.	Dicko Moussa Youssoufa	+	
45.	Dicko Oumou Issa		+
46.	Dicko Salou Boureima	+	
47.	Dicko Yéro Hama	+	
48.	Dicko Youssoufi	+	
Sub total		23	25
TOTAL			48

# Presence list community meeting with the village of Touka Bayel on July 16, 2016

N° order	Name and surname		Sex
		Men	Women
1.	Amadou Mamoudou	+	
2.	Balkissa Bello		+
3.	Bocou Abdoulaye Hama	+	
4.	Bocoum Aïssatou		+
5.	Bocoum Amadou	+	
6.	Bocoum Amadou Mamoudou	+	
7.	Bocoum Balkissa Hamidou		+
8.	Bocoum Boureima	+	
9.	Bocoum Boureima	+	
10.	Bocoum Drissa	+	
11.	Bocoum Fatimata Hama		+
12.	Bocoum Ousséini	+	
13.	Cissé Hama	+	
14.	Diabaté Aïssatou Hama		+
15.	Diabaté Amadou		+
16.	Diabaté Mairama		+
17.	Diallo Aïssatou Hama		+
18.	Diallo Aïssatou Hama		+
19.	Diallo Awa		+
20.	Diallo Boureima Hamidou	+	
21.	Diallo Fatima		+
22.	Diallo Fatimata		+
23.	Diallo Habibou Boureima		+
24.	Diallo Hadjatou Hama		+
25.	Diallo Seïdou	+	
26.	Dicko Aïssatou		+
27.	Dicko Aïssatou		+
28.	Dicko Aïssatou Hama		+
29.	Dicko Aminata		+
30.	Dicko Anata		+
31.	Dicko Asmaou Hama		+
32.	Dicko Awa Hama		+
33.	Dicko Balkissa Hama		+
34.	Dicko Boubacar	+	

35.	Dicko Boubacar Amadou	+	
36.	Dicko Bousra		+
37.	Dicko Bousra		+
38.	Dicko Djénéba Hama		+
39.	Dicko Djénéba Ousseini		+
40.	Dicko Fatima Hama		+
41.	Dicko Fatima Hamidou		+
42.	Dicko Fatimata Mamoudou		+
43.	Dicko Hadjatou		+
44.	Dicko Hadjatou		+
45.	Dicko Hadjatou Boubacar		+
46.	Dicko Hama	+	
47.	Dicko Hama	+	
48.	Dicko Hama Mamoudou	+	
49.	Dicko Hamidou	+	
50.	Dicko Hamidou	+	
51.	Dicko Hamidou Mamoudou	+	
52.	Dicko Mairama Hama		+
53.	Dicko Moussa Kadri	+	
54.	Dicko Tahirou	+	
55.	Fadima Nassourou		+
56.	Fadima Ousmane		+
57.	Hadjatou Amadou		+
58.	Hassane Hamidou	+	
59.	Lankoandé Adama		+
60.	Lankoandé Aïssatou		+
61.	Lankoandé Aïssatou Boureima		+
62.	Lankoandé Balkissa		+
63.	Lankoandé Fatimata Hamidou		+
64.	Lankouandé Moussa	+	
65.	Mamoudou Hamidou	+	
66.	Safiatou Moussa		+
67.	Tiam Fatimata		+
68.	Yattara Hamidou Amadou	+	
	Sub total/ Sex	25	43
	TOTAL GENERAL		68

# Presence list community meeting with the village of Touka Korno on July 16, 2016

N°order	Name and surname	Sex	
		Men	Women
1.	Aissatou Amadou		+
2.	Alhoki Dani	+	
3.	Alou Hama	+	
4.	Bocoum Anata Ousmane		+
5.	Bocoum Boureima Ousmane	+	
6.	Bocoum Fatimata		+
7.	Bocoum Hadjatou		+
8.	Bocoum Hadjatou Guedal		+

9.	Cissé Abdoulaye Hassane	+	
10.	Cissé Aissatou		+
11.	Cissé Amadou Oumarou	+	
12.	Cissé Boureima Yéro	+	
13.	Cissé Fatima Boureima		+
14.	Cissé Fatimata		+
15.	Cissé Hadjatou Amadou		+
16.	Cissé Hama	+	
17.	Cissé Hamadou Oumarou	+	
18.	Cissé Hamidou	+	
19.	Cissé Moussa Hamidou	+	
20.	Cissé Sambo	+	
21.	Diabaté Mairama Boureima		+
22.	Diallo Aissatou Hama		+
23.	Diallo Aissatou Mamoudou		+
24.	Diallo Ali	+	
25.	Diallo Amadou Boureima	+	
26.	Diallo Amadou dit Djika	+	
27.	Diallo Amadou Hama	+	
28.	Diallo Amadou Hama	+	
29.	Diallo Amadou Hamidou	+	
30.	Diallo Awa Hama		+
31.	Diallo Boureima	+	
32.	Diallo Boureima Hamidou	+	
33.	Diallo Boureimma Amadou	+	
34.	Diallo Djeneba Amadou		+
35.	Diallo Djénéba Hama		+
36.	Diallo Fadima Hama		+
37.	Diallo Hadjatou Hamidou		+
38.	Diallo Hamidou Ousmane	+	
39.	Diallo Issa	+	
40.	Diallo Mamoudou	+	
41.	Diallo Moussa	+	
42.	Diallo Rabia Boureima		+
43.	Diallo Yaya	+	
44.	Diallo Zakariaou	+	
45.	Dicko Anata Boureima		+
46.	Dicko Balkissa Oumarou		+
47.	Dicko Boureima Boubacar	+	
48.	Dicko Boureima moussa	+	
49.	Dicko Djénéba Hama		+
50.	Dicko Fatimata		+
51.	Dicko Fatimata		+
52.	Dicko Fatimata Amadou		+
53.	Dicko Habsatou Amadou		+
54.	Dicko Hamidou Hama	+	
55.	Dicko Issa Hama	+	
56.	Dicko Mamoudou Amadou	+	
57.	Dicko Moussa	+	
		-1	

58.	Dicko Moussa	+	
59.	Dicko Moussa Boureima	+	
60.	Dicko Moussa Hama	+	
61.	Dicko Nouhoun	+	
62.	Dicko Oumarou	+	
63.	Dicko Soumaï		+
64.	Fatimata Amadou		+
65.	Hadjatou Amadou		+
66.	Hama Amadou Bogo	+	
67.	Hama Boureima	+	
68.	Hama Mamoudou	+	
69.	Hamadou Hamidou	+	
70.	Hamidou Amadou Hama Billa	+	
71.	Maiga Salamatou		+
	Sub total	41	30
	TOTAL		71

# **Site description sheet**

		Date
Site	Village	Commune
Type of implementa	ation:Coordinates	GPS (X)
	on: foothills/_/ Glacis/_/ l/_/ rocky/_/ sandy/_/ clay/_/	Dune / _ / Plateau / _ /
Type of vegetation	1= steppe with trees 2= shrub	steppe 3= grassy steppe 4= other
Recovery rate: - woody species / herbaceous species		
nerouceaus species	5/ <u> </u>	
	ght: wooded shrub wooded shrub	herbaceous herbaceous.
Dominant species:-	tree stratum 1	2
		2
-her		4
Type of plantation:	indigenous species / _ / natura	alized species / _ / both/ _ /
Fires: yes / _ /	no / _ / Last acciden	ntal fire:
Woodcut: none / _ /	weak / _ / moderate / _ / h	igh / _ /
Non-timber forest p high / _ /	product or pharmacopoeia explo	itation: none / _ / weak / _ / moderate / _ /
Pasture : none / _ /	weak / _ / moderate/ _ / high /	_/ very high/_/
Neighbouring agric	ultural activity Yes /_/ No /_/ S	urrounding distance
Neighbouring minir	ng industry Yes /_/ No /_/ Surro	ounding distance
Land Status of the s	ite:	
Observations:		

# Identification and characterisation sheet of the project coordinator

Name of the structure		Status	
Date of creation			
Amount of the operating budget (in 2016 in FCFA)		Banks for direct debit accounts	
Signatories of accounts	1.	2.	3.
Unique Financial Identification Number (IFU)			
Workforce 2016	Number of Local National  Number of non Local National  Number of non National		(Nationals originating in the region of exploitation) (Nationals other than those of the region of exploitation)
Authorisation of creation	N° Decree	Address/contact	Region/Commune

	Identification	Address/contact	Qualification
Name of Director /			
Coordinator			
Name of External			
Auditor / PCA			
Have the financial			
statements for 2016 been			(If yes, please
audited? (Yes No)			attach the
			financial and

			accounting report for 2016 and / or earlier) If not consider prior periods
Is there a Board of Directors or Management? (Yes No)			(If yes, please attach the report of the last and / or previous session)
Producer groups or associations in the intervention villages of the project (Indicate the recognition receipts)	Farming	Forestry	Craft
State structures partners of the project (quote)		Private Structures Partners of the project (cite)	
Participatory methods and tools for the involvement of producers			
Communication plan of the project implementation			
Conflicts resolution system of the project			
Number of meetings and training workshops for producers			
Number and dates of meetings with specific target groups (youth, women, disadvantaged social groups) since the project was finalized	Young	Women	Farmers
Monitoring system developed by the project (against cuts, bush fires)			
Is there a management plan for the developed area?			

Certification by the reporting entity's management	
I, the undersigned for and on behalf of the reporting entity declare that the information	
contained in the attached declaration is correct and reliable.	
Name	
Position	