



RESEARCH  
PROGRAM ON  
Forests, Trees and  
Agroforestry



RESEARCH PROGRAM ON  
Climate Change,  
Agriculture and  
Food Security



Environmental Change Institute



# Scenario-guided policy development in Burkina Faso in the context of climate change

---



*Photography by Kaboré Hervé*

A national workshop in Ouagadougou, Burkina Faso, 14-15 July 2015

## Workshop Report

---

---

## **Table of contents**

1. Introduction	3
2. Workshop Process	5
3. Results	9
4. References	53
5. Appendix 1: Workshop participants	54
6. Appendix 2: Summary of the PNSR	56

## 1. Introduction

The Consultative Group on International Agricultural Research (CGIAR) is a global partnership that brings together 15 research centers committed to a hunger-free future. The research it conducts aims at reducing rural poverty, improving food security, human health and nutrition, and promoting sustainable natural resources management. In order to increase its effectiveness and build on its achievements, CGIAR undertook reforms in 2008 aimed at improving synergies between the various research centers and the other actors of the agricultural world and refocus efforts of the centers on the main challenges to global development. These reforms have led to the development of collaborative research programs between the centers known by the acronym CRP (CGIAR Research Program).

In Burkina Faso, several centers of the CGIAR group (CIFOR<sup>1</sup>, ICRAF<sup>2</sup>, ICRISAT<sup>3</sup>, IWMI<sup>4</sup> and ILRI<sup>5</sup>) implement research under the following CRPs: Forests, Trees and Agroforestry (FTA), Water, Land and Ecosystems (WLE) Climate Change, Agriculture and Food Security (CAAFS) and Dryland Systems.

Since 2013, these CRPs undertook a joint initiative to tackle the twin challenges to more effectively coordinate their interventions in Burkina Faso and to demonstrate the contribution of their research to the development goals set by the Government of Burkina Faso for the rural sector. Thus, a partnership concept was developed to serve as a planning, monitoring and learning tool of this initiative and in addition, a common vision, a mission and a roadmap have been defined for this initiative extended to non-CGIAR research and development actors. Building a thematic and geographical database of all CGIAR projects and those of non-CGIAR actors working in the rural sector of Burkina has also been initiated, which was later included in the map database Initiative of Government and technical and financial partners' interventions in the area of rural development in Burkina, led by the SP/CPSA (*Secrétariat Permanent de Coordination des Politiques Sectorielles Agricoles*).

As a part of this project, a workshop was organized focusing on the revision of the National Rural Sector Program, or *Programme National du Secteur Rurale* (PNSR) in French. This workshop took place **14-15 July 2015**, in the conference room of Royal beach Hotel, Ouagadougou. The process

---

<sup>1</sup> Center for International Forestry Research

<sup>2</sup> World Agroforestry Center

<sup>3</sup> International Crop Research Institute for Semi-Arid Tropics

<sup>4</sup> International Water Management Institute

<sup>5</sup> International Livestock Research Institute

was aimed at examining the policy in the context of multiple socio-economic and climate scenarios, to improve the policy's robustness, flexibility and feasibility in the face of these diverse futures. In addition, the joint initiative of the CRPs FTA, CCAFS, WLE and Dryland was linked to this process: workshop participants identified how CGIAR research can contribute to strengthening the PNSR. This scenario-guided policy development process is unique as it brings together CGIAR experts and national policy making experts, and links policy formulation directly to research.

The objectives of the workshop were to:

1. Identify the issues addressed in the PNSR
2. Formulate key objectives of the PNSR (for both 5 and 10 years)
3. Identify contribution of CGIAR research to PNSR objectives
4. Downscale the CCAFS West Africa scenarios developed in 2010-2012 (together with a wide range of regional stakeholders) to the level of Burkina Faso
5. Review the PNSR in the context of the Burkina Faso scenarios
6. Improve the PNSR and first draft on basis of the scenario-guided review
7. Improve contribution of CGIAR research on basis of the scenario-guided review

Participants included policy makers, researchers, academics, rural private sector and civil society

## 2. Workshop process

The workshop took place 14-15 July 2015 at the Royal Beach Hotel in Ouagadougou, Burkina Faso. The workshop process consisted of four phases, which will be described in more detail in this chapter.

### *Outline of the workshop*

First, the workshop participants were divided into four groups. All groups analysed a specific part of the PNSR (see Appendix 1) to create first drafts for improvement (based on the five and ten year objectives that were identified) as well as preliminary CGIAR research proposals aimed at contributing to the PNSR objectives (phase 1). Then, the groups were reshuffled into four new groups, with the assignment to downscale the CCAFS West Africa scenarios to the relevant policy levels (from regional to national; phase 2). These scenarios were subsequently used to test the feasibility of the new PNSR drafts and CGIAR research proposals that were put up during phase 1 and provide suggestions for improvement (phase 3). This resulted in a final draft proposal that is expected to be feasible in the context of diverse socio-economic/ climate futures (phase 4).

After the workshop process, these steps will be taken forward in cooperation with the SP/CPSA (phase 5 and 6). The workshop outline and subsequent steps are summarized in table 1.

*Table 1: Phases of the workshop and post-workshop steps*

<i>Phase</i>	<i>Activities</i>	<i>Result(s)</i>
1 – Analysis and evaluation of PNSR; formulation of 5 and 10 year objectives; define how CGIAR research can support this	Identification of gaps (including across levels); adding elements	New draft policy; CGIAR research proposal
2 – Downscaling of CCAFS West Africa scenarios	Creating policy-relevant multi-level scenarios	Down-scaled, multi-level scenarios
3 – Review of PNSR through down-scaled scenarios; review of CGIAR research proposal	Testing feasibility of new draft and providing suggestions for improvement; tailoring CGIAR research contribution to PNSR	PNSR recommendations from scenarios; improved CGIAR research proposal

	objectives in accordance with scenarios	
4 – Proposing a new draft of the PNSR in response to recommendations from scenarios	The policy development groups reconvene to process the comments and recommendations provided by the scenario groups to improve the PNSR	Improved draft
5 – Developing a detailed plan to implement proposed changes		Detailed implementation plan
6 – Implementation proposed changes into policy	Implementing the proposed changes in collaboration with national government and other responsible stakeholders	Final policy

The results of the meeting will be 1) an analysis and revision of the PNSR; 2) tailored socio-economic/climate scenarios for Burkina Faso; 3) an introduction to scenarios methodology for strategic planning for all participants, and 4) tailored CGIAR research proposals to contribute to PNSR objectives.

*Background: CCAFS scenarios*

Within the CCAFS program, multi-stakeholder regional scenarios (see Box 1) have been developed for the West African region and 5 other global regions in order:

1. to explore key regional socio-economic and uncertainties for food security, environments and livelihoods under climate change through integrated qualitative-quantitative scenarios describing futures up to 2050;
2. to use these scenarios with regional, global and local actors for strategic planning and research to explore the feasibility of strategies, technologies and policies toward improved food security, environments and livelihoods under different socio-economic and governance conditions.

**Box 1: CCAFS West Africa scenarios** (taken from CCAFS West Africa working paper)

The CCAFS scenarios for Western Africa were developed from 2010 to 2012 during four workshops attended by a range of stakeholders from different backgrounds but with a shared interest in food security, environments and livelihoods.

The development of scenarios for policy and investment guidance on food security, environments and livelihoods in West Africa focused initially on Senegal, Mali, Burkina Faso, Niger and Ghana from the early 2010s up to 2050 while also covering the entire ECOWAS region.

The main steps were to set a suitable time horizon and then to identify the key drivers of change. The participants set the time horizon at 2030, since they felt this would allow sufficient time for planning at the regional level while still developing fairly detailed narratives. Later, the scenarios were extended to 2050 to

Participants then identified the key drivers of future change, selecting those relevant to food security, environments and livelihoods, and listing them according to their importance and to the level of uncertainty associated with them. Climate change was not included among these drivers since this factor of change, while of central importance to CCAFS and its partners, is introduced in the quantitative modelling as an integrated dimension of the scenarios.

Two drivers were considered highly relevant for future food security, environments and livelihoods in West Africa, but with high levels of uncertainty attached to them:

- whether short-term or long-term priorities dominate in regional governance
- whether state or non-state actors are the driving force of change in the region

These two ‘uncertain’ drivers were used to structure four scenarios. An artist impression of these scenarios by André Daniel Tabsoba is displayed in figure 1.



Figure 1. Cartoon representation of the scenarios, by André Daniel Tabsoba



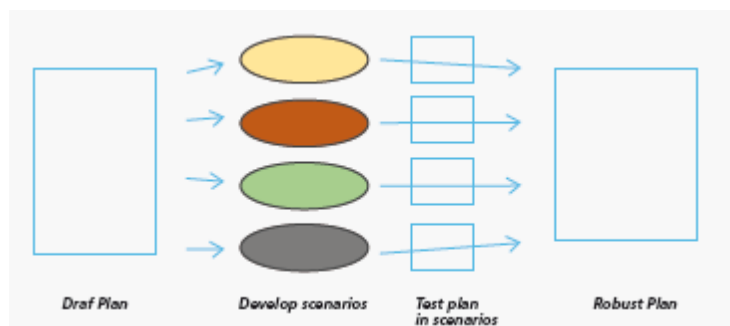
Globally, the CCAFS scenarios program works with 240 partner organizations who through the use of scenarios have identified 81 policy impact pathways. The scenarios program is supported by global partners such as FAO, UNEP-WCMC, Oxfam GB and by regional economic bodies and national partners in its regions.

Within the CCAFS program, combined regional socio-economic/climate scenarios have been developed with a wide range of stakeholders in East and West Africa, as well as South Asia, Southeast Asia and Latin America. For East Africa, a set of qualitative scenarios up to 2050 was developed in close collaboration with regional stakeholders. Subsequently, these scenarios have been quantified using two agricultural economic models: GLOBIOM, developed by IIASA, and IMPACT, developed by IFPRI. The CCAFS scenarios project focuses strongly on the use of scenarios for decision making to achieve better policies and investments. In East Africa, government policies and action plans have been tested and developed to be feasible in the face of the challenges posed by the combined socio-economic and climate scenarios. Subsequently, maps on land use, ecosystem services and biodiversity have been developed in collaboration with UNEP WCMC. These maps were used by regional decision-makers to start to review and propose improvements to strategies.

### **Box 2: Best practice – Scenario-guided policy development in Honduras**

The CCAFS Scenarios team in Latin America worked together with experts and decision makers from Honduras, Belize, Guatemala, Panama, Costa Rica, and Nicaragua to develop four regional scenarios. Thereafter, a national scenario-guided policy workshop was held in Honduras. Participants, including representatives from the Secretariat of Agriculture and Livestock (SAG), first reviewed the Strategy for risk management and climate change adaptation (2015-2019) for the sector of agriculture and livestock. Then, they downscaled and tailored the regional scenarios to the context of Honduras. In addition, they were informed about quantitative model results per regional scenario. The next step was testing the robustness of the Strategy in the face of the four downscaled scenarios. The participants identified the main barriers for the Strategy and enabling factors in each scenario. On basis of this, they formulated recommendations to improve the effectiveness of the strategies' milestones, objectives and action points (see figure 2 for a schematic representation of the workshop process). These recommendations were integrally implemented in the Strategy, resulting in the following:

- An entirely new strategic objective within the strategy; focused on training for farmers in adaptation measures in increase production capacity
- Other elements that were added to the strategy were the improvement of agro-climatic information systems; early warning systems; and land use planning
- Its original focus on stimulating aquaculture production was expanded to other types of livestock



*Figure 2. A draft plan is tested and improved through multiple scenarios*



### 3. Workshop results

#### 3.1 First review of the PNSR

During this session participants were subdivided into four groups, each addressing one of the four policy themes (or axes, as they are called in the PNSR). They came up with long-term (10 years) and short-term (5 years) objectives the PNSR should be working towards. The group discusses how it can be improved. Secondly, the key issues addressed by each new draft of the PNSR themes were identified. These issues were aggregated into a single list, to be used in the tailoring of the scenarios the next day.

##### *3.1.1 Long-term and short term objectives by theme (axis)*

###### Axis 1. Improvement of Food Security and Sovereignty

Long-term objectives of the PNSR

- Sustainable management of agricultural water
- Sustainable management of soil fertility
- Promotion and dissemination of improved seeds
- Strengthening the capacity of stakeholders at all level
- Strengthening food sovereignty both qualitative and quantitative
- Sustainable growth and diversification of the supply of agricultural products.
- Promotion of the production and consumption of rich food in nutrients
- Access to agricultural inputs and equipment
- Promotion of fundamental research in agricultural matters
- Promotion of non-timber forest product as food product
- Contribute to securing farms (agriculture, livestock, agroforestry)
- Establishment and operationalization of an early warning system

Short term objectives of the PNSR

- Contribute to securing farms (agriculture, livestock, agroforestry);
- Improve access to agricultural inputs and equipment (agriculture, livestock and forestry);
- Strengthen the technical capacity of the actors (producers, agro-dealers, etc.)
- Promote the use of improved varieties;
- Promote sustainable management technologies of pest control;

- Promote sustainable management techniques of soil fertility
- Improve the legal and regulatory framework in the livestock sector (particularly the formulation and adoption of animal husbandry code)

Axis 2. Improvement of Rural Populations' Incomes

Long term objectives (10 years)	Short term objectives (5 years)
1. Promoting consumption of local agricultural products particularly by engaging State to grant priority to local products when buying food products for public institutions	State buys first systematically local productions to supply public institutions (school canteens, military barracks, hospitals, etc.)
2. Developing agricultural entrepreneurship based on SMEs / SMIs as well as small family farms	Mechanize farms of family type up to 15% compared to the current situation and improve rural electrification
3. Identify and develop cash crops	Promote incentives for developing value chains of sesame, milk and cashew
4. Developing socio-economic infrastructures of support for agricultural production in rural areas	Build and make functional stores for agricultural products
5. Valorization of local agricultural production through processing and insurance of product quality	Provide existing agri-food processing establishments with appropriate equipment
6. Facilitate access to regional and international markets	Facilitate access to regional and international markets
7. Ensure access to financing adapted to agricultural producers	Create a guarantee fund to support the establishment of agricultural enterprises by young people and women
8. Promoting effective information systems on markets	
9. Better organize the producers within umbrella organizations which have capacity	Better organize producers within umbrella organizations which have capacity to handle provision of services to their members

to handle provision of services to their members	
10. Establish mechanisms to ensure that a minimum income is guaranteed to farmers	

Axis 3. Sustainable Management of Natural Resources

Long-term objectives of the PNSR

- Increase the availability of and access to water for production
- Develop innovative approaches to natural resource management
- Promote sustainable management of natural resources
- Ensure the effective involvement of local stakeholders in the governance of natural resources
- Establish a reliable mechanism for the equitable distribution of revenues from the exploitation of natural resources.

Short term objectives of the PNSR

- Strengthen the operational capacity of local communities in water management matters.
- Disseminate research results in the rational management of natural resources
- Improve agro-forestry-pastoral yields through effective, efficient and appropriate technologies.
- Strengthen the capacity of technicians and local communities in REDD +
- Improving consideration of gender in natural resource exploitation

Axis 4. Improve access to drinking water and life framework

Key objectives by 10 years

1. Use of renewable energies
2. Creation of water points with a focus on the professionalization of water management
3. Focusing on simplified drinking water supply in rural areas
4. Water supply in suburban areas
5. Treatment and recovery of waste water
6. Equip all municipalities with public latrines and ensure awareness and maintenance
7. Environmental education in rural areas
8. Develop a communication to sanitation approach
9. Enhance hygiene education in the family / domestic environment
10. Creating more water catchment facilities

11. Fight against pollution from gold digging
12. Fight against corruption in water management.

#### Key objectives by 5 years

1. Gradually replacing man-powered pumps by solar and wind pumps
2. Professionalization of water management in rural areas through the training of local actors
3. Extension of simplified drinking water supply in rural areas
4. Awareness and education of rural populations on the use of latrines through a communication approach on the access to sanitation
5. Enhancement of water supply in suburban areas
6. Transparency in the management of water users' associations
7. Fight against pollution from gold digging and mining
8. Fight against industry-related pollution

#### *3.1.2 List of key issues addressed by the PNSR*

### AXIS 1 – IMPROVEMENT OF FOOD SECURITY AND SOVEREIGNTY

#### 1.1 – SUSTAINABLE DEVELOPMENT OF AGRICULTURAL PRODUCTION

- Climatic conditions
- Land tenure
- Access to agricultural equipment
- Access to mineral fertilizers
- Production of organic manure
- Crop yields
- Cereal production
- Cash crops production
- Locusts and other pests
- Soil fertility

#### 1.2 – IMPROVEMENT OF PRODUCTIVITY AND COMPETITIVENESS OF ANIMAL PRODUCTION

- Food (in)security of cattle
- Persistence of certain diseases

- Poor performance of local animal breeds
- Low mastery of animal production techniques
- Milk production
- Competitiveness of animal husbandry
- Level of professionalism of stakeholder in the animal production sector
- Quality of livestock feed
- Genetic potential of local breeds
- Marketing infrastructure
- Research for animal production

### 1.3 IMPROVEMENT OF ANIMAL HEALTH AND VETERINARY PUBLIC HEALTH

- Livestock health
- Diseases transmitted by food of animal origin

### 1.4 SUSTAINABLE DEVELOPMENT OF AGRICULTURAL WATER

- Irrigation
- Water storage capacity

### 1.5 - PREVENTION AND MANAGEMENT OF FOOD AND NUTRITION CRISES

- distribution of food over the country
- Local food insecurity
- Natural disasters causing food crises
- Capacity to deal with food crises

## AXIS 2. IMPROVEMENT OF RURAL POPULATIONS' INCOMES

### 2.1. PROMOTION OF AGRICULTURAL ECONOMY

- market access of farmers
- Agricultural product marketing
- Export
- Processing of agricultural products
- Techniques and infrastructure for (post-harvest-)storage
- Information system on the market
- Funding for agriculture stakeholders (including women and youth)

## AXIS 3: SUSTAINABLE DEVELOPMENT AND NATURAL RESOURCE MANAGEMENT

### 3.1. ENVIRONMENTAL GOVERNANCE AND PROMOTION OF SUSTAINABLE DEVELOPMENT

- Environmental governance
- Sustainable development
- Sustainable management of renewable natural resources
- Deforestation/reforestation
- Biodiversity
- Wetlands

### 3.2. SUSTAINABLE MANAGEMENT OF WATER, SOIL AND SECURITY IN RURAL AREAS

- Demand for water
- Climate change
- Level of water resource degradation resulting from human activities
- Distribution of water in time/space
- Knowledge of water resources, their management and protection
- Competition and conflict between stakeholders for control and use of land
- Rate of agricultural migration
- Pastoral transhumance
- Concentration of land in the hands of entrepreneurs called agri-business people or "new stakeholders"
- Efficiency of legal and institutional mechanisms for land management and management of rural conflicts

### 3.3 - SECURITY AND SUSTAINABLE PASTORAL RESOURCE MANAGEMENT

- Amount of grazing land
- Access to pastoral resources
- Access to water
- Climatic degradation
- Conflicts between users of natural resources
- Pastoral infrastructure

### 3.4 - DEVELOPMENT OF FOREST, WILDLIFE AND FISHERY PRODUCTION

- Deforestation
- Vegetation cover

- Fishery resources
- Wildlife resources
- Aquaculture

#### AXIS 4: IMPROVE ACCESS TO DRINKING WATER AND LIFE FRAMEWORK

##### 4.1 - DRINKING WATER AND SANITATION

- Access to safe drinking water and sanitation in rural areas
- Access to safe drinking water and sanitation in urban areas
- Prevalence of waterborne diseases

##### 4.2 - CLEANER ENVIRONMENT AND IMPROVED LIFE FRAMEWORK

- Management of domestic wastewater and excreta
- Municipal, radioactive, industrial and hospital solid waste
- Air pollution
- GHG emissions
- Invasive aquatic plants
- Drainage of rainwater
- Health
- Environmental awareness

#### AXIS 5: DEVELOPMENT OF PARTNERSHIP BETWEEN RURAL STAKEHOLDERS

##### 5.1 - STEERING AND SUPPORT

- Number of staff
- human resource capacity
- level of equipment (computer hardware and others)
- availability of financial resources mainly for proper monitoring of activities, collection, processing and dissemination of statistical information
- legal and regulatory framework
- monitoring and evaluation capacities



### 3.2 Operationalization of elements into a theme drafts

The next step was to define the timeline, who is responsible and where the funding is coming from. This resulted in a new draft of the theme (or axis).

Axis 1.

<i>Element</i>	<i>Timeline</i>	<i>Who is responsible</i>	<i>Funding</i>
Contribute to securing farms (agriculture, livestock, agroforestry)	5 years	Government	Government
Improve access to agricultural inputs and equipment (agriculture, livestock and forestry)	5 years	Government Farmers organization	Government Private sector (agro-dealers)
Strengthen the technical capacity of the actors (producers, agro-dealers, etc.)	5 years	Government and	Government / Financial partners / Farmers organization own resources
Promote the use of improved varieties	2 years	Government Agricultural Research institutions	Government CGIAR centers and its partners
Promote sustainable management technologies of pest control	3 years	Government Agricultural Research institutions	Government CGIAR centers and its partners
Promote sustainable management techniques of soil fertility	3 years	Government Agricultural Research institutions	Government CGIAR centers and its partners
Improve the legal	5 years	Government	Government

and regulatory framework in the livestock sector (particularly the formulation and adoption of animal husbandry code)			
---	--	--	--

Axis 2.

<i>Element</i>	<i>Timeline</i>	<i>Who is responsible</i>	<i>Funding</i>
<i>State buys first systematically local productions to supply public institutions (school canteens, military barracks, hospitals, etc.)</i>	<i>2 years</i>	<i>Government</i>	<i>Government, development partners</i>
<i>Mechanize farms of family type up to 15% compared to the current situation and improve rural electrification</i>	<i>5 years</i>	<i>Government, NGOs, producer organizations, private sector</i>	<i>Government, development partners, own resources</i>
<i>Promote incentives for developing value chains of sesame, milk and cashew</i>	<i>5 years</i>	<i>Government, NGOs, producer organizations, private sector</i>	<i>Government, development partners, own resources</i>
<i>Build and make functional stores for agricultural products</i>	<i>5 years</i>	<i>NGOs, producer organizations, private sector</i>	<i>Development partners, own resources</i>
<i>Provide existing agri-food processing establishments with appropriate equipment</i>	<i>5 years</i>	<i>NGOs, producer organizations, private sector</i>	<i>Development partners, own resources</i>

<i>Facilitate access to regional and international markets</i>	<i>5 years</i>	<i>Government, NGOs, producer organizations, private sector</i>	<i>Government, development partners, own resources</i>
<i>Create a guarantee fund to support the establishment of agricultural enterprises by young people and women</i>	<i>5 years</i>	<i>Government, NGOs, producer organizations</i>	<i>Government, development partners, own resources</i>
<i>Better organize producers within umbrella organizations which have capacity to handle provision of services to their members</i>	<i>5 years</i>	<i>NGOs, producer organizations</i>	<i>Development partners, own resources</i>

Axis 3.

<i>Element</i>	<i>Timeline</i>	<i>Who is responsible</i>	<i>Funding</i>
<i>Increase the availability of and access to water for production</i>	<i>10 years</i>	<i>Government/Private Sector</i>	<i>Government, Development partners, Own resources</i>
<i>Develop innovative approaches to natural resource management</i>	<i>10 years</i>	<i>Agricultural Research Organisations, Government, NGOs, producer organizations, private sector</i>	<i>Government, CGIAR Institutions,</i>
<i>Promote sustainable management of natural resources</i>	<i>10 years</i>	<i>Government, NGOs, producer organizations, private sector</i>	<i>Government, Development partners</i>
<i>Ensure the effective involvement of local</i>	<i>10 years</i>	<i>Government, CSOs ,Agricultural</i>	<i>Government, Development</i>

stakeholders in the governance of natural resources		<i>Research Organisations, NGOs</i>	<i>partners, CGIAR Institutions</i>
Establish a reliable mechanism for the equitable distribution of revenues from the exploitation of natural resources.	<i>10 years</i>	<i>Government, CSOs, Organisations, NGOs</i>	<i>Government, CGIAR Institutions, Development partners, Own resources</i>
Strengthen the operational capacity of local communities in water management matters.	<i>5 years</i>	<i>Government/Private Sector</i>	<i>Government, Development partners, Own resources</i>
Disseminate research results in the rational management of natural resources	<i>5 years</i>	<i>Agricultural Research Organisations, Government, NGOs, producer organizations, private sector</i>	<i>Government, CGIAR Institutions,</i>
Improve agro-forestry-pastoral yields through effective, efficient and appropriate technologies.	<i>5 years</i>	<i>Government, NGOs, producer organizations, private sector, Agricultural Research Organisations</i>	<i>Government, Development partners, CGIAR Institutions</i>
Strengthen the capacity of technicians and local communities in REDD +	<i>5 years</i>	<i>Government, CSOs, Agricultural Research Organisations, NGOs</i>	<i>Government, Development partners, CGIAR Institutions</i>
Improving consideration of gender in natural resource exploitation	<i>5 years</i>	<i>Government, CSOs, Organisations, NGOs</i>	<i>Government, CGIAR Institutions, Development</i>

			<i>partners, Own resources</i>
--	--	--	--------------------------------

Axis 4.

<i>Element</i>	<i>Timeline</i>	<i>Who is responsible</i>	<i>Funding</i>
Gradually replacing man-powered pumps by solar and wind pumps	<i>10 years</i>	<i>GOVERNMENT</i>	<i>Government / communities own resources</i>
Extension of simplified drinking water supply in rural areas	<i>5 years</i>	<i>GOVERNMENT</i>	<i>External resources</i>
Awareness and education of rural populations on the use of latrines through a communication approach on the access to sanitation	<i>5 years</i>	<i>GOVERNMENT</i>	<i>Government / communities own resources</i>
Professionalization of water management in rural areas through the training of local actors	<i>5 years</i>	<i>Government/ private sector /NGOs</i>	<i>Government/ private sector /NGOs</i>
Fight against pollution from gold digging and mining	<i>5 Years</i>	<i>NGOs/CSOs/ private sector</i>	<i>Government/ private sector /NGOs</i>
Fight against industry-related pollution	<i>5 Years</i>	<i>NGOs/CSOs/ private sector</i>	<i>Government/ private sector /NGOs</i>

### **3.3 Support by CGIAR research – research proposal**

During this session participants discussed how CGIAR research can support the PNSR objectives, resulting in a preliminary research proposal.

Axis 1.

Research proposal is developed based on the short term objectives of the PNSR for the axis 1: “**axis 1 – improvement of food security and sovereignty**”. The needs for research are expressed for two sub-programs of the axis 1: Sub-Program 1.1: Sustainable development of agricultural production and Sub-program 1.4. : Sustainable development of agricultural water.

<b>Element of the PNSR</b>	<b>Short term objectives</b>	<b>Need for research</b>	<b>CGIAR</b>	<b>Time period</b>
Sub-Program 1.1 –Sustainable development of agricultural production	Contribute to securing farms	Research on land resources governance	By CIFOR	In the short term (>5 years)
	Promote the use of improved varieties	Research on improved varieties	With ICRISAT for cereals and grain legume	In the short term (>5 years)
	Promote sustainable management technologies of pest control	Research on pest control techniques	With ICRISAT for cereals and grain legume	In the short term (>5 years)
	Promote sustainable management techniques of soil fertility	Research on soil fertility management techniques	With ICRAF and ICRISAT	In the short term (>5 years)
Sub-program 1.4. Sustainable development of agricultural water	Promote agricultural water (for example supplementary irrigation)	Research on water harvesting and water management at plot level and source level for multipurpose (including livestock needs)	With IWMI	In the short term (>5 years)

Axis 2.

*Short term objectives (5 year horizon) for PNSR's Axis 2 (Improvement of rural populations' incomes) and associated research questions that CGIAR research may address.*

<b>Element of the PNSR</b>	<b>Short term objectives</b>	<b>Need for research</b>	<b>CGIAR</b>	<b>Time period</b>
Sub-program 2.1. Promotion of agricultural economy	State buys first systematically local productions to supply public institutions (school canteens, military barracks, hospitals, etc.)	(i) identify constraints to public procurement of agricultural products and capitalize / document good practices related to public procurement; (ii) identify the determinants of the demand for local products	IFPRI	< 5 years
	Mechanize farms of family type up to 15% compared to the current situation and improve rural electrification	(i) identify the levers to make viable and sustainable agricultural enterprises; (ii) identify the factors conducive to the transformation of small family farms in agricultural enterprises	IFPRI	< 5 years
	Promote incentives for developing value chains of sesame, milk and cashew	(i) Identify varieties of cash crops adapted to global changes (biophysical, climate, etc.); (ii) Develop appropriate technical itineraries for cash agro-forestry-pastoral products	ICRISAT, ICRAF, ILRI	> 5 years
	Build and make functional stores for agricultural products	None		
	Provide existing agri-food processing establishments with appropriate equipment	(i) Demonstrate the positive economic impact of the results of research and innovation in food-processing area; (ii) Contribute to participatory dissemination of research results	IFPRI	< 5 years



	Facilitate access to regional and international markets	Analyze the dynamics and trends of agro-forestry-pastoral products markets	IFPRI, ICRAF, ILRI, CIFOR, ICRISAT	< 5 years
	Create a guarantee fund to support the establishment of agricultural enterprises by young people and women	Analyze the financial products offered by banking institutions to identify those suitable to the rural world	IFPRI	< 5 years
	Better organize producers within umbrella organizations capable of managing the provision of services to their members	Analyze governance structure and practices of producer organizations and their impacts on the livelihoods of their members' households as well as the local economic development	IFPRI, ICRAF, ILRI, CIFOR, ICRISAT	< 5 years

### Axis 3.

Research proposal is developed based on the short term objectives of the PNSR for the axis 3: The needs for research are expressed for sub-programs 3.1 as well as 3.2 and 3.4. A couple of new ideas were proposed that could be linked to more than one sub programme at the same time.

<b>Element of the PNSR</b>	<b>Short term objectives</b>	<b>Need for research</b>	<b>CGIAR</b>	<b>Time period</b>
Sub Programme 3.1. Environmental governance and promotion of sustainable development	Disseminate research results in the rational management of natural resources	Not detailed	CIFOR, ICRAF, ICRISAT, BIOVERSITY	
SUB PROGRAMME 3.2. Sustainable Management of Water, soils and tenure security in rural areas	Strengthen the operational capacity of local communities in water management matters.	Design Training modules on sustainable water management systems	IWMI	In the short term (>5 years)
		Identify and scale up good practices for sustainable water management	IWMI	In the short term (>5 years)
Sub Programme 3.4. Development Of Forest, Wildlife	Strengthen the capacity of technicians and	Design and test tools for carbon measurement	CIFOR and ICRAF	In the short term (>5 years)

And Fishery Production	local communities in REDD + related issues	Generate data on carbon stocks	CIFOR and ICRAF	In the short term (>5 years)
New issue/linked to Sub Programmes 3.1. and 3.4: Establish a reliable mechanism for the equitable distribution of revenues from the exploitation of natural resources.	Improving gender considerations in natural resource exploitation	Research on gender responsiveness and facilitation of policy review processes	CIFOR	In the short term (>5 years)
		Support gender mainstreaming in development of local development plans and legal instruments	CIFOR, ICRAF, ICRISAT, BIOVERSITY	In the short term (>5 years)
		Research on production technologies that are adapted to the needs and conditions of women	CIFOR, ICRAF, ICRISAT, BIOVERSITY	In the short term (>5 years)
New issue/linked to Sub Programme 3.4: Promote sustainable natural resource management options	Improve agro-forestry-pastoral yields through effective, efficient and appropriate technologies.	Support research on soil fertility and agro-forestry	ICRAF	In the short term (>5 years)

#### Axis 4.

Research proposal is developed on the basis of short-term objectives of the NRHP for Axis 4 (Improving access to drinking water and the living environment): Research needs are expressed to subroutines 4.1 and 4.2.

Element of the PNSR	Short term objective	Need for research	CGIAR	Time period
Sub-program 4 .1. Drinking water and sanitation	Baselines Analysis of situations in the management and governance of water and make alternative proposals through a participatory approach	Expertise and analysis of reference situations in water management; Make alternative proposals. Promoting the research works.	IWMI	In the short term (> 5 years)
Sub-Program. 4.2 environmental sanitation	Development of waste recovery, treatment, storage	Environmental impact study in industry, mining	CIFOR ICRAF	In the short term (> 5 years)

and improving the living environment	and reuse techniques	and gold digging sectors.	ICRISAT BIOVERSITY	In the short term (> 5 years)
		Calculation of discharge standards in industry, mining and gold digging sectors. Installation of card exchange and sharing between the technical services of the state and researchers.	CIFOR ICRAF ICRISAT	

### 3.4 Burkina Faso scenarios

Before this session, participants were assigned to new groups, each dedicated to one of the four CCAFS West Africa scenarios. Participants examined and downscaled the West Africa scenarios to the national level of Burkina Faso during this session.

#### 3.4.1 Cash, Calories, Control

This scenario applied to Burkina Faso means that the government is playing a strong role in the socio-economic development of country by setting up policies and strategies based on short term priorities. The country's development goals include increasing food security and reducing poverty of population. As the economy of Burkina Faso is based on agriculture and natural resource exploitation, the short term priority will lead to **the development of an agri-business** and mining sector. These are the two key sectors that can contribute more easily **to reach quick fixes, and fast gains and cash are the priority**. The agribusiness sector could be developed in a planned way through the development of "growth hubs" or "*pôle de croissance*". It could also be developed through individual initiative. In both cases **the agribusiness sector will grow fast**. Small farmers will lose their farm lands and will instead become farm workers (employees). Agribusiness farmers will **produce mainly export crops**. The **staple crop will be neglected**. This will exacerbate the **food insecurity in the rural area**. The agribusiness sector will use more chemical inputs leading to **environmental problems** (water and soil pollution). It also need large space leading to **deforestation and land grabbing of small farmers**.

The development of the mining sector will be based mainly on gold as it is the first export product of the country. The use of chemical products in mining sector will increase the environmental problems. The mining sector will provide income to the country (taxes) but due to the bad

governance the resource will not be used properly for the development issue. Most of the mining companies are held by foreigners.

Agribusiness and mining development will exacerbate **the land problem (speculation on lands, conflicts between agriculturalists and pastoralists)**, conflicts between crop farmers and miners) as well as **environment degradation** (water and soil pollution from the use of pesticides and mining product, **deforestation, forest and land degradation**).

The unsustainable use of chemicals products in agriculture and mining will increase **the environmental problem** (water pollution, deforestation, forest and land degradation). This will decrease the availability of suitable cropping lands and also **reduce the productivity of small farmers**.

Food security and sovereignty will not be achieved through this scenario. The government will **try to mobilize foreign aid money to solve the food crises**. It takes some social measures (including food donation, sale of food at subsidised prices) against expensive live (“*vie chère*”) and food crises. These measures are not sustainable and could **cause social trouble in the medium term**. To conclude, the scenario Cash Control Calories will not allow the country to achieve a sustainable food security and sovereignty during the five years period of the PNSR. Likewise, structural development constraints will remain. This includes energy problems (shortages, polluting forms of energy), **lack of infrastructures and mal governance** (leading to fraud, corruption, security problems and civil unrest).

#### *3.4.2 Self-determination*

This is a scenario in which state actors are dominant and where long-term priorities prevail in Burkina Faso with a vision for 2025. It explores a future that is characterized by a slow, difficult, uncertain and often painful transition to **sustainable governance of food security, environment and livelihoods** following the popular uprising that saw the departure of former and long ruling head of state.

The transition government aims to set the nation on a pathway towards self-determination and economic independence. Some of the choices made are contradictory to the advice or policies of the International Monetary Fund, the European Union and other important donors. However, the current nationalistic spirit leads people to believe strongly in a new Burkina Faso that determines not only its own vision for development, but also its strategies and targets. As a result, most donors leave Burkina Faso, drastically reducing funding support to rural sector programs, projects and research.

Unable to keep up with short term costs for rural sector investment, government cuts spending on rural sector services and capacity building resulting in reduction of **soil fertility**, decreased

efficiency of early warning systems for **climate variability** or for **locust invasions**, reduced access to capital and **production equipment**, and **overall lower productivity** and export capacity. Government measures focus on short-term priorities; certain actions for medium to long term are postponed: issues such as gender mainstreaming are postponed for medium to long term, and survival of households is the priority. Public service employment is cut down and the private sector and civil society organizations are shrinking as people make greater efforts to produce locally and conduct local research for development.

By 2018, rapid **degradation of forests and other natural resources** is observed as people struggle to increase economic output by **increasing land converted to agriculture, grazing and mining**. With the absence of international “watchdogs”, corruption is rife and a gradually growing awareness of negative implications for a resource poor country, induces a government crackdown and review of governance standards and requirements. Testing of alternative income sources by the government leads to increased taxes and tax recovery, issuing of government bonds, reduction in state spending and sensitization on the need for a national change in mentality.

At the same time, improved regional cooperation allows for more trade across national boundaries, and sharing of data, research and ideas. Local scientists begin to develop new technologies that boost **rural production** as well as industrialization processes. Hence the initial loss in production capacity and economic slump are overcome in the long run as Burkina Faso becomes a model for good governance, private sector initiatives, economic production and overall economic growth. Local research and extension services provide a foundation for a vibrant economy, and increased exports bring in financial resources to support quality training for young students.

Hence the initial “Save Yourself” situation in the short run will eventually evolve into a thriving Burkina Faso which governance aimed at self-determination.

### *3.4.3 Civil Society to the Rescue?*

**In this scenario, while State is not dominant in the interplay between actors, it ensures its sovereign missions which are to put in place the policy and regulatory framework necessary to allow people to live together and peacefully in a state, even if it does not always have the means to ensure that this policy and regulatory framework is properly enforced.** In terms of non-state actors driving the development agenda, NGOs followed by producer organizations (POs) are the most active ones. Producer organizations are strong of more than 75 % of the rural population and are very well organized, from basic producer groups at village level to umbrella organizations at country level. Together with NGOs and civil society, they are the actors which drive local development in rural areas where they replace State in complementarity with local authorities put

in place with the decentralization process. They defend the rights of the rural poor as well as a sustainable management of natural resources. **Their actions contribute to ensure land security for small producers in face of a growing risk of land grabbing with the gradual emergence of the agricultural private sector.** The private sector is rather weak in agricultural production sector at the contrary of the agri-food processing sector where it takes precedence over the producer organizations. **Despite their dynamism, these actors alone cannot guarantee the stability and the functionality of state apparatus, therefore an environment at central state level that is safe enough and conducive to financial flows from bilateral and multilateral partners which are key for a successful implementation of the PNSR.** But fortunately, with the increasing role played by NGOs, producer organizations and civil society in the local development, the State has more and more resources freed up that it can then devote for mobilizing international funding needed to implement the PNSR. The activism of civil society, particularly in awareness raising, has contributed to make populations much more informed about their rights vis-à-vis the State at both central and local level, particularly for accountability in management of public affairs, and much more demanding for good governance and equity.

**The dynamism of the emerging private sector in agricultural production and processing as well as in agricultural service provision creates some prosperity, with often some tendencies from this actor to corruption practices with state officers and agencies so that to generate further profits from its businesses.** But fortunately, these practices are very limited because of the activism and lobbying of civil society as well as the pressure of a much more aware population which is demanding for good governance and accountability in the management of public affairs. The legal and regulatory environment put in place by the State and which guarantee particularly land security for the private sector in order to attract its investments in the rural sector, protects also land ownership by smallholders. **Overall, improvement in land security for all actors in rural sector is favorable to a smooth implementation of PNSR.**

#### Impact of this scenario on the implementation of the PNSR

##### Axis 1: IMPROVEMENT OF FOOD SECURITY AND SOVEREIGNTY

Overall, the scenario "Civil society at the rescue?" is conducive to the actions set in axis 1. However in a hypothesis where the private sector takes a bigger share in agricultural sector (both in production and in provision of farm inputs and equipment), some actions may face trouble:

- While the dynamism of the private sector ensures that farm inputs are widely available on the markets, the quality of these farm inputs may not always meet the required standard due to the combination of the following factors: the tendency of the private providers to search for maximum profits and the weakness of State agencies to ensure enforcement of the regulation in place. This

may affect negatively crop yields, and therefore may slow to some extent the expected increase of productivity and production agricultural.

- Always with the tendency to maximize its profits, the private sector may focus on a limited number of cash crops that it could in addition dedicated primarily for the export market, hence a risk of compromising the objective of diversification of agricultural production.

- Diversification of agricultural production also relies on off-season crops, therefore irrigation farming in the climatic context of Burkina Faso. Building dams and irrigation infrastructures to allow irrigation farming require huge financing. The State is not strong enough to mobilize such financing and the private sector is not willing to put money in such kind of decisive investments for local development. By means of vigorous and lasting campaigns toward the Government, NGOs and POs may oblige it to take its responsibilities and to seek means to realize these investments and so get their realization ultimately in the long term.

#### Axis 2: IMPROVEMENT OF RURAL POPULATION'S INCOMES

Overall, the scenario is favorable to this axis with the increasing power of the producer organizations which work toward this objectives. However without a constant effort to increase the organizational and institutional capacities of these producer organizations, the benefits generated along the agro-sylvo-pastoral products value chains might be inequitably captured by the private sector within or outside the country at the expense of the producers.

#### Axis 3: SUSTAINABLE DEVELOPMENT OF NATURAL RESOURCES

- Most of the actions in this axis falls in the field of sovereign missions of the State and the local authorities put in place with the decentralization process. Although POs and CSOs that are dominant are sensitive to issues of sustainable development and sustainable management of natural resources, the fact that the State does not always have the financial and human resources to ensure that the legal and regulatory provisions the protection of natural resources are applied or that the necessary public investments in this area are made will not help achieve the objectives of this axis.

- Another challenge here is to meet the growing demand for natural resources of both the producer organizations and the emerging private sector to achieve agricultural production for food security and natural resource-based income/profit generation.

#### Axis 4: IMPROVE ACCESS TO DRINKING WATER AND LIFE FRAMEWORK

While many NGOs are very active in the area of this axis, and that there are windows for private sector to be involved in several actions of this axis, all things that will benefit the axis, some other actions fall in the areas of competencies and sovereignty of the State and the local authorities. The fact that the State does not always have the financial resources to ensure that the necessary public investments in this area are made might compromise some achievements of this axis.



### 3.4.4 Save Yourself

Twelve general elements characterizing this scenario in Burkina Faso were identified by the participants:

1. Weak/passive unstable State
2. Civil society Organization and non-state associations are strong
3. We are in an emergency and survival situation
4. Lack of long term development objective
5. Lack of regulation and control
6. Migration / rural exodus
7. Food insecurity for vulnerable people
8. Regional Instability
9. Lack of natural resources management policy
10. Natural disaster
11. Lack of external financing
12. Insecurity of life and property

*A scenario where non-state actors are the driving force and short-term priorities dominate in Burkina Faso by 5 years (short term) and 10 years (long term).*

In this scenario, where **civil society organizations and non-state associations are strong** and are the driving force of change, the State is weak, passive, and unstable. The country is in an emergency and survival situation. We note a **lack of long term development objective**, the government acts as a facilitator for the mining activities of the private sector oriented towards the short term, there is a **lack of regulation and control**, civil society organizations focus almost exclusively on emergency issues. Extra-regional interventions to try and stabilize Mali have failed and instead led to great regional unrest. Hyper-liberal market policies have led to an increasing diversity of available food for the urban middle class, while at the same time the rural poor are highly food insecure due to the fiercely expansive presence of commercial agriculture. Rural livelihoods are decreasing and there are massive movements to urban areas in search of work, ungoverned by national governments, **rural exodus is increasing**. Environmental health has suffered greatly from a lack of policy in this domain and the scramble for new rural sources of livelihood. **Lack of natural resources management policy is observed**. Crises in case of **natural disaster (flood)** are **poorly organized and preventive measures are non-existent**. **We have insecurity of life and property, lack of external financing**.

### Impact of this scenario on the implementation of the PNSR

Under the scenario "Save yourself" - "Zoe M Bass Taaba" axis 1 of the PNSR shows a situation of low capacity of the actors to deal with the impacts of climate conditions in the short to medium term, also a low government subsidy on fertilizers and equipment, which will result in speculation. There will also be an exacerbation of land conflicts and a drop in production and yields in the short term (**Axe1; 1.1**). In this scenario too, the fodder shortage leads to an increase in cattle feed prices, a drop in productivity and quality, lack of infrastructures and insufficient technical supervision of human resources. All this, happening in the short term (**Axis 1; 1.2 and 1.3**). In this scenario, we will face, in the medium term, a lack of construction of new hydro-agricultural facilities, low mobilization of surface water and groundwater resources, low national research activity and shift in research by major international research groups. In the short term, we will face a lack of maintenance of existing facilities, a lack of development of new areas and most likely, an inability to manage food crisis (**Axis 1, 1.4 and 1.5**).

**Axis 2 (2.1)** of the PNSR will face a lack of funding in the short term. While in the medium term, we see, a poor access to formal markets resulting in the emergence of black markets, the proliferation of rogue traders and scarcity of local products.

**Axis 3 (3.1; 3.2; 3.3; 3.4)**, will face an accelerated degradation of natural resources, the non-application of legislations on environmental governance and an exacerbation of conflicts relating to the use of natural resources over the medium term. We observe an uncontrolled exploitation of natural resources (water - forest - mines, etc.) in the short term.

**Axis 4** will see a lower access rate to drinking water in the short term. The lack and degradation of drinking water catchment, treatment, distribution and waste water drainage facilities will also result in a deteriorated health situation in the medium term. We will be in a situation of deterioration of living environments (air, water pollution, etc.) in the short and medium term. In conclusion this scenario presents poor management and governance (Axis 5).

### **3.5 Scenario-guided policy recommendations**

Subsequently, participants reviewed the PNSR themes by means of the four different scenarios. They examined which elements of the policy should be improved to work in each of the Burkina Faso scenarios.

### 3.5.1 Cash, Calories, Control

<i>What elements would not work or be difficult to achieve?</i>	<i>Insights from the scenario - How does this assessment follow from the logic of the scenario?</i>	<i>Recommendations - How should it be improved?</i>
<p><b>AXIS 1:</b> IMPROVEMENT OF FOOD SECURITY AND SOVEREIGNTY</p>	<p>It is not possible to achieve food security and sovereignty through the scenario 1</p> <ul style="list-style-type: none"> <li>- In rural area, people will face to food deficit in term of quality and quantity</li> <li>- In urban area, people will face to food deficit in term of quality</li> </ul>	<ul style="list-style-type: none"> <li>- Securing the land tenure for small holders farms</li> <li>- Enhance livestock productivity for small farmers and develop and adopt production norms (zootechnical code)</li> <li>- Creating and boosting local committees for water management;</li> <li>- Implementing crop insurance related to the climate</li> </ul>
<p><b>1.1 Sustainable development of agricultural production</b></p> <ul style="list-style-type: none"> <li>- From the scenario CCC, it will be difficult to ensure access to agricultural inputs and equipment for the small farmers.</li> </ul>	<p>From the scenario the situation will be characterized by :</p> <ul style="list-style-type: none"> <li>- More conflicts for land access and use ;</li> <li>- Better access to farm equipment and inputs mainly for the agribusiness sector but not for small farmers</li> <li>- Reduction of the use of organic manure</li> <li>- Increase of yield for export crops</li> <li>- Decrease of cereal production due to the land competitiveness between cash/export and staple crops</li> <li>- Decrease of soils fertility due to the development of agribusiness.</li> </ul>	<ul style="list-style-type: none"> <li>- Securing the land tenure for small holders farms</li> <li>- Ensure access to equipment and inputs by small farmers.</li> </ul>
<p><b>1.2 Improvement of productivity and competitiveness of animal production</b></p> <p>It will not be possible to improve livestock productivity for the small farmers</p>	<p>We expect the intensification of livestock production in agribusiness sector for specific products (milk, meet, eggs production) using exotic breeds, livestock and veterinary inputs and by developing investment in market infrastructures. This will lead to an increase of the productivity and the competitiveness of farm products for</p>	<p>Enhance livestock productivity for small farmers and develop and adopt production norms (zootechnical code)</p>

	export. The small farming will be neglected.	
<b>1.3 Improvement of animal health and veterinary public health</b>	<ul style="list-style-type: none"> <li>- The veterinary public health will be deteriorated because of use of doping products in animal feeds.</li> <li>- The local markets will be flooded with a farm lower quality products.</li> </ul>	Develop and adopt production norms (zootechnical code)
<b>1.4 Sustainable development of agricultural water</b>	<ul style="list-style-type: none"> <li>- More conflicts for water use</li> <li>- Water pollution by pesticides</li> <li>- Poor functioning of local committee of water management</li> </ul>	Creating and boosting local committees for water management to avoid conflicts
<b>1.5 Prevention and management of food and nutrition crises</b>	Short-term management of food crises through food aids and social measures	Implementing crop insurance to secure production
<b>AXE2 : IMPROVEMENT OF RURAL POPULATION'S INCOMES</b>	Decrease of rural population's incomes as they will not be part of the development of agribusiness sector and will not benefit from the potential markets. They will lose his lands and will be transformed in farm workers.	<ul style="list-style-type: none"> <li>- Develop road infrastructures including rural roads to facilitate exchange of agricultural products of high production areas to deficit areas</li> <li>- Ensure stable and remunerative prices for agricultural products (by fixing minimum guarantee price)</li> </ul>
<b>AXE 3 : SUSTAINABLE DEVELOPMENT OF NATURAL RESOURCES</b>		<ul style="list-style-type: none"> <li>- Set up local structures for conflicts management in natural resources uses ;</li> <li>- Promote the use of renewable energies (biogas, solar, wind power).</li> </ul>
<b>3.1 Environmental governance and promotion of</b>	- Short term concerns fail to take into account environmental sustainability and sustainable management of natural resource ;	Set up local structures for conflict management in natural resources use

<b>sustainable development</b>	- the need for large cropping areas will cause deforestation and reduce the biodiversity	
<b>3.2 Sustainable management of water, soils and security in rural areas</b>	- More conflicts for water and land uses - Land grabbing by agribusiness farmers - Migration for agricultural purpose	
<b>3.3 Security and sustainable pastoral management</b>	- Decrease in pastoral resources to benefit the crop land - Increase in conflicts over common resources (rangeland and water)	
<b>3.4 Development of forest, wildlife and fishery production</b>	- Increase of deforestation and forest degradation - Decrease in wildlife - The use of inputs including pesticides leads to the depletion of fish resources and biodiversity - Possible development of renewable energy (biogas, solar)	
<b>AXE 4 : IMPROVE ACCESS TO DRINKING WATER AND LIFE FRAMEWORK</b>		No specific recommendation for the axis 4
<b>4.1 Drinking water and sanitation</b>	- Drinking water will be improved. This will decrease waterborne diseases. - However in the framework of social responsibility, agribusiness enterprises, could invest to improve sanitation.	No specific recommendation
<b>4.2 Cleaner environment and improved life framework</b>	Degradation of the life framework due to the increase of greenhouse gases and pollution. This will increase diseases including respiratory diseases.	No specific recommendation

### 3.5.2 Self-Determination

<i>What elements would not work or be difficult to achieve?</i>	<i>Insights from the scenario - How does this assessment follow from the logic of the scenario?</i>	<i>Recommendations - How should it be improved?</i>
SP 1.1. The action 7 and 8 cannot walk in the axis 1	is searched based largely on outside support where there will not be enough money for basic research	Delete actions 7 and 8 and replace with dissemination of research results.
SP 1.1: Action 5 will not work	With the decline in external financing, it will be difficult to provide the necessary inputs for the production of these new crops.	We must focus rather cereal production, market gardening, etc.
SP 1.2: Action 4 should disappear in the short term.	Limited funding will make it difficult/unwise to import and promote exotic breeds	PNSR should focus on action 3 of this sub program in the short term and develop local breeds
SP 1.2: Delete Actions 6 and 7 as individual points	There is no logic in having two actions are identical finances and implemented separately.	Actions 6 and 7 should be merged into one action
SP 1.4 : Rethink action 6	If we operate with a limited budget it makes sense to reduce our expectations and targets	Reduce the number of dams to be built in the short term and focus on wells and other solutions
SP 3.2: Action 1 should evolve beyond the scope of Axes 3	Tenure problems will have a major impact as people seek to develop national production and increase incomes from the rural sector in the short term	Securing land tenure should evolve into a cross cutting issue across the entire PNSR
SP 3.2: Actions 3 and 4		Merge Actions 3 and 4
SP 3.4: Action 4	Action 4 In the context of austerity, gender issues may not be the priorities. In the medium and long term the problem is relevant and should be treated in a holistic manner	The problem is relevant but should be treated throughout the PNSR as a cross-cutting issue

### 3.5.3 Civil Society to the Rescue?

<i>What elements would not work or be difficult to achieve?</i>	<i>Insights from the scenario - How does this assessment follow from the logic of the scenario?</i>	<i>Recommendations - How should it be improved?</i>
<p><b>Axis 1</b></p> <p>Overall, the scenario "Civil society at the rescue?" is conducive to the actions set in axis 1. However the following elements may work with some difficulties:</p> <ul style="list-style-type: none"> <li>- SP1.1, Action 1 - Promotion of producers' access to agricultural inputs and equipment</li> <li>- SP1.1, Action 5 - Diversification of agricultural production</li> <li>- SP1.4. Sustainable development of agricultural water</li> </ul>	<p>In a hypothesis where the private sector takes a bigger share in agricultural sector (both in production and in provision of farm inputs and equipment), some actions face some trouble:</p> <ul style="list-style-type: none"> <li>- while the dynamism of the private sector ensures that farm inputs are widely available on the markets, the quality of these farm inputs may not always meet the required standard due to the combination of the following factors: the tendency of the private providers to search for maximum profits and the weakness of State agencies to ensure enforcement of the regulation in place. To some extent, this may affect negatively crop yields, and therefore may slow to some extent the expected increase of productivity and production agricultural.</li> <li>- Always with the tendency to maximize its profits, the private sector may focus on a limited number of cash crops that it could in addition dedicated primarily for the export market, hence a risk of compromising the objective of diversification of agricultural production.</li> <li>- Diversification of agricultural production also relies on off-season crops, therefore irrigation farming in the climatic context of Burkina Faso. Building dams and irrigation infrastructures to allow irrigation farming require huge financing. The</li> </ul>	<ul style="list-style-type: none"> <li>- Reinforce/strengthen the capacities of the state agencies in charge of homologation and quality control of farm inputs and equipment</li> <li>-</li> </ul>

	State is not strong enough to mobilize such financing and the private sector is not willing to put money in such kind of decisive investments for local development. By means of vigorous and lasting campaigns toward the Government, NGOs and POs may oblige it to take its responsibilities and to seek means to realize these investments and so get their realization ultimately in the long term.	
SP1.1 Action 7 - Promotion of research and development for crop production	Capitalization and valorization of research actions toward peasants and also peasant innovations (How to assure extension of the research products toward their adoption and use by producers)	State reinforce the capacities of the research centers (human resources, equipment, materials, financial resources)
SP1.1 Action 8 (new action added)	Not sure about the relevance of this action for the PNSR. However, the following recommendation is formulated	Promote partnerships with international research centers (CGIAR) to undertake joint research
SP1.2 Action 2 - Enhancing livestock food	Increasing the productivity of grazing areas, hay and forage conservation capabilities. Valid challenges to the great mass of farmers	Promote the restoration of degraded lands (with zai techniques, half moons, etc.) for forage production
SP1.2 Action 5 - Development of marketing infrastructures for animal products	Ensuring the quality of animal products, ensuring the cold chain and hygiene in slaughterhouses. The private sector susceptible to engage in this area might not have the necessary resources or neglect these aspects.	Accelerate the establishment of modern regional slaughterhouses
Axis 2: Improvement of rural populations' incomes	Overall, the scenario is favorable to this axis with the increasing power of the producer organizations which work toward this objectives. However without a constant effort to increase the organizational and institutional capacities of these	<ul style="list-style-type: none"> <li>- Strengthen capacity of producer organizations to bargain and find more remunerative markets</li> <li>- Producer organizations to invest more and more</li> </ul>



	<p>producer organizations, the benefits generated along the agro-sylvo-pastoral products value chains might be inequitably captured by the private sector within or outside the country at the expense of the producers.</p>	<p>in the processing of agro-sylvo-pastoral productions</p>
<p>Axis 3: Sustainable development and natural resource management</p>	<p>- Most of the actions in this axis falls in the field of sovereign missions of the State and the local authorities put in place with the decentralization process. Although POs and CSOs that are dominant are sensitive to issues of sustainable development and sustainable management of natural resources, the fact that the State does not always have the financial and human resources to ensure that the legal and regulatory provisions the protection of natural resources are applied or that the necessary public investments in this area are made will not help achieve the objectives of this axis.</p> <p>- Another challenge here is to meet the growing demand for natural resources of both the producer organizations and the emerging private sector to achieve agricultural production for food security and natural resource-based income/profit generation.</p>	<p>- Strengthen state's means and authority.</p> <p>- Civil society to put pressure on the state so that it enforces the regulation in NRM</p>
<p><b>Axis 4: Improve access to drinking water and life framework</b></p>	<p>While many NGOs are very active in the area of this axis, and that there are windows for private sector to be involved in several actions of this axis, all things that will benefit the axis, some other actions fall in the areas of competencies and sovereignty of the State and the local authorities. The fact that the State does not always have the financial resources to ensure that the necessary public investments in this</p>	<p>Civil society to put pressure on the State so that it mobilizes the necessary funds to invest in the required actions in this axis</p>

	area are made might compromise some achievements of this axis.	
--	--	--

### 3.5.4 Safe Yourself

<i>What elements would not work or be difficult to achieve?</i>	<i>Insights from the scenario - How does this assessment follow from the logic of the scenario?</i>	<i>Recommendations - How should it be improved?</i>
<b>AXIS 1:</b> Difficulty in the implementation of the actions aimed at improving food security and sovereignty	Passive/weak State Lack of financial/human resources Difficulty to adapt to the impacts of climate change	Non-state actors taking the leadership in production and support to communities Develop early warning mechanisms
<b>Axis 2:</b> Low diversity of sources of income for the rural communities  Lack of rural employments and lack of employment protection	Nonexistent and/or poorly organized markets Lack of support to farmers in the chain: production-marketing-processing-price	Establishment of a rural credit mechanism by non-state actors Establishment of a support system for farmers by non-state actors
<b>Axis 3:</b> low enforcement of legislations related to environmental governance	Coordination problem in the enforcement of legal instruments (sectoral policy) Non ownership of legal instruments by communities	Transfer and accountability of natural resources management to communities
<b>Axis 4:</b> shortage and deterioration of water resources catchment facilities and sanitation facilities	Lack of financial support for building and maintaining these facilities Corruption in awarding infrastructure building contracts, and in the management of available infrastructures	Transfer the management of some facilities and institute a results-based management (ensure transparency and acceptability mechanisms)
<b>Area 5:</b> Poor governance	Corruption Instability Appointment of convenience	Improve rural sector governance by involving all stakeholders

### 3.6 Scenario-guided recommendations for CGIAR research

Thereafter, participants did the same for the initial CGIAR research proposals. They identified what should be improved to make it work in each of the Burkina Faso scenarios.

### 3.6.1 Cash, Calories, Control

<i>Which elements of the research proposals will be useful in this scenario?</i>	<i>Should the research be adjusted in order to be valuable in this scenario?</i>	<i>Recommendations - How should it be adjusted improved?</i>
Land resources governance	Yes	This research should suggest solutions to secure land of small farmers
Varietal research	Yes	Provide improved varieties for both staple and import crops
Pest control	Yes	Provide improved pest control techniques accessible to small farmers
Soil fertility management	Yes	Provide improved management techniques for soil fertility
Water harvesting & management	Yes	Provide water harvesting and management techniques at plot level and source level for multipurpose (including livestock needs)

### 3.6.2 Self-Determination

<i>Which elements of the research proposals will be useful in this scenario?</i>	<i>Should the research be adjusted in order to be valuable in this scenario?</i>	<i>Recommendations - How should it be adjusted improved?</i>
Axis 2:	No need for an international center to work on the warehouses.	Remove Action 4: Research might be more useful in developing or testing new technologies for post-harvest storage
In axis 3		Change the actions 7 and 9 CGIAR Combine and reformulate.
In axis 4		Add research on how to apply the principles “polluter payments” to the mining sector in Burkina Faso

### 3.6.3 Civil Society to the Rescue?

<i>Which elements of the research proposals will be useful in this scenario?</i>	<i>Should the research be adjusted in order to be valuable in this scenario?</i>	<i>Recommendations - How should it be adjusted improved?</i>
<i>Axe 1</i>		
Research on land tenure	Yes	Focus on conditions for land security for all actors with disaggregation according to factors like gender, migration status, etc.
Research on selection and breeding of crop varieties (including cash crops)	Yes	Animal productions and forest productions should be included
Research on plant pests and diseases	Yes	- Research on sustainable intensification and agro-ecologically sound production systems
Management of soil fertility	Yes	

Management of agricultural water at field level	Yes	- Develop and facilitate the adoption of integrated extension systems
<i>Axe 2</i>		
Identify constraints to public procurement of agricultural products	No need	
Identify determinants of the demand for local products	Yes	Research on value chains and markets with regards to forest and farm products
Ensure continuous adaptation of the cultivation technics of cash crops	No need	
<i>Axe 3</i>		
Research on NRM and ecosystem services (understanding and mitigating threats to sustainable use)	No need	
Economic valuation of ecosystem services	No need	
Research on NRM policy and institutions in support of effective NRM knowledge use and evidence based NRM decision making	No need	

### 3.6.4 Safe Yourself

<i>Which elements of the research proposals will be useful in this scenario?</i>	<i>Should the research be adjusted in order to be valuable in this scenario?</i>	<i>Recommendations – How should it be adjusted/improved?</i>
<b>AXIS 1:</b> Non-state actors taking the leadership in production and support to communities Develop early warning mechanisms	Research on improved varieties Study early warning mechanisms adapted to local knowledge.	Research on improved varieties Study early warning mechanisms adapted to local knowledge.
<b>AXIS 2:</b> Establishment of a rural credit mechanism by non-state actors	Analyze the dynamics and trends of agriculture-forestry-pastoral products markets	Analyze the dynamics and trends of agriculture-forestry-pastoral products

Establishment of a support system for farmers by non-state actors	Analyze available financial products to identify those suitable for rural areas.	markets Analyze available financial products to identify those suitable for rural areas.
<b>AXIS 3:</b> Transfer and accountability of natural resources management to communities	Identify and disseminate best practices in natural resources management	Identify and disseminate best practices in natural resources management
<b>AXIS 4:</b> Transfer the management of some facilities and institute a results-based management (ensure transparency and acceptability mechanisms)	Baseline analysis in water management and make alternative proposals through a participatory approach.	Baseline analysis in water management and make alternative proposals through a participatory approach.
<b>AXIS 5:</b> Improve rural sector governance by involving all stakeholders	Help develop training tools for capacity building	Help develop training tools for capacity building.

### 3.7 Improvement of the initial theme proposal

Finally, participants reconvened in their original groups subdivided by PNSR theme. They received the scenario-guided recommendations and summarized how the PNSR theme at hand can be improved in order to be likely to work in each of the scenarios.

#### 3.7.1 Axis 1

Scenario	Weaknesses	How can they be supported/overcome
<i>Cash, control and calories</i>	<b>1.4 Sustainable development of agricultural water</b> (more conflicts related to the use of water, water pollution by pesticides, poor functioning of local committee of water management)	Creating and boosting local committees for water management.
	<b>1.5 Prevention and management of food and nutrition crises</b> (a short-term management of food crises through food aids and social measures is not sustainable)	Implementing crop insurance related to the climate
<i>Save yourself</i>	Difficulties in implementation of actions aiming to improve food security and sovereignty because of passive and weak state, lack of financial and human resources, poor adaptive capacity to climate change)	Non state actors take the leadership to boost production and support people

<i>Social society to the rescue?</i>	PNSR Axe 1 Actions 1 & 2: State could fail to handle the quality control of the agricultural inputs (fertilizers, etc.)	Reinforce/strengthen the capacities of the services in charge of homologation and quality control of those inputs
	PNSR Axe 1.1 Action 5 (Risk not to achieve the diversification of the production because private sector could focus on a limited crops that will only be beneficial for him)	Create conditions to guaranty the agricultural diversification such as incentives (e.g. use optimum or limited prices in the case of maize production)
	PNSR Axe 1.1 Action 7 (Capitalization and valorization of research actions toward peasants and also peasant innovations (How to assure extension of the research products toward their adoption and use by producers)	State reinforce the capacities of the research centers (human resources, equipment, materials, financial resources)
	PNSR Axe 1.1 Action 8: (Not sure about the relevance of this action for the PNSR. However, the following recommendation is formulated)	Promote partnerships with international research centers (CGIAR) to undertake joint research
	SP 1.2 Action 2: Enhance productivity of grazing areas as well as capacity to harvest and store fodder (this is a challenge for the majority of herders)	Promote the recuperation of degraded lands through SWC techniques (zai, half-moon, etc.) for forage production
	Axe 1.2 Action 5: Ensuring the quality of animal products by developing cold chain and hygiene in slaughterhouses (private sector in charge of that should face a lack of resources to invest in).	Accelerate the establishment of modern slaughterhouses at regional level
<i>Self determination</i>	SP 1.1. actions 7 and 8 will not work in the axis 1 :  The research is based mostly in external support. There is not enough fund for basic research.	Remove the actions 7 and 8 and replace them by dissemination of research findings / outputs
	The action 5 will not work : with the decrease in external funding, it will be difficult to provide inputs to famers for news crop cultivation	Focus on cereal and vegetable

	<p>The action 4 of the SP 1.2, should disappear in the short term.</p> <p>- Limited resources (fund) leading import difficulties and promotion exotic breed</p>	Focus on the action 3 in the short term period
	<p>Actions 6 and 7 should be merged: there is no sense to separate them</p>	
	<p>To revisit the action 6 of SP 1.4:</p> <p>With a limited budget, it is better to reduce our expectations.</p>	Reduce the number of dams

### 3.7.2 Axis 2

<b>Scenario</b>	<b>Weaknesses</b>	<b>How can they be supported/overcome</b>
<i>Save Yourself</i>	Poor diversification of sources of rural incomes	<ul style="list-style-type: none"> <li>- Put in place a rural credit mechanism by non-state actors for producers</li> <li>- Put in place a support system for producers by non-state actors</li> </ul>
<i>Self-determination</i>	None	None
<i>Cash, Control &amp; Calories</i>	Because rural populations are not able to enter the agrobusiness sector and benefit from the advantages of the associated potential market, their revenues decrease. They are dispossessed of their lands while they have no possibility of reconversion into another job.	<ul style="list-style-type: none"> <li>- Develop road infrastructure to facilitate trade of agricultural products from areas of high production to areas structurally deficient</li> <li>- Guaranteeing a minimum price for agricultural products (e.g. floor prices)</li> </ul>
<i>Civil Society to the Rescue?</i>	Revenues generated in the agricultural sector might be captured by other actors than smallholders, particularly by the emerging private sector.	<ul style="list-style-type: none"> <li>- Strengthen capacity of producer organizations to bargain and find more remunerative markets</li> <li>- Producer organizations to invest more and more in the processing of agro-sylvo-pastoral productions</li> </ul>



### 3.7.3 Axis 3

- What are strengths and weaknesses identified by all scenario groups?
  - There are no-common strengths and/or weaknesses identified by all the scenario groups.
- What are common recommendations and how can these be integrated into the proposal?
  - Establish management structures for conflicts related to natural resource use.
  - Clarification of roles and empowerment of actors to play their roles fully and effectively.
- What are strengths and weaknesses in the proposal that only come up in one or two scenarios, and how can they be supported/overcome?

<b>Scenario</b>	<b>Weaknesses</b>	<b>How can they be supported/overcome</b>
<i>Cash, Control, Calories</i>	None identified	
<i>Save Yourself</i>	None identified	
<i>Self determination</i>	Gender equity issues are considered non priorities for the short term in the scenario. However they are dealt with only in certain areas of the PNSR	Gender equity is transversal to all the PNSR and is a priority for the medium and long term.
	Land tenure is considered in specific actions of the PNSR	This should be a cross cutting issue and should become a sub programme of its own
<i>Civil Society to the rescue?</i>	None identified	

### 3.7.4 Axis 4

Strengths and weaknesses identified by all groups:

Scenario	What elements would not work or be difficult to achieve?	Insights from the scenario - How does this assessment follow from the logic of the scenario?	Recommendations - How should it be improved?
<i>Cash, Control, Calories</i>	4.1 Drinking water and sanitation	Access to drinking water will be improved leading to the reduction of waterborne diseases As part of Agrobiz corporate social responsibility, sanitation could improve	No specific recommendation
	4.2 Environmental sanitation and improvement of the living environment	A deterioration of the living environment due to increased greenhouse gases and air pollution. This will affect health (respiratory diseases)	
<i>Self-determination</i>	CGIAR points	-	Research on how to apply the polluter pays principle to mining companies
<i>Civil society to the rescue?</i>	Axis 4	CSOs' action will be beneficial to this axis.	-
<i>Save yourself « zoe bass taaba »</i>	<i>Axis4:</i> shortage and deterioration of water resources catchment facilities and sanitation facilities	- Lack of financial support for building and maintaining these facilities - Corruption in awarding infrastructure building contracts, and in the management of available infrastructures	Transfer the management of some facilities and institute a results-based management (ensure transparency and acceptability mechanisms)

### Common recommendations

Transfer management of some hydraulic facilities to territorial authorities for results-based community management.

*How thesis can be integrated into the proposal:* The integration of these elements requires a reformulation of the objective of axis 4.

**The strengths and weaknesses in the proposal that only come up in one or two groups:**

<i>Scenario</i>	<i>Recommendation</i>	<i>How can they be supported / overcome?</i>
CCC	-	The integration of these elements requires a reformulation of the objective of axis 4
Self-determination	- Research on how to apply the polluter pays principle /mining – cotton – hide sectors	
Save yourself	- Transfer management of some hydraulic facilities to territorial authorities for results-based community management	
Civil society	- Equip-mobilize its members around the water management problem - Ensure advocacy for the mobilization of resources in favor of communities	

## References

SP/CPSA Burkina Faso (2012). Programme National du Secteur Rural (PNSR) 2011-2015. Document de programme. Available online: [www.spcpsa.gov.bf/agriculture-burkina-le-pnsr/publications-pnsr/doc\\_download/50-pnsr-version-finale-adoptee](http://www.spcpsa.gov.bf/agriculture-burkina-le-pnsr/publications-pnsr/doc_download/50-pnsr-version-finale-adoptee)

CCAFS (2015). Project P6-FP4-EA-IITA: Influencing and linking policies and institutions from national to local level for the development and adoption of climate-resilient food systems.

Palazzo, A., Rutting, L., Vervoort, J.M., Havlik, P., Zougmore, R., Jalloh, A., Aubee, E., Helfgott, A.E.S., Mason-D'Croz, D., Islam, S., Thornton, P., Ericksen, P.J., Segda, Z., and Moussa, A.S. (2015). The future of food security, environments and livelihoods in West Africa: Four socio-economic scenarios, Working Paper No. 130, CGIAR Research Program on Climate Change, Agriculture and Food Security

Vervoort, J. M., Thornton, P., Kristjanson, P., Förch, W., Ericksen, P.J., Kok, K., Ingram, J.S.I., Herrero, M., Palazzo, A., Helfgott, A.E.S., Wilkinson, A., Havlík, P., Mason-D'Croz, D., and Jost, C. (2014). *Challenges to scenario-guided adaptive action on food security under climate change*. Global Environmental Change.

## Appendix 1: Workshop participants

No	Names	Institution	Phone	E-mails
1	Djiguimdé Omar	CAF-CASSOU	70.25.69.65	<a href="mailto:caf_cassou@yahoo.fr">caf_cassou@yahoo.fr</a>
3	OUIBGA Joachim	SP/CPSA	70.74.54.00	<a href="mailto:j.ouibga@spcpsa.bf">j.ouibga@spcpsa.bf</a>
6	SOME Gustave	SP/CPSA	70.22.93.42	<a href="mailto:g.some@spcpsa.bf">g.some@spcpsa.bf</a>
7	Savadogo Boureima	MARHASA	78.42.41.20	<a href="mailto:savadogob332@gmail.com">savadogob332@gmail.com</a>
8	Kam Ollé Arnaud	DGESS/MARHASA	71.22.32.03	<a href="mailto:arnaudkam@gmail.com">arnaudkam@gmail.com</a>
9	NIGNAN Tahirou	DGESS/MRA	71.64.54.63	<a href="mailto:nignantahirou@yahoo.fr">nignantahirou@yahoo.fr</a>
10	Haro Jean	DGESS/MRA	70.23.88.95	<a href="mailto:johnhattina@yahoo.fr">johnhattina@yahoo.fr</a>
11	Zida Didier	CNRST	70.83.83.61	<a href="mailto:didierzida@hotmail.com">didierzida@hotmail.com</a>
12	Barry Yacouba	CPF	70.87.30.38	<a href="mailto:boubadji2005@yahoo.fr">boubadji2005@yahoo.fr</a>
14	Mme Zoundi Simone	FIAB/SODEPAL	70.23.11.56	<a href="mailto:sodepal1@fasonet.bf">sodepal1@fasonet.bf</a>
15	Boussim Simon Pierre	STN/SCADD	70.43.96.16	<a href="mailto:simonboussim@yahoo.fr">simonboussim@yahoo.fr</a>
16	Ouedraogo Anouar	ANVAR ex DGVRI	70.03.42.27	<a href="mailto:anouartop@yahoo.fr">anouartop@yahoo.fr</a>
17	Nicolas Ahouissoussi	Banque Mondiale		<a href="mailto:nahouissoussi@worldbank.org">nahouissoussi@worldbank.org</a>
19	Lucas Rutting	CCAFS	+31 626656761	<a href="mailto:l.rutting@uva.nl">l.rutting@uva.nl</a>
20	Joost Vervoort	CCAFS	+31 641101105	<a href="mailto:joost.vervoort@eci.ox.ac.uk">joost.vervoort@eci.ox.ac.uk</a>
21	Mathieu Ouédraogo	CCAFS/ICRISAT	+223 91580546	<a href="mailto:mouedraogo@cgiar.org">mouedraogo@cgiar.org</a>
22	Robert Zougmore	CCAFS/ICRISAT	+223 78205473	<a href="mailto:r.zougmore@cgiar.org">r.zougmore@cgiar.org</a>
23	Cush Luwesi	IWMI	+233 263772520	<a href="mailto:c.luwesi@cgiar.org">c.luwesi@cgiar.org</a>
24	Vincent Bado	ICRISAT	72.91.66.00	<a href="mailto:v.bado@cgiar.org">v.bado@cgiar.org</a>
25	Jules Bayala	ICRAF/MALI	70.32.38.59	<a href="mailto:j.bayala@cgiar.org">j.bayala@cgiar.org</a>
26	Prof Harouna Karambiri	2ie	78.75.80.77	<a href="mailto:harouna.karambiri@2ie-edu.org">harouna.karambiri@2ie-edu.org</a>
28	Maimouna Bologo	2ie	73.00.73.10	<a href="mailto:maimouna.bologo@2ie-edu.org">maimouna.bologo@2ie-edu.org</a>
29	Sawadogo Lazare	DGM - Météo	70.30.31.63	<a href="mailto:sawadogolazare@gmail.com">sawadogolazare@gmail.com</a>
31	Zida Mathurin	CIFOR	76.51.23.42	<a href="mailto:m.zida@cgiar.org">m.zida@cgiar.org</a>
32	Michael Balinga	CIFOR	76.63.88.85	<a href="mailto:m.balinga@cgiar.org">m.balinga@cgiar.org</a>
33	Abdoulaye Rabdo			<a href="mailto:rabdoa@gmail.com">rabdoa@gmail.com</a>
34	Augustin Kaboré	CIFOR	70.12.44.85	<a href="mailto:a.kabore@cgiar.org">a.kabore@cgiar.org</a>
35	Brahima Ouédraogo	CIFOR		<a href="mailto:ouedr@yahoo.com">ouedr@yahoo.com</a>
36	Nadia Djenontin	CIFOR	76.30.90.00	<a href="mailto:i.djenontin@cgiar.org">i.djenontin@cgiar.org</a>
37	Sawadogo Justin	DGESS/MERH	70.29.77.62	<a href="mailto:sawnebw@yahoo.fr">sawnebw@yahoo.fr</a>
38	Bougoum Ernest	DGESS/MERH	70.03.75.78	<a href="mailto:bougoumernest@yahoo.fr">bougoumernest@yahoo.fr</a>
39	Yonli Djibril	DGESS/MRSI	70.72.90.66	<a href="mailto:d.yonli313@gmail.com">d.yonli313@gmail.com</a>
43	Koura Djibrillou	SPONG	70.26.10.52	<a href="mailto:djibril-koura@yahoo.fr">djibril-koura@yahoo.fr</a>
44	Soulama Mohamadou	ARBF	70.71.44.19	<a href="mailto:lasoulmad@yahoo.fr">lasoulmad@yahoo.fr</a>
46	Palé Remy	SP/CPSA	70.05.28.40	<a href="mailto:r.pale@spcpsa.bf">r.pale@spcpsa.bf</a>
47	Ouedraogo Moumini	SP/CPSA	70.26.97.60	<a href="mailto:ouedsam09@yahoo.fr">ouedsam09@yahoo.fr</a>
48	Pouya Clarisse	SP/CPSA	76.63.20.29	<a href="mailto:c.pouya@spcpsa.bf">c.pouya@spcpsa.bf</a>
49	Sondo Marie Denise	SP/CPSA	70.35.67.16	<a href="mailto:marie.sondo@yahoo.fr">marie.sondo@yahoo.fr</a>
50	Ouedraogo Joachim	SP/CPSA	70.24.04.70	<a href="mailto:ouederjoachim@yahoo.fr">ouederjoachim@yahoo.fr</a>
51	Zoungrana Alizèta	SP/CPSA	70.02.60.72	<a href="mailto:a.zongo@spcpsa.bf">a.zongo@spcpsa.bf</a>
52	Segda Zénabou	PR/CCAFS	70.23..49.30	<a href="mailto:segdaorama@gmail.com">segdaorama@gmail.com</a>
53	Bonkougou Edouard	P.R	76.62.41.63	<a href="mailto:bonkougou_edouard@yahoo.fr">bonkougou_edouard@yahoo.fr</a>
54	Kaboré Augustin	CIFOR	70.12.44.85	<a href="mailto:kabaugustino@yahoo.fr">kabaugustino@yahoo.fr</a>

55	Yago Davy	Interprete	70.07.70.97	<a href="mailto:davyago@yahoo.fr">davyago@yahoo.fr</a>
56	YOUL Bahisimine	Interprete	70.23.13.62	<a href="mailto:barboza90@hotmail.com">barboza90@hotmail.com</a>
57	Tchonang Hervé Sylvain	U-AUBEN	76.11.40.40	<a href="mailto:hervetchonang@gmail.com">hervetchonang@gmail.com</a>
58	Kambiré Herman W	CIFOR	70.25.13.80	<a href="mailto:hkambire@yahoo.fr">hkambire@yahoo.fr</a>
59	Tiendrébéogo Adiara	SP/CPSA	70.11.25.33	<a href="mailto:a.tiendrebeogo@spcpsa.bf">a.tiendrebeogo@spcpsa.bf</a>

## **Appendix 2: Summary of the PNSR**

The National Program for the Rural Sector in Burkina Faso (PNSR), 2011-2015, is the unique planning document that coordinates all development interventions in rural sector in Burkina Faso whose scope includes that of the ministries in charge of agriculture, hydropower, environment, animal resources, and research.

It is divided into 13 sub-programs gathered around five axes designed to work harmoniously. These sub-programs are the result of a breakdown of the tasks of the ministries in charge of the sector and as such, they also take into account the "urban" and crosscutting aspects of the missions of the three departments.

**Axis 1 focuses on improving food security and sovereignty.** It comprises five sub-programs namely: (1.1) Sustainable development of agricultural production; (1.2) Improvement of productivity and competitiveness of animal production; (1.3) Improvement of animal health and reinforcement of veterinary public health; (1.4) Sustainable development of agricultural hydraulics; (1.5) Prevention and management of food and nutritional crises.

**Axis 2 focuses on increasing rural populations' incomes.** It focuses on sub-program (2.1) Promotion of agriculture economy and market access.

**Axis 3 is sustainable development of natural resources.** It covers four sub-programs namely: (3.1) Environmental governance and promotion of sustainable development; (3.2) Sustainable management of soil and water, and security of land tenure in rural areas; (3.3) Security and sustainable management of pastoral resources; (3.4) Improvement of forest, fish and wildlife productions.

**Axis 4 focuses on improving access to drinking water and life framework.** Two sub-programs will be implemented: (4.1) Water supply and sanitation; and (4.2) Sanitation of environment and improvement of life framework.

**Axis 5 focuses on the development of partnership between rural stakeholders.** It will be implemented through sub-program (5.1) Monitoring and assistance; it is a unifying sub-program dedicated to coordinating and managing the entire rural sector.

Each program consists of actions (ten maximum) including a support and control action (not described in the sub-program), which essentially consists in ensuring coordination and close monitoring of the program according to the subsidiarity principle.