



Initiatives pour un Développement Intégré Durable

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Projet de renforcement
des capacités d'adaptation
des acteurs ruraux
béninois face aux
changements climatiques

PARBCC

Usability of Seasonal Forecasts for climate change adaptation : experiences of Benin ACCA Project (PARBCC)

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OUTLINE

- Context
- Forecast supply chain
- Model analysis
- System evaluation
- Key lessons



CONTEXT

- High variability of saison
- High vulnerability of rain agriculture in Benin
- Decrease of crop yield and food insecurity
- High frequency of climatic phenomenon (flood, dry, wind)
- Producers and extension service are losed their repers
- Low capacity to face adaptation issues
- No forecast and warning system to support agriculture production or civil protection



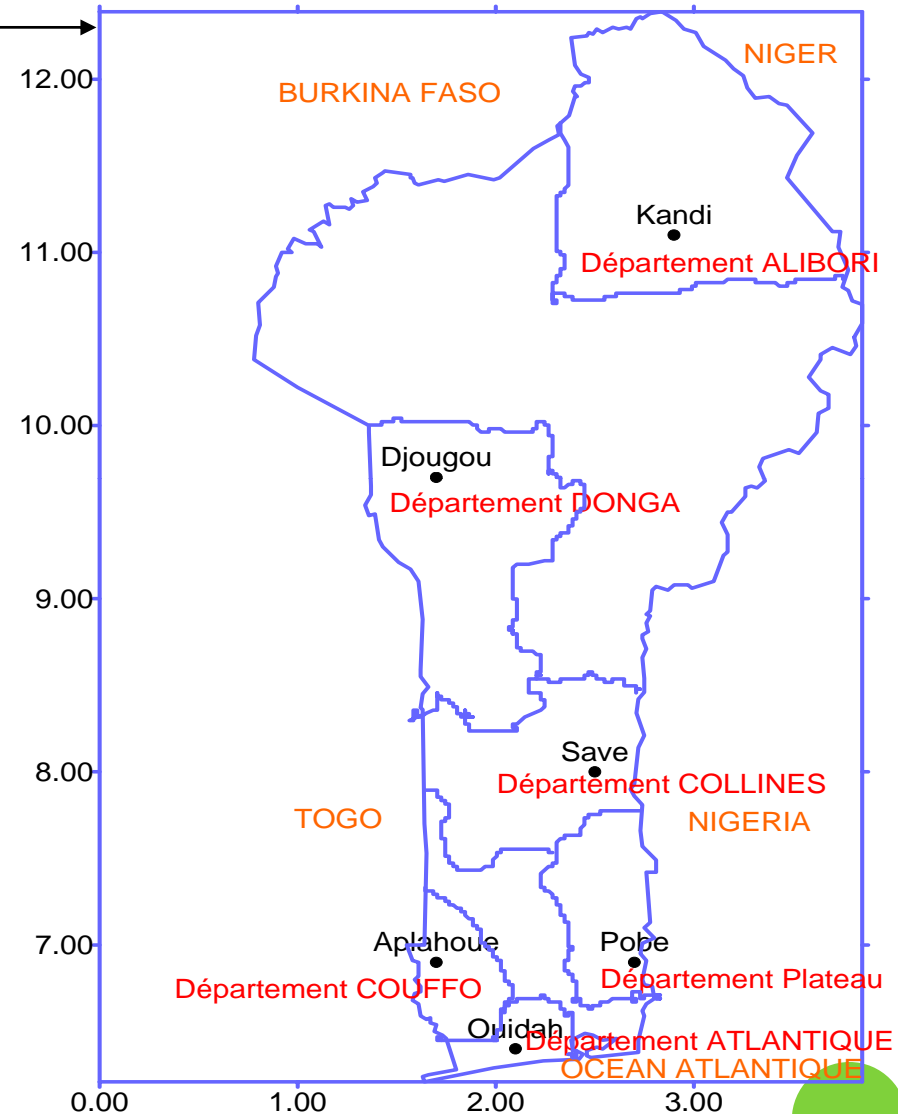
- The settlement of the seasonal forecasting system is a key alternative to sustain the production
- Three objectives of PARBCC:
 - Pre-alert for agricultural adaptation
 - Improve agricultural practices to better adapt
 - Awareness and advocacy local authorities, policy makers and local communities
- Multi-stakeholders and partnership approach
- PAR research approach





REPUBLIQUE DU BENIN

CARTE: Zones d'intervention du PROJET PARBCC



LEGENDE

■ Commune de référence

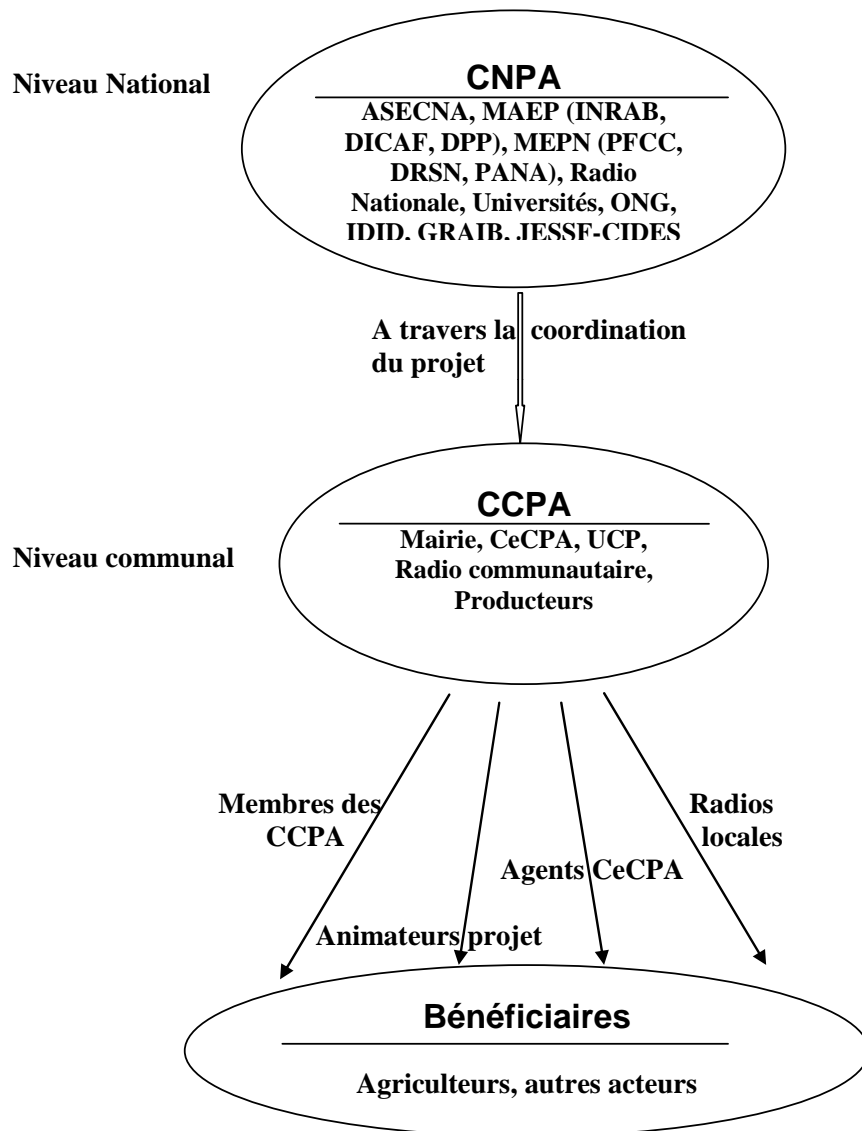
Target groups

- Farmers
- Agricultural extension service
- Producers organization's
- Local authorities and policy makers

Partners

- Ministries (Environment and Agriculture)
- National Meteorological Service
- National Research Institute
- Universities of Abomey-Calavi and Parakou
- Civil Society
- Rural radio

AGRO-METEOROLOGICAL FORECAST SYSTEM



Objectives:

- Reduce vulnerability of rain-fed agriculture
- Improve use of meteorological data
- Give good agricultural practices for climate risks management

Information's diffusion:

Hard version for agricultural extension agents

Radios spots in local language for producers, stakeholders...

THE CLIMATE INFORMATION SUPPLY CHAIN: OPERATING MODEL

National early warning and agro-meteorological interpretation committee (It is made up of representatives from the project's management unit, the Agency for Airway Security and Navigation in Africa (ASECNA), the Ministry of Agriculture, Livestock and Fisheries (MAEP), the Ministry of the Environment and Nature Protection (MEPN), FUPRO, the Benin Institute of Agronomic Research (INRAB) and National Radio)

Inputs:

Cross-tabulated informations with the phenological data from the production zones, the weather forecasts issued by the National Weather Service and the Climate Watch Africa Bulletins published by ACMAD

Outputs:

Agro-Meteorological Bulletin together with advice on growing operations (seeding, tending and harvesting): 11 since the project begun

LOCAL EARLY-WARNING COMMITTEE (Mayor, Local agriculture extension service, local environment service, Local farmer's union, farmers, Local radio)

Inputs:

Endogenous forecasting expertise, local expertise on farming (agricultural itinerary), multi-stakeholders working

Outputs:

Seasonal forecasting informations as commun and ordinary informations in local languages

FARMERS (End-users of the seasonal forecasting information)

Inputs:

Use of informations

Outputs:

Suggestions and feedback

THE MODEL ANALYSIS

Key elements	Operationalization	Project focus	Comment
KNOWLEDGE OF THE CLIMATIC HAZARD	Are hazards and vulnerabilities known?	++	Diagnostic study shows that people have endogenous knowledge about climate observations
	What are the problems and trends of the factors?	++	Rain-fed decrease or increase according to the region, high spatio-temporal variability of rain, violent winds, extension of dry season and occasional dry period in rainy season
	Are the hazard's mapping and data sufficiently available?	+	According to NAPA results
DISSEMINATION AND COMMUNICATION	Do the warning impact the most exposed persons to the hazards?	++	Informations are given to farmers, extension service in rural area specifically
	Are the hazards and warning understood?	++	Monitoring and evaluation show that people better understood advice following forecast analysis instead forecast
	Are the informations related to warning clear and usable?	++	Informations are given in local languages

Key elements	Operationalization	Project focus	Comment
MONITORING AND WARNING SERVICE	Are the good parameters well monitored?	++	lack of phenological data on crop and less geographical coverage
	Are the forecasts scientifically solid and modern?	++	Use of local experiences to perform and adapt model outputs
	Some forecasts are generated in real time	++	Real time for agricultural forecast seems different from real time for meteorological forecast
RESILIENCE	Are the communication plans updated and tested?	+	Monitoring and evaluation system help to do it. Indicators are local and elaborated by users
	Are the abilities and endogenous knowledge used?	+	Through local committee in each zone
	Are People trained and ready to act in case of warning?	+	local committee improve self mobilization and support adaptation effort with local authorities

Adapted from the International Strategy for Catastrophs forecasting, Panel for Early-Warning Promotion


+ = Fair

++ = Very good

EVALUATION OF THE SYSTEM

Strengths	Weaknesses
<ul style="list-style-type: none"> • Many technic services which validate and filter all the CNPA does • Regular sessions of the CNPA • True collaboration between the CNPA members • Appointment of focal points at the beginning of the CNPA • Multi-stakeholders committee where exist some services engaged in CC • Complementary expertises • Connection with the local committees which functioning reinforce theirs. • Assiduity of the committee members 	<ul style="list-style-type: none"> • Breakdown in the national radio participation • Absence of the farmers's participation as priorly expected • Absence of field work of the committee • An ineffective feedback of end-users with the committee • Absence of communication on the committee functioning • Low financial autonomy of the committee • Late transmission of the collected phenological data • Insufficient documentation on the impact of the early-warning system
Opportunities	Threats
<ul style="list-style-type: none"> • Opportunity to bring down ministries concerned with the climate change and the hydroagricultural potential • The current policy of the Benin's Government regard agriculture sector • Need of early-warning data at national level • International community stake in CC, food security... • Regional Collaboration with ACMAD, AGRYMET 	<ul style="list-style-type: none"> • End of IDRC financial support • Political decision of withdrawing some participant services by their head • Unavailability of reliable statistics on the agriculture sector • Mobility of the public administration staff • Politicization of the committee

KEY LESSONS

- Conversion of forecast in advices and agricultural practices to face climate risk
 - Using of rural radio and information's dissemination in local language
 - Forecast for next season are more useful at the end of last season
 - Improving of forecast result using endogenous knowledge about climate
 - Local committee (CCPA) for self mobilization in case of climate disaster and local adaptation effort support
 - Involvement of local authorities for sustainable forecast system
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THANK YOU FOR YOUR ATTENTION

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