



WEST AFRICA AGRICULTURAL PRODUCTIVITY PROGRAM:

**Developing Resilient rice Farming
Systems: Key actions of the National
Center of Specialization on rice in Mali**

**GREETINGS FROM NCoS-RICE,
WAAPP MALI**

Accra, Ghana July 8, 2013

Dr. Gaoussou Traoré, CNS-RIZ Coordinator



OUTLINE

- ❖ RESILIENCE, LABS: COMMUN UNDERSTANDING
- ❖ CLIMATE CHANGE RESILIENCE ADAPTATION, A MUST FOR MALI SURVIVAL
- ❖ WAAPP SPECIALIZATION CENTER ON RICE IN MALI: CNS-RIZ/WAAPP, IER
 - Mission&Objectives
 - Key actions for improving rice farming resilience
 - partnership mechanisms





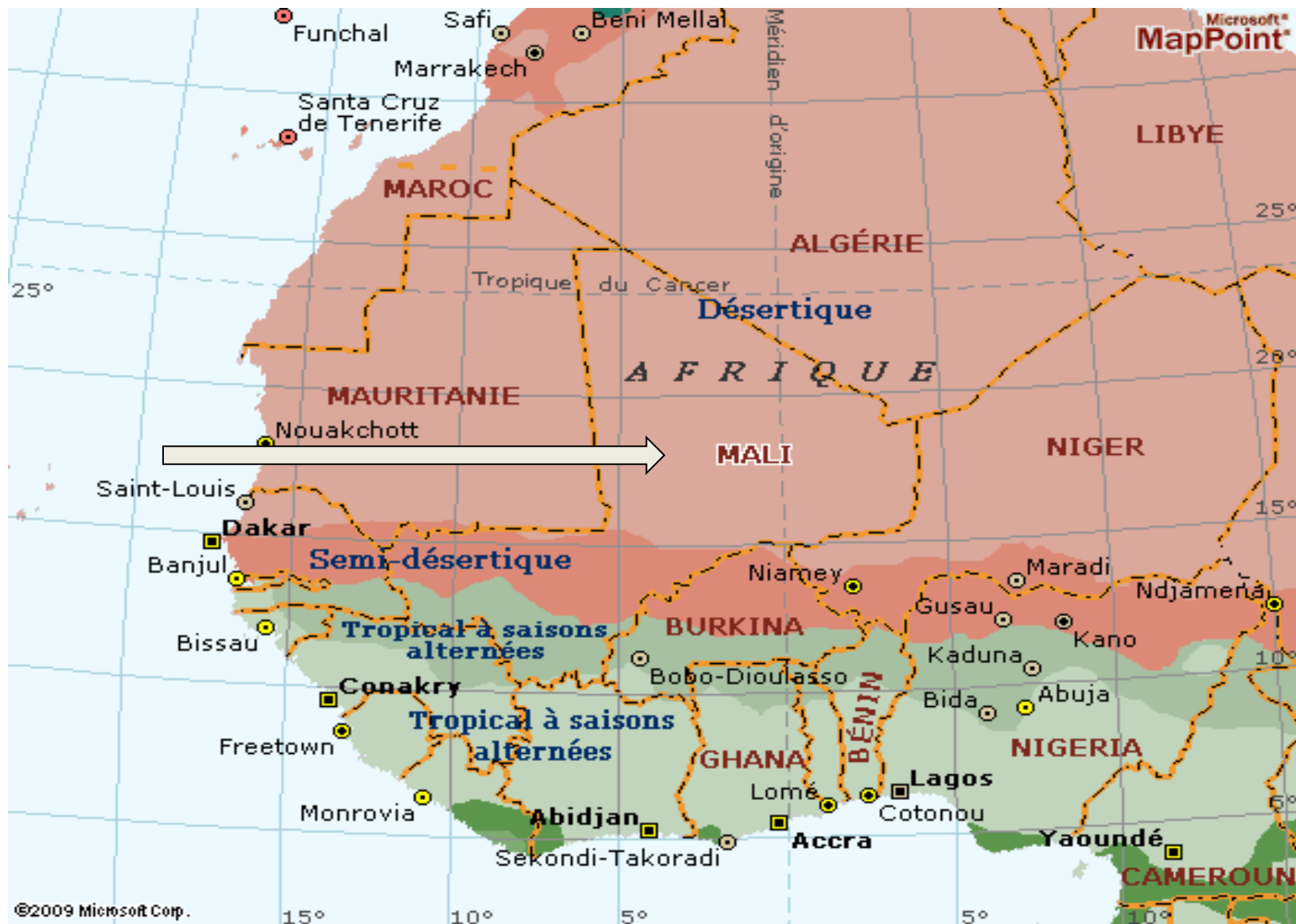
COMMUN UNDERSTANDING IN THIS PRESENTATION

Ecological Resilience: The ability of an ecosystem to recover from or adjust easily to misfortune or important disturbing conditions in order to come back to normal

Social Resilience: Ability of groups or communities to adapt and learn to address stress and external disturbing conditions: political, socio-economic or environmental (ADGER, 2000)

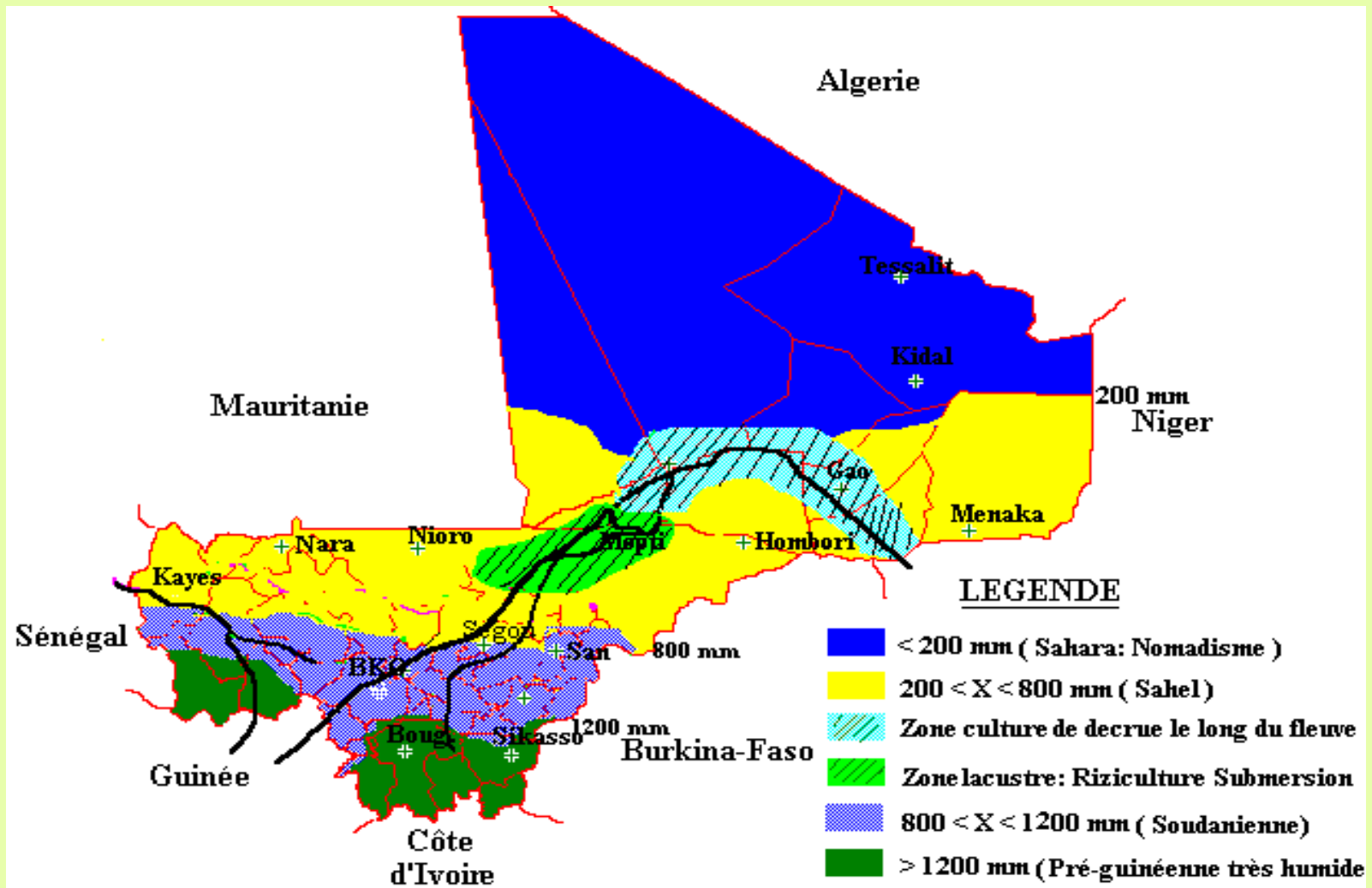
Innovation Labs: Innovation « Programmes »?

LE MALI EN AFRIQUE DE L'OUEST





DECREASE IN ANNUAL RAINFALL





SATELLITE IMAGE OF MALI





MALI CLIMATE CHANGE PROJECTIONS FOR 2025



- ❖ hotter and drier future (Mali' National Plan of action).
 - Average temperature is predicted to **increase by 2.71°C to 4.51°C**
 - rainfall is predicted to **decrease by up to 11%**.
- ❖ crop yields may **decrease by 5.5% and forage yields by 20%** affecting major food crops and livestock
- ❖ the proportion of the population that will be vulnerable to food insecurity and hunger may **rise to 68%**. Small farmers and pastoralists are especially vulnerable.

Adaptation of the agricultural sector and development of more resilient systems is not an end in itself but a “Must” to address sustainable development of Mali.

Recurrent drought is the biggest challenge

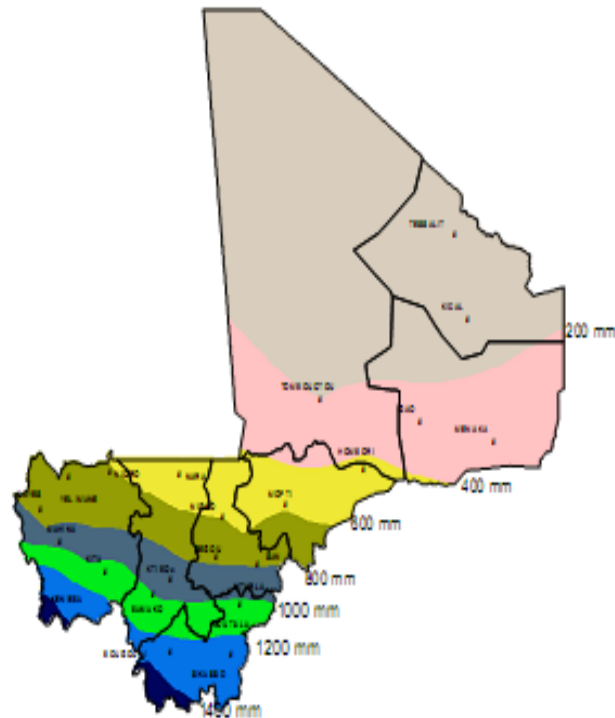




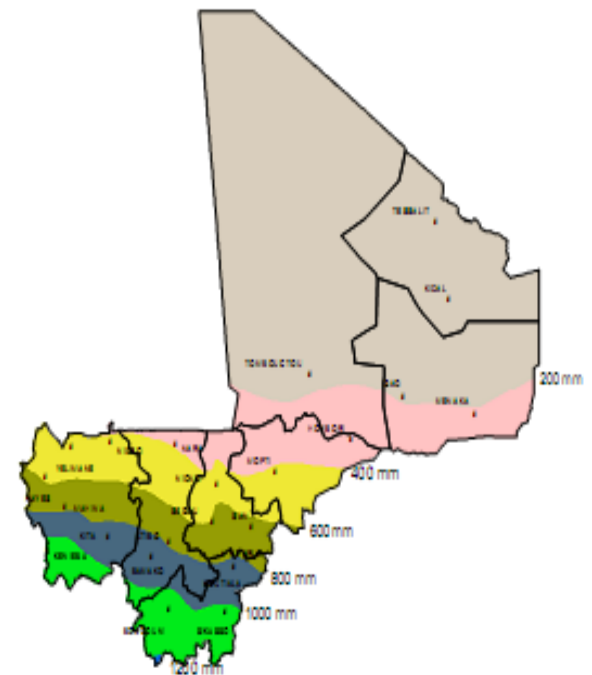
DECREASE IN ANNUAL RAINFALL



PLUVIOMETRIE ANNUELLE MOYENNE (mm) : 1951 - 1970



PLUVIOMETRIE ANNUELLE MOYENNE (mm) : 1971 - 2000



Isohyets in Mali from 1951-1970 compared with the period 1971-2000



WAAPP IMPLEMENTATION IN MALI

March 2008: Start

❖ 10 years programme with 2 phases of 5 years each

Development objective

❖ Contribute to increase ag productivity

Specific Objectives

❖ Make Agr. more productive & sustainable

❖ Promote Regional Integration





Programme Components

4 Components :

❖ Component 1 : Enabling Conditions for Regio Coop&Improved Tech dissemination

❖ Component 2 : National Centers of Specialization (NCOS)/RCE: **RICE**

❖ Component 3 : Demand Driven Technology Transfert and Adoption

❖ Component 4 : Coord, Management, M&E

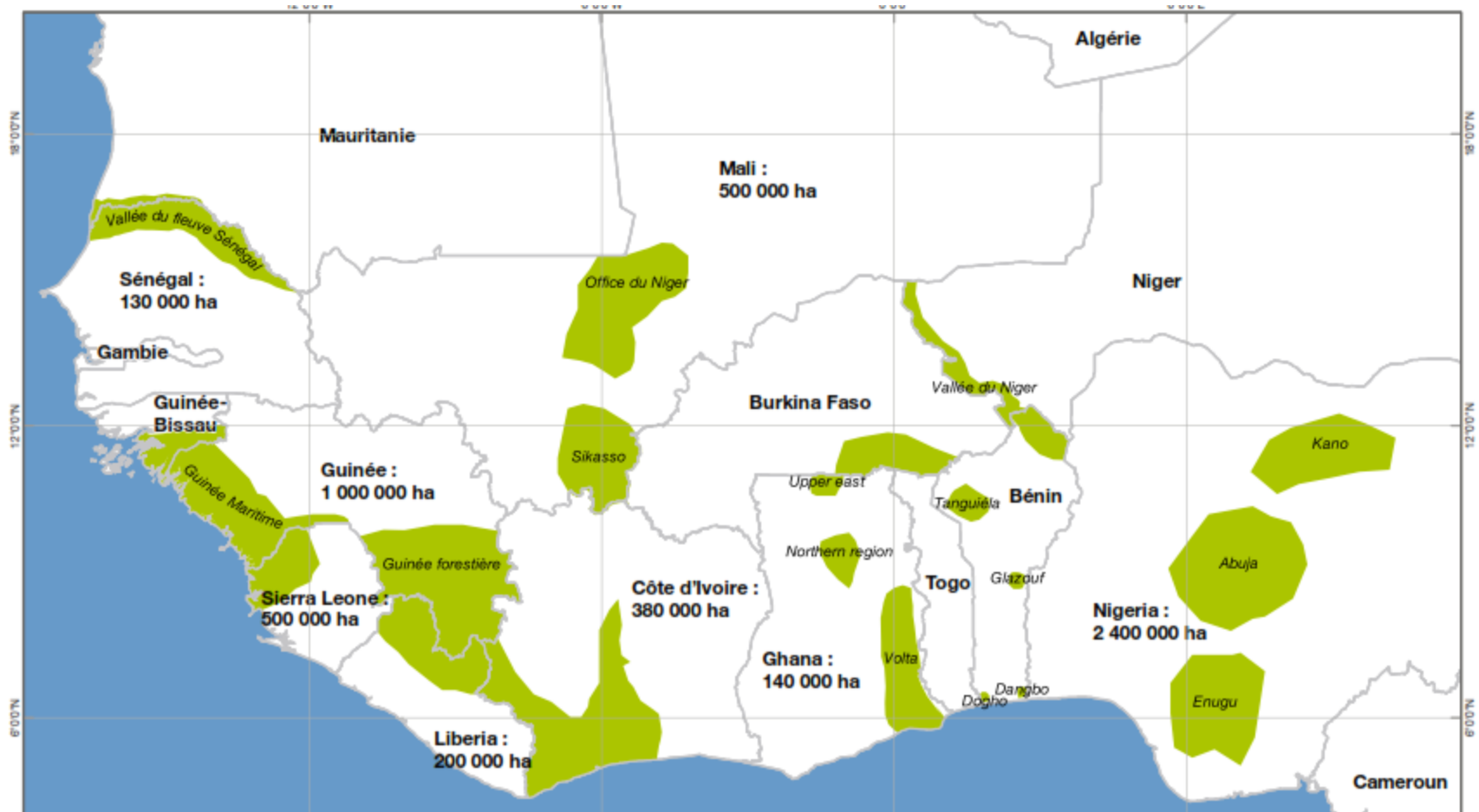




Component 2:

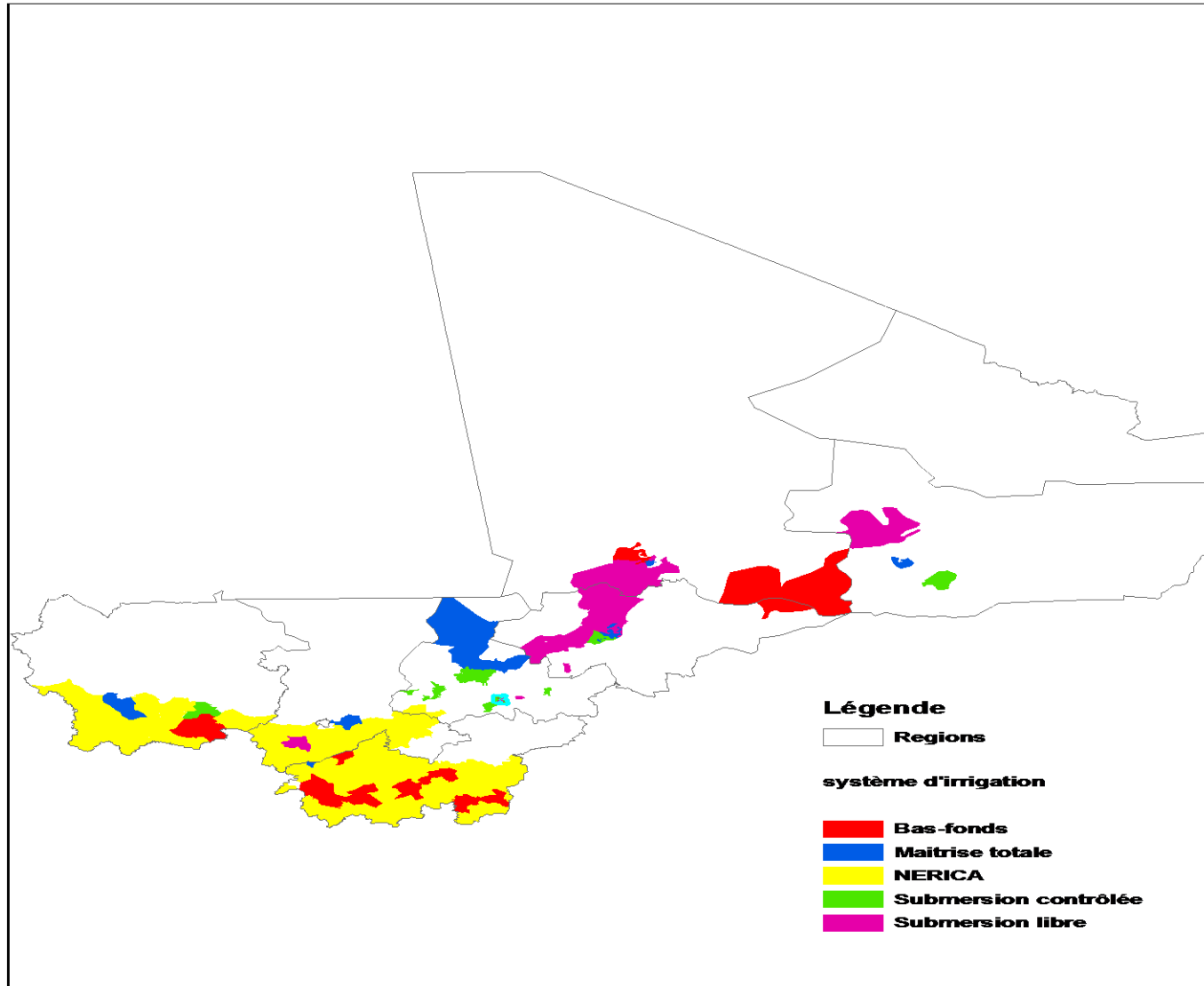
CNS-RIZ

GRANDS BASSINS DE PRODUCTION DE RIZ: AO



Bulletin club du sahel-AO: Enjeu Ouest Africain N°2 Juin 2011

SYSTEMES DE RIZICULTURE AU MALI



Sites du Cns-riz Niono, Site principal



**Sikasso et Mopti
Sites secondaires**

MISSION

Creation: June 2010

Inform&Train different categories of
rice commodity actors on
generated technologies &
scientific information made
available to them

VISION

SELF SUFFICIENT&EXPORT RICE:
PRODUCTIVE &SUSTAINABLE IN
MALI &WEST AFRICA

OBJECTIVE

**CONTRIBUTE TO THE
IMPROVEMENT OF
PRODUCTIVITY AND
COMPETITIVITY FOR WEST
AFRICAN RICE IN THE WORLD
MARKET**

STRATEGY

DEVELOP WIN WIN PARTNERSHIP:

- FRAMERS GROUPS, AND ORGANIZATION (AOPP....) ;
- NARS,RSO, CGIAR, UNIVERSITIES, AIC: RESEARCH/TRAINING/EXTENSION ;
- PRIVATE SECTOR;
- VALUE CHAINS ANALYSIS APPROACH

STRATEGY

PRODUCTION SYSTEMS WITH RICE AS THE
DOMINANT CROP, BUT **DIVERSIFICATION** WITH
INTELLIGENT INTEGRATION OF:

LIVESTOCK, AGROFORESTERY, FRUITS&VEGETABLE
ETC;

TRHU COMPONENT 3

Critères pour l'obtention du label de RCoE

Un Accord a été conclu entre les pays sur les six (6) critères suivants pour le déplacement des NCOS vers le RCoE:

- (i) la qualité des équipes de recherche;**
- (ii) la pertinence de la Certification ISO du programme mis en œuvre par les RCoE vis-à-vis des priorités et des besoins régionaux;**
- (iii) la planification régionale du programme de recherche et de réseautage;**
- (iv) l'efficacité de la stratégie d'information et de communication des résultats de la recherche agricole**
- (v) La contribution au renforcement significatif et efficace des capacités des NARS grâce à un partenariat avec le CGIAR & ARIs en Afrique de l'Ouest**
- (vi) La quantité et la qualité des innovations agricoles « ready-to-go » innovations générées et délivrées de manière efficace**

CLIMATE CHANGE AND BIODIVERSITY TAKEN INTO ACCOUNT IN PROJECT APPROVAL
CRITERIA (environmental screening)

1. L'environnement naturel et socioéconomique

Le projet de recherche pourrait-il affecter négativement les éléments suivants ?

Aires protégées (parc, réserve, forêt classée, etc.) Oui_____Non_____

Forêts riveraines Oui_____Non_____

Zones humides (lacs, rivières, zones inondées par saison) Oui_____Non_____

Sites géologiques instables Oui_____Non_____

Paysage/esthétique Oui_____Non_____

Site historique, archéologique ou d'héritage culturel Oui_____Non_____

Récoltes y compris arbres fruitiers, etc. Oui_____Non_____

Compensation et ou acquisition des terres Oui_____Non_____

Sols (structure physique, fertilité, ..) Oui_____Non_____

Biodiversité (faune sauvage, animaux domestiques, flore y compris micro-organismes, OGM) Oui_____Non_____

Air (pollution par des éléments physiques ou chimiques) Oui_____Non_____

Changement climatique : Séquestration du carbone Oui_____Non_____

Eaux (souterraines ou de surface) Oui_____Non_____

Etablissements humains Oui_____Non_____



KEY ACTIONS



❖ **BREEDING: early maturing varieties**

STRATEGY

❖ **SUSTAINABLE PRACTICES FOR INTENSIFICATION:**

Economic&environmental use of fertilizers; effic. water use; climate smart; intercropping; rotation; diversification etc.

DRIP IRRIGATION for irrigated rice , **SRI**

❖ **INTEGRATED PEST&DISEASE MANAGEMENT:** Virus, bacteria, weeds, nematodes, termites etc. taking into account break outs related to climate changes

❖ **MECHANIZATION**

❖ **POST HARVEST PROCESSING**

❖ **VALUE CHAIN ANALYSIS**

❖ **OBSERVATORY: DECISION MAKING TOOLS, TRAINING (MMC)**





KEY ACTIONS



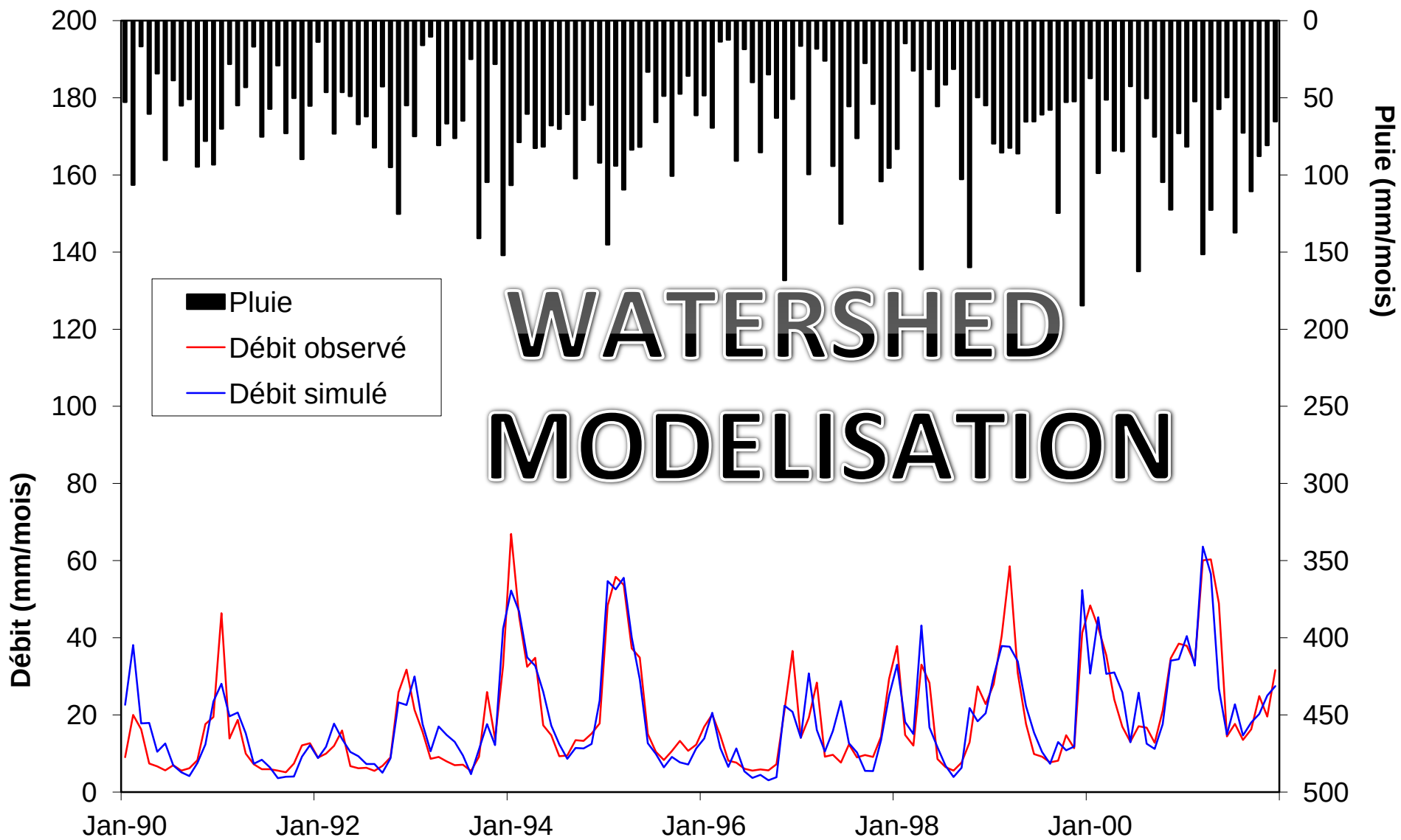
INSTITUTIONAL CAPACITY BUILDING IS KEY:

- Infrastructures

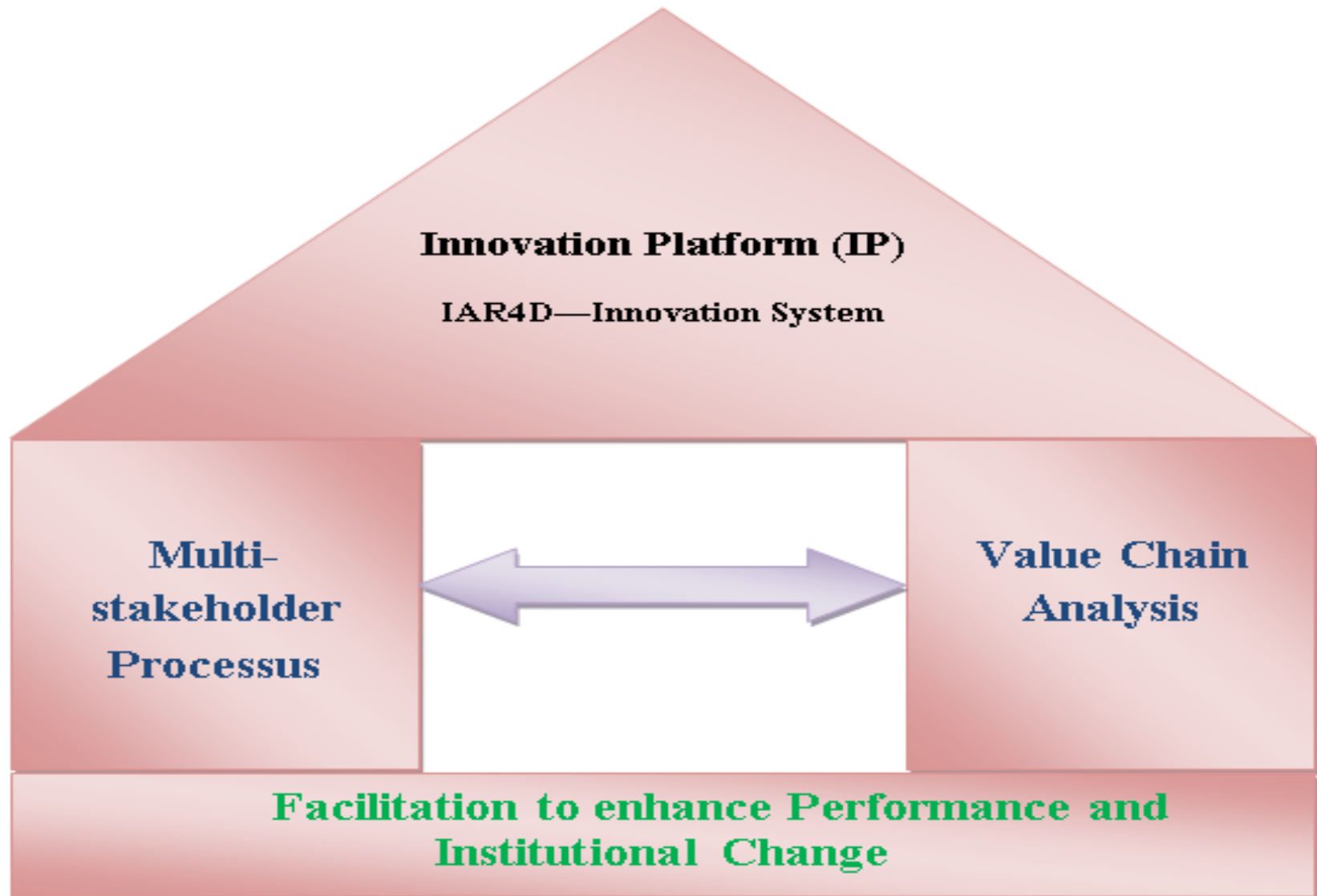
- Human resources: Aging a major problem: Young researchers targeted : MS, PhD training plans over next five years. ALSO SHORT TERM

- Partners Organizations

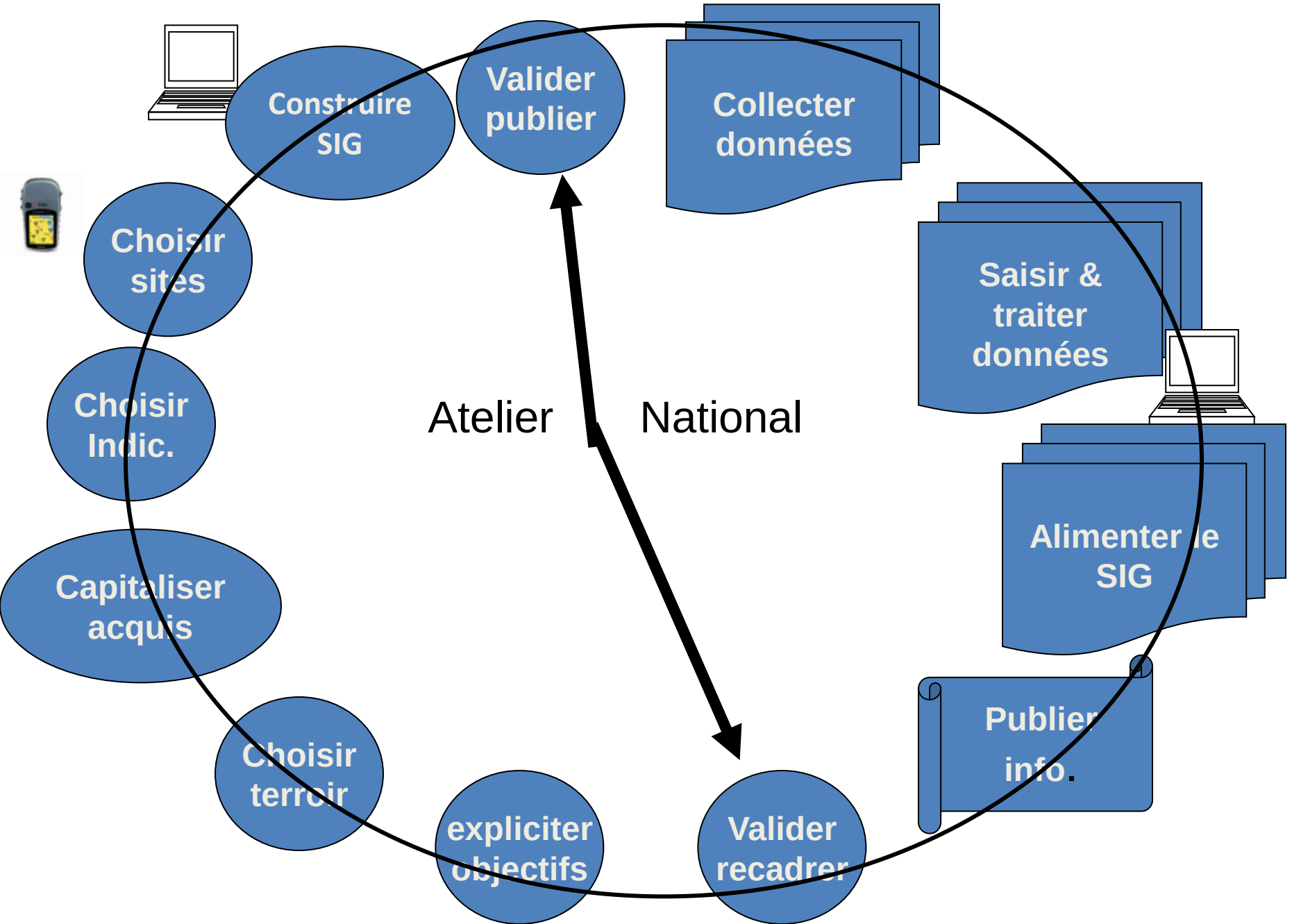




Linkages between platform & Value Chain



Observatoire





Plants de soja à la SRA de Mopti, septembre 2009



Grains de soja

Soubala de soja

Formation des maraîchères de l'association Djiguifa de SAMA en techniques de préparation du soubala de soja, Février 2010.

AFTER WATER WITHDRAWAL CROPPING SYSTEM

- **Progressive use of the remaining water in the soils as the level of flooding water bodies progressively goes down (rivers, lakes etc.).**





SK 95-4

Cycle: 115 jours

Rendt potent: 8 /ha

RDT moyen: 5 t/ha

Aire d'Adopt : Irriguée

RAINFED: 2.5- 3 T/HA

LOW LAND: 5-6 T:HA

WAB 748-6-5-HB



DUNKAFA 11
DKA-11



PROGRAMME RIZ BAS-FOND

WAB 450-I-B-P-91-HB
(NERICA 4 : *Dususuma malo*)



WAB 880-1-38-20-17-P1-HB
(NERICA 12)



PRE-GERMINATED SEEDS SEEDER



MECANISATION

SEMOIR à traction animale



SEMOIR à traction motorisée



PROCESSED RICE PRODUCTS



Gâteaux de riz NERICA

Pains aux légumes (50 % RIZ NERICA)



Biscuits de riz NERICA



SCIENTIFIC VISITS: GUINEA BISSAU, 7 months in Niono



Monitoring Tour October 2011 : Group picture Markala, Dam

EXCHANGE/SUPPORT GUINEA



SEED PRODUCING FARMER Kilissi



COLLECTION DE
VARIETES DE MANIOC
ET PATATE DOUCE

FROM GHANA

YELLOW
POTATO
BUR

Manioc
(Mila)

Loulouni
III
(Boumba)

PÉRASSO

ATELIER SUR LE SRI OUAGA:

26-27 Juillet 2012



REGIONAL WEST AFRICAN PROJECT ON SRI WITH CORNELL

TITLE: Improve and scale up the System of Rice Intensification (SRI) in West Africa

GOAL AND OBJECTIVE

Goal: Improve food security in West Africa.

Specific objective: Improve rice productivity and competitiveness in 13 ECOWAS countries through the existing WAAPP and CORAF/WECARD frameworks.



CNS-RIZ/FAO FUNDED PROJECT



INTEGRATING CLIMATE RESILIENCE INTO AGRICULTURAL PRODUCTION FOR FOOD SECURITY IN RURAL AREAS OF MALI 2011-2015

Component: 1

Piloting of improved climate- resilient agricultural practices

Component: 2

**Capacity building and promotion of improved agricultural practices
through Farmer Field Schools**

Component : 3

**Mainstreaming of climate change considerations into agricultural
sector policies and programs**



CNS-RIZ/UNDP FUNDED PROJECT



INTEGRATING CLIMATE RESILIENCE INTO AGRICULTURAL PRODUCTION FOR FOOD SECURITY IN RURAL AREAS OF MALI

2011-2015

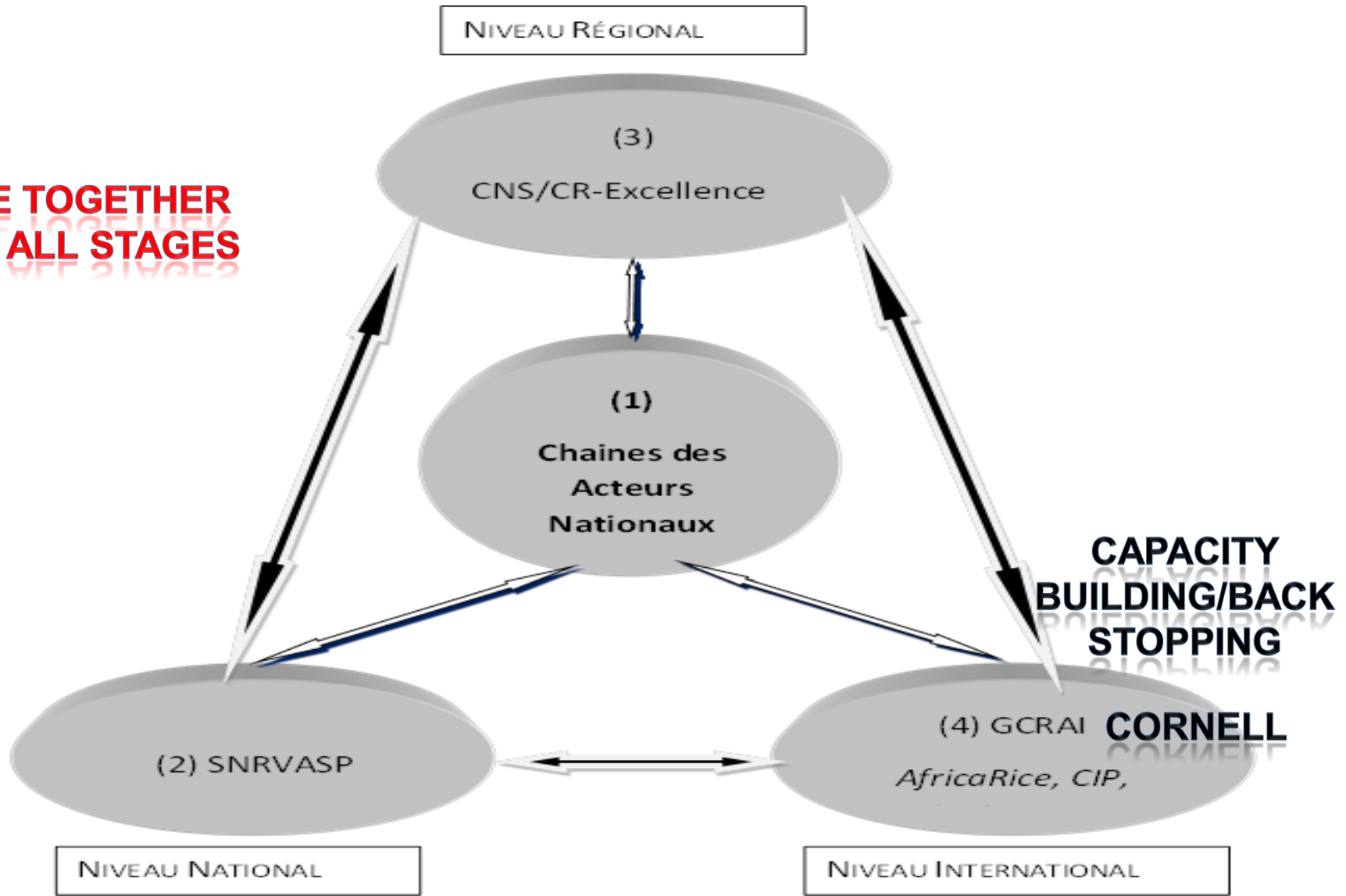
Thematic priority 1 *“Societies and territories under global environmental changes: vulnerability, adaptation and mitigation”.*

Thematic priority 2: *“Global environmental changes and interactions with ecosystems and biodiversity”.*

Thematic priority 3 *“Natural resources and food security in the global environmental change context”*

PARTNERSHIP MECHANISMS

**BE TOGETHER
AT ALL STAGES**



MERCI/THANKS

