Vulnerability and adaptation in the context of pastoral communities depending on forest and livestock in northern Mali

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Side event: at the COP18 : Stepping out of the REDD+ shadow – Why forests and adaptation need greater attention.

RECOFTC – The Center for People and Forests and Rainforest Alliance

THINKING beyond the canopy

CIFOR

Ecosystem based Adaptation (EbA)

- Ecosystem based Adaptation EBA, defined as measures using environmental goods and services for societal adaptation (IUCN,2009). It addresses the role of environmental services in reducing the vulnerability in a multi-sectoral and multi-scale approach (Vignola et al. 2009)

- It builds on the increasing evidence that natural resources can play an important and cost-effective role in adaptation (Turner et al. 2009; Campbell et al., 2009)
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- EBA, need to understand the role of forests in adaptation and the role of communities in forest-based adaptation. Here examples from a case study in Northern Mali

Adaptation in CIFOR projects

CIFOR's projects analyze linkages between forests and adaptation in two ways:

- Adaptation for forests
  - CC will affect forests
  - Adaptation measures needed for forests
- Forests for adaptation
  - Forest ecosystems contribute to social adaptation
  - They provide ecosystem services that reduce the vulnerability of local communities and the broader society (Locatelli et al., 2010)
- Starting to take in account mitigation and adaptation linkages

Is EbA eco-centered?...

"**help people to adapt**" (CBD),
"**reducing the vulnerability of society**" (Vignola et al., 2009)

Sustainable and resilient ecosystems

Ensured provision of ecosystem services

Resilient society (to CC and other exposure)

Sustainable & Adaptive management

For reducing social vulnerability, we need to address ecosystem conservation or sustainable management.

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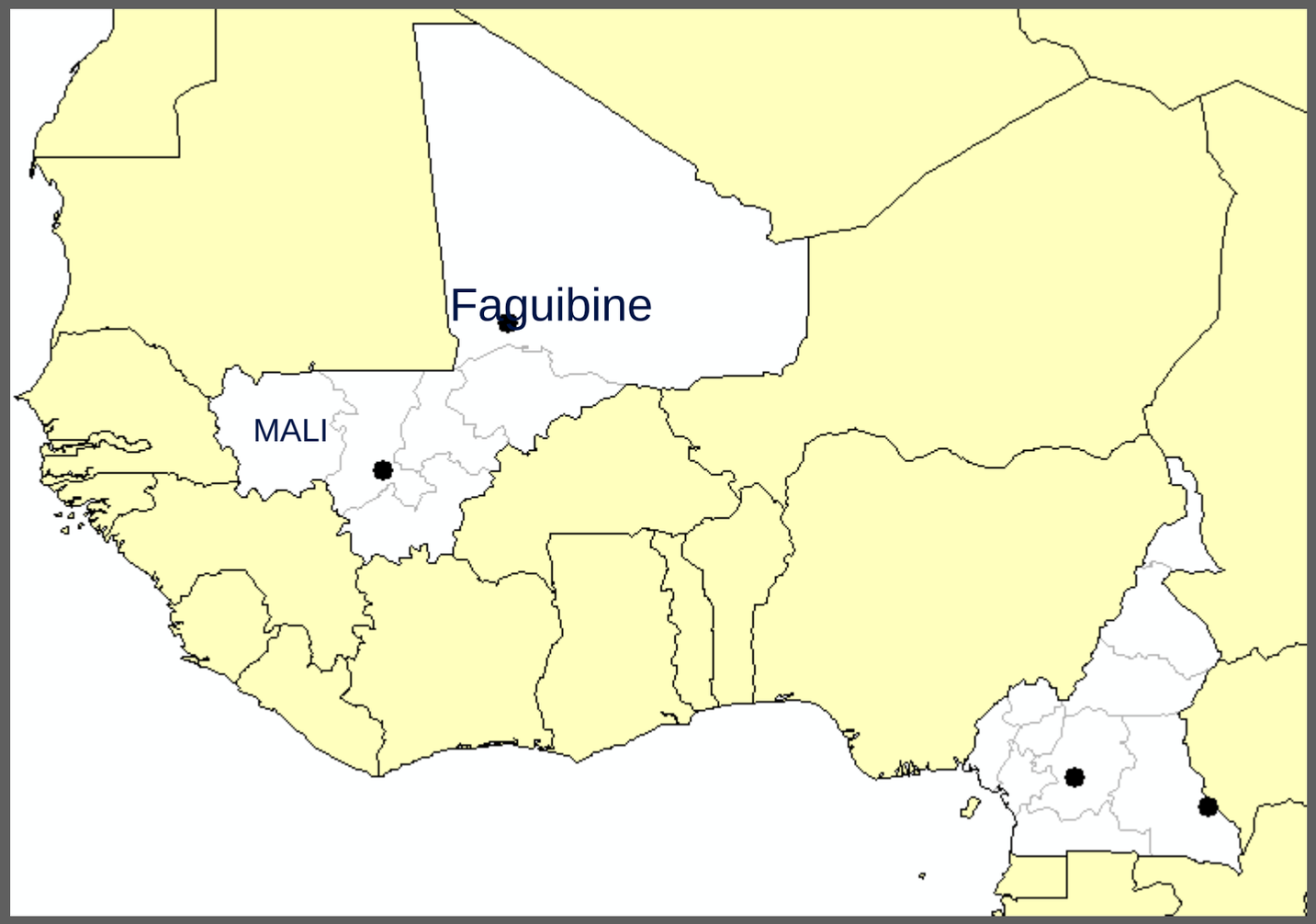
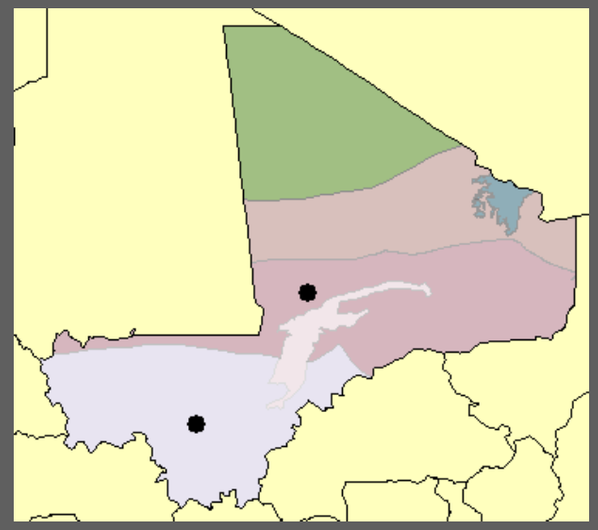
"enable **both people and nature** to adapt" (IUCN, 2009)

Study site

Lac Faguibine, North Mali: +16.77° -3.97° (16°46'N ;3°58'W)



Ecoregion: Sahelian Acacia savanna



Olson et al., 2001. Terrestrial Ecoregions of the World: A New Map of Life on Earth. BioScience 51(11): 933-398

Impact of CC on ecosystems and Livelihoods :

-Prosopis plantations in the 80ies

-Drying out of the Lake Faguibine after the droughts (1980's)

Drastic transformation in the **ecosystem:**

The lake Area => forest (Acacia and Prosopis)

Livelihoods from water and agriculture based to forest and livestock based livelihoods

January 3, 1974, & December 26, 1978

March 17, 2005, & September 28, 2006

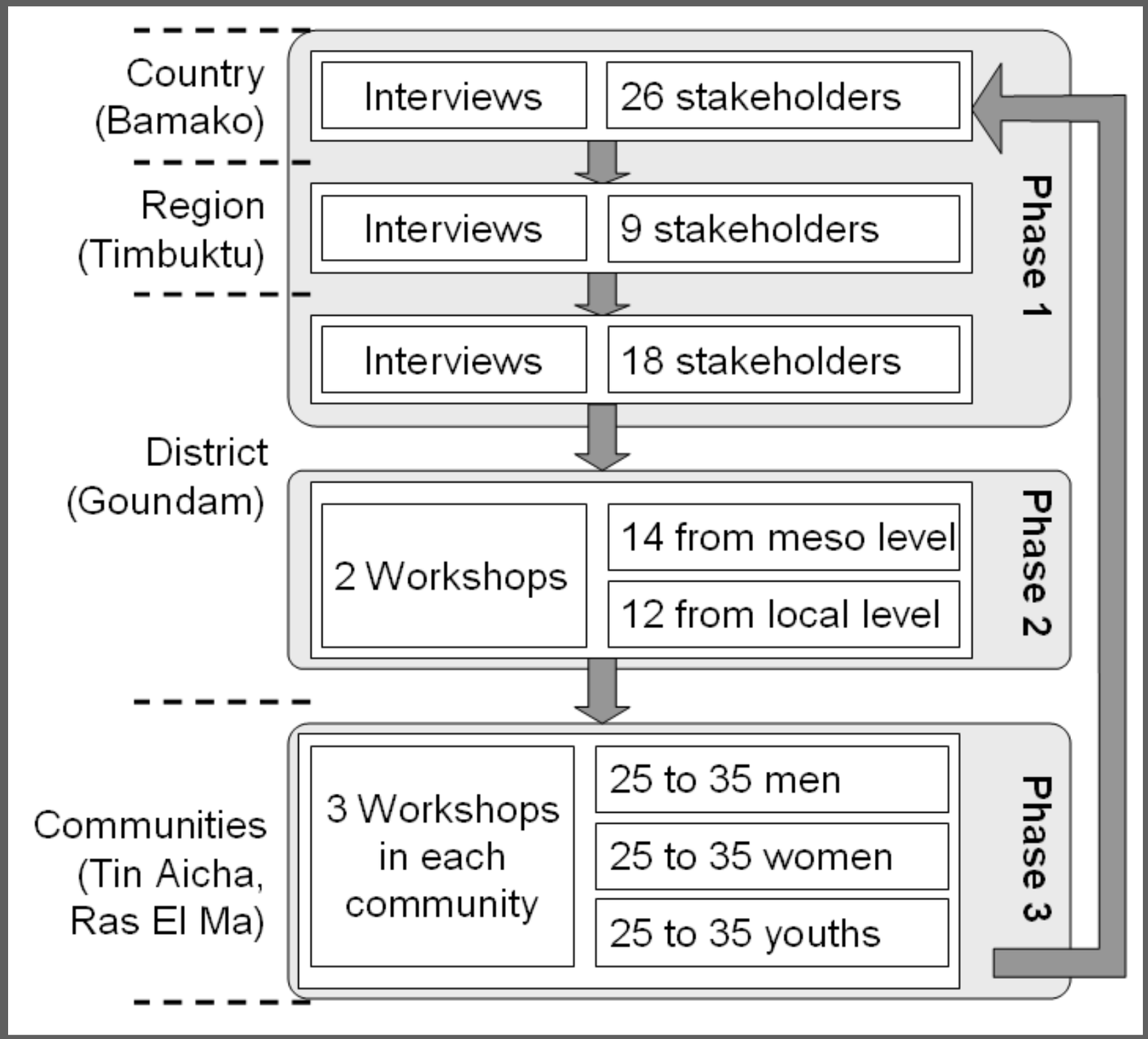
Source: Nasa

Objectives of the study

To assess, with different stakeholders at different scales, vulnerability and adaptive strategies of local communities depending on livestock and forest

Approach and methods

Multi-level
Participatory
Differentiated by ethnical groups and Genders

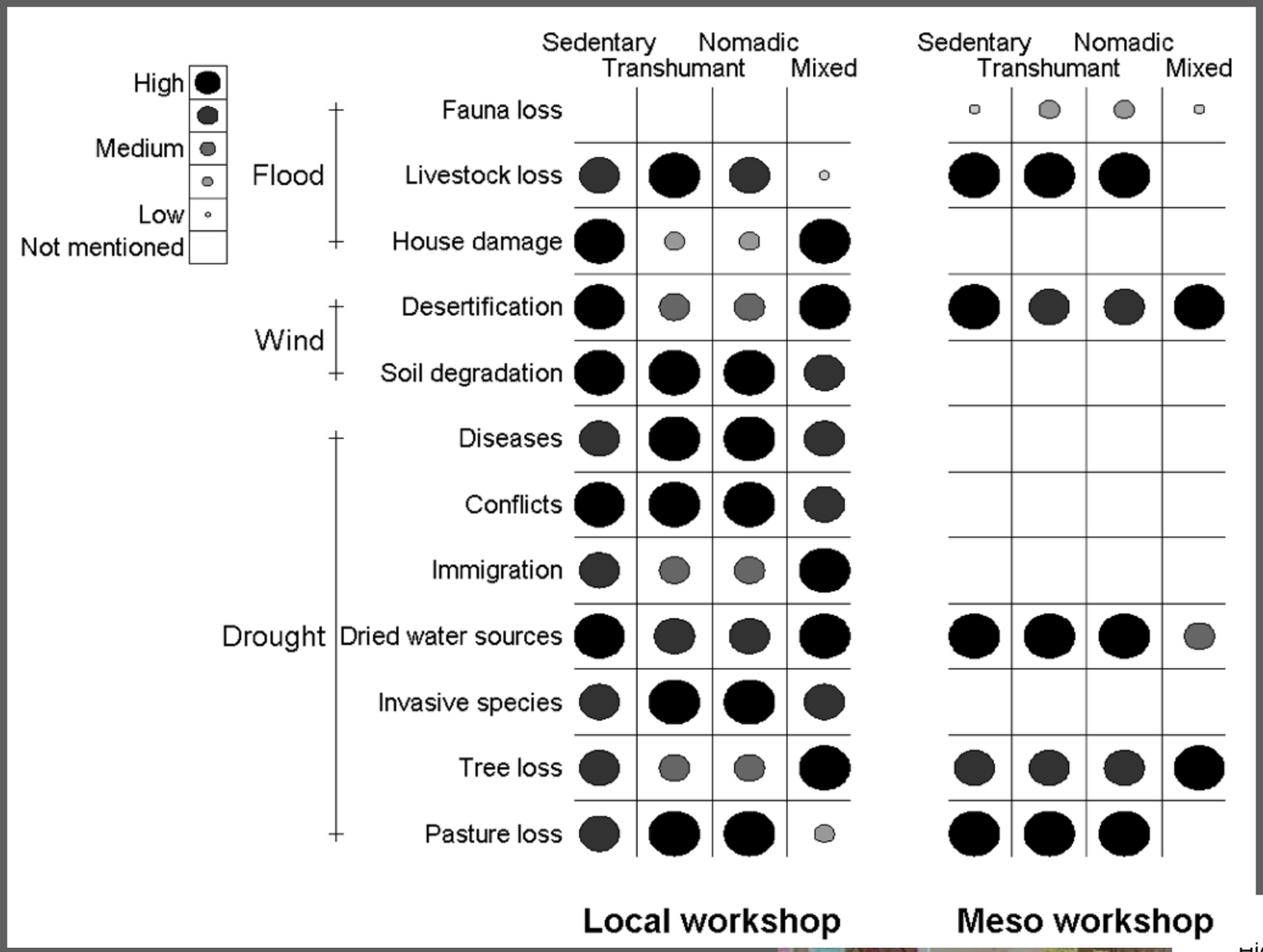


Importance to take multi stressors in account: development interventions and governance challenges

Years	1970s	1980s	1990s	2000s
Climate	Droughts	Severe droughts		Droughts
Hydrology	Dried lake			
Vegetation		Prosopis introduction	Forest growth in the dried lake	
Politics			Rebellion	Decentra-lization
External interventions	Refugee camps / Food aid		GTZ Program: Emergency / Development	
Population		Emigration (drought)	Emigration (conflict)	

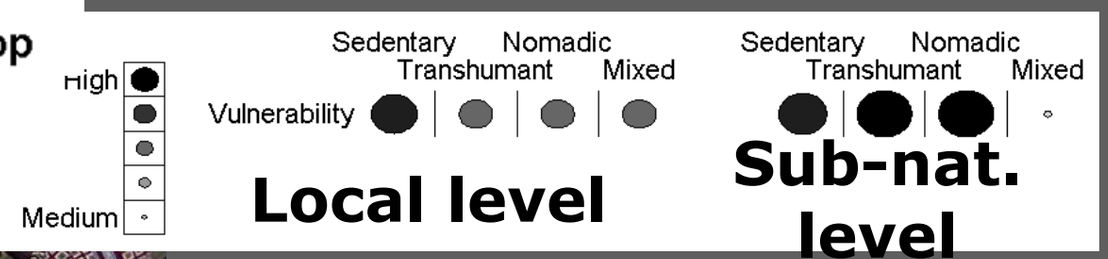
Historical timeline in the study area (based on community-level workshops)

- Divergent vulnerability assessments between communities and governmental representives



Aggregated vulnerability (all groups) of four types of livelihoods (upper row) to climate change and variability, as expressed (scoring) by local and governmental representatives in the district level workshops in Goundam

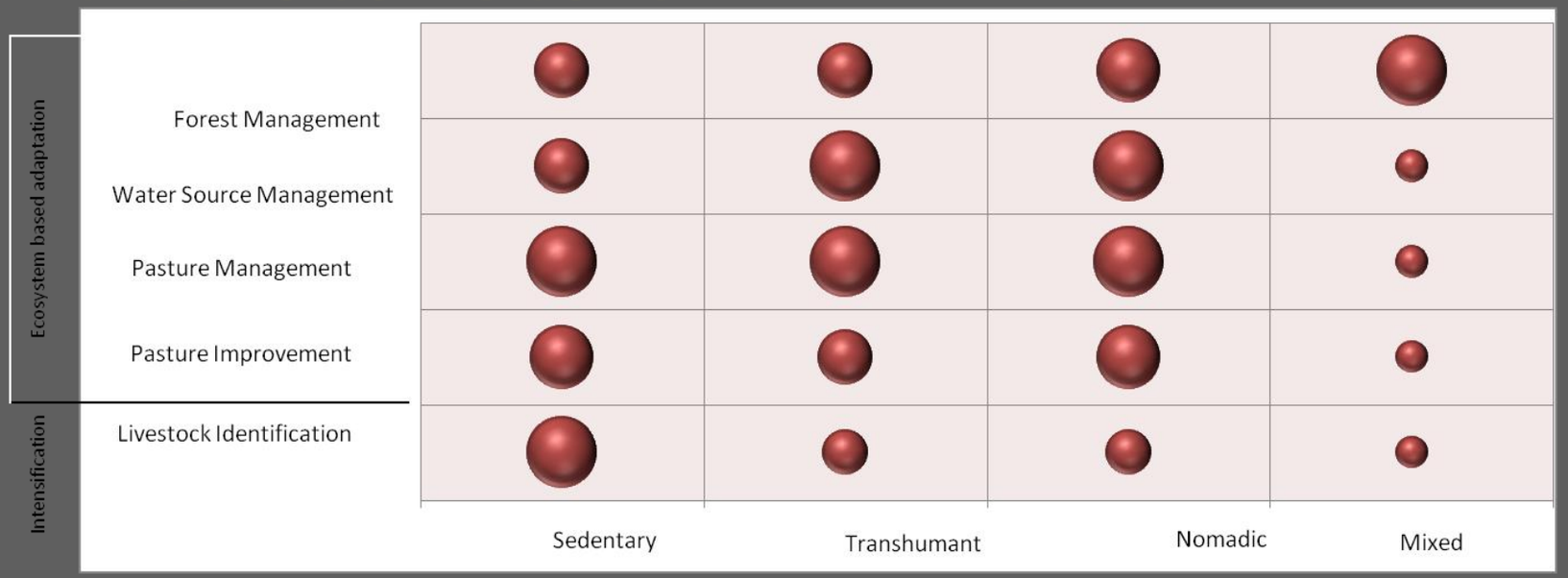
- Facit: divergent vulnerability assessments between different groups

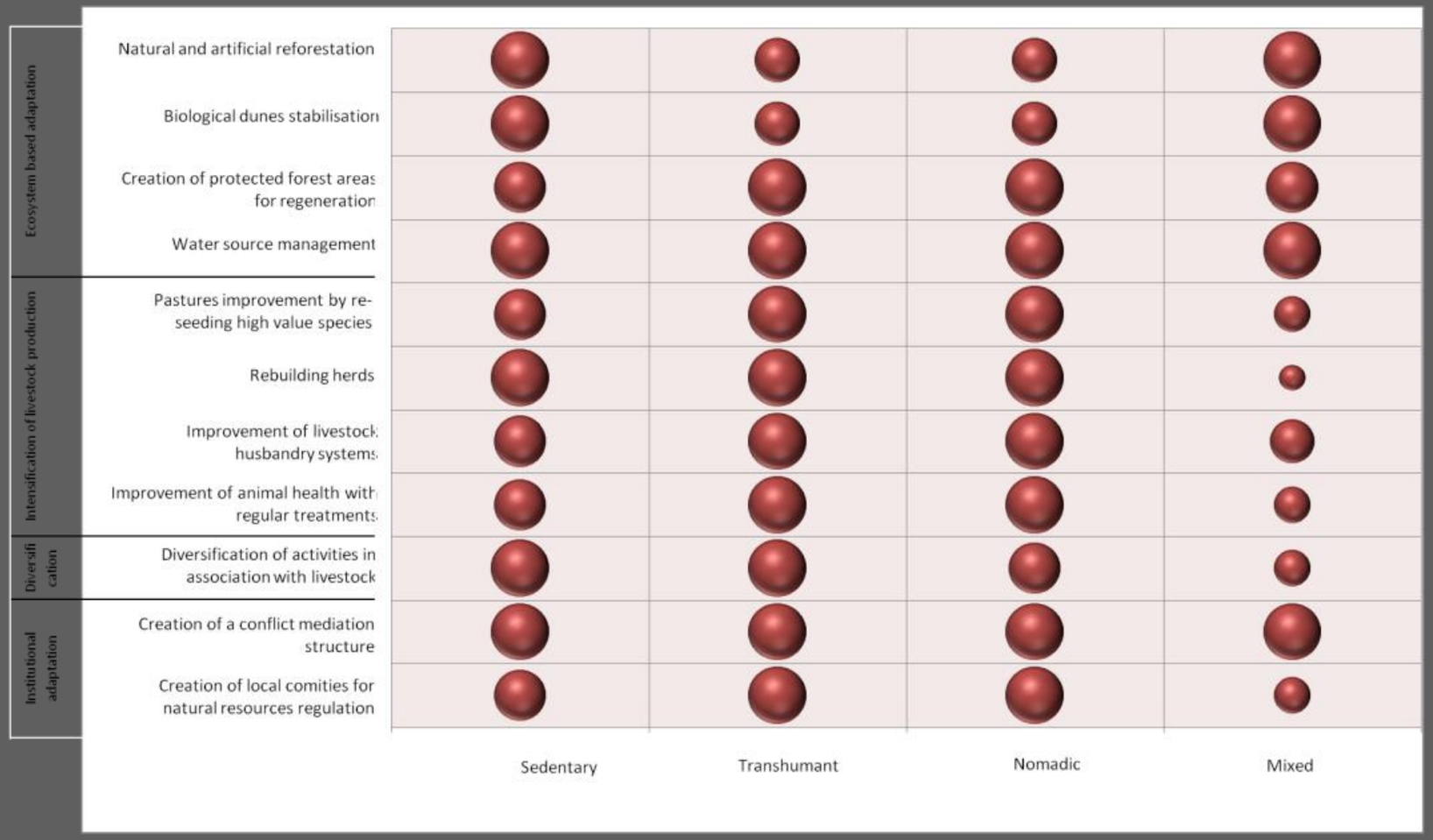


Mobility = Adaptive strategy

Mobility = Factor of vulnerability

The importance of forests in adaptive strategies at the local scale

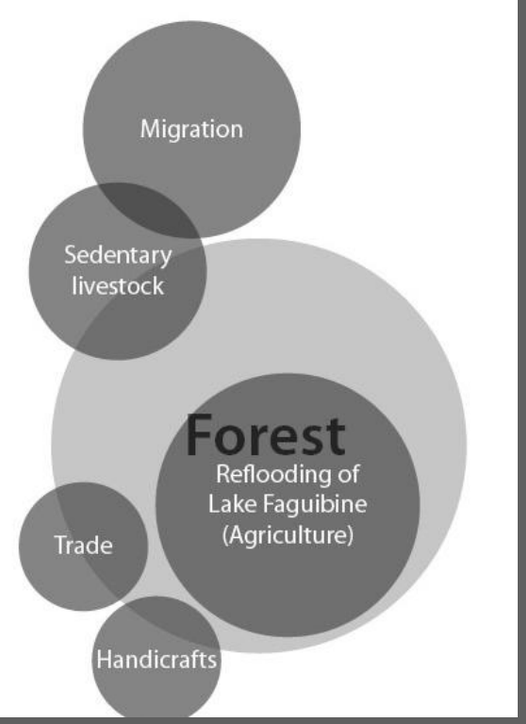




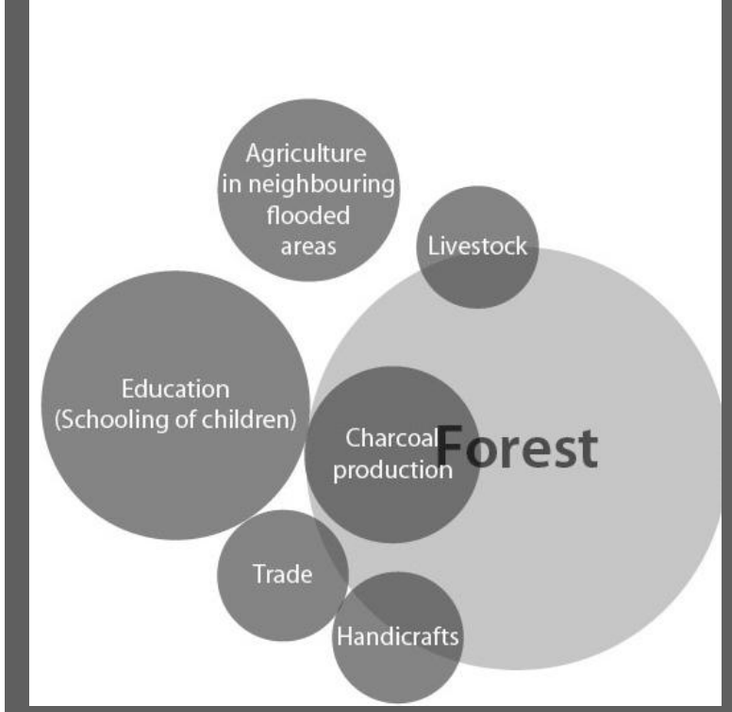
Divergent assumptions: technical beliefs (governmental representatives) versus institutional adaptation (local communities):Access and rights

- Identified strategies at the community level
- pastoral and farmer communities
- Women, men

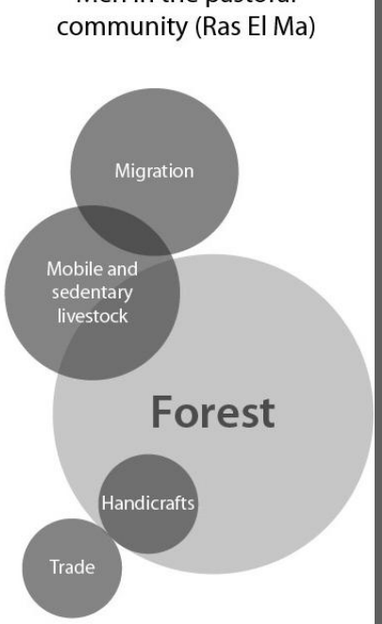
Men in the farmer community (Tin Aicha)



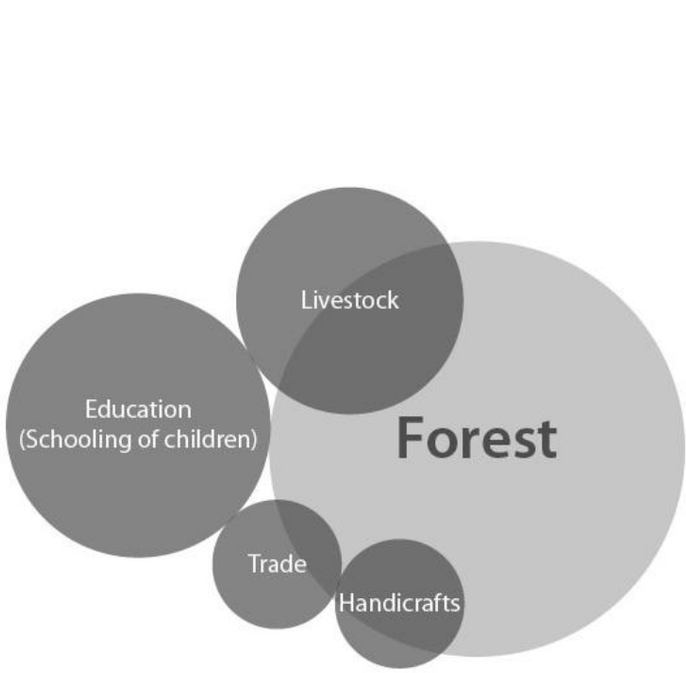
Women in the farmer community (Tin Aicha)



Men in the pastoral community (Ras El Ma)



Women in the pastoral community (Ras El Ma)

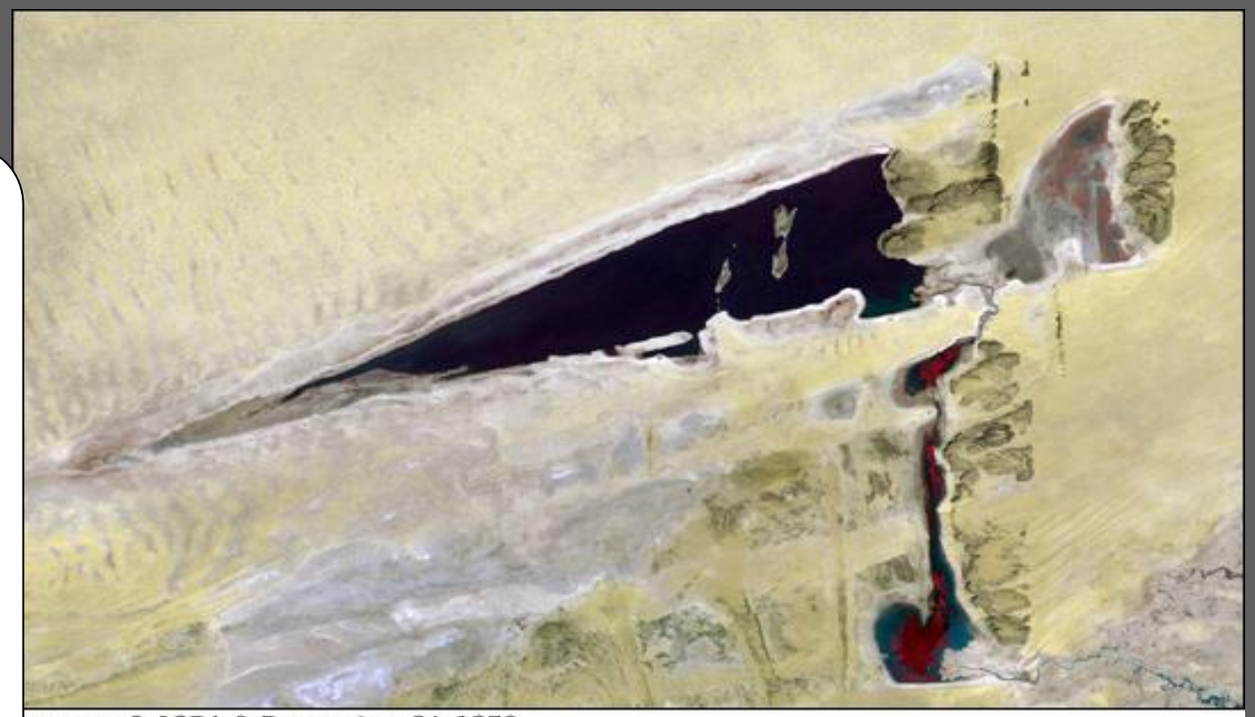


- How national actors are considering community's strategies: Planed adaptation at the national level, Refilling the lake

Objectives of the project

- Restore the ecosystems functioning
  was decimated by prolonged droug
  catchment management
- Raise awareness on the preventi
  farmers and livestock keepers, to sec
  and to improve management of graz
- Strengthen Mali's capacity to enga
  society, private sector and the pul
  dialogue on water and sustainable ec
  for human well-being

Past droughts as a cause of the drying out of lake Faguibine but no consequences for future adaptation plans

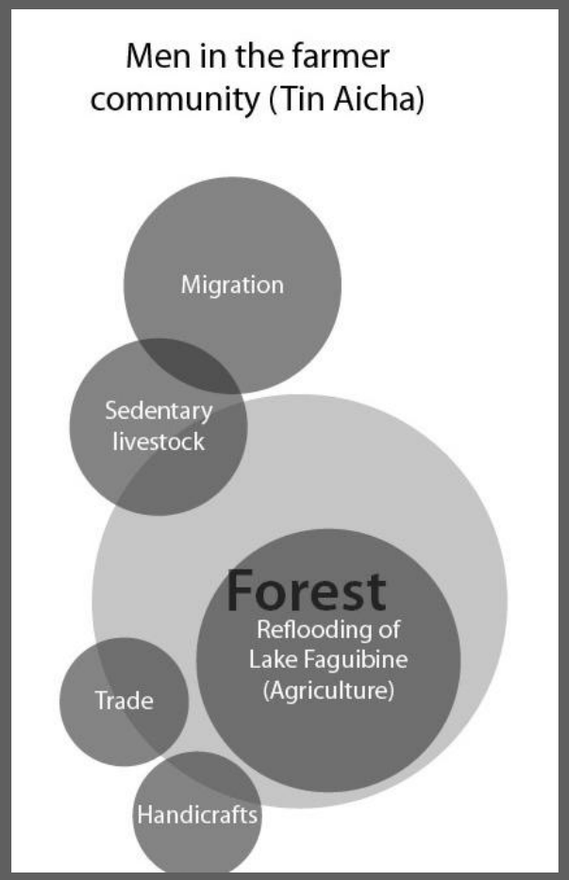


anuary 3, 1974, & December 26, 1978

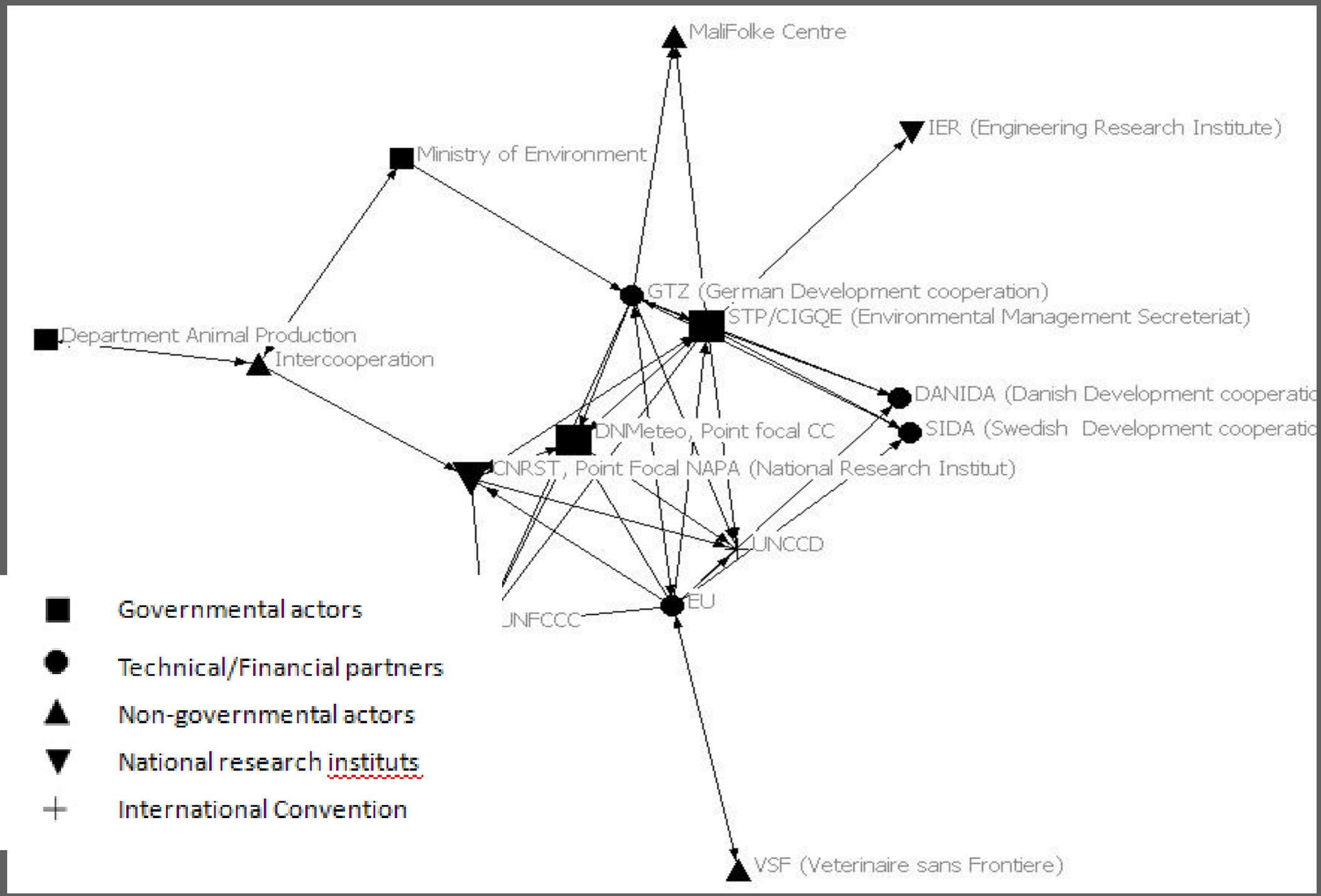
March 17, 2005, & September 28, 2006

(Some facts from the project documents)

National priorities on adaptation are affecting local percetions of adaptation (local gouvernement) but local priorities are not reflected at the national level



Network analysis at the national level: where are local institutions?



How to overcome these challenges

- More effort are needed to link levels: Bringing local priorities to national or provincial levels
- Analyzing sustainability of forest versus infrastructure adaptation: reffiling the lake and EbA?
- Providing solid evidence on the benefits and effectiveness of EbA to facilitate adoption and promotion of EbA by decision-makers across all scales of governance ==➔Linkages to mitigation plans
- Enhancing resilient governance arrangements by empowering local communities to reduce their vulnerabilities and to manage ecosystems in the face of climate change

Source photos:????….

Thank you….