

# Climate-Resilient Agriculture (CRA) and Agricultural Innovation Systems (AIS)

*Ann Waters-Bayer (ann.waters-bayer@etcnl.nl)*

***PROLINNOVA** (PROMoting Local INNOVation in ecologically oriented  
agriculture and natural resource management)*

*www.prolinnova.net*

# Conventional approach to climate-smart agriculture

- × **Focus on technologies:**
  - to reduce GHG emission (mitigation)
  - to cope with climate variability or uncertainty (adaptation)
  - to increase production (growth)
- × **Linear transfer-of-technology**
- × **Opportunity of CC-related interest & funding:**  
“climate-smart” label to promote uniform technologies that are scalable and marketable
- × **Knowledge of “experts” in research and agro-business regarded as supreme**

# AIS perspective on CRA

---

- ✘ **Inclusive processes of creating and sharing knowledge by diverse actors who develop and apply appropriate solutions for diverse areas that experience CC in different ways**
- ✘ **Leading to site-specific techniques & organisational forms that:**
  - **Contribute to mitigation and adaptation, yet also**
  - **Meet current requirements for food security, in ways that**
  - **Maintain system capacities to weather shocks and adjust to uncertain future**
- ✘ **Innovation (successfully applying new ways of doing things): outcome of interactive learning & negotiation among diverse actors**

# Development of CRA requires:

---

- ✘ **Combining technological & organisational improvements in production, processing and distribution**
- ✘ **Policies that create incentives for low-carbon-emissions pathways**
- ✘ **Institutions that can catalyse and facilitate relevant change**
- ✘ **Approaches that support continuous, decentralised and equitable processes of generating, applying and adapting climate-smart solutions**

# **Key to climate-resilient agriculture:**

**Resilient communities practising forms of farming that reduce / handle risk and can adapt**

**Communities can do so more quickly if:**

- They are part of vibrant AIS encompassing all necessary actors, and**
- All actors are aware of CC risks and opportunities, and of implications of these for their choices.**

# Climate smartness as added value

---

- ✘ **Avoid too narrow focus on generating and disseminating specifically “climate-smart” technologies**
- ✘ **In “resource-poor” areas, AI processes functioning not primarily because of CC but more immediate pressures**
- ✘ **Outcomes may be climate-smart as added value, if using local resources wisely and flexible in application**
- ✘ **Supporting these local initiatives and improving local actors’ linkages with others in broader AIS can enhance adaptive capacity, even if AI processes not focused on CC**

# Focus on resilience

---

- ✘ To thrive under changing conditions, farmers must innovate continuously and efficiently
- ✘ Resilience is outcome not of particular technologies but of increased capacity of AIS to adapt
- ✘ Well-functioning AIS recognises and links contributions of all actors
- ✘ PROLINNOVA therefore encourages researchers and advisors to recognise how farmers innovate in the face of change and to strengthen local initiatives
- ✘ Improves linkages between farmers, researchers and advisors on more equitable basis than in conventional approaches to R&D
- ✘ Makes them better able to interact further in adapting to new pressures and opportunities

# More than production

---

- × **AIS for CRA not confined to interactions between farmers, researchers and advisors**
- × **Must include attention to:**
  - **land-tenure arrangements**
  - **risk-management strategies**
  - **effective communication systems**
  - **nimble agro-services that allow flexibility and choice**

# Issues for this session

---

- ✘ **How can an AIS perspective be applied in developing CRA?**
- ✘ **What key issues in terms of technologies, processes, institutions and policies need attention if one approaches CRA from an AIS perspective?**
- ✘ **What examples do participants have about on-the-ground experiences in applying an AIS perspective to CRA?**
- ✘ **What are the challenges / gaps and opportunities?**

# Expected outcomes of this session

---

- ✘ Better understanding of how AIS perspective can be applied in developing CRA
- ✘ Recommendations for people trying to apply it
- ✘ 10-minute summary for Friday plenary
- ✘ Possibly more elaborated “think-piece” on applying AIS perspective to CRA