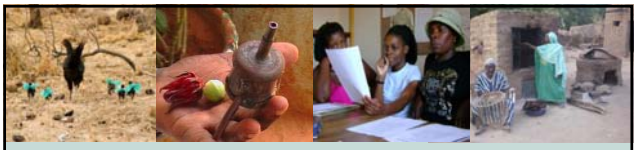

Strengthening local resilience to climate change

The role of grassroots adaptation and participatory innovation development

Laurens van Veldhuizen, PROLINNOVA Secretariat, ETC AgriCulture, Netherlands

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Climate Change Adaptation (CCA) and agriculture

CCA in agriculture refers to:

- **Technologies and practices**
- **Sustainable food systems**
- ***Effective adaptation processes***

What is the role of farmers & rural communities in processes of adapting to climate change?

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in ecologically oriented agriculture and natural resource management

- **Promoting participatory approaches that build on farmers' *own innovative capacities***
- **Integrating these into mainstream programmes and organisations of agricultural research & development**

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PROLINNOVA international network & partnership

19 Country Platforms

Africa:
Ethiopia, Cameroon, Ghana, Kenya, Mali, Mozambique, Niger, Nigeria, Senegal, South Africa, Sudan, Tanzania & Uganda

Asia: **Cambodia, India & Nepal**

Latin America: **Andes Regional Initiative in Bolivia, Ecuador & Peru**

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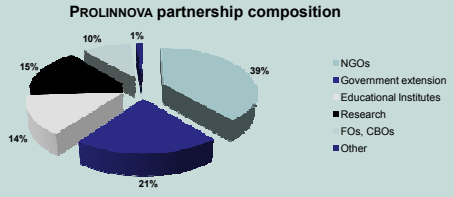
Multistakeholder partnership



180 organisations (October 2011)

What PROLINNOVA does

Diverse activities depending on local context & priorities:

- ***Creating the evidence*:** studies of local innovation efforts, participatory innovation development (PID) on the ground, methodology development; and ***documenting*** this all
- ***Sharing the evidence:*** publications, media
- Establishing ***multistakeholder platforms*** for planning and learning: working groups, steering committees, workshops
- ***Capacity building,*** training and working with universities and colleges to include PID in teaching and research
- ***Policy dialogue and mainstreaming*** PID at local, district, national and international level

PROLINNOVA and CCA

- **Extensive literature review on grassroots adaptation initiatives in the face of CC**
- **Field studies with communities in Ethiopia, Nepal and Niger**
- **Workshops in these countries: PROLINNOVA partners and other agricultural and climate-change related organisations**
- **Policy brief on strengthening local resilience to climate change**

Examples of farmer adaptation to climate change: Nepal

Diversity of adaptation / innovation cases:

- **Reduced tillage and mulching of garlic to cope with less rain**
- **Additional millet crop in winter**
- **Hanging nurseries on platforms to protect seedlings against floods**
- **Own crossbreeding to develop maize varieties that withstand lodging**

Examples of pastoralist adaptation to climate change: Ethiopia

- Developing own cut-and-carry feeding system
- Creating private and community waterpoints
- Increasing market interaction (credit, vehicle use)
- Changing herd composition
- Settling on islands in dryland lakes
- Diversifying livelihood sources by men & women
- Empowering traditional institutions

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Ethiopian pastoralists' cut-and-carry innovation

Combining technical and socio-organisational innovation

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Some examples from other countries

- Niger: Donkeys as dowry for young women to cover long distances to waterpoints
- India: Flood protection by planting bamboo
- Jamaica: Protecting banana plants from high winds
- Indonesia: Fencing for flood protection; early-maturing beans; moving houses

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Indonesia: Fencing for flood protection

Reduces flow of floodwater and thus damage; accumulates silt; but access to palm-leaf stems?

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Aspects of local adaptation

- Vulnerability to climate change is due to multiple factors.
- "Traditional" practices emerge from dynamic local innovation.
- Women's innovation is often invisible.
- Adaptation to change never ends.
- Not all local innovations have positive impacts.
- Local innovation with limited options / resources, less systematic, not widely shared.

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Building resilience by strengthening local adaptive capacity (PID)

- Recognise and respect local adaptation and innovation efforts
- Assist smallholders to improve and/or validate local innovations / adaptations

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Building resilience by strengthening local adaptive capacity (PID) – 2

- Spread successful locally developed adaptations
- Introduce new ideas / practices / formal science into farmer-led processes of joint innovation
- Create direct local access to resources for experimentation and adaptation funds (LISFs)

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Participatory Innovation Development for Climate Change Adaptation

- Link community-based organisations, farmer groups and support agencies with sources of information on climate change (CC)
- Build local capacities in participatory tools for CC-related analysis (vulnerability / risk assessment)
- Support CC-related local analysis
- Build local capacities in agro-meteorology and link with indigenous forecasting

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Local adaptive capacity: PID and more

Local adaptive capacity depends on:

1. **Ability to *live with change and uncertainty***
2. **Ability to *access and combine diverse sources of knowledge* for innovation**
3. **Ability for *self-organisation and networking***

Adapted from work by Folke *et al* (2003) and Swanson *et al* (2007)

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Local adaptive capacity (1)

Ability to *live with change and uncertainty*:

- **Nurturing diversity: encouraging different ways of doing things**
- **Participatory vulnerability / risk assessment & management**
- **Development of trust within the community**
- **Disaster early-warning systems and rapid feedback for change**

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Local adaptive capacity (2)

Ability to *access and combine diverse sources of knowledge* for innovation:

- **Local innovation and its recognition**
- **Links to information sources and services**
- **Collaborative experimentation / PID**
- **Capacity for monitoring**
- **Literacy**

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Local adaptive capacity (3)

Ability for *self-organisation and networking*

- **Local mechanisms for governance of natural resources**
- **Conflict management**
- **Equity in resource access and allocation**
- **Interaction with external agencies**

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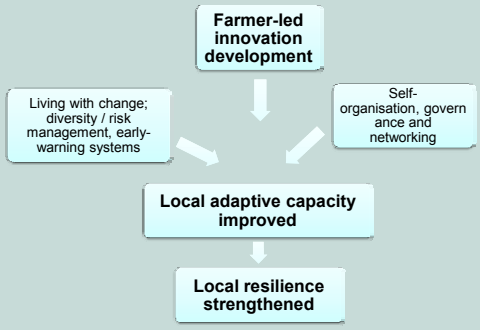
In summary



THANK YOU

Contact us:

PROLINNOVA International Secretariat
c/o ETC AgriCulture
Kastanjelaan 5, P.O. Box 64
3830 AB Leusden, The Netherlands
Tel +31 33 432 6024
E-mail prolinnova@etcnl.nl
Website www.prolinnova.net