AKIH
Agrobiodiversity Knowledge and Information Hub
Development of a decision support facility for agrobiodiversity conservation and management
Rationale

• Human societies have always adapted agrobiodiversity to enable food security BUT rapid pace, complexity and severity of the global change call for new forms of intervention.

• Climate changes: Increased variability of critical weather parameters
  – temperature during the growing season,
  – timing and intensity of precipitation,
  – frequency of extreme weather events
  – agricultural pest populations,
  – viability of agricultural crops needed for food security.

• ➔ increased uncertainty and vulnerability of smallholder farming systems in many countries, particularly those in less economically developed regions.
Rationale

- Agrobiodiversity and crop diversity are key assets that communities can exploit to adapt to global climactic change
  - Smallholders farming
  - Primary global resource on knowledge and use of ABD.
  - But insufficiently studied and understood.
    - In what ways do smallholder farming practices already address important climate change adaptation behaviors and structures,
    - In what ways are they limited in their ability to respond to climate variability?
    - To what extent and under what conditions is ABD utilized and how can it be more effectively utilized?
- New scientific knowledge, interdisciplinary approaches and methods, and information sources and technologies => opportunity for exploring and applying information-based interventions.
ABD - Climate

• Multiple geographical scales
  – structure of human interaction and organization
  – ecological and environmental processes
• ➔ integrated approach designed and developed, with local communities
• ➔ use of information technology to mitigate farmer and farmer society vulnerabilities
• ➔ distributed information facility
  – recognizes how crop and farming systems are part of broader ecological landscapes
  – makes that information available to farmers
Overall ambition

• To increase our understanding on how ICT could be used to combine local practical knowledge with globally-relevant knowledge and information

• for more informed choices to be made by various communities on agrobiodiversity management in response to global changes.
Research questions

1) What knowledge about crop diversity generated at different scales (understood as geographic, temporal and social) by various communities (scientists, practitioners, farmers, and government) could be relevant in a context of global changes?
   - Aggregation existing and new information on crop diversity and associated practices, the physical and social environment in which these are conserved, exchanged and used.

2) What collective arrangements and social processes are in place for information sharing and structuring and how could they be further enhanced?
   - Social network data and analysis to determine information flows,

3) What are the different information and communication protocols, tools and collective arrangements with which communities can increase access to a broader range of relevant, usable information to improve their response capacity to exogenous global changes?
   - Ensure constant interactions throughout the project with stakeholder communities acting simultaneously both as users and producers of data, information and knowledge.
WPs

• WP1: participatory monitoring and assessment methods.
  – support all other WPs, including ICT solutions structuring, sharing and mobilization.
  – ensure coherence between the practices, needs and constraints of the partner communities, and the AKIH knowledge model, process and infrastructure.
  – support and monitor integration and implementation of the process between the communities, the researchers and the other stakeholders’ groups.
  – assess generalizability and transferability of the results to other contexts with low AKIH interventions.

• WP2: controlled vocabulary (standards) included in a multi-thematic thesaurus of agrobiodiversity.

• WP3: social network analysis methods to understand how information and materials (eg. Seed) are exchanged between farmers and other actors.

• WP4: technical design of the information and communication system. Integrate collectively

• WP5: coordination, knowledge management and dissemination.
AKIH ➔ NA4MA

• A Platform for Agrobiodiversity Research-Agropolis partnership: contributing to land-sharing land-sparing debate through introducing agrobiodiversity information

• = NA4MA (New Approaches for Management of Agrobiodiversity)