G·STIC 2018
GLOBAL SUSTAINABLE TECHNOLOGY & INNOVATION CONFERENCES

Agroecology for Sustainable Food Systems

Highlights of G-STIC 2017

Key messages and key findings

The challenge

- ‘Industrial agriculture’ – the input-intensive crop monocultures and industrial-scale animal feedlots that dominate agriculture – has successfully produced food
- *But* this has come at a great cost to the environment, human health and animal welfare, generating negative outcomes on multiple fronts
- Business as usual is not an option: If we continue on the same path, we risk threatening the very resource base that agriculture is dependent on, and we will still not be addressing hunger nor inherent vulnerabilities to climate change in our agricultural systems

Key finding 1

- There is a need for a paradigm shift in agriculture to diversified agroecological systems as they can address multiple challenges. This paradigm shift can be facilitated by supportive public policies, a rights-based approach and collective action. Both producers and consumers have important roles to play.

Agroecology

- Increasingly gaining recognition as an approach that could enable substantially better food production, with practices that are regenerative and resilient
- Applies ecological principles to the design and management of agroecosystems
- Its technologies and innovations diversify farms and landscapes, increase biodiversity, nurture soil health, enhance recycling, promote ecosystem services and stimulate interactions between different species, while improving water harvesting and water storage capacities, allowing the farm to provide for all its needs without recourse to external inputs

Key finding 2

- The application of ecological principles to the design and management of agroecosystems manifests in various practices; practices that can be locally adapted to farmers' needs and circumstances, while being accessible, affordable, socially acceptable, environmentally sound and gender sensitive. Such technology assessment criteria are relevant to any agricultural technologies and innovations.

Contribution to the SDGs

- Agroecology could significantly contribute to the SDGs in an integrated, comprehensive and holistic manner
- It has strong potential to contribute to SDG 2 targets:
  - ending hunger and malnutrition
  - doubling agricultural productivity and incomes of small-scale food producers
  - ensuring sustainable food production systems and implementing resilient agricultural practices
  - maintaining the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species
- In addition, it can contribute to many of the other SDGs

Key finding 3

- Evidence is particularly strong on the ability of agroecology to deliver strong and stable yields by building ecological, social and climate resilience, and in delivering nutrition and secure livelihoods, in the places where needed most, and to the peoples who need these most

Farmers' knowledge and innovation

- Agroecology is a science, movement and practice that draws on social, biological and agricultural sciences and integrates these with traditional and farmers' knowledge
- It is based on techniques that are not delivered top-down, but developed on the basis of farmers' knowledge and experimentation, and through farmer-researcher participatory approaches
- This 'wide-tech' paradigm shifts the focus to diversified and decentralised innovation, based on farmers' and locally-applicable knowledge

Key finding 4

- Agroecology technologies and practices build on farmers' and indigenous peoples' knowledge and innovation. They require bottom-up, participatory approaches in research and development, dissemination and extension, including through farmer-to-farmer networks and farmer-scientist collaborations.

G-STIC 2018

- *How do we make the key findings of GSTIC 2017 more actionable?*
- *What is needed to enhance the use of agroecology technologies and innovations?*
- *What policy actions are needed to scale the use of agroecology technologies and innovations?*