CLIMATE CHANGE AND NATURAL DISASTERS - SCOPE FOR REGIONAL COOPERATION -
PAKISTAN’S CASE

CONSERVATION, [SUSTAINABLE] USE AND EXCHANGE OF
PLANT GENETIC RESOURCES
26-27TH AUGUST 2015, KATHMANDU, NEPAL

DR. WAJID PIRZADA
CEO ROOTS PAKISTAN
- A GRASS ROOT DEVELOPMENT ACTION
CLIMATE CHANGE AND NATURAL DISASTERS- SCOPE FOR REGIONAL COOPERATION - PAKISTAN’S PERSPECTIVE

- Historic Perspective
- Changing Global, Regional & National Contexts
- PGR Interfacing Tech. Mix, multilateral trading- trans-boundary diseases climate change and natural disasters
- Risks, Opportunities & Options
- Pakistan’s case
- Way Forward
- Links to Resource Institutions in Pakistan
HISTORIC PERSPECTIVE

i. PGR Interfacing Technological Mix

- Common Heritage - Fellow companions
- Plant Domestication & Human Manipulation - New combination of genes through plant breeding - Crop & Varietal Development

Plant Breeding - Yields, Environ. adaptation, Pest & Disease Resistance, Food Quality & Safety

- Large number of land races with substantial genetic diversity
  Few Crops → narrow Genetic base → Genetic Impoverishment
- PGR Conservation → Ag. Production, Trade & Food Security
- Plant Genetic Diversity → Ag. Production & Food security
- Organized Preservation of PGR diversity for today & tomorrow
- Sustainable Use, Equitable Sharing of the benefits - CBD
CHANGING GLOBAL, REGIONAL & NATIONAL CONTEXTS

ii. PGR Interfacing Multilateral Trading, Climate Change

- Closed economies are part of history now
- Trade Liberalization- Impact of Import Surges, exotic diseases
- Looming Threat of Climate Change- CC front line states in the region, Changed disease ecology
- Natural Disasters- Erosion of GR base
- On top of it Corporate Hegemony & Rent Seeking- a day light robbery
- Border control of diseases- Agricultural Health & Food Safety
- Food Security- Changing Paradigm
  - Self-sufficiency paradigms has become irrelevant
  - Push & Pull of the markets
  - Erosion of Indigenous Knowledge and Home grown safety nets
RISKS, OPPORTUNITIES & OPTIONS

Risks:
- Mono Crop culture - Loss of diversity
- Dependence
- Loss of Comparative Advantage
- Import Surges → Shrinkage of farm sector → Loss of diversity
- Threatened Livelihoods and Food Security
- Climate change & natural disasters → impoverishment

Opportunities:
- Informed & collective actions for organized preservation and development
- Regional Inventories and integrated Conservation System
- SPS Management - Regional Framework
- CC Adaptation & Mitigation - Regional Framework
- Research - CC resilient PGRs
- Identification of Invasive Species

Options:
- Bilateral/regional cooperation
- EU modality - PGRFA - EC PGR - Ex Situ Conservation - AEGIS (European Gene Bank Integrated System)
REGIONAL COOPERATION-WAY FORWARD

- Institutional Development- National & Regional
- National & Regional PGR Inventories
- Harmonization of PGR data Protocols
- Development of National & Regional Technical Standards
  - Documentation & conservation
  - Capacity Building Trainings
  - Joint Collection of Material
  - Salvage & Emergency Rescue of Threatened Diversity
  - Research & Exchange
  - Quality Standards for Conservation & Use
  - Innovative, efficient & cost effective approaches
  - Knowledge Management & Sharing

- Development of Regional Framework (Conservation, Research & Innovation, Use and Exchange)

Global Networking and informed participation in multilateral negotiations & Treaties
PAKISTAN’S CASE

- Pakistan follows a liberal PGR access policy in line with IT-MLS and CBD Benefit Sharing
- More than 1200 requests entertained
- Part of SAARC initiative on sharing of PGR related information
- PGRI-PARC central research & conservation facility
- New Seed Policy and Plant Breeders Rights Act on Anvil

**Limitations & Risks**

- Gene Pool Erosion
- Lack of IPR Management
- National/sub-national legislation deficit
- Weak inter-institutional coordination

**Strength & Potential:**

Centre of Excellence in PGRFA for the Region
PAKISTAN’S CASE

Way Forward:

- Needs biodiversity conservation, P RFA R&D strategy
- Inter institutional & regional Coordination & cooperation
- Added focus on indigenous & adapted varieties
- Documentation of wild races with potential for food security & CC adaptation
- CC adaptation & mitigation with added focus on PGR for F&A preservation
- Life forms Intellectual Property Management
- Border control of diseases-SPS Management
- Informed participation in bilateral/regional & multilateral negotiation with built-in PGRFA perspective (45 countries case studies)

https://www.wto.org/english/res_e/booksp_e/casestudies_e/casestudies_e.htm

Potential PGR resources for Regional Cooperation

- Agro-ecology specific, pest & disease resistant and environ. Friendly varieties
- Maize, wheat, sorghum, Millet
- Issues around Rice
- Where is Basmati Rice coming from? http://ageconsearch.umn.edu/handle/51698
RESOURSE INSTITUTIONS

- Pakistan Agricultural Research Council
  www.parc.gov.pk
- Plant & Genetic Resources Research Institute
- National Institute for Biotechnology & Genetic Engineering
- Agriculture Universities Network
- Provincial Agricultural Departments
THANK YOU