SAARC SEED BANK
Potentials and Challenges

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SAARC: People and Poverty

- The total population of SAARC Region is 1.7 billion which is **23% of the world**.
- The population is likely to exceed **2.2 billion by 2050**.
- Tremendous progress in last 4 decades
  - Food consumption increased from 1900 kcal to 2500 kcal
  - Average GDP growth >6%
  - Decreased food imports
SAARC: People and Poverty

• Yet, it is the home of 40% poor and 35% of undernourished people of the world.
• 68% of SAARC people live in the rural areas.
• Agriculture important for livelihood security of > 50% population
• More than 65% of farmers are smallholders who hold less than 2.5 acre (1 ha) of land.
Smallholder Agriculture

- Small size of holdings
- Majority are marginal, having lands < 1 ha
  - Bangladesh 87%
  - India 80%
  - Nepal 90%
  - Pakistan 36%
  - Sri Lanka 71%
Climate change and agriculture

• Climate change, in particular increased risk of floods and droughts, is expected to have severe impact on South Asian countries (IPCC).

• South Asia is a major hotspot
  – Projected to be very vulnerable to climatic risks
  – Increased production variability due to more frequent droughts, floods, and heat events

• Climate change likely to reduce agricultural production by 10-50% by 2050 and beyond, if we do not start adapting now (APAARI, 2012).
Vulnerabilities in South Asia

- Drought: 70% land
- Floods: 12% land
- Cyclones: 8% land
- Frost: Northern regions
- Heat: Frequent at many places
- Coastal salinity ingression
- Food security and poverty are the key issues
Vulnerabilities of the Sri Lankan Agricultural Sector

- Rise in temperature
  - During last 70 years, temperature has increased by 1 °C. (0.14 °C per decade.)
  - During last 22 years, it increased 0.2 °C per decade
  - Minimum-maximum temperature increased

- Wetter rainy seasons and drier dry seasons

- Dry days increased in dry and intermediate regions

- Rainfall pattern is changing and intensity of droughts, cyclone and floods increasing
SAARC: Seed for Food

• To protect around 500 million people from serious malnutrition, the region will have to increase food production at a rate of 60%, by 2050 (SARFC, 2015).

• Food production is depended on availability of Quality Seeds, along with other inputs.

• To increase food production:
  – In-situ and ex-situ conservation of varieties
  – On farm research for high yielding varieties and
  – Available supply of seeds to farmers is important in this region
Community Level Seed Banks

Since thousands of years, farmers of this region have been

• producing,
• developing,
• preserving,
• sharing,
• exchanging and
• Selling

seeds at individual and community level.
Seed Management: Problems

• Farmers don’t have right to exchange beyond the border of countries.

• Small and marginal farmers don’t have capacity to conduct research at large scale.

• Small farmers are not capable for preserving all indigenous varieties.
• To meet the challenge of seed supply, farmers collect 60-80 percent seed by saving, exchange buy or selling at local level.

• Farmers who buy seeds from unregistered dealers face issues like **lower yields** and **lower productivity**.
Considering the vulnerabilities and opportunities,
Ensuring long term climate adaptation and food security is difficult without
a progressive, proactive, farmer-friendly and transparent Seed Bank for the Region.
SAARC Seed Bank

• In their declaration of the 16th SAARC Summit in April 2010, South Asian governments agreed to promote cooperation for a regional seed bank in South Asia.

• At the 17th SAARC Summit held in November 2011, they signed on to: The SAARC Seed Bank Agreement and The Framework for Material Transfer Agreement
Three objectives

• Provide Regional Support to National Seed Security Efforts; address regional seed shortages through collective actions; and foster inter-country partnerships.

• Increase Seed Replacement Rate with appropriate varieties at a faster rate as far as possible so that the use of Quality Seed for Crop Production can be ensured.

• Act as a Regional Seed Security Reserve for member states of SAARC.
SAARC Seed Bank: Ratification

- Heads of eight member countries signed Seed Bank Agreement.
- Only five countries ratified the SAARC Seed Bank:
  - Bangladesh (NOV 2011)
  - Bhutan (JUL 2013)
  - India (2011) Delegated National Seed Corporation Limited for SSB on 12 January 2012
  - Nepal (NOV 2014) and
  - Sri Lanka (NOV 2011)
- Ratification from all member countries are mandatory to establish the SSB.
Major provisions of the agreement

• Seed replacement rate
• common varieties
• Maintaining seed quality
• Seed reserve and the quality of the reserve
• Withdrawal, release and replenishment
• Determination of price
• Institutional arrangements
Major concerns

• **Seed security** not defined and inadequately addressed
  
  – Seed security is primarily assured through self-production and additionally through purchase of seeds
  
  – Over emphasis on short-term seed security through external supply/trading mechanisms
  
  – No consideration for long-term seed security through strengthening local and national seed systems and establishment of seed information system
Major concerns...contd

• Lack of clarity on the concept of seed bank
  – Without conservation/maintenance of seeds, it is just a seed business
  – SAARC Seed Bank or SAARC Seed Trading???
  – Is it just a seed reserve or a dynamic seed system?
  – Only a system for improved (modern) varieties or also to promote conservation and use of local varieties.
Major concerns...contd

• Over emphasis on SRR Role of farmers/farming communities
  – Focus on modern varieties while undermining of local seeds and seed systems
  – One sided promotion of seed trading/private sector
  – Ill defined role for farmers and farming communities other than recipients
Major concerns...contd

• Basis of preparing a **common list** of varieties
  – How this will address diverse seed needs of farmers?
  – Why to limit the varieties rice, wheat, pulses and oil seeds?
  – Danger of narrowing down genetic base
  – Even undermines provision of ITPGRFA

• Role of hybrid and transgenic varieties which may decrease seed security
Major concerns...contd

- **Harmonized quality standards** and testing procedures
  - Only focus on modern varieties
  - Any special measures for the consideration of local varieties of seeds
  - what terms and conditions of quality standards the farmers’ varieties will be included within the Seed Bank system is yet to be clear.

- How country specific situations would be considered in addressing the **fair pricing** and adequate supply of seeds.
Major concerns...contd

• There is a serious lack of transparency in the Seed Bank mechanism.
  – Information of only Indian national designated authority is open for all.
  – Only powerful vested interest groups will be benefited by such lack of transparency

• Lack of ownership
  – How/through what mechanisms local/indigenous varieties would be conserved?
  – How to protect them from corporate companies
Major concerns...contd

• Limited representation of farmers in Board, and no representation of CSOs
• Now, only SAARC Seed Forum, has access in the Board, and Corporate Seed Companies already moved to form SSF.
• There is no mechanism to select a real farmer. So, there is a doubt of political and corporate dominations.
Major concerns...contd

• Demand assessment and supply mechanism
  – Mechanism to collect real demand
  – Supply side is not clear – who will produce seed?
    Role of farmers and pricing mechanism
  – Supply could be expensive in the lack of decentralized seed production
  – Strict quality control and certification is likely to exclude local/ farmers’ varieties
  – What actions would be taken if seed allocated for SSB remains without use?
Major concerns...contd

• The SSB recognizes TRIPs but ignored United Nations Convention on Biological Diversity (CBD) and United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) which are standard to protect the rights of indigenous and local farmers on the genetic resources.
Way Forward

– Pressure should be created on non ratified countries to ratify SSB as soon as possible to activate the Seed Bank for the farmers
– All the countries should be encouraged to identify their nodal points.
– There is a strong need for review and amendment of the Agreement by all the member countries
– The concept should focus on the whole seed systems: conservation/maintenance; production; distribution; research and information sharing.
Future food security and Self sufficiency depends on
Further increase in

Yield potential

with varieties and associated technologies having

Higher input use efficiencies and
Resistance / Tolerance to
biotic and abiotic stresses
Those have it - will win

Those who don’t have it ????

Thank you
Annex
Article III: Seed replacement rate

• The member state will undertake planned approach to increase SRR at a faster rate, as far as possible, to ensure supply of quality seed

• The member states will produce quality seed beyond the planned quantity to meet the SRR and seed reserve.
Article IV: Common Varieties

• Member States will collaborate with each other in the development of a list of common variety (ies) of major priority/identified crops while recognizing the need to preserve local/indigenous varieties as may be appropriate.
Article V: Maintaining Seed Quality

• Common Minimum Seed Quality Standard (CMQS) and Seed Testing Procedures for different quality attributes, keeping conformity of the ISTA procedures.
• Common Seed Certification system and standards
• Nodal laboratories to improve seed testing
• Harmonized acts, rules and regulations
**Article VI: Seed Reserve**

- Shall consist of quality seeds of the common variety (ies) of rice, wheat, maize, pulses and oilseeds earmarked by the Member States.
- This reserve shall remain the property of the member state which has earmarked it and shall be in addition to any national reserve that may be maintained by that Member State.
Article VIII: Withdrawal from the Reserve

• The Member State in need shall directly notify, through its designated Nodal Point(s), the other Member State(s) of the amount of seed required.

• The other Member State(s), on being so requested, shall take immediate steps to make necessary arrangements to ensure immediate and speedy release of the required quality seed, subject to availability.
Article X: Replenishment of the Reserve

• A Member State that has released all or part of the seed forming its share of the Reserve shall replace such quantity as soon as practicable and, in any event, not later than one calendar year following the date on which the release of the seed took place.
Article XI: Determination of Price

• The prices, terms and conditions of payment shall be
  – the subject of direct negotiations between the member states concerned
  – based on the guidelines to be approved by the Seed Bank Board for determination of price, which shall be reviewed periodically
  – In the case of emergency, humanitarian aspects would be given due importance while determining prices
Article XII: Institutional Arrangements

• An institutional arrangement in the form of a Seed Bank Board consisting of **one member from each Member State**, one farmer **representative on rotational basis** from a Member State and **two members from private sector** to administer functioning of the Seed Bank and for its policy making has been provided for in the Agreement.
Framework for Material Transfer

• To operationalize the Regional Seed Bank, the Framework for Material Transfer shall be applicable with a view to facilitate easy movement of seeds and plant materials across the Member States.

• The framework shall be performed in accordance with the existing laws, regulations and guidelines of SAARC Member States and the ITPGRFA.