

Climate and Natural Disasters in South Asia

Scope for Regional Cooperation on the Conservation, Use and Exchange of Crop Genetic Resources

Case of India

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Plant Genetic Resources

International Undertaking on Plant Genetic Resources (FAO, 1983) defines PGR as the reproductive or vegetative propagating material of

- (i) cultivated varieties (cultivars) in current use and newly developed varieties;
- (ii) obsolete cultivars;
- (iii) primitive cultivars (landraces);
- (iv) wild and weed species, near relatives of cultivated varieties; and
- (v) special genetic stocks (including elite and current breeder's lines and mutants).

PGR, according to the Convention for Biological Diversity (CBD, 1992), are any living material of present and potential value for humans.

In the absence of unambiguous definition, CBD implies genetic resource to be any “genetic material of actual and potential value”, and genetic material to be a “functional unit of heredity”.

Thus, what is potential is a matter of interpretation and the state of technological advancements.

Occasionally, genes, DNA fragments and RNA are also included under the purview of genetic resources. Genomic resources, therefore, are nowadays conserved in gene banks.

Key International Laws

- ✓ **International Undertaking on Plant Genetic Resources (IU)** - first comprehensive international agreement dealing with plant genetic resources for food and agriculture
- ✓ **International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) / International Seed Treaty** - aims at guaranteeing food security through the conservation, exchange and sustainable use of the world's plant genetic resources for food and agriculture (PGRFA), as well as the fair and equitable benefit sharing arising from its use. The Treaty establishes the Multilateral System of Access and Benefit-sharing to facilitate plant germplasm exchanges and benefit sharing through Standard Material Transfer Agreement (SMTA)
- ✓ **Convention on Biological Diversity (CBD) / Biodiversity Convention** – a multilateral treaty for conservation of biological diversity (or biodiversity); sustainable use of its components; and fair and equitable sharing of benefits arising from genetic resources
- ✓ **International Plant Protection Convention (IPPC)** - multilateral treaty overseen by the FAO that aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products

Key International Laws

- ✓ **WTO–Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement**
- an international agreement sets down minimum standards for many forms of intellectual property (IP) regulation as applied to nationals of other WTO Members.
- ✓ **International Union for the Protection of New Varieties of Plants (UPOV) (Plant Breeders' Rights)** - objective is the protection of new varieties of plants by an intellectual property right. By codifying intellectual property for plant breeders, UPOV aims to encourage the development of new varieties of plants for the benefit of society



Indian Scenario - National Bureau of Plant Genetic Resources (NBPGR)

The National Bureau of Plant Genetic Resources, (NBPGR)

-by the Indian Council of Agricultural Research (ICAR)

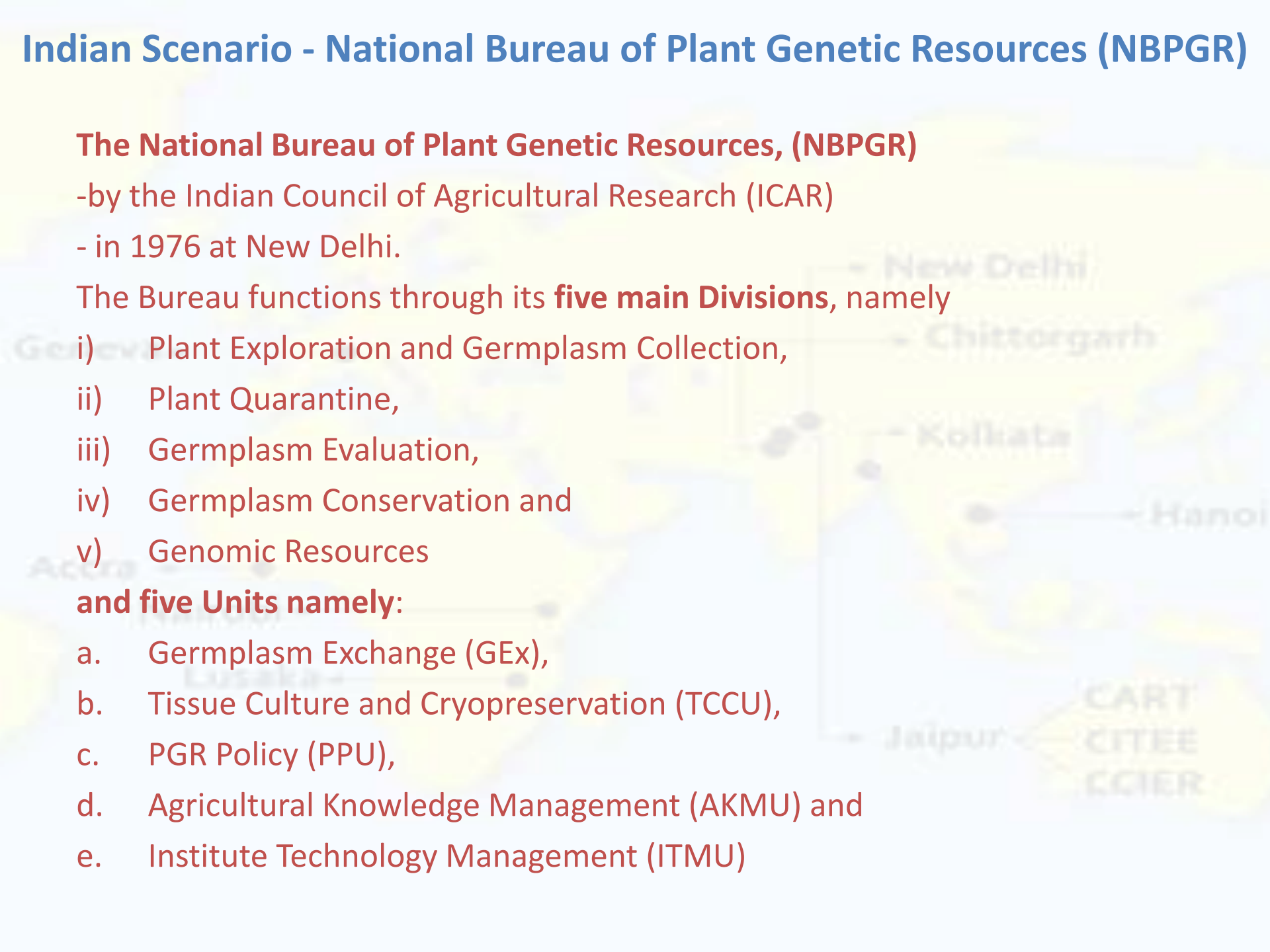
- in 1976 at New Delhi.

The Bureau functions through its **five main Divisions**, namely

- i) Plant Exploration and Germplasm Collection,
- ii) Plant Quarantine,
- iii) Germplasm Evaluation,
- iv) Germplasm Conservation and
- v) Genomic Resources

and five Units namely:

- a. Germplasm Exchange (GEx),
- b. Tissue Culture and Cryopreservation (TCCU),
- c. PGR Policy (PPU),
- d. Agricultural Knowledge Management (AKMU) and
- e. Institute Technology Management (ITMU)



Indian Scenario - National Bureau of Plant Genetic Resources (NBPGR)

Germplasm Conservation:

A total of 9,379 new accs. of germplasm including varieties to be notified and released and trait-specific registered germplasm of various crops were received for long-term conservation in the National Genebank.

These were processed following the genebank standards, adding another 5,512 accs. to the base collection raising the total germplasm holding to 4,01,265.

In addition, a total of 13,494 accs. of regenerated material of various crops were received and conserved in long-term storage (LTS).

Germplasm Exchange:

A total of 47,623 accessions (1,35,525 samples) were imported which included 33,856 accessions (34,792 samples) of germplasm and 13,767 entries (1,00,733 samples) of CGIAR nurseries for trials.

Requirements for germplasm from abroad were met by arranging material from different Indian sources and 13,109 samples of different crops were exported to 6 countries under SMTA/ MTA after the approval of DARE/NBA.

A total of 9,991 samples of different crops were supplied to national users for utilization in crop improvement program based on requests received from research workers under Material Transfer Agreement (MTA).

Indian Scenario - National Bureau of Plant Genetic Resources (NBPGR)

Import of PGR

Germplasm accessions : 33,856 accessions procured and processed (34,792 samples)

CGIAR nurseries for trials : 13,767 entries (1,00,733 samples)

No. of countries involved : 41

No. of import permit issued : 801

Export of PGR

Number of countries to which material exported: 6

Total number of samples exported: 13,109

Inland Supply of PGR

Based on specific requests received a total of 9,991 samples were supplied under the Material Transfer Agreement (MTA).

In addition information on a total of 14,794 samples supplied for regeneration/ multiplication/ morphological characterization/ preliminary evaluation/ taxonomic identification/ viability testing was documented that were supplied from other divisions.

Indian Scenario - National Biodiversity Authority (NBA)

Gol enacted the **Biological Diversity Act in 2002 (BD Act)** and notified relevant rules in 2004, In response **to its obligations to the CBD** and in order to provide a national framework to deal with conservation, sustainable use and fair and equitable sharing of benefits from such use.

Functions:

- ✓ Advise the Gol on matters relating to conservation of biodiversity, sustainable use of its components and fair and equitable sharing of benefits arising out of utilization of biological resources.
- ✓ Regulate activities and issue guidelines for access to biological resources and for fair and equitable benefit sharing
- ✓ Take necessary measures to oppose the grant of IPR in any country outside India on any biological resource obtained from India or knowledge associated with such biological resource derived from India illegally.
- ✓ Advise the state governments in the selection of areas of biodiversity importance to be notified as heritage sites and suggest measure for their management
- ✓ NBA and SBB provide guidance and technical support to Biodiversity Management Committees for documenting People's Biodiversity Registers

Indian Scenario - Protection Of Plant Varieties And Farmers' Rights (PPV&FR) Authority, India

India ratified the Agreement on Trade Related Aspects of the Intellectual Property Rights.

To give effect to the aforesaid objectives the Protection of Plant Varieties and Farmers' Rights Act, 2001 was been enacted in India.

Functions:

- a) The registration of new extant plant varieties subject to such terms and conditions and in the manner as may be prescribed
- b) Developing characterization and documentation of varieties registered under this Act;
- c) Documentation, indexing and cataloguing of farmers' varieties;
- d) Compulsory cataloguing facilities for all varieties of plants;
- e) Ensuring that seeds of the varieties registered under this Act are available to the farmers and providing for compulsory licensing of such varieties
- f) Collecting statistics with regard to plant varieties, including the contribution of any person at any time in the evolution or development of any plant variety, in India or in any other country, for compilation and publication.
- g) Ensuring the maintenance of the Register

Climate Change & PGR – Opportunities In South Asia

1. SAARC Environment Action Plan (1997)

- The “SAARC Environment Action Plan” was adopted by the Third Meeting of the SAARC Environment Ministers (Male, 15-16 October 1997) and identified some of the key concerns of Member States and set out the parameters and modalities for regional cooperation.
- Since its adoption in 1997, a number of measures outlined in the SAARC Environment Action Plan have been implemented by the Regional Centres.

2. Disaster Management in South Asia: A Comprehensive Regional Framework for Action 2006-2015

- Pursuant to the Malé Declaration, a “Comprehensive Framework on Disaster Management 2006-2015” was adopted in 2006 to address the specific needs of disaster risk reduction and management in South Asia. The Framework is aligned with the Hyogo Framework of Action (2005-2015). Member States are in the process of preparing their respective National Plans of Action for implementation of the Regional Framework and thereafter, an Expert Group Meeting will harmonize the national reports and articulate a Regional Plan of Action.

Climate Change & PGR – Opportunities In South Asia

3. Dhaka Declaration and SAARC Action Plan on Climate Change (2008)

The SAARC Action Plan on Climate Change (2009-2011) identifies seven thematic areas of cooperation covering adaptation; mitigation; technology transfer; finance and investment; education and awareness; management of impacts and risks; and capacity building for international negotiations. The Action Plan lists the areas of capacity building for CDM projects; exchange of information on disaster preparedness and extreme events; exchange of meteorological data; capacity building and exchange of information on climate change impacts (e.g. sea level rise, glacial melting, biodiversity and forestry); and mutual consultation in international negotiation process as the Priority Action Plan.

4. Delhi Statement on Cooperation in Environment (2009)

The Eighth Meeting of the SAARC Environment Ministers (New Delhi, October 2009) adopted the “Delhi Statement on Cooperation in Environment” which identifies many critical areas that need to be addressed and reaffirms the commitment of Member States towards enhancing regional cooperation in the area of environment and climate change.

Climate Change & PGR – Opportunities In South Asia

5. Thimphu Statement on Climate Change (2010)

Climate Change was the theme of the Sixteenth Summit (Thimphu, 28-29 April 2010) and, among others, adopted the “Thimphu Statement on Climate Change”, which outlines a number of important initiatives at the national and regional levels to strengthen and intensify regional cooperation to address the adverse effects of climate change in a focused manner. The Inter-governmental Expert Group on Climate Change (IGEG.CC), established by the Thimphu Statement, is required to monitor, review progress and make recommendations to facilitate the implementation of the Thimphu Statement. The IGEG.CC reports to the SAARC Environment Ministers.

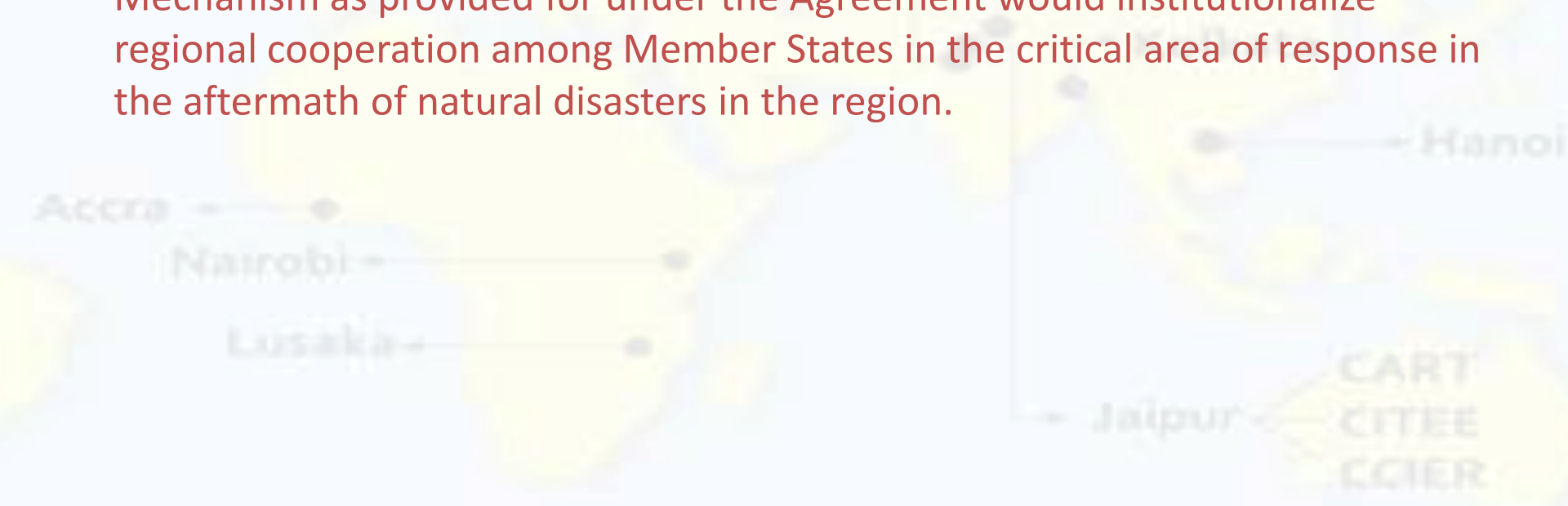
6. SAARC Convention on Cooperation on Environment (2010)

The “SAARC Convention on Cooperation on Environment” was signed during the Sixteenth Summit. The Convention has been ratified by all Member States and entered into force with effect from 23 October 2013. The Convention identifies 19 areas for cooperation in the field of environment and sustainable development through exchange of best practices and knowledge, capacity building and transfer of eco-friendly technology in a wide range of areas related to the environment. The implementation of the Convention has been entrusted to a Governing Council, comprising of the Environment Ministers of Member States.

Climate Change & PGR – Opportunities In South Asia

7. SAARC Agreement on Rapid Response to Natural Disasters (2011)

The “SAARC Agreement on Rapid Response to Natural Disasters” was signed at the Seventeenth Summit (Maldives, 10-11 November 2011) and will come into force once all Member States complete the ratification process, which has been completed by five countries till date (November 2014). The setting up and operationalization of the SAARC Natural Disaster Rapid Response Mechanism as provided for under the Agreement would institutionalize regional cooperation among Member States in the critical area of response in the aftermath of natural disasters in the region.



About CUTS International



CITEE Timeline

1993: Involvement with trade and regulatory issues since early 90s when the Uruguay Round was at its peak – published a booklet titled “All About GATT – a consumers’ perspective”

1994: Compelling reason – not many consumer groups and other civil society organisations from the South were engaged in the UR debate – Co-convenor of Consumer International’s Global Policy and Campaigns Committee on Economic Issues

1995: Launched a civil society network: South Asia Watch on Trade, Economics & Environment – a demand-driven initiative

One of the five founding members of Geneva-based International Centre for Trade and Sustainable Development

1995-99: Emerging international trade regime under the aegis of the World Trade Organisation and bilateral/regional free trade agreements

2000-05: Developmental aspects of multilateral/bilateral/regional trade negotiations and their implementation

2006-12: Regional economic cooperation, linkages between trade, development and poverty and trade, climate change and food security, and larger issues of development cooperation – South-South Cooperation (BRICS), South-North Cooperation (G-20), Trilateral Development Cooperation

CUTS International Projects

Direct Interventions

Food Security in India The Interactions of Climate Change, Economics, Politics and Trade (FOODSEC)

<http://www.cuts-citee.org/FOODSEC/>

Sustainable Development Investment Portfolio Promoting water, food and energy security in South Asia (SDIP)

<http://www.cuts-citee.org/SDIP/>

Addressing Barriers to Rice Seeds Trade Between India and Bangladesh (RISTE)

<http://www.cuts-citee.org/RISTE/>

Impact of Climate Change and Food Insecurity on Poverty (CCFS)

<http://www.cuts-citee.org/CCFS/>

Institutional Cooperation on Trade in Agriculture and Allied Products

[http://www.cuts-citee.org/pdf/Institutional Cooperation on Trade in Agriculture and Allied Products-Project Brief.pdf](http://www.cuts-citee.org/pdf/Institutional%20Cooperation%20on%20Trade%20in%20Agriculture%20and%20Allied%20Products-Project%20Brief.pdf)

CUTS International Projects

Indirect Interventions

Linkages between trade, development and poverty reduction (TDP)

<http://www.cuts-citee.org/tdp/>

External Preferential Trade Agreements and the Indian Economy: An Analysis of Impacts and Counter Measures

<http://www.cuts-citee.org/EPTAs/>

Trade and Transport Facilitation Audit in South Asia (TTFA)

<http://www.cuts-citee.org/TTFA/>

Indo-Bangla Trade Assessment- Phase II (IBTA-II)

<http://www.cuts-citee.org/IBTA-II/>

Promoting Participatory Approaches for Removing Regional Trade Barriers in South Asia

(COENCOSA-Phase II)

<http://www.cuts-citee.org/COENCOSA-Phase-II/>

Cost of Economic Non-Cooperation to Consumers in South Asia (COENCOSA)

<http://www.cuts-citee.org/COENCOSA/>

CUTS CITEE Achievements

1. Addressing Barriers to Rice Seeds Trade Between India and Bangladesh

- Consensus among major stakeholder groups on demand scenarios and bilateral trade potential between Bangladesh and India for HYV rice seeds
- Buy-in from a set of policy champions from among key stakeholder groups to promote bilateral trade between India and Bangladesh in HYV rice seeds
- Inclusion of rice seeds trade in the agenda of the India-Bangladesh joint task force on bilateral trade
- Evidence of progress on joint rice seeds research agenda between Indian and Bangladeshi agriculture research institutions /universities
- Dialogues initiated between trade ministries and standard-setting bodies of India and Bangladesh on mutual recognition of certification methods and standards of HYV rice seeds
- Enabling of private sector participation in bilateral HYV rice seeds trade
- Signing of MoU between NSAI & BSA to for cooperation on seed trade

CUTS CITEE Achievements

2. Assessment of Bangladesh-India Trade Potentiality

- **Motor Vehicle Movement** - Reviewed the drafted Motor Vehicle Agreement, so as to assess its strength and reach, Dissemination of recommendations for operationalising this agreement. BBIN MVA was a long term engagement from CUTS International.
<http://www.mopit.gov.np/files/download/BBIN%20motor%20vehicle%20agreement.pdf>
- **Sanitary and Phyto Sanitary Measures** - Advocacy to bring together relevant stakeholders and government towards drafting this agreement
- **Border Haats** - Dissemination of policy measures so as to encourage the initiative of replicating border haats.

CUTS CITEE Achievements

3. Impact Of Climate Change & Food Insecurity On Poverty

- Generation of information/knowledge about factors that lead to crop yield decline such as climate change and barriers encountered by small and marginal farmers in earning their livelihoods and that which facilitates distinctions between these barriers and others
- Generation of knowledge about perceptions of farmers regarding the impact of climate change on agricultural yields
- Generation of knowledge about perceptions of rural NGOs/agronomists/rural sociologists regarding the impact of climate change and other factors on agricultural yields
- Evaluation of mentioned stakeholder perceptions about promoting intra-regional and international cooperation in regard to setting up of food banks and other issues such as South-South and North-South technology transfer and subsequent adaptation of technologies transferred. This would in turn enable correct decision making in regard to whether such transfer should be facilitated
- Evaluation of perceptions of local and international think tanks in regard to a programme for revamping the system for multilateral trade and aid in food grains and other agricultural products to facilitate an increase in the volumes of such aid and trade.

CUTS CITEE Achievements

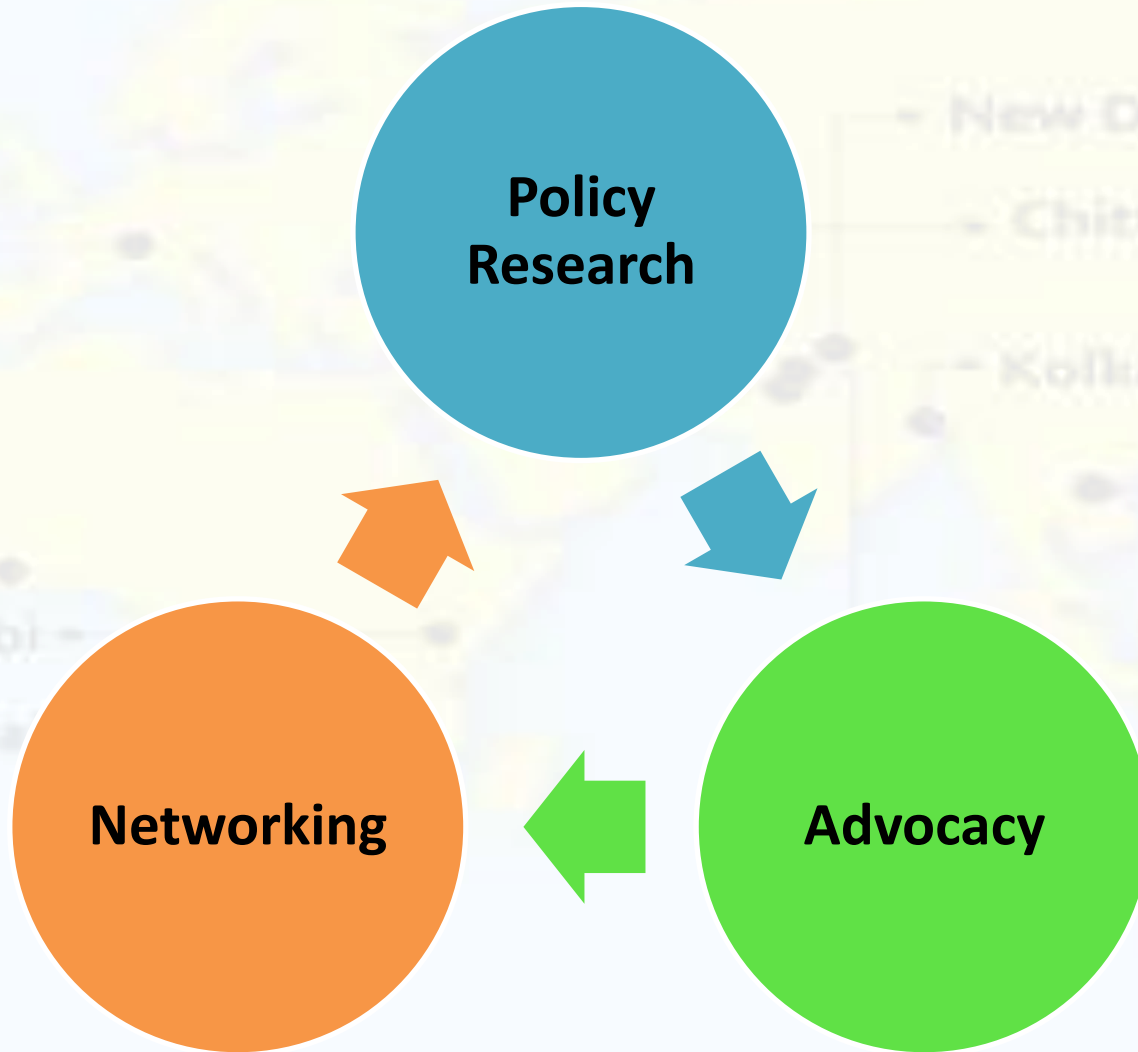
- 4. Sustainable Development Investment Portfolio Promoting water, food and energy security in South Asia (SDIP) covering Indus, Ganges & Brahmaputra Basins**
- ✓ Increased understanding of issues related to SDIP intervention areas.
 - ✓ Understanding of stakeholders' perceptions on ground realities related to stalled bilateral and regional cooperation on water, food and energy security in the sub-region
 - ✓ Strengthened networking among CSOs in the sub-region
 - ✓ Efficient & effective M&E of various SDIP-related activities
 - ✓ Greater awareness among policy makers of the sub-region for enhanced bilateral and multilateral cooperation in food, water and energy domains
 - ✓ Advocacy of key policy messages at sub-national, national and regional levels
 - ✓ Lessons learned from SDIP's past successes and non-successes
 - ✓ Engagement in more policy advocacies

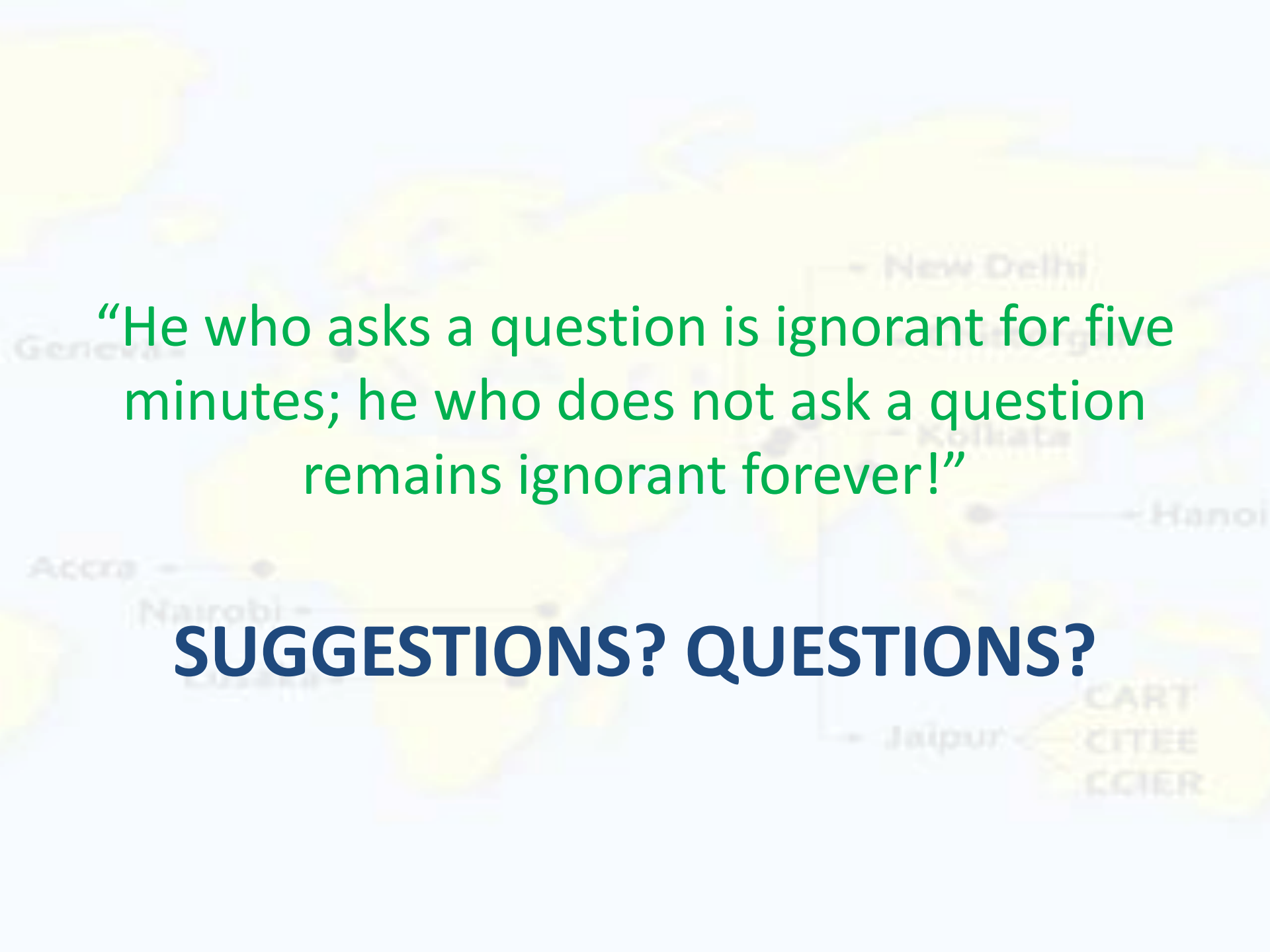
Recent Pathways of Change: Hydro Projects, Gender Disaggregated Data, Renewable energy discussions, Regional cooperation on food and energy issues

Why CUTS CITEE?

- ✓ Working closely with several governments in Asia and Africa and in Geneva on trade and trade-related developmental issues
- ✓ Developed a vibrant network of civil society organisations and other stakeholders working on trade and development issues
- ✓ Served on various trade and trade-related committees of the Government of India and represented at the WTO Director-General's Informal NGO Advisory Body and Stakeholders Panel on the Future of Trade
- ✓ Accredited to many inter-governmental and multilateral bodies such as WTO, UNCTAD, UNESCAP, UNDP, UNEP
- ✓ Received regular support from development cooperation partners and inter-governmental/multilateral bodies working on trade and development issues

How can CUTS International be the change maker in regional cooperation for a food secure, climate resilient South Asia?





“He who asks a question is ignorant for five minutes; he who does not ask a question remains ignorant forever!”

SUGGESTIONS? QUESTIONS?