



Way Forward to accelerate Seed Export

Enabling a Regulatory Environment for International Movement of Seeds



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The transforming world and the need for transboundary movement of seeds



Our world is transforming

4th Industrial Revolution



Risk assessment evolution as a science of its own

High consciousness about what we eat and increased awareness of health risks.

Changing Consumer Demands



Demographic changes

7 billion people on the planet today



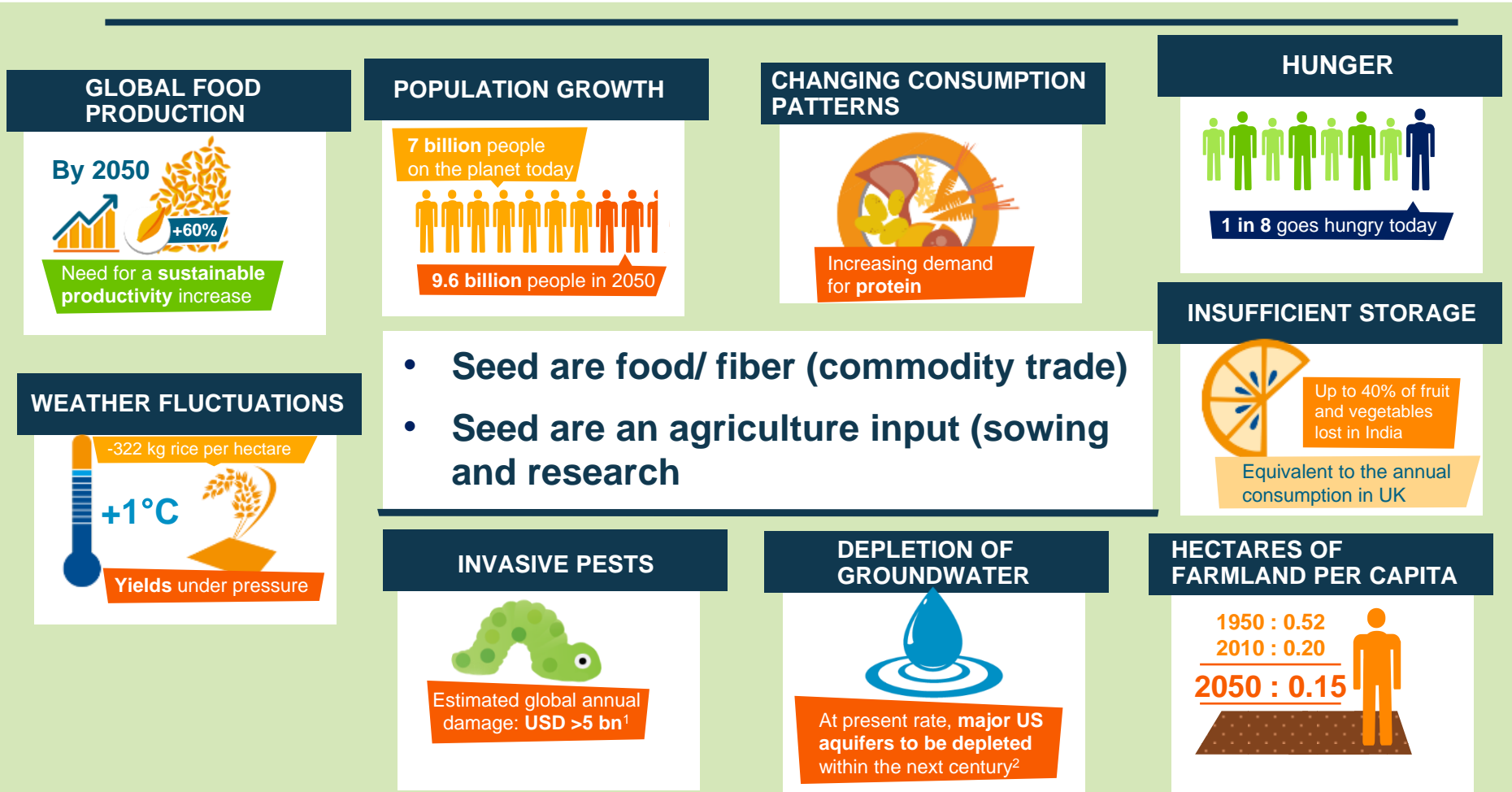
9.6 billion people in 2050

Climate Change





Growing need for food and fiber: it is a hungry and growing planet!



Enable farmers to grow more with limited resources without putting any further stress on the planet – **Sustainability is not just a fashionable word!**

We live in a global village- seeds move in all directions



Global treaties evolved over the years to aid global movement of seeds

The global treaties and their mandates

The treaties

- 114 countries are parties
- Main mandate:
 - Conservation
 - Benefit sharing
 - Germplasm exchange

CBD

Enable global exchange of germplasm and benefit sharing

Convention on Biological Diversity (relates to all forms of biodiversity)

- 1993 →  1994
- Conservation of Biological Diversity
- Sustainable use of Biological Diversity
- Fair & equitable benefit sharing arising

Nagoya Protocol

- 2010 →  2014
- Adopted under the CBD for more defined framework for ABS compliance

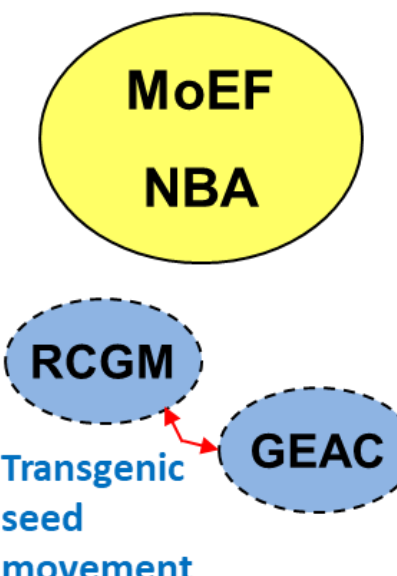
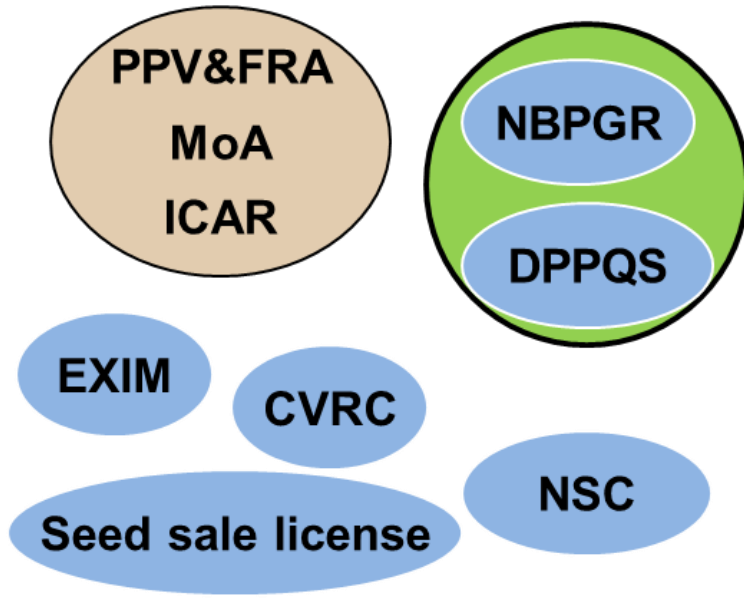
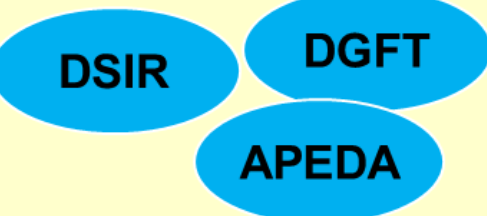
ITPGRFA

International Treaty on Plant Genetic Resources for Food and Agriculture

- FAO 2001 →  2002
- Facilitate access to germplasm for research through multilateral system

Our legislative environment that governs/
regulates transboundary movement of seeds in
India

The laws, the rules, the agencies and the tango!

<p>Principle legislations</p>	<p>Environment Protection Act 1986</p>	<p>Seed act 1966 Seed(control)order 1983 National seed policy, 2002</p>	<p>Agricultural and Processed Food Products Export Development Authority (APEDA) Act, 2009</p>
<p>Secondary legislations</p>	<p>BDA, 2002</p>	<p>Plant Quarantine Order 2003. PPV&FR, 2001 New policy on seed development , 1988</p>	<p>APEDA rules, 2013 DGFT Foreign Trade Act 1992</p>
<p>Rules/ policies</p>	<p>EPA rules 1989 BDA rules 2004</p>	<p>Seed policy 2002 PPV & FR rules 2002</p>	<p>Export and import policies under the ministry of commerce and industry</p>
<p>Agencies</p>			<p><i>Main focus for trade and compliance seed regulatory has a supporting role specific to policy domain</i></p> 

Export Process – Regulatory Permissions

Approvals & Competent Authorities

- ❖ National Biodiversity Authority (NBA), Chennai → for access & export approval (for non-exempted crops / crops other than Annex I of ITPGRFA list)
- ❖ Department of Biotechnology (DBT / RCGM) → for export authorizations for GM materials
- ❖ Directorate of Agriculture & Cooperation (DAC), New Delhi / through NBPGR under MLS → for access & export approval (for exempted crops / crops in Annex I of ITPGRFA list) (still evolving)
- ❖ National Bureau of Plant Genetic Resources (NBPGR), New Delhi → for phytosanitary certificate
- ❖ Importing Country Authorizations



सत्यमेव जयते

Department of Agriculture & Cooperation

Ministry of Agriculture, Government of India

What's good about what exists?

PQ order, 2003

- **A detailed 304 page regulatory document with detailed description of quarantine requirements**
- **15 clauses describing various aspects and conditions of import of plants and plant products**
- **24 forms for various plant quarantine regulatory functions**
- **2016 under ease of doing business → Import permit requirement lifted for commercial imports**
- **2017 India Plant Quarantine Department introduced E-phytosanitary certificate systems (eventually not accepted by EU and other countries due to technical reasons)**
- **Network and infrastructure capabilities to handle large volumes of commercial imports and exports**
- **Well defined system for import and exports of research material**

New Policy on seed development, 1988

- **Liberalization of trade for vegetables and fruits**
- **Enabled the vegetable revolution by lifting trade barriers**

**The governments initiative for digitalization and ‘make in India’ thrust→
India as the seed production hub for the world**

What's could be better?

The science of plant quarantine is ever evolving → pathogens co-evolve with better crops

Areas of opportunities	Status
Seed as pathway (are quarantine pathogens transmitted by the seed?)	<ul style="list-style-type: none">• ISF's Pest list recommendations are available• Although pest data base is updated by nodal agency but existing database is more than 10 year old and many examples exists where seed is not the pathway..
Purpose of import/ export	<ul style="list-style-type: none">• Defined guidelines exist for import of research material and proficiency testing (destructive testing) but there is a need to revise them for purpose for import and type of material being imported for e.g. need for additional declarations in phytosanitary certificates even for destructive sampling and for tissue samples.
Seed inspection and testing (sampling) – commercial and research seed lots	<ul style="list-style-type: none">• Lab or field based testing is not clearly defined in PQ order• In case of certain vegetables both field inspection for viruses and lab testing is mandatory → doubles the effort and not accepted by many NPPOs.• Compulsory PEQ for entire seed consignment- only progeny of PEQ material can be used in research
Treatments (crop trt, seed trt)	<ul style="list-style-type: none">• Seed treatment is a gap area:<ul style="list-style-type: none">a) Research seed lots – no seed treatment allowedb) commercial seed lots - Treatments are allowed 'only if the treating insecticide label and dosage are registered in India'• No restriction on crop treatment for production of import lots.
System approaches	<ul style="list-style-type: none">• No traction on this yet from Govt. of India.

Way Forward – key enablers

- Create a separate Seed Export Promotion Council
- Effective single window clearance for export proposals
- Earmark separate and dedicated areas for seed production
- Improve Intellectual Property Protection (Law & Enforcement)
- Passage of New Seed Bill & BRAI bill
- Simplify the movement of germplasm for R&D
- Completion of Pest Risk Analysis for key crops
- Tax support to the industry
- Institutionalized approach towards above measures



Thank you