

Role of public and private sectors in  
seed sector development in Nepal,  
and  
issues of farmers' rights

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# Outline

- Seed related issues
- Role of public sector in seed development
- Role of private sector
- Breeders rights
- Issues of farmers' rights
- Seed governance and Food Security
- Structure of seed market
- Conclusions

# Seed Issues

## Private Sector concerns:

- Business
- Trade

## Farmers' concerns:

- Agriculture production
- Seed price
- Risks in production
- Farmers' livelihood
- Poverty

## Consumers' concerns:

- Food price
- Food taste
- Human health

## National concerns:

- Food security
- Biosecurity
- Biodiversity
- Environment
- Democracy
- Sovereignty.

# Key issues of Seed System Development

- Policy and legislation
  - norms, taxes, subsidy, laws, IPR, international and regional cooperation
- Science
  - genetics, technology, physiology, entomology, pathology, agronomy, biodiversity....
- Economy
  - management, marketing, investment, finance, credit
- Culture and social
  - livelihoods, traditions, indigenous knowledge

# Role of public sector in seed development

- Plant breeding and Varietal development by NARC
  - Conventional breeding (Selection, Crossing)
  - Multi location trial
  - Grow out trial
  - Hybridization
  - No Gene splicing
- National Seed Board
  - Variety release and their domain
- SQCC – registration, quality control- ISTA accredited seed laboratory
  - Seed Vision 2013-2025
- DOA -- crop seeds-- extension, mini kit, seed multiplication
- DOLS -- fodder seeds-- extension, mini kit, seed multiplication
- DOF – forest tree seeds-- extension, seed multiplication
- Agriculture Development Strategy (ADS)
- Legal provisions

# Role of private sector in Seed Development

- Breeding
- Seed multiplication
- Processing, branding, packing
- Seed quality control
- Marketing chain
- Export
- Import
- Consume
- Conserve genetic resources

# Conservation of crop biodiversity

- Informal seed exchange
- In situ conservation – community seed bank
- Ex situ conservation – gene bank
- Biodiversity registration
- Registration of farmers varieties
- Sustainable agriculture

# Breeders rights

- Breeders rights over plant variety
- Patenting
- Sui generis
- International Union for the Protection of New Varieties of Plants (UPOV)
  - UPOV 91 prohibits the exchange of protected varieties between farmers (including through sale, barter or gift) and restricts the practice of farm-saved seed
  - Rights of the breeder over the crop harvest



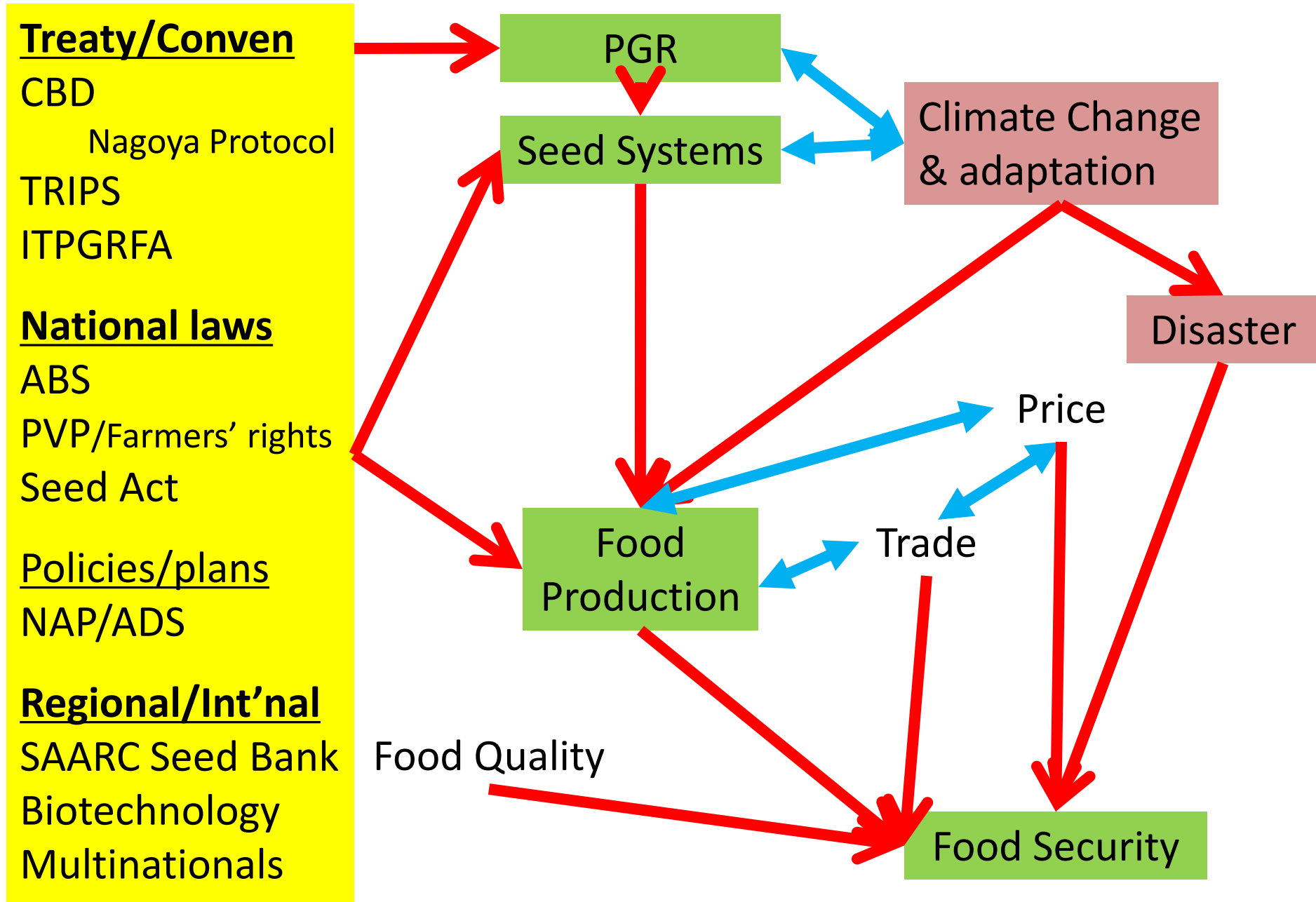
# Issues of farmers' rights

- CBD 1992 – rights of local community
- TRIPS 1994 – no recognition on the farmers rights
- ITPGRFA 2001 – farmers rights through national law, national responsibility
  - measures to protect and promote Farmers' Rights (Article 9):
    - Protection of TK relevant to PGRFA;
    - Right to equitably participate in sharing benefits arising from the utilization of PGRFA; and
    - Right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA.
    - Nothing in this Article limits any rights that farmers have to save, use, exchange and sell farm-saved seed/propagating material, subject to national law.
- Farmers rights and Plant Variety Protection (PVP) bill draft

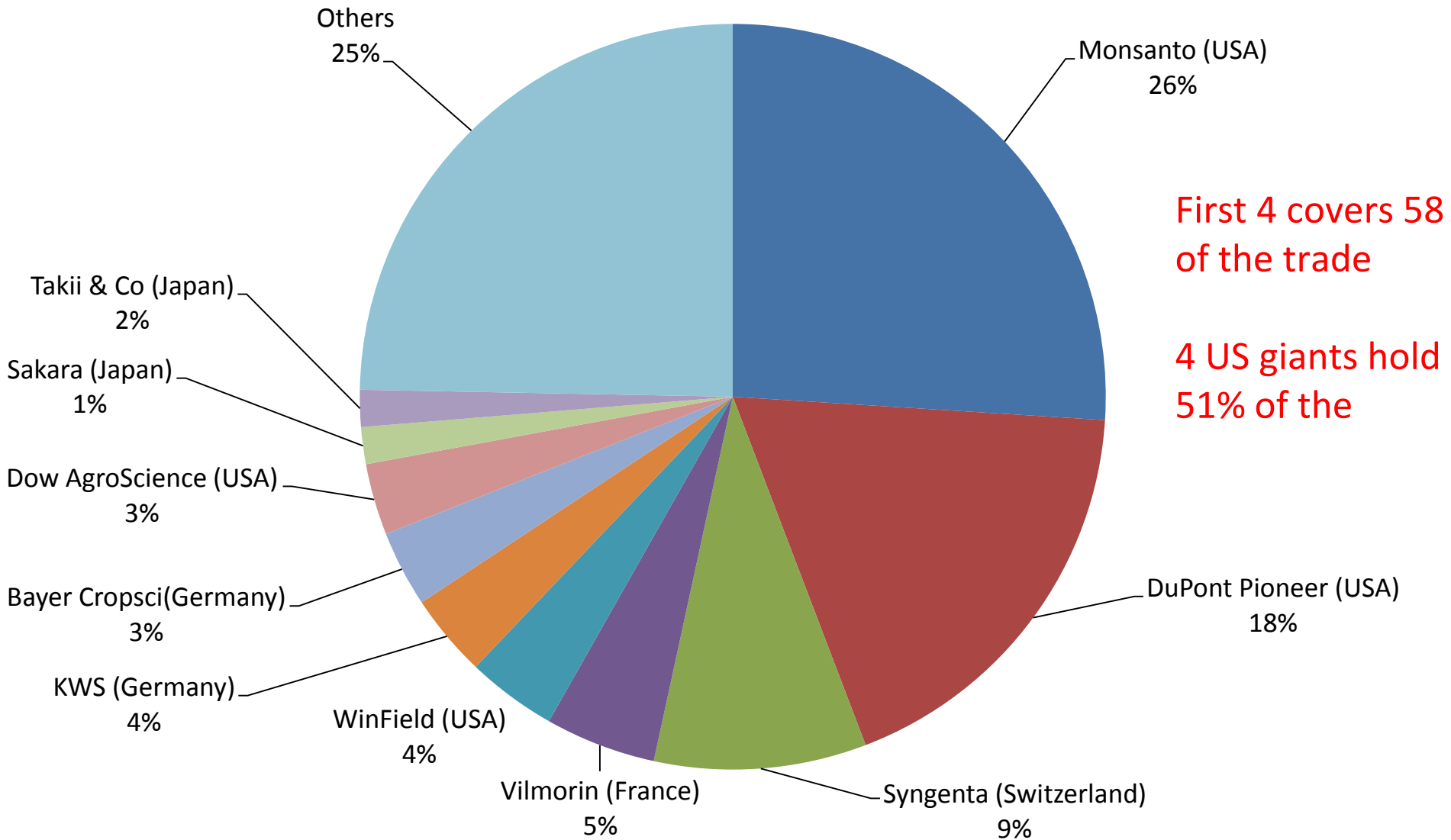
# Commercialization and food security

- High yielding varieties and green revolution
- Climate change and natural disasters
- Hybrid varieties and risks
- LMO – Cartagena Protocol on Biosafety
- Biosafety framework draft
- Biosecurity Policy Framework - ongoing
- Trade liberalization
- FDI in seed sector
- Access to protected varieties
- Human health and environment

# Drivers of Food Security

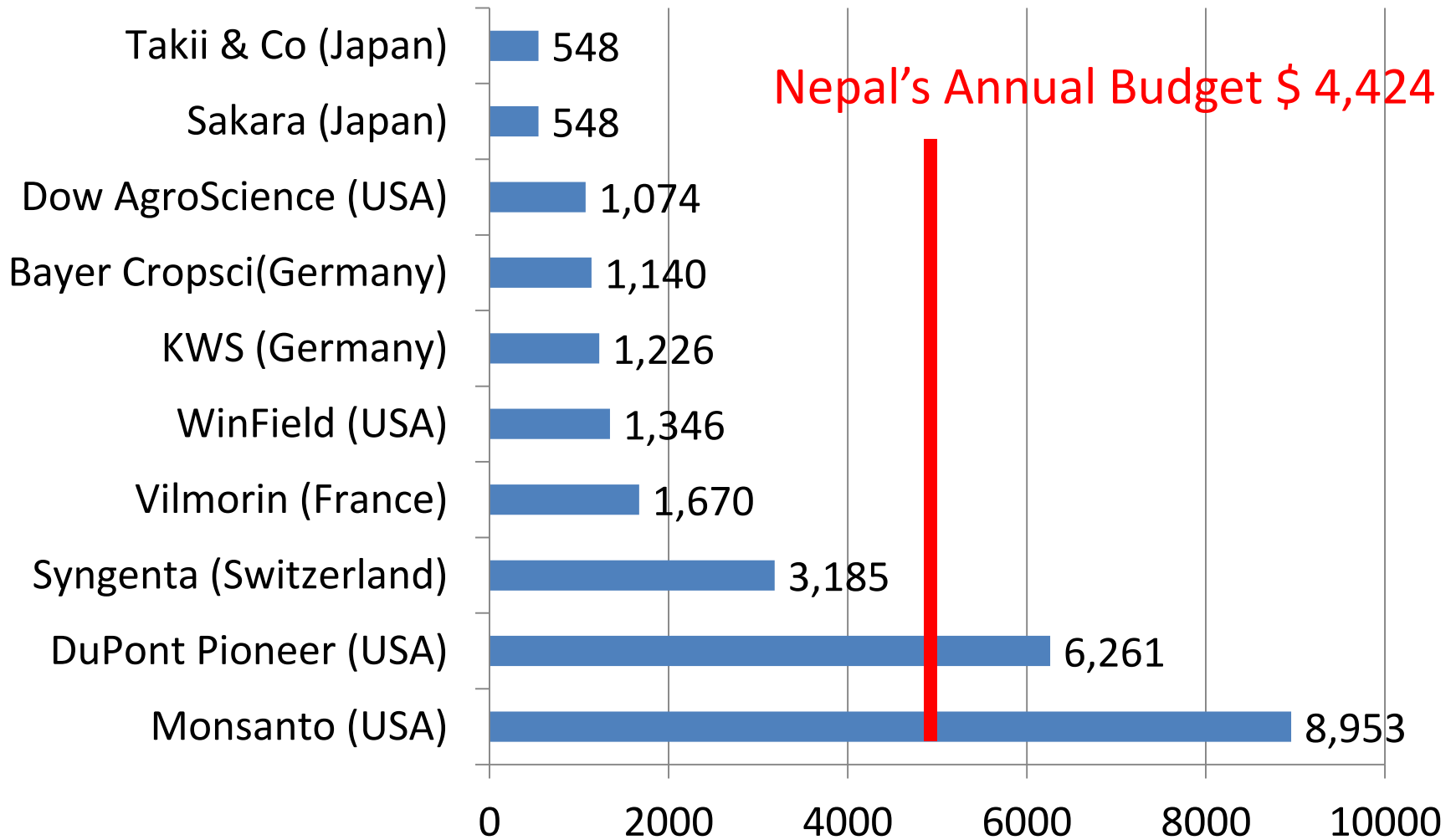


# Structure of Global Seed Market



# Size of seed business

## Seed sales in 2011 (million US\$)



# Farming not alike across the globe

- Small scale vs large scale
- Low tech vs high tech
- Subsistent vs commercial
- Heterogeneous vs homogenous



## Mean farm size

Region	Mean size (ha)
Central America	10.7
South America	111.7
East Asia	1.0
South Asia <b>Nepal 0.68 ha</b>	1.4
Southeast Asia	1.8
West Asia/North Africa	4.9
Sub-Saharan Africa	2.4
Europe	32.3
USA	178.4

Source: Based on Eastwood et al., 2009



# Conclusions

- Seed is a highly complex product affecting many aspects of life
- Public sector is playing development related activities in seed
- Seed governance is weak in the country
- Seed systems and flow of PGR are affected by international legislations
- Breeders rights and farmers' rights not yet legally established
- Structure of seed market is not suitable for open competition
- Framework policy is necessary to guide development of seed legislations
- Enactment of ABS laws before PVP laws is necessary to facilitate sustainable seed systems

Thank You for your kind patience

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