



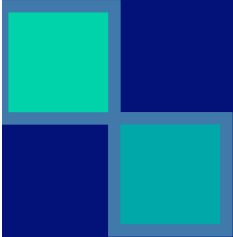
India's Plant Protection Issues



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Agriculture & WTO

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- Agriculture is a twin issue under the WTO:

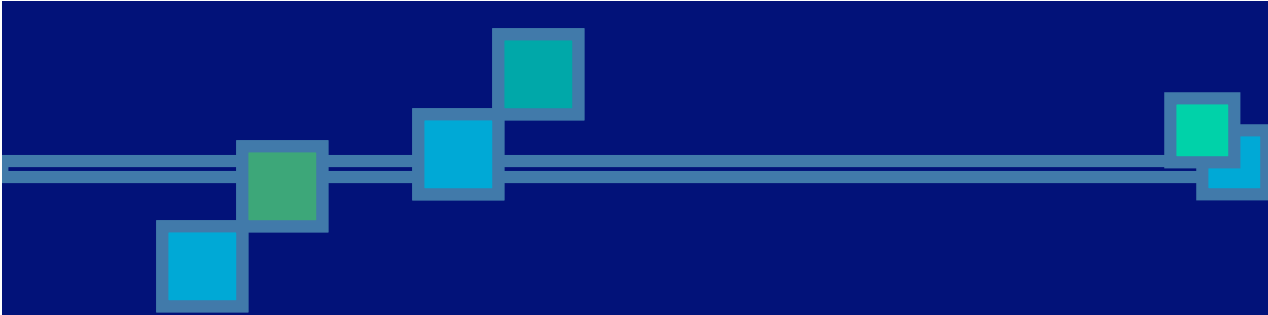
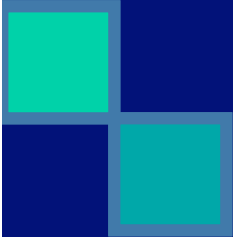



Protection of plant varieties under Article 27.3 of TRIPS



Reduction of agriculture subsidies





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- Objective: highlight the changing role that India and other Asian economies are playing
 - History as a background of what India was



Indian Agricultural History

- At the time of independence in 1947, agri. development was keyed in with other national goals like rural development
 - 3 phases of agri. sector development:
 - Phase 1: (1956-60): Land reform/ removal of *Zamindari* system (2nd 5 Yr. Plan)
 - Phase 2: (1961-65): Self-sufficiency (3rd 5 Yr. Plan)
 - Phase 3: (1969-73): Green Revolution – helped India achieve a level of self-sufficiency (4th 5 Yr. Plan)
 - Introduced high yielding varieties of seeds; improved irrigation
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- In 1961 India was on the brink of mass famine.
 - PUNJAB was selected by the Indian government to be the first site to try the new crops because of its reliable water supply and a history of agricultural success. India began its own Green Revolution program of plant breeding, irrigation development, and financing of agrochemicals.
 - India soon adopted IR8 - a rice variety developed by the International Rice Research Institute produced more grains of rice per plant when grown properly with fertilizer and irrigation.
 - IR8 was a success throughout Asia, and dubbed the "Miracle Rice."
 - In the 1960s, rice yields in India were about two tons per hectare; by the mid-1990s, they had risen to six tons per hectare. In the 1970s, rice cost about \$550 a ton; in 2001, it cost less than \$200 a ton. India became one of the world's most successful rice producers, and is now a major rice exporter, shipping nearly 4.5 million tons in 2006.
 - Famine in India, once accepted as inevitable, has not returned since the introduction of Green Revolution agriculture
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- Indian Agriculture History


- Self-sufficiency

- Agriculture as an industry


- Public sector innovation rather than private innovation

- Indian Patent Act, protection for food



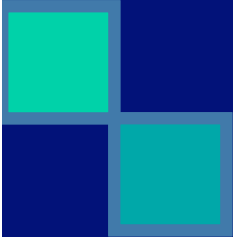


Giant public sector players include the National Seeds Corporation (NSC), the State Farms Corporation of India (SFCI) and the thirteen State Seed Corporations (SSCs). NSC was the first public sector organization, established in 1963, and remained virtually the only agency for seed production for around 13 years. Its role extended to several developmental programmes including training, quality control and extension activities in seeds. This was followed by the setting up of the SSCs under two consecutive plan periods, supported by the World Bank, and these largely adopted the role of the NSC in the Indian States. These corporations engage principally in production and marketing of seeds of high yielding and hybrid varieties developed by the public sector.





India, TRIPS & Agriculture

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- In the 1980s, India moved towards promoting agricultural trade owing to two major factors:
 - Entry of foreign seed corporations (which also gave rise to demands for IP protection)
 - Membership in the WTO.
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Protection of Plant Varieties

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- TRIPS
 - UPOV
 - CBD – Convention on Biological Diversity
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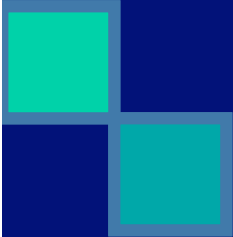

Article 27 (3)(b) of TRIPS



“...members shall provide for the protection of plant varieties either by patents or an effective *sui generis* system or by any combination thereof”





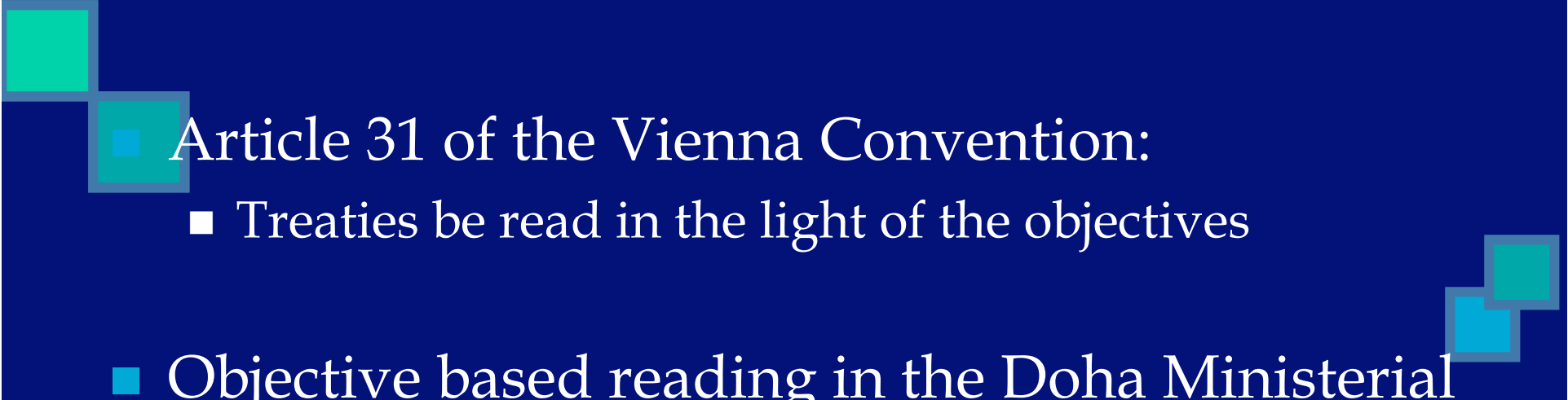
Effective protection under Article 27.3 of TRIPS

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- Patents
 - *sui generis* system or
 - a combination of patents and *sui generis* systems
 - Uniqueness of article 27(3):
 - Lack of harmonization
 - Flexibility
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- What is an *effective* PVP regime?
 - An objective based reading of TRIPS posits that *effectiveness* is dependent on the individual member's *national* requirements in embracing the international trade regime
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An effective *sui generis* system

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- Article 31 of the Vienna Convention:
 - Treaties be read in the light of the objectives
 - Objective based reading in the Doha Ministerial Declaration
 - Scope of the article? – Para 19 of the Declaration – to consider CBD and TK issues

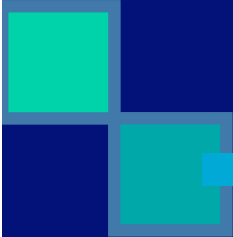


Objective Based Reading


- Article 1: Nature and Scope
 - “Members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice.”
 - Members can adopt protection best suited for national legal system and practices
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Art. 7 of TRIPS: Objectives

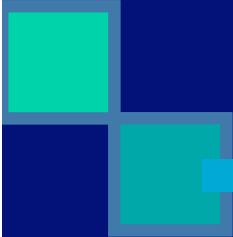


The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of *rights and obligations*.






Article 7 of TRIPS






The protection and enforcement of intellectual property rights should contribute to the promotion of to the mutual advantage of producers and users ... in a manner conducive to social and economic welfare, and to a balance of *rights and obligations* of members

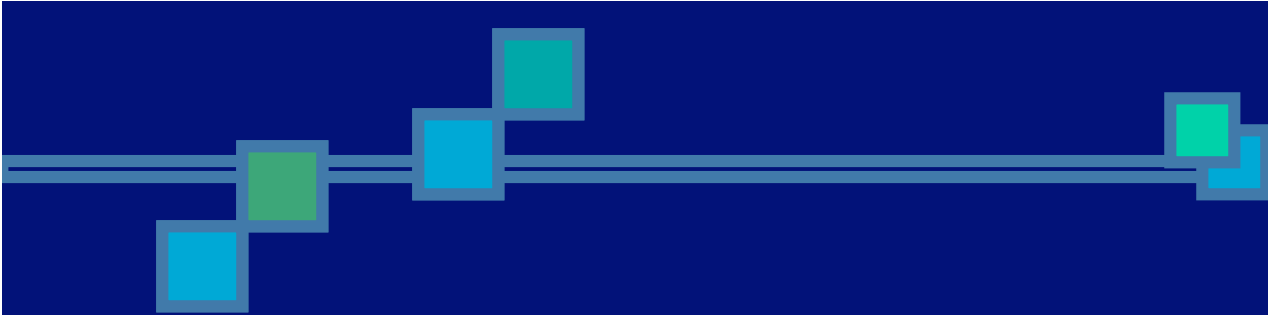





Art. 8 of TRIPS: Principles

- Members may,, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.
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- Surely, the article **cannot mean** that where inconsistent members need not: “Protect public health and nutrition, and to promote the public interest in sectors of vital importance”
 - Thus, member’s public health & public interest situations form an adequate exemption under art. 27 (3) (b) of TRIPS.
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- Article 7 & 8 + Doha Declaration:
 - Lends a *national* rather than a global objective
 - Members have to adopt TRIPS in a way that balances their rights & obligations
 - Members can make adequate exceptions in a manner protecting public health and interest.
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- For developing using a national yardstick, an *effective* system would stimulate research and development of plant varieties without compromising national welfare goals.
 - It would prioritize goals like:
 - Food security.
 - Biodiversity protection
 - Sustainable development of indigenous communities, *etc.*



History of Article 27.3


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- EU and US/ Japan differed
 - Developing nations went with EU
 - Increased dependence of **population** on agriculture
 - Hence, economy's dependence on agriculture
 - More biodiversity
 - Marginal participation in international trade in commodities
 - No studies specific to developing nations
 - The inevitable process of privatization
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Whether UPOV can be an effective *sui generis* system?




UPOV is an ineffective *sui generis* system because:

- Diluted Eligibility requirements
 - Excessive Scope for breeder's rights
 - Inadequate limitations on breeder's rights
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UPOV's Eligibility Requirements

- Protection under UPOV for:
 - New
 - Useful
 - Distinct &
 - Stable varieties
 - Novelty & distinctiveness tied to sale/disposal or official application.
- 




Novelty Requirements



- Commercial Novelty: Art. 6 of UPOV

The variety shall be deemed to be new if, at the date of filing of the application for a breeder's right, propagating or harvested material of the variety has not been sold or otherwise disposed of to others, by or with the consent of the breeder, for purposes of exploitation of the variety



• **Excludes cultivation, reference collection, publication etc.,**


• **Allows the breeder to claim protection over genetic varieties that have been cultivated for centuries but never sold.**




Distinctiveness Requirement





Article 7 of UPOV:

- “The variety shall be deemed to be distinct if it is clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of filing the application.”
- 


Application materials that are a matter of common knowledge can pass the test of distinctiveness if it can be distinguished from another material that is a matter of common knowledge.



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- Art 14:
 - A variety is “a matter of common knowledge,” under article 14 of UPOV, if it has been subject “of an application for the granting of a breeder's right” or has been entered in the official register of varieties, in any country”
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- Distinctiveness: Ability to distinguish from another variety entered in the official register or, for which an application has been made.
 - Varieties already cultivated, being cultivated, well known, and are indistinguishable from well known varieties will continue to qualify as “distinct” so long as close cousins of the variety have not been subject to an application for breeder’s rights.
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Exaggerated Scope of protection

- Breeder's right covers **protected variety** and “varieties not clearly distinguishable” from protected variety (art. 14 (5)(a)) and “essentially derived variety”
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- Art. 14 (5)(b) - Breeder can exercise rights over ‘essentially derived varieties’
 - ‘Essentially derived varieties’ are:
 - predominantly derived from the protected variety
 - derived from a variety that is predominantly derived from the initial variety, **and**
 - it is *clearly distinguishable* from the initial variety
 - **Breeder may be able to claim rights of other farmer’s experimented variety although it is clearly distinguishable from the protected variety**
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Limitations on Breeder's Rights




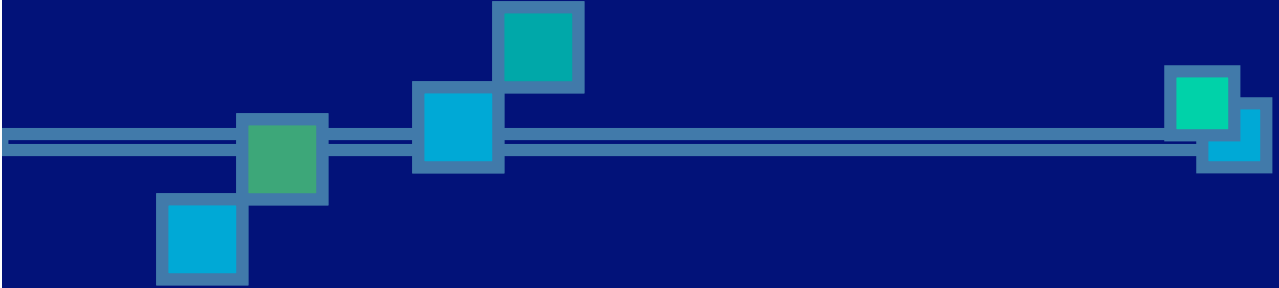
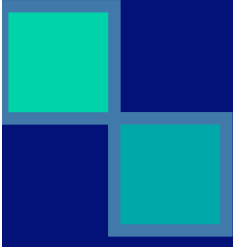

Breeder's rights have few restrictions

- Art 14(1)(b): “Breeder may make his authorization subject to conditions and limitations”
 - Art 17: “No Contracting Party may restrict the free exercise of a breeder's right for reasons other than of public interest”
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- “Public interest”
- 




Comparison with the Utility patent system

- Eligibility standards are lower than for utility patent system
 - Easier to create a private domain
 - But the rights regime is similar to the utility patent system
 - Results in the creation of an exaggerated private domain in the context of the protection standards
 - It results in a lack of recognition for farmer's rights
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- Importantly PBR regimes will interact with CBD
 - What happens when we establish a PBR regime under article 27.3
 - It will inevitably implicate CBD & agreement on agriculture
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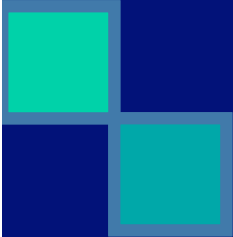



Protection of Plant Varieties & Farmers Rights Act (2004) of India

- Objective: Balance farmers' and breeders' rights
 - Creates 3 protectable varieties:
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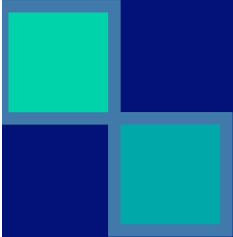



1. New Variety

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- Eligibility standards track UPOV
 - Differs in the registration regime, which requires:
 - applications to include a denomination of the variety and describe
 - geographical origin of the material, and
 - information re: contribution of farmer or community, or organization in the development of the variety.
 - Highlight genetic or parental material used to develop
 - Includes a public interest exceptions to registration:
 - Varieties likely to deceive the public, hurt the religious sentiments, or causes identity confusion, or is not different from every denomination which designates a variety of the same botanical species or of a closely related species registered under the Act are unregistrable.
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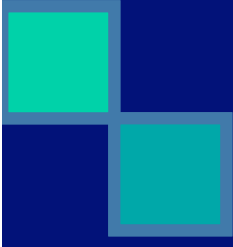



2. Extant Variety

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- Creates a register of materials in the public domain
 - Farmer's variety is a subset of the extant variety
 - Objective: creates a higher distinctiveness standard for registering new varieties
 - Applicants can seek government permission to exploit (non-exclusively) extant varieties
 - Disadvantages:
 - Imposes a term of protection for matters in the public domain are not available in perpetuity.
 - Allowing third parties to register an extant variety could presumably leave some species in the public domain unregistered.
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3. Farmer's Variety

- “Farmer:” defined from community rights perspective
 - “Farmers’ variety” is one over which the “farmers possess common knowledge.”
 - Common knowledge here is different from what is required for protection of new varieties
 - Protects a variety created by a community of farmers
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- 



Deviations from UPOV: 1



Protecting Biodiversity

- Gene Fund
- Promotes Benefit Sharing



Right to Resow

- Retains right to resow
 - Provided TM rights are not violated
- 




Deviations from UPOV: 2



Community Property Rights

- Permission to use farmer's variety
- Benefit sharing, where appropriate

Benefit Sharing


- Statutory right for communities and farmers
 - Depends on extent of use of genetic material and commercial value of the material
- 



Deviations from UPOV: 3



Research Exemption

- Research permitted on protected varieties with prior permission
 - EDVs can be registered by the EDV breeder but they cannot exceed the protection period of the original variety
- 



Broader public interest exemptions

- Compulsory licensing after 3 years under some circumstances - price criterion
- No terminator technology to be used



Deviations from UPOV: 4



 Compensation for spurious seeds

 Protection against innocent infringement

- No duty to destroy – Sec. 42
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Reduction of agriculture subsidies

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- Subsidies in the context of plant variety protection
 - WTO as a negotiating forum:
 - Pharmaceutical commitments have already been met
 - Time to meet the agriculture commitments
- 



The End

