







Implementing the Nagoya Protocol in a Time of Scientific and Commercial Change





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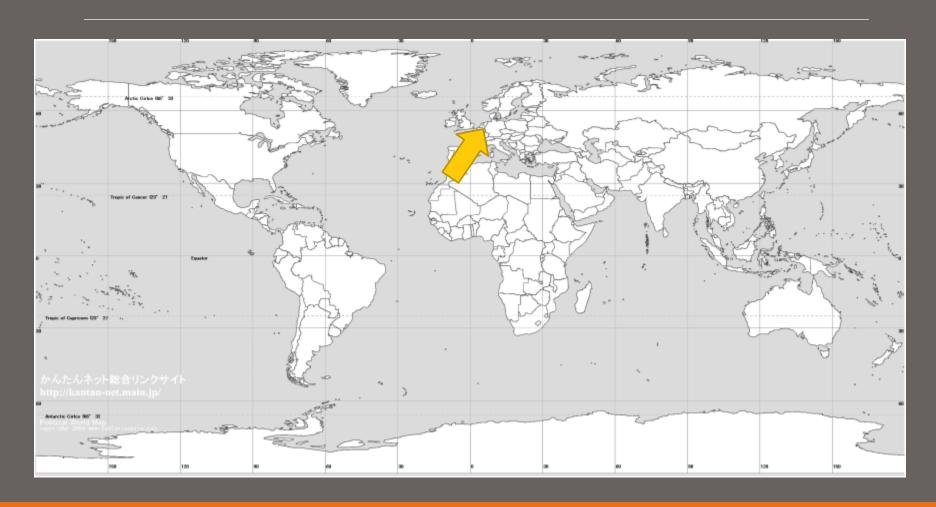
WITH INTRODUCTORY SLIDES FROM GSUHEL AL-JANABI, ABS INITIATIVE





Argan





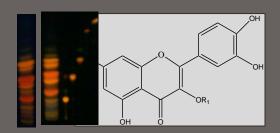
Argan











Polyphenoles

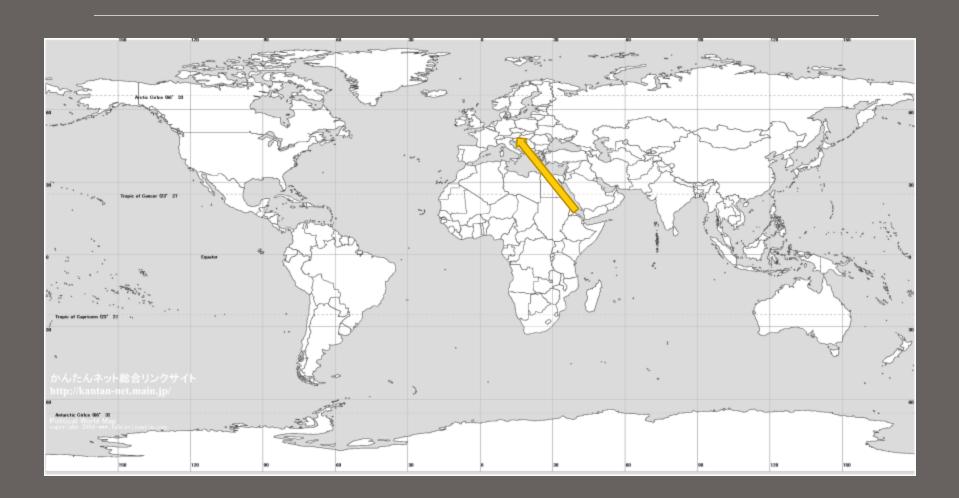






Teff





Teff







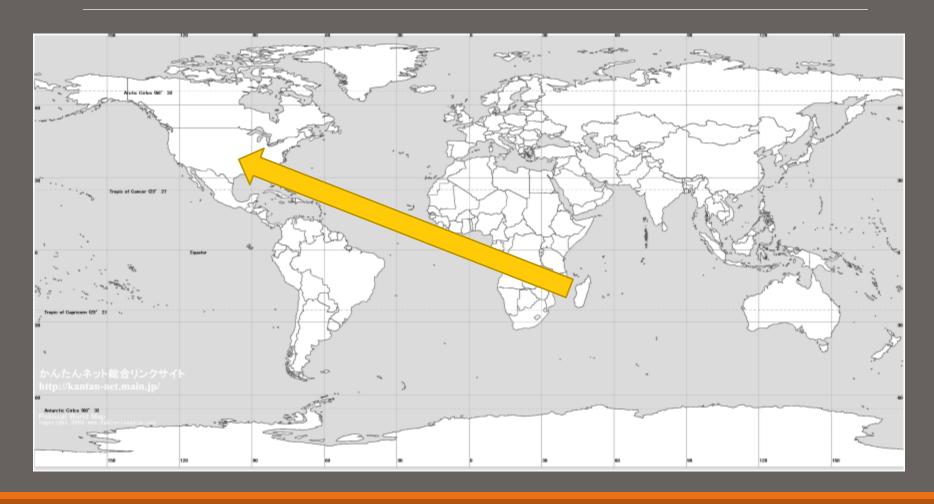








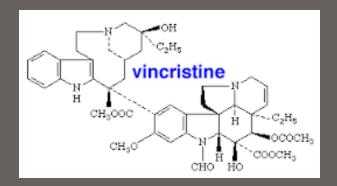
Rosy Periwinkle





Rosy Periwinkle





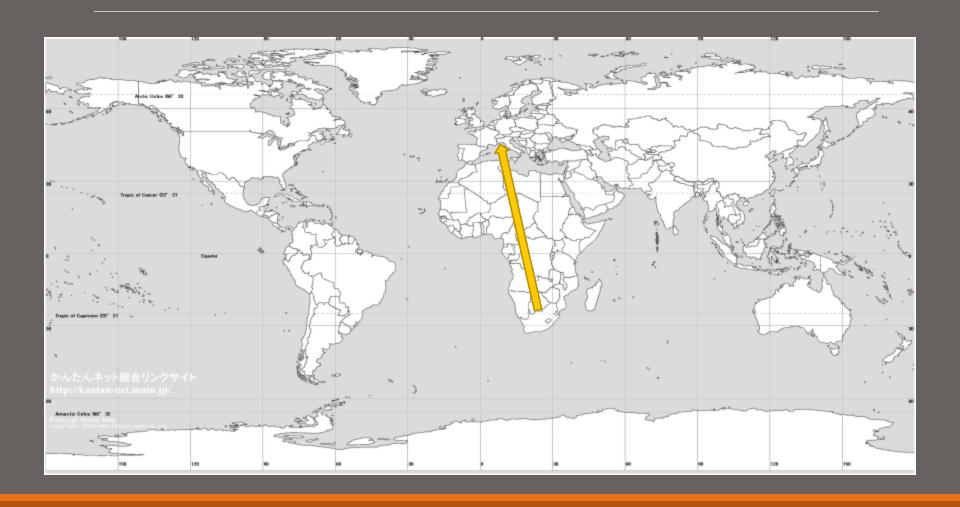








Hoodia Gordonii

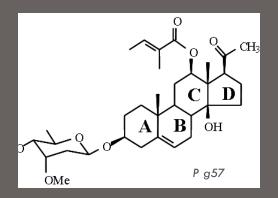


Hoodia Gordonii









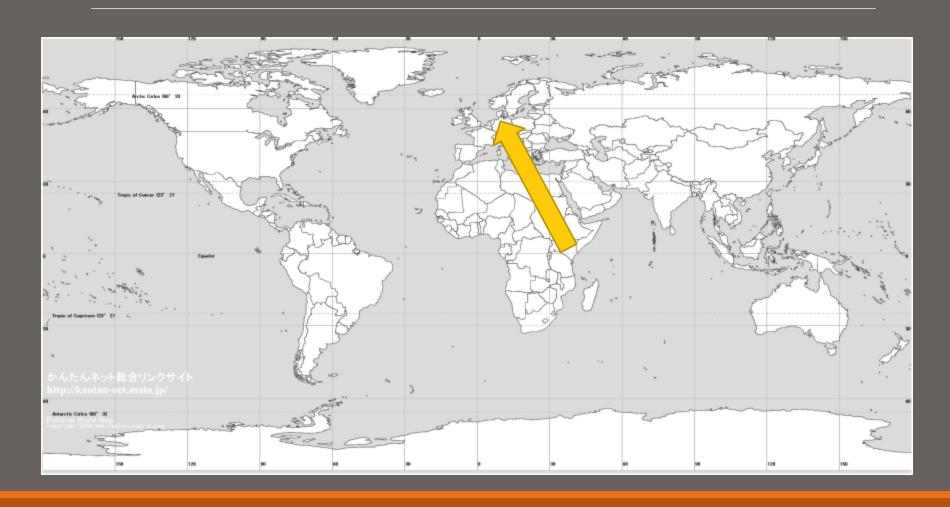








Microorganisms & Enzymes





Microorganisms & Enzymes













Nagoya Protocol on ABS Objective



".... the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components"

Definition of research and development under the NP



Art. 2



"Utilization of genetic resources" means to conduct research and development on the genetic and/or biochemical composition of genetic resources, including through the application of biotechnology as defined in Article 2 of the Convention.

"Biotechnology" as defined in Article 2 of the Convention means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.

Use of GR: concept

Different type of genetic resourcesh

Animal, plant, microbial

Used for different purposes

Research & development

- commercial
- non commercial

based on PIC / MAT

Different types of users operating in different sectors

- pharmaceuticals
- Botanicals and horticulture
- personal care and cosmetics
- biotechnology
- (Functiomal) Food & Beverages

A large number of actors involved, rarely one provider and one user, R&D can vary considerably and changes



2015



REVOLUTION IN SCIENCE AND TECHNOLOGY

Genomics = study of the totality of an individual's makeup

Proteomics = study of proteins

Metabolomics = study of substances produced in the cells of organisms

Convergence of new molecular techniques, bioinformatics, automated laboratory tools for generating molecular data

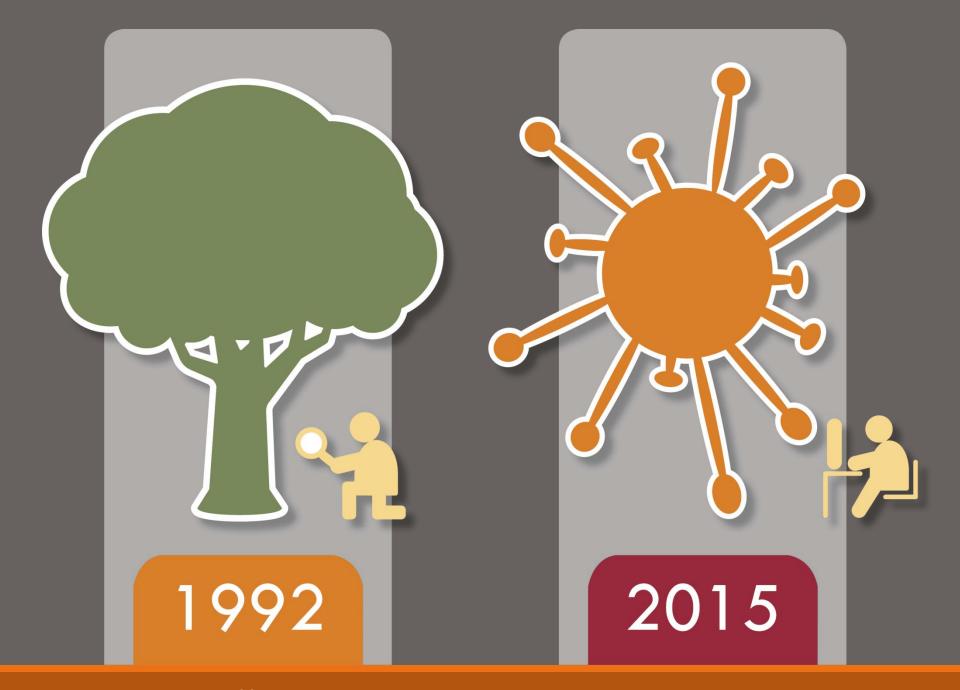
Fundamentally changed approaches to drug discovery, plant breeding, crop improvement, foods and some cosmetics

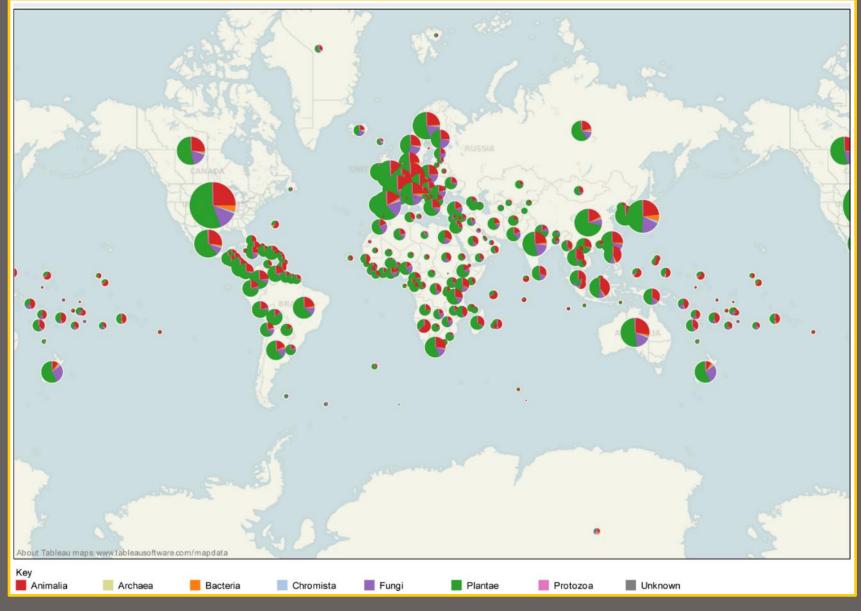


KEY RESEARCH CHANGES

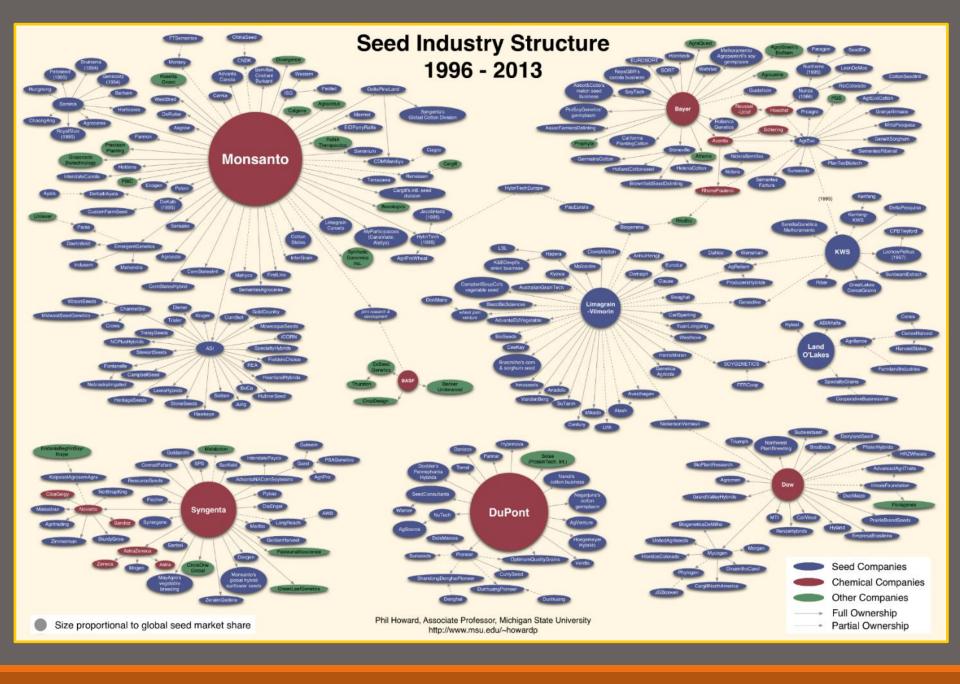


- Distinctions between organisms are not always clear-cut
- Rise of microorganisms
- Genome mining of old sources, switching on pathways
- Greater speed, scale and efficiency
- Greater precision
- Solving supply issues using synthesis or cell cultures
- Means tiny amounts needed
- Less interest in traditional knowledge

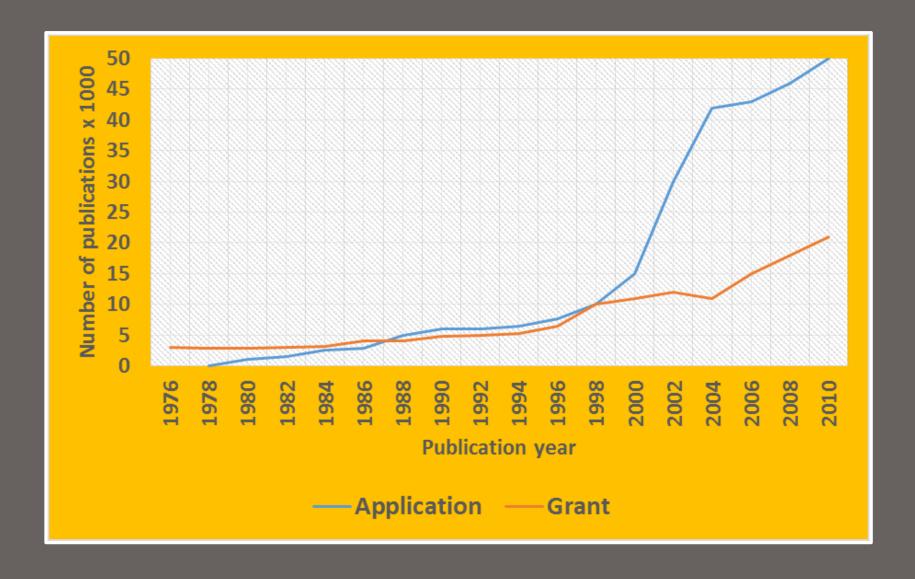




Global distribution of species in patents by Kingdom





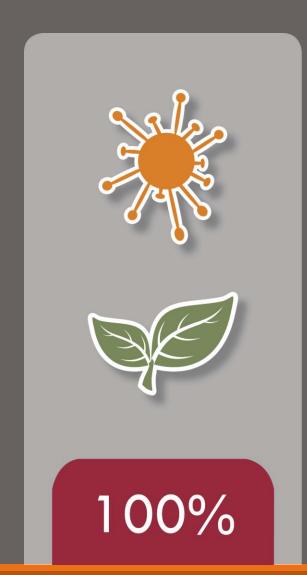


Increasing number of patents on biodiversity

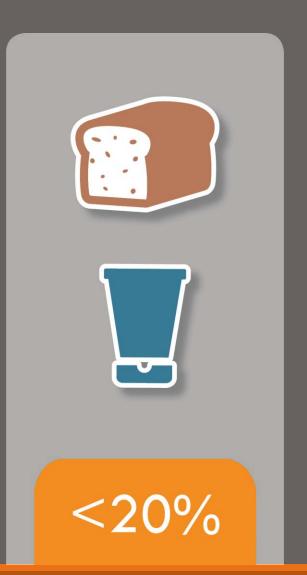
REVENUES ACROSS SECTORS



PERCENTAGE 'NATURAL'







HIGH TECHNOLOGY





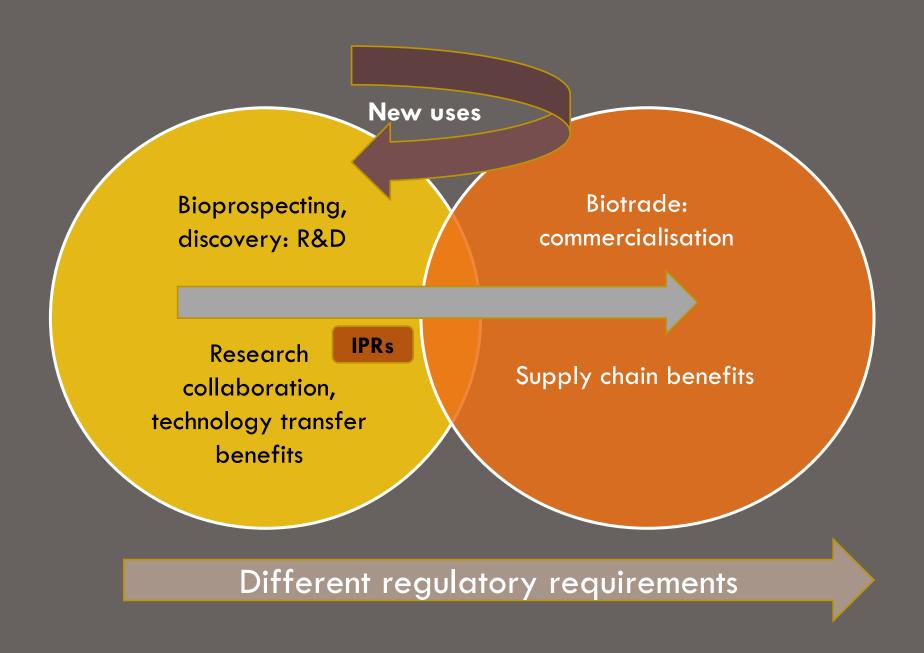


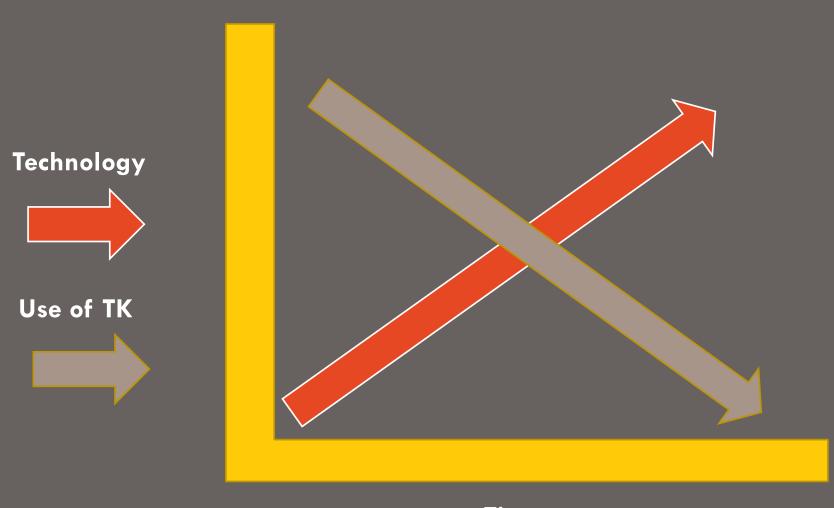




LOW TECHNOLOGY





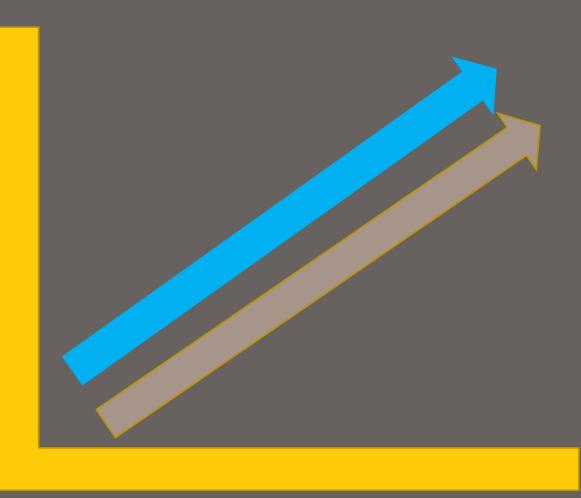


Time

Consumer interest in natural products



Industry interest in TK for marketing



Time

INTERNATIONAL LAW CITES, WTO/TRIPS, ITPGRFA, CBD, Nagoya Protocol, UNDRIP, UNFCCC **USERS** quality control ABS Regional customs agreements Safety and quality control transport efficacy **IPR** Forestry IPR agriculture TRADE TRADE CONSUMER PROTECTION Customs ABS and excise control LAND TENURE customary law **VOLUNTARY MEASURES** finance and taxation Certification: fair trade, organic, sustainable, quality control **PROVIDERS** Industry standards for best practice

