

Current Status on the Implementation of the ITPGRFA and the SMTA

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Outline of Presentation

- Our Common Needs for PGRFA
- The Rich Variety of Food from Agrobiodiversity
- The Value of PGRFA
- The Policy Issues-conservation, access, IPR, market, biosafety
- The Policy Options
- ITPGRFA



Our Common Needs for PGRFA

- ✓ Food/Nutritional Security
- ✓ Income for the Poor
- ✓ Adaptation and Mitigation of
Climate Change



ADB Study on Climate Change in Southeast ASIA (April 2009)

- South East Asia is particularly vulnerable to the impacts of climate change with its extensive, heavily populated coastlines, large agricultural sectors and large sections of the population living under \$2 or even \$1 a day.



ADB Study on Climate Change in Southeast ASIA (April 2009)

- The study observed that climate change is already affecting Southeast Asia, with rising temperature, decreasing rainfall, rising sea levels, increasing frequency and intensity of extreme weather events leading to massive flooding, landslides and drought causing extensive damage to property, assets, and human life.
- Climate change is also exacerbating the problem of water stress, affecting agriculture production, causing forest fires, degrading forests, damaging coastal marine resources, and increasing outbreaks of infectious diseases.



ADB Study on Climate Change in Southeast ASIA (April 2009)

- The report urges that Southeast Asian countries should treat adaptation as an extension of sustainable development practices. Its key elements include: adapting agricultural practices to changes in temperature and precipitation; adapting water management to greater risk of floods and droughts; adapting coastal zone management to higher sea levels; safeguarding forest areas from forest fires and degradation; adapting people to threats of vector-borne infectious diseases.
- Southeast Asia countries need to take timely action to adapt to climate change, build resilience, and minimize the costs caused by the impact driven by GHG emissions that have been locked into the climate system.



ADB Study on Climate Change in Southeast ASIA (April 2009)

- Global warming is likely to cause rice yield potential to decline by up to 50% on average by 2100 compared to 1990 in Indonesia, Philippines, Thailand, and Viet Nam; and a large part of the dominant forest/woodland could be replaced by tropical savanna and shrub with low or no carbon sequestration potential.



Adaptation Options for Agriculture

Reactive/Responsive

- Erosion control
- Dam construction for irrigation
- Changes in fertilizer use and application
- **Introduction of new crops**
- Soil fertility maintenance
- Changes in planting and harvesting times
- **Switch to different cultivars**
- Educational and outreach programs on conservation and management of soil and water

Proactive/Anticipatory

- **Development of tolerant/resistant crops (to drought, salt, insect/pest)**
- Research and Development
- Soil-water management
- **Diversification and intensification of food and plantation crops**
- Policy measures, tax incentives/subsidies, free market
- Development of early warning systems

The Rich Variety of Food from Agrobiodiversity

CEREALS FROM BIODIVERSITY RICH FOOD SYSTEMS – CONTRIBUTORS OF DIETARY PROTEIN AND MICRONUTRIENTS



ROOTS AND TUBERS AND STARCHY FRUITS FROM WEST AFRICAN FOOD SYSTEMS – SUPPLIERS OF DIETARY ENERGY, BETA CAROTENE AND ANTIOXIDANTS



GRAIN LEGUMES FROM BIODIVERSITY RICH FOOD SYSTEMS OF WEST AFRICA – MAJOR SUPPLIERS OF PROTEINS AND MICRONUTRIENTS



INDIGENOUS FRUITS – MAJOR SOURCES OF MICRONUTRIENTS FROM TRADITIONAL BIODIVERSITY-RICH FOOD SYSTEMS OF WEST AFRICA



OIL SEEDS/FRUITS – SOURCES OF FOOD OIL FROM TRADITIONAL BIODIVERSITY-RICH FOOD SYSTEMS OF WEST AFRICA



SAUCE THICKENERS, CONDIMENTS AND SPICES FROM TRADITIONAL BIODIVERSITY-RICH FOOD SYSTEMS OF WEST AFRICA



VEGETABLES ARE INDISPENSABLE PART OF INDIGENOUS FOOD HABITS – THEY ARE SOURCES OF MICRONUTRIENTS AND ANTIOXIDANTS TO DIETS

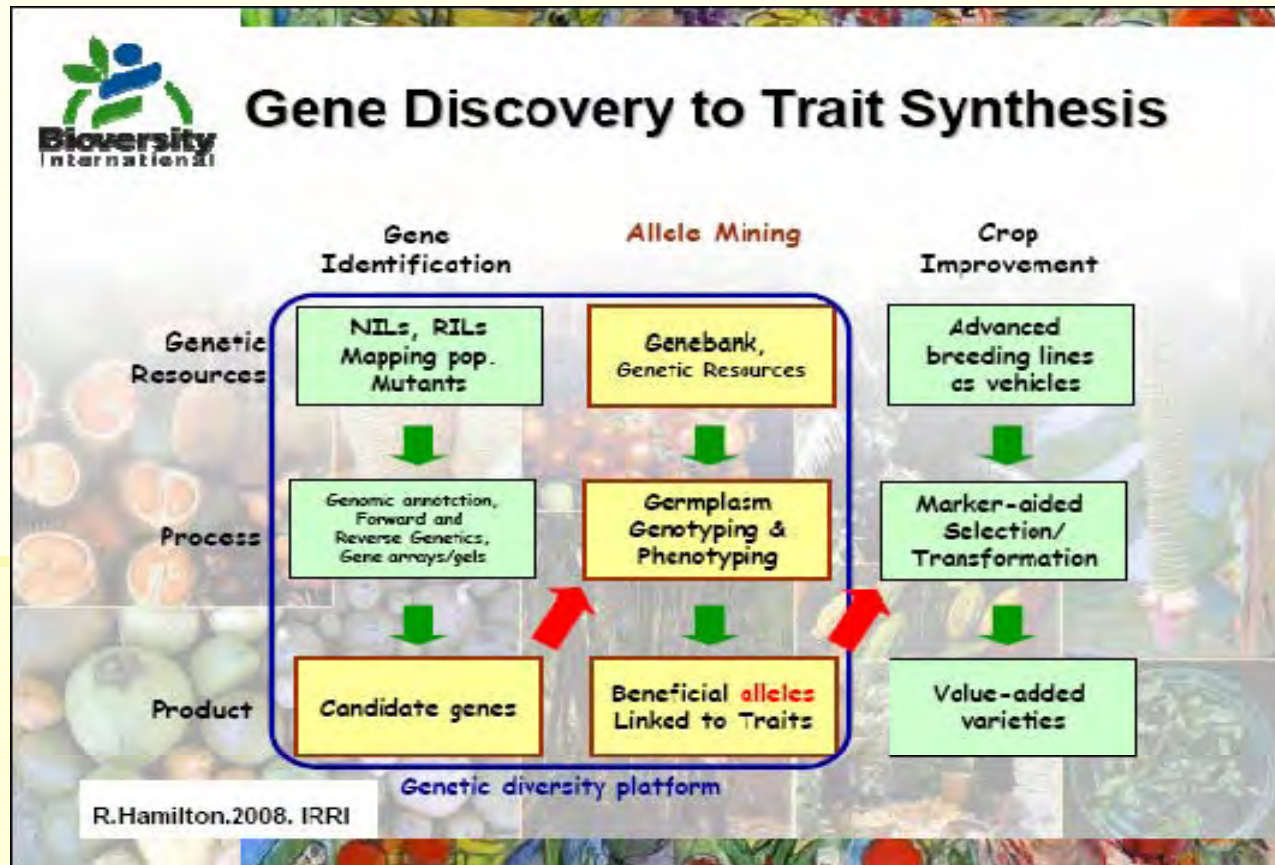


VALUE of PGRFA ?

The SEED HUNTER

- The Seed Hunter
Source - Youtube

The GENE HUNTER



VALUE Of Plant Genetic Resources

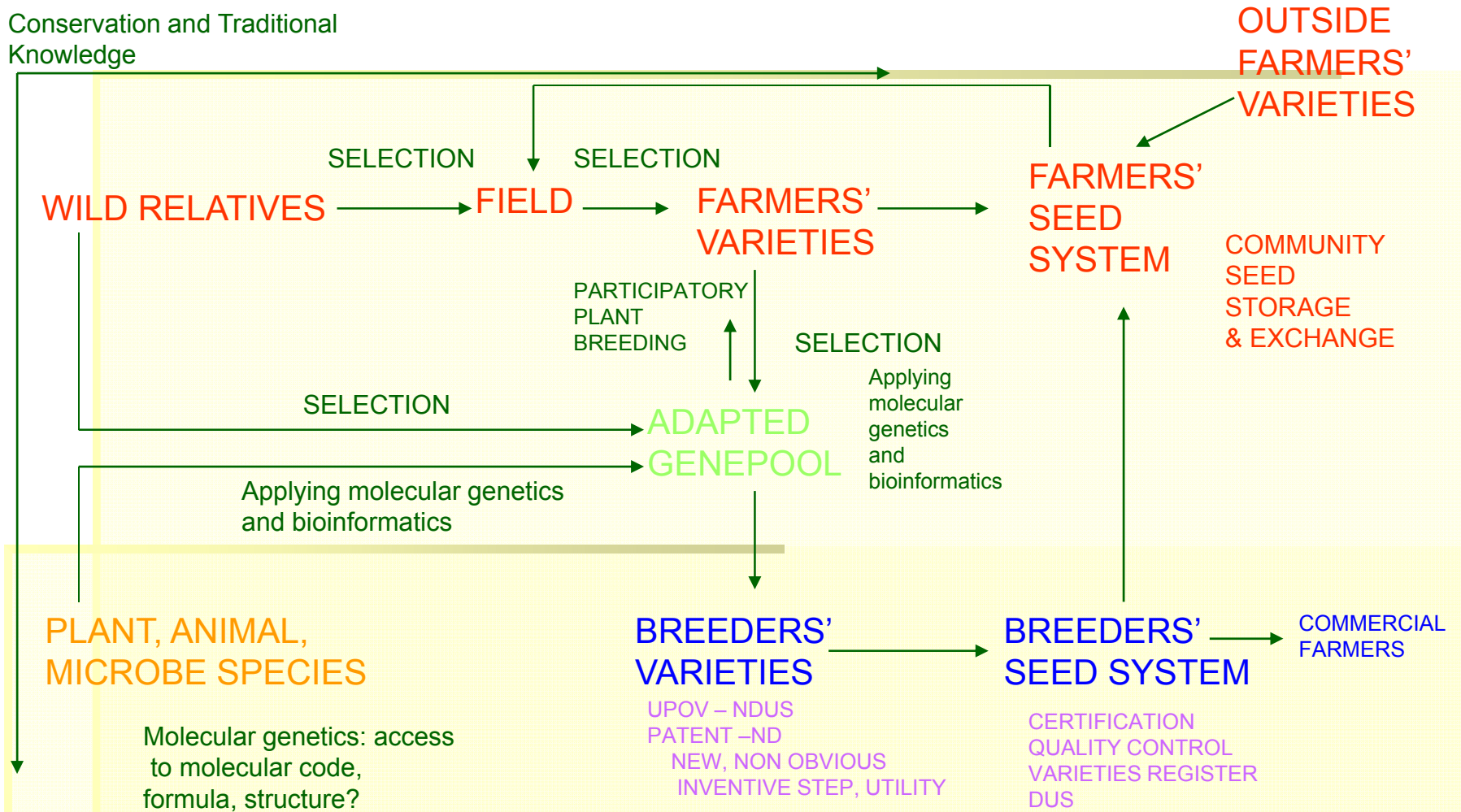
- **The GREEN GOLD**
- **SURVIVAL OF THE HUMAN RACE**



CURRENT POLICY ISSUES IN AGROBIODIVERSITY CONSERVATION AND UTILIZATION

1. CONSERVATION 2. ACCESS. 3. IPR. 4 MARKET. 5 BIOSAFETY

Conservation and Traditional Knowledge





Effective Biodiversity Conservation (EBC)

- Values - use and non-use
- Costs and benefits of conservation
- Rational policy and investment decisions on conservation
- One of the major strategies of EBC is the use of genetic resources - market value and/or adding value to local livelihoods



The Policy Options

Access to PGRFA for
Conservation, Research and
Breeding

International law on access to genetic resources

- 1. The origins of international law on biodiversity**
- 2. The Convention on Biological Diversity**
- 3. The WTO and the TRIPS agreement**
- 4. The International Treaty on Plant Genetic Resources for Food and Agriculture**



Genetic Resources: From labs to policy meetings

A little bit of history...

50's, 60's, 70's:

- Industrial production of drugs based on biological processes/compounds
- First hybrids (maize, rice)
- Genetic engineering

United Nations Conference on Human
Environment, Stockholm, 1972



Genetic Resources: From labs to policy meetings

The key questions:

1. Who is the owner of the material held in the genebanks???
2. If new products are the result of applying technology to some genetic material, why aren't the rights of the providers of the material recognized in the final product????



International Undertaking on Plant Genetic Resources, 1983

- PGRFA are the heritage of the whole humanity
- Free exchange of material among all countries



The INBio-Merck Agreement, a milestone in biodiversity law history

Merck gets...

**Samples provided
by INBio**

**INBio Costa Rica
gets...**

1 million USD

Lab equipment

Capacity building

**Royalties over
products of
research**



The Convention on Biological Diversity

The CBD in a Nutshell...

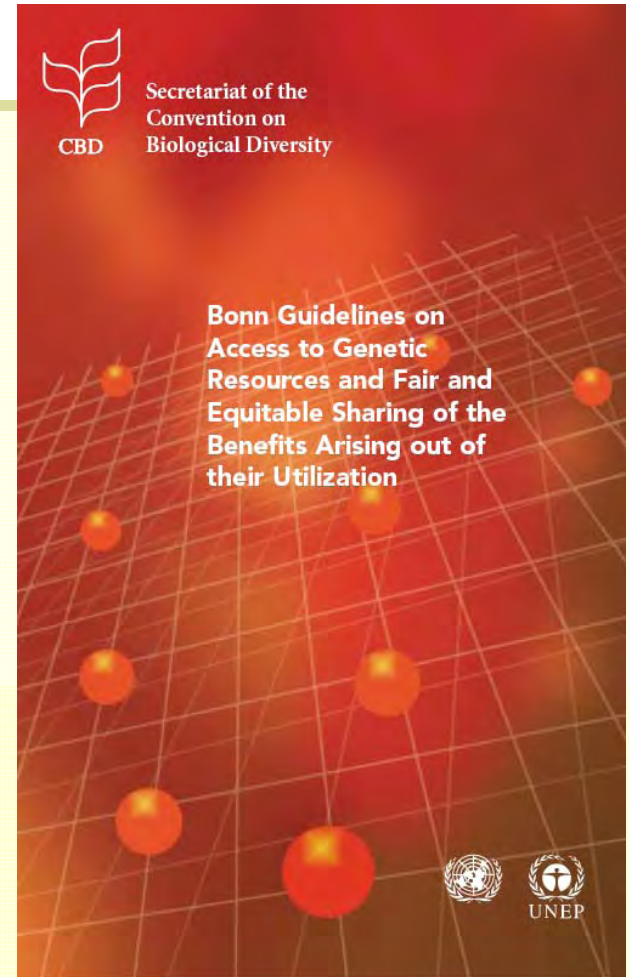
- ✓ Adopted in 1994
- ✓ 190 parties (189 countries + the EU)
- ✓ Principles: States have sovereign rights over their natural resources
- ✓ Objectives:
 - conservation of biological diversity
 - sustainable use of its components
 - fair and equitable sharing of the benefits arising out of the utilization of genetic resources

Access to genetic resources and benefit-sharing

Art. 15

(1) Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.

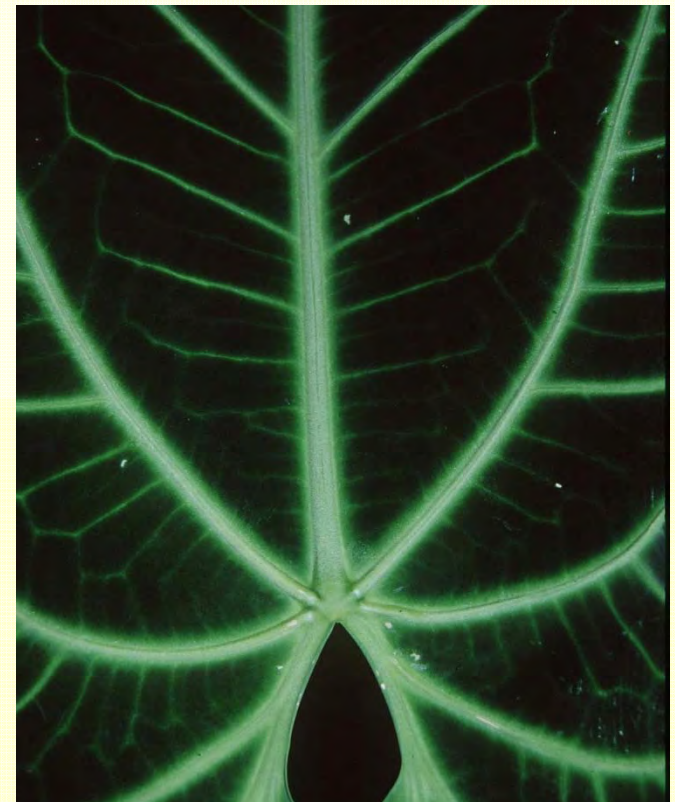
(5) Access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party.



Access to genetic resources and benefit-sharing

Common requirements in national access legislations:

- Prior informed consent
- Mutually agreed terms:
 - samples
 - access payments
 - intellectual property rights
 - reporting
 - benefit-sharing
 - traditional knowledge





Access to genetic resources and benefit-sharing

Challenges in the implementation of access laws:

- nature of genetic resources
- lack of clear, transparent regulation
- lack of resources
- lack of awareness at the community level
- boundaries of laws

Risks:

- Insufficient flow of genetic resources for research
- No benefit generated

WTO and the agreement on Trade-related aspects of Intellectual Property

Art. 27.3:

- Patentibility of animals, plants, microorganisms, non biological or microbiological processes.
- Protection of new Plant Varieties.

Why do PGRFA need a special regime of ABS ?

Differences between PGRFA and wild GR



Why do PGRFA need a special regime of ABS ?

There is not a unique country of origin!

Wheat variety Sonalika

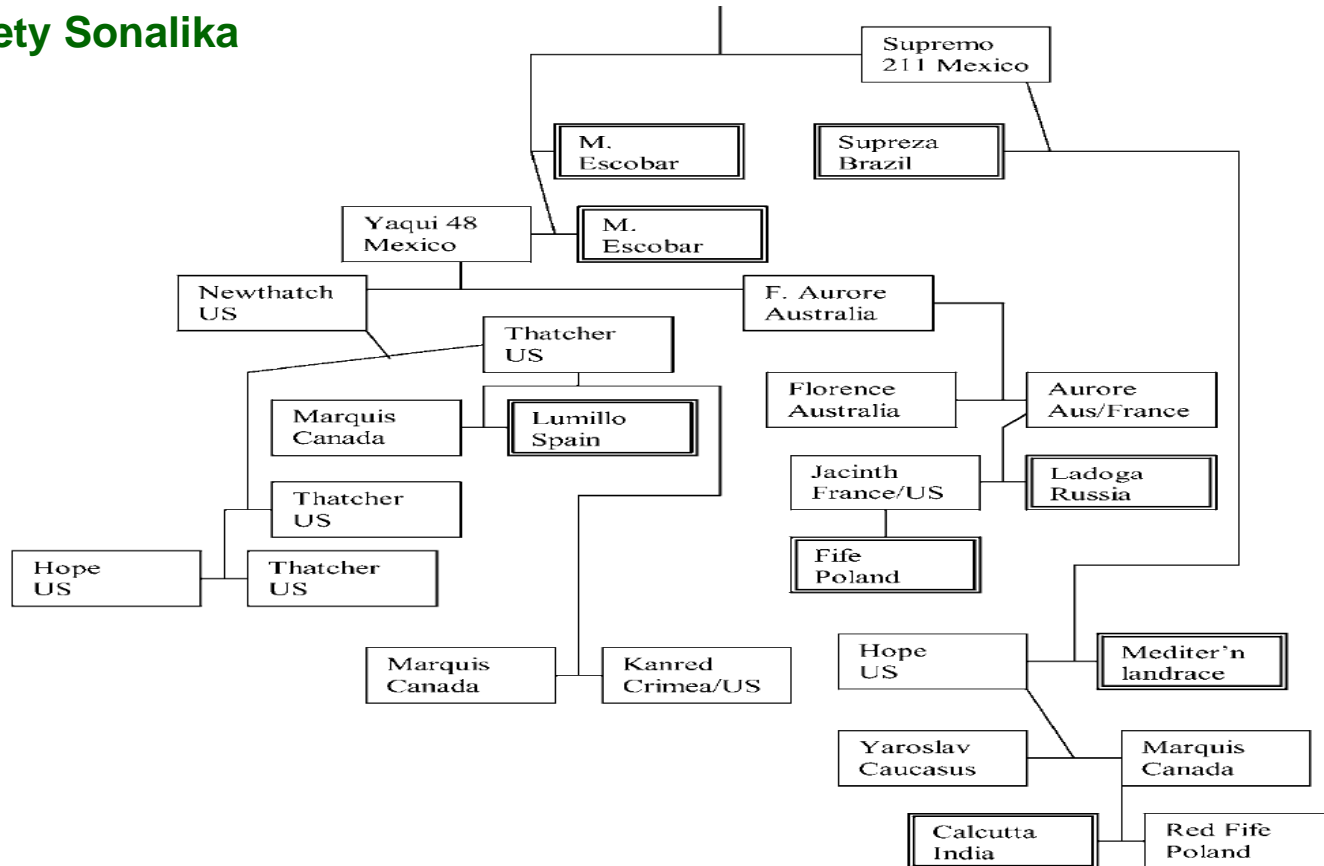
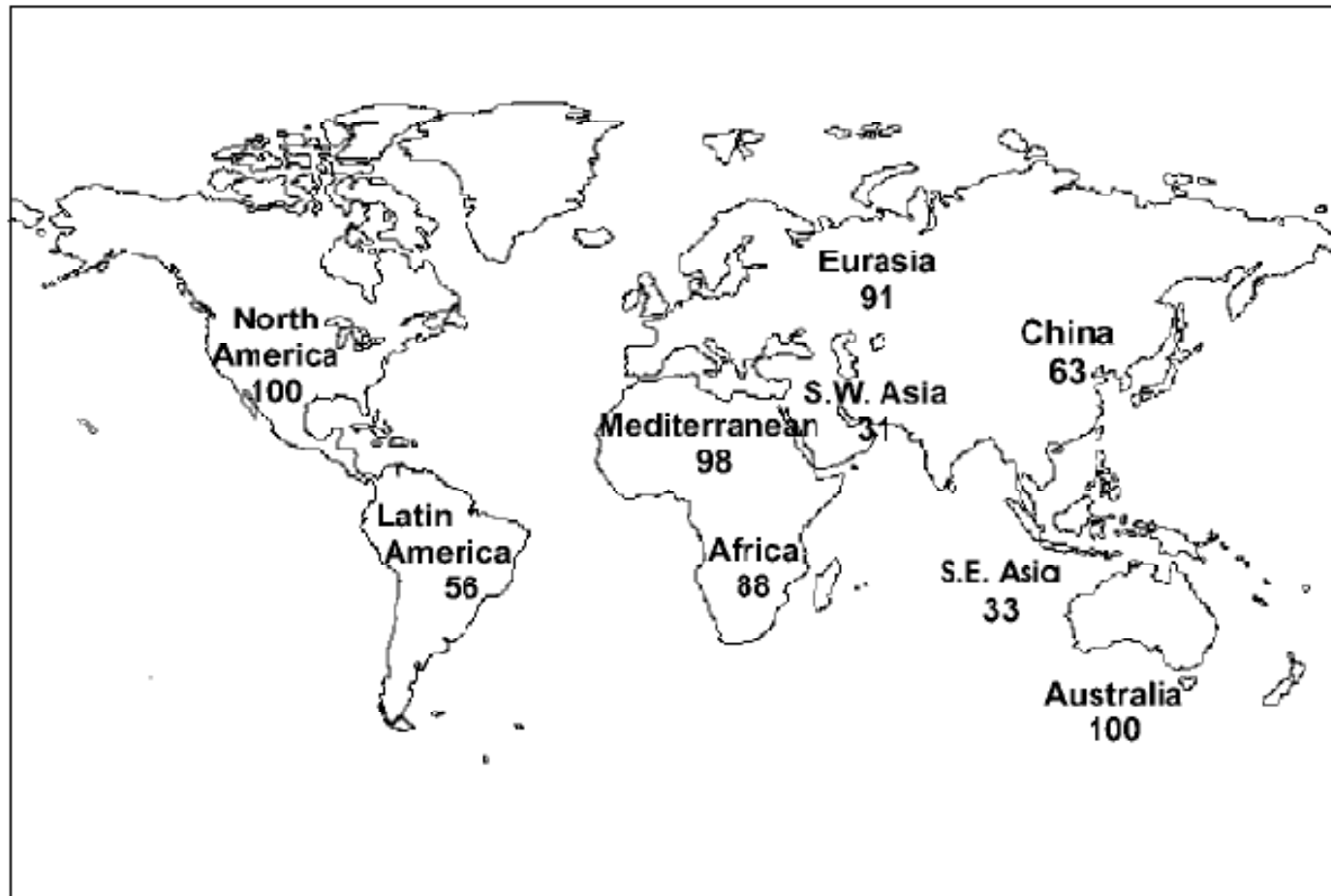


Figure 1 A small segment of the bread wheat (cv. Sonalika) pedigree. Landraces are in a double box.

Why do PGRFA deserve a special regime of ABS ?

Interdependence of countries on PGRFA



The International Treaty on Plant Genetic Resources for Food and Agriculture

The Treaty
was adopted
after seven years
of negotiation
by the
FAO Conference
on 3 November 2001



The International Treaty on Plant Genetic Resources for Food and Agriculture



Scope: Plant genetic resources for food and agriculture

Objectives:

- conservation of and sustainable use of plant genetic resources for food and agriculture
- equitable benefits arising out of their use, in harmony with the CBD



The Status of Ratification

The Treaty will enter into force 90 days after ratification by 40 states

As at August 2009, 120 states and the European Community had ratified it

The Treaty entered into force on the 29 June 2004