

*Future Challenges Regarding the
International Regulation of IPRs and
Biotechnology*
-
Animal Genetic Resources

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Overview

1. Background
2. Science, property rights and politics
3. AnGR: relevant characteristics
4. Preliminary conclusions
5. Weiterführende Fragen



BACKGROUND

01.12.2009

The National Centres of Competence in Research (NCCR) are a research instrument
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Commission on Genetic Resources for Food and Agriculture/FAO: State of the World's Animal Genetic Resources for Food and Agriculture (AnGRFA) (2007)

- Global assessment of the roles, values and status of AnGRFA.
- Importance of AnGRFA diversity within agriculture, for global food security, as an integral part of agricultural ecosystems
- Conservation and sustainable use of AnGRFA and the sharing of benefits resulting from their use, are an international concern.
- Measures to reverse the ongoing trends of erosion and underutilization of AnGR diversity.



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Commission on Genetic Resources for Food and Agriculture

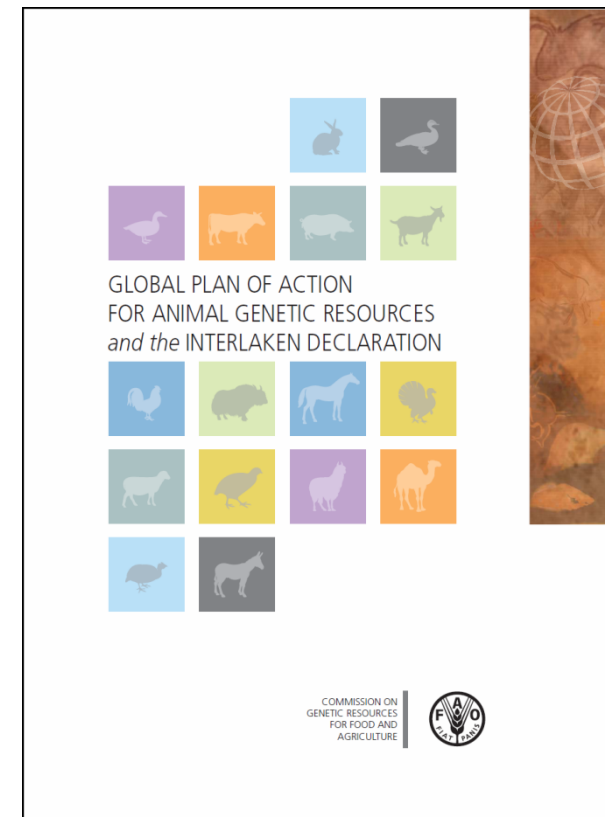
Global Plan of Action for Animal Genetic Resources

Strategic Priority Area 4: Policies, Institutions, Capacity Building:

...“ an area that requires development is the framework for exchange of animal genetic resources among countries:

Take into account:

- The increasing role of intellectual property rights
- The need to secure fair and equitable benefit sharing
- And the rights of indigenous and local communities/pastoralists and the role of their knowledge systems



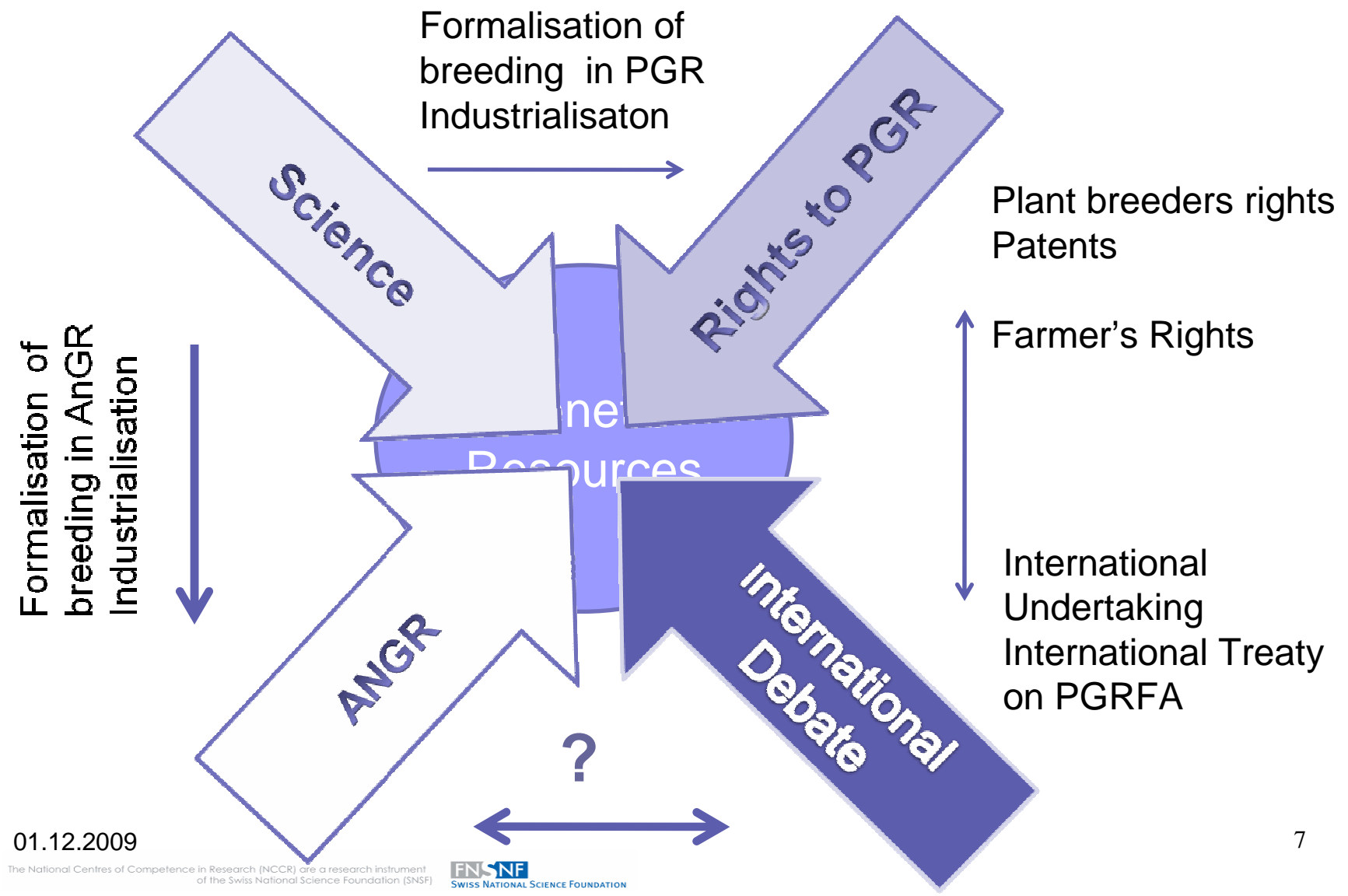


SCIENCE, PROPERTY RIGHTS AND POLITICS

The international Debate on Genetic
Resources for Food and Agriculture

01.12.2009

Strands of the present debate on rights to GRFA



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ANIMAL GENETIC RESOURCES: FACTS AND QUESTIONS

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Erosion of diversity of AnGR, trade and intellectual property rights

- Expansion of global markets
- Increased demand in livestock products
- Production efficiency and safety
- Industrialisation and homogenisation of production
- Market concentration

Market failure leads to loss of diversity of
AnGRFA

Are there market mechanisms to balance
this failure?

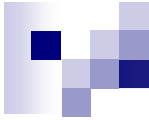
Do we need specific rights to animal genetic
resources, in analogy to the plant breeders
rights and the farmer's rights?

Questions re a possible PGR-AnGR analogy

- Are there relevant differences between animal and plant breeding?
- How are rights to breeds and their progeny dealt with in conventional breeding and in indigenous farming contexts?
- What are the current trends in biotechnology and animal breeding? Do they influence the diversity of animal genetic resources?
- How does the protection of biotechnological innovation influence the flow of AnGR?

Some answers

- Genetic variation in animals is owned by the holder of the animal; the genetic value is included in the market price.
- Exchange of genetic information (mainstream breeds) works on private basis and is running smoothly.
- New technologies in breeding and conservation of germplasm expand the geographical area of exchange of genetic information
- This puts low-tech breeders in developing countries at a disadvantage.



There are differences that are essential for the AnGRFA-PGRFA discussion

Preliminary Results

In order to balance concentration processes and to further diversity, participatory breeding and local breeding organisations need to be strengthened.

What would be the legal means?

- Can registration of rare/indigenous breeds form a basis for ABS (in analogy to TK)?
- Is specific protection for TK needed?
- Can participation, registration, protection of TK be bundled into a *sui-generis* (intellectual) (property) right?
- What would be the adequate level and framework for regulation?

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PATENTS AND ANGR

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Patents & AnGR – What is being Patented? What is Marketed?

- **Depends on stage of technology & consumer's acceptance**
- **Agriculture**
 - Hardly any *transgenic* animals (market/technology related?)
 - Many 'gene patents' potentially applicable in agriculture
 - Focus on methods (breeding methods – question of progeny extension)
- **(Medical) Research**
 - Transgenic model animals (ethical aspects)
- **Biotechnology v. 'traditional' innovation/activity**
 - Monsanto pig & Brassica discussion
 - 'Biotechnological' does not equal 'transgenic' - Distinction between biotech and traditional agriculture is shaky

Patents & AnGR: General Points I

- Shift in ownership structures
- Interests differ amongst actors involved: the research community, the farming community (small scale-farmers, livestock keepers, industrial breeding companies),...
- Little jurisprudential guidance
- Analogies with plants – caution

Patents & AnGR: General Points II

- Prior art (especially in relation to breeding methods) – poor
- Low-tech innovation is not covered by IP rights of the patent type (no sui generis system)
- Ethical exclusions in patent law – unclear
- Market shows issues of concentration and of genetic uniformity – yet this came outside of patents' influence

Patents & AnGR: (Technical) Debate

- Extension of patents over progeny
- Extension of patents over ‘traditional’ activities
- Extension of patents over excluded subject matter
- Relevance of the ‘animal varieties’ exclusion in Europe + term ‘variety’

AnGR Patenting Worldwide

- Developing countries usually exclude animals from patentability
- Developed countries
 - Canada – exclusion higher life forms
 - EU/EPO – exclusion animal varieties
 - USA – no exclusion
 - Similar in relation to essentially biological production processes

AnGR & TRIPS: Way Forward?

- **Why leaving choice to countries?** Is there (still) a justification?

- **Trade is increasing**
 - **International trade** in swine for breeding increased from 30 million USD in 1990 to about 80 million USD in 2005
 - The share of North-North trade is losing breath in comparison to the increasing share **of North-South trade (Biodiversity issue)**. Level playing field Extensive free riding?
 - **Level playing field/trade distortion**; different conditions to investment and increased transaction costs

AnGR & TRIPS: Way Forward (II)?

■ Ethical Basis?

- Property rights over animals are accepted;
- Animal welfare/rights laws do not go as far as exclude genetic engineering per se;
- An (international) exclusion of animals from patentability if their suffering would be disproportionate to the progress in research that can be achieved appears more appropriate

Conclusions

- Erosion of AnGR has also to be looked at from a market failure angle
- Further research is needed on the necessity for sui generis systems
- The possibility to exclude animals from patentability under TRIPS does appear appropriate anymore



Thanks!