Reforms of IPR management to promote diffusion of climate-friendly technologies

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Some preliminary points

- Need for thinking outside the usual box because Business as usual won't work in emissions or in conventional technology paradigm
- Importance of both (1) Innovation and (2)
 Access to technologies at affordable prices.
 Need to balance these, and have both.
- The patent system encompasses Protection of IP as well as Flexibilities. Both are important components of the system.
- TRIPS agreement obliges WTO members to take on minimum standards and obligations of protection.

Flexibilities in TRIPS and national patent laws

- TRIPS also enables Flexibilities including:
- Pre-Grant measures (a) exemptions and exceptions from patentablity (eg plants and animals, surgical procedures, for reasons of *ordre public*, to protect plant and animal life, etc.); (b) interpretation of patent criteria (eg inventive step) and consideration of patent applications etc.
- Post-grant measures (eg compulsory licensing, government use order, for imports or production and export, mandatory licensing for anti-competitive reasons, parallel imports, exemptions for research, etc). Certain conditions for CL – prior negotiation with patent holder (with exceptions for emergency, government use, anti-competitive measures), reasonable remuneration.
- Countries are allowed to choose reasons for compulsory licensing (eg public interest, health and nutrition, environment protection, national emergency or conditions of extreme urgency. NOTE: Not necessary for there to be an emergency.
- Flexibilities are used as part of the patent system in developed countries, eg US, Canada, UK, Italy, etc. And increasingly by developing countries (eg Malaysia, Indonesia, Thailand, Brazil, Ghana, Zimbabwe, etc).

Types of Technologies and Measures

- 3 types of technologies: those (1) in public domain, (2) that are patented; (3) future technologies.
- Patents are not a barrier for Type (1). However developing countries need capacity building for innovation in making and adapting to local conditions.
- For Type 2, there is a range of possibilities for managing IP and flexibilities.
- (1) Clarification of and possible expansion of Flexibilities through Declaration on TRIPS and Climate Change (on lines of TRIPS and Public Health Declaration) on CL, parallel imports and waiver of Article 31(f) on "predominantly for domestic market" to allow diffusion in developing countries with no manufacturing capacity
- (2) In-depth study of issues and proposals through a UNFCCC Commission on Innovation, IPR, Access to Climate Technologies (along lines of WHO Commission) and a follow-up working group and Global Strategy and Plan of Action.

Measures for managing patented technologies (continued)

- (3) Clarification of or expansion of exemptions for climate-friendly technologies, using existing or new TRIPS provisions. Possibility of different status of exemption or implementation periods etc in developing countries vis-à-vis developed countries.
- (4) Mandatory voluntary licenses. Examples:
 - -- US Clean Air Act: District Court can compel patent holder to provide license to other users or producers at specified royalty for technologies that prevent/reduce air pollution, eg components in cars.
 - -- Italian court compelled drug company to provide license royalty-free for medicines in order to promote competition and promote use of generic drugs. Similar case in South Africa regarding AIDS drug.

Measures on patented technologies (continued)

- (5) Patent Pools. Fast track and one-stop centres for obtaining licenses for technologies at specified and discounted rates, to facilitate easier and cheaper licensing.
 - (a) for products that contain multiple patents
 - (b) for a product with single patent but with multiple users especially in developing countries.
- (6) Expansion of public domain for technologies that have been publicly funded by governments or through international cooperation or agencies

Type 3: Future technologies

- Model of R & D and its financing can influence the access to climate-friendly technologies.
- Much of R and D funding used to be from public sector and the products were in public domain. Recent changes: universities, companies allowed to own patents even where significant R&D funding is public.
- Government can have major influence over terms of patenting if it has funded R and D, eg if it funded 70% of R&D costs, it should have 70% of royalty rights, which can be waived when used in developing countries.

R and D models for affordable access to technologies

- International cooperation for funding R and D for climate technologies:
 - -- Example of CGIAR in which improved plant varieties are not patented, allowing low-cost diffusion in developing countries.
 - -- Technology Mechanism and Fund under UNFCCC can have strong R&D component.
- Fund for R&D with (a) Council setting priorities of technology needs and allocation of funds; (b) Expert panel to assess grant applications; (c) Grants for innovation given, with payments by installments, and only those with success in each stage obtaining next tranche of grant. (d) Final product will not be patented or the patent is assigned to the Technology Fund. (e) Fund can license the technology to various users freely.
 - -- Example of Drugs for Neglected Diseases Initiative

Alternative rewards or incentives for innovators

- Need to separate cost of innovation from the price of the technology to make the technology affordable.
- Model of funding of R and D is thus important factor
- Scientists and innovators can be rewarded in ways other than granting of patents, for example by grants and by prizes to successful inventors.

Conclusions

- Both innovation and access are important.
- UNFCCC is based on equity principle, with developed countries obliged to provide technology transfer to developing countries.
- Technology is vital way to fill gap between economic growth need, and reduction of emission below normal growth path. The cheaper the cost of technology to developing countries, the more effective is the use of funds to enable them to educe emissions.