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Some Key Points on Climate Change, Access to Technology and Intellectual Property Rights

Submission by Third World Network

1. If developing countries are to moderate their emissions growth and eventually cut their emissions, while still having the capacity to have economic growth (of the appropriate type, consistent with sustainable development), the key is for them to have access to climate-friendly technology at affordable prices.
2. Climate change is perhaps the most important and serious problems of our time. "Business as usual" ways of producing, consuming and doing business are no longer an option. Innovative thinking -outside-the-box in many cases- is called for. In this emergency situation, the survival of the planet and of humanity is of top priority. Narrow interests must give way to the general public good, which in turn must incorporate the public interest internationally.
3. A global framework of negotiations and agreements on climate change is imperative and must be fair and effective. The UN Framework Convention on Climate Change (UNFCCC), together with its Kyoto Protocol, is the global framework. Technology development and transfer, together with finance, is the key component of a fair agreement under the UNFCCC. The UNFCCC recognises this in several provisions, including article 4.3 (developed countries shall provide financial resources including for technology transfer needed by developing countries to meet their agreed full incremental costs of implementing measures), article 4.5 (developed countries shall take all practicable steps to facilitate and finance transfer of and access to environmentally sound technologies and know-how particularly to developing countries; and shall support the development and enhancement of endogenous capacities and technologies of developing countries) and article 4.7 (the extent to which developing countries will implement their commitments will depend on effective implementation of developed countries' commitments on financial resources and technology transfer).
4. The Bali (December 2007) decision on long term cooperative action contains sections on actions on technology transfer and financial resources. These should be provided to developing countries in a measurable, reportable and verifiable manner.
5. Despite the central role of technology transfer, there has been in fact very little, if any, practical transfer of climate-friendly technology under the UNFCCC. The operation of the principles, the establishment of mechanisms, and the actual transfer of technologies have yet to be put into effect. These are now urgent tasks.
6. Technology transfer is not merely the import or purchase of machines etc. at commercial rates. A central aspect of technology transfer is the building of local capacity so that local people, farmers, firms and governments can design and make technologies which can be diffused into the domestic economy. In the first phase of technological development, developing countries can go through three stages: (1) initiation stage, where technology as capital goods are imported; (2) internalisation stage, where local firms learn through imitation under a flexible intellectual property rights (IPR) regime; (3) generation stage, where local firms and institutions innovate through their own research and development (R & D) (UNCTAD 2007). In stage 1, the country is dependent on capital imports, some of which may be extra high in cost (those that are patented) because of the higher prices enabled by monopoly margins. In stage 2, costs may be lowered by "generic versions" produced locally. In stage 3, the local firms are able to design and make their own original products. Technology transfer may involve the

purchase and acquisition of equipment; the know-how to use, maintain and repair it; the ability to make it through "imitation" or reverse engineering; to adapt it to local conditions; and eventually to design and manufacture original products. The process of technology transfer involves progressively climbing through all these aspects.

7. Several conditions have to be present for technology transfer and development to take place. The absence of such conditions can form barriers to technology transfer. Among the barriers that are normally listed are poor infrastructure, inadequate laws and regulations, shortage of skilled personnel, lack of finance, ignorance of technology issues, high cost of certain technology agreements, problems created by equipment suppliers, and intellectual property rights.

8. Whether IPRs constitute a barrier or an important barrier depends on several factors, such as whether or not the particular technology is patented, whether there are viable and cost-effective substitutes or alternatives, the degree of competition, the prices at which it is sold, and the degree of reasonableness of terms for licensing, etc. Some technologies are in the public domain, or are not subjected to patents. But many key technologies are patented. And many technologies of the future will also be patented.

9. For technologies that are in the public domain, international cooperation is also required to facilitate its transfer. Importantly, the space for technology in public domain should be expanded. Governments in developed countries play an important role in funding R & D programmes. The programmes are implemented by government institutions or are in partnership with the private sector. About 40% of annual national R & D spending within some OECD countries was publicly funded (UNCTAD 1998). In addition, governments sponsor a range of R & D that underpin private sector investments in developing environmentally sound technologies (ESTs) (IPCC 2000, Chapter 3, page 95). A paper for UNFCCC surveyed government R & D funding of ESTs in the US, Canada, UK and Korea. It found that in most countries, governments allocated their rights (patents, copyrights, trademarks etc.) to the recipient research institutions to a significant degree. As a result, the diffusion of climate-friendly technology would "typically be along a pathway of licensing or royalty payments rather than use without restriction in the public domain." (Sathaye et al 1995). The IPCC study (2000) calls on OECD countries to influence the flow of such technology directly through their influence on the private sector or public institutes that receive funding from government for their R & D to be more active in transferring technologies to developing countries. It cites Agenda 21 (chapter 34, paragraph 34.18a) that "governments and international organisations should promote the formulation of policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain." Products that emerge from publicly funded R & D should be placed in the public domain. Those that are partially funded should be in the public domain to the extent to which it is publicly funded.

10. As part of international cooperation, there can be R & D programmes jointly planned and coordinated by governments (developed and developing). If certain products are wholly publicly funded, they could be placed in the public domain, or else made available through affordable licenses. This can make the technologies much more affordable.

11. For technologies that are patented, there must be an understanding that patents should not be an obstacle for developing countries to have access to them at affordable prices. According to the World Trade Organisation (WTO) Trade-Related Intellectual Property Rights (TRIPS) Agreement, if there is a patent on a product, a process or a technology, a firm or agency in a country in which the patent is operating can request for a voluntary license from the patent holder, in order for the firm to make or import generic versions of the patented product or technology. The patent holder will normally charge a price (royalty or license fee) for granting the license. If the patent holder refuses to give a license, or if the price charged is too high, the firm or agency can apply to the government to grant it a "compulsory license". Alternatively, a government that wants to have access to generic versions of a product or technology can itself take the initiative to issue a compulsory license.

12. The firm or agency granted a compulsory license would normally have to pay a royalty or remuneration to the patent holder. In the case of pharmaceutical drugs, the royalty rate offered in recent compulsory licenses by developing countries such as Malaysia, Indonesia, Thailand, ranges from 0.5 to 4 per cent of the price of the generic drug.

13. Under the TRIPS Agreement, there is considerable flexibility provided to WTO member states on grounds

for issuing compulsory licenses. These grounds are not restricted, as confirmed by the WTO Ministerial Declaration on TRIPS and Public Health (Doha 2001). It is not necessary to declare a state of emergency, for example. Certainly the fact that a country requires a product or technology in order to meet its objectives or responsibilities to mitigate climate change or to adapt to climate change is a most valid ground for compulsory licensing.

14. Compulsory licensing is not a unique or exceptional policy. In developed countries like the US and the UK, there have been many compulsory licenses granted by the government to facilitate cheaper products and technology in the industrial sector. In many developing countries, compulsory licenses have been issued for the import or local production of generic drugs. There is a type of compulsory license known as “government use” which many developing countries have made use of. This is when the product to be imported or produced in a generic version is to be for public, non-commercial use, for example for medicines distributed by the government in clinics and hospitals. In such cases, prior negotiation with the patent holder is not necessary, although remuneration or royalty to the patent holder is required.

15. Thus, compulsory licensing is an option that developing countries can seriously consider for those patented climate-friendly technologies for which they have a need for, which are expensive, and in cases where negotiations with the patent holder does not yield results in lowering the prices to reasonable levels. The Brazilian Foreign Minister Mr. Celso Amorim, in his speech at the plenary of the Bali climate conference in December 2007, said that inspiration should be drawn from the case of TRIPS and medicines, and that a similar statement regarding TRIPS and climate-friendly technologies should be considered. Strictly speaking, it is not necessary for such a statement to be made by Ministers before a country exercises rights that it has to issue compulsory licenses for climate technologies. The flexibility rights already exist in TRIPS. However, when countries exercise these rights, they may be penalised by other countries. Therefore, developing countries find it useful that an international declaration is made, so that when they exercise their rights they are to some extent more protected politically, which adds to their confidence in exercising what is already their rights under international law (i.e. TRIPS). However, there is no guarantee that the political declaration will protect a country that exercises its rights – Thailand has been placed on the IP Watch List of the USA (which implicitly carries a threat of future trade sanctions) following its issuing compulsory licenses on some drugs.

16. Another value in a TRIPS and Climate Change Technologies declaration may be in extending the lifting of the restriction under TRIPS for compulsory licensing (i.e. that it be restricted to production of products “predominantly for the domestic market”) from pharmaceutical drugs to climate-friendly technologies and products as well. This will enable a more adequate supply of “generic” technologies and products to countries that lack productive capacity to produce their own such products.

17. It is also possible to raise the level of ambition for sustainable development, by proposing that environmentally-friendly technology should not be patented in the first place (so that the process of compulsory licensing etc. is not even required). There is a strong rationale for this, at least for climate-friendly technology and products. If climate change is truly the serious crisis threatening human survival, and there is only a few years left to start very strong action, then the situation is similar to emergency war-like conditions. In such conditions, individual commercial interests such as patents are suspended so that there can be concerted national action in the most effective way, to face the enemy. Developing countries require technologies at the cheapest possible prices. If they obtain the needed technology at one quarter the price, they can increase the rate of change to put into effect mitigation and adaptation measures many times faster and more effectively.

18. There can be many variations for the relaxation of IP in relation to climate-friendly products and technologies. For example: (a) An exemption for patents on climate-friendly technologies and products; (b) An exemption on patents in developing countries only, while patents can still be granted in developed countries, to allow for recovery of innovation cost, and provide incentives; (c) Developing countries, if they so desire, are allowed to exclude patents on climate-friendly technologies and products; (d) Voluntary licenses must be automatically granted on request, which will be free of royalty; (e) Voluntary licenses are automatically given and compensation is provided.

19. There are some examples of developing countries and their firms being hampered from adopting climate-friendly technologies or products due to there being patents on these products, and due to the unreasonable demands made by the patent holders on companies in developing countries that request a voluntary license from

the patent holder. A study on transfer of technologies for substitutes for ozone-damaging chemicals under the Montreal Protocol has given details for some cases in which technology transfer to developing countries' firms was hindered by either high prices or other unacceptable conditions imposed by companies holding patents on the chemical substitutes onto companies in developing countries that wanted a license to manufacture the substitutes. Examples include: (a) The case of HFC-134a, a chemical used to replace harmful CFC in refrigeration. When Indian companies requested a license from a US company owning the patent for HFC-134a, in order to manufacture the chemical, they were asked to pay a very high sum (US\$25 million) which was far above the normal level, or to allow the US company to own a majority equity stake in a joint venture and with export restrictions on the chemical produced in India; both options were unacceptable to the Indian producers; (b) Korean firms also faced difficulties when they wanted to replace CFCs with acceptable substitutes HFC-134a and HCFC-141b, which had been patented by foreign companies in Korea. "South Korean firms are of the opinion that the concession fees demanded by technology owners represent a lack of intention to transfer the alternative technology." (Anderson et al 2007, pages 262-265); (c) The case of HFC-227ea: This chemical (known also as FM-200) is a substitute for halon-1301 for fire protection applications. The US owner of FM-200 patent requires that licensed fire protection systems satisfy certain design and inspection requirements and only 3 enterprises (in the US, UK, and Australia) have satisfied the approvals. The patent owner offered joint ventures with majority share holding but did not want to license the technology to wholly locally owned firms, and thus Indian firms are unable to avail themselves to this product (Anderson 2007, page 265); (d) Many of the technology agreements between Korean firms and their partners in Japan and the US contain restrictions such as they are not allowed to consign to a third party, to export, and that the improved technologies should be shared (Anderson 2007).

20. In conclusion, any WTO member state is already allowed by the TRIPS Agreement to take measures such as compulsory licenses and parallel importation to obtain technologies or products (that are patented) at more affordable prices. But the processes of negotiating with the patent holder and of issuing compulsory licenses etc. can be quite cumbersome to countries not familiar with the procedures. It is better that developing countries be allowed to exempt such technologies from patenting. Developed countries should not treat patents or IPRs as something sacred that has to be upheld at all costs. That would send a signal that climate change is not a serious threat, as commercial profits for a few are more important on the scale of values and priorities than are the human lives that are at stake due to global warming. Technology transfer to developing countries to enable them to combat climate change should be the far higher priority. Developed countries should not treat climate technology as a new source of monopoly profits, as this would damage the ability of developing countries to phase in existing or new climate-friendly technologies for both mitigation and adaptation. The post-Bali process should therefore adopt the principle that developing countries can exempt climate-friendly technologies from patents. Such a principle would demonstrate that developed countries are serious about resolving the global climate crisis and assisting developing countries. It would also help developing countries to take on mitigation and adaptation measures, which are dependent on the technologies.