

28 July 2012

Tackling the Intellectual Property Elements of an Enabling Environment for Technology Transfer

Climate Action Network-International (CAN-International) is the world's largest network of civil society organizations, with more than 700 members in over 90 countries, working together to promote government action to address the climate crisis.

Executive Summary

Climate Action Network International (CAN) concurs with the apparent consensus at the third Technology Executive Committee (TEC) meeting (held on the 28th and 29th of May in Bonn) that intellectual property rights (IPR) is an issue in the transfer of climate technologies that could be an incentive, a barrier, neither or both. Furthermore, the determination of which role it plays can only be made at the national/sectoral level on a case-by-case basis. There are cases where IPR has been and *can* be a barrier and some parties are concerned that it will be a barrier to the transfer of key climate technologies to help mitigate their emissions and enhance their adaptive capacities. On the other hand, technology developers are concerned with the intellectual property enforcement risk in developing economies and potential negative impacts on innovation. In the absence of some guidance on key issues related to IPR from the Technology Mechanism (TM), countries and providers would be left to deal with each IPR issue that arises from scratch, stalling and even derailing much-needed technology deployment.

But the UNFCCC can play a critical role here to ensure that countries have the tools they need to find resolution in a case where IPR issues threaten to pose a barrier to the transfer of a key climate technology while ensuring that appropriate incentives for technology innovation are maintained. By providing appropriate guidelines on the use of existing tools and a platform to facilitate various forms of information sharing on IPR solutions among other initiatives, the UNFCCC has the opportunity to proactively prevent IPR from becoming a widespread barrier while building confidence in the TM among both demanders and suppliers of climate technologies.

CAN recommend:

1. *The adoption of a COP Decision for a declaration on climate change and intellectual property that existing international flexibilities on patents, plant varieties, and copyrights especially relating to competition law, compulsory licensing, exceptions and limitations must be interpreted in ways conducive to enabling rapid and efficient uptake of technologies to address mitigation and adaptation. In addition support for public-private partnerships and bilateral or multilateral research initiatives, such as joint R&D projects without patents, can also enable the development and diffusion of technologies.*
2. *A COP mandate to the TEC to provide clear rules and regulations that will ensure that UNFCCC support for 'incremental costs' includes those associated with purchase of IP protected products and IP licenses embodying best available technologies;*

3. A COP mandate to the TEC to establish a Consultative Group on IPR (CGIPR) in conjunction with the Climate Technology Center and Network (CTCN) that would help countries and private sector stakeholders evaluate whether IPR barriers to the transfer of their desired technologies exist and, if so, to help them to find resolution.

4. A COP mandate to the TEC to establish a set of criteria for technology prioritization based on Technology Needs Assessments, patent status, and a set of objective criteria for greenhouse (GHG) mitigation potential and effectiveness at building adaptive capacity.

In addition to these general recommendations CAN also makes the following specific recommendations on the distribution of products and knowledge:

A. Distribution of Products:

In accordance with a COP mandate the TEC should

- 1. Develop and make available through the CTCN and Regional networks **Model Licenses for Least Developed Country (LDC) Market Segmentation** that would allow LDCs to access technologies at a lower cost but also set limits on the export of goods produced under such licenses to non-LDC parties so that the benefits are well-targeted;*
- 2. Design or designate a **business-to-business (B2B) platform for commercial transactions related to climate change mitigation and adaptation products and goods, especially for public domain products;***

B. Distribution of Knowledge:

- 1. In accordance with a COP mandate the TEC should develop and distribute through the CTCN and Regional networks **Model Licenses for LDC Market Segmentation** to ensure affordable access to technologies and knowledge for LDCs;*
- 2. The UNFCCC should require that R&D funding by any UNFCCC financial mechanism establishes joint intellectual property rights for the UNFCCC, through the TEC and/or CTCN as its authorized representative.*
- 3. The TEC should design, or designate an **Intellectual Property Exchange** specifically for climate change mitigation and adaptation technologies. Such an exchange would enable secure, efficient and transparent arms-length transactions for intellectual property licensing at a one-stop shop, with a range of standard licenses that can be pre-designated by rightholders.*

CAN concludes that these actions are both urgent and necessary to ensuring the successful operationalisation of the TM and to transform the patterns of technology deployment required to shift markets from niche providers and consumers, to mass providers and mass consumers, across borders which action represents our best hope for meeting the agreed 2°C goal, and for keeping the door to 1.5°C open.

CAN hopes that consideration of these actions is undertaken at COP 18.

I. Introduction

We thank the TEC for the opportunity to provide input on the important topic of enabling environments for the transfer of environmentally sound technologies. We look forward to continuing openness and inclusion of the contributions of civil society to the work of the TEC. We fully support the TEC in its endeavor to provide concrete and achievable recommendations to COP18 on what the COP can do to nurture such environments.

Due to the limited time available before the COP18 deadline, this CAN submission focuses on the issue of IPR. We have chosen this focus because it has been highlighted by some countries as a possible barrier to the transfer of mitigation and adaptation technologies and because action on IP offers the UNFCCC an opportunity to make quick strides to improve country trust in the TM and to re-balance the discussion towards supply-side measures ('push' policy measures that can be taken by countries to encourage their rightholders to export technological products and license technologies).

The TEC should not interpret from our choice that we have no interest in other matters related to enabling environments. We look forward to further engaging with the TEC on other topics in the broader discussion of enabling environments, including demand-side measures, within the framework of UNFCCC Articles 4.1c, 4.3, 4.5 and 4.7.

Our approach: Addressing both demand-side and supply-side constraints

This submission aims to focus on achievable, near term solutions with concrete timelines rather than to rehash old debates. While important longer term action may require re-structuring and renegotiating international treaties, the near term recommendations from CAN will focus on solutions that do not require complex and distant time-horizon processes for treaty negotiations.

CAN believes that it is important that the "enabling environments" discussion is an opportunity to promote positive action on core issues relating to technology transfer such as IPR. We must address not only demand-side constraints (on the ground conditions in countries that make rightholders reluctant or unlikely to export technological products or license technologies into a specific domestic market) but also those on the supply-side (largely in developed countries). We must also acknowledge that IPR policy measures on both the supply-side and demand-side take place in the broader context of ongoing dynamic shifts in the location and the flows of technology; and in an existing governance framework established by the UNFCCC. This requires a recognition that:

- Technology product and knowledge flows increasingly move South-to-North and South-South even while these remain a small part of overall global flows. For example, South-South flows of renewable energy technology are at a very low level, the lowest among the four South-to-North vectors of flows.¹ However, these have been increasing since 2002 and are likely to grow as more developing countries put in place policies that create demand for such technologies;
- Actions to enable demand-side measures (see below for the types of measure) may bear costs, costs which may need to be offset within the framework of UNFCCC Articles 4.1c, 4.3, 4.5 and 4.7, and especially on the basis of poverty and vulnerability with the poorest and most vulnerable populations and their public or private sector actors receiving full amelioration of those costs.

While this document will focus on supply-side measures (specifically, intellectual property-related supply-side measures), we note that demand-side measures are also a necessary, though not sufficient, part of a portfolio of

¹ p573, IEA, *Energy Technology Perspectives 2010: Scenarios and Strategies to 2050*, (Paris: IEA/OECD, 2010) – Figure 15.3. However, in specific markets such as solar panels, countries such as China are now the major products exporters both to developed and developing countries.

policies and measures that must be put in place to enable technology transfer. Strongly linked to making intellectual property-related interventions most effective are demand-side measures such as:

- The creation of predictable, stable and transparent environments for financial transactions, contracting, licensing, and dispute settlement. This is necessary to reduce both the perception and the reality of sovereign risk. However, it may be inappropriate to ask countries to reduce policies aimed at enabling technology spill overs and learning as these are a main goal of technology transfer policies. Without these, learning in the broader economy may not take place at a pace sufficient to build endogenous capacity into adaptable, GHG reducing patterns.
- Assurance of predictable, stable and transparent protection of intellectual property consistent with national policy needs and international obligations;
- Implementation of market creation measures that establish some form of carbon price and stimulate demand for GHG reduction technologies;
- Implementation of market support measures to reduce the costs of adopting GHG emissions reduction technologies and invest in climate resilience for the long term; this may involve subsidization for purchase of technologies and technological goods, either through direct cash transfers or through after-purchase tax mechanisms; as well as support for research and development of locally appropriate technologies;
- Immediate reduction of fossil fuel production subsidies and more gradual reduction of fossil fuel consumption subsidies commensurate with ensuring energy access for the most vulnerable;

Implementing such demand-side measures clearly bears a cost either directly financial or through imposing regulatory burdens on domestic actors. The success of these demand-side measures also requires the existence of willing providers of both technological products and knowledge, willing to sell at a price significantly above marginal cost of production or investment but not so high as to make rapid adoption of technologies economically unviable. It is this supply-side element that we plan to focus on in this submission driven by one key question:

What can the UNFCCC do to help each country achieve greater market penetration and adoption of climate mitigation and adaptation technological products and knowledge at a price that makes technology adoption economically viable and at a speed that will meet the climate challenge of peaking before 2015.

II. Understanding the role of Intellectual Property

In order to properly frame the solutions that CAN will put forward, it is important to clarify a significant range of rights that are implicated, including: Patents, Utility models (sometime called petty patents); Trade secrets; Industrial design protection; Plant breeders rights or Plant variety protection; and Copyright – for software protection especially as related to efficiency in appliances as well as smart metering. The existence or use of IPR may reduce competition (at both the product and the knowledge level), maintaining high prices for a product above marginal cost of production as the IP owner has no incentive to lower the price of the product or knowledge, make it more competitive or allow others to reproduce or use it. Thus, intellectual property is a trade-off between present (static efficiency) anti-competitive costs and the generation of future technologies (dynamic efficiency).

Governments are constantly assessing the appropriate balance between static and dynamic efficiency and use several tools to shift the balance in one direction or another depending on specific policy goals and needs at a particular time. The tools that they use to do so include compulsory licensing, working requirements, patent exceptions, patent exclusions and the broad application of competition law to restructure markets in technological knowledge and technological products. However, the appropriateness and effectiveness of these tools to address technology transfer is conditioned on an understanding that:

- The market for technological products is markedly different from the market for the technology/knowledge embedded in products.
- The key problem related to distribution of goods is that prices of products (e.g. household appliances; software programs; seeds) may be set so high that they make it uneconomical to adopt climate mitigation and adaptation technologies.
- The key problem related to distribution of the technology/knowledge is: refusals to allow others to reproduce or use the knowledge; or setting the price of accessing the knowledge at such a high price as to make it uneconomical for others to participate in the market.

Certain types of behaviour (such as anti-competitive tactics, refusals to deal, exercising monopoly pricing, abusive litigation, patent trolling, undue claims etc.) of individual IPR holders can pose a barrier to technology transfer but the existence of such barriers can only be truly determined at the national level in the specific market sector. Thus the key question in determining whether the international intellectual property framework poses a barrier is:

Do countries have the requisite tools to address situations where the acquisition and use of IP by an individual or group of intellectual property holders poses a barrier to transfer of a key climate change mitigation or adaptation technology in their domestic market?

This question is applicable across all types of IPR but the issue is clearest in relation to: the TRIPS Agreement, especially for patents, copyright for software/databases and protection of plant and plant varieties; the International Convention for the Protection of New Varieties of Plants (UPOV 1991) in relation to farmers rights to save, re-sow and re-sell seeds; the WIPO Copyright Treaty, for software and databases.

Countries have historically used variations of tools to correct the market imbalances caused by the behaviour of individual rightholders, or to remove the ability of such actors to prohibit certain kinds of actions in areas of core public interest or vulnerability. Such tools have historically included:

- Compulsory licenses;
- Working requirements;
- Parallel imports;
- Research and other exceptions; e.g. humanitarian use exemptions particularly for adaptation-related technologies/know-how
- Technology transfer and other performance requirements to qualify for foreign direct investment; and
- Application of competition law.

This submission concludes that while some of these tools remain available, the international system of rules on intellectual property (the TRIPS Agreement; UPOV 1991; the WIPO Copyright Treaty) place such limits on their exercise that they are unable to be used to effect the kind of sectoral and economy-wide market restructuring required to enable countries to access technology at a sufficiently rapid pace to ensure peaking of emissions before 2015 and to enable the building of sufficient adaptive capacity by the 2025 horizon for vulnerable countries who are already experiencing and will continue to bear the brunt of the effects of increasingly extreme climate variability. In addition, unilateral actions and threats by some countries have had a significant chilling effect on countries' ability to use the existing flexibilities freely as part of industrial policy.

At the general level for example, while TRIPS has many existing flexibilities, both individually, and in the aggregate, they are limited in what they can address especially to manage broad issues such as market structure in IP licensing of technologies. At best, they are capable of dealing with the distribution of goods/ products problem, but remain largely unavailable to address issues relating to market structure and distribution of knowledge. The main flexibility and option that appears most available under the TRIPS Agreement is to apply the rules of competition law to the

market behavior of rightholders since TRIPS does not restrict the use of competition law to structure knowledge and product markets.

As such, the UNFCCC should take action to:

- reduce transaction costs, transaction risks and price barriers for technology providers and technology adopters;
- mitigate the lack of flexibilities in the international IP system by encouraging the use of mechanisms to:
 - Enable specific forms of licensing with favourable terms for LDCs and other developing countries;
 - Enable measures to de-link innovation and distribution of technologies from pricing mechanisms, such as prizes, advanced market commitments, and public funding of research and development; and
 - Provide purchasing power where it is missing.

III. What solutions from the UNFCCC?

In suggesting actions that the TEC should recommend to the COP, CAN have taken into account that:

- Solutions must encompass technologies not just to address mitigation, but adaptation. In particular, adaptation must be addressed in its two core dimensions:
 - Increasing adaptive capacity, through poverty reduction and economic development;
 - Providing measures to adapt to specific climate challenges, such as floods and droughts.
- Technology transfer for adaptation must address itself to the broad range of technologies necessary to ensure rapid but sustainable development in the near term.
- The near term peaking requirements (before 2015) for emissions as well as the requirement for rapid increases in adaptive capacity suggests the need for a radical transformation in the existing structure of technology markets in the period to 2020. The patterns of deployment required suggest that markets in technology will have to shift from niche providers and consumers, to mass providers and mass consumers, across borders. This will require predictable, stable and transparent markets with simple rules, pricing and valuations, at a cost closer to marginal price of production than now exists, at least for existing and near term technologies. For technologies that will need to be developed, the route from research and development to mass market will have to be sped up, and rewards for innovation may need to be somewhat de-linked from pricing mechanisms in order to achieve rapid uptake of technologies that may still need to compete against existing lower cost but GHG intensive or maladaptive alternatives. For rightholders, this may entail lower profits per unit of technology, but higher profits overall due to increase in volumes sold.
- Solutions should prioritize the special needs of LDCs (article 4.9 of the Convention) and ensure special consideration for "enhancements of endogenous capacities and technologies" (1/CP16 paragraph 120). Any solution that is predicated on limiting the amount of spill over and absorption of technology into the economies of vulnerable countries does not meet this standard.
- Fairness and equity should be the driving principles behind any solutions in line with UNFCCC Article 4.1(c), 4.3, 4.5 and Kyoto protocol Article 10(c).

With this framework in mind, CAN suggests that the Technology Executive Committee recommend the following actions to COP 18, for implementation as suggested in each proposal. These are divided into three groups: Broad Institutional recommendations; recommendations to address distribution of products; and recommendations to address distribution of knowledge.

Broad Institutional Recommendations

CAN Recommendation 1

1. CAN recommend the adoption of a COP Decision for a Declaration on Climate Change and Intellectual Property.

Generally, there is a clear need for a statement that existing international flexibilities on intellectual property, in particular patents, plant varieties, and copyright especially relating to competition law, compulsory licensing, exceptions and limitations should be interpreted in ways conducive to enabling rapid and efficient uptake of technologies to address mitigation and adaptation. CAN recommend the adoption of a COP decision on a Declaration on Climate Change and Intellectual Property that at a minimum, states that:

- All possible policy avenues to accelerate research, development, demonstration and diffusion of climate-friendly technology, should be explored, including the use of all flexibilities, exceptions and limitations in international and national patent and related intellectual property rules, as well as innovative uses of intellectual property mechanisms, licensing practices, and alternative modes of innovation such as open source approaches.
- UNFCCC parties agree that the TRIPS Agreement, the International Convention for the Protection of New Varieties of Plants, the International Treaty on Plant Genetic Resources for Agriculture, and the WIPO Copyright Treaty (“the international IP treaties”) do not and should not prevent UNFCCC parties from taking measures to address climate change mitigation and adaptation. Accordingly, while reiterating their commitment to the international IP treaties, they should affirm that these agreements can and should be interpreted and implemented in a manner supportive of UNFCCC members obligations to adopt measures necessary to address climate change mitigation, to enable their citizens to adapt to the effects of climate change and to promote the public interest in sectors of vital importance to their socio-economic and technological development. They should reaffirm the right of UNFCCC parties to use, to the full, the provisions in these international treaties, which provide flexibility for this purpose.

CAN Recommendation 2

2. CAN recommend that the TEC make clear in its rules and regulations, including for those that establish the relationship between the TEC and the CTCN, and the TEC and the Green Climate Fund (GCF), that the effect of the provisions of Article 4.1c, 4.3, 4.5, and 4.7 requires the UNFCCC to provide support for, and include within the definition of ‘incremental costs’:

- Purchases of products embodying the best available technologies in the context of projects and programmes funded by all recognized financial mechanisms of the UNFCCC;
- Purchases of licenses (at full cost, or concessional rates) for best available technologies in the context of projects and programmes funded by all recognized financial mechanisms of the UNFCCC, especially in the context of activities undertaken by the CTCN.

CAN suggests that this recommendation be implemented in the finalization of the rules for operationalization of the CTCN and the GCF , and be included as an implementation mandate for the GEF, in its role as a financial mechanism of the Convention. Preferably this would take place at COP 18.

CAN Recommendation 3

3. The TEC should recommend that the CTCN establish *a Consultative Group on IPR* (CGIPR) at COP18 (as a function of the CTCN itself, composed of appropriate and experienced expert advisors) that provides a platform for research, analysis, discussion and consultations on IP in international climate change mitigation and adaptation technology markets. The CGIPR should;

- Cooperate with existing bodies such as WIPO and the IEA to actively gather data, information and analyses from all sources and stakeholders and publish a bi-annual ***Climate Technology Perspectives*** report focusing on the progress of technology development and deployment in key mitigation and adaptation sectors, as well as the latest data on patent landscapes, licensing surveys, and barriers. The aim would be to provide an evidentiary and empirical basis for action by UNFCCC parties and the UNFCCC itself. The first such report should be published at COP20.
- Create a website with an ***IP Reporting Mechanism*** for all stakeholders to report problems and issues relating to intellectual property and technology transfer, especially on issues such as:
 - Public domain and anti-commons problems relating to research and development;
 - Refusals to deal;
 - Restrictive licensing practices;
 - Restrictive covenants;
 - Anti-competitive pooling arrangements;
 - Unreasonable, unfair and discriminatory pricing;
 - Inability to enforce IP rights or licensing contracts;
 - Undue or unfair government appropriation of IPR;

CAN suggests that this be established and running within 6 months of COP18.

- Establish a ***Multi-Stakeholder Platform*** which will operate as a TRIPS Article 40.3 consultative mechanism on information sharing and enforcement on anti-competitive practices in climate mitigation and adaptation technology markets. This platform will work to bring relevant stakeholders together to voluntarily work out, agree and implement market-based and sector-wide solutions, such as:
 - Patent pools, patent commons, and related concepts such as patent libraries;
 - Joint research and development initiatives;
 - Compulsory or non-voluntary licensing ;
 - Patent buy-outs;
 - Geographically segmented licensing;
 - Parallel imports;
 - Patent exclusions;
 - Open-source and/or general public licensing
 - Prize funds; open access to publicly funded technologies

CAN suggests that this be established by a decision at COP18 and operationalized by COP19.

- Authorize, designate or create an ***Arbitration Mechanism*** to address intellectual property licensing problems that arise in the context of any legal dispute related to projects or programmes funded by any UNFCCC Financial Mechanism. This will reassure rightholders that they will have a reliable, secure, predictable way of managing disputes related to IP that they provide through UNFCCC processes. In this way fears of sovereign risk and uncertainty of IP enforcement can be mitigated, especially for small and medium enterprises. Receipt of funds from any UNFCCC financial mechanism and use of such in any contract using, accepting or in any way transferring intellectual property, should be contingent on acceptance of a mandatory arbitration clause in the funding contract and in the contract between the funding recipient and the technology provider (subject to the participants' choice of law in each contract and the designated countries system for recognition of mandatory arbitration terms).
 - It may be appropriate to designate existing mechanisms with sufficient expertise on arbitration issues related to cross border transaction on intellectual property (e.g. the WIPO Arbitration and

Mediation Center). Such mechanisms should meet minimum criteria for transparency, and expertise in environmental.

CAN suggests that this be established by a decision at COP18 and selection could be finalized and the mechanism authorized to begin operation by COP19.

CAN Recommendation 4

4. CAN recommend that the TEC establish a set of criteria for technology prioritization based on Technology Needs Assessments, whether the technology is in the public domain, and objective criteria such as, environmental impact, GHG mitigation potential and effectiveness at building adaptive capacity. Such prioritization should exclude from consideration technologies that have unacceptable and harmful consequences, or that may be maladaptive and should be done on an urgent basis.

CAN Recommendations on Distribution of Products

CAN Recommendation 5

5. Can recommend that the TEC develop (through consultation with all relevant stakeholders) and distribute through the CTCN and Regional networks ***Model Licenses for LDC Market Segmentation***, aimed at addressing the needs of LDCs in particular, for use by private sector actors in their private contracts and transactions. One example of a model license could address the issue of lack of production capacity in LDCs (and other countries with insufficient domestic manufacturing and knowledge capacity) that makes compulsory licensing an unusable option for them:

- A model license, (designed by the TEC but used on a voluntary basis by private sector actors) to be offered for use by enterprises in UNFCCC parties to produce technologies primarily for their domestic markets and for export to LDC (or other countries with insufficient technological and manufacturing capacity) markets. The license would explicitly exclude the export of patented products (or products produced by a patented process) into other (non-LDC) UNFCCC country markets. Recipients of funds from any UNFCCC financial mechanism who used such a license would be prioritized for receipt of funds and would be guaranteed 100% support of licensing costs, even at full commercial rates.
 - It may be appropriate to require that funds for licensing of such technologies covered by such a license meet criteria, such as:
 - they would be effective at increasing energy access for the most vulnerable;
 - they would be effective at enabling specific adaptation to a climate change risk or effect to which LDCs are particularly vulnerable; or
 - they would be effective at increasing the adaptive capacity of vulnerable populations in all developing countries.
- Such licenses have already been somewhat explored in recent collaborations such as GreenXchange (<http://www.greenxchange.cc/>), Creative Commons (http://wiki.creativecommons.org/CC_Public_Patent_License and <http://sciencecommons.org/projects/patent-licenses/>) and in the development of Humanitarian Use licenses for agricultural and health-related technologies (see the Humanitarian Licensing Working Group of the American Association for the Advancement of Science Program on Science in the Public Interest <http://sippi.aaas.org/hue.shtml>).

CAN suggests that the license be developed and made available for use within about 6 months after COP 18.

CAN Recommendation 6

6. CAN recommend that the TEC design, designate or authorise (in conjunction with the CTCN), a ***B2B platform for commercial transactions related to climate change mitigation and adaptation products and goods***, specifically targeted at projects and programmes funded by UNFCCC financial mechanisms, that leverages the information and categorization achieved by TT:CLEAR and its affiliated databases, to allow easy access to publicly available technologies. Such a platform would enable global, transparent offers for sale and offers for purchase on a web-based platform and enable secure, efficient arms-length transactions without long protracted negotiating and contracting processes. Registration requirements and placing of financial bonds for participation would reduce transaction risks for sellers and buyers, as would processes for reputational ranking. Such a platform could:

- Offer standard terms, possibly based on CISG² and INCOTERMS.³
- Enable optimal searching; input window self-selection (based on the products meeting minimum qualification conditions for effectiveness, reliability perhaps by adopting existing industry certifications and standards) and reliable and secure financial transactions, especially suited to government procurement departments in developing countries;
- Enable simple, standard contracting terms, billing, purchase orders, sales and delivery tracking, and expedited dispute resolution through a mandatory arbitration process provided by the platform.

Preferably a COP 18 decision would mandate the TEC to carry out an open tender process for implementing and operating such a platform leading to authorization and piloting of the system over the following year with full implementation in the subsequent year.

CAN Recommendations on Distribution of Knowledge

CAN Recommendation 7

7. Can recommend that the TEC develop and distribute through the CTCN and Regional networks ***Model Licenses for LDC Market Segmentation***, aimed at addressing the needs of LDCs in particular. To ensure distribution of knowledge into LDCs, two interventions in particular may be appropriate:

- A model license to allow enterprises from any UNFCCC party to export technological goods produced in any LDC (or other country with insufficient technological and manufacturing capacity) into any other UNFCCC party (including other developing countries) where the products or process producing such products is IP protected. The terms of such a license could include, for example, that:
 - Production of the technology and/or application of the process for production is carried out in facilities located within the territory of an LDC and is committed to do so for at least, say, 10 years;
 - At least, say, 30% of personnel involved each year in production are local citizens;
 - Production involves capacity building, education, information transfer, training of local personnel, and use of local content.
 - At least one sub-license is granted (at grant or concessional rates) for use of the technology for production and/or adaptation primarily for the domestic market of the LDC (or other country with insufficient technological and manufacturing capacity);

² United Nations Convention on Contracts for the International Sale of Goods (CISG)

³ This is a set of international agreed terms developed by the International Chamber of Commerce (in cooperation with UNCITRAL) that defines and governs the interpretation of key contract terms relating to international purchase and sale of goods.
(<http://www.iccwbo.org/products-and-services/trade-facilitation/incoterms-2010/>)

- Recipients of any UNFCCC Financial mechanism who used such a license would be prioritized for receipt of funds and would be guaranteed 100% support of licensing costs, even at full commercial rates. Technologies covered by such a license could be required to meet one of the following criteria:
 - They would be effective at increasing energy access for the most vulnerable;
 - They would be effective at enabling specific adaptation to a climate change risk or effect to which LDCs are particularly vulnerable; or
 - They would be effective at increasing the adaptive capacity of vulnerable populations in all developing countries.

To maximize the impact of these licenses it would be best if they were developed and distributed at the latest 6 months after COP 18.

- For those LDCs (or other country with insufficient technological and manufacturing capacity) where a specific technology product or process is not IP protected, UNFCCC parties should commit to allow import into other UNFCCC countries of that technological product (or product produced by that process) made in LDCs (or other countries with insufficient technological and manufacturing capacity). The terms of the commitment could include, for example, that:
 - Production of the technology and/or application of the process for production is carried out in facilities located within the territory of an LDC (or other countries with insufficient technological and manufacturing capacity), and is committed to do so for at least, say, 5 years;
 - At least, say, 30% of personnel involved each year in production are local citizens;
 - Production involves capacity building, education, information transfer, training of local personnel, and use of local content.
 - Recipients of any UNFCCC Financial mechanism who carried out such production would be prioritized for receipt of funds. Technologies covered by such a license could be required to meet one of the following criteria:
 - They would be effective at increasing energy access for the most vulnerable;
 - They would be effective at enabling specific adaptation to a climate change risk or effect to which LDCs are particularly vulnerable; or
 - They would be effective at increasing the adaptive capacity of vulnerable populations in all developing countries.

CAN suggests that this be implemented through a Decision at COP18.

CAN Recommendation 8

8. CAN recommend that the TEC require that all R&D projects funded by any UNFCCC financial mechanism establishes joint intellectual property rights for the UNFCCC, through the TEC and/or CTCN as its authorized representative (or through a specialized TT entity independent of the TEC but directed and mandated by it to carry out such functions on its behalf), and that the TEC and/or CTCN or specialized TT entity shall not require permission from other joint rightholders to license the technology (non-exclusively, at grant or concessional rates and terms, with proceeds shared jointly with other rightholders) to enterprises and institutions located in LDCs (or other countries with insufficient technological and manufacturing capacity) provided that:

- The enterprise or institution is located within the territory of an LDC (or other country with insufficient technological and manufacturing capacity), and is committed to carry out research and development activities related to the technology in the country for at least, say, 5 years;

- Research and development activities relating to the licensed technology, involve capacity building, education, information transfer, training of local personnel.

CAN suggests that this recommendation be adopted through a Decision at COP18 and implemented by all UNFCCC Financial Mechanisms.

CAN Recommendation 9

9. CAN recommend that as a condition of receiving funds, all R&D projects with a funding component from any UNFCCC Financial Mechanism, involve at least one public research institution from an LDC (or other country without sufficient technological or manufacturing capacity) and, at the very least, IPR in technologies and knowledge developed under the research project or programme so funded be vested jointly in that public institution and entitle it to royalty proceeds. A condition of participation for the public institution could be that it establishes a technology transfer office to ensure further development and licensing of the technologies so developed into the domestic market.

CAN suggests that this recommendation be adopted through a Decision at COP18 and implemented by all UNFCCC Financial mechanisms.

CAN Recommendation 10

10. CAN recommend that technology transfer, specifically transfer of know-how, skills, information and licenses, becomes a requirement for:

- Validation/Verification of projects for the CDM or whatever future CDM-like market mechanism exists in the post-Kyoto framework;
- Registration/Issuance of credits under the CDM or whatever future CDM-like market mechanism exists in the post-Kyoto framework, requiring best available technologies.

The aim would be to extend the benefits of hardware and product transfer that embody the majority of technology transfer under the CDM to include the much more important elements that enable building endogenous technological capacity.

CAN suggests that this recommendation be adopted through a Decision at COP18 and through amendments to the existing forms and regulations of the CDM by COP19.

CAN Recommendation 11

11. CAN recommend that the TEC design, designate or authorize an ***Intellectual Property Exchange*** specifically for climate change mitigation and adaptation technologies. Such an exchange would enable secure, efficient and transparent arms-length transactions for intellectual property licensing at a one-stop shop, with a range of standard licenses that can be pre-designated by rightholders. A pilot version of such an exchange, for example, is Green Xchange (<http://www.greenxchange.cc/>), although the concept has been implemented more successfully in other environments. Such exchanges make the process of identifying licensees, identifying technologies on offer and carrying out negotiations and pricing much easier and simpler, including standard licensing. It may be appropriate for the TEC and/or CTCN to select one or more existing exchanges in an open and competitive process provided that the exchange that is finally selected meets basic criteria such as:

- Ensuring the inclusion of appropriate technologies that meet basic certification criteria or standards for environmental impact, GHG mitigation potential and/or adaptation capacity;
- Providing a low flat nominal fee per transaction for those posting assets or seeking to access licenses;

- Providing security and reliability for financial transactions;
- Providing secure, speedy and predictable dispute settlement, internally or through an arbitration mechanism as in General Recommendation 3 above;
- Enabling special licensing arrangements for LDCs, based on the model licenses above.

CAN suggests that the designation/creation of an IP exchange be approved by a decision at COP18 and the process for selection carried out by the TEC in the period up to the end of 2013 when the exchange will be authorized to begin operating in the pilot phase, to be evaluated and fully implemented by 2014.

IV. Conclusion

Attempts at addressing the intellectual property issue in the UNFCCC have suffered from a lack of specificity and perhaps undue focus on legal changes or barriers. This submission aims to show that there are significant facilitative measures that the UNFCCC can, and should, take to use the international intellectual property system and existing global markets to increase the rate and scope of technology research, development, deployment and diffusion, especially into LDCs and other countries with insufficient technological or manufacturing capacity. The proposals made here should be viewed as a suite of policies that together may create critical mass that can restructure and leverage private sector activity in global markets for climate change mitigation and adaptation technology. They provide opportunities for participation and action rather than prescribe specific actions by private sector actors, and use the financial power of UNFCCC financial mechanism to put a thumb on the scale in the direction of greater distribution of climate technologies. In particular, by providing security, predictability and funding, these recommendations are aimed at the heart of the enabling environments dilemma: how to create a framework of trust that will allow rightholders to more freely engage in transactions, while ensuring that technology consumers have access to the widest and most competitive range of technologies possible. We look forward to further engaging with the TEC on ensuring enabling environments on both the supply and demand-side of the technology research and development, deployment, and diffusion markets framework.

Contact: Dalindybo Shabalala

Advisor on Intellectual Property and Climate Change, CIEL

Assistant Professor (International Economic Law - Intellectual Property)

Maastricht University Faculty of Law

(dalindybo.shabalala@maastrichtuniversity.nl)