

PROJECT DESCRIPTION

The United Nations Environment Programme (UNEP), the European Patent Office (EPO) and the International Centre for Trade and Sustainable Development (ICTSD) are jointly collaborating on the development of a study that aims to enhance understanding of the role of patents vis-à-vis access to environmentally sound technologies (ESTs).¹ This analysis will provide useful input into ongoing discussions on technology transfer in the context of the UN Framework Convention on Climate Change (UNFCCC) and result in concrete recommendations for consideration in a post-2012 climate agreement.

Specifically, the joint study shall:

- Provide a time series analysis of patent trends and their implications for access to ESTs in selected technological fields;
- Develop a methodology for the analysis of the impact of patent trends in the development and dissemination of ESTs;
- Feed into ongoing international discussions and initiatives on ESTs; and
- Establish an example (*pars pro toto* approach, in one strategic sector) of how underlying intellectual property questions can be treated in a systematic, objective and data driven way.

RATIONALE

Increased research and analysis on the links between the transfer of technology and intellectual property is fundamental to understanding the underlying issues and to developing effective technology-related international cooperative actions on climate change. Several studies looking at these issues have been carried out over the years, but they remain too general to serve as a basis for informed and objective discussion and political decision-making.

BACKGROUND

This project is part of a broader international effort aimed at better assessing the role of patents in the development and transfer of technologies for addressing climate change. Such an analysis is of the utmost importance given that uncertainty regarding the impact of intellectual property on technology transfer may affect efforts to reach an agreement for a post-2012 climate framework at the 15th UNFCCC Conference of the Parties meeting in December 2009 in Copenhagen, Denmark (COP-15).

¹ Chapter 34 of Agenda 21 defines environmentally sound technologies as technologies which protect the environment; are less polluting; use all resources in a more sustainable manner; recycle more of their wastes and products; and handle residual wastes in a more acceptable manner than the technologies for which they are substitutes.

Thus, the question is what data and information would be useful to ensure the debate regarding patents is well-informed. Studies on ESTs to date have looked primarily at industry characteristics and trends, focusing only on limited patent data. Additional quantitative and qualitative analysis would greatly enhance existing understanding of the link between patents and ESTs.

PROJECT OBJECTIVES

The aim of the project is to deliver objective data and analysis to inform policymakers in the ongoing discussions and processes at the UNFCCC and, in particular, within the Expert Group on Technology Transfer (EGTT).

In particular, the proposed analysis should address questions² such as:

- What are the elements of the technologies or their utilization that are protected by patents?
- For a particular technology, what is the percentage of patents held by companies or individuals from developed and developing countries?
- What do patenting trends imply for the rate and direction of the dissemination of the technologies in the short, medium, and long term?
- What percentage of existing patents derives from public sector research? What is the trend in this regard? What would this entail for proposals to develop special access arrangements for publicly-funded clean technologies?

PROJECT SCOPE

Patents and ESTs:

Based on a mapping analysis of energy generation technologies carried out by ICTSD, a detailed patent analysis of the identified technologies, including the apparatus (e.g. for wind energy this would include wind turbines, support structure, etc.) and in selected cases at component level (e.g. blades, gear) will be carried out.

After a first analysis of the patent landscape, critical fields will be identified and selected for further investigation regarding licensing conditions and policy proposals.

The project partners recognize that the development and transfer of ESTs depends on a multitude of factors and that patents and licensing practices represent only a small piece of a wider picture. For instance, the existence of a self-sustaining market for the technology, financing opportunities, and the strength of the legal and regulatory markets, are also critical to successful technology transfer.

Policy conclusions or recommendations on technology transfer of ESTs which would be included in the study shall take this into consideration. Work done by

² This is a preliminary list and is being fine-tuned with input from private sector.

partner organisations on other aspects of technology transfer, including the development of financing mechanisms and regulatory regimes shall also be taken into consideration.

Geography:

The analysis will focus primarily on countries/regions of origin of inventions/patents and countries/regions of patent families. If time and resources permit, additional detailed analysis will focus on 1-2 key developing countries.

The project outputs, including all studies, will be disseminated at several levels (selected governments, intergovernmental and broader public).

PROJECT PHASES

To capture the linkage between patenting practice and access to ESTs, a multi-phase programme, based on a broad international alliance, including key industrial players is currently being established. The extent and time-horizon of the broader international effort goes beyond the proposed project, which is however key for the success of the whole.

Phase 1 consists of the mapping of relevant technologies and its validation by relevant lead authors of the Working Group III reports of the Intergovernmental Panel on Climate Change (IPCC).

Of relevance for the current project is the mentioned mapping study on energy generation, already carried out on behalf of ICTSD. Thus, in **Phase 2** of the project, the patent landscape will be drawn, based on the mapping study for this particular technology sector. Statistical analysis will be carried out on this data by the OECD Environment Directorate in the context of existing cooperation between the EPO and the OECD in the area of statistics.

Involvement of industry / private sector

Once the patent landscape is established, **Phase 3** will look into trends and questions of concentration/diversification of ownership of technologies and their applications, including profiles of possible key 'receiver' countries.

For this phase several means of data collection may be utilized, including circulation of an open-ended questionnaire among the identified critical patent applicants. Collaboration with relevant industry and business associations, which could support and even coordinate industry input for Phase 3, has been sought. This will help to send a strong message to private sector that its input is of real importance and that it will be fully taken into account in the results of the study.

In view of their representative nature and their large number of members at the international, regional and national level, a number of industry and business associations have been invited to contribute to the project.

As the study evolves, input from other private sector organizations, particularly those with a specific focus on climate change technology, may also be sought.

Further steps

Based on the findings, specific policy proposals shall be elaborated to address any identified challenges (**Phase 4**). Finally, in **Phase 5** the results of the study will be disseminated.

The figure below provides an overview of the broader international effort and the relatively limited reach of the current project (only energy sector). Depending on the outcome of the project, the expansion of the project to other key technology sectors and other countries and regions will be explored.

