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PROJECT PAPER FOR THE PROJECT ON INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER: COMMON CHALLENGES - BUILDING SOLUTIONS (RECOMMENDATIONS 19, 25, 26 AND 28)

prepared by the Secretariat

1. The "Project on Intellectual Property and Technology Transfer: Common Challenges - Building Solutions", approved by the Committee on Development and Intellectual Property (CDIP) in its sixth session envisaged, as a first step, the preparation of a project paper including a detailed description of the components of the project for approval by the Committee.

2. Accordingly, the annex to this document contains the above-mentioned project paper.

3. *The CDIP is invited to consider and approve the Annex to this document.*

[Annex follows]

I. OUTLINE: VISION FOR THE PROJECT

1. The Project Paper contains information and a detailed description of the stages as well as all activities proposed for the Project on Intellectual Property and Technology Transfer: "Common Challenges – Building Solutions" (Recs. 19, 25, 26 & 28)[1] approved by Member States in CDIP/6/4.

2. In addition, the paper provides the vision, strategy and ultimate objectives for the project as well as a more holistic and comprehensive picture of the project.

(A) INTRODUCTION

3. Transfer of technology to developing countries has been one of the most discussed areas of international economic relations in the past thirty or more years. In particular, the role of transnational corporations (TNCs) in the process of developing, applying and disseminating technology across national borders to such countries has generated special interest. One result has been the institution of numerous policy initiatives at the national, regional and multilateral levels. These have, in turn, produced a significant number of legal provisions both in national law and in international instruments.

4. Any discussion of investment by TNCs in technology needs a sound understanding of two basic issues: 1) what is actually meant by the terms "technology" and "technology transfer" and, 2) how firms in developing countries actually become proficient in using technology. As to the first, "technology" can be defined in various ways. The present concern is to identify, for legal purposes, a definition that encompasses all forms of commercially usable knowledge, whether patented or unpatented, which can form the subject matter of a transfer transaction.

5. Concerns about the access to and transfer of knowledge and technology between different actors on the national (university – private sector – industry) and the regional/international levels are becoming increasingly important, not only because creativity and innovation are crucial for competitiveness and economic growth in the knowledge based economy, but also because they may be part of the solution with respect to some of the issues raised by complex contemporary problems and needs, for example, in the areas of climate change, health, food security or in the attempts to reduce the knowledge and technology gap between countries.

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[1] Recommendation No. 19 (Cluster B): "To initiate discussions on how, within WIPO's mandate, to further facilitate access to knowledge and technology for developing countries and LDCs to foster creativity and innovation and to strengthen such existing activities within WIPO."

Recommendation No. 25 (Cluster C): "To explore IP related policies and initiatives necessary to promote the transfer and dissemination of technology, to the benefit of developing countries and to take appropriate measures to enable developing countries to fully understand and benefit from different provisions, pertaining to flexibilities provided for in international agreements, as appropriate."

Recommendation No. 26 (Cluster C): "To encourage Member States, especially developed countries, to urge their research and scientific institutions to enhance cooperation and exchange with research and development (R&D) institutions in developing countries, especially LDCs."

Recommendation No. 28 (Cluster C): "To explore supportive IP related policies and measures Member States, especially developed countries, could adopt for promoting transfer and dissemination of technology to developing countries."

6. The promotion of technology transfer[2] to developing countries has been a recurrent issue on the international economic agenda of the past three decades. The draft UNCTAD Code of Conduct on the Transfer of Technology addressed the issue from various perspectives: the legitimization of specific domestic policies to promote the transfer and diffusion of technology, the rules governing the contractual conditions of transfer of technology transactions, the special measures on differential treatment for developing countries, and the measures that would strengthen international cooperation.

7. The abilities to create new technology and to acquire and successfully absorb technologies from both external and internal sources are critical determinants of a country's ability to compete successfully. While this applies to all countries, it is evident that the transfer of technology from foreign sources and from international and domestic research institutes represents a potent source of technological information particularly for developing countries. The challenge is to establish and maintain effective access to this information and to devise mechanisms for deploying it effectively within an economy. Technological knowledge includes both the know-how of processes for producing goods and services and the organizational and management of information needed to produce and distribute goods and services efficiently. Such technology is embedded in machinery, equipment, licensing agreements, and managerial skills. Opportunities to learn also occur through other means such as training and access to the global stock of scientific and technical information.

8. A key component of any transfer process is the effective transfer of the skills and intangible know-how that ensure production capability. Indeed, since the 1970s, developing countries have expressed in various international forums their desire for improved access to foreign technologies and enhanced technological capabilities. In the past two decades, specific provisions on transfer of technology have been incorporated into various international instruments. Such provisions have different objectives and scope, and different modes of implementation, including the provision of financing, and are subject to different terms and conditions. In most cases, however, such provisions contain only "best effort" commitments, rather than mandatory rules.

(B) DEFINITION

9. For the purpose of this paper, transfer of technology refers broadly to a series of processes enabling and facilitating flows of skills, knowledge, ideas, know-how and technology among different stakeholders such as university and research institutions, international organizations, IGOs, NGOs, private sector entities and individuals, as well as international technology transfer among countries.

10. Transfer of technology, which is often considered to include the absorption of new technologies, is sometimes also considered to involve the transfer of concrete knowledge for the manufacture of products, the application of a process or for the rendering of a service granting the improvement of domestic as well as the international competitiveness in the economic market.

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[2] Technology transfer should be distinguished from technology *diffusion*. The latter is better seen as another benefit that the transfer of technology may bring to a host economy. This can be achieved by the fact that the introduction of a technology into a host country creates an awareness of that technology. That awareness may spill over into the economy as a whole.

(C) OBJECTIVES

11. The objectives of the Project are framed by recommendations 19, 25, 26 and 28. In particular, the project will use a "step-by-step" approach involving accredited organizations and new partners involved in all aspects of technology transfer, and explore intellectual property-related policies and new initiatives necessary to promote the transfer and dissemination of technology, benefiting developing countries in particular, together with the establishment of international IP collaboration.

12. The indicators of success in achieving the project objectives are:

(a) Feedback from the CDIP on the extent to which understandings of the issues have been enhanced and project objectives have been met;

(b) Adoption and concrete use of the suggestions, recommendations and possible measures for promoting technology transfer by Member States;

(c) Feedback on the contents by the users via the Web Forum and evaluation questionnaires; and

(d) Widespread use of the medium by developing countries and LDCs.

13. Target beneficiaries include: National Governments through Government officials in various areas and policy-makers, universities and research institutions, industry, IP experts and technology managers.

II. PREPARATORY WORK: STRATEGY OF WORK

14. This work attempts to provide an overview of the different existing approaches to technology transfer by different entities. It is very important to keep in mind UNCTAD's draft International Code on the Transfer of Technology (the draft TOT Code[3]): it gives a first definition of "technology transfer", which is described as a "systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service".

15. The analytic studies need to start with a literature review of existing work and efforts done in the field of technology transfer by other International organizations, such as UNCTAD, UNEP,

[3] "Technology transfer" is the process by which commercial technology is disseminated. This takes the form of a technology transfer transaction; the draft TOT Code has listed the following transactions:

(a) The assignment, sale and licensing of all forms of industrial property, except for trade marks, service marks and trade names when they are not part of transfer of technology transactions;
(b) The provision of know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulae, basic or detailed engineering designs, specifications and equipment for training, services involving technical advisory and managerial personnel, and personnel training;
(c) The provision of technological knowledge necessary for the installation, operation and functioning of plant and equipment, and turnkey projects;
(d) The provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and/or raw materials which have been acquired by purchase, lease or other means; and
(e) The provision of technological contents of industrial and technical co-operation arrangements.

UNIDO, WHO, WTO among others. A list of issues which need to be addressed should be pre-defined as required by Development Agenda recommendations 30 and 40, and as explicitly raised at the Open Forum on the DA projects hosted by WIPO on October 13 and 14, 2009. These economic studies would also be coordinated with other DA studies such as the "Project on Intellectual Property and Socio-Economic Development" described in recommendations 35 & 37 (CDIP/5/7).

16. A review of the patent landscaping reports being prepared under the Project on "Developing Tools for Access to Patent Information" (CDIP/4/6) should be conducted, with a view to identifying the possibilities of international transfer of technology in these areas. Similar analysis of patent landscaping, from the viewpoint of technology transfer, in the areas of food and agriculture should also be undertaken.

(A) LITERATURE REVIEW OF WORK DONE BY OTHER ORGANIZATIONS

17. Different organizations focused on technology transfer but, there is still no exclusive, global and meaningful definition[4] of the issue. The Secretariat, in order to solve this problem, will analyze different existing definitions which international organizations, institutions and NGOs used to delineate the phenomena.

18. United Nations Conference on Trade and Development (UNCTAD): Series on issues in International Investment Agreements (IIAs), "Transfer of Technology", United Nations, Geneva, 2001. The document discusses the issue of technology transfer in the context of IIAs. It is an issue that has generated debate for many years. Given the centrality of technology to development, and the necessity of technology acquisition by developing countries as a means of furthering development, it is desirable that such countries should be able to benefit from the generation, transfer and diffusion of the best available technology. Unfortunately, this has not always been the case. In particular, the fact that most of the world's advanced technology is generated privately by Transnational Corporations (TNCs), whose principal Research and Development (R&D) activity is located in developed countries, creates an asymmetry between technology possession and the location of technological need. The result is a gap between the technology developed and owned by firms in developed countries and that which can be obtained and utilized by developing countries. This reality has generated numerous policy responses.

19. In particular, policies for the encouragement of technology transfer have evolved over the years and have been the subject of provisions in IIAs. The paper places such policies in a wider context. The encouragement of technology transfer cannot be seen in isolation; it is a policy that is closely related to the broader treatment of proprietary knowledge through intellectual property laws; to the structure of the market, and the conduct of transactions, which may impact on the competitive process in relation to the generation, transfer and dissemination of technology; and to host country measures designed to control the process of technology generation, transfer and diffusion through performance requirements. In the light of the above, two broad policy approaches to technology issues are identified:

(a) one is a regulatory approach, which, though preserving the essential characteristics of intellectual property rights, seeks to intervene in the market for technology so as to rectify perceived inequalities in that market as between the technology owner and the technology recipient.

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[4] In many instances, determining the meaning of technology transfer ''effectiveness'' proves daunting. Indeed, much of the analysis assumes multiple, sometimes conflicting, definitions of technology transfer effectiveness.

The latter is generally seen as the weaker bargaining party. This can be remedied through regulatory intervention in technology transfer transactions, through, for example, the outlawing of provisions in technology transfer transactions that may be seen to unduly favor the technology owner. Coupled with such policies may be the discretion on the part of the receiving country to impose performance requirements on the technology owner as a condition for the transfer transaction to take place. Such policies have, in the past, been adopted by developing host countries and have informed the content of a number of international instruments.

(b) A contrasting approach sees the transfer of technology as being best undertaken in a market-based environment. Thus the emphasis is not on regulation or intervention in the technology transfer process, but more on the creation of conditions for a free market transfer of technology. The principal features of this approach are a reliance on the protection of private rights to technology based on intellectual property rights; the absence of direct intervention in the content or conduct of technology transfer transactions, save where these violate principles of competition law by reason of their market-distorting effects and/or by their use of unreasonable restrictive trade practices; and by the prohibition, or highly proscribed use, of technology-related performance requirements. Another issue covered by IIAs is the interaction between technology transfer and scope and definition questions, admission and establishment, the most-favored-nation standard, national treatment and fair and equitable treatment, taxation, environment, host country operational measures, funds transfer and competition.

20. In the conclusions, seven possible options concerning the role to be played by provisions on technology in IIAs are outlined. These are considered in the light of the market for technology and the position of developing countries therein. The seven options are: no coverage of technology issues; limited coverage of technology issues: control over technology-related performance requirements; limited coverage of technology issues: permissible technology transfer requirements; wide “regulated” coverage of technology issues; wide “market-based” coverage of technology issues; a “hybrid” approach; and the regional industrial policy approach.

21. United Nations Environment Programme (UNEP): Technology Transfer and Cooperation under the Convention on Biological Diversity, “Towards more effective implementation”. The year 2010 has been designated as the International Year of Biodiversity (IYB) by the UN General Assembly as a way to recognize the contribution of biodiversity to human development and well-being. Sustaining biodiversity in the face of considerable threats from human activities constitutes a great challenge for the modern development paradigm. The Convention on Biological Diversity seeks to address this challenge by pursuing three objectives:

(a) the conservation of biological diversity, the sustainable use of its components, and

(b) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

The Convention recognizes that both access to and transfer of technology among contracting Parties are essential elements for the attainment of these objectives.

22. Articles 16 and 19 of the Convention call upon Contracting Parties to facilitate access for and transfer of relevant technology to other Parties, including modern biotechnology. The Convention’s provisions on technology transfer reflect the global consensus among countries that the development, transfer, adaptation and diffusion of technologies, as well as the building of related capacities, is critical for achieving sustainable development. In a world that is besieged with a lack of suitable technologies to achieving the objectives of Multilateral

Environmental Agreements (MEAs), concerted efforts are urgently needed for the more effective transfer of such technologies.

23. United Nations Industrial Development Organization (UNIDO): UNIDO and the World Summit on Sustainable Development (WSSD), “Innovative Technology Transfer Framework Linked to Trade for UNIDO Action” prepared by David Bennett, UNIDO Consultant. This document is an input into the UNIDO initiative on "Technology Transfer: Assessing Needs - Promoting Action" to be launched at the 2002 WSSD where technology transfer from industrialized to developing countries is likely to emerge as an important issue. The terms of reference for the paper are to:

(a) summarize the current understanding on the process of technology transfer and its contribution to adaptation and innovation,

(b) identify linkages between technology transfer and trade, taking account of Trade Related Intellectual Property Rights (TRIPS),

(c) assess the UNIDO technology transfer operations in general, and

(d) based on the above research, prepare a “Technology Transfer Framework Linked to Trade for UNIDO Action”.

24. Given UNIDO’s commitment to Sustainable Industrial Development (SID), the technology transfer issues are considered within the context of SID, which has three dimensions, namely, economic development, enhancing social welfare and environmental soundness. Ideally, technical cooperation should contribute positively to all three dimensions. In practice, this is not always possible and therefore programs which target at least one of the three dimensions with measures to limit any adverse effects on the other two are considered to be compatible with SID.

25. Technology transfer is a transaction or a process through which technological know-how is transferred normally between businesses or agencies representing businesses. This is the micro-level “business model” of technology transfer in which the transaction or collaboration takes place because both the parties perceive gains. The focus of the business model is not simply on technology transfer but also on its integration with the other dimensions of the business to ensure that it makes a contribution to improving the competitiveness and performance of the business. Without such motivation and effectiveness in implementing it, development of technological capability will either not take place or will be inappropriate.

26. Technology transfer is also an issue of some prominence at the macro level in negotiations between developed and developing countries especially in the context of trade liberalization and protection of the environment. This is referred to here as the macro-level “political bargaining model” of technology transfer.

27. World Health Organization (WHO): “Technology transfer to developing country vaccine manufacturers to improve global influenza vaccine production: A success story and a window into the future”, F. Marc LaForce, PATH, Washington DC, USA. Developing country vaccine manufacturers, so-called “emerging suppliers”, have made enormous strides over the last two decades. They have increased capacity, improved facilities and are developing new important products.

28. Developing country manufacturers now provide over half of all vaccines used globally. Their early activities concentrated on the manufacture of the standard World Health Organization/Expanded Program on Immunization (WHO/EPI) antigens (diphtheria, tetanus, pertussis, oral polio vaccines, measles and BCG) for local consumption, but over the last 15

years several developing country manufacturers have worked with WHO and the United Nations Children's Fund (UNICEF) to officially "prequalify" their products for global distribution. These emerging suppliers are exploring partnerships with multinationals and other partners as they seek to expand the products they can offer both locally and globally.

29. The papers grouped in this special issue of Vaccine offer an excellent example of their flexibility and their potential in meeting global vaccine needs.

30. World Trade Organization (WTO): Developing countries, in particular, see technology transfer as part of the bargain in which they have agreed to protect intellectual property rights. The Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS)[5] includes a number of provisions on this. More precisely, Article 7 ("Objectives") states that the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.

31. The obligation for developed countries to provide incentives for technology transfer is contained in Article 66.2. Least-developed countries want this requirement to be made more effective. In Doha, ministers agreed that the TRIPS Council would "put in place a mechanism for ensuring the monitoring and full implementation of the obligations". The council adopted a decision setting up this mechanism in February 2003. It details the information developed countries are to supply by the end of the year, on how their incentives are functioning in practice. This decision is now being implemented, and was reviewed in full when the TRIPS Council met in November 2003. At the same time, various decisions under TRIPS have raised the question of technology transfer and reiterated the commitment to implement Article 66.2, such as the 2003 and 2005 decisions on TRIPS and Public Health. Additionally, climate change negotiators have been discussing the link between technology transfer and the TRIPS Agreement.

32. International Centre for Trade and Sustainable Development (ICTSD): Project on Intellectual Property Rights (IPRs) and Sustainable Development, "Encouraging International Technology Transfer" by Keith E. Maskus, Professor of Economics, University of Colorado, USA. The present paper dealing with Encouraging International Technology Transfer is one contribution of the joint UNCTAD-ICTSD Project on IPRs and Sustainable Development to the ongoing debate on the impact and relevance of intellectual property to development.

33. This report reviews comprehensively the basic theory and evidence regarding how intellectual property protection affects incentives for International Technology Transfer (ITT). Analysis is provided of market-mediated ITT through trade, foreign direct investment, licensing, and personnel movements, along with informal means through imitation, reverse engineering, and spillovers. The report points out that there are inherent shortcomings in markets for technology that justify public intervention. One form of intervention is IPRs, which can support ITT but also may create market power. Empirical evidence suggests that enforceable patents can increase inward flows of ITT in middle-income and large developing countries but probably have little impact in the least-developed countries. Thus, the TRIPS Agreement at the WTO by itself will have little impact on technology acquisition for poor countries. Negotiators recognized this and introduced Article 66.2, which obligates the developed countries to provide positive incentives for ITT to the least developed countries. This study makes numerous suggestions for improving these incentives by policy changes in recipient countries, source countries, and the global trading system.

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[5] The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

34. Intellectual property rights have never been more economically and politically important or controversial than they are today. Patents, copyrights, trademarks, industrial designs, integrated circuits and geographical indications are frequently mentioned in discussions and debates on such diverse topics as public health, food security, education, trade, industrial policy, traditional knowledge, biodiversity, biotechnology, the Internet, the entertainment and media industries. In a knowledge-based economy, there is no doubt that an understanding of IPRs is indispensable to informed policy making in all areas of human development. Intellectual property was until recently the domain of specialists and producers of intellectual property rights. The TRIPS Agreement concluded during the Uruguay Round negotiations has signaled a major shift in this regard. The incorporation of intellectual property rights into the multilateral trading system and its relationship with a wide area of key public policy issues has elicited great concern over its pervasive role in people's lives and in society in general.

35. Developing country members of the WTO no longer have the policy options and flexibilities developed countries had in using IPRs to support their national development. But the TRIPS Agreement is not the end of the story. Significant new developments are taking place at the international, regional and bilateral level that build on and strengthen the minimum TRIPS standards through the progressive harmonization of policies along standards of technologically advanced countries. The challenges ahead in designing and implementing IP-policy at the national and international levels are considerable. Empirical evidence on the role of IP protection in promoting innovation and growth in general remains limited and inconclusive. Conflicting views also persist on the impacts of IPRs in the development prospects. Some point out that, in a modern economy, the minimum standards laid down in TRIPS will bring benefits to developing countries by creating the incentive structure necessary for knowledge generation and diffusion, technology transfer and private investment flows. Others stress that intellectual property, especially some of its elements, such as the patenting regime, will adversely affect the pursuit of sustainable development strategies by raising the prices of essential drugs to levels that are too high for the poor to afford; limiting the availability of educational materials for developing country school and university students; legitimizing the piracy of traditional knowledge; and undermining the self-reliance of resource poor farmers.

36. The central objective has been to facilitate the emergence of a critical mass of well-informed stakeholders in developing countries - including decision makers, negotiators but also the private sector and civil society - who will be able to define their own sustainable human development objectives in the field of IPRs and effectively advance them at the national and international levels.

37. International Centre for Trade and Sustainable Development (ICTSD): "Does TRIPS Art. 66.2 Encourage Technology Transfer to LDCs? An Analysis of Country Submissions to the TRIPS Council (1999-2007)" by Suerie Moon. The issue of whether or not technology transfer to LDCs has actually increased as a result of the TRIPS-mandated incentives is a broad question requiring lengthy empirical study. The study focuses on public policies or programs that developed countries undertake to encourage their enterprises or institutions to engage in technology transfer, rather than on market-based technology transfer that largely occurs through private channels. This distinction is important for three reasons:

(a) measuring private technology transfer will be very difficult in the absence of a unified reporting mechanism;

(b) market-based flows from the most advanced economies to the least-developed are likely to be minimal in the absence of policies that offer additional incentives; and

(c) the legal obligation in Article 66.2 is on governments rather than on private firms.

38. One of the central challenges of this study was that the existing reporting mechanism does not provide enough data to gauge with any precision the extent to which developed country incentives are actually working to promote technology transfer. It is also extremely difficult to measure changes over time, and there is no baseline from which to compare. An improved reporting system with contributions from both developed and last developed countries (LDCs) Members could lead to better assessments in the future. Finally, there is a need for a negotiated understanding of what comprises an acceptable level of compliance.

39. Establishing an effective mechanism will require time, attention, political capital and financial resources. In assessing these costs, we should bear in mind that many resources have already been dedicated to implementing other parts of the TRIPS Agreement, particularly those pertaining to tightening IP protection and enforcement. An equal amount of political attention should be devoted to ensuring that the Agreement's purported benefits, namely technology transfer, are realized.

40. World Business Council for Sustainable Development (WBCSD): Enabling frameworks for technology diffusion. Under the UNFCCC negotiations there are calls for an increase in technology transfer to developing countries. Each developing country has very different needs, and technology transfer has varying applicability and needs within different industries. In emerging economies the challenge lies in fueling economic growth while avoiding a lock-in of high emission technologies.

41. In some markets, such as China, India, Brazil and other rapidly developing economies, the spread of advanced clean technologies is happening at least at the same rate as in developed economies. For some technologies and countries it is even faster, since they are able to bypass the challenges of "restructuring" entrenched installations and infrastructure. In the least developed countries the challenge of pursuing economic and social progress necessitates facilitation and support to access existing low-carbon technologies and to strengthen their endogenous technological capabilities. Technologies are diverse and numerous; they are at different stages of maturity, progressing from an initial learning phase down the cost curve to commercial viability. They also have different carbon-mitigation potentials and require different policy responses in different countries depending on their international commitments for Greenhouse Gas (GHG) reductions.

42. To stimulate investment in appropriate technologies, to deliver at the right time, place and cost, countries will need to consider the full lifecycle of technology and enable a portfolio of technologies to be developed in parallel, not sequentially. It is important to consider the life-cycle and turnover of existing capital infrastructure as new low-carbon technologies are phased in and new long-term infrastructure is built. There are specific policy measures that need to be taken today to enhance the urgent deployment of existing low carbon technologies in developing countries (some of these enablers affect both developed and developing countries; here we focus on the latter) and to avoid the risk of high-carbon technology lock-in.

43. The WBCSD puts forward six key elements to enhance investments and sales of low-carbon technologies in developing countries. These range from government signals to foster low-carbon solutions to engaging business more actively into the international and national climate change process. As key providers of technology and innovation, companies can support these targets but the transition to a low-carbon growth will be facilitated if governments set up frameworks that are conducive to investment in the first place.

44. Specifically, the six elements to enhancing investments and sales of low-carbon technologies are:

(a) Strong signals from governments toward low-carbon growth nationally and internationally, either through targets or regulatory measures;

(b) Adequate institutional frameworks that provide stable policies, transparent investment regulation and favorable local conditions;

(c) Appropriate absorptive capacity in institutions, business and society including a functioning education system, a receptive environment and targeted capacity building programs;

(d) Economic and financial incentives to bridge the gap between low-carbon solutions and their commercial viability;

(e) Energy efficiency drivers through removing barriers such as perverse subsidies, introducing economic incentives and consumer outreach; and

(f) A more active engagement of business in the international and national climate change process to increase the likelihood of success in reaching common objective. In addition to these cross-cutting elements, the report identifies specific enablers that can encourage diffusion of low-carbon technologies in individual industry sectors.

45. South Centre: "Accelerating Climate-Relevant Technology Innovation and Transfer to Developing Countries: using TRIPS Flexibilities under the United Nations Framework Convention on Climate Change UNFCCC." Transfer of Environmentally Sound Technologies (EST) is an essential component of the global action necessary to address mitigation and adaptation aspects of climate change through the development, diffusion and innovation of ESTs in developing countries.

46. Technology transfer is a treaty commitment that developed country Parties to the UNFCCC have bound themselves to comply with fully and effectively. However, the UNFCCC Expert Group on Technology Transfer (EGTT) has pointed out that to date, the UNFCCC's technology transfer-related provisions have not yet been reflected in concrete, practical, results-oriented actions in specific sectors and programs. This clearly indicates that developed country Parties have not fully and effectively complied with their treaty commitments under the UNFCCC relating to technology transfer.

47. In this context, paragraph 1 (b) (ii) and 1 (d) of the Bali Action Plan adopted at COP 13 in Bali in December 2007 calls for nationally appropriate actions by developing countries on mitigation and adaptation to be supported by technology in a measurable, reportable and verifiable manner, and for enhanced action on technology development and transfer to support the same.

(B) LITERATURE REVIEW OF EXISTING WORK WITHIN WIPO

CDIP/4/6 Project on Developing Tools for Access to Patent Information (Recommendations 19, 30 and 31)

48. This project aims to provide developing countries, including LDCs, upon request, with services which will facilitate the use of patent information on specific technology for facilitating their indigenous innovation and R&D in cooperation with other intergovernmental organizations. In order to achieve these aims, the project will implement the following elements:

(a) Patent Landscaping Reports will be drafted which exploit the vast resources of patent information to provide an analysis of specific technologies and related existing IP rights for selected areas of technology;

(b) An e-tutorial available on DVD or on the Internet will provide training on using and exploiting patent information, in particular focusing on the preparation of technology and patent search reports similar to Patent Landscaping Reports; and

(c) Conferences, including workshops and training courses, will be organized for users, in particular for staff of Technology and Innovation Support Centers (TISCs), in order to exchange experiences and best practices regarding the use of patent information, as well as to develop specific skills such as preparing Patent Landscaping Reports by local research institutions and universities.

CDIP/5/7 Project on Intellectual Property and Socio-Economic Development (Recommendations 35 and 37)

49. The project consists of a series of studies on the relationship between IP protection and various aspects of economic performance in developing countries. They would seek to narrow the knowledge gap faced by policymakers in those countries in designing and implementing a development-promoting IP regime. The envisaged studies would focus on three broad themes: domestic innovation, the international and national diffusion of knowledge, and institutional features of the IP system and its economic implications.

CDIP/3/INF/2 Project on Innovation and Technology Transfer Support Structure for National Institutions (Recommendation 10)

50. The project creates and tests or, where they exist, updates and improves, a series of modules and materials relating to the management of IP rights (particularly patents) by academic and research institutions, including on the setting up and running of technology transfer offices at public research organizations, exploring technology transfer mechanisms (in particular, licensing agreements) and enhancing the capacity to draft patents.

51. The project also includes the addition of the material in a portal which will be a digital repository of training modules, guides, tools, examples, models of national IP strategies, institutional IP policies, best practices and case studies accessible through one single portal on WIPO's website for the promotion of local innovation and technology transfer activities through improving IP infrastructure and IP management in developing countries.

52. The studies would be implemented by research teams involving the WIPO Office of the Chief Economist, international experts, and local researchers.

(C) STUDIES AND CASE STUDIES

Description

53. Elaboration of a number of peer-reviewed analytic studies, in cooperation with relevant UN and other international organizations, including economic studies and case studies on international technology transfer that will provide inputs for the High-Level Expert Forum, including, in particular:

(a) a series of economic studies on IP and International Technology Transfer. These studies would focus on areas that have received less attention in the available economic literature and on identifying possible obstacles and suggesting possible ways in which technology transfer could be enhanced. These studies should not be redundant with

existing internal (in other WIPO committees such as SCP) or external (from other organizations) studies on technology transfer;

(b) a study that will provide information on existing intellectual property right (IPR) related policies and initiatives found in the public and private sector of developed countries to promote technology transfer and R&D capacity in developing countries, including international IP standards pertaining to technology transfer, such as the use of flexibilities in international IP agreements. This new study should avoid duplication of work and constitute an addition to work already undertaken in WIPO;

(c) a series of case studies of cooperation and exchange between R&D institutions in developed countries and R&D institutions in developing countries as well as a database of links to national institutions that already offer technology transfer opportunities or may offer such possibilities;

(d) a study on Favorable Incentive Policies for businesses to become partners in technology transfer processes at the national and international level;

(e) an analysis of transfer of technologies issues relating to existing and emerging issues of concern to DCs and LDCs in order to identify their needs in certain specific regions or sub-regions;

(f) a series of studies looking at alternatives for R&D efforts and support to innovation aside from the currently existing patent system.

54. New relevant studies could be included in the list after approval of the project paper by Member States.

III. PROJECT DELIVERABLES

55. After the preparation of this project paper to be submitted to the CDIP for approval, the followings steps are scheduled:

(a) The organization of five Regional Technology Transfer Consultation Meetings in different regions of the world, including in developed countries, in prior consultation with Member States in Geneva, and involving different stakeholders in the area of technology transfer, including other relevant UN organizations;

(b) The elaboration of a number of peer-reviewed analytic studies, in cooperation with relevant UN and other international organizations, including economic studies and case studies on international technology transfer, that will provide inputs for the High-Level Expert Forum;

(c) The drafting of a concept paper on building solutions as the basis for discussion at the High Level International Expert Forum, to be submitted to the CDIP for approval;

(d) The preparation and provision of materials, modules, teaching tools and other instruments resulting from recommendations adopted at the Expert Meeting, and inclusion of such results into the global WIPO capacity building framework. This may include contents and concrete country projects related to the design and development of the necessary infrastructure for IP asset management in relation to technology transfer;

(e) The organization of a High Level Expert Forum in the form of an international conference to initiate discussions on how, within WIPO’s mandate, to further facilitate

access to knowledge and technology for developing countries and LDCs, including in emerging areas, as well as, other areas of special interest for developing countries, taking into account recommendations 19, 25, 26 and 28. In particular, the experts should debate on technology transfer supportive IP-related policies by developed countries;

(f) The creation of a Web Forum on "Technology Transfer and IP: Common Challenges – Building Solutions" within the framework of the portal on Innovation and Technology Transfer Support Structure for National Institutions to be established in the context of the project for Recommendation 10 in consultation with Member States and other stakeholders, while facilitating the participation of developing countries and LDCs in such Web Forum; and

(g) The incorporation of any outcome resulting from the above activities into the WIPO programs, after consideration by the CDIP and any possible recommendation by the Committee to the General Assembly.

(A) DESCRIPTION OF ALL STAGES

56. After the finalization of the Project Paper, the first of the scheduled five 'Regional Technology Transfer Consultation Meetings' will be organized in prior consultation with Member States in Geneva, and involving different stakeholders in the area of technology transfer, including other relevant UN organizations. The objective of these meetings is to provide a forum for exchange of expert views on the issues related to contemporary technology transfer challenges and to define suggestions and recommendations for their adjustment to development goals of the United Nations and the world, in particular developing and least developed countries.

57. The next planned activity is the development of studies, case studies and papers in the area of IP and international technology transfer information and the elaboration of a number of peer-reviewed analytic studies, in cooperation with relevant UN and other international organizations. These studies will provide inputs for the High-Level Expert Forum and will be commissioned to external Consultants during the 1st quarter of 2012.

58. The preparation and submission of the Concept Paper for comments by international experts, as well as, the provision of the materials, modules, teaching tools and other instruments resulting from recommendations adopted at the Expert Meeting, will follow the finalization of the studies. This may include contents and concrete country projects related to the design and development of the necessary infrastructure for IP asset management in relation to technology transfer. The paper and tools will represent the bases for discussion at the High Level International Expert Forum to be submitted to the CDIP for approval.

59. The High Level Expert Forum will have the form of an international conference to initiate discussions on how, within WIPO's mandate, to further facilitate access to knowledge and technology for developing countries and LDCs, including in emerging areas, as well as, other areas of special interest for developing countries, taking into account recommendations 19, 25, 26 and 28 (food, agriculture, climate change). The Forum would provide a framework for an open dialogue among independent experts from both developed and developing countries knowledgeable in public and private sector technology transfer. In addition to the specific areas indicated in the related recommendations, the experts may identify further issues related to improving technology transfer and to propose potential solutions. In particular, the experts should debate on technology transfer supportive IP-related policies by developed countries. The objective would be to obtain high-level expert recommendations as a basis for the creation of the above-mentioned list of suggestions, recommendations and possible measures for promoting technology transfer. The High-Level Expert Forum should also benefit from

consultations with Member States. Concerning the composition of the High-Level Experts Forum, the top experts worldwide on the different aspects of the subject would need to be selected by WIPO according to fair selection criteria approved by Member States to ensure the project's progress. For the experts meeting, experts from both the public and private sector would be invited. The terms of reference (TORs) for the experts would be decided in consultation with Member States. (see Appendix I)

60. Subsequently, one day meeting with inter-governmental and non-governmental organizations, professional associations and selected experts will take place on the last quarter of 2012 in order to examine the Concept Paper and provide further suggestions on it.

61. Finally, the last stage concerns the creation of a Web Forum on "Technology Transfer and IP: Common Challenges - Building Solutions" within the framework of the portal on Innovation and Technology Transfer Support Structure for National Institutions to be established in the context of the project for recommendation 10[6] in consultation with Member States and other stakeholders. The Web Forum will be constantly updated from its creation till the end of the 27 project months thanks to the help of the IT Consultant.

62. The project foretaste the incorporation of any outcome resulting from the above activities into the WIPO programs, after consideration by the CDIP and any possible recommendation by the Committee to the General Assembly.

(B) DESCRIPTION TIMELINES OF ALL STAGES

63. The first stage of the Project is the drafting of the Project Paper (sub-activity 3.1.). It is finalized in October 2011 and subsequently presented to the CDIP to the Member States for approval. The next activity scheduled is the organization of Five Regional Consultation Meetings (activity 1.); the first of the five Consultation Meetings will be organized in the first quarter of 2012. At the same time, in the first quarter of 2012, studies, case studies and papers in the area of IP and Technology Transfer will be commissioned to experts.

64. During 2012 also other activities will begin, specifically:

(a) the preparation of the Concept Paper (sub-activity 3.2.),

(b) the submission for comments of its first draft to international experts (sub-activity 3.3.),

(c) the presentation of the paper to the Permanent Missions in Geneva (sub-activity 3.4.), and

(d) the organization of the following meetings:

(i) three days High Level International Expert Forum (activity 3.),

(ii) one day meeting with inter-governmental and non-governmental organizations and professional associations (sub-activity 3.5.).

[6] Recommendation No. 10 (Cluster A): To assist Member States to develop and improve national intellectual property institutional capacity through further development of infrastructure and other facilities with a view to making national intellectual property institutions more efficient and promote fair balance between intellectual property protection and the public interest. This technical assistance should also be extended to sub-regional and regional organizations dealing with intellectual property.

65. The last stage planned in the project is the creation of the Web Forum (activity 4.), which will be constantly updated thanks to the help of an IT Consultant, together with the incorporation of any outcome resulting from the above activities into the WIPO programs (activity 5.).

IV. REFERENCES DESCRIBED ABOVE

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[Appendix I follows]

DEVELOPMENT AGENDA PROJECT DA_19_25_26_28_01

TERMS OF REFERENCE (TORS) AND COMPOSITION CRITERIA IN RESPECT OF THE REGIONAL CONSULTATION MEETINGS AND THE EXPERTS TASKED TO ELABORATE VARIOUS STUDIES

1. WIPO Member States have required to decide on the Terms of Reference (TORs) and the Composition Criteria in respect of the Regional Consultation Meetings and the experts tasked to elaborate various studies as provided by the Development Agenda Thematic Project on Intellectual Property and Technology Transfer: "Common Challenges – Building Solutions" (Recs. 19, 25, 26 & 28). The following paragraphs contain relevant information on the planned five Regional Consultation Meetings and the experts tasked to elaborate various studies, for approval by Member States.

Regional Consultation Meetings

The Consultation Meetings will represent a forum for exchange of expert views on the issues related to contemporary technology transfer challenges and to define suggestions and recommendations for their adjustment to the development goals of the United Nations and the world, in particular developing and least developed countries. The purpose of the meeting is to use a "step-by-step" approach involving accredited organizations and new partners involved in all aspects of technology transfer in order to explore new and more efficient mechanism for IP collaboration and technology transfer.

1. Title

Regional Consultation Meeting for the Development Agenda Project on Intellectual Property and Technology Transfer: "Common Challenges – Building Solutions" (Recs. 19, 25, 26 & 28).

2. Venue and dates

The five Consultation Meetings will be held in different regions of the world, including in developed countries, and in prior consultation with Member States. Probably, the first two Meetings will be organized in 2012, the other ones will be planned in 2013.

3. Organizers

WIPO in cooperation with the competent national authorities.

4. Program

A provisional program is attached for your information (Appendix II). Every session starts with an introduction to the subject matter, followed by presentation of some real cases from the region and ends with practical roundtables with a view to facilitating the debate between participants, increasing awareness and, in particular, generating skills in creating new practical measures and tools for technology transfer between developing and developed countries. The topics contained in this draft program are of an indicative nature and may be adapted depending on the region and/or the requests formulated by Member States.

5. Working languages

English, with simultaneous interpretation in certain regions, as required.

6. Participants to be invited by WIPO

The Meeting will be attended by Member States' policy makers, Government officials, and representatives of IP Offices. In addition, the Meeting will involve different stakeholders and experts in the area of technology transfer, including from other relevant organizations.

7. Local speakers for the Meeting

Local speakers form the region as well as invited Government representatives will be encouraged to participate in the meetings.

8. WIPO officials

WIPO will be represented by two officials (to be determined).

9. WIPO's contribution

WIPO to finance all costs, except those generated by activities under 10 below.

10. Local organizer's contribution

The local organizer will ensure:

(a) administrative and secretarial support during the Regional Consultation Meeting;

(b) invitation of local participants who will attend the event at their own expense; and

(c) conference facilities.

11. Composition criteria

Delegates from the countries of the relevant regions (members of WIPO).

One participant per country would be financed by WIPO.

Studies

In addition to the Regional Consultation Meetings, the project provides for the elaboration of a number of peer-reviewed analytic studies, in cooperation with relevant UN and other international organizations, including economic studies and case studies on international technology transfer that will provide inputs for the High-Level Expert Forum, including, in particular:

(a) a series of economic studies on IP and International Technology Transfer. These studies would focus on areas that have received less attention in the available economic literature and on identifying possible obstacles and suggesting possible ways in which technology transfer could be enhanced. These studies should not be redundant with existing internal (in other WIPO committees such as SCP) or external (from other organizations) studies on technology transfer;

(b) a study that will provide information on existing intellectual property right (IPR) related policies and initiatives found in the public and private sector of developed countries to promote technology transfer and R&D capacity in developing countries, including

international IP standards pertaining to technology transfer, such as the use of flexibilities in international IP agreements. This new study should avoid duplication of work and constitute an addition to work already undertaken in WIPO;

(c) a series of case studies of cooperation and exchange between R&D institutions in developed countries and R&D institutions in developing countries as well as a database of links to national institutions that already offer technology transfer opportunities or may offer such possibilities;

(d) a study on Favorable Incentive Policies for businesses to become partners in technology transfer processes at the national and international level;

(e) an analysis of transfer of technologies issues relating to existing and emerging issues of concern to DCs and LDCs in order to identify their needs in certain specific regions or sub-regions;

(f) a series of studies looking at alternatives for R&D efforts and support to innovation aside from the currently existing patent system; and

(g) a review of the patent landscaping reports being prepared under the Project on "Developing Tools for Access to Patent Information" (CDIP/4/6), with a view to identifying the possibilities of international transfer of technology in these areas. Similar analysis of patent landscaping, from the viewpoint of technology transfer, in the areas of food and agriculture should also be undertaken.

12. Selection criteria for the consultants who will prepare the studies

Criteria for the selection of consultants should seek a balance in terms of their geographical representation (developed as well as developing countries), their affiliation (public and private sector), and their position with respect to the role of IP in technology transfer.

13. Deliverables

The consultants would deliver a final report presenting the studies on the relevant issues showing tools and experiences of their use. A clear set of definitions and a glossary of terms will be produced in order to make the results sufficiently practical to be useful for policy makers and relevant professionals (including technology transfer professionals) in developing countries.

14. Target beneficiaries

The target beneficiaries include National Governments through Government officials in various areas and policy-makers, representatives of universities, research institutions and industry, IP experts and technology managers.

15. Delivery timeline

The delivery of the studies will be according the following timeline:

Commissioning of the studies	After CDIP/8
Delivery of the studies	2012

16. Successful delivery

Within 30 days upon receipt of the studies, WIPO will assess whether they include all the required deliverables, and whether the comments and required amendments by WIPO to the

consultant were taken into account in a revised version of the document. Should this be the case, the delivery of the report will be considered successful.

In case of delayed delivery, the author will be imposed a daily fine of 100 Swiss francs. WIPO may extend the deadlines for the various phases, if duly justified.

17. Performance evaluation

WIPO will assess the performance of the author after the delivery of the final report presenting the studies. According to the quality of this report delivered, and the respect of deadlines, the performance evaluation may be:

(a) Non-satisfactory performance: no payment will be made. WIPO may set a time limit for improvement. Should the result still not be satisfactory, no payment will follow.

(b) Satisfactory performance: the service will be paid.

(c) Very good performance: the service will be paid and the provider will be considered for future contract awards.

[Appendix II follows]

xx, 2012

9.00 – 9.30	Registration
9.30 – 9.45	OPENING CEREMONY Welcome addresses by: The Representative of the competent Department of Intellectual Property The Representative of the World Intellectual Property Organization (WIPO), Geneva
9.45 – 10.45	**Topic 1: Key Challenges of International Technology Transfer in […] Countries** Speaker: WIPO Official
11.15 – 12.15	**Topic 2: Experts' Suggestions and Recommendations Concerning Strategies to Adopt in order to Solve Technology Transfer Challenges in particular in Developing and Least Developed Countries** Speakers: Local Speakers
12.15 – 13.15	Debate
13.15 – 14.15	Lunch Break
14.15 – 15.15	**Topic 3: Alternatives for R&D Efforts and Support to Innovation Aside from the Currently Existing Patent System in […] Countries** Speaker: WIPO Official
15.15 – 16.15	**Topic 4: Policy and Case study on Technology Transfer in […] Countries** Speakers: Local Speakers
16.45 – 17.45	Debate
18.00	End of Session

xx, 2012

9.00 – 10.00	**Topic 5: International IP Standards & Flexibilities Pertaining to Technology Transfer in International IP Agreements** Speaker: WIPO Official
10.00 – 11.00	Debate

11.30 – 12.30	**Topic 6: Cooperation between R&D Institutions in Developed Countries and Developing countries, in particular in […] Countries, to Take Advantage of Technology Transfer Opportunities** Speakers: From two countries to be nominated
12.30 – 14.00	Lunch Break
14.00 – 15.00	**Topic 7: Incentive Policies for Businesses in […] Countries to Become Partners in Technology Transfer Processes at the International Level** Speakers: From two countries to be nominated
15.30 – 16.30	Debate
16.30 – 17.00	CLOSING CEREMONY

[End of Appendix II and of document]