

## **Committee on Development and Intellectual Property (CDIP)**

**Seventh Session**  
**Geneva, May 2 to 6, 2011**

### **INTELLECTUAL PROPERTY (IP) AND BRAIN DRAIN**

*Document prepared by the Secretariat*

1. The Annex to this document, containing a thematic project proposal on “Intellectual Property and Brain Drain”, addresses WIPO’s Development Agenda Recommendations 39 and 40. The estimated cost for the project amounts to 339’000 Swiss francs, of which 150,000 Swiss francs are related to non-personnel costs and 189,000 Swiss francs to personnel costs.

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

[Annex follows]

**DEVELOPMENT AGENDA RECOMMENDATIONS 39 AND 40**

**PROJECT DOCUMENT**

<b>1. SUMMARY</b>	
<u>Project Code</u>	DA_39_40_01
<u>Title</u>	Intellectual Property and Brain Drain
<u>Development Agenda Recommendations</u>	<p><i>Recommendation 39</i> (Cluster D): To request WIPO, within its core competence and mission, to assist developing countries, especially African countries, in cooperation with relevant international organizations, by conducting studies on brain drain and make recommendations accordingly.</p> <p><i>Recommendation 40</i> (Cluster D): To request WIPO to intensify its cooperation on IP related issues with United Nations agencies, according to Member States' orientation, in particular UNCTAD, UNEP, WHO, UNIDO, UNESCO and other relevant international organizations, especially the WTO in order to strengthen the coordination for maximum efficiency in undertaking development programs.</p>
<u>Brief Description of Project</u>	<p>Outward migration of skilled workers and the associated brain drain phenomenon are important development challenges. If and how intellectual property (IP) rights affect migration flows and subsequent human capital formation is poorly understood. Moreover, how the migration of skilled workers impacts on the effectiveness of the IP system has not been analyzed.</p> <p>The proposed project seeks to make a first step towards closing this knowledge gap. It consists of two activities. First, a research project that seeks to exploit information on inventor nationality and residence in patent documents to map the migration of scientists. Second, the convening of an expert workshop bringing together academia, relevant international organizations, and policymakers with a view to developing a research agenda on IP, migration, and associated knowledge flows. The results of the research project and the proposed research agenda would then be submitted to the Committee on Intellectual Property and Development for further consideration.</p>
<u>Implementing Program(s)</u>	Program 16
<u>Links to other related Program(s)/ DA Project(s)</u>	<p>Programs 1, 8, 12, 18</p> <p>Project CDIP/5/7 – IP and Socio-Economic Development</p>

<u>Links to Expected Results in the Program and Budget</u>	16.2
<u>Project Duration</u>	18 months
<u>Project Budget</u>	Total non-personnel cost: 150,000 Swiss francs Personnel cost: 189,000 Swiss francs

## 2. PROJECT DESCRIPTION

### 2.1. Introduction

Outward migration of skilled workers and the associated brain drain phenomenon are important development challenges. The exit of skilled workers directly reduces an economy's human capital endowment. It also does so indirectly—for example, when doctors and teachers no longer attend to the domestic population. Reduced prospects for human and economic development are the inevitable consequence. In the longer term, the possibility of return migration—and the associated “brain gain”—and the economic contributions of overseas diasporas may attenuate initial brain drain losses or may even lead skilled migration to be socially beneficial. However, such outcomes are not guaranteed, especially for the poorest countries that cannot offer internationally competitive employment opportunities for skilled workers.

These challenges are well recognized and have been subject to a considerable number of studies in many parts of this world. In addition, governments have instituted various policies to curtail economically harmful brain drain (or, at least, minimize associated losses) and to encourage “brain gain” outcomes.

Possibly, there is a relationship between IP and the brain drain phenomenon, with two-way causality. IP protection may affect the decisions of scientists, engineers, information technology specialists and related professionals about where to exercise their profession, with consequences for a country's innovative capacity and the availability of knowledge. Vice-versa, outward migration of skilled workers can impact on the effectiveness of the IP system in reaching its goals of promoting innovation and technology transfer.

The precise linkages between IP and brain drain and whether such linkages are significant at all, are poorly understood, however. No empirical research is available at WIPO and only few academic studies exist on the topic, reflecting in part the poor availability of data on migration flows, especially in low income countries.

The proposed project seeks to make a first step towards closing this knowledge gap. It consists of two activities which will be tightly focused on the linkages between IP and the migration of knowledge workers, while avoiding to discuss brain drain and related policies generally – in line with Development Recommendation 39. First, a research project that seeks to exploit information on inventor nationality and residence in patent applications to map the migration of scientists. This mapping exercise would establish a partial geography of migration flows and innovation, insofar the phenomenon can be traced through patent documents. Given the difficulty of this exercise, the study would carefully highlight related statistical and other challenges to avoid misinterpretation of the data. Furthermore, the exercise would be entirely descriptive and, by itself, would not offer insights into the causes and consequences of skilled migration, especially in regards to IP protection. (A logical follow-up activity would be to conduct a survey of the scientists identified through the mapping exercise, though such a survey is outside the scope of the proposed project).

The second project activity is the convening of an expert workshop bringing together academia, relevant international organizations, and policymakers with a view to developing a research agenda on IP, migration, and associated knowledge flows. This workshop would ideally be organized in cooperation with other international organizations with expertise in the topic (notably, the International Organization for Migration, the International Labour

Organization, UNCTAD, and the World Bank). Experts would include migration specialists from various fields (economics, education, law, science and technology) and IP experts to explore what studies could realistically be conducted, especially in light of available data.

The results of the research project and the proposed research agenda would be submitted to the Committee on Intellectual Property and Development for further consideration and recommendations accordingly.

## 2.2. Objectives

The proposed project would have two objectives, which emanate directly from DA Recommendation 39:

1. To contribute to greater awareness and enhanced understanding of the IP and brain drain linkages among policymakers.
2. To develop an informed research agenda on IP, migration, and associated knowledge flows, providing the basis for future studies on this topic.

## 2.3. Delivery Strategy

The first project activity – the mapping of scientist migration flows – will be implemented in-house, drawing on available patent databases (especially the PCT statistical database and, possibly, national patent databases). Migrating scientists will be identified by comparing information on inventor nationality and inventor residence. A preliminary investigation suggested that this information is available for a large number of patent documents, but not universally so; in addition, this approach relies on a number of strong assumptions on how scientists move from one country to another. There is thus a risk that the mapping will be incomplete and/or biased. Assessing the degree of these measurement difficulties will be an integral part of the project.

The success of the second project activity will depend on the active participation of other international organizations and migration experts. Careful prior consultations with relevant institutions and sufficient lead time for organizing the expert workshop will increase the chances of high quality participation in the workshop.

## 3. REVIEW AND EVALUATION

### 3.1. Project Review Schedule

A mid-term progress report (after 9 months) and a final project review report (upon project completion) will be prepared. The project outputs will be submitted to the CDIP for further consideration.

3.2. <u>Project Self-Evaluation</u>	
<i>Project Outputs</i>	<i>Indicators of Successful Completion (Output Indicators)</i>
Report on mapping of scientist migration flows	Research report published on WIPO website
Expert workshop	Workshop conducted with positive evaluation by participants
<i>Project Objective(s)</i>	<i>Indicator(s) of Success in Achieving Project Objective (Outcome Indicators)</i>
Objective 1	Number of downloads and citations of research report
Objective 2	Follow up research activities on IP and brain drain by WIPO and other institutions

4. IMPLEMENTATION TIMELINE

<u>Activity</u>	<u>Quarters</u>							
	2012				2013			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Recruitment of SLC for project implementation	X							
Conduct of research		X	X	X	X	X		
Organization and delivery of expert workshop		X	X	X	X	X		
<b>REVIEW SCHEDULE</b>								
Mid-term progress report and final project review					X			X

BUDGET (non-personnel resources)

Table 1 – Project Budget by Cost Category and Year

<u>Cost Category</u>	<u>Budget (Swiss Francs)</u>			
	<u>2012</u>	<u>2013</u>	<u>Year</u>	<u>Total</u>
<i>Travel and Fellowships</i>				
Staff Missions				
Third-party Travel		100,000		100,000
Fellowships				
<i>Contractual Services</i>				
Conferences		10,000		10,000
Experts' Honoraria		40,000		40,000
Publishing				
Others				
<i>Equipment and Supplies</i>				
Equipment				
Supplies and Materials				
TOTAL		150,000		150,000

BUDGET (personnel resources, where applicable)

Table 2 – Project Budget by Cost Category and Year

<u>Cost Category</u>	<u>Budget (Swiss Francs)</u>			
	<u>2012</u>	<u>2013</u>	<u>Year N</u>	<u>Total</u>
SLC (P-3 equivalent)	126,000	63,000		189,000
TOTAL	126,000	63,000		189,000

[End of Annex and of document]