INTEGRATED SAFEGUARDS DATA SHEET
APPRAISAL STAGE

Report No.: ISDSA920

Date ISDS Prepared/Updated: 07-Sep-2012

I. BASIC INFORMATION

1. Basic Project Data

<table>
<thead>
<tr>
<th>Country:</th>
<th>Mexico</th>
<th>Project ID:</th>
<th>P126838</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name:</td>
<td>Second Phase Innovation for Competitiveness APL (P126838)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Team Leader:</td>
<td>Cristian Quijada Torres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Appraisal Date:</td>
<td>10-Sep-2012</td>
<td>Estimated Board Date:</td>
<td>25-Oct-2012</td>
</tr>
<tr>
<td>Managing Unit:</td>
<td>LCSPF</td>
<td>Lending Instrument:</td>
<td>Adaptable Program Loan</td>
</tr>
<tr>
<td>Sector:</td>
<td>General industry and trade sector (40%), Tertiary education (30%), Central government administration (20%), Sub-national government administration (10%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theme:</td>
<td>Technology diffusion (40%), Education for the knowledge economy (30%), Other public sector governance (20%), Export development and competitiveness (10%)</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Financing Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrower</td>
<td>0.00</td>
</tr>
<tr>
<td>International Bank for Reconstruction and Development</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Environmental Category: B - Partial Assessment

Is this a Repeater project? No

2. Project Objectives

The second phase project development objective is to strengthen the capacity of CONACYT and state level STI institutions to formulate innovation policies and to improve the effectiveness of the Borrower's Innovation System.

This will be achieved by:

- Strengthening states’ capacities to formulate, implement and evaluate policies and programs to foster innovation;
- Continuing to support the formation and supply of a qualified and skilled labor force in the fields of science and technology;
Supporting the establishment and development of intermediary agents to accelerate the process of technology transfer to the productive sector; and

Strengthening CONACYT’s institutional capacity to implement a multi-annual, strategic plan to monitor and evaluate its portfolio of projects and programs.

3. Project Description

The proposed program is divided into four components that will address some of the main issues affecting the innovation system in Mexico. These are: the institutional capacity at the state level to design an innovation strategy and initiatives that are tailored to local needs and context and that have a large degree of buy-in from key local stakeholders; the supply of highly skilled human capital in areas of science and engineering, and the improvement of quality standards of national graduate programs; the linkages between universities and research centers and the private sector to facilitate and promote the flow of ideas into applications with social and economic impact; and lastly the systematic planning of monitoring and evaluation activities with the goal of improving effectiveness, targeting and transparency of innovation policies. The choice of components responds to CONACYT’s desire to continue its collaboration with the Bank to deepen some efforts and to accompany them on new initiatives. It is also a pragmatic choice based on the client’s scope of policy action.

Component 1: Strengthening sub-national Innovation Systems (US$ 35 million)

This component will support sub-national innovation systems by strengthening states’ capacities throughout Mexico to formulate, implement and evaluate policies and programs to foster innovation. Activity 1.1: Strengthening states’ capacities to design, implement and evaluate policies and programs to foster innovation. This activity consists of implementing a series of training courses in key issues related to innovation policy relevant to the Mexican context. These courses will be implemented throughout the life of the project. The first and introductory course could serve as an introduction for local government officials, policy makers, representatives from the private sector, researchers and other interested stakeholders on key issues related to innovation and innovation policy. Subsequent courses will cover more specific topics according to needs identified by CONACYT, but potential topics include: technology parks as innovation policy, technology transfer offices, entrepreneurship, incubators, technology extension services, and monitoring and evaluation systems for innovation policy, among others. It is expected that the project will organize on average 2 courses per year throughout the life of the project. By generating these regular interactions between key stakeholders, the project will strengthen the social capital and connections among actors which are key to developing trust relationships that underlie successful private-public initiatives in innovation efforts.

Activity 1.2: Support to select states to strengthen subnational innovation strategies and action plans. While Activity 1.1 seeks to generate basic knowledge on innovation policy issues and to begin to create interactions among stakeholders, this second activity takes the next step in that it brings the relevant actors of a state’s innovation system to drive the process of thinking about their own local challenges and coming up with a shared vision and strategy for achieving results according to local priorities and needs. The project will select a group of up to six states to benefit from this more targeted and focused assistance. One state from each region in the country will be selected based on:

a. Proposals submitted to the technical committee for evaluation. The proposals must include an agreement to be entered between the local government and representative members of the private sector whereby the parties express their interest in and commitment to working to support and improve their state innovation system by among other things participating in the strategy design.
activity supported by the project.

b. Independent assessment of stakeholders’ capacity and commitment to improving the state innovation system.

The project will support the selected states in the discussion, definition and design of a state strategy for innovation to be agreed upon by key stakeholders in the local innovation system (government, private sector and academia), and in the drafting of an action plan to implement the strategy. This exercise will be led by local stakeholders, with the support of hired specialized consultants to facilitate, structure and inform, through technical analysis and international experiences, the dialogue and discussions that will lead to the design of a strategy and action plan for each state involved in this activity. It is expected that these initiatives will last from 6-18 months, depending on the level of capacity and social capital available in each state.

Activity 1.3: Support to research, development and technology innovation projects to resolve a common development challenge. While the first two activities help build the capacity so that states can prioritize initiatives and interventions related to innovation, this component actually funds R&D projects that seek to have real social and economic impact. The project will support FORDECYT, an already established program within CONACYT that seeks to encourage collaboration among states and municipalities to address common challenges that can be resolved through research and development projects. This push for collaboration across states on common challenges tries to avoid duplication and fragmentation of resources.

A technical committee will review the proposals and make decisions on projects to be supported. Projects will have up to 36 months to complete implementation of their activities. The project will finance up to 80 percent of the total cost of the project, with the other 20 percent of funds being provided by the counterparts. Eligible expenditures include: hiring of specialized services, supplies, tests, software, training, purchase of specialized equipment, and small and specialized infrastructure, such as laboratories, among others. The call for proposals (Convocatorias) and the agreements between FORDECyT and the beneficiaries will include the procurement threshold and the obligation for the beneficiaries to follow Bank procurement Guidelines and procedures. These agreements will also include fraud and corruption clauses.

The program will conduct a screening of the projects for potential environmental impact. Projects deemed to have potential environmental impact will need to provide evidence throughout its implementation of compliance with all necessary environmental permits and certifications to comply with safeguard 4.01. These environmental requirements will be identified during the initial screening process. The program will also provide support to improve the quality of projects at-entry, by facilitating consulting services to help potential beneficiaries improve drafting of the project proposal.

Component 2: Formation of Advanced Human Capital (US$ 35 million)

The component will build on the first phase of the APL and will continue to support the formation of advanced human capital through its funding of overseas scholarships for graduate studies (Masters and PhD levels) in priority areas established in the PECiTI. Moreover, the component will also help improve the quality of domestic graduate programs. Activities planned under Component 4 will also support efforts to consolidate mechanisms to monitor and evaluate the scholarships program’s performance.

Activity 2.1 Support overseas scholarships in graduate science and technology programs. The program will support continued efforts by CONACYT to increase the supply of graduates in priority areas of science and technology identified in the PECiTI (or an equivalent plan to be drafted for the
next 5 years). The program will specifically support one cohort of PhD students and at least two cohorts of Masters students seeking degrees in centers of excellence overseas.

Activity 2.2: Evaluation of the certification process of national graduate programs. The program will support the improvement of the certification process of graduate programs (the PNPC, in its Spanish acronym) in Mexico. CONACYT will seek to have the PNPC certification process assessed by an international independent panel (either as an ad-hoc panel or through a more formal structure, such as the European Association for Quality Assurance in Higher Education, ENQA). The program will support this effort by hiring expert consultants to help CONACYT prepare for the assessment, and working afterwards to support implementation of recommendations provided during the assessment.

Component 3: Accelerating Technology Transfer (US$ 17 million)

The proposed component will build on the first phase of the APL by scaling up initiatives to help transform technological developments into viable high value products and services. More specifically, the component will support the consolidation and early deal flow of Knowledge Transfer Offices (OTT, in the Spanish acronym being used by CONACYT), whose primary objective is to help generate a market for new technologies, to link universities and research centers to the productive sector and to assist researchers/entrepreneurs to bring their technologies to a productive purpose through partnerships with industry, licensing and/or establishment of a new venture. These types of linkages between university and the market are notoriously weak, especially so in Mexico. They require public support to overcome high transaction costs inherent in these interactions and incomplete information that actors have a priori on the benefits arising from these types of collaborations and to maximize spillovers effects that these activities often generate.

Activities supported by this Component will be funded using FOINS, a trust fund run by CONACYT. OTTs to be supported by the program will be selected through a competitive process. The selection criteria are being discussed by CONACYT and the Bank, and clear selection guidelines will be included in the Operational Manual.

Activity 3.1: Capacity building and support for OTTs. The program will support training activities to improve the capacity of the OTTs to fulfill their role in the commercialization of research and technical assistance to support the overall implementation of the OTT initiative. Training modules will be tailored to identified needs, and will likely include specific training in intellectual property management, technology scoping, financing, marketing, and spin offs, among others. OTTs selected into the program will benefit from this training.

The technical assistance will consist of support to design and implement a network of OTTs to facilitate the exchange of experiences and best practices among OTTs and an evaluation of the initiative by independent experts, with recommendations to refine and improve the program.

Activity 3.2: Supporting OTTs by stimulating the demand for their services. The program will support the OTTs in their first years of operation to help them consolidate expertise and build a client base for their projects. This support will include: i) co-financing of the costs of implementing their portfolio of commercialization subprojects, and ii) co-financing of the OTTs’ assistance to private firms or other institutions (such as universities and research centers) with respect to technology development and commercialization subprojects to help said firms and/or institutions. The selection of these subprojects will be done through calls for proposals, which for the second type of subprojects will likely include multiple calls for proposals. Similar procurement arrangements and environmental impact screening to that of Activity 1.3 will apply for these subprojects.

The portfolio of commercialization subprojects, to be developed by each OTT on the basis of their identified projects with the greatest potential of achieving successful commercialization will then be presented to the program for approval. It is expected that the development of the portfolio of subprojects will include activities such as prototyping, market and legal studies, and product testing.
Once approved, the portfolio of projects will be evaluated on an annual basis, based on achievement of milestones established in the project implementation plan. Given the inherent uncertainty over the development of these subprojects, it is expected that changes to the portfolio will occur, and the evaluation of the subprojects and of the portfolio as a whole should take this into account. Overall project support to OTT’s portfolio of subprojects will be partial and will decrease overtime, to encourage greater sustainability.

The commercialization services provided by the OTT that will be co-financed by the project can include: (a) contract research; (b) IP management services, including preparation of patent application and commercialization of patents; (c) preparations for spin-offs. Eligible activities will include prototyping, market and legal studies, and product testing. For subprojects involving private sector companies, the co-financing support will be focused on proposals presented by MSMEs, and will cover a part of the cost of the service to be procured the first time the company seeks support, and a decreasing share for repeat support. After a few subprojects (2-3), it is expected that the company will pay in full for the services needed. For public sector organizations that wish to enlist the OTTs services, the co-financing will follow a similar tapering support. Clear and precise guidelines and rules for the support to be provided will be included in the Operations Manual.

Finally, the OTTs will be monitored and evaluated on a series of specific indicators that are being agreed upon between CONACYT and the Bank.

Component 4: Strengthening CONACYT’s Planning, Monitoring and Evaluation System (US$ 3million)

This component will strengthen CONACYT’s institutional capacity to plan and implement the monitoring and evaluation of its portfolio of programs and instruments. This support includes the implementation of important evaluations, training and capacity building activities, and technical assistance in various key issues for CONACYT, including assistance to review its planning capacity and ability to build a coherent and comprehensive monitoring and evaluation system for the institution. This last technical assistance in particular will support the improvement of its planning capacity, by reviewing what programs and instruments should be evaluated, when they should be evaluated (frequency) and how (evaluation methods to be used), taking a multi-annual approach to planning. This should be the basis for the subsequent review of CONACYT’s current M&E system and identification of main gaps in availability of required skills, data and infrastructure that will be summarized in an action plan.

Moreover, the project will also monitor and evaluate interventions it is supporting through components 1, 2 and 3. For the component that supports scholarships, the project will be financing a broader evaluation of CONACYT’s scholarship program, including both scholarships for domestic and international programs, with a focus on impact in completion rates, labor re-insertion, and scientific production among others. For components 1 and 3, while activities supported do not lend themselves to an experimental type impact evaluation, given their likely small number of beneficiaries, non-standard, demand driven and very diverse nature of projects to be supported, nonetheless, the following assessments will be carried out:

- For activity 1.2, an independent evaluation by a team of expert consultant will be made of the strategies and action plans developed by states supported by the project, and this will be compared to potential strategies and action plans that other states not supported by this project may have developed, to gauge, at least qualitatively, the value added of project support and assistance in this activity.

- Similarly for activity 3.2, TTOs not supported by the project will also be monitored periodically, to the extent possible, so that their performance in terms of key indicators can be measured and compared to the TTOs supported by the project.
Specific methodological designs for these evaluations will be developed in collaboration with CONACYT by an M&E expert to be incorporated into the project team. The goal will be to provide a meaningful evaluation of the activities, taking into account the difficulties inherent in the exercise.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

All states of Mexico.

5. Environmental and Social Safeguards Specialists

Ricardo Hernandez Murillo (LCSEN)
Jose Luis Calderon Bartheneuf (LCSEN)

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<thead>
<tr>
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<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>A category B has been established and individual subprojects will be submitted to a screening process to determine the appropriate mitigation measures.</td>
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<td>Natural Habitats OP/BP 4.04</td>
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<td>Forests OP/BP 4.36</td>
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<td>Pest Management OP 4.09</td>
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<td>Physical Cultural Resources OP/BP 4.11</td>
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<td>Projects on International Waterways OP/BP 7.50</td>
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<td>Projects in Disputed Areas OP/BP 7.60</td>
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II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the Restructured project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The subprojects are expected to fall into mostly C and some in B categories, and will be subject to a screening and follow up process based on a specifically developed Environmental Management Framework (EMF) which will guarantee the compliance of World Bank safeguards and national legislation. No potential large scale, significant or irreversible impacts are expected.
2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

None expected. Due to the previous types of projects supported by CONACYT and due to the fact that exclusion list applies, most of the subprojects will be category C and a low percentage will be category B and these will be subject to follow up by CONACYT and the World Bank according to the application of the EMF developed for this purpose with Bank assistance. No indirect or long term impacts are expected.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

N/A

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

Since this is a category B project, the Bank supported CONACYT in the development of an Environmental Management Framework (EMF) and training key personnel in its application to achieve that:

a) CONACYT must screen subprojects for environmental and social risks and impacts
b) CONACYT ensures that beneficiaries carry out environmental assessment for their respective (sub)project
c) CONACYT verifies that subproject complies with local laws and is consistent with Bank Safeguards Policies
d) CONACYT uses the EMF developed specifically for the project and based on PPAH (now EHSGs) as a benchmark for acceptable environmental performance
f) CONACYT applies an exclusion list (“negative list”) to prevent financing this type of projects

The above translates into requiring CONACYT to have an acceptable Environmental Management Systems (EMS), the extent of which is commensurate with the project risks.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The beneficiaries of the loan will be various universities and research centers that apply for CONACYT’s economic support to develop their portfolios of research and commercialization projects. These institutions, at least the most relevant ones, were the key stakeholders in the consultation process since they will have to be aware of the EMF application and follow up by CONACYT and the World Bank. Public consultation was held in CONACYT’s premises in Mexico City on August 29, 2012, with videoconferencing links to many regional offices. The final version of the EMF, incorporating comments received during the public consultation process, will be disclosed at CONACYT’s web page and in the World Bank’s Infoshop before appraisal.

B. Disclosure Requirements Date

<table>
<thead>
<tr>
<th>Environmental Assessment/Audit/Management Plan/Other</th>
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<tbody>
<tr>
<td>Was the document disclosed prior to appraisal?</td>
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<tr>
<td>Date of receipt by the Bank</td>
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<td>Date of &quot;in-country&quot; disclosure</td>
<td>20-Aug-2012</td>
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<tr>
<td>Date of submission to InfoShop</td>
<td>05-Sep-2012</td>
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<tr>
<td>For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors</td>
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<tr>
<td>If the project triggers the Pest Management and/or Physical Cultural Resources policies, the</td>
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</table>
respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

<table>
<thead>
<tr>
<th>OP/BP/GP 4.01 - Environment Assessment</th>
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<tbody>
<tr>
<td>Are the cost and the accountabilities for the EMP incorporated in the credit/loan?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
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<table>
<thead>
<tr>
<th>The World Bank Policy on Disclosure of Information</th>
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<tbody>
<tr>
<td>Have relevant safeguard policies documents been sent to the World Bank's Infoshop?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
</tr>
<tr>
<td>Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
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</table>

<table>
<thead>
<tr>
<th>All Safeguard Policies</th>
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<tbody>
<tr>
<td>Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
</tr>
<tr>
<td>Have costs related to safeguard policy measures been included in the project cost?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
</tr>
<tr>
<td>Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
</tr>
<tr>
<td>Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?</td>
<td>Yes [✓]  No [ ]  NA [ ]</td>
</tr>
</tbody>
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III. APPROVALS

| Task Team Leader: | Cristian Quijada Torres |
| Approved By |  |
| Sector Manager: | Name: Thomas Edward Haven (SM)  Date: 12-Sep-2012 |