



**External Evaluation of UNCTAD's Project AC -  
Strengthening Science, Technology and Innovation Policies  
for Development in Latin America\***

**UNEDITED COPY**

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## EXECUTIVE SUMMARY

This report presents the results of an external evaluation of UNCTAD's implementation of the Development Account Project - *Strengthening Science, Technology and Innovation Policies for Development in Latin America*. The project was implemented in the period 2009 to 2012, during which UNCTAD provided Science, Technology and Innovation Policies (STIP) reviews to the governments of Peru, El Salvador and the Dominican Republic.

This evaluation examines the project performance in accordance with its logical framework, and focuses on assessing the relevance, effectiveness, efficiency, sustainability, and impact of the project, among other issues. The intended audience for this evaluation report includes UNCTAD's management, the project team, the Capacity Development Office/ Development Account of DESA, beneficiary country stakeholders, UNCTAD's member states, and other stakeholders and interested parties.

The evaluator used a combined approach to carry out the evaluation: desk review of published and written reports, survey questionnaire and interviews.

In general, the STIP reviews and the accompanying activities did achieve the planned objectives by providing practical, reliable and accurate policy recommendations, coupled with outstanding analysis of the national innovation system of each country. The response from the surveys and the interviews revealed a high level of satisfaction by all stakeholders and beneficiaries.

This evaluation observes that the STIP reviews played a good and important role of awareness raising and facilitated consensus building in beneficiary countries. Two out of the three beneficiary countries have put some of the recommendations from their respective STIP Reviews on the top of their political agenda and some evidence suggests some recommendations have either been implemented or would be implemented in the medium-term. Such outcomes are encouraging, particularly as ensuring implementation of the recommendations is beyond the mandate and budget of this Development Account project.

Regarding relevance of the project, the evaluator found that the STIP reviews did actively involve some of the beneficiary country counterparts in the project design, including initiation and selection of sector studies and the establishment of national project counterpart teams, hence ensuring close customization of activities. UNCTAD staff and international experts who participated in the review activities were considered as suitable providers of the STIP reviews. More importantly, UNCTAD has been flexible in using alternative conceptual frameworks, which are better adapted to the specificities of each of the beneficiary countries, to analyze the national innovation system and provide corresponding policy recommendations.

In the area of project effectiveness, the activities are determined to have achieved planned objectives. The evaluator observed that UNCTAD provided an outstanding SWOT analysis of the beneficiary countries' national innovation system, and provided practical, reliable and accurate policy recommendations and clear roadmaps for implementing recommendations. However, the evaluator found that some compromises were reached in the choice of sectors to be included in a Review, the availability of data for the preliminary literature review, and the preparation of field visits, all of which had an effect on the

conduct of the reviews. It also appeared that the two-week field missions are too short for effective information collection and interaction with stakeholders.

When evaluating project efficiency, the evaluator observed that in all countries, the STIP reviews were completed within reasonable time parameters, and a high level of output was achieved within the limited project budget. However, the STIP review project was not fully successful in using modern communication tools to facilitate information exchange and coordination in each country as initially planned in the project, and the lack of suitable human capacity in one country to cooperate on the Review led to considerable delays.

In terms of sustainability and impact of the project, there are good signs that in two countries, some STIP review recommendations either have been or are going to be implemented. UNCTAD ensured inter-agency collaboration and involved UN ECLAC in the project. Positive comments were received that UNCTAD has done a good job in terms of awareness-raising and initiating policy dialogue among stakeholders. However, the full impact of the project can only be evaluated in a few years' time.

On the basis of the findings and conclusions, the evaluation makes the following recommendations to UNCTAD:

- Official requests for STIP Reviews that are submitted to UNCTAD by countries should be better guided by clear requirements and criteria for embarking on such Reviews, to achieve better clarity on the expectations for each STIP Review;
- More thorough preparation of field visits in order to improve information gathering;
- Ensure better coordination through beneficiary country counterparts to maximize the representation of all stakeholders, including beneficiary country ministries and their relevant administrative units, academia, and the private sector;
- Improve sustainability and impact of the project by establishing mechanisms for monitoring implementation of the recommendations;
- Intensify inter-agency collaboration.

## **Chapter 1.- Introduction**

### **1.1. Project background<sup>1</sup>**

Technological upgrading in the productive sector is a necessary condition for long-term growth, development and improvement of living standards. Science, technology and innovation (STI) also offer major contributions to the achievement of social and environmental goals such as improving access to health and education, managing natural resources, addressing climate change or preserving biodiversity. As knowledge-based and technology-intensive processes generate an increasing share of added value, developing countries need to upgrade their capacity to generate and absorb knowledge and technology and related capacities. Developing countries need to fine-tune continuously their STI-related policies across all sectors of the economy and also support innovative development at enterprise and government levels.

The UNCTAD Project AC - Strengthening Science, Technology and Innovation Policies for Development in Latin America (STIP reviews or reports) is aimed at assisting developing countries in Latin America in building their STI capacity, with a view to ensuring that national STI programmes become an instrument for supporting relevant components of the national development agenda. The STIP reviews are based on an interactive process with the Government. The STIP reviews assist developing countries to assess the effectiveness of their STI-related policies and to adjust their policies and institutions in order to build a national STI framework that is conducive to technological growth and innovative development. They include an analysis of the country's strengths, weaknesses, opportunities, and threats (SWOT) to development and identify the different elements – legal instruments, policies, measures and practices – that make up their current STI framework; they pinpoint systemic and structural weaknesses; they evaluate the STI-related components of sectors and priorities; and provide options and recommendations on national policies. The outcome of this work is the publication of a Science, Technology and Innovation Policy (STIP) review for each of these countries.

### **1.2. Evaluation background**

The purpose of this exercise is to examine the performance of this project in accordance with its logical framework. The evaluation reviews all activities that have been implemented under this project in the three beneficiary countries, namely, the Dominican Republic, El Salvador and Peru.

The evaluation assessed the relevance, effectiveness, efficiency, sustainability, and impact of work implemented by the STIP review project.

### **1.3. Evaluation methodology**

The methodology used for this evaluation study comprised the following:

- 1) Desk review of a broad range of published or written reports and other relevant documents;
- 2) Questionnaires or surveys to national and international experts and other stakeholders involved<sup>2</sup> in the STIP review;

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<sup>1</sup> Adapted from the DTL\_ST&ICT\_Cluster XV report 2010 (UNCTAD, 2011)

3) In-depth interviews in Geneva and through teleconferences.

The survey questions included in this report are based on the Terms of Reference (ToR) of this evaluation. The design of the survey is supported by the analysis of the 2009 projects document and the methodological framework report<sup>3</sup> (UNCTAD, 2011).

The evaluation paid specific attention to the inclusion of experts in the STI field who were not involved in the preparation of the STIP reviews, in order to collect neutral and third-party opinion of the project performance.

The evaluation also made specific efforts to review and assess if STIP analysis and policy recommendations are considered to be of good quality and credibility, and the project and process management of the STIP review.

#### **1.4. Limitations**

The evaluation exercise was scheduled for a very short time frame of four weeks, which means that the activities were carried out in a fast pace and the quick response to the survey questionnaires was crucial. Due to time pressure, not all foreseen stakeholders provided feedback in the two to three weeks' window of the survey period. The survey questionnaires received seven, six and four responses from stakeholders in Peru, El Salvador and the Dominican Republic respectively.

Despite the fact that maybe more collaboration could have been obtained from policy makers and from the production sector, the evaluator personally feels that the information obtained and follow-up on specific issues following interviews is sufficient to give a good overview about the quality and impact of the STIP reviews, because a very intensive cooperation was obtained from the international experts of the beneficiary countries.

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<sup>2</sup> Target respondents include: the UNCTAD team, the team of international, and of national experts; beneficiary country policy makers, the national representatives of El Salvador, Peru and the Dominican Republic to UNCTAD, and the representatives of the production sector.

<sup>3</sup> UNCTAD, 2009: the project document 08/09 AC: Strengthening Science, Technology and Innovation Policies for Development in Latin America. UNCTAD; 2011: the UNCTAD report "A framework for science, technology and innovation Policies Review (STIP review). This framework indicates some specific objectives although it also mentions indirectly some general aims like in the preface or other parts of the publication. Also for each country specific questions will be included based on the corresponding STIP reviews. Basically it will be asked what is done with each of the specific recommendations. It is important to note that this methodological framework was elaborated after much of the work being evaluated here was done and drew to a significant extent from the experience gained in this project. However it was used as a point of reference to define the research questions of this project

## **Chapter 2.- Main Findings**

### **2.1.- Relevance**

The evaluation questions pertaining to relevance of this project were as follows:

1. Whether the project design and choice of activities/deliverables have properly reflected the needs of the beneficiaries, taking into account UNCTAD's mandates, and alignment with the objectives of the Development Account;
2. Whether UNCTAD was a suitable provider of the project activities/deliverables;
3. Whether the activities and outputs of the programme were consistent with the intended outcomes and impact;

Each STIP Review is intended to provide an in-depth analysis of the strengths, weaknesses, opportunities and threats (SWOT) of the national innovation system of the beneficiary country; and based on the SWOT analysis, the experts provide specific, practical, reliable and accurate policy recommendations to the country.

In general, the evaluator found that the quality, completeness and appropriateness of STIP reviews can be considered as very good. Most stakeholders are satisfied with the SWOT analysis, the review of the STI policies and consider that the recommendations are appropriate. In conclusion, the activities and outputs of the program were consistent with the intended outcomes and expected achievements.

The positive opinion of all the stakeholders shows that the project design and choice of activities and the final deliverables have properly reflected the needs of the beneficiaries. The STIP reviews were successfully carried out, following exactly the methodology suggested in the proposal. Moreover the participation of all stakeholders was considered by the stakeholders, in general, as satisfactory to very good. Some international experts did value very positively that the STIP review use an alternative method to analyze the national innovation system; one that is more appropriate for developing countries.

Representatives of the three beneficiary countries interviewed through the evaluation exercise expressed their satisfaction, and indicated that the reports are of a very high quality and that the recommendations are very useful and to the point. The survey responses from 17 experts and stakeholders confirmed this opinion. For most of the questions that assessed the overall quality of the STIP review, the respondents gave an average of 4.5 points out of a maximum of five points. In the case of the Dominican Republic, the assessment of the "policy recommendations" was on average, 3.5 points. However, the evaluator also notes that respondents who commented on the STIP review for the Dominican Republic commended it as the most comprehensive and systematic review to date and probably the only one to be formulated from the viewpoint of innovation, which is distinct from scientific research or technology acquisition.

The evaluator observed that each STIP review has put into motion, important and necessary awareness-raising and consensus-building processes in the three countries. Even though implementation of the recommendations in each of the Reviews has not yet occurred, the reviews have triggered some initial positive outcomes. As one respondent mentioned "the most important aspect is not the STIP review report in itself, which has its importance due to its existence. However the most important aspect is the process to achieve this product: the consensus obtained; the involvement of stakeholders and institutions and; the level of suitability of the recommendations". These facts reflect the

rising level of awareness, which will have an important role to ensure a sustainable long term impact from the reviews. In fact, survey findings reveal that the STIP review report becomes a very important source of information for those who want to obtain information about or want to analyze the national innovation systems and the STI policies.

UNCTAD staff and the international experts were considered as suitable providers of such assistance, with a very good level of expertise and involvement, as confirmed by the findings from the surveys and interview respondents.

UNCTAD has been flexible in using alternative conceptual frameworks, which are better adapted to the specificities of each of the beneficiary countries, to analyze the national innovation system and provide corresponding policy recommendations. However, the evaluator also found out in one particular country, at the National Stakeholders workshop, several academics complained that applying international standards in doing the assessment on STI was not relevant for their country. Due to the limited duration of the evaluation exercise, this point could not be further substantiated.

The evaluator also received some feedback from a stakeholder who felt that UNCTAD could have adopted a more flexible approach in its recommendations. This related in particular, to a recommendation as to which national institution (Ministry or Agency) should lead the STI agenda in the country. However on further probing, this finding was not further substantiated, but instead, the evaluator found that the criticism stemmed from some personal tensions between some of the stakeholders involved in the process. Generally, international experts engaged in the STIP reviews were perceived by the country stakeholders as being neutral and more open to looking for alternative solutions for institutional settings or reforms than the national experts.

## **2.2.- Effectiveness**

1. Whether the activities have achieved planned objectives;
2. Whether the scope of the activities has been adequate in view of the existing resources and expertise;
3. Effectiveness of and obstacles during the STIP review process.

In general the STIP reviews and the underlying activities did effectively achieve the planned objectives: providing practical, reliable and accurate policy recommendations, based on an outstanding SWOT analysis of the national innovation system.

The policy recommendations were successful in the way that they strike a balance between specific recommendations and holistic or general ones. At the same time, they mapped out a vision for the beneficiary country. The combination between specific and general recommendations proves to be realistic, practical and achievable, according to the survey respondents. In the case of El Salvador and Peru, experts and stakeholders commented that clear, appropriate and achievable recommendations were proposed with a clear roadmap for their implementation. In the case of the Dominican Republic, the evaluator observed that the recommendations seem to be more of a general nature. This last aspect may be due to the fact that in this country the systemic weaknesses on STI are more prevalent than those in El Salvador and Peru, thus they call for stronger efforts to organize the institutional setting that can enable the operation of a national system of innovation and related STI policies.

The STIP reviews involve an in-depth analysis of STI related policy and programmes. Initially perceived by some stakeholders as some sort of external audit of their work, the project team would sometimes face big challenges in getting cooperation from some stakeholders. However, it turned out that the project team is successful in building trust with the stakeholders as the project progresses, and thus more effectively built consensus.

Two important aspects that influence the outcome of the STIP review process are associated with the initial preparation of the STIP review: the quality and comprehensiveness of the official request for a STIP review, and the profile of the national counterpart team. The evaluator believes that a well communicated official request for a STIP review raised by the potential beneficiary country could very well facilitate the implementation of the STIP review, ensuring effectiveness of the review, and avoiding conflicts on preferences that would otherwise emerge if expectations are not clarified from the beginning. A clear structure with clear roles and responsibilities of different stakeholders of the national counterpart is essential in coordinating, facilitating and monitoring the STIP review implementation. The national counterpart team should have full representation of all government and academia stakeholders relating to STI and the relevant private sector representatives. It is also important that the field visits undertaken could ensure academia and private sectors' engagement in interviews and discussions. All of the three beneficiary countries had problems defining precisely the objectives and expected outcomes of the STIP review due to limited prior exposure to such issues, which highlighted the importance of UNCTAD's role in this regard.

It was observed that at least in one instance, compromises on the focus of the Review had to be made due to divergent views as to the purpose of such Reviews. For instance, in one country, the Government believed that the STIP Review could play the role of a prospects study and trigger technological development in a field in which the country had not yet the capacity. The STIP Reviews are however, intended to provide an analysis of, and recommendations for improving the innovation systems of the most relevant existing production sectors, especially those playing important roles in the country's GDP. As each STIP Review is strongly dependent on the support and participation of each country, the Review was conducted as per the views of the beneficiary country. The period during which such discussions took place however caused some delays to the process, and some reservations about the effectiveness and appropriateness of the final product were voiced to the evaluator in this regard. Nonetheless, the survey and interview results proved that the country representatives are very satisfied with the work done by the STIP review team.

STIP Reviews require comprehensive, accurate and reliable information in order to ensure their robustness and relevance. Good collaboration with national counterparts, and adequate resources should be devoted to ensure enough information is collected, whether it is for the purpose of selecting sectors for STIP review, or for the purpose of doing SWOT analysis of the sectors at a later stage. In each country two field visits were made. The first one was used as an intensive information-gathering and stocktaking mission to obtain and complete the required information and to discuss with the stakeholders the current situation in order to obtain qualitative background information for the SWOT analysis of the national innovation system and the structure and effectiveness of the STI policies. The second field visit is to discuss the draft report with the stakeholders and to analyze and discuss the appropriateness of the recommendations. The field missions, if well planned, would compensate the limitations and difficulties of desk research or getting comprehensive information from the beneficiary country through telephone or emails.

The evaluator found that some field missions were not carried out successfully as planned, although the agenda of the field visits was intensive and comprehensive. Extended absences of relevant national counterparts, missing data, and inadequate cooperation affected the effectiveness of such data collection. For such reasons, the two-week field missions are in fact too short. However, as the budget does not permit longer visits, the preparation of the field missions is very important.

Although almost all stakeholders, survey and interview respondents commended the expertise and qualifications of UNCTAD staff and international experts, however, respondents from two of the countries involved noted that their respective Reviews could have benefited from more careful selection of the national experts involved in the Reviews. The evaluator concurs with the comments that finding good experts in countries where national innovation system is still being developed is not an easy task. Luckily, the shortage of skills of some national experts was to some extent balanced by the outstanding jobs done by the international experts.

Comments were also received that the STIP review reports could have also addressed the role of intellectual property rights, transfer of technology and know-how and the ways in which these can be promoted by better coordination with other UN agencies, besides investment agreements. The STIP reviews are a good instrument, but some respondents said that attention should also be given to how the beneficiary country can acquire technologies and absorb technologies. Further, some respondents suggested that the STIP reviews should also give a solution regarding the establishment of a mechanism to encourage and improve the interaction of all stakeholders within the innovation system in each country.

### **2.3.- Efficiency**

1. Whether project schedules were met or projects were completed within reasonable time parameters;
2. Whether the activities have used the most efficient means in delivering the activities, for example, through the use of local resources or of modern communication tools, when appropriate;

Generally, the evaluator observed that in all countries, the STIP reviews were completed within reasonable time parameters, and a high level of output was achieved within the limited project budget. For instance, in some of the beneficiary countries, the field mission was quite intensive and included interviews in regions outside the capital.

The STIP review project for the three Latin America countries was approved in 2008. The project started in May 2009 after the financial resources were made available from the Development Account, and finished in July 2012. A request for extension of the project was obtained to ensure the dissemination and formal presentation of the STIP review report of the Dominican Republic, and the latter is planned to take place at the next session of the United Nations Commission on Science, Technology and Development (CSTD) in May 2013.

However for each country's project, some specific problems led to the rescheduling of initially planned activities. For instance, the lack of suitable human capacity at the country level to cooperate on the Review in one instance led to considerable delays. Normally the second field mission should take place some three to four months after the first one to

discuss the draft report and appropriateness of the recommendations. However, in one instance, the feedback from the national counterpart on the first draft report came one year later, despite several requests that were made by UNCTAD. In another country, there was an initial delay of some activities due to the problems with finalizing the exact composition of the national counterpart team; and the unclear and somewhat duplicate responsibilities between stakeholders delayed the decision making process towards the recommendations. Also, changes in governments and change of persons in charge of STI in two countries caused further delay of the presentation of the final report and some other activities, which finally led to an extension of the project timeline.

The participants in the STIP reviews perceived that the funds were used very efficiently; with a limited quantity of resources, a high level of outputs were reached as each Review incorporated extensive data collection and consultations. Moreover, several respondents believe that the STIP reviews in the three countries have either generated or will generate a high level of spill-over effects in the institutional, legal and economic areas.

The project could have benefitted from greater efficiencies in its coordination of data exchanges with each national counterpart team. It was found that the project was not fully successful in using modern communication tools as initially planned. This was also acknowledged by the UNCTAD staff. UNCTAD developed an online platform to encourage information exchange and sharing of best practices among the direct participants of the STIP review and with the project team. The platform was found not to be user-friendly and was not used by most of the participants. It ended up that most interchange of information and reports and feedback on questions or problems was carried out directly by e-mails among the participants and with the project team.

## **2.4.- Sustainability and impact**

1. Whether the activities have been designed and implemented in such a way to ensure maximum sustainability of their impact;
2. Whether there is initial evidence that the benefits of the project will, or are likely to continue in the future;
3. Whether there is initial evidence of the acceptance/implementation of recommendations from the completed STIP review in the beneficiary countries;
4. Whether any outcomes (intended and/or unintended) in beneficiary countries are evident following the intervention by UNCTAD;

The STIP review process is designed to ensure maximum sustainability of their impact and effect on STI related national policy.

From the very start the STIP review involved the beneficiary countries actively in the initiation, design and implementation of the project. Beneficiary countries played an important role in the design of the project, the selection of the sector studies and the establishment of a national counterpart team. As illustrated in Box 1, government counterparts would be involved in the STIP review from phase 1. This ensured to a reasonable extent the sustainability of the impact as stakeholders are more likely to accept policy recommendations of the STIP review. Moreover there are several aspects of the reports and the design of the review process that contributed to a certain extent, the buy-in of the stakeholders and the future implementation of the recommendations:

- The inclusion of a country-specific roadmap that offers a sound strategy to help the government develop an appropriate institutional setting and STI policies to initiate a technological catch up process;
- The inclusion of a country-specific sector analysis based on the needs of the country. Each country selects the most promising or important sectors or those areas where they want to reinforce R&D and innovation;
- Round table discussions of the draft reports with the participation of all the stakeholders (policymakers, enterprises and scientists) and an official presentation of the final report in the country and in UNCTAD;
- And, very importantly, the involvement of some international development organizations as participants in the STIP review to help ensure future support for the implementation of the recommendations.

**Box 1.- The 7 Phases of the STIP review process**

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| <ol style="list-style-type: none"> <li>1. Government request of the STIP review <ul style="list-style-type: none"> <li>• Creation of STIP review team (2-4 international experts and UNCTAD staff)</li> <li>• Establishment of an inter-ministerial team of government counterparts</li> <li>• Agreement on which sectors of the economy should receive detailed scrutiny)</li> </ul> </li> <li>2. Fact finding and data collection mission (interviews with all stakeholders – 2-3 weeks)</li> <li>3. Preparation of the first draft report</li> <li>4. Internal review process and comments from the government country parts</li> <li>5. In country stakeholders´ workshops to discuss the key findings and recommendations</li> <li>6. Publication of the STIP review and its presentation in the UNCTAD</li> <li>7. Possible preparation of a project to finance the implementation of the high priority recommendations</li> </ol> |
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Source: based on the interview with UNCTAD staff

UNCTAD adapted to the different STI environment of the three countries in the policy recommendations and the design of the roadmap. The recommendations and the roadmap received good comments from the surveys and interviews and are believed to be achievable. In the case of El Salvador and Peru, clear, appropriate and achievable recommendations were proposed with a clear roadmap for their implementation. However, in the case of the Dominican Republic the recommendations were more general due to its relatively low level of innovative system and yet to be developed innovation related policies. It was determined that the priority and precondition for the Dominican Republic in the area of STI is to establish a sound and performing institutional and legal setting first, and only then they can further launch and implement specific STI related initiatives in certain industry sectors. This is also emphasized by an international expert — no good STI policies can be developed to promote innovation in the energy sector of the Dominican Republic unless the legal setting or regulation is amended. Therefore the recommendations for the Dominican Republic had a more general and holistic nature.

UNCTAD ensured inter-agency collaboration in the STIP reviews in Latin America and involved UN ECLAC in the project. ECLAC had very good information and knowledge on the overall economic development of the three countries being examined. They also have good contacts and relationships with the local authorities. Owing to the above reasons and the prospect of getting potential funds for future implementation of the policy recommendations through this collaboration, the project can be considered successful in leveraging inter-agency collaboration to ensuring sustainability.

Almost all interviewed experts or stakeholders mentioned the follow up activities to implement the recommendations as a weakness in the design of this Development

Account project. In fact this project's activities finishes when the implementation of the recommendations should start, which is supposed to be the most important and critical part of work in terms of building a nation's capacity and policies on STI. Neither UNCTAD nor this Development Account project can further finance the implementation of the recommendations. It is also not easy to involve some international/ regional investment banks or other organizations to give support for development and technical cooperation because they have different mandates and priorities of work, and UNCTAD must maintain its autonomy to carry out the STIP reviews. Some respondents also noted that the countries involved in this project face some challenges in locating funds for the follow-up activities given that they have an intermediate level of economic development, and that many donors prioritize funds for least developed countries.

While UNCTAD has done a good job in terms of awareness-raising and initiating policy dialogue among stakeholders through this project, the sustainability of the project and its long term impact can really only be evaluated in a few years' time, particularly following implementation of the recommendations contained in each Review. Angola's case could be an example to illustrate the time it takes to have the STIP review recommendations implemented. The Secretary of State for Science and Technology of Angola<sup>4</sup> presented at the CSTD in May 2012 their planned implementation of the recommendations of the STIP review, which was finished in September 2008. It follows that the actual effects of such actions can only eventuate after implementation of this plan.

Moreover, several factors that affect the sustainability and impact of the project can be summarized as follows: (1) the decision making process of the beneficiary country governments and stakeholders; (2) the talent pool in the beneficiary countries to follow up and implement the policy recommendations; (3) country specific preference on sector development; and (4) the obtaining of financial resources for following up and capacity building.

The STIP review project for the three countries of Peru, El Salvador, and the Dominican Republic were conducted in the last two years and have only recently been completed. It takes time to implement changes in the policy mix, institutional setting and legal framework. As stated in the previous chapter, it is important that the institutional setting to implement the changes includes all STI related ministries and administrative units, and relevant private and academic sectors. The evaluator observed that the involvement of some stakeholders was insufficient. This was especially the case of the stakeholders from the private sector, who can play an important role in developing the national innovation system and technology development capacity through their investments in research and development, driven or supported by government policy.

While implementation of the recommendations in each STIP Review is beyond the scope of the project, the evaluator sought to identify if there are already initial indications of the possible impact of the project's activities. It should be noted that it is difficult to separate the effect of the STIP review in relation to other reasons or causes of the changes in the STI policies of the beneficiary countries. The fact that a country requested for a STIP review implies that some stakeholders of that country already attach high importance to research and development and innovation policies, which means not all changes in STI policies are necessarily triggered by or are the results of the STIP review. The following

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<sup>4</sup> Guidelines and Tools for implementation, coordination and regulation of Science, Technology and Innovation in Angola. Presentation Prof. João Sebastião Teta, (.Secretary of State for Science and Technology) during the 15th Session of the CSTD ( Geneva, 21 – 25 May 2012)

section aims merely to capture outcomes that can be discerned in each country following the completion of the project's activities.

The implementation of STIP review recommendations is uneven among the countries. In the case of the Dominican Republic, no real impact can be observed, especially due to the fact that the STIP review recommendations are only scheduled for a formal presentation in May 2013, and have only been informally presented to the Ministry of Higher Education, Science, and Technology, at a time of transition in its leadership. However, the evaluator managed to observe some direct positive effects in the case of El Salvador and Peru. It appeared that STI policies are on the top of the two countries' political agenda.

In El Salvador, the process of elaborating the STIP review as well as its official presentation has resulted in an increased interest across different government authorities, ministries, private sectors and academia aiming to reinforce science, technology and innovation policies. In fact, the analysis and recommendations of the report have already fed into public policy design processes. These include the elaboration of the *National Industrial Policy* and *National Innovation, Science and Technology Policy*, the proposals for a World Bank loan and an IADB loan related to the promotion of STI in the country. Their "*New Industrial Program*" mentioned the STIP review as one of the inputs in designing the program. Moreover the new law on STI (*National Innovation, Science and Technology Policy*), as recommended by the STIP review, integrated two previously foreseen to be independent laws: one on innovation, and the other on science and technology. UNCTAD also organized a training workshop on the design and management of innovation funds following the STIP review, in response to a specific demand from the Government of El Salvador to expand the availability of financial resources for innovation activities and impact. However the strategic recommendation in the STIP review to create an institutional setting where STI are led by a senior official is still not defined in this new law. Moreover some experts have serious concerns as to whether the funds (obtained from international organizations) would be used to promote academic or private sector R&D, or will be only used to finance STI projects of the governmental institutions. The Government of El Salvador has also recently put in place a number of programs that address several other recommendations included in the report, such as the increased public investment in STI.

In Peru the implementation is less encouraging and is still in an initial phase, among other reasons, due to the change of the government in August 2012 and the delay in the institutional restructuring required to design and implement the new foreseen STI policies. It could be observed that some recommendations have already been taken into account. UNCTAD staff and the international experts indicate that the new Government of Peru takes the R&D and innovation policy seriously. It was a main agenda in the last election campaign proposed by one of the presidential candidates (who was successfully elected the new president) and his new government values the report and its recommendations. According to some national stakeholders, the situation is moving in the right direction: (1) The new government is trying to increase the human and financial resources to promote STI; (2) Since a few months ago, the private sector has witnessed an increasing attention for innovation and they are demanding national STI policies. This tendency can be considered as substantial change in the innovative culture of the enterprises; (3) Although the new government is still working on the implementation of the recommendations, it seems that they have decided to reorganize and reinforce the National Council for Science, Technology and Innovation (CONCYTEC), as recommended by the STIP review report, instead of the creation of a new STI ministry; (4) The government has the intention

to establish a system to better collect information on its innovation system to define the required indicators.

### **Chapter 3.- Key conclusions**

The STIP reviews satisfied the intended project objectives and expected accomplishments, and the surveys and interviews confirm the outstanding work and capabilities of the UNCTAD staff and the international experts. The positive opinions of all the stakeholders demonstrate that the project design, choice of activities and the final deliverables have properly addressed the needs of the beneficiaries. The main stakeholders are satisfied with the SWOT analysis, the review of the STI policies and they consider the recommendations are appropriate. Moreover the representation of all stakeholders in the counterpart team was considered, in general, as satisfactory to very good.

The STIP review project is successful in awareness-raising and consensus-building in the STI related area in the beneficiary countries. However, it is too early to judge the long term impact of the STIP review and the beneficiary countries' follow-up on and implementation of STIP review recommendations. In El Salvador, several recommendations are either implemented or at the top of the political agenda. Also, in the case of Peru, the recommendations are high on the agenda, although the new government, which has been in office only since last August, has not had time to implement the changes. In the case of the Dominican Republic however, the official presentation of the Review is only scheduled for May 2013.

Some critical comments were made on improving the selection of the sectors for STIP review. As mentioned under 2.1- relevance, sometimes beneficiary country maintains that the STIP Review should help trigger emergence of new sector and technology, while the UNCTAD secretariat prefers to analyse and improve the innovation systems of the most relevant existing production sectors. It suggests a need to have a mechanism built into this STIP review and have the criteria set up to avoid compromise in project execution.

### **Chapter 4.- Recommendations<sup>5</sup>**

#### **1. Better formulate the requirements and criteria on official requests to be raised by the beneficiary countries applying for the STIP review with UNCTAD**

- A well communicated official request for STIP review raised by the potential beneficiary country could facilitate the discussion and implementation of the STIP review, ensuring effectiveness of the review, and avoiding conflicts on preferences that would otherwise emerge in a not so well formulated situation. UNCTAD published its new Framework for conducting STIP reviews, which was updated after gaining experiences from the STIP reviews of the three Latin American countries. This new framework requests national counterparts to submit a brief background note and self-assessment stating their objectives for the STIP review and a justification of the selection of the sectors.
- However, the evaluator believes that UNCTAD should further strengthen the framework and ensure that governments interested in applying for a STIP Review undertake a mandatory self-evaluation of the sectors to be examined by the STIP Review, based on

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<sup>5</sup> Details of some of the recommendations can be consulted in annex 2.4

a realistic assessment of objectives for the STIP review, national technology readiness, development priorities, potential markets and potential impact, the role of the requesting office in terms of STI, and talent pool in the relevant sectors. This could facilitate the beneficiary country's self-assessment and the quality of its outcome.

- The framework should specify clear criteria in evaluating the eligibility of sectors for STIP review, thus UNCTAD could avoid scenarios when the project was initially planned to strengthen important industry sectors but was compromised to provide policy recommendation on a new and immature sector. The evaluator has the opinion that when selecting specific sectors, the following criteria should be observed by both UNCTAD and the national counterparts: a) the sector has some significant economic or social relevance for the country and at the same time, it requires investment in R&D and innovation, and/or an upgrading of technology due to known technological gap, and b) there is good potential that the recommendations included will be acted upon.
- In the official request for STIP review, beneficiary country should envisage and justify the exact composition of the national counterpart team and define the roles and responsibilities of different ministries, academia and private sectors. This would minimize conflicts that might arise if the reporting line and decision making is not clear in the national counterpart team.
- The output of the above-mentioned work, if thoroughly done by the beneficiary country, could be used in UNCTAD's feasibility study and initial assessment of the situation.

## **2. Make all efforts to improve information gathering and ensure thorough preparation of field visits**

- The first field visit is very essential in this project. Thoroughly planned and successfully carried out, the field visit would make it possible for the experts to be more efficient and effective in the information collection, discussions and interviews with the stakeholders.
- To ensure efficiency, UNCTAD should collaborate with the counterpart to have well prepared agenda for the field visits and should have done sufficient research and desk study on STI related areas of the beneficiary country before they meet the stakeholders. By having an intensive agenda and a schedule to meet all the representatives of the stakeholders (academic, private and political), the experts on the field mission can then more effectively collect information for SWOT analysis and follow-up.
- Video conferences or online interactive interviews (using SKYPE) could be organized to clarify information received and gathered before the project experts embarking on the field visit. This helps control the costs, as it makes it less necessary to organize long duration field visits. More importantly, this helps clarify issues and problems, making it possible for the experts to devote time for consensus-building during the field visits.
- In the field missions, it appeared that mostly the policy makers with a political background were interviewed. Future STIP reviews field visits should aim to talk to a broader range of stakeholders and representatives, involving high level Civil Servants and local specialists who are in the field and can provide more substantive information due to their background and experience.

### **3. Ensure full representation of stakeholders in the composition of the national counterpart team**

- Each beneficiary country should set up a national counterpart team with representatives from all STI related ministries and governmental organizations , as well as representatives from the private and the academic sector in the national counterpart team.

### **4. Improve sustainability and impact of the project by establishing built-in mechanisms for monitoring implementation of the recommendations**

The implementation of the recommendations is a long term process, outside the mandate and responsibilities of this Development Account funded project. However, at the same time it is the ultimate objective of the STIP reviews. A mechanism could be built into such projects to extend the intervention of UNCTAD and ensure that each beneficiary country proactively follow up on the policy recommendations and report back on their implementation. Although no funds are available, in the evaluator's opinion, UNCTAD staff could still be involved at least on a low indirect level to provide certain support to the stakeholders of the beneficiary country. Some suggestions in this regard are as follows:

- Include in the initial agreement on the STIP review a requirement that the beneficiary country should present to UNCTAD, on the occasion of three and six years after the STIP review, the development status of the institutional and legal changes and the adjustment of the STI policy mix.
- Facilitate beneficiary countries' self-assessment by designing a form (checklist) that can be filled in easily for the beneficiary country to evaluate which aspects or recommendations are implemented, how they are implemented and in which ways, and what are the lessons learned and what are areas still having difficulties and challenges for implementation.
- Explore possibilities of having certain provisions in the project design to provide non-regular consultation through video conferences or teleconferences to assist with the implementation after the STIP review project has delivered policy recommendations and roadmap.
- Promote peer exchange and encourage best practice sharing at the intergovernmental machinery of UNCTAD and conventions such as United Nations Commission on Science and Technology for Development (UN CSTD) within three or four years.

### **5. Intensify inter-agency collaboration**

- Intensify collaboration with other international cooperation agencies and financial institutions such as the World Bank, ECLAC<sup>6</sup> in the STIP review process, engaging them in an early stage of the projects, which could facilitate the implementation of the recommendations included in the STIP reviews.

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<sup>6</sup>Or the InterAmerican Development Bank, GIZ, UNDP, USAID

## **Annex 1.- Surveys and interview guidelines**

**Evaluación externa del programa de UNCTAD “Exámenes de las Políticas de Ciencia, Tecnología e Innovación” (Exámenes PCTI) para el desarrollo en Latino América**

Exámenes PCTI en Perú, la Republica Dominicana y El Salvador

**Realizado por encargo de la "Evaluation and Monitoring Unit" de la UNCTAD**

Estimada/o señora o señor:

La UNCTAD esta actualmente evaluando la calidad y el impacto de los exámenes de políticas nacionales de ciencia, tecnología e innovación (exámenes PCTI o STIP reviews) efectuado recientemente en tres países de Latino América: El Salvador, el Perú y la República Dominicana (entre 2009 y 2012). Estos exámenes persiguen elaborar un análisis de las Fortalezas, Amenazas, Debilidades y Oportunidades (Análisis FADO) del sistema nacional de innovación. Sus objetivos principales son **concienciar la sociedad, las administraciones públicas y el sector productivo de la importancia de las políticas CTI** para el desarrollo y formular recomendaciones al respecto. Por ello los exámenes ofrecen una visión general del sistema nacional de innovación y las políticas correspondientes. También analiza estos temas para unos sectores concretos considerados por el gobierno nacional de gran importancia para el país.

Para recoger la información hemos diseñado una encuesta que analiza distintos aspectos de los exámenes PCTI y su impacto en el sistema nacional de innovación. La encuesta ha sido diseñada para obtener un panorama global del papel de los exámenes PCTI y de su calidad como fuente de información. Se trata de un conjunto de preguntas donde se solicita una valoración (numérica) de la importancia de ciertos aspectos. Después de cada conjunto de preguntas les pedimos comentar sus respuestas mediante unos comentarios cualitativos directamente relacionados con las preguntas mencionadas. Además solicitamos posibles sugerencias que podrían mejorar los futuros exámenes PCTI.

Dada su participación y/o su experiencia relacionada con este trabajo, sus comentarios sobre los Exámenes de PCTI llevados a cabo en Perú, El Salvador y/o la República Dominicana serían de gran utilidad para la realización de una evaluación global.

Por ello le rogamos contestar la encuesta y mandarlo al señor Joost Heijs ([joost@ccee.ucm.es](mailto:joost@ccee.ucm.es)). El señor Heijs recibe las respuestas de forma directa, serán tratadas de forma confidencial y anónima y solo se utilizarán para esta evaluación. Dado que el cuestionario es general, sólo se espera que comente sobre aquellas áreas en las que ha participado usted o tiene conocimiento directo.

Agradeciéndole de ante mano su colaboración

Reciba un cordial saludo

**Yuen Ching Ho**

Officer-in-Charge

Evaluation and Monitoring Unit

UNCTAD

**Joost Heijs**

Evaluador Externa

Director Instituto de Análisis Industrial y Financiero

Universidad Complutense Madrid

Para todas las preguntas o dudas respecto a la encuesta puede dirigirse al señor Joost Heijs ([joost@ccee.ucm.es](mailto:joost@ccee.ucm.es): 34. 626 519 372). Y para cualquier otra pregunta sobre la evaluación puede dirigirse (en inglés) a Ms. Yuen Ching Ho, OiC, Evaluation and Monitoring Unit ([Yuen.Ching.Ho@unctad.org](mailto:Yuen.Ching.Ho@unctad.org), tel. +41 229176242)

Las respuestas y observaciones formuladas en los cuestionarios serán tratadas de forma totalmente confidencial por el Sr. Heijs y se utilizarán únicamente para los fines de esta evaluación. Además las opiniones y comentarios se introducirá en el informe de evaluación solo de forma anónima sin que se revela su nombre u organización a la UNCTAD

## **AVISO IMPORTANTE**

**No todos los expertos han participado de la misma forma y en la misma intensidad. Por lo que se pide contestar solo aquellas preguntas de que usted tiene conocimiento bien debido a su participación directa en el estudio o bien debido a su experiencia acumulada durante su trayectoria profesional.**

**De hecho, algunos expertos posiblemente solo deben contestar unas pocas preguntas**

**Para aquellas preguntas cuyo contenido se encuentra fuera de su ámbito de competencia no duda dejar la respuesta en blanco o indicar el valor “0”**

DATOS DE IDENTIFICACIÓN

1. Nombre de la persona y afiliación:

NOMBRE \_\_\_\_\_

PAIS \_\_\_\_\_

PAIS A QUE SE REFIEREN LAS RESPUESTAS \_\_\_\_\_

(Peru, El Salvador o la República Dominicana)

ORGANIZACIÓN O DEPARTAMENTO \_\_\_\_\_

Teléfono (Código del país) Ciudad/numero personal \_\_ (\_\_\_\_) \_\_\_\_\_ / \_\_\_\_\_

“Dirección” SKYPE \_\_\_\_\_

Correo Electrónico \_\_\_\_\_

2. Tipo de experto: Nacionalidad y campo de trabajo o actividad

	<b>SI/NO</b>
NACIONAL	
INTERNACIONAL	
UNCTAD	

	<b>SI/NO</b>
Administración publica (policymakers)	
Académico/a y/o científico/a	
Empresario/a	
OTROS.....	

	<b>SI/NO</b>
Área o campo (científico)	
Generalista (Sin área)	
Sector agricultura o agro-industria	
Sector de salud	
Sector energético	
Sector de Información y Telecomunicaciones	
Otros sectores	

## A.- La calidad y enfoque del contenido analítico del examen PCTI

Esta primera parte analiza la calidad del informe y en que medida refleja una visión completa de las Fortalezas, Amenazas, Debilidades y Oportunidades (Análisis FADO) del sistema de innovación y la calidad general del informe y las recomendaciones. Más adelante en la encuesta se analiza estos aspectos más en detalle.

A.1 Análisis general del examen PCTI		Apenas	.....	De forma muy clara		
¿El examen PCTI ha generado un entendimiento claro de los puntos fuertes y débiles del sistema nacional de innovación?	0	1	2	3	4	5
¿El examen PCTI ha analizado las políticas desde un punto de vista estratégico a largo plazo y en acuerdo a la política de desarrollo general del país?	0	1	2	3	4	5
¿Se podría considerar el examen PCTI como un “punto de referencia” bueno e importante para investigadores o políticos interesados en una visión crítica de su sistema nacional de innovación?	0	1	2	3	4	5
¿El examen PCTI ha identificado prioridades estratégicas para el desarrollo?	0	1	2	3	4	5
¿El examen PCTI ha analizado la efectividad de las políticas de CTI actuales?	0	1	2	3	4	5
El examen PCTI recoge y refleja, entre otros, un conjunto de datos que ya existía. ¿Ha ofrecido el examen PCTI un valor añadido a estos datos existentes mediante una nueva forma de interpretación?	0	1	2	3	4	5
¿El examen PCTI ofrece recomendaciones claras y bien definidas? (abstractos versus muy concretos y claros)	0	Muy abstracto...versus...claramente definidos				
¿El examen PCTI ofrece recomendaciones que se pueden alcanzar? (demasiadas ambiciosas versus concretas y ejecutables)	0	Demasiado ambicioso.....versus..... muy alcanzable				
¿El examen PCTI ha generado información nueva respecto a distintos aspectos del sistema nacional de innovación y sus limitaciones?	0	Apenas .....versus .....de forma muy amplia				

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas **respecto a la calidad y el enfoque general del examen PCTI**

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:
- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas
- El informe incluye algunos análisis sectoriales.¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podría mejorar los futuros exámenes PCTI?.

**B.- LA CALIDAD DEL PROPIO PROCESO DEL EXAMEN DE PCTI Y LOS PROBLEMAS Y OBSTACULOS DURANTE ESTE PROCESO**

**B1.- El nivel de competencia, el compromiso e implicación de los participantes durante el proceso del examen de PCTI.**

	No sabe/ No contesta	Muy bajo ... .. .Muy alto				
¿Existía durante el examen PCTI un compromiso de las altas instancias políticas?	0	1	2	3	4	5
¿El enlace nacional ha resultado un agente fuerte y creíble?	0	1	2	3	4	5
¿El equipo de trabajo interno del país tenía un tamaño suficiente para la colaboración y apoyo continuo durante el proceso de elaborar el examen PCTI?	0	1	2	3	4	5
¿Cuál fue el nivel de implicación y compromiso de los <b>responsables de la política de CTI</b> durante la ejecución del examen de PCTI?.	0	1	2	3	4	5
¿Cuál fue el nivel de implicación y compromiso <b>del sector productivo</b> durante la ejecución del examen de PCTI?.	0	1	2	3	4	5
¿Cuál fue el nivel de implicación y compromiso de <b>sector científico y/o académico</b> durante la ejecución del examen de PCTI?.	0	1	2	3	4	5

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas **respecto al nivel de competencia, compromiso e implicación de los participantes durante el proceso del examen de PCTI**

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:
- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas
- El informe incluye algunos análisis sectoriales.¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podrían mejorar estos aspectos en los futuros exámenes PCTII?.
-

**B.2.- Obstáculos y barreras que dificultaban la elaboración del examen PCTI y la recogida de datos e información**

	No sabe/ No contesta	No importante..... muy Importante				
Falta de información existente respecto a los aspectos básicos del sistema nacional de innovación	0	1	2	3	4	5
	No sabe/ No contesta	Apenas .....versus .....Muy bien				
¿Se ha ejecutado el proyecto dentro de las fechas previstas y en un tiempo razonable?	0	1	2	3	4	5
¿Los expertos de la <b>UNCTAD</b> estaban bien preparados? (¿Tenían la preparación requerida para elaborar el examen PCTI?)	0	1	2	3	4	5
¿Cuál fue el nivel de compromiso y dedicación de los expertos de la <b>UNCTAD</b> ? (¿Han prestado un apoyo profesional al examen –Pej. han respondido bien y en tiempo a las necesidades y problemas?)	0	1	2	3	4	5
¿Cuál fue el nivel de compromiso y dedicación de los expertos <b>nacionales</b> ? (¿Han hecho su trabajo bien y en tiempo?)	0	1	2	3	4	5
¿Los expertos <b>nacionales</b> estaban bien preparados? (¿Tenía el conocimiento requerido?)	0	1	2	3	4	5
¿Cuál el nivel de compromiso y dedicación de los expertos <b>internacionales</b> (¿Han hecho su trabajo bien y en tiempo?)	0	1	2	3	4	5
¿Los expertos <b>internacionales</b> estaban bien preparados? (¿Tenía el conocimiento requerido?)	0	1	2	3	4	5
¿Tenía el equipo de expertos y los miembros de UNCTAD un acceso fácil a la información y personas	0	1	2	3	4	5

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas **respecto los obstáculos y barreras que dificultaban la elaboración del examen PCTI y la recolecta de datos e información**

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:
- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas
- El informe incluye algunos análisis sectoriales.¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podrían mejorar estos aspectos en los futuros exámenes PCTII?.
-

## C.- Tipos de recomendaciones y su calidad y adaptación a las posibilidades y problemas del país y su sistema de innovación

### C.1.- El tipo de recomendaciones.

	No sabe/ No contesta	Muy generales.....versus.....muy concretas										
¿Qué tipo de recomendaciones se han propuesto en el examen (¿Propuestas concretas versus generales)	0	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5					
1	2	3	4	5								
¿Ha identificado el examen PCTI medidas que promociónen el desarrollo de la capacidad de absorber de los actores del sistema nacional de innovación?	0	<table border="1"> <tr> <td colspan="2">Apenas .....</td> <td>versus .....</td> <td colspan="2">de forma muy clara</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	Apenas .....		versus .....	de forma muy clara		1	2	3	4	5
Apenas .....		versus .....	de forma muy clara									
1	2	3	4	5								
¿Ha identificado el examen PCTI medidas que promociónen o facilita la transferencia tecnológica mediante el comercio o la inversión internacional u otras canales	0	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5					
1	2	3	4	5								
¿Ha identificado el examen PCTI recomendaciones enfocadas hacia mecanismos de seguimiento y planes de acción para los agentes del sistema nacional de innovación?	0	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5					
1	2	3	4	5								
¿Apoya el examen PCTI el dialogo político y la provisión de oportunidades para generar una cultura y una mayor consciencia respecto a la importancia de la mejora del sistema nacional de innovación para el desarrollo global del país?	0	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5					
1	2	3	4	5								

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas respecto al **tipo de recomendaciones y su calidad y adaptación a las posibilidades y problemas del país y su sistema de innovación**

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:
- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas
- El informe incluye algunos análisis sectoriales.¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podrían mejorar estos aspectos en los futuros exámenes PCTII?.

**C.2.- Debido al examen de PCTI ¿en su país se ha promocionado la introducción de nuevas políticas de I+D+i u otras iniciativas para mejorar el sistema nacional de innovación?**

La mayoría de los países donde se han elaborado un examen de PCTI tienen sistemas nacionales de innovación muy poco desarrollados. Por ello el objetivo directo de este tipo de exámenes es concienciar a los agentes económicos y aumentar la cultura innovadora. La implantación de las recomendaciones es un objetivo a largo plazo. A pesar de que la implantación de las recomendaciones no ha sido prioritaria y todavía es pronto para analizar esta implantación las UNCTAD está interesada en saber si se han implementado ya algunas de sus recomendaciones durante o directamente después de finalizar el examen PCTI.

	No sabe/ No contesta	Apenas ..... versus ..... de forma muy clara				
¿El examen PCTI ha ayudado a reforzar <b>el papel</b> de los organismos de consulta respecto a los temas de PCTI	0	1	2	3	4	5
¿El examen PCTI ha ayudado a reforzar <b>las relaciones formales y/o regulares</b> entre los organismos de consulta respecto a los temas de PCTI con el gobierno? (Como consultor y fuente de opinión en temas de PCTI).	0	1	2	3	4	5
¿El examen PCTI ha ayudado a situar las políticas de CTI en la parte central de las políticas de desarrollo económico y social?	0	1	2	3	4	5
¿El examen PCTI ha ayudado a conectar las políticas de CTI con otras políticas de desarrollo económico o social?	0	1	2	3	4	5
<b>¿El examen PCTI ha ayudado a introducir cambios políticos :</b>						
¿Qué podrían conseguir un aumento del gasto público en I+D especialmente enfocados hacia áreas de interés económico y/o social?	0	1	2	3	4	5
¿Qué podrían ayudar a convertir "brain drain" en un proceso de "brain gain" ¿	0	1	2	3	4	5
¿Qué podrían ayudar a mejorar las relaciones en temas de CTI entre PYMES, empresas grandes, organizaciones de ciencia y tecnología, instituciones educativas y organizaciones empresariales?	0	1	2	3	4	5
¿Qué podrían promover la modernización industrial a base de innovación y un cambio tecnológico?	0	1	2	3	4	5
¿Qué podrían promover la modernización del sector de agricultura y pesca a base de innovación y un cambio tecnológico?	0	1	2	3	4	5
¿Qué podrían reforzar la capacidad científica y tecnológica de las empresas para participar en el desarrollo y para poder usar y adaptar las nuevas tecnologías a las condiciones y exigencias locales?	0	1	2	3	4	5
¿Qué podrían reforzar la promoción de la creación de empresas nuevas con base tecnológica?	0	1	2	3	4	5
¿Qué podrían reforzar la promoción de la disponibilidad de fondos públicos y/o privados de capital de riesgo para facilitar el desarrollo de nuevos productos o procesos y/o la comercialización de tecnologías nuevas o emergentes?	0	1	2	3	4	5

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas respecto al impacto de examen PCTI en su país sobre la introducción de nuevas políticas de CTI u otras iniciativas para mejorar el sistema nacional de innovación

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:
- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas
- El informe incluye algunos análisis sectoriales. ¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podrían mejorar estos aspectos en los futuros exámenes PCTII?.

### C3 Importancia de los obstáculos para implantar las recomendaciones del examen PCTI

	No sabe/ No contesta	Obstáculo no importante .....versus .....muy importante				
La innovación y el cambio tecnológico ¿son considerados actividades muy alejado de la realidad del sistema productivo y del desarrollo económico en su totalidad?	0	1	2	3	4	5
La falta de una masa crítica requerida para su implantación exitosa	0	1	2	3	4	5
Falta de calidad y excelencia del <b>sistema productivo</b>	0	1	2	3	4	5
Falta de compromiso o implicación del sistema productivo	0	1	2	3	4	5
Falta de calidad y excelencia del <b>sistema público de I+D</b>	0	1	2	3	4	5
Falta de compromiso o implicación <b>del sistema público de I+D</b> en la aplicación de los resultados científicos	0	1	2	3	4	5
Falta de compromiso o implicación <b>del sistema educativo</b> en apoyo a la innovación en sus diversas formas	0	1	2	3	4	5
¿Falta de compromiso o implicación de las altas estancias políticas?	0	1	2	3	4	5
¿Falta de compromiso o implicación de los responsables de la política de CTI?	0	1	2	3	4	5
¿Las recomendaciones del examen PCTI fueron demasiados ambiciosas (Lejano a las posibilidades reales de cambio)?	0	1	2	3	4	5
Otros aspectos (Por favor ¿menciónelas?)	0	1	2	3	4	5
-----	0	1	2	3	4	5
-----	0	1	2	3	4	5
-----	0	1	2	3	4	5

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas respecto a la **importancia de los obstáculos para implantar las recomendaciones del examen PCTI**

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:

- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas
- El informe incluye algunos análisis sectoriales.¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podrían mejorar estos aspectos en los futuros exámenes PCTII?.

#### C.4.- Efectos indirectos durante el proceso de ejecución del examen PCTI

	No sabe/ No contesta	Apenas había ... versus ... de forma muy clara				
¿El examen PCTI ha conseguido aumentar la conciencia o cultura innovadora y estimular el dialogo entre los responsables políticos y otros agentes del sistema nacional de innovación?	0	1	2	3	4	5
¿El examen PCTI ha conseguido aumentar la conciencia o cultura innovadora respecto al papel de la ciencia tecnología e innovación para el desarrollo nacional?..	0	1	2	3	4	5
¿El examen PCTI ha conseguido aumentar la conciencia respecto a la necesidad de mejorar el dialogo y las relaciones entre los agentes involucrados en CTI?	0	1	2	3	4	5
¿El examen PCTI ha ayudado a conseguir un consenso entre los responsables políticos de PCTI y otros agentes del sistema nacional de innovación sobre los futuros líneas de actuación?	0	1	2	3	4	5
¿El examen PCTI ha ayudado a mejorar la creación de redes y a aumentar la colaboración a nivel nacional, internacional y regional?	0	1	2	3	4	5
¿El examen PCTI ha promovido el dialogo inter-ministerial sobre las Políticas de Ciencia, Tecnología e Innovación?	0	1	2	3	4	5
¿Los responsables de la política de CTI han aprovechado – durante el periodo de elaboración del examen PCTI – de la interacción con los agentes claves del sector privado?	0	1	2	3	4	5
¿Los responsables de la política de CTI han aprovechado – durante el periodo de elaboración del examen PCTI – de la interacción con los agentes claves del <b>sector académico?</b>	0	1	2	3	4	5
¿Los responsables de la política de CTI han aprovechado – durante el periodo de elaboración del examen PCTI – la interacción con otros responsables políticos?	0	1	2	3	4	5
¿El examen PCTI ha aumentado la concienciación de la contribución potencial de la ciencia, tecnología e innovación para el desarrollo económico y social?	0	1	2	3	4	5
¿El examen PCTI ha intensificado y reforzado las relaciones e interacciones entre los agentes más importantes del sistema de innovación?	0	1	2	3	4	5

Nos sería de gran ayuda si usted pudiera complementar el análisis con sus comentarios y opiniones críticas respecto a los **efectos indirectos durante el proceso de ejecución del examen PCTI**

- Comentarios adicionales directamente relacionados con las preguntas mencionadas:
- Comentarios adicionales respecto a aspectos no relacionados con las preguntas mencionadas:
- El informe incluye tres o cuatro análisis sectoriales.¿ Existe algún sector en el que las respuestas anteriores destaquen negativamente o positivamente?.
- ¿En que medida se podrían mejorar estos aspectos en los futuros exámenes PCTII?.

#### D. Other aspects

Please use this open space for other comments or judgments about the STIP review on topics not analysed before

Como posiblemente ya le han informado, la UNCTAD esta actualmente evaluando la calidad y el impacto de los exámenes de políticas nacionales de ciencia, tecnología e innovación (Examen PCTI) efectuado recientemente en Perú y a la que se puede acceder mediante el siguiente enlace: [http://unctad.org/es/docs/dtlstict20102\\_sp.pdf](http://unctad.org/es/docs/dtlstict20102_sp.pdf)

Dada su posición clave en el sistema peruano de innovación y como responsable político de una parte importante de las políticas de CTI su colaboración sería muy importante y de gran utilidad para la realización de esta evaluación.

El procedimiento de la evaluación que hemos diseñado tiene dos pasos:

1.- Un cuestionario por escrito: Se trata de que, si lo considera oportuno, conteste por escrito a la encuesta que le adjunto en el plazo más corto posible.

2.- Una entrevista personal: Teniendo en cuenta las respuestas al cuestionario anterior, le haría personalmente una entrevista telefónica siguiendo el guion que también le adjunto. Para ello necesitaría que fijara usted el día y hora, así como el número de teléfono, en el que pueda llamar.

La UNCTAD tiene prevista la finalización del proceso de evaluación antes del día 9 de noviembre por lo que le ruego, sí podría ser, la máxima diligencia en el proceso :

Agradeciéndole de ante mano su colaboración

Reciba un cordial saludo

Joost Heijs  
Evaluador Externa  
Director del Instituto de Análisis Industrial y Financiero  
de la Universidad Complutense de Madrid

# **External Evaluation of UNCTAD's Project AC - Strengthening Science, Technology and Innovation Policies for Development in Latin America**

Evaluation of the STIP reviews of Peru, El Salvador and the Dominican Republic

**Carried out for UNCTAD's Evaluation and Monitoring Unit**

**Questions for the in depth interviews related to the block "A" of the survey**

## **A.- The quality and completeness of the analytical content of the STIP review**

This first part of the survey analyses the quality of the STIP reviews. Basically answered by the survey. However we like to analyse if the outcome do fulfill the expectations of the national government, policymakers and their stakeholders.

### **New questions not mentioned in the survey**

- Did the project design and results properly reflected the needs of the beneficiaries ?
- Were the activities and outputs of the programme consistent with the intended outcomes and impact ?

### **Questions mentioned in the survey**

- Did the STIP review offer well clearly defined reachable recommendations (versus abstract and to ambitious ones)

## Questions for the in depth interviews related to the block “B” of the survey

### B.- THE PROBLEMS DURING AND THE QUALITY OF THE PROCESS OF THE STIP REVIEW

#### B1.- The level of expertise and engagement of the stakeholders and participants during the STIP review

New questions not mentioned in the survey

- Did exist during the STIP review a high-level political commitment that made possible to get access to information sources and persons
- Did the STIP review team and the experts got access to information sources and persons

Questions included already in the survey

- What was the level of involvement or engagement of **the country’s policymakers** in the STIP review. (Number of persons and their added value )
- What was the level of involvement or engagement of **the production sector** in the STIP review. (Number of persons and their added value )
- What was the level of involvement or engagement of **the scientific and academic sector** in the STIP review (Number of persons and their added value

#### B.2.- Obstacles and barriers during the STIP review and the process of data gathering

New questions not directly mentioned in the survey

- Was the UNCTAD a suitable provider of the project activities/deliverables (ToR);
- Whether the activities have used the most efficient means in delivering the activities, for example, through the use of local resources or of modern communication tools, when appropriate
- Was the scope of the STIP review adequate in view of the existing resources and expertise
- Did the activities of the STIP review achieved planned objectives
- Whether the activities have used the most efficient means in delivering the activities, for example, through the use of local resources or of modern communication tools, when appropriate

Questions included already in the survey

- Some details on the quality and involvement of the experts in relation to the sector analysis

## Questions for the in depth interviews related to the block “C” of the survey

### C.- The type of the recommendations, their quality and appropriateness

#### C.1.- The type of the recommendations (No extra questions)

#### C.2.- The STIP review promoted the implementation of novel policies or initiatives or strengthened existing ones.

Most countries where STIP reviews are carried out has a very weak national innovation system. Therefore the immediate objective of the STIP review is the awareness rising while the real implementation of its recommendations is a medium-long term objective. Despite of this situation we are interested in what new initiatives were developed or implemented since or during the STIP review.

### New questions not directly mentioned in the survey

Besides the question of the survey we could discuss this aspects again during the interview based on the following questions:

- Whether there is initial evidence of the acceptance/implementation of recommendations from the completed STIP review in the beneficiary countries
- What is the evidence that the benefits of the project will, or are likely to continue in the future?
- Do the STIP review improve policy formulation and implementation, including through an improved national dialogue in the area of STI?

### New questions not directly mentioned in the survey

Did the STIP Review include a road map or action plan intended to provide the government and stakeholders with options for the practical implementation of the recommendations formulated in the STIP Review report

Did the diagnosis and recommendations provide the basis to formulate specific capacity-building activities by targeting various elements of the innovation system and environment

Did the STIP Reviews identify the priorities for action leading to sustainable development outcomes

- Did the STIP review identify specific **short term** actions?
- Did the STIP review identify specific **long-term** actions?
- Did the STIP review identify specific **medium-term** actions?

### **C3 Importance of the obstacles to implement the recommendations of the STIP review**

#### **New questions not directly mentioned in the survey**

- What are the specific factors that influence positively or negatively the sustainability of the results obtained by the project?
- Were the activities designed and implemented in such a way to ensure maximum sustainability of their impact, for instance, whether beneficiary countries were actively involved in the initiation, design and implementation of the project;
- What are the specific factors that influence positively or negatively the sustainability of the results obtained by the project? ;

#### **C.4.- Indirect effects during the STIP review process**

Probably the indirect effects during and just after the STIP review are the most important effects of this exercise. Therefore we will talk about these effects in the interview

#### **New questions not directly mentioned in the survey**

- Did the STIP Review process raise awareness and to stimulate a policy dialogue among stakeholders about the role of STI in national development and to encourage the emergence of stronger linkages among the STI players?
- Did the government agencies act –during the STIP review- as the crucial catalysts of economic development and have a lead role in providing institutional coordination and leadership on STI to promote the development of technological capabilities

#### **Some answers of the questions of this part of the survey can be analysed during the interview**

#### **Questions for the in depth interviews related to the block “D” of the survey**

##### **D. Other aspects**

As a last point the UNCTAD wants to evaluate the role of the STIP review in combination with others policy fields

- Whether the project was designed and has contributed to other related objectives, such as those related to the promotion of gender equality
- Whether any outcomes (intended and/or unintended) in beneficiary countries are evident following the intervention by UNCTAD
- Do exist synergies between the STIP review and the work of other international organizations, (for example the UN Economic Commission for Latin America and the Caribbean, (UNCTAD 2009: P.3)

## ANNEX 2. List of surveys and interviewed persons

Title	Name	Surname	Title	Persons that received an invitation to participate in the surveys and/or interviews		Real Participation	Country
				Survey	Interview		
Mr.	Sebastián	Rovira	STI specialist	Survey	Interview	Survey	DC- Chile
Ms.	Juana	Kuramoto		Survey	Interview	Survey/Interview	DC- Peru
Ms.	Ligia Amada	Melo de Cardona	Minister of Higher Education, S&T	Survey			DC
Ms.	Magaly	Bello de Kemper	Representante nacional en la UNCTAD	Survey	Interview	Survey/Interview	DC
Mr.	Diógenes	Aybar	Viceminister of S&T	Survey	Interview		DC
Mr.	Doroteo	Rodríguez		Survey	Interview		DC
Mr.	Andrés	Van Der Horst		Survey			DC
Mr.	Henry	Guerrero		Survey			DC
Mr.	Rafael	Pérez Duvergé		Survey			DC
Ms.	Bernarda	Castillo		Survey			DC
Ms.	Carmen Elena	Castillo-Gallandat	Representante nacional en la UNCTAD	Survey	Interview	Survey/Interview	ESVD
Mr.	Yax	Canossa	Director Innovación, Viceministerio de Comercio	Survey	Interview	Survey	ESVD
Ms.	Erlinda	Handal	Viceministra de C&T	Survey	Interview		ESVD
Mr.	Mario Roger	Hernández	Viceministro de Economía	Survey	Interview		ESVD
Ms.	Raquelina	de Huevo	Especialista sectorial DESCA	Survey			ESVD
Mr.	Pedro	Argumedo	Gerente sección microeconómica	Survey			ESVD
Ms.	Reina	Durán de Alvarado	Vicerrectora de C&T	Survey		Survey	ESVD
Mr.	Samuel	Salazar	Director	Survey		Survey	ESVD
Mr.	Roberto	López Martínez	Profesor	Survey	Interview	Survey/Interview	ESVD - Mexico
Mr.	Galileo	Solís		Survey			ESVD - Panamá
Mr.	Alejandro	Afuso	Executive Director	Survey			ESVD - Peru
Mr.	René	Hernández		Survey	Interview	Survey/Interview	ESVD - Chile
Mr.	Ignacio	del Busto Mellado		Survey			ESVD - US
Ms.	Juana	Kuramoto		Survey	Interview	Survey/Interview	Peru
Ms.	Luz	Caballero	Representante nacional en la UNCTAD	Survey	interview	Survey/Interview	Peru
Mr.	Miguel	Palomino	Embajador - Director de C&T	Survey	Interview		Peru
Ms.	Mercedes	Carazo		Survey	Interview		Peru
Mr.	José Luis	Chicama	Former Viceminister of SMEs and Industry	Survey	Interview		Peru
Ms.	Gisella	Orjeda	President	Survey	Interview		Peru
Ms.	Juana	Kuramoto			Interview	Interview	Peru
Ms.	Elizabeth	Astete	Embajadora - Subsecretaria de Asuntos Económicos	Survey			Peru
Ms.	Magaly	Silva	Viceminister of SMEs and Industry	Survey			Peru
Mr.	Victor	Carranza	Former a.i. President	Survey		Survey	Peru
Mr.	Augusto	Mellado	Former President	Survey			Peru
Mr.	Francisco	Sagasti		Survey			Peru
Ms.	Fabiola	León Velarde	Rectora	Survey			Peru
Mr.	Sebastián	Rovira	STI specialist	Survey		Survey	Peru - Chile
Mr.	José Luis	Solleiro		Survey	Interview	Survey/Interview	Peru - Mexico
Mr.	Fernando	Villarán	Presidente SASE Consultores	Survey			Peru - Peru
Mr.	Alejandro	Afuso	Executive Director	Survey			Peru - Peru
Mr.	Guillermo	Rozenwurcel	Professor	Survey		Survey	Peru - UNCTAD - Argentina
Mr.	Juan Carlos	Navarro	Líder Técnico Principal - División de C&T	Survey			Peru - US
Ms.	Marta	Pérez Cusó	Economic Affairs Officer (Policy Review Section)	Survey	Interview	Survey/Interview	UNCTAD
Mr.	Mongi	Hamdi	Chef-de-cabinet of the UNCTAD Secretary-General's office	Survey	Interview	Interview	UNCTAD
Ms.	Anne	Miroux	Director, Division on Technology and Logistics	Survey		Interview	UNCTAD
Ms.	Maria-Sabina Yeterian-Parisi		Senior Economic Affairs Officer	Survey		Interview	UNCTAD
Mr.	Ángel	González	Chief, Policy Review Section	Survey	Interview	Survey/Interview	UNCTAD
Ms.	Judith	Arrieta	Consejero	Survey	Interview	Interview	UNCTAD - Mexico
Mr.	Hugo	Rodriguez			Interview	Interview	UNCTAD Mexico