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Committee on Development and Intellectual Property (CDIP)

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EVALUATION REPORT OF THE PROJECT ON CAPACITY-BUILDING IN THE USE OF APPROPRIATE TECHNOLOGY SPECIFIC TECHNICAL AND SCIENTIFIC INFORMATION AS A SOLUTION FOR IDENTIFIED DEVELOPMENT CHALLENGES – PHASE II

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1.   The Annex to the document contains an independent Evaluation Report of the Project on Capacity-Building in the Use of Appropriate Technology Specific Technical and Scientific Information as a Solution for Identified Development Challenges – Phase II, undertaken by Mr. Tom P. M. Ogada, Evaluation Consultant, T&P Innovation and Technology Management Services, Nairobi, Kenya.

2.   The CDIP is invited to take note of the information contained in the Annex to this document.

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LIST OF ACRONYMS

AT	Appropriate Technology
CDIP	Committee on Development and Intellectual Property
DA	Development Agenda
DACD	Development Agenda Coordination Division
ECA	Economic Commission for Africa
ESCAP	Economic and Social Commission for Asia and Pacific
ICT	Information and Communication Technologies
IMD	Infrastructure Modernization Division
IP	Intellectual Property
IPOs	Intellectual Property Offices (national)
ITC	International Trade Center
LDCs	Least Developed Countries
FAO	Food and Agriculture Organization
MoU	Memorandum of Understanding
NEG	National Expert Group
UPM	Universiti Putra Malaysia
WIPO	World Intellectual Property Organization

EXECUTIVE SUMMARY

BACKGROUND

1.   This is a report for the evaluation of the phase II of the project - ***Capacity building on the use of appropriate technology, specific technical and scientific information as a solution for identified development challenges*** – which was implemented in Tanzania, Rwanda and Ethiopia from July 2014 to June 2017. Phase II project was built on the successes and lessons learned from phase I of the project, which was implemented in Zambia, Bangladesh and Nepal in 2010-2013. The overall objective of the project was to contribute to the economic, social, cultural and technology development of the country concerned and, ultimately, to poverty alleviation. The specific objectives were:

   a.   To facilitate greater use of appropriate technical and scientific information in addressing nationally identified needs for development goals;

   b.   To build national institutional capacity in the use of technical and scientific information for identified needs so as to progress towards the achievement of key national development targets; and

   c.   To coordinate the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement this technology in a practical and effective manner.

2.   The aim of this evaluation was to provide opportunity for learning from experiences in order to improve on future performance as well as to provide evidence based evaluative information to support the CDIP's decision making process. The evaluation used a combination of desk study (document review) and interviews with WIPO Staff and National and International consultants of the project. The evaluation came up with 13 Findings, 9 Conclusions and 5 Recommendations, which are briefly presented here below.

KEY FINDINGS

A: Project Design and Management:

3.   Finding 1: The revised project document was sufficient as a guide for the implementation of the project and assessment of the results achieved. All the key steps identified in the revised project document were successfully undertaken without modification to the project document. The signing of the MoU was particularly a game changer in the implementation of the project since it clarified the commitments and obligations of the parties. As a results the implementation started off smoother than was experience in phase one. However, phase two was supposed to be a scale-up phase and the evaluation noted with concern that three countries participated, due to budgetary constraint.

4.   Finding 2: The tools for the project's monitoring, self-evaluation and reporting were adequate and useful for providing information on the progress of implementation of the project. The WIPO Secretariat strictly followed the requirements of the monitoring tools. It ensured that MoUs were signed and work plan prepared before the start of the projects. The

Secretariat also regularly prepared and submitted progress reports to CDIP. A total of seven (7) such reports were prepared and submitted to CDIP. As a result, the projects were implemented and completed within the stipulated timeframe. However the evaluation noted that there were delays of up to 12 months in signing the MoUs. The evaluation also noted that the National Expert Groups did not prepare and submit some of the reports required for monitoring and evaluation.

5.   **Finding 3: The contributions of the other entities within the secretariat were fairly adequate to enable effective and efficient project implementation.** Particularly the contribution of the Patent Information Section on patent searches and the inputs of the Development Agenda Coordination Division were key the project. However, the evaluation noted with concern that the Regional Bureau for Africa did not participate in the project although all the three participating countries are from Africa.

6.   **Finding 4: The Risks that were identified in the revised project documents did not occur and therefore did not negatively affect the implementation of the project.** The envisaged risks were significantly reduced through capacity building and the signing of the MoUs. The MoUs sorted out the risks of coordination; identification of the focal points and appointment of the National Expert Groups. The capacity building sorted out the risk of misunderstanding the concept of appropriate technology. However, the issue of motivation of NEGs members remained a challenge for securing their total commitment to the project.

7.   **Finding 5: The project took into consideration emerging trends, technologies and other external**. Three out of the six projects undertaken were on aquaculture which is an emerging area in Africa seen as a solution to the rapidly depleting catch fish from the lakes. The aquaculture project also considered the application of Genetically Improved Fish Fingerlings, which is a very new technology in Africa. A visit to Malaysia was included in the project, where selected representatives from the three countries were exposed to some emerging technologies relevant to their projects. Factors that were external to the project were identified as management commitment support for the projects, which varied from country to country. However, where they occurred, they were addressed.

B: Project Effectiveness

8.   **Finding 6: The project was effective and useful in facilitating greater use of appropriate technical and scientific information in addressing nationally identified needs for development**. Six needs areas were selected by the three countries. Through patent search several possible technologies were identified and after evaluation and prioritization, appropriate technologies were formulated and business plans developed. These include solar coffee drying in Ethiopia; fish breeding technology for Rwanda and processing of seaweeds to extract Carrageenan in Tanzania. However, at the time of evaluation, none of the business plans was being implemented and therefore it was too early to determine the effectiveness of the technologies in addressing the identified needs.

9.   **Finding 7: The project was fairly effective and useful in building national institutional capacity in the use of technical and scientific information for the identified need**. The project build capacities of around 180 Members of National Experts Groups and the wider stakeholders forum in the three countries. In total 12 capacity building programs were organized. In addition, WIPO Secretariat organized a regional technological capacity building

meetings in cooperation with United Nations Economic Commission for Africa (ECA) and United Nations Economic and Social Commission for Asia and Pacific (ESCAP), which were attended by more than 240 senior officials over the three years. However, the evaluation noted that although the landscape reports were prepared by NEGS, the business plans were prepared by international consultants. More capacity of NEGs would be built if they were required to prepare the business plans under the guidance of international consultants.

10. **Finding 8: The project was effective in coordinating the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement this technology in a practical and effective manner**. The search process was initiated by the national expert, in consultation with NEG and international and National consultants. The search requests were then passed to WIPO experts at LDC Division, for comments before being submitted to WIPO's Patent Information Division. This procedure ensured that the search requests were of high quality, which in turn facilitated quality search and search reports. The search reports were then made available by WIPO for preparation of the technical landscape report and business plans. However, the participation of NEGs in the search process was minimum since the project document did not require them to do so. More involvement of the NEG in search process is required to enhance their capacity in retrieval of appropriate technical and scientific information.

C: Project Sustainability

11. **Finding 9: There is likelihood that some of the business plans developed during the project will be implemented.** The evaluation learned that the Ethiopian Ministry of Science and Technology has allocated money and identified experts to help implement the project. The chairman of NEG has also been appointed to oversee the implementation of the project. In Tanzania the National Expert reported that the Ministry of Trade and Industrialization of Zanzibar has made funds available for the implementation of the project on extraction of carrageenan from seaweeds. Similarly, in Rwanda, the National Consultant reported that the National Industrial Research and Development Agency had allocated resources to implement the project with effect from July, 2018.

12. **Finding 10: There is likelihood that the project of appropriate technology will continue in these three countries.** The evaluation learned in Ethiopia the Appropriate technology project was launched at a time when the country was developing a technology roadmap which includes facilitating technology transfer in 21 prioritized areas. The AT project therefore fits very well in this program. In Rwanda, it was reported by the National Expert that the National Industrial Research Institute is developing a seven year strategic plan (2019-2026) and has included issues of technology acquisition and transfer as well as use of IP information for research and development. In Tanzania, the National Expert reported that a Fund had been set up to establish innovation spaces in the universities and capacity building programs including use of IP information. However, in all the three countries, there were no concrete plans to make NEG a permanent feature.

13. **Finding 11: There is likelihood that WIPO and Member States will continue with this project**. For example, the Regional Bureau for Latin America and the Caribbean is planning to pilot the concept of appropriate technology in some two countries. The Korean Fund-In-Trust in collaboration with WIPO has been implementing appropriate technology projects in developing

countries, and this is likely to continue in future. Whereas recently WIPO signed an MoU with the Government of Mozambique on appropriate technology.

14. **Finding 12: The level of sustainability of the projects in phase 1 is moderate**. In Zambia, the project on rainwater harvesting was successfully implemented as per the business plan. The evaluation learnt that the Global Environmental Fund is interested in promoting the replication of the project country wide. Similarly, in Nepal, the project on biomass briquetting technology has been successfully implemented as per the business. The technology resulted into a bio-briquette product that is mechanically strong, novel, efficient, eco-friendly and easily ignitable fuel. Several members of the informal sector were trained and are already making and selling the improved briquettes, which are in great demand particularly in winter. Currently the product is widely used in most parts of the country. However, in Bangladesh, the two projects have not been implemented. Similarly the project on solar water distillation in Zambia, and drying of cardamom in Nepal have also not been implemented.

15. **Finding 13: This evaluation has found that the project has responded to the recommendations 19, 30 and 31.** The project has facilitated access to knowledge and technology for Least Developed Countries (Recommendation 19); facilitated cooperation with Economic Commission for Africa, and Economic and Social Council for Asia and the Pacific to provide developing countries and LDCs to access and make use of IP-related information in areas of special interest to these countries (Recommendation 30) and undertaken initiative to facilitate better access to publicly available patent information (Recommendation 31)

CONCLUSIONS

A. Project design and management

16. **Conclusion 1 (*Ref: Findings 1, 2, 4).*** The project document, as it is now, is adequate and sufficient for the implementation of the appropriate technology project in future in both the Developing and Least Developed Countries. Going forward, consideration should be given to: mainstreaming and scaling up the project; maintaining regional distribution; expanding the project to interested developing countries; reviewing the duration of delivering a specific project; introducing a mechanism to ensure that NEGs adheres to the reporting requirements and organizing induction for project consultants.

17. **Conclusion 2 (*Ref: Findings 3).*** The contribution of the other entities within the WIPO Secretariat to the project should be enhanced. This will require; promoting awareness creation of the AT project to relevant internal stakeholders and involving Regional Bureaus to ensure that use of Appropriate Technology is mainstreamed in the national IP strategies of the LDCs in their jurisdiction.

18. **Conclusion 3 (*Ref: Findings 4).*** Effective utilization of NEGs as a national Organ for capacity building and implementation of the AT project has remained a unresolved risk. To make NEGs more effective, special attention should be given to selection, membership, operation and rewarding of the NEGs.

19. **Conclusion 4 (*Ref: Findings 1-5).*** The project piloting process has been successfully completed and the project should now be mainstreamed and up scaled.

B. Project Effectiveness

20.   Conclusion 5   (*Ref: Findings 6-8).* The project has successfully demonstrated, in a practical manner, its potential for capacity building in the use of appropriate technical and scientific information in addressing nationally identified development needs. However, to increase its effectiveness, more attention should be given to: increasing the number of countries participating and the number of projects undertaken in each country, training more people, and ensuring that NEGs is involved in patent search, preparation of landscape reports and business plans. Emphasis should be put to the implementation of the business plans.

21.   Conclusion 6   (*Ref: Finding 8).* The current practice of patent search needs to be changed to allow more opportunities for capacity building of NEG on patent search.

C. Sustainability

22.   Conclusion 7 (Ref: Finding 9 and 12). The implementation of the business plans and replication remains the weakest point of the sustainability of the project. This situation can be improved through: strict application of the selection criteria; and involvement of the relevant private sector, potential funding agencies, and relevant NGOs in the process. There may be need to revisit the mandate of NEG.

23.   Conclusion 8 (Ref: Findings 10 and 12). The current design of the project document does not put emphasize on facilitating the establishment of appropriate legal, institutional and policy framework to ensure the continuation of the project after the implementation of the business plans. Where this has been done, it has been unintended positive outcome of the project. In future more attention and resources should be given to mainstreaming AT in national strategies and policies. There is need to keep the AT project life in the six countries where the project has been implemented. A starting point should be to organize a meeting of past managers of the six countries and relevant government departments to review the projects. This may be preceded by a scoping study to document what is actually on the ground.

24.   Conclusion 9 (Ref: Findings 11). There is interest both at WIPO and Member States to continue with the AT project. There is need to strengthen this interest by: mainstreaming the project as a program in LDC; supporting the efforts of the regional bureaus to pilot the project in their regions; improving and updating the project document to take care of emerging issues, strengthening the existing partnerships; developing of new ones and documenting success stories.

RECOMMENDATIONS

A. Mainstreaming and up-scaling the Appropriate Technology project

25.   Recommendation 1 (Ref. Conclusions 1-5)*.* The evaluation recommends that CDIP approves mainstreaming and up-scaling the appropriate technology project for implementation in Least Developed Countries (LDCs) .

B. Project design and management

26.   Recommendation 2 (Ref. Conclusions 1-5)*.* To enable effective mainstreaming and up-scaling, the evaluation recommends that WIPO Secretariat updates the procedures for the implementation of the appropriate technology project to cater for the following:

a. Flexibility and adaptability for use by both LDC

b. Ensuring regional distribution.

c. Increasing the number of projects per countries.

d. Reducing the time of implementation of each project.

e. Expanding the project to interested developing countries.

f. Introducing a mechanism to ensure that NEGs adheres to the reporting requirements of the project.

g. Introducing induction program for project consultants.

h. Enhancing the contribution of the regional bureaus in the project.

i. Enhancing the effectiveness of NEG in the implementation of the project.

C. Capacity building and transfer of knowhow

27.   Recommendation 3 (Ref. Conclusions 5 and 6). To enhance capacity building and transfer of knowhow on the use of appropriate technical and scientific information in addressing the development needs of the member states, WIPO Secretariat should ensure that :

a. NEGs are fully responsible for undertaking patent search, as well as the preparation of the landscape reports and the business plans.

b. More people are involved in the training on the use of appropriate technical and scientific information in addressing development needs of the member states

c. More projects are undertaken per country

D. Sustainability

28.   Recommendation 4 (Ref. Conclusion 8). To enhance the chances of implementation of the business plans and replication of the projects, the evaluation recommends that the WIPO Secretariat undertakes the following:

a. Ensures that the implementation of the business plan becomes the main condition for selection of the Member States for participation in the project and an integral part of the MoU

b. Promotes the involvement of the private sector in the development and implementation of the project

c. Promotes the involvement of local financial and NGOs in the process.

d. Promotes the mainstreaming of use of AT in national strategies and policies of the Member States (for example, national IP policy, STI policy, industrialization policy)

e. Organize a review meeting of past managers of the six countries and relevant government departments to explore how to strengthen the use of Appropriate Technology in these countries.

29.   Recommendation 5 (Ref: Conclusion 9). To promote the continuation of the AT project within WIPO and Member States, the evaluation recommends that the secretariat undertakes the following:

a. Mainstream the AT project as a program in LDC Division

b. Promote and encourage the efforts by the Regional Bureaus to pilot the AT project in developing countries in their regions

c. Strengthen the existing partnerships relevant to the Appropriate Technology project and establish new ones.

d. Review and document the existing projects to provide success stories and create a center of excellence within LDC to be the source of information on Appropriate Technology

INTRODUCTION

30. This is a report for the evaluation of the phase II of the project - ***Capacity building on the use of appropriate technology, specific technical and scientific information as a solution for identified development challenges*** – which was implemented in Tanzania, Rwanda and Ethiopia during the period July 2014 to June 2017, covering a period of 36 months. The phase II project was built on the successes and lessons learned from the phase I of the project, which was implemented in Zambia, Bangladesh and Nepal in 2010-2013. The report outline:

    a.   the project objective;

    b.   the objectives; scope, focus, criteria and methodology evaluation; and

    c.   the findings, conclusions and recommendations of the evaluation.

DESCRIPTION OF THE PROJECT

31. Knowledge and technology (K&T) can be used as a tool to combat poverty. K&T can contribute to sustained economic growth, enhance market efficiency and create employment opportunities. In this context, application of K&T in industry, agriculture, health, education and services is critical. Building technical capacity that will allow developing and least developed countries to apply to meet their social and economic challenges is therefore very important. However, this requires the participation of a range of players, including inventors, creators, research and development (R&D) centers, academic institutions, manufacturing enterprises, agricultural organizations and health services.

32. Purpose: In the light of the above, the primary purpose of this project was to contribute to the building of national capacity of least developed countries to improve the management, administration and utilization of technical and scientific information to meet their national growth and development goals through knowledge transfer and capacity building taking into account social, cultural and gender implications of the use of technology.

33. Objectives: The overall objective of the project was to contribute to the economic, social, cultural and technology development of the country concerned and, ultimately, to poverty alleviation. The specific objectives were:

    a.   To facilitate greater use of appropriate technical and scientific information in addressing nationally identified needs for development goals;

    b.   To build national institutional capacity in the use of technical and scientific information for identified needs so as to progress towards the achievement of key national development targets; and

    c.   To coordinate the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement this technology in a practical and effective manner.

34. **Delivery strategies:** In order to achieve the above mentioned objectives, the revised project document specified the following delivery strategies:

    a. Advertisement
    b. Submission of expression of interests by Member States
    c. Review of the expression of interests by WIPO
    d. Signing of Memorandum of Understanding with selected Member States defining the obligations of each partner
    e. Establishing the National Experts Groups (NEGs)
    f. Identifying and agreeing on the Needs Areas
    g. Preparing search requests
    h. Undertaking search and preparing search reports
    i. Preparing landscape report based on search reports
    j. Approving the landscape reports by NEG
    k. Preparing the Business Plans
    l. Implementing the Business Plans
    m. Organizing a national outreach program

OVERVIEW OF THE EVALUATION

35. **Evaluation design:** The evaluation approach was participatory which allowed active involvement of all those with a stake in the projects: project team, national consultants and NEG as well as the beneficiaries.

36. **Evaluation Objective:** The two main objectives of this evaluation were:

    a. **Learning:** Provide opportunity for learning from the existing experiences in order to improve future performance i.e. what worked well and did not work so well for the benefit of future project implementation. This include assessing the project design framework, project management including monitoring and reporting tools, as well as measuring and reporting on the results achieved to date and assessing the likelihood of sustainability of the results achieved.

    b. **Decision:** Provide evidence based evaluative information to support the CDIP's decision-making process.

37. **Scope and Focus:** The project time frame for this evaluation was 36 months (July 2014 to June 2017). The focus was not to assess individual activities but rather to evaluate the project as a whole and its contribution in assessing the needs of the Member States, its evolution over time, and its performance including project design, project management, coordination, coherence, implementation and results achieved. Specifically, the evaluation assessed the extent to which the project was instrumental in;

    a. Strengthening the national capacities of LDCs in using appropriate technical solutions to address major national development challenges

    b. Improving understanding of the use of technical and patent information for innovation and national technology capacity building and

    c. Ensuring effective exploitation of technical and patent information for achieving development objectives and goals

38.   **Criteria:** The evaluation was guided by the following four criteria:

    a. Project design and management,

    b. Effectiveness,

    c. Sustainability, and

    d. Implementation of Development Agenda Recommendations.

39.   **Project Design and Management:** Under Project Design and Management, the evaluation asses the following:

    a. The appropriateness of the revised project document as a guide for the project implementation and assessment of results achieved

    b. Whether the project monitoring, self-evaluation and reporting tools and analysis of whether they were useful and adequate to provide the project team and key stakeholders with relevant information for decision making purposes

    c. The extent to which the risks identified in the revised project document have materialized or have been mitigated, and

    d. The project`s ability to respond to emerging trends, technologies and other external forces

40.   **Project Effectiveness:** Under Project Effectiveness, the evaluation assessed the following:

    a. The usefulness of the project in facilitating greater utilization of appropriate technical and scientific information in addressing identified national needs for development

    b. The effectiveness and usefulness of the project in establishment of national institutional capacity in the use of technical and scientific information for identified needs

    c. The effectiveness of the project in coordinating the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement the identified technology in a practical and effective manner

41.   **Project Sustainability** assesses the likelihood for continued work on appropriate technology specific technical and scientific information as a solution for identified development challenges.

42.   **The Implementation of Development Agenda Recommendations,** analyzed the extent to which the DA Recommendations 19, 30 and 31 have been implemented throughout this project.

43.   An Evaluation Framework has been prepared, (see ANNEX 1: Evaluation Matrix) which provides details (proposed indicators, data collection tools and possible sources of information) on how the above evaluation criteria was addressed.

PROPOSED EVALUATION METHODOLOGY

44. The following methodology was used for the evaluation exercise:

    a. **Desk Review**: Some 30 documents were reviewed. These included Memoranda of Understanding; research requests, search reports, landscape reports, business plans and programs for capacity building meetings. ANNEX 2 gives the list of the documents reviewed.

    b. **Interviews:** Some 15 Respondents were interviewed. These included members of the project team; WIPO staff, as well as the International and National Consultants. ANNEX 3 gives the list of the names of Respondents interviewed.

    c. **Data collection tools**: A questionnaire was which served as a guide during the interviews (Appendix IV).

KEY FINDINGS

45. This section presents the findings of the evaluation. It is organized on the basis of the four evaluation areas:

  a. Project Design and Management

  b. Project Effectiveness,

  c. Project Sustainability; and

  d. Implementation of the development agenda recommendations.

A. Project design and management

46. The evaluation of the Project Design and Management looked at the following:

  a. The appropriateness of the revised project document.

  b. The usefulness of project monitoring, self-evaluation and reporting tools and analysis.

  c. The contributions of other entities within WIPO secretariat to project implementation

  d. The impact of the risks identified to project implementation

  e. The impact of emerging trends, technologies and other external forces

A1: *Appropriateness of the revised project document as a guide for implementation and assessment of results achieved.*

47. Finding 1: The revised project document was sufficient as a guide for the implementation of the project and assessment of the results achieved.

48. Achievements: The following achievements support this finding:

  a. All the key steps identified in the revised project document were successfully undertaken without modification to the revised project document.

	ACTIVITY	TANZANIA	RWANDA	ETHIOPIA
1	Signing of Memorandum of Understanding	✓	✓	✓
2	Establishing the National Expert Group	✓	✓	✓
3	Identifying areas of urgent development needs	✓	✓	✓
4	Preparation of search request	✓	✓	✓
5	Undertaking patent search	✓	✓	✓
6	Preparation of search report	✓	✓	✓
7	Preparation of landscape report	✓	✓	✓
8	Developing business plans	✓	✓	✓
10	Organizing outreach programs	✓	✓	✓

b. **Signing of the MoUs:** The MoUs were all signed at very top levels (by the Ambassadors of the three countries in Geneva and the Director General of WIPO). The signing of MoUs was a game changer in the implementation of the project. Specifically, the MoUs:

   i. clarified the commitments and obligations of each party before the beginning of the projects;

   ii. managed expectations and conflicts, and

   iii. as a results, the implementation of the projects started off much smoother than was experienced in phase one.

c. **Establishment of NEGs:** The MoUs gave the Member State Partner the responsibility of identifying and appointing the members of the National Expert Groups (NEGs); coordinating their meetings and funding NEGs Secretariat. The three countries undertook these responsibilities successfully.

d. **Identification of priority need areas:** The priority needs areas were identified through a nationally driven and all-inclusive process. All the three national consultants interviewed appreciated the project approach on needs identification. They found the approach useful in providing a systematic needs identification, prioritization and consensus building and thereby increasing the ownership by the stakeholders of the projects finally identified. In all the three cases, NEGs started with over five projects each, and through evaluation and further prioritization; each country selected the final two projects.

e. **Other achievements:** As per the revised project documents, the following were successfully undertaken:

   i. Preparation of the search requests

   ii. Undertaking searches and preparation of search reports

   iii. Preparation of landscape reports based on search reports

   iv. Preparation of business plans

49. **Shortcomings:** The evaluation noted the following shortcomings:

   a. Phase 2 was expected to be a scaling up phase based on the experiences from phase one. As a result, more countries were expected to participate. However, only three countries participated in phase 2. The evaluation learnt that up scaling did not take place due to budgetary constraint.

   b. All the three countries were from one region, putting into question the issue of regional distribution.

A2: The adequacy and usefulness of the project monitoring, self-evaluation and reporting tools to provide the project team and key stakeholders with relevant information for decision making purposes

50.   The revised project documents provided the following mechanisms for review and monitoring the progress of implementation of the project.

  a.   The project in a selected country to start only after signing of the MoUs between WIPO and Member States

  b.   Work plans were to be prepared in order to start the implementation of the project

  c.   Progress reports were to be prepared every 6 months by the project team

  d.   NEGs were to prepare and submit to WIPO inception reports, mid-term reports and end project reports

  e.   Self Evaluation by the project team which included realization of specific project milestones and objectives

51.   Finding 2: The tools for the project's monitoring, self-evaluation and reporting were adequate and useful for providing information on the progress of implementation of the project:

52.   Achievements: The evaluation noted the following achievements:

  a.   All the projects started only after signing of the MoUs between WIPO and Member States.

  b.   The MoUs served as useful guide since the appraisal, monitoring and evaluation tools were included as attachments to the MoUs.

  c.   A work plan was prepared for a period of 36 months from July 2014 to June 2017

  d.   Four progress reports and three Director General's report were prepared by the project team and submitted to CDIP as follows:

    i.   Progress Reports, CDIP/14/2, Annex VII

    ii.   Director General's Report on Implementation of the Development Agenda, CDIP/15/2 (page 17)

    iii.   Progress Reports, CDIP/16/2, Annex III

    iv.   Director General's Report on Implementation of the Development Agenda, CDIP/17/2 (Page 18)

    v.   Progress Reports, CDIP/18/2, Annex III

    vi.   Director General's Report on Implementation of the Development Agenda, CDIP/19/2

    vii. Progress Report, CDIP/20/2, Annex III

  e.   The progress reports also included information on self evaluation by the project team which included realization of specific project milestones and objectives.

53.   As a result of these monitoring tools, all the projects were implemented and completed within the stipulated timeframe.

54.   **Challenges and shortcomings:** The evaluation noted the following challenges and shortcoming with the monitoring and evaluation tools:

   a. **Delays in signing the MoUs**. Whereas the project started in July 2014, the MoUs were signed 9-12 months later, as shown here below. However, the projects were launched soon thereafter, followed by the inception trainings of the stakeholders, as shown in Table below.

	Country	KEY DATES		
		Signing MoUs	**Project Launch**	**Inception Training**
1	Rwanda	22-09-2015	28-09-2015	28/29-09-2015
2	Tanzania	14-04-2015	24-08-2015	24/25-08-2015
3	Ethiopia	29-07-2015	27-08-2015	27/28-08-2015

   b. Whereas NEGs in all the three countries prepared inception reports as required by M&E tools in the project documents, the following other two required reports were not prepared:.

      i.   Mid-term reports that indicate achievements, challenges and what needs to be done in order to complete the projects in time

      ii. End-of-project reports articulating achievements against set objectives, challenges realized, lessons learned and how to ensure that the business plan is implemented.

   c. Some timelines provided in the revised project documents were unrealistic. For example the requirement that the business plans be prepared within 6 months after the start of the project was untenable since a number of activities must be completed before the formulation of a business plan can start

A3: *The extent to which other entities within the Secretariat have contributed and enabled an effective and efficient project implementation.*

55.   **Finding 3: The contributions of the other entities within the secretariat were fairly adequate to enable effective and efficient project implementation.**

The following entities contributed to the project implementation:

   a. The Patent Information Section coordinated the patent searches and preparations of the search reports.

   b. The Development Agenda Coordination Division (DACD) provided coordination of discussion of intergovernmental group, presentation of the reports to CDIP and follow up on the discussions and recommendations. DACD also organized this evaluation.

56. **Shortcomings:** The evaluation, noted the following shortcomings:

a. The Regional Bureau for Africa did not participate in the project as would have been expected since all the three countries that participated in phase two of the project are from Africa.

b. Within WIPO, there appears to be limited opportunities to create awareness to internal stakeholders on the appropriate technology project.

A4: *The extent to which the risks identified in the revised project document have materialized or have been mitigated*

57. **Risks:** The revised project documents identified the following FOUR risks which could negatively affect the progress of implementation of the project.

a. Different understanding of the definition of Appropriate Technology which could hamper the transfer of technology to be used to address the identified needs;

b. Lack of adequate coordination amongst project partners could lead to a delay in implementation of the project;

c. Lack of focal point institutions;

d. Lack of motivation to members of NEGs.

58. **Finding 4: The Risks that were identified in the revised project documents did not occur and therefore did not negatively affect the implementation of the project**

59. **Achievements:** The envisaged risks were significantly reduced through capacity building and the signing of the MoUs.

a. **Concept of Appropriate Technology**: This risk did not occur because the concept of Appropriate Technology was clarified during the inception capacity building meetings which took place immediately after the launch of the projects. In all these workshops, (which brought together Members of NEG and the National Stakeholders Forum), covered the following topics, that clarified the concept of appropriate technology:

   i. The use of appropriate technology for addressing development and technology needs and challenges of Tanzania

   ii. The concept and content of appropriate technology project

   iii. Using intellectual property for economic growth and development

   According to the inception report for Ethiopia, the participants deliberated on the definition of appropriate technology and agreed that in the Ethiopian context appropriate technology should be taken as technology which meets the needs of the country/community, generated employment and benefits large number of people especially in the rural areas.

b. **Coordination**: The issue of coordination was expressly articulated in the MoUs. The MoUs required the Member States to ensure that the implementation of the project is on

schedule and as per the work plans and also to make efforts to publicize and secure support for the project from other relevant stakeholders of the Government

c. **Focal points:** Appointment of the focal points. In all the three cases, the focal points were appointed before the signing of the MoUs, and were expressly identified in the MoUs (article 8) as follows:

   i. **Tanzania:** Tanzanian Commission of Science and Technology was the focal point. Dr George Silas Shemdoe was designated as the focal person. Dr Shemdoe was also retained as the national consultan.

   ii. **Rwanda**: Ministry for Trade and Industry was the focal point. The Minister for Trade and Industry, Hon. Francois Kanimba, officially nominated Mr James Kagara as the National Expert and Chairperson of the National Expert Group.

   iii. **Ethiopia**: Ethiopian Intellectual Property Office was the focal point. Mr Teshale Yona, the Director General, was the focal person.

d. **NEGs incentives**: The responsibility of coordination and funding of the secretariat, including providing incentives to NEG, was given to the Member States by the MoU.

60. Challenges: Through the interviews with national consultants, the following observations were made

a. There were cases where the membership of NEGs kept on changing during the implementation of the project. This negatively affected the capacity building objective of the project since new members slowed down the pace.

b. The issue of motivation of NEGs members remained a challenge since this expectations was not adequately met.

A5: *The project's ability to respond to emerging trends, technologies and other external forces.*

61. Finding 5: The project took into consideration emerging trends, technologies and other external.

62. Achievements: The following provide justification for this finding:

a. **Emerging Trend:** Three out of the six projects undertaken were on aquaculture which is an emerging area seen as a solution to the rapidly depleting catch fish from the lakes. These projects also considered the application of Genetically Improved Fish Fingerlings, which is a very new technology in Africa.

b. **Emerging Technologies:** A visit to Malaysia was included in the project, where selected representatives from the three countries visited Malaysia to be exposed to some emerging technologies relevant to the areas of development needs of these countries. The meeting took place in Kuala Lumpur, Malaysia in March 20-24, 2017. This was organized within the context of technical cooperation between WIPO, University Putra Malaysia, the Swedish Patent Registration Office and the Swedish Development

Corporation Agency. The participants visited relevant projects including science park, innovation hub, fish and solar energy projects.

c. **External forces:** Factors that were external to the project were identified as management commitment support for the project that varied from country to country; and where they occurred, they were addressed. For example, the focal point in one country was changed midway to enable successful implementation of the project.

B. Effectiveness

63. **Project Effectiveness:** Under Project Effectiveness, the following issues were assessed:

   a. Facilitating greater use of appropriate technical and scientific information

   b. Establishment of national institutional capacity in the use of technical and scientific information for identified needs

   c. Coordinating the retrieval of appropriate technical and scientific

B1: The effectiveness and usefulness of the project in facilitating greater use of appropriate technical and scientific information in addressing nationally identified needs for development.

64. Finding 6: The project was effective and useful in facilitating greater use of appropriate technical and scientific information in addressing nationally identified needs for development.

65. Identified Projects: Six needs areas were selected by the three countries. Through patent search several possible technologies were identified and after evaluation and prioritization, appropriate technologies were formulated. For Example;

   a. **Fish breeding technology for Rwanda, Tanzania and Ethiopia:** The technology sought to address the problem of depletion of fish production from the lakes in these three countries in order to meet the ever increasing demand gaps. For example, currently Rwanda is a net importer of fish. In 2014 Rwanda produced only 2.9 MT of fish against imports of 60,000 MT. With such supply gap, Rwanda aims to produce up to 155,000 MT per year by 2020. An offshore fish breeding technology is required to bridge the technology gap in fish production in Rwanda. In all the three cases, the desired technology should enable fish farmers to use any water source available. The technology should also be affordable, replicable and adaptable to various business and production levels. The technology should have a system of draining, purification and quality control subsystem of water. Some 33 technologies were identified out of which five were found appropriate.

   b. **Solar water distillation technology for Rwanda:** The technology sought was to address the problem of limited access to quality and clean drinking water by 71 % of the 11.8 million population of Rwanda that currently live in the rural areas. Rwanda has a national target to supply portable and clean drinking water to all its communities. This could be made possible by introducing a solar water distillation

technology that is affordable, replicable, green and suitable for individual households and commercial community use. Some 40 technologies were identified during the patent search out of which NEG selected US 20080067054 - *system and method for solar distillation*. This technology is not registered in Rwanda and thus using it locally will not infringe any patent rights.

c. **Solar coffee drying in Ethiopia:** Many Ethiopian coffee farmers apply open air drying method which consists mainly of spreading the coffee on the ground or on some other surface. This method causes several post harvest losses due to contamination by dust, rodents and other animals. The sun drying method is also dependent on whether conditions is time consuming and requires high labor inputs. This project therefore sought a technical alternative to the traditional method of sun drying, which should be low cost, locally manufactured, tremendously reduce post harvest losses and increase quality of coffee. 19 technologies were identified through patent search and NEG selected patent CA1162735, a solar dryer which was found to use a simple technology and the required construction materials are available locally and at a low cost

d. **Processing of seaweeds to extract Carrageenan in Tanzania:** Most of the crops produced in Tanzania are sold unprocessed to traditional and world market. The products are then processed there and thereafter, the finished product re-exported to Tanzania. Furthermore the price of raw produce is low and erratic at international markets. This is what happened for along time for the Tanzanian seaweed. Tanzania has been exporting raw seaweeds to Europe where carrageenan is extracted and resold to Tanzania at higher prices. Some 15,000 tons of dry weeds are exported annually. Through value addition, this situation can be reversed. This project sought to get a technology for extracting carrageenan from seaweed, which already has markets locally in the textile industries. The technology should allow small scale production which groups or cluster of seaweed farmers can use to add value to their seaweeds. Some 27 technologies were identified through patent search and were all evaluated by NEG. NEG selected US 5801240 - *Methods for extracting semi refined carrageenan from seaweeds*. NEG noted that the patent was filed in 1998 and would expire this year and therefore, there would be no patent infringement by using it.

66. **Observations:** The evaluation made the following observations:

   a. At the time of the evaluation, none of the business plans had been implemented. Without implementation of the identified technologies, the projects will not have solved the development needs of these countries.

   b. The evaluation found that the selection of same project on aquaculture by the three countries was unusual coincidence.

c.   The idea of limiting the needs areas to two is not justified

B2: The effectiveness and usefulness of the project in building national institutional capacity in the use of technical and scientific information for identified needs so as to progress towards the achievement of key national development targets

67. Finding 7: The project was fairly effective and useful in building national institutional capacity in the use of technical and scientific information for the identified need.

68. Achievements: The evaluation made the following positive observations:

a. The project built capacities of the national expert, members of NEG as well as members of the wider multi-stakeholders forum on the following:
- Understanding appropriate technology
- Identification of needs
- Preparation of search requests
- Undertaking searches
- Preparation of search reports
- Preparation of Landscape reports
- Preparation of Business Plans

b. Around 180 people received training in the use of technical and scientific information including through participation in NEG meetings between 2015 and 2017. In total 12 capacity building programs were organized - Tanzania (6); Ethiopia (3); Rwanda (2); Malaysia (1) and Sweden (1).

c. In addition, LDC Division of WIPO organized a regional technological capacity building meetings in cooperation with United Nations Economic Commission for Africa (ECA) and United Nations Economic and Social Commission for Asia and Pacific (ESCAP), which were attended by more than 240 senior officials over the three years

d. A special technological capacity building programs has been established as part of the framework of cooperation with the government of Sweden which provides training for around 25 senior officials from LDC per year.

e. The national consultants interviewed talked very positively about the project's capacity building strength

> *NEG went through the process of needs identification based on Rwanda development agenda of creation of wealth and job opportunities and overall development including enhancing the contribution of the manufacturing sector to 14 % of the GDP. The state of art search was the most useful one, you cannot appreciate this until you do it.*
> ***James Kagaba - RWANDA***

Capacity building was useful, enabled people to understand AT and the importance of Patent Information, there was an outreach programs undertaken at Nelson Mandela and the visit to Malaysia was very useful. **George Shemdoe - TANZANIA**

NEGs capacity was built. Most members did not have ideas on the concept of AT. The project it provided clarity on the concept of AT and how to identify needs areas. Two members are already applying the skills in their private work. **Wondwossen Belele - ETHIOPIA**

69. **Shortcoming**: The evaluation noted that whereas the landscape reports were prepared by NEGs through supervision of the international consultant, the business plans were prepared by international consultants and then submitted presented to NEG for approval. Whereas this was done according to the project document, this arrangement limits the realization of capacity building objectives. More capacity would be built if NEGs were also mandated to prepare the business plans under the guidance of international consultants.

B3: The effectiveness of the project in coordinating the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement this technology in a practical and effective manner

70. **Finding 8: The project was effective in coordinating the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement this technology in a practical and effective manner.**

71. **Achievements**: The evaluation noted that, as per the project document, the search process was initiated by the national expert, in consultation with NEG and international and National consultants. The search request were then passed to WIPO experts at LDC Division, for comments before being submitted to WIPO's Patent Information Division. This procedure ensured that the search requests were of high quality, which in turn facilitated quality search and search reports. The search reports were then made available for preparation of the technical landscape report and business plans.

72. **Shortcomings:** The participation of NEGs in the search process was minimum since the project document did not expect them to do so. However, according to the national experts, more involvement of the NEG in search process would enhance their capacity in retrieval of appropriate technical and scientific information.

C. Sustainability

73. The evaluation assessed Sustainability based on the following four criteria:

   a. Likelihood that the business plans developed during the project would be implemented

   b. Likelihood that the three countries will continue with the work on Appropriate Technology

    c.   Likelihood of WIPO and Member States continuing with this project

    d.   Lessons learned from phase 1

C1: Likelihood that the business plans developed during the project would be implemented

74.   Finding 9: There is likelihood that some of the business plans developed during the project will be implemented.

75.   The following evidences support this finding:

    a.   Based on the interview with Mr Wondwossen Belele, the Ethiopian Ministry of Science and Technology has allocated money and identified experts to help implement the project. The chairman of NEG has also been appointed to oversee the implementation of the project.

    b.   In Tanzania the National Expert reported that the minister for trade and industrialization of Zanzibar has made funds available for the implementation of the project on extraction of valuable products from seaweeds. Furthermore, it was reported that the equipment for the processing seaweed can be made in Tanzania which is good in terms of capacity building and repairs. These will involve smaller plants for communities, starting with 3 pilot plants. A cluster of seaweed consisting of youth and women has been formed to work on the project. The seaweed cluster has already ordered for equipment for crushing and grinding from a local supplier. This supplier will also be responsible for the fabrication of the extraction technology. It was further reported that the Tanzania Science and Technology Commission is initiating a project on innovative cluster and seaweeds cluster is one of those selected.

    c.   In Rwanda, the National consultant reported that the National Industrial Research and Development Agency (NIRDA) and its stakeholders are ready to implement the projects on pilot basis before undertaking large scale country-wide implementation. The pilot phase will start in July 2018 for a period of 1-2 years. NIRDA has already earmarked US$ 50,000 for the project.

76.   Shortcoming: The evaluation made the following observations:

    a.   In all the projects the implementations of the business plans have been public sector driven. Lack of involvement of the private sector right at the beginning of the projects may have limited their participation and consequently the implementation of the projects.

    b.   In all the cases, there were no involvement of the financial institutions and development NGOs in the project development process.

C2: Likelihood that the project of appropriate technology will continue in these three countries

77.   Finding 10: There is likelihood that the project of appropriate technology will continue in these three countries.

78.   The following evidences support this finding:

a. According to Mr Wondwossen Belele, the AT project was launched at a time when Ethiopia was developing a technology roadmap which includes facilitating technology transfer in 21 prioritized areas. The AT project therefore fits very well in the technology roadmap program. It was also reported that the Ethiopia NEG consisted of senior officials of the government. Since their capacity has been built, there were plans to use them to support various AT projects as well as the development of IP policy and other relevant government development documents

b. In Rwanda it was reported by the National Expert that the National Industrial Research Institute is developing a seven year strategic plan (2019-2026). The plan has included two strategies arising from the project - (a) Technology acquisition and transfer (b) knowledge management including use of IP information for research and development. These two programs will promote the appropriate technology project. The Rwanda Government Delegation to the 18th CDIP meeting of November 2016 also expressed the Government's happiness with the project. While commenting on the progress report on AT project, the delegation said " .. *this is one of the best technical assistance programs for problem solving. It was extremely important to identify areas where technology was lacking and to find the technology to support the implementation*..."

c. In Tanzania, the National Expert reported that:

• Funds had been set up to establish innovation spaces in the universities and capacity building programs included including use of IP information. This will lead to increase in the use of IP

• Although there was no concrete plans to convert NEG into a permanent organ, the National Expert stated that NEG is very useful and Tanzania Science and Technology Commission will coordinate members of NEG so that they can be used to be advocates of the AT programs. These issues are being put in the strategic plan to mainstream them. Furthermore, during the project, NEG had identified four areas, two were implemented and two awaiting to be implemented through other projects

79.   Shortcomings: The evaluation noted the following shortcoming:

a. There were no concrete plans to make NEG a permanent feature in all the three countries.

b. The idea of mainstreaming AT in national strategies is good, but wherever this has happened, it has done so accidentally.

80.   Finding 11: There is likelihood that WIPO and Member States will continue with this project.

81.   The following evidences support this finding:

    a.   Regional Bureau for Latin America and the Caribbean is planning to pilot the concept of appropriate technology in some two countries. A team led by Ms Beatriz Amorim-Bohrer , Director for the Regional Bureau and Mr Oswaldo Girones, Senior Counselor, met the evaluator to exchange information about the project. The team expressed their desire to pilot it, with some modification, in Latin America.

    b.   The Korean Fund-In-Trust in collaboration with WIPO has been implementing appropriate technology projects in developing countries, as mentioned here below, and this is likely to continue in future:

    i.   First, during discussion of the reports on appropriate technology in November 2015 (16th CDIP), the Delegation from the Republic of Korea reported that the Korean IP Office was working with Mongolia and Myanmar in developing appropriate technologies to help these countries increase their incomes and improve their way of life.

    ii.   Secondly, during the 18th CDIP which took place in October/November, 2016, The Delegation of the Dominican Republic mentioned that it held an appropriate technology competition on January 1, in Latin America with the support of WIPO and the Korean Intellectual Property Office. The competition sought to ensure that developing countries and LDCs were guided to find the best solutions to access technologies for communities but also provide technical assistance to find solutions to issues by using patents.

    c.   WIPO has just signed an MoU with the Government of Mozambique on appropriate technology.

Finding 11: The level of sustainability of the projects in phase 1 is moderate.

82.   Observations:

a. **Zambia:**

i.   The project on rainwater harvesting was successfully implemented as per the business plan[1]. With the support of the District Commissioner and the local chief, the project was initially rolled out in the drought-stricken areas of Simamba Village in Savonga, in Zambia's Southern Province. A local committee was formed including local government officials, local NGOs, community representatives and farmers. The committee worked very closely with the NEG to implement the project. Day-to-Day management of the project rest with the community under the supervision of the chief. Ownership of the project by the local community is ket to its sustainability and long term success. The success of this project was summed up in the statement of the Senior Chief Simamba X1.

> **When the people from WIPO first came to our community, we were quite skeptical because we have been cheated in the past, but the water harvesting project is making a real difference to the lives of the community members. Our farmers can now grow crops and can feed their families and their animals during the dry season. We are even thinking of starting to use our water supplies to farm fish.**

ii.   Although the project has not been replicated in other places, from interviews with Mr National Consultant for the project, the Global Environmental Fund is interested in promoting the replication of the project country wide.

iii.   However, the other project of solar distillation was not implemented. Furthermore NEG collapsed due to lack of resources to facilitate its activities to carry the project forward.

b. **Nepal:**

i.   The project on biomass briquetting technology has been successfully implemented as per the business. The technology resulted into a bio-briquette product that is mechanically strong, novel, efficient, eco-friendly and easily ignitable alternative fuel source for Nepal. According to an interview with the National Consultant, (Dr Ramesh Singh) several members of the informal sector were trained and are already making and selling the improved briquettes, which are in great demand particularly in winter. Currently the product is widely used in most parts of the country. It is informal private sector driven.

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[1] WIPO Magazine April 2017 - patent information enables rainwater harvesting in Zambia

ii.   According to Singh, the implementation of the other project (drying of cardamom) is going on in Eastern Nepal. However the progress as been slow. Furthermore, NEG is not operation and therefore follow up is a problem

c.   **Bangladesh:**

i.   None of the two projects were implemented

83.   **Suggestions**: The following suggestions have been made by the national consultants from Zambia and Nepal on the issue of sustainability

a.   Ways and means should be found out to ensure that NEGs are made a permanent feature of the project. For example NEG can be converted to advisory body under the implementing agency, meeting regularly and paid allowances.

b.   The Appropriate Technology methodology is powerful and should be used to replicate the projects elsewhere

c.   There is a need to organize a meeting of past participants (the six countries) to review the project and develop strategies of strengthening it in those countries

d.   The participating governments must commit money for implementing the business plan as pilot projects for marketing to potential private sector

D. Implementation of Development Agenda Recommendations

The extent to which the DA Recommendations 19, 30 and 31 have been implemented through this project.

84.   **Finding 13: This evaluation has found that the project has responded to the recommendations 19. 30 and 31; as following:**

85.   *Recommendation 19: To initiate discussions on how, within WIPO's mandate, to further facilitate access to knowledge and technology for developing countries and LDCs to foster creativity and innovation and to strengthen such existing activities within WIPO.* The project implemented Recommendation 19 as it has facilitated discussions both within the CDIP and in the three beneficiary countries on the how to promote further access to knowledge and technology in LDCs. In particular, the CDIP has discussed the project document, and all the progress reports related to the implementation of the project since 2014 and a number of member states have expressed their interest in the continuation and strengthening of the project.

86.   *Recommendation 30:   WIPO should cooperate with other intergovernmental organizations to provide developing countries and Least Developed Countries (LDCs) upon request, advice on how to gain access to and make use of IP-related information on technology, particularly in areas of special interest to the requesting parties.*

a.   The Division for Least Developed Countries of WIPO cooperated with the United Nations Economic Commission for Africa (ECA) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in the organization of regional

technological capacity building meetings for LDCs which in particular focused on the use of technical and scientific information for the fulfillment of development objectives.

a. In addition, cooperation was initiated with the Universiti Putra Malaysia (UPM) which included a study visit for participants from the project beneficiary countries. This cooperation enabled participants to further develop knowledge and know how in the use of patent information and scientific and technical journals for invention, and innovation.

b. Cooperation has also been established with WorldFish which will allow for the sustainable national implementation of the appropriate technology identified in the area of aquaculture and which will further address the specific requests made by the LDCs.

c. The project implemented Recommendation 30 as it promoted access to technology relevant scientific and technical information in nationally identified development needs areas in three beneficiary countries.

87. Recommendation 31: To undertake initiatives agreed by member States, which contribute to transfer of technology to developing countries, such as requesting WIPO to facilitate better access to publicly available patent information.

a. The project fully implemented Recommendation 31 as the implementation modalities of the project were based on the use of publicly available scientific and technical information including patent information to identify technologies and contribute to technology transfer and national technological capacity building

CONCLUSIONS

A. Project design and management

88. Conclusion 1 (*Ref: Findings 1, 2, 4).* The project document, as it is now, is adequate and sufficient for the implementation of the appropriate technology project in future in both the Developing and Least Developed Countries. Going forward, consideration should be given to the following:

a. Mainstreaming and scaling up the project

b. Maintaining regional distribution

c. Expanding the project to interested developing countries.

d. Review the duration of delivering a specific project. After the identification of the needs area, the time to deliver a specific project should not be more than 12 months. In this way, more projects could be delivered within the project time and with the same amount of resources

e.   Build in the project document a mechanism to ensure that NEGs adheres to the reporting requirements of the project

f. To ensure effective utilization of the consultants, an induction meeting should be held to give them a clear understanding of the project. In addition to the background documents,

reports from the previous projects should also be made available so that the consultants have a clear picture of the concept and the pathway to the implementation of the project.

89. Conclusion 2 (*Ref: Findings 3).* To contribution of the other entities within the WIPO Secretariat is should be enhanced. Attention should specifically be given to the following:

a. Strengthening awareness creation of the AT project to relevant internal stakeholders

b. Involving Regional Bureaus to ensure that use of Appropriate Technology is mainstreamed in the national IP strategies of the LDCs.

90. Conclusion 3 (*Ref: Findings 4).* Effective utilization of NEGs as a national Organ for capacity building and implementation of the AT project has remained a unresolved risk. To improve on this, in future, special attention should be given to the following:

a. The selection of the NEG must be done carefully so that there is a balanced representation of the relevant ministries or departments.

b. Representation of the relevant industry (private sector) should also be include in NEG.

c. The chairman of the NEG must have strong leadership qualities.

d. The NEG must regularly update WIPO and the consultant on its activities and progress.

e. The NEG members should be paid a small honorarium for attending the meeting. The NEG members should also be awarded a certificate; for serving on the committee and for attending the capacity building programme.

f. For continuity and success of the project, change of membership must be minimized.

g. Consultant must be updated on any membership changes so that appropriate action can be taken to ensure the new members are updated to the required level of knowledge. New Committee formed must also undergo capacity building.

91. Conclusion 4 (*Ref: Findings 1-5).* The project piloting process has been successfully completed and the project should now be mainstreamed and up scaled.

B. Project Effectiveness

92. Conclusion 5 (*Ref: Findings 6-8).* The project has successfully demonstrated, in a practical manner, its potential for capacity building in the use of appropriate technical and scientific information in addressing nationally identified development needs. However, going forward, to increase its effectiveness, the following issues should be considered:

a. More LDC countries should be involved for greater impact

b. Within a country, more projects should be pursued, at least 10 projects

c. NEGs should be fully responsible for undertaking patent search; as well as preparation of the landscape reports and the business plans.

d. More people should be involved in the training on the use of AT

e. Emphasis should be put on the implementation of the business plans. Without this, the actual realization of the objectives of the project is not ascertained.

93. **Conclusion 6 (*Ref: Finding 8).*** The current practice of patent search needs to be changed to allow more opportunities for capacity building of NEG on patent search.

C. Sustainability

94. **Conclusion 7 (Ref: Finding 9 and 12**). The implementation of the business plans and replication are the most important post project activities that can guarantee the sustainability of the project. The chances of implementing the business plans can be improved through the following consideration:

a. strict application of the selection criteria, which among others, requires that the participating countries commits resources in the budget for the implementation of the business plan.

b. Involvement of the relevant private sector in the process of search, preparation of landscape report and business planning, once the development needs areas have been identified.

c. Involvement of potential funding agencies, e.g. national commercial and industrial development financial corporations and relevant international NGOs in the process.

d. After the identification of the 2-3 technologies, the NEG composition be reviewed and new members be recruited according to the needs.

e. There may be need to re-organize the mandate of NEG. NEG would be actively involved in the process of identification of the needs areas. Once these areas are identified, then small implementation teams can be constituted, appropriate to the sector. For example, a project on aquaculture can be spearheaded by a small team consisting of representatives from the Ministry in charge of fisheries, private sector association dealing with fisheries (or agriculture), Financial institution funding agriculture and NGOs active in the area of agriculture.

95. **Conclusion 8 (Ref: Findings 10 and 12**). The current design of the project document does not put emphasize on facilitating the establishment of appropriate legal, institutional and policy framework to ensure the continuation of the project after the implementation of the business plans. Where this has been done, it has been unintended positive outcome of the project. In future more attention and resources should be given to:

a. How to mainstream AT in national strategies and policies (for example, national IP policy, STI policy, industrialization policy)

b. There is need to keep the AT project life in the six countries where the it has been implemented. A starting point should be to organise a meeting of past managers of the six countries and relevant government departments to review the projects. This may be preceded by a scoping study to document what is actually on the ground.

96.   **Conclusion 9 (Ref: Findings 11**). There is interest both at WIPO and Member States to continue with the AT project. This interest should be supported through the following:

    a.   The project is mainstreamed as a program in LDC Division

    b.   The effort by the Regional Bureau for Latin America and the Caribbean to pilot the project in its region is supported. Other Regional Bureaus should be encouraged.

    c.   The project document is improved and updated to take care of some of the emerging issues

    d.   Existing partnerships relevant to the AT project that have been established by the Division of LDC such as University Putra Malaysia; United Nations Economic and Social council for Asia and Pacific (UN ESCAP); United Nations Economic Commission for Africa (UN ECA) and the Swedish Patent Office should be strengthen and new ones established.

    e.   A review of the existing projects should be undertaken and documented to provide success stories and a center of excellence in created within LDC to be the source of information on AT.

    f.   The timelines for the project should be reviewed.

RECOMMENDATIONS

A. Mainstreaming and up-scaling the Appropriate Technology project

97.   **Recommendation 1 (Ref. Conclusions 1-5)**. The evaluation recommends that CDIP approves mainstreaming and up-scaling the appropriate technology project for implementation in both Least Developed Countries (LDCs) and Developing Countries.

B. Project design and management

98.   **Recommendation 2 (Ref. Conclusions 1-5)**. To enable effective mainstreaming and up-scaling, the evaluation recommends that WIPO Secretariat updates the procedures for the implementation of the appropriate technology project to cater for the following:

    a.   Flexibility and adaptability for use by both LDC and Developing Countries

    b.   Ensuring regional distribution

    c.   Increasing the number of projects per countries

    d.   Reducing the time of implementation of each project

    e.   Expanding the project to interested developing countries.

    f.   Introducing a mechanism to ensure that NEGs adheres to the reporting requirements of the project

    g.   Introducing induction program for project consultants

h. Enhancing the contribution of the regional bureaus in the project

i. Enhancing the effectiveness of NEG in the implementation of the project.

C. Capacity building and transfer of knowhow

99. **Recommendation 3 (Ref. Conclusions 5 and 6).** To enhance capacity building and transfer of knowhow on the use of appropriate technical and scientific information in addressing the development needs of the member states, WIPO Secretariat should ensure that :

a. NEGs are fully responsible for undertaking patent search, as well as the preparation of the landscape reports and the business plans.

b. More people are involved in the training on the use of appropriate technical and scientific information in addressing development needs of the member states.

c. More projects are undertaken per country.

D. Sustainability

100. **Recommendation 4 (Ref. Conclusion 8).** To enhance the chances of implementation of the business plans and replication of the projects, the evaluation recommends that the WIPO Secretariat undertakes the following:

a. Ensures that the implementation of the business plan becomes the main condition for selection of the Member States for participation in the project and an integral part of the MoU

b. Promotes the involvement of the private sector in the development and implementation of the project

c. Promotes the involvement of local financial and NGOs in the process.

d. Promotes the mainstreaming of use of AT in national strategies and policies of the Member States (for example, national IP policy, STI policy, industrialization policy)

e. Organize a review meeting of past managers of the six countries and relevant government departments to explore how to strengthen the use of Appropriate Technology in these countries.

101. **Recommendation 5 (Ref: Conclusion 9**). To promote the continuation of the AT project within WIPO and Member States, the evaluation recommends that the secretariat undertakes the following:

a. Mainstream the AT project as a program in LDC Division

b. Promote and encourage the efforts by the Regional Bureaus to pilot the AT project in developing countries in their regions

c. Strengthen the existing partnerships relevant to the Appropriate Technology project and establish new ones.

d. Review and document the existing projects to provide success stories and create a center of excellence within LDC to be the source of information on Appropriate Technology

[Appendixes follow]

APPENDIX I: EVALUATION FRAMEWORK

		Sub-Foci	Indicators	Means of verification
1: PROJECT DESIGN AND MANAGEMENT				
1a		The appropriateness of the revised project document as a guide for project implementation and assessment of results achieved	Whether or not the revised project document was used without revision to successfully implemented the project and attain the desired results	Through document review and interview with the project team.
1b		Adequateness and usefulness of the project monitoring, self-evaluation and reporting tools in providing relevant information for decision-making purposes of the project team and key stakeholders.	Whether or not the project monitoring, self-evaluation and reporting tools were used without revision to provide relevant information for decision-making purposes of the project team and key stakeholders.	Through document review and interview with project team and the beneficiaries
1c		The extent to which other entities within the Secretariat have contributed and enabled an effective and efficient project implementation.	The contribution of the other entities within the Secretariat to enable effective and efficient project implementation	Through document review and interview with project team and the relevant departments.
1d		The extent to which the risks identified in the initial project document have materialized or been mitigated.	Whether or not the risks identified in the revised project document have materialized or how they have been mitigated.	Through document review and interview with project team, NEGs and Beneficiaries
1e		The project's ability to respond to emerging trends, technologies and other external forces.	The extent to which the project responded to emerging trends, technologies and other external forces.	Through document review and interview with project team.
2: EFFECTIVENESS				
2a		The usefulness of the project in facilitating greater use of appropriate technical and scientific information in addressing nationally identified needs for development	Use of appropriate technical and scientific information in addressing nationally identified needs for development	Through document review and interview with project team, NEGs and Beneficiaries and recipients
2b		The effectiveness and usefulness of the project in the establishment of a national institutional capacity in the use of technical and scientific information for identified needs	• Effective Multi stakeholders forum established • Institutional capacity for use of technical and scientific information by LDC built	Through document review and interview with project team, and recipients and members of multi stakeholders policy forum
2c		The effectiveness of the program in coordinating the retrieval of appropriate technical and scientific information and the provision of appropriate know-how in this technical area to implement this	• Coordination of retrieval of technical and scientific information • Provision of appropriate know-how	Through document review and interview with project team, recipients and members of NEG

	technology in a practical and effective manner		
3: SUSTAINABILITY			
3a	The likelihood for continued work on Appropriate Technology – Specific Technical and Scientific Information as a solution for identified development challenges by WIPO and its Member States.	Measures in place to ensure that the project can continue without support from WIPO	Through document review and interview with project team and recipients
4: IMPLEMENTATION OF DEVELOPMENT AGENDA (DA) RECOMMENDATIONS			
4a	The extent to which the DA recommendations 19, 30 and 31 have been implemented through this project	• Enhance access to knowledge and technology for developing countries and LDC, • Advice to developing countries and LDC on how to gain access to and make use of IP-related information on technology. • Contribution to technology transfer to developing countries and access to publicly available patent information	Through document review and interview with project team and recipients

[Appendix II follows]

APPENDIX II: LIST OF DOCUMENTS TO BE REVIEWED

1. CDIP/5/6 – PROJECT DOCUMENT PHASE I (2010)

2. CDIP/12/3 – EVALUATION REPORT ON PHASE I (2013)

3. CDIP/13/9 – PROJECT DOCUMENT PHASE II (2014)

4. PROGRESS REPORTS – ZAMBIA

5. PROGRESS REPORTS – ETHIOPIA

6. PROGRESS REPORTS – RWANDA

7. LANDSCAPE REPORTS FOR THE SIX PROJECTS

8. BUSINESS PLANS FOR THE SIX PROJECTS

9. MISSION REPORTS

10. MONITORING REPORTS

[Appendix III follows]

APPENDIX III: LIST OF WIPO STAFF TO BE INTERVIEWED DURING THE FIRST EVALUATION MISSION BY PROF OGADA SCHEDULED FOR FEBRUARY 26-28, 2018

LIST OF DEPARTMENT/SECTIONS/DIVISIONS AND CONTACT DETAILS OF THE WIPO STAFF TO BE INTERVIEWED

SN	NAME	TITLE	DEPARTMENT/AFFILIATION	CONTACT DETAILS
1	Mr. Kifle Shenkoru	Director (project Manager)	WIPO Division for Least-Developed Countries	Kifle.shenkoru@wipo.int +41 22 338 8192
2	Ms. Alexandra Bhattacharya	Consultant	WIPO Division for Least-Developed Countries	Alexandra.bhattacharya@wipo.int +41 22 338 8155
3	Prof. Mohamed Shariff Bin Mohamed Din	International Consultant for the Project	Advisor on Intellectual Property and Technology Transfer Universiti Putra Malaysia (UPM)	pshariff@gmail.com +60 122 83 9845 (mobile phone)
4	Mr. Allan A. Phiri	International Consultant for the Project (Preparation of Business Plans)	Manager, Technology and Marketing, Lusaka, Zambia	aphirib@yahoo.co.uk +260 211 222409 +260 966457553 (mobile phone)
5.	Dr. Georges Shemdoe	National Consultant (Tanzania)	Principal Research Officer, Tanzania Commission for Science and Technology (COSTECH), Dar es Salaam	shemdoeg@yahoo.com +255 715 879 877 (mobile phone)
6	Mr. James Kagaba	National Consultant (Rwanda)	Division Manager, Innovation, Technology Transfer and Commercialization, National Industrial Research and Development Agency (NIRDA), Kigali	kagaba44@gmail.com (+250) 788 355 554 (mobile phone)
7	Mr. Wondwossen Belete	National Consultant (Ethiopia)	International Consultant, Science and Technology Policy Expert, Addis Ababa	wondwossenbel@yahoo.com +251-911-886709
8	Mr Irfan Baloch	Director	WIPO Development Agenda Coordination Division	+41 22 3389955 079-6156006 (mobile phone) irfan.baloch@wipo.int
9	Mr. George Ghandour	Senior Program Officer	WIPO Development Agenda Coordination Division	george.ghandour@wipo.int 004122338 8646 079-6156036 (mobile phone)
10	Mario Matus	Deputy Director General	WIPO Development Sector	Mario.matus@wipo.int +41 22 3389026
11	Mr. William Meredith	Director Infrastructure Modernization Division	Global Infrastructure Sector	William.meredith@wipo.int +41 22 338 9658
12	Mr. Y. Takagi	Assistant Director General	Global Infrastructure Sector	Yo.Takagi@wipo.int +41223389058 079-2480106 (Mobile Phone)
13	Mr. Roca Campaña	Senior Director-Advisor	Global Infrastructure Sector	Alejandro.Roca@wipo.int +4122338 9029 079-2480185 (Mobile Phone)

14	Mr. Mark Sery-Kore	Director	Regional Bureau for Africa	Mark.sery-kore@wipo.int Tel: +41 22 338 9948
15	Ms Joyce Banya	Senior Counsellor	Regional Bureau for Africa	Joyce.banya@wipo.int Tel: +41 79 6156041
16	Ms Loretta Asiedu		Regional Bureau for Africa	Loretta.asiedu@wipo.int Tel: +41 79 5388273

[Appendix IV follows]

APPENDIX IV: DATA COLLECTION QUESTIONNAIRE FOR THE PROJECT TEAM, INTERNATIONAL AND NATIONAL CONSULTANTS AND CHAIRPERSON OF NEGS

1. Brief information on the Respondent
   a. Name:

   b. Role:

2. Project Design and Management

2.1. The Project Framework

To what extent was the revised project document useful for each of the following activities of the implementation of the project? Tick as appropriate.

Activity	Extent of usefulness of the project document		
	Low	Medium	High
a. Submission of expression of interests by Member States			
b. Review of the expression of interests by WIPO			
c. Signing of participation agreement defining the obligations of each partner			
d. Establishing the National Experts Group (NEG)			
e. Identifying and agreeing on the Needs Areas			
f. Preparing search request			
g. Undertaking search and preparing search report			
h. Preparing landscape report based on search report			
i. Approving the landscape report by NEG			
j. Preparing the Business Plan			
k. Implementing the Business Plan			
l. Organizing a national outreach program			

Please provide explanations to your answers---

2.2. The Project Monitoring and Controlling Tools

Were the following monitoring and control tools adequate and useful to provide the project team, consultants and key stakeholders with relevant information for decision making purpose

Activity	Extent of usefulness of the project document	
	YES	HIGH
a. Were all the projects successfully implemented		
b. Was NEG established within 30 days		
c. Were landscape reports prepared in time and submitted to the Government and WIPO		
d. Were business plans prepared and implemented within 6 months after the start of the project		
e. Were sector specific targeted outreach program completed within 24 months of start of the project		
f. Were the mid-term and end term reports prepared for each project		

Please provide explanations to your answers---

2.3. The Project Synergy

a. Which departments, divisions or any other units within WIPO participated or contributed to the project?

b. What was the contribution of each of them?

c. Are there others which could have contributed but did not? If so which and what could they have done?

2.4. Risks/Context

a. There were risks that were identified in the initial project document. To what extent have they materialized or been mitigated and how has the project been able to respond to changes in the context?

- Different understanding of the definition of appropriate technology hampers the transfer of technology to be used for the identification of needs

- Lack of adequate coordination among project partners might lead to delay in implementation of the project

- Institutional realities in LDCs such as lack of focal point institutions and technology information centers and relevant research institutions
- Lack of motivations and problems of having the right target group to participate in training and skills development program

Please provide explanations to your answers---

2.5.   Lessons learned and Best practices

   a. What key lessons and best practices would you draw from the project design and administration?

3. Project Effectiveness

3.1.   To what extent was the project able:

  a.   To facilitate greater use of appropriate technical and scientific information in addressing nationally identified needs for development?

  b.   To establish effective and all inclusive multi stakeholders policy forum?

  c.   To build institutional capacity in the use of technical and scientific information for identified needs?

  d.   To effectively coordinate the retrieval of appropriate technical and scientific information?

  e.   To provide appropriate know-how in the technical area to implement the technology in a practical and effective manner?

4. Project Sustainability

  a.   What are the contributions of the host country and institutions in the establishment of the Appropriate Technology project and provision of the necessary resources?

  b.   How are the host countries using the project?

  c.   Is the project addressing the specific needs of the organizations/ countries?

  d.   What commitments are there to show that the activities of the project will continue after the support of WIPO?

5. Implementation of development agenda recommendations

    a. The extent to which the DA recommendation 19, 30, 31 has been implemented through the project.

6. Other issues

    - The number of people who have received training and are using the acquired skills and knowledge--

    - Names of nation capacity building programs which are continuing and being expanded through support from the government and other stakeholders--

    - Names of institutions that have been put in place to continue working on Appropriate technology---

    - Whether or not NEG has been made a permanent organ to promote work on Appropriate Technology--

    - Whether or not AT information is being used for development---

    - Whether or not the project is being replicated to other areas without WIPO`s support---

    - The extent to AT is being utilized for economic development and is included in the national IP policies and strategies--

    - To what extent AT is being used to solve needs based identified problems---

[End of Appendix IV and of document]