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EVALUATION REPORT OF THE PROJECT ON INTELLECTUAL PROPERTY MANAGEMENT AND TRANSFER OF TECHNOLOGY: PROMOTING THE EFFECTIVE USE OF INTELLECTUAL PROPERTY IN DEVELOPING COUNTRIES, LEAST DEVELOPED COUNTRIES AND COUNTRIES WITH ECONOMIES IN TRANSITION

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1. The Annex to this document contains an external independent Evaluation Report of the Project on Intellectual Property (IP) Management and Transfer of Technology: Promoting the Effective Use of IP in Developing Countries, Least Developed Countries and Countries with Economies in Transition, undertaken by Ms. Anita Leutgeb, Evaluation & Research For Development, Vienna.

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

[Annex follows]

TABLE OF CONTENTS

Executive Summary	2
I. Introduction	6
II. Description of the Project	6
III. Overview of Evaluation Criteria and Methodology	6
IV. Key Findings	7
A. Project Design and Management	7
B. Effectiveness of the Project	8
C. Sustainability	12
D. Implementation of Development Agenda (DA) Recommendations	12
V. Conclusions and Recommendations	14

Appendixes

Appendix I: Persons Interviewed/Consulted	1
Appendix II: Documents Consulted	1
Appendix III: Inception Report (Attached separately)	

List of Acronyms Used

CDIP	Committee on Development and Intellectual Property
DA	Development Agenda
IP	Intellectual Property
LDCs	Least Developed Countries
TISCs	Technology and Innovation Support Centers
WIPO	World Intellectual Property Organization
TT	Technology Transfer
TNA	Training Needs Assessment
IVC	Innovation Value Chain

EXECUTIVE SUMMARY

1. This report is an independent evaluation of the Development Agenda Project (Project Code: DA_1_10_12_23_25_31_40_01) on the Intellectual Property Management and Transfer of Technology: Promoting the Effective Use of Intellectual Property in Developing Countries, Least Developed Countries, and Countries with Economies in Transition proposed by South Africa. The project duration was from January 2018 until October 2020, including a three months extension approved by the Member States at CDIP/24¹.
2. This project aimed to enhance the innovation capabilities of Developing Countries, Least Developed Countries (LDCs) and Countries with Economies in Transition by deploying opportunities for training, capacity building and cooperation. Key outputs included the provision of a training needs assessment methodology and toolkit, mapping of the innovation value chains (IVC), and the implementation of training activities according to the training plan elaborated within this project in the four pilot countries South Africa, Rwanda, Indonesia, and Chile.
3. The aim of this evaluation was to learn from experiences during project implementation and to provide evidence-based evaluative information to support the CDIP's decision-making process. This included assessing the project management and design including monitoring and reporting tools, as well as measuring and reporting on the effectiveness and usefulness of the project, the achieved results, and assessing the likelihood of sustainability. The evaluation utilized a combination of methods including a document review and interviews/group discussions with 11 staff at the WIPO Headquarters and zoom/WhatsApp interviews with nine government stakeholders involved in the project implementation in the four pilot countries.

Key Findings

Project Design and Management

4. **Finding 1-2:** The project document was found to be sufficient in guiding the overall implementation and assessment of progress. Additional documentation and guidance were developed to facilitate the implementation of the project. The project monitoring tools were appropriate for reporting to Member States at the CDIP on the overall progress of the project, notably through the Project Progress reports. Reporting and analysis tools included feedback surveys of training workshops; spreadsheets to track project progress and budget utilization. Measuring the size of knowledge gains and the use of the acquired skills could have been improved with the inclusion of pre and post-testing of training participants and other adequate follow-up measures.
5. **Finding 3:** The activities of this project were managed by the Technology and Innovation Support Division of the Innovation and Knowledge Infrastructure Department of the Global Infrastructure Sector. The Division for Africa, Division for Least Developed Countries, Division for Asia and the Pacific, and Division for Latin America and the Caribbean (Regional Divisions) were involved to a limited extent in supporting the implementation.
6. **Finding 4-5:** The risk identified in the initial project document did not materialize to any significant extent, while also considering the mitigation strategies that were documented and adopted by the project. During implementation, Covid-19 was identified as a risk for the implementation of on-site trainings. The project also had to respond to significant institutional

¹ Para 6.1 of Summary by the Chair, CDIP 24: https://www.wipo.int/meetings/en/details.jsp?meeting_id=50452

changes affecting the innovation value chain. For both external factors, the project team together with their implementing partners found adequate solutions to mitigate negative effects.

Effectiveness

7. **Finding 9-11:** 386 people have been trained in total, 56% of these in Indonesia, 30% in South Africa, and 14% in Rwanda. Participants included various players along the IVC, the majority being developers of IP. The participant feedback survey shows their satisfaction and a high degree of consensus that practical exercises were the most needed and useful aspects of the trainings. In each step, WIPO and country experts collaborated with government officials in host institutions to improve the quality of the outputs and to make it comprehensive. The participatory implementation was a key success factor of the project for getting valid data and ensure national ownership. The Division for Latin America and the Caribbean, Division for Africa, Division for Least Developed Countries, and Division for Asia and the Pacific were involved to a limited extent during the project implementation which, in their view, could have been expanded.
8. **Finding 12:** Covid-19 and related travel restrictions made it necessary to organise trainings after March 2020 through an online format. Considering that the WIPO project team had previously only used online training delivery for limited purposes, the project succeeded in not only mitigating the negative effects of Covid-19 but also gaining important transferable skills and increasing flexibility. This is an unexpected positive outcome of this project where a challenge was turned into an opportunity.
9. **Finding 14-15:** The trainings and tools created were useful for the pilot countries to increase awareness on and understand the value of using IP rights and licensing as key elements for economic development. Training participants learned from the experts to understand the commercialisation and technology transfer concepts.
10. **Finding 16-18:** The developed capacity building framework for IP management and technology transfer helped refine targeting of trainings effectively by assessing individual, institutional, and national training needs. Moreover, the tools have helped the pilot countries to collect important baseline data that gave them – in most cases – for the first time a complete picture of the IVC for IP and technology transfer, which in turn helped some of the pilot countries to develop their national capacity development strategy. The feedback collected from the pilot countries on the practicability and usefulness of the tool supported the project team to improve the quality of the tool and to make it more flexible with required and optional elements for TNAs increasing the possibility of its adaptation to available resources.
11. **Finding 19-20:** The project effectively contributed to increase the capacity in IP management and technology transfer of the various actors in the pilot countries along the innovation value chain (funders, developers, managers, and users of IP). In their feedback surveys following the training workshops, more than 80% of the survey respondents confirmed that the workshops were successful (i.e., useful and effective) in building their knowledge and skills in the trained areas (e.g., IP protection strategies, commercialization, patent search, etc.) and that the training will be useful for their daily work. The 60% target defined in the project document was therefore overachieved.
12. **Finding 21:** Feedback from the participants survey showed the value of the training for the trainees. However, almost all stakeholders recognized the need for further training support to meet capacity gaps to a larger extent and increase knowledge retention.

Sustainability

13. **Findings 23-26:** At WIPO, the TNA manual and toolkit, one of the key outputs of this project, will become a part of the pre-project assessment cycle of the TISC planning process. The pilot-countries reported their interest in re-using the methodology (training needs assessment, training plans, IVC mapping) developed by this project. The wider use of the manual and toolkit will be facilitated by the publication foreseen for the end of March 2021. Based on the training plan developed with this project, Chile has started preparing the establishment of a National Certification Mechanism for technology transfer, which is an important contribution to sustainability. Hence, sustainability of the project's achievements will be dependent on host institutions, national IP offices and supportive Member States.

Implementation of Development Agenda (DA) Recommendations

14. **Findings 27-33:** The project has contributed significantly to the implementation of the DA recommendations 1, 10, 12, 23, 25, 31, and to a lesser extent to recommendation 40. It has contributed to a development-oriented technical assistance tailored to the needs of the country and encouraged country-specific solutions to training delivery (Finding 27). It contributed to increase IP management capacity in the four pilot countries Chile, Indonesia, Rwanda, and South Africa (Finding 28) as well as to deepen understanding on needs and priorities related to IP management and technology transfer in a development context (Finding 29). Trainings covered IP related policies, legislation, licensing, patent searching, and technology transfer and, therefore, contributed to the implementation of the DA recommendation 23, 25, and 31 (Finding 30-32). The project has contributed to a lesser extent to implement DA recommendation 40 (on the intensification of cooperation on IP issues with UN agencies) as it did not find itself well positioned to do so.

Conclusions and recommendations

15. **Conclusion 1 (Ref: Findings 6-13).** The project has successfully delivered the key outputs of the project, notably the manual and toolkit, the training needs assessments, the innovation value chain mappings, the training plans, and the training activities. These outputs were developed in a collaborative manner incorporating feedback and input from all relevant stakeholders (national focal points, trainees), increasing their potential for effectiveness and usefulness. The whole project cycle displayed good practices in identifying and tailoring the needs to the pilot countries (rather than delivering "ready-made" solutions).

16. **Conclusion 2 (Ref: Findings 6-13, 23-24).** The training needs assessment manual and toolkit have the potential for use beyond this project and will be an important resource for assessing and tailoring capacity building needs and activities in the field of IP management, technology transfer and beyond if further mainstreamed within WIPO.

17. **Conclusion 3 (Ref: Findings 6-22).** The methodological approach developed by this project was effective and useful for the pilot countries to understand the innovation value chain and identify any capacity gaps for IP management and technology transfer. However, meeting the identified capacity needs requires more training support and follow-up measures (to plan during and after the training delivery).

18. **Conclusion 4 (Ref: Findings 19-22):** The evidence collected for this evaluation strongly indicates that the training participants have increased their knowledge and understanding in issues related to IP management and technology transfer. The wider impact of this project i.e., impact on organisations and at national level is difficult to assess because the project had not included indicators and activities to track the use of knowledge and skills gained at the individual, institutional, and national level.

19. **Conclusion 5 (Ref: Finding 11).** Regional Divisions were involved only a little in the project design and implementation. They implement projects with Member States as well but could not draw enough insights from this project as they lacked information and were not always given an opportunity to provide inputs to this project. Their background knowledge and contacts in the country and the region were used to a limited extent by the project.

20. **Recommendation 1 (Ref: Conclusion 1-4, Findings 6-22).** It is recommended to the Technology and Innovation Support Division of the WIPO Secretariat in their mainstreaming of the capacity building framework developed by this project (i.e., extending it to other interested countries) that it considers:

- (a) The technological context: e.g., make webinar recordings available offline, maybe only audio in order to make it suitable for weaker internet connections as well.
- (b) Offering mentoring/coaching/follow-up during and after trainings to support trainees in the application of training content in their day-to-day job-related challenges. In addition, it is recommended to create a platform where trainees and mentors can have an exchange in a sort of community of practice.
- (c) Providing translations for all or parts of training content to facilitate participant learning.
- (d) Collecting feedback after each training module and make it compulsory. This way it can ensure the necessary response rates to improve the validity of the results.
- (e) A participation certificate could encourage training participation and make it more rewarding.
- (f) Carrying out a pre and a post-test,
 - a. to improve targeting of the audience (e.g. offer basic and advanced courses)
 - b. to assess the knowledge increase of training participants against the baseline (including assignments or applied work)
- (g) Considering tracer or follow-up studies to track how participants have gone on to develop or to use their skills.

21. **Recommendation 2 (Ref: Conclusion 2-3, Findings 6-13, 23-24).** It is recommended to WIPO and the Member States, their national IP offices and other entities involved in this project to provide the necessary support to build on the training achievements in order to increase the sustainability of this project such as promoting the forthcoming manual and toolkit.

22. **Recommendation 3 (Ref: Conclusion 1-4, Findings 1-22).** In similar projects/capacity building activities it is recommended to

- (a) include mid- to longer term indicators (3-6 months after the training) that measure changes in behaviour and practice (i.e., use/application of knowledge and skills) of individuals; how the behaviour change has benefitted their organisation; and ultimately how this did affect the national level capacities;
- (b) consider longer training periods to increase knowledge retention and contribute to a more sustainable impact from trainings.

23. **Recommendation 4 (Conclusion 5, Findings 11):** For similar projects and mainstreaming of this project, improve coordination with the Regional Divisions and establish systematic communication lines right from the start:

- (a) to avoid duplication of project activities in the same countries, but instead create synergy effects;
- (b) to better draw on their regional expertise and contacts.

I. INTRODUCTION

24. This report is an independent evaluation of the Development Agenda Project (DA_1_10_12_23_25_31_40_01) on Promoting the Effective Use of Intellectual Property Management and Transfer of Technology in Developing Countries, LDCs and Countries with Economies in transition, proposed by South Africa. The project was approved during the 19th session of the Committee on Development and Intellectual Property (CDIP) (document CDIP/19/11 REV), held in Geneva, in May 2017. The project duration was from January 2018 until October 2020, including a three-month extension (approved by Member States at the 24th session of the CDIP).

II. DESCRIPTION OF THE PROJECT

25. **Objectives:** This project aimed to promote the effective use of intellectual property and any associated intellectual property rights as a tool for socio-economic development, emerging and least developed countries (LDCs), in particular, the use of intellectual property developed following public investment in research and facilitate access to knowledge and technology for developing countries and least developed countries (LDCs). The project had defined the following specific objectives:

- (a) Establish a framework in order to target more effectively capacity-building activities in the field of technology transfer.
- (b) Create capacity in IP management and transfer of technologies amongst the key role players in the categories of funders, developers, managers, and users of IP in the following countries: Chile, Indonesia, Rwanda and South Africa.

26. **Outputs:** The project document set out the following five main outputs of the project:

- (a) Provision of assessment training needs methodology and toolkit
- (b) Mapping of technology value chains in four pilot countries
- (c) Establishment of a training plan according to assessed training needs
- (d) Implementation of training activities according to the training plan
- (e) Evaluation and refining of methodology and toolkit

27. Within WIPO, this project has been managed by the Innovation and Knowledge Infrastructure Department, Technology and Innovation Support Division.

III. OVERVIEW OF EVALUATION CRITERIA AND METHODOLOGY

28. The aim of the evaluation was to learn from experience gained during project implementation assess the project's performance, including project design and management, coordination, coherence, implementation, and results achieved. The evaluation also aimed to provide evidence-based evaluation information to support the decision-making process of CDIP.

29. The evaluation was organized around 10 evaluation questions split into four areas: Project Design and Management, Effectiveness, Sustainability, and Implementation of Development Agenda Recommendations. These questions are responded to, directly in the section "Key findings" below.

30. The evaluation utilized a combination of methods. In addition to a review of all relevant documentation and available monitoring data, interviews and group discussions were conducted with 11 staff at the WIPO Secretariat in Geneva and zoom/WhatsApp/written interviews with nine stakeholders from the implementing institutions in the four pilot countries.

IV. KEY FINDINGS

This section is organized on the basis of the four evaluation areas. Each evaluation question is answered directly under the headings of each area.

A. Project Design and Management

Appropriateness of the initial project document as a guide for project implementation and assessment of results achieved.

31. **Finding 1:** The project document provided a description of the delivery strategy, activities and schedule, budget and monitoring indicators. The project document was found to be sufficient in guiding the overall implementation and assessment of the implementation progress. The original aim of the project was to assess training needs and capacity building at individual, institutional, and national levels. However, given the short-term nature of the project, the indicators of success and therefore the implementation had a strong focus on immediate to short-term results at the individual level.

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

32. **Finding 2:** The project monitoring tools were appropriate for reporting to Member States at the CDIP on the overall progress of the project, notably through the Project Progress Reports. Several observations concern the reporting and analysis tools:

- (a) A project timeline (in Excel) format was used by the project team to track the progress of the different outputs, their related activities and budget allocations. This provided the project team with the ability to monitor the activities and their progress.
- (b) The initial project document was supplemented with additional documentation to facilitate the implementation of the project (for example, terms of reference for country experts and the author of the manual and toolkit, a spreadsheet to track progress and budget utilization) and monitoring of the activities and their progress.

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

33. **Finding 3:** The activities of this project were managed by the Technology and Innovation Support Division of the Innovation and Knowledge Infrastructure Department of the Global Infrastructure Sector with the support of other entities within the Secretariat. The Division for Latin America and the Caribbean, Division for Asia and the Pacific, Division for Africa, and Division for Least Developed countries contributed to a limited extent to the project, mainly in supporting collaboration with countries within their respective regions.

The extent to which the risks identified in the initial project document have materialized or been mitigated.

34. **Finding 4:** The initial project document identified one risk (Risk 1 in the table below) for the project. The project documentation described a mitigation response as listed below. This risk did not pose a significant barrier; the mitigation strategy was successfully adopted. Risk number 2 arose with the onset of the Covid-19 pandemic and was also successfully tackled.

Identified risk	Mitigation response
Risk 1: Human resources turnover among beneficiaries of training activities.	Focus on training of trainers and support institutions such as TISCs to enable local support and minimize impact of turnover.
Risk 2: Inability to implement in-person training activities	Risk mitigation strategy: Implementation of online training activities

Table 1: Risks and risk mitigation

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

35. **Finding 5:** The project implementation had to respond to several external forces and challenges. This evaluation identified the following factors and describes how the project team responded to them:

(a) *Staff changes:* In the second quarter of 2019, the Associate Program Officer, responsible for the project administration, left the project. A new staff assumed the post in the third quarter of 2019; this staff change contributed to a slight delay of activities and was the reason for the request for extension of the project duration.

(b) *Institutional changes in Chile:* In Chile, during the last quarter of 2019, the Government implemented a change in key institutions and institutional actors for IP Management and Technology Transfer. The new Government established a new Ministry, the Ministry of Science and Technology and appointed a new director of the IP office. Moreover, a new opportunity was identified by the IP Office to support the development of the IVC in the country. A new objective was identified for the pilot project in Chile, namely the creation of a national certification mechanism for technology transfer. These institutional changes with new roles and responsibilities and a new focus resulted in a revision of the country mapping carried out prior to the changes and the postponement of training activities foreseen to be carried out as part of the project. The country focal point preferred to start discussions with the national stakeholders, WIPO, and an external expert for the development of the certification mechanism first. The National Capacity Building Plan developed by this project served as a basis for the mechanism as commented by the interview partners.

(c) *The Covid-19 pandemic:* In March 2020, the whole world had been hit by the Covid-19 pandemic and related lockdown measures almost overnight. The already planned on-site workshops in Indonesia and Rwanda that were about to start could not take place as planned. In response to the ongoing constraints for in-person training, the project team decided to prepare the delivery of online training. The project team relatively quickly gained new experience and skills to set up online training and increased the internal capacities and flexibility of WIPO to continue its training work when external challenges impede onsite training. These challenges and delays related to Covid-19 made the second extension of the project duration necessary.

B. Effectiveness of the Project

The implementation process by which project results were achieved

A comparison between planned and implemented activities showed that the main activities have been carried out as outlined in the proposal document except for trainings in Chile which were not carried out (see finding 5 b) for details).

36. **Finding 6:** A training needs assessment expert developed a draft manual and toolkit for assessing training needs in areas related to technology transfer and commercialization which was the first key output delivered in the second quarter of 2018. The training needs assessment (TNA) helped better targeting of training activities in terms of getting the audience, training content and delivery strategy right. The TNAs were carried out by country experts (selected by WIPO) in the 4 pilot countries² and completed with the delivery of country TNA reports in the 4th quarter of 2018. The manual/toolkit was revised by the TNA expert (author) based on the feedback from the country experts (for example guidance on what can be done with low survey response rates, what can be left out where few resources are available, what is compulsory, what optional). A final revision of the manual and toolkit was done based on feedback collected from training participants and completed in December 2020. At the time of this evaluation, the publication of the manual and toolkit on the WIPO website was under preparation. The publication is foreseen for the end of March 2021.

37. **Finding 7:** In parallel to the TNAs the country experts undertook a mapping of the innovation value chain (IVC), to assess the training needs among the elements of the chain, and to establish a training plan to address those specific national, institutional, and individual needs. The experts collaborated with government officials to identify all relevant stakeholders along the IVC (funders, developers, managers, users of IP, and associated support institutions).

38. **Finding 8:** In the second quarter of 2019, each country expert prepared a training plan based on the TNA and IVC mapping making sure that the training plan was established according to the specific national, institutional, and individual training needs. Before the finalisation of the training plan, feedback was collected from the national focal points (i.e. IP offices or Ministries responsible for IP).

39. **Finding 9:** Based on the training plans, training seminars were designed in consultation with the project focal points. The trainings were carried out for Indonesia onsite in December 2019 and online in October 2020 (total of 23,5 hours); for Rwanda in January 2020 onsite and in August 2020 online (total 25,5 hours); for South Africa in October 2019 and February 2020, both onsite (33,5 hours). The course duration was subject to the content and to the training format. 386 people have been trained in total, 56% of these in Indonesia, 30% in South Africa, and 14% in Rwanda. Participants included various players along the IVC, the majority being developers of IP. As noted above, no trainings were carried out in Chile.

40. **Finding 10:** Training content consisted of both new and existing content and was, as much as possible, adapted to the needs identified in the national training plans. The training material was developed and presented by the experts/facilitators from WIPO and other organisations. The training material comprised of theoretical input for each of the main content areas and practical exercises to give participants hands-on insights and experience on IP related issues (e.g. negotiation and licensing). The participant feedback survey shows their satisfaction and a high degree of consensus that practical exercises were the most needed and useful aspects of the trainings.

41. **Finding 11:** The project was carried out in a participatory style which was a key success factor for getting valid data, and ensure national ownership. It included regular feedback loops from different stakeholders: The country experts provided written comments and recommendations to WIPO based on their practical experience in using the tool highlighting

² Chile, Indonesia, Rwanda, South Africa.

areas for improvement. The national focal points were involved closely in each step of the TNA process (mapping, TNA, training plans), including the opportunity for a formal response to the training plans. The collaboration was conceived by all involved parties as smooth. The Division for Latin America and the Caribbean, Division for Africa, Division for Least Developed Countries, and Division for Asia and the Pacific were involved to a limited extent during the project implementation which they felt would have been useful to expand.

42. **Finding 12:** Covid-19 impacted on the delivery of training at the planned time and format. While South Africa did carry out the training on-site before the onset of Covid-19, in Rwanda and Indonesia the second part of the seminars was online. Considering that online training development was new to the WIPO project team, the project succeeded in not only mitigating the negative effects of Covid-19 but gaining important transferable skills and increasing flexibility (i.e., restriction of movement due to the pandemic or other external challenges that impact travelling have been overcome by switching to online training delivery). Creating at WIPO the skills within the Innovation and Knowledge Infrastructure Department to design and carry out online training is an unexpected positive outcome of this project. The challenge was turned into an opportunity.

43. **Finding 13:** Important learnings reported by the project team and external stakeholders were a) the need for flexibility and responsiveness of the tool to changes in the external environment, i.e., in the innovation system (as it happened in Chile); b) how to make IVC mapping a more uniform process to allow for comparison. It was recognised that there should be more structured guidance in the future to ensure greater uniformity in the structure and content of the country mappings); c) country specificities are important in the training organisation (i.e., the local approach to the training format, duration, and available technical infrastructure).

The effectiveness and usefulness of the project in promoting the effective use of IP and any associated IP rights as a tool for socio-economic development in beneficiary countries, and, in particular, the use of IP developed following public investment in research and/or development.

44. **Finding 14:** This evaluation found evidence that the trainings and tools created were useful for the pilot countries to increase awareness on and understand the value of using IP rights and licensing as key elements for economic development. They are of direct use especially for the research community. The project encouraged the creators of innovation to protect their ideas and to commercialize them.

45. **Finding 15:** Training participants learned from the experts to understand the commercialisation and technology transfer concepts. The project contributed to an increased interest in the topic and “a general awakening to use the IP system” as one partner interviewed commented. In Rwanda, for example, the increased awareness for IP created by the project seems to have contributed already to increased IP applications according to Rwandan stakeholders interviewed.

The effectiveness and usefulness of the project in establishing a framework for more effectively targeted capacity building activities in the field of technology transfer.

46. **Finding 16:** The project developed an approach for training needs assessments in the field of IP Management and technology transfer. The approach helped to improve the effectiveness of targeting of trainings by assessing individual, institutional, and national training needs. The manual and toolkit are flexible enough to enable their adaptation to capacity building projects in other countries as well, in the field of technology transfer and beyond which in turn increases the likelihood of sustainability.

47. **Finding 17:** The usefulness of the framework during the project and potential for further use was confirmed by the interview partners in the pilot countries. The tools have helped the pilot countries to collect important baseline data that gave them – in most cases – for the first time a complete picture of the IVC for IP and technology transfer, which in turn helped some of the pilot countries to develop their national capacity development strategy.

48. **Finding 18:** The tools of the capacity-building framework were tested and refined based on various feedback rounds gathered during the implementation process from various stakeholders (country experts, national project focal points, training participants and their institutions). This approach (in which learnings from previous projects have been applied, notably the use of information in the public domain) largely contributed to improving the quality of the tools and to make it more flexible with required and optional elements for TNAs. Hence, its usefulness is increased by the possibility of adapting it to available resources. For example, a commonly reported challenge was the initial TNA survey. Although the results were useful for drawing conclusions, interview partners reported that it was very detailed, time-consuming and difficult to complete, especially where IP/TT units are very small or consist of a single person in an institution.

The effectiveness and usefulness of the project in creating capacities in IP management and transfer of technologies amongst key role players in the categories of funders, developers, managers, and users of IP.

49. **Finding 19:** The project effectively contributed to increase the capacity in IP management and technology transfer of the various actors in the pilot countries along the innovation value chain (funders, developers, managers, and users of IP). Feedback from workshop participants and interviewees in the pilot countries indicated that the training and the materials were for most participants consistent with their level of expertise. However, some participants found it difficult to understand the complex training content in English. They would have preferred translations and interpretation into their native languages.

50. **Finding 20:** In their feedback surveys following the training workshops, more than 80% of the survey respondents confirmed that the workshops were successful (i.e., useful and effective) in building their knowledge and skills in the trained areas (e.g., IP protection strategies, commercialization, patent search, etc.) and that the training will be useful for their daily work. The target of 60% defined in the project document was therefore overachieved. Although the response rate for surveys carried out several months after the training to determine impact on trainee capabilities was low and statistically not significant, information collected during interviews point towards the same direction. Without a pre-test of skills and knowledge, a more precise measurement of the knowledge gains compared to a baseline could not be established.

51. **Finding 21:** Training content related to the promotion of IP, technology transfer and commercialization (e.g., how to value your IP, negotiate your IP, commercialize it) were particularly appreciated. There was consensus, that one or two trainings on these complex subjects were not enough, especially for beginners. More trainings/more hours of trainings, especially on international patent information search and patent drafting, would be required to sustain and expand on the impacts achieved according to stakeholders interviewed. In addition to that, suggestions were made by stakeholders to include a sort of mentoring or buddying system where trainees can get help with practical questions that arise in their day-to-day work in between and after the trainings.

52. **Finding 22:** In Chile, where no trainings were carried out due to circumstances explained under finding 5, the project helped the country to develop the national capacity building plan for technology transfer and to start with the process of creating a national certification mechanism.

The plan together with the value chain mapping were considered by interviewees being important steps towards the actual capacity building process.

C. Sustainability

The likelihood of the continuation of use of tools developed in the project to ensure continuous use of the IP system as an effective tool for socio-economic development.

53. **Finding 23:** The pilot countries reported an interest in re-using the methodology (TNA, training plans, IVC mapping) developed by this project. Interviewees agreed that more support is needed to carry out additional trainings and follow-up on assessing how and if the new skills acquired are applied. This project was considered by most stakeholders interviewed as an “introduction” with the need to starting more comprehensive capacity building efforts.

54. **Finding 24:** It is anticipated that within WIPO there is a large potential for sustainability of this project, if the training needs assessment tool is mainstreamed and integrated into other areas and programmes as well as rolled out to other interested countries. It is foreseen that the TNA Manual and Toolkit, one of the key outputs of this project, will become a part of the pre-project assessment cycle of the TISC planning process as reported by interviewees. The wider use will be facilitated by the publication of the manual and toolkit foreseen for the end of March 2021.

55. **Finding 25:** The networks of actors along the IVC were strengthened by the project in the pilot countries. Before this project, the different stakeholders were separated in most pilot countries. Through this project they came together and exchanged experiences. The contacts and partnerships created reinforce the impact of the capacity created and are an important contribution to the sustainability of the action.

56. **Finding 26:** The clearest indication for takeover of the project is in Chile. In Chile, this project acted as a catalyzer for the intermediate goal of establishing a National Certification mechanism for technology transfer. As a continuation of this project, the country is now looking for strategic alliances (with WIPO and other countries) to preparing the necessary steps for achieving this goal.

D. Implementation of Development Agenda (DA) Recommendations

The extent to which the DA Recommendations 1, 10, 12, 23, 25, 31, and 40 have been implemented through this project

DA Recommendation 1 is concerned with “technical assistance being development-oriented, demand-driven and transparent, taking into account the priorities and the special needs of developing countries, especially LDCs. Design, delivery mechanisms and evaluation processes of technical assistance programs should be country specific.”³

57. **Finding 27:** This project has supported the implementation the DA Recommendation 1. The project has been submitted to WIPO by South Africa, through its Permanent Mission in Geneva, for consideration by the 19th session of the CDIP, which then has been revised following inputs from other MS. The project proved to have considered and encouraged country-specific solutions to the delivery mechanism (e.g., type and duration of trainings to be carried out, etc.). The beneficiary countries have been selected by WIPO based on requests received from countries.

³ The DA Recommendations are available at: <https://www.wipo.int/ip-development/en/agenda/recommendations.html>

DA Recommendation 10 is concerned with assisting MS to develop and improve national IP institutional capacity.

58. **Finding 28:** Improving national institutional capacity for IP Management was the central aim of this project. Providing the pilot countries with a methodology for IP capacity development (that will remain as an important resource for assessing training needs) and meeting some of their training needs made a significant contribution to achieving this recommendation.

DA Recommendation 12 is concerned with mainstreaming development considerations into WIPOs TA activities and debates.

59. **Finding 29:** The project substantially contributed to get a better understanding of the needs and priorities related to IP management and technology transfer in developing countries. The TNAs and IVC mappings provided WIPO with a clear picture of IP and Technology Transfer in a development context that can be used to build upon.

DA Recommendation 23 is concerned with the promotion of pro-competitive intellectual property licensing practices, particularly with a view of fostering creativity, innovation and the transfer and dissemination of technology to interested countries, in particular developing countries and LDCs.

60. **Finding 30:** IP licensing practices were content of trainings carried out through this project. With the trainings the project increased the target institutions' and individuals' understanding and use of IP as instrument for development.

DA Recommendation 25 is concerned with exploring IP-related policies and initiatives to promote the transfer and dissemination of technology, to the benefit of developing countries.

61. **Finding 31:** Training participants were trained on IP legislation, protection strategies and initiatives, etc. It allowed to understand the relevant actors active in the field of IP and technology transfer.

DA Recommendation 31 is concerned with the transfer of technology to developing countries and the facilitation of better access to publicly available patent information.

62. **Finding 32:** The project contributed to the implementation of DA Recommendation 25 by putting a focus on the promotion of IP management as well as technology transfer for enhanced innovation and, ultimately, the creation of opportunities for socio-economic development. Patent searching and technology transfer were covered by the delivered trainings but remain some of the most needed topics to be covered in future trainings according to feedback from training participants and institutional stakeholders in the pilot countries.

DA Recommendation 40 is concerned with the intensification of WIPO's cooperation on IP related issues with UN agencies, in particular UNCTAD, UNEP, WHO, UNIDO, and UNESCO.

63. **Finding 33:** IP issues have been discussed with various UN organizations according to the interview partners, although these outside connections were challenging for the project team because of shortness of time to reach out, and more so, for a lack of a real mandate in the context of the implementation of this project, to do so.

V. CONCLUSIONS AND RECOMMENDATIONS

64. **Conclusion 1 (Ref: Findings 6-13).** The project has successfully delivered the key outputs of the project, notably the manual and toolkit, the training needs assessments, the innovation value chain mappings, the training plans, and the training activities. These outputs were developed in a collaborative manner incorporating feedback and input from all relevant stakeholders (national focal points, trainees), increasing their potential for effectiveness and usefulness. The whole project cycle displayed good practices in identifying and tailoring the needs to the pilot countries (rather than delivering “ready-made” solutions).
65. **Conclusion 2 (Ref: Findings 6-13, 23-24).** The training needs assessment manual and toolkit have the potential for use beyond this project and will be an important resource for assessing and tailoring capacity building needs and activities in the field of IP management, technology transfer and beyond if further mainstreamed within WIPO.
66. **Conclusion 3 (Ref: Findings 6-22).** The methodological approach developed by this project was effective and useful for the pilot countries to understand the innovation value chain and identify any capacity gaps for IP management and technology transfer. However, meeting the identified capacity needs requires more training support and follow-up measures (to plan during and after the training delivery).
67. **Conclusion 4 (Ref: Findings 19-22):** The evidence collected for this evaluation strongly indicates that the training participants have increased their knowledge and understanding in issues related to IP management and technology transfer. The wider impact of this project i.e., impact on organisations and at national level is difficult to assess because the project had not included indicators and activities to track the use of knowledge and skills gained at the individual, institutional, and national level.
68. **Conclusion 5 (Ref: Finding 11).** Regional Divisions were involved only a little in the project design and implementation. They implement projects with MS as well but could not draw enough insights from this project as they lacked information and were not always given an opportunity to provide inputs to this project. Their background knowledge and contacts in the country and the region were used to a limited extent by the project.
69. **Recommendation 1 (Ref: Conclusion 1-4, Findings 6-22).** It is recommended to the Technology and Innovation Support Division of the WIPO Secretariat in their mainstreaming of the capacity building framework developed by this project (i.e., extending it to other interested countries) that it considers:
- (a) Technological context: e.g., make webinars available offline, maybe only audio in order to make it suitable for weaker internet connections as well.
 - (b) Offering mentoring/coaching/follow-up during and after trainings to support trainees in the application of training content in their day-to-day job-related challenges. In addition, it is recommended to create a platform where trainees and mentors can have an exchange in a sort of community of practice.
 - (c) Providing translations for all or parts of training content to facilitate participant learning.
 - (d) Collecting feedback after each training module and make it compulsory. In this way you can ensure the necessary response rates to improve the validity of the results.
 - (e) A participation certificate could encourage training participation and make it more rewarding.
 - (f) Carrying out a pre and a post-test
 - a. to improve targeting of the audience (e.g. offer basic and advanced courses)

- b. to assess the knowledge increase of training participants against the baseline (including assignments or applied work)
- (g) Considering tracer or follow-up studies to track how participants have gone on to develop or to use their skills.

70. **Recommendation 2 (Ref: Conclusion 2-3, Findings 6-13, 23-24).** It is recommended to WIPO and the Member States, their national IP offices and other entities involved in this project to provide the necessary support to build on the training achievements in order to increase the sustainability of this project such as promoting the forthcoming manual and toolkit.

71. **Recommendation 3 (Ref: Conclusion 1-4, Findings 1-22).** In similar projects/capacity building activities it is recommended to

- (a) include mid to longer term indicators (3-6 months after the training) that measure changes in behaviour and practice (i.e., use/application of knowledge and skills) of individuals; how the behaviour change has benefitted their organisation; and ultimately how this did affect the national level capacities;
- (b) consider longer training periods to increase knowledge retention and contribute to a more sustainable impact from trainings.

72. **Recommendation 4 (Conclusion 5, Findings 11):** For similar projects and mainstreaming of this project, improve coordination with the Regional Divisions and establish systematic communication lines right from the start:

- (a) to avoid potential duplication of project activities in the same countries, but instead create synergy effects
- (b) to better draw on their regional expertise and contacts.

[Appendix I follows]

APPENDIX I: Persons Interviewed/Consulted

WIPO Staff:⁴

Beatriz Amorim-Borher, Director, Division for Latin America and the Caribbean

Loretta Asiedu, Senior Counsellor, Division for Africa

Maya Bachner, Director, Program Performance and Budget Division

Alejandro Roca Campaña, Senior Director, IP for Innovators Department (IPID)

Andrew Czajkowski, Director, Technology and Innovation Support Division

Georges Ghandour, Senior Counsellor, Development Agenda Coordination Division

Victor Guizar Lopez, Program Officer, Division for Latin America and the Caribbean

Efua Halm, Project Officer, TISC Development Section, Technology and Innovation Support Division

Alex Riechel, Head, TISC Development Section, Technology and Innovation Support Division

Marc Sery-Koré, Director, Division for Africa

David Simmons, Counsellor, Division for Asia and the Pacific

External (country focal points):

Chile:

María José García Caro, Subdirectora de Transferencia de Conocimiento, Instituto Nacional de Propiedad Industrial

Carolina Sepúlveda, Jefa de Gabinete Dirección Nacional, Instituto Nacional de Propiedad Industrial, Instituto Nacional de Propiedad Industrial

Indonesia:

Erry W. Prasetyo, Officer at the Directorate of Trade, Commodities and IP, Ministry of Foreign Affairs

Reyhan S. Pradietya, Foreign Service Officer, Directorate of Trade, Commodity, and Intellectual Property, Directorate General of Multilateral Cooperation Ministry of Foreign Affairs

Irni Yuslianti, Directorate General of Intellectual Property, Ministry of Law and Human Rights

⁴ The names of the WIPO Divisions have been updated to reflect the changes in the WIPO Office Instructions No. 07/2021, of February 15, 2021.

Suzy Heranita, Head of Intra-governmental Cooperation Section, Directorate of IP Cooperation and Empowerment, DGIP

South Africa:

Lungelwa Kula, Deputy Director, NIPMO, Pretoria

Rwanda:

Kellen Twinamatsiko, Patent Examiner, Rwanda Development Board

Jean Mugemana, Legal Advisor, Ministry of Trade and Industry

[Appendix II follows]

APPENDIX II: Documents Consulted

WIPO (2017), CDIP, Project Document CDIP/19/11 Rev.

WIPO (2018), CDIP, Twenty-second session, Project Progress Report CDIP/22/2, Annex I

WIPO (2019), CDIP, Twenty-fourth session, Project Progress Report CDIP/24/2, Annex I

WIPO (2021), CDIP, Completion Report

WIPO (2018), Training Needs Assessment Survey

WIPO (2019), Training Needs Assessment Manual and Toolkit

WIPO (2018), Training Needs Assessment Report, Rwanda

WIPO (2018), Training Needs Assessment Report, Chile

WIPO (2020), National Training Plan for Technology Transfer, Chile [update of previous report]

WIPO (2018), Training Needs Assessment Report, Indonesia

WIPO (2018), Training Needs Assessment Report, South Africa

WIPO (2018), Mapping of Innovation Value Chains in Rwanda

WIPO (2018), Mapping of organizations comprising the technology value chain in Chile

WIPO (2018), Mapping report, South Africa

WIPO (2018), Mapping Report: Indonesia Technology Value Chain

WIPO (2018), Training plan Rwanda

WIPO (2019), Training plan Indonesia

WIPO (2019), Training plan South Africa

WIPO (2019), Training plan Chile

[Appendix III is separately attached (in English only)]