

TC DOCUMENT

1 Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	Strengthening knowledge and capacities to support climate change actions in LAC
▪ TC Number:	RG-T4261
▪ Team Leader/Members:	Leonelli, Andrea (KIC/KLD) Team Leader; Bonnefoy, Juan Cristobal (KIC/KLD) Alternate Team Leader; Coton Gutierrez, Xenia Libertad (KIC/KLD) Alternate Team Leader; Grunwaldt, Alfred Hans (CSD/CCS) Alternate Team Leader; Caicedo Sierra, Miguel Felipe (ORP/GCM); Garces D, Ana M (KIC/KIC); Laura Conti (KIC/KLD); Mendoza Benavente, Horacio (LEG/SGO),
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	N/A
▪ Date of TC Abstract authorization:	02/06/2023
▪ Beneficiary:	Bank borrowing member countries
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC SDP Window 2 - Sustainability(W2A)
▪ IDB Funding Requested:	US\$300,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 Months
▪ Required start date:	June 16, 2023
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	KLD/SDI- INDES
▪ Unit of Disbursement Responsibility:	KIC/KLD- Knowledge and Learning
▪ TC included in Country Strategy (y/n):	N
▪ TC included in CPD (y/n):	N
▪ Alignment to the Update to the Institutional Strategy 2020-2023:	Institutional capacity and rule of law; Environmental sustainability; Gender equality Gender equality Institutional capacity and rule of law

2 Objectives and Justification of the TC

- 2.1 This Technical Cooperation (TC) aims to improve critical knowledge and capacities and reduce the skills gap to support and accelerate actions to address climate change challenges in LAC that will be delivered through Massive Online Open Courses (MOOC). The specific objectives are to: (i) implement new MOOC to address the learning needs of stakeholders on climate change actions in the region; (ii) use existing MOOCs as a tool to strengthen the understanding of and action on climate change challenges; and identify new actions to support the design of operations considering the region's interest in building climate-resilient and low carbon development pathways.
- 2.2 The current operation is consistent with the Second Update to the Institutional Strategy (AB-3190-2) and with the Corporate Results Framework 2020-2023 (GN-2727-12) by strengthening the country members' operational work in the cross-cutting issue themes of enhancing Institutional Capacity and the Rule of Law particularly in improving the delivery of public services and climate change and environmental sustainability as it focuses on increasing capacity of government officials to pursuing opportunities for climate resilience and adaptation to climate impacts. The new MOOC allows individuals to acquire relevant knowledge, skills, and competencies applicable to their work. By equipping government officials with updated information and best practices on climate change actions, they can better understand the issue's complexities and develop tailored innovative solutions. The TC also focus on raise awareness about integrating climate change considerations into institutional practices and public service delivery, enabling individuals to recognize climate impacts and address them proactively, making informed decisions to prioritize climate resilience and sustainability, supporting, and ultimately enhancing the delivery of public services. Through knowledge and skill-building, the TC is indirectly supporting government in the implementation of climate actions and facilitating the transition towards low-carbon and climate-resilient pathways in the LAC region.
- 2.3 It is also aligned with the two priority areas of the OC SDP Window 2 - Sustainability(W2A), (GN-2819-14) (i) climate change and environmental sustainability and (ii) sustainable and resilient infrastructure; by expanding the knowledge base on climate change mitigation, adaptation, and strengthen capacities to manage disaster risk and respond to emergencies stemming from natural disasters.
- 2.4 Additionally, TC will also be promoting gender equality, by addressing the gender gap observed in capacity building efforts in a traditionally male-dominated work environment. Between 2020 and 2022, 38.2 % of the registered participants in one of the 16 editions organized for the two most recent IDB MOOCs dealing with climate change¹ self-identified as female. This compares with the 44.3 % that self-identified as female in all the IDB MOOCs, for the same years.

¹ Infraestructura sostenible: Una visión integral para el desarrollo, and Análisis del riesgo de desastres y cambio climático en proyectos de infraestructura

- 2.5 This TC also aligns with the Climate Change Sector Framework document (GN-2835-8), in particular with the dimensions of supporting countries so that they have (i) institutions that integrate the national objectives and commitments towards climate-resilient and low carbon development; (ii) knowledge to effectively support a just transition to a low-carbon, climate-resilient economy; (iv) advances in the incorporation of climate considerations in all sectors; and (vi) national systems which articulate disaster risk management and climate change adaptation and with IDB Group Climate Change Action Plan 2021–2025. Furthermore, it aligns also with the Disaster Risk Management Policy (GN-2345-3), which emphasizes a proactive risk reduction approach before disasters occur.
- 2.6 Climate change is a critical challenge for sustainable development in the region. LAC needs to transition to net zero emissions before the end of the century to fulfill international climate change objectives and commitments, including those of the Paris Agreement. Sustainable infrastructure is now recognized as an essential foundation to achieve inclusive and sustainable growth, deliver on Sustainable Development Goals (SDGs), and meet the targets of the Paris Agreement of the United Nations Framework Convention on Climate Change. Infrastructure project choices will be a significant driver of future emissions; identifying a range of possible impacts of climate change and considering them in infrastructure planning and design is an essential part of increasing resilience.
- 2.7 Going forward, countries' pathways to enable the implementation of effective climate change actions, such as, infrastructure planning and design, disaster risk management and mitigation, and climate change adaptation and resilience depend on individual country circumstances and capabilities. To meet this ambitious agenda, LAC countries will need to strengthen their knowledge and skills, and institutional, technical, and financial capacities at an unprecedented scale to develop effective climate change national policies, plans, and projects. They will also need to build capacity on how to align infrastructure projects with the mitigation and adaptation goals of the Paris Alignment, identify available climate funds to finance infrastructure and apply climate risk management assessment methodology at the project level.
- 2.8 Therefore, closing the knowledge and capacities gaps to drive these actions will be critical to delivering sustainable development. With over 11 million public sector employees in the LAC alone², it is imperative to continuously train government officials at the regional, national, and local levels. Therefore, utilizing MOOCs (massive open online courses) for public sector training is not only a viable option but also a necessity. Several studies have been conducted to investigate and provide empirical evidence of the potential impacts of MOOCs on skill improvement of professionals from different sectors. Overall, these studies suggest that MOOCs can help professionals acquire new skills and can particularly be useful for addressing skills gaps for them to adapt to the changes in the way we work and live today.

² ILOSTAT (ILO Department of Statistics)

- 2.9 Ten years ago, IDB embraced capacity building through MOOCs. As a result, the program has produced more than 80 MOOCs and 17 Small Private Open Courses (SPOCs) and offers more than 60 editions per year through online platforms such as edX and Coursera, reaching over two million learners primarily from IDB borrower member countries. Over 130,000 participants have already benefited from the courses and achieved a passing grade. Among the participants, 47% are from the public sector, 28% from the private sector, 7% from academia, and 12% from NGOs and MDBs.
- 2.10 Since then, IDB's MOOC and SPOC have proven to be highly beneficial in enhancing the capacities and skills of individuals in Latin America and the Caribbean (LAC) by providing actionable knowledge produced by the IDB Group. According to the results of the surveys conducted over the years, MOOCs have been an effective tool for professional development for public sector employees in LAC, improving their knowledge and skills for their current job (94.10%), contributing to their work performance (92.54%), and enabling them to work more productively (90.85%). Furthermore, MOOCs have helped participants to apply innovative methodologies, tools, or technologies (88.41%), improve their capacity for formulating, implementing, or evaluating public policies (84.20%), and helped them design, execute, or evaluate development programs or projects (87.06%). These findings demonstrate the positive impact of IDB's MOOC and SPOC programs on professional development and strengthening knowledge and capacities for individuals in the public sector in LAC.
- 2.11 The IDBx Program has proven experience providing updated knowledge to the region on issues related to the challenge of climate change. MOOCs and SPOCs have been created in English and Spanish to address the cross-cutting issue of infrastructure sustainability, the impact of climate change in the management of water resources and food production policies, and in educating youth in climate change issues³. To date, these courses add up more than 125,000 enrollments and 5,800 participants have achieved a passing grade.
- 2.12 In terms of sustainability, our initiative will seek to establish new and strengthen existing partnerships with government agencies, universities, and civil society organizations in the region. The Bank already has partnerships in place with some of these entities, and we will work to expand these relationships by licensing all the learning resources developed through our initiative under a Creative Commons license. This will enable these resources to be used widely and beyond the time that the TC exists. By doing so, we aim to create a sustainable ecosystem of learning and capacity-building that can be scaled up and replicated in the region.

³ Infraestructura sostenible: Una visión integral para el desarrollo. Análisis del riesgo de desastres y cambio climático en proyectos de infraestructura (Spanish and English version). Educación sobre el cambio climático (Spanish and English version). AGRIMONITOR: Política agropecuaria, seguridad alimentaria y cambio climático (Spanish and English version) Gestión del agua para las ciudades del futuro. Hydro-BID: Herramienta para el manejo y planificación del recurso hídrico en América Latina y el Caribe.

- 2.13 The TC team will conduct regular evaluations to assess the impact of the course and identify areas for improvement. To ensure the effectiveness of MOOC in achieving its objectives and its impact on the learners, the IDBx team will implement a learning measurement framework aims to understand participants' (i) reactions and satisfaction, (ii) learning during the course and, (iii) transfer of learning to work/sector setting. This measurement framework system will allow the capture of indicators to explore the value and impact of the training, including the visualization and production of statistics disaggregated by gender and will help to ensure that the course remains relevant and effective over time.

3 Description of activities/components and budget

3.1 Component 1- Support the Capacity Building of Government officials required to enable climate change actions to contribute to the region's interest in building climate-resilient and low-carbon development pathways (US\$200,000).

The objective of this component is to develop a new knowledge product, delivered through MOOC, aimed at integrating climate action into public policies, projects, and to support climate change actions in LAC. Specifically, this component will offer Government officials and technical professionals in LAC tailored knowledge, tools and technical know-how needed to identify and respond to climate change challenges to effectively support the transition toward a climate-resilient and low-carbon development pathways; promote green sustainable national climate plans and policies and mobilize climate finance for new infrastructure. The aim is for the IDB to use this new MOOC as a tool to support the upstream level dialogue that the IDB normally undertakes with line ministries to influence the quality and type of projects that countries present to the Bank.

Expected Output and results: This component aims to design, develop, and launch a new MOOC that will cover topics of the lines of actions of the IDB work in the Climate Change sector framework in the region. This new learning and knowledge product will be designed and developed in partnership with CSD/CCS, and the topics covered shall be prioritized throughout a learning needs assessment process led by KIC, based on institutional goals and Government capacity needed and skill gaps in this field⁴.

⁴ The knowledge products generated within this technical cooperation will be the property of the Bank and may be made available to the public under a creative commons license.

3.2 Component 2- Knowledge dissemination (US\$100,000).

Through the dissemination of existing knowledge products (MOOCs) on climate change and the new MOOC produced in Component 1, this component aims to provide government officials and technical professionals in LAC with access to high-quality professional certificates to foster a deeper understanding of the best practices in relation to climate change challenges and understanding the actions that can contribute to the region's interest in building climate-resilient and low-carbon development pathways. These professional certificates will cover various topics, such as, but not limited to, how to design sustainable infrastructure projects, types of financial instruments available towards environmental sustainability objectives, and how to incorporate climate change resilience and natural disaster risk analysis into the design of infrastructure projects. These certificates will be disseminated across two different platforms and will be available in two of the official languages of the Bank. These courses are expected to make a significant contribution to capacity building in LAC, promoting access to high-quality educational resources, supporting upskilling and reskilling, addressing skills gaps, and promoting sustainable development.

Expected Output and results: Through this component, the IDB will increase the accessibility and reach of its existing MOOCs by repurposing and repacking them into two Professional certificates that will be available on Coursera platform in both English and Spanish. By doing so, a wider audience of public servants will have access to these courses, thereby increasing their professional development opportunities. Additionally, the IDB will enroll in a Pilot Program that provides scholarships for government agency employees to enroll in any of the courses offered by the Bank, free of charge. This will eliminate a significant entry barrier expressed by COFs and provide potential participants with a cost-effective way to access cutting-edge knowledge on climate change and sustainable development. The IDBx Program team will work closely with COFs during this pilot it will be the COFs who will identify organizations to allocate these scholarships according to their country strategy. Awareness campaigns will be implemented to promote the dissemination of these professional certificates and engage public institutions in the scholarship program.

Indicative Budget

Activity/ Component	Description	IDB	Total Funding
Component 1	Support the Capacity Building of Government officials required for enable climate change action to contribute to the Region's interest in building climate-resilient and low-carbon development pathways	\$200,000	\$200,000
Component 2	Knowledge dissemination	\$100,000	\$100,000
TOTAL		\$300,000	\$300,000

*The complete project budget is an annex to this document which can be reviewed at [Detailed Budget RG-T4261](#).

** This TC will not finance staff travel expenses

4 Executing agency and execution structure

- 4.1 The Bank, through KLD/SDI (INDES), will be the executing agency for this project in collaboration with VPS Departments. Research and dissemination products are key to support the countries and clients and ultimately serve operational purposes as they support an understanding of key sectors and the development challenges and gaps faced by each country. As such, they inform the policy dialogue and programming process with countries, as well as with the private sector, and help focus the Bank's strategic framework with a country, and in a given sector.
- 4.2 The Bank is responsible for the supervision and quality control of all the planned activities, as well as for contracting the required consultancy services. Contracting and consultant payments will follow the procurement policies applied to Bank executed operations.
- 4.3 INDES has established a core group of Knowledge and Learning Specialists and expert consultants (IDBx team) dedicated to preparing, disseminate, deliver, and evaluate the MOOCs and SPOCs of the IDBx Program in collaboration of specialists and subject matter experts in different Bank departments. The IDBx team is constantly learning and innovating on educational / instructional methodologies, and e-learning technologies, systems, and tools, as well as mapping and optimizing IDBx processes to improve quality, efficiency, and effectiveness in achieving learning and development goals. The IDBx team members coordinate with external consultants and consulting firms responsible for the production and post-production of videos, transcription of videos, translations, formatting and final edition of main readings, infographics, dissemination activities and maintenance of two 24/7 e-learning platforms. As explained, since November 2014 INDES has launched, in addition to the tutor-led courses, more than 80 MOOCs that have permitted the Bank provide to the region massive, specialized training based in its operational and sectorial knowledge, and has reached more than two million learners.
- 4.4 All activities to be executed under this TC have been included in the Procurement Plan (see Annex IV) and will be contracted in accordance with Bank policies as follows: (a) AM-650 for Individual consultants; (b) GN-2765-4 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and (c) GN-2303-28 for logistics and other related services.

5 Major issues

- 5.1 Learners' engagement and motivation: MOOCs can be challenging to complete as they typically require a high degree of self-motivation and self-discipline. This may be particularly challenging for learners who are not accustomed to it. To mitigate this risk the IDBx team will incorporate interactive elements such as quizzes, discussions, and assignments into the course content, develop learning material that is relevant to participants work, and they can see the practical application of what they are learning. And provide learners with hands-on activities and certificates or badges for completing the course.
- 5.2 Application of the knowledge acquired: It is difficult to predict with certainty whether participants will apply their new capacities and skills to improve actions against climate change, as this will depend on a variety of factors, including their personal motivation, available resources, and the political and economic context of their country. However, research has shown that training and capacity building programs can be effective in changing behavior and improving performance in specific areas. To mitigate this risk the IDBx team will design the capacity building program focusing on hands-on activities and incorporates real-world examples and case studies to support the application of new skills and increase the probability of the knowledge application.
- 5.3 Climate change topics are constantly evolving, opening new avenues in terms of the emphasis of programs for the formulation of strategies and public policies for adaptation to climate change and transition towards a low-carbon economy, improving resilience and reducing vulnerability of Latin American and Caribbean countries. The ability to update content and learning materials as new information becomes available will be a key feature of the MOOC and professional certificates, ensuring that they remain relevant and innovative. The constantly evolving nature of the field also provides an opportunity for capacity building programs to stay up-to-date and responsive to emerging needs.

6 Exceptions to Bank policy

- 6.1 No exceptions to Bank Policies apply.

7 Environmental and Social Strategy

- 7.1 This TC will not finance feasibility or pre-feasibility studies of investment projects with associated environmental and social studies; therefore, it is excluded from the scope of the Bank's Environmental and Social Policy Framework (MPAS)

Required Annexes:

[Results Matrix - RG-T4261](#)

[Terms of Reference - RG-T4261](#)

[Procurement Plan - RG-T4261](#)