

# PACIFIC ALLIANCE EDUCATION FOR EMPLOYMENT PROGRAM

The story of a successful  
collaboration between Canada and  
the Pacific Alliance countries

Outcomes, impacts, best practices,  
and looking to the future

Canada  
Chili  
Colombia  
Mexico  
Peru

The Pacific Alliance Education for Employment Program (PA-EFE) is financed by the Government of Canada (Global Affairs Canada), with a contribution of Can\$16 million. It is managed by Colleges and Institutes Canada (CICan) and has a duration of seven years (2016-2023).

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The Pacific Alliance Education for Employment Program (PA-EFE)'s Capitalization Book was written by Marcela Torres, a specialist in sustainable development and communications, in collaboration with CICan's PA-EFE team.

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# PROLOGUE CANADA

Canada

Canada is proud to have partnered for the past six years with Colleges and Institutes Canada (CICan) on this important initiative. Canada's CAN\$16-million contribution to the Pacific Alliance's Education for Employment program has led to a meaningful and inclusive collaboration with Chile, Colombia, Mexico, and Peru; these countries are among Canada's closest partners in the hemisphere, as we share common goals and have long-standing diplomatic ties.

This initiative would not have been possible without the commitment of the Pacific Alliance members, as well as the close collaboration and cooperation among Colleges and Institutes Canada, the Pacific Alliance technical groups, and the National Coordinators. We applaud the hard work and the results achieved.

We are pleased that the support of the Canadian government has made a valuable cross-sector dialogue possible between public- and private-sector stakeholders, including civil society and international experts, to address a number of TVET priorities for the Pacific Alliance, such as alignment with the private sector, quality assurance, and regional qualifications. Although we all work in different environments and have unique perspectives, sharing our experience and best practices in this way allowed us to build the capacities and knowledge of our governments, the education sector, the private sector, and other key stakeholders. When we collaborate and reach agreements, as we have done through this program, we can create accessible, quality education.

For Canada, inclusive governance is where government, civil society, individuals, and the private sector can work together to drive gender-equitable change, responsibly allocate resources, make decisions that promote human rights, and uphold accountability. Ensuring that women and youth are at the forefront of any development initiative can truly bring about sustainable and equitable change that benefits everyone. Successful development requires the participation of all members of society.

Ensuring that this participation is based on accessible education and vocational training is another important component of Canada's engagement in the region. Through programs such as this one, we seek to support the development of human capital and the next generation of leaders in the Americas, while strengthening the ties among educational institutions in our countries.

This book is a compilation of all the results achieved by this program, as well as the primary lessons learned. The partnerships and alliances forged through this project are amazing. However, it is not enough just to record all these achievements in a document. The alignment and synergies established among our five countries are achievements that we must strive to maintain after this Program ends.

Successful and sustainable development requires the continuous and active participation of all stakeholders in each country, as well as a lasting commitment from the Pacific Alliance. As we continue to promote regional dialogue and invest in human capital, the capacity of each institution will continue to evolve and grow to meet the needs of the labour market, thus enriching each of our countries.

We look forward to continued success.



**Alexandre Guimond**  
Deputy Director  
Inter-American Affairs  
Global Affairs Canada

# PROLOGUE PACIFIC ALLIANCE

 Alianza del  
Pacífico

5

International cooperation is an important way of strengthening institutions and ensuring the quality of education. Sharing best practices also means that progress can be made more quickly along the path already taken by other institutions in different countries. This is the principle behind the Pacific Alliance Education for Employment Program (PA- EFE).

The Government of Canada (Global Affairs Canada) invested in the PA-EFE project as a Pacific Alliance (PA) observer country, making a representative contribution of CAD 16 million at the 11th Pacific Alliance Summit in 2016. Since 2017, the PA-EFE has been managed by Colleges and Institutes Canada (CICan). Its objective is to promote public-private dialogue on environmental and social policies and best practices to strengthen governance in the extractive sector. It also aims to build partnerships between CICan member colleges and institutes and technical education institutions in the four PA countries to support the development of students' skills and the capacity of training centres to meet the needs of the extractive sector.

Canada has been a key partner in this project, promoting the development of competitive curricula to enable graduates of the seven partner institutions in the program to enter the labour market. Through technical cooperation to strengthen the extractive sector, knowledge has been transferred from various Canadian consortia to technical and technological institutes, as well as to companies, public administrations and civil society in Chile, Colombia, Mexico and Peru. Each component of the educational process has been able to benefit, leading to significant improvements at the various levels of education.

The collaborative design of the process and the involvement of the partners in every aspect of it has allowed the Canadian technical assistance model to be of great benefit to the beneficiary institutions of the PA. This ensures that real needs are addressed and that the conditions necessary for relevant and useful assistance are taken into account.

The issues addressed by the Canadian consortia have been diverse, involving different stakeholders and influencing processes at local, state and national levels. Decision-makers, employers and teachers have also been considered. The richness of such a collaborative exercise over six years is unprecedented and should be seen as a success story for future projects.

Over these seven years, in addition to strengthening the extractive sector, the program has addressed cross-cutting issues, such as gender equality, the development of a regional qualifications framework for the region's tourism sector, and sustainability strategies, making the work carried out much richer and more comprehensive.

The integration of memory, evidence and best practices into the beneficiary institutions in the four PA countries remains a valuable exercise that we hope will precede others of similar value.

## Pacific Alliance

# PROLOGUE COLLEGES AND INSTITUTES CANADA



Education for Employment (EFE) is an approach to development cooperation that Colleges and Institutes Canada has pioneered and implemented with success for 15 years. Colleges and Institutes Canada has pioneered and tailored to success. Around the world, the approach brings together governments, institutional partners, communities, and employers to strengthen the social and economic development of the communities in which we work.

At the institutional level, it helps ensure that training meets the needs of local labour markets, communities, and learners and helps local TVET institutions develop the capacity to sustain educational change. At the government and industry levels, it helps strengthen capacity of civil servants and bring together different ministries to develop and exchange best practices. It also works with private sector and civil society partners to ensure dialogue and collaboration.

EFE puts partners in the driver's seat at all stages of program development and implementation. This ensures that our partners are fully on-board, and the work we do has a lasting impact, even after projects come to an end.

In the case of our Pacific Alliance EFE program, with funding from Global Affairs Canada, we set out to strengthen socio-economic opportunities for men and women in a sustainable and inclusive extractive sector in Chile, Colombia, Mexico, and Peru. In total, we connect 22 Canadian colleges and institutes with partners in the Pacific Alliance countries through 16 institutional partnerships

With many thanks to our partners, this book outlines the incredible work that was carried out over the last seven years and shares what we've learned through best practices, innovative results, and recommendations for the future. We hope the highlights will inspire and guide future collaborations.

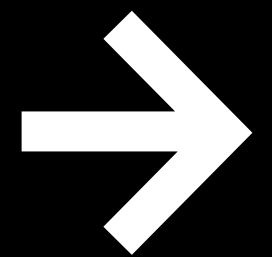
Partnership means we maximize our contributions to lasting change.

Denise Amyot  
President and CEO, Colleges and Institutes Canada

# INTRODUCTION



Students in renewable energy at the UTLD,  
Durango, Mexico



## CONTENTS

Pacific Alliance Education for Employment Program (PA-EFE)

Approach of CiCan's EFE programs

Unforeseen circumstances due to the COVID-19 Pandemic

The Capitalization process of the PA-EFE Program

# Pacific Alliance Education for Employment Program (PA-EFE)

The Pacific Alliance Education for Employment Program: sustainable development and skills in the extractive sector (PA-EFE program) was implemented between 2016 and 2023 by Colleges and Institutes Canada (CICan). The program was regional in scope and was managed in collaboration with the Pacific Alliance (PA). The PA is an initiative for development and for political and economic coordination, cooperation, and integration among four Latin American countries—Chile, Colombia, Mexico, and Peru—that seeks to create a space to promote greater growth and competitiveness for the four member economies. The Pacific Alliance members are confident that this is possible through the progressive advancement of the free movement of goods, services, capital, and people<sup>1</sup>.

This intervention was financed by the Government of Canada, through Global Affairs Canada, via a contribution of Can\$16 million. The main objective was to increase socio-economic opportunities for women and men in a sustainable and inclusive extractive sector (ES). This was based on two pillars:

1. supporting good governance in the extractive sector, through the strengthening of regional dialogue and the exchange of best practices and with the support of three **technical assistance projects** and a series of five **thematic forums** with representatives from the public and private sectors and civil society, working in the extractive sector, from all four countries (Component A); and
2. the formation of **institutional partnerships** between post-secondary education institutions that are members of CICan, and the technical education institutions from the four PA member countries, to strengthen the quality and diversification of technical training, with the aim of improving the employability of beneficiaries (Component B).

As a result of this process, 22 higher technical institutions (colleges) in Canada and 12 institutes in the four PA countries participated in the Program through 16 institutional partnerships, which will be described in more detail in the following chapters. Each of these initiatives was implemented by a consortium of Canadian and PA institutions, and also in some cases by civil society organizations (CSOs) such as the Canadian Mining Industry Human Resources Council (MiHR) and other institutions representing the private extractive sector. The local partners for the regional technical assistance projects (Component A) were government institutions or representatives of PA Technical Groups, such as Education, Communication, and Gender.

In addition to the 16 projects, throughout the duration of the PA-EFE Program, five thematic forums were held with the participation of representatives from international organizations, government institutions, the private sector, and civil society from Canada and the PA countries, specifically from the communities living in the territories where extraction companies operate. These forums were key to advancing the regional dialogue that was sought as part of the Program, and to identifying policies and best practices in the PA countries; these were then analyzed in their respective reports, which are discussed in greater detail below.

<sup>1</sup> <https://alianzapacifico.net/en/what-is-the-pacific-alliance/>

7 years  
of implementation,  
from 2016 to 2023

Can\$  
16 million

Funding from the  
Government of Canada in the  
amount of CAN\$16 million

34

TVET institutions from the PA  
and Canada participated

# INSTITUTIONAL PARTNERSHIPS AND REGIONAL TECHNICAL ASSISTANCE PROJECTS



FIGURE 1

# INSTITUTIONAL PARTNERSHIPS AND REGIONAL TECHNICAL ASSISTANCE PROJECTS

MEXICO

## Programs, equipment, and relationships with companies

Project Code	Canadian Partners	Sectors/Themes	PA Partners
<b>B05</b>	<ul style="list-style-type: none"> <li>Marine Institute</li> <li>Niagara College Canada</li> <li>Cégep de Trois-Rivières</li> </ul>	<ul style="list-style-type: none"> <li>Industrial mechanics</li> <li>Industrial electro-mechanics</li> </ul>	<ul style="list-style-type: none"> <li>Universidad Tecnológica de Campeche (UTCAM)</li> <li>Colegio Nacional de Educación Profesional Técnica de Ciudad del Carmen de Campeche (CONALEP 021)</li> </ul>
<b>B06</b>	<ul style="list-style-type: none"> <li>Collège Montmorency</li> <li>Cégep de Jonquière</li> </ul>	<ul style="list-style-type: none"> <li>Renewable energies</li> <li>Alternative energy sources</li> </ul>	<ul style="list-style-type: none"> <li>Universidad Tecnológica de La Laguna Durango (UTLD)</li> <li>Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146)</li> </ul>

## Services for educational succes, employability, and labour market insertion

Project Code	Canadian Partners	PA Partners
<b>B11</b>	<ul style="list-style-type: none"> <li>Fanshawe College</li> <li>Northern Lights College</li> </ul>	<ul style="list-style-type: none"> <li>Universidad Tecnológica de Campeche (UTCAM)</li> <li>CONALEP 021, Campeche</li> <li>Universidad Tecnológica de La Laguna Durango (UTLD)</li> <li>CONALEP 146, Durango</li> <li>Secretariat of Public Education, Mexico</li> </ul>

COLOMBIA

## Programs, equipment, and relationships with companies

Project Code	Canadian Partners	Sectors/Themes	PA Partners
<b>B03</b>	<ul style="list-style-type: none"> <li>Collège Communautaire du Nouveau-Brunswick (CCNB)</li> <li>Cégep Saint-Jean-sur-Richelieu</li> </ul>	<ul style="list-style-type: none"> <li>Supervision in mining operations</li> </ul>	<ul style="list-style-type: none"> <li>Centro Minero Regional Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA), Colombia</li> </ul>
<b>B04</b>	<ul style="list-style-type: none"> <li>Niagara College Canada</li> <li>Fanshawe College</li> <li>Cégep de Trois-Rivières</li> </ul>	<ul style="list-style-type: none"> <li>Environmental resources technology</li> </ul>	<ul style="list-style-type: none"> <li>Unidades Tecnológicas de Santander (UTS)</li> </ul>

## Services for educational succes, employability, and labour market insertion

Project Code	Canadian Partners	PA Partners
<b>B10</b>	<ul style="list-style-type: none"> <li>Cégep de Chicoutimi</li> <li>Cégep de Jonquière</li> </ul>	<ul style="list-style-type: none"> <li>Centro Minero Regional Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA), Colombia</li> <li>Unidades Tecnológicas de Santander (UTS)</li> <li>Ministry of Education, Colombia</li> </ul>

PERU

## Programs, equipment, and relationships with companies

Project Code	Canadian Partners	Sectors/Themes	PA Partners
<b>B07</b>	<ul style="list-style-type: none"> <li>Nova Scotia Community College</li> <li>College of New Caledonia</li> <li>British Columbia Institute of Technology (BCIT)</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of heavy machinery</li> <li>Metallurgy</li> </ul>	<ul style="list-style-type: none"> <li>Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza (IESTP-HDE)</li> <li>Instituto de Educación Superior Tecnológico (IEST) Pedro P. Díaz</li> </ul>

PERU

<b>B08.1</b>	<ul style="list-style-type: none"> <li>Fanshawe College</li> <li>Humber College</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of a distance learning platform (LMS)</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Education, Peru</li> <li>Directorate for Higher Technological, Technical, Productive, and Artistic Education (DIGESUTPA)</li> </ul>
<b>B08.2</b>	<ul style="list-style-type: none"> <li>Humber College</li> <li>Collège Communautaire du Nouveau-Brunswick</li> <li>Cégep Saint-Jean-sur-Richelieu</li> </ul>	<ul style="list-style-type: none"> <li>Pilot implementation of a national network of digital community centres (fab labs)</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Education, Peru</li> <li>Directorate for Higher Technological, Technical, Productive, and Artistic Education (DIGESUTPA)</li> </ul>

## Services for educational succes, employability, and labour market insertion

Project Code	Canadian Partners	PA Partners
<b>B12</b>	<ul style="list-style-type: none"> <li>Cégep Édouard-Montpetit</li> <li>Collège Montmorency</li> </ul>	<ul style="list-style-type: none"> <li>IESTP-HDE</li> <li>IEST Pedro P. Díaz</li> <li>Ministry of Education, Peru</li> <li>Regional Education Office, Arequipa</li> </ul>

CHILE

## Programs, equipment, and relationships with companies

Project Code	Canadian Partners	Sectors/Themes	PA Partners
<b>B01</b>	<ul style="list-style-type: none"> <li>College of New Caledonia</li> <li>Niagara College Canada</li> <li>Nova Scotia Community College</li> </ul>	<ul style="list-style-type: none"> <li>Electricity</li> <li>Efficiency energy</li> </ul>	<ul style="list-style-type: none"> <li>CEDUC UCN Antofagasta</li> <li>Colegio Técnico Industrial Don Bosco, Antofagasta</li> </ul>
<b>B02</b>	<ul style="list-style-type: none"> <li>Cégep de l'Abitibi-Témiscamingue</li> </ul>	<ul style="list-style-type: none"> <li>Operation of mining plants</li> <li>Basics of mining plants</li> </ul>	<ul style="list-style-type: none"> <li>CEDUC UCN Coquimbo</li> <li>Centro de Formación Técnica (CFT) Estatal Regional Coquimbo</li> </ul>

## Services for educational succes, employability, and labour market insertion

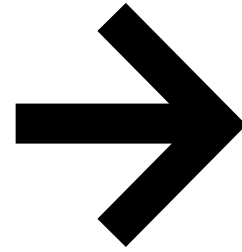
Project Code	Canadian Partners	PA Partners
<b>B09</b>	<ul style="list-style-type: none"> <li>Collège Boréal</li> <li>Collège Communautaire du Nouveau-Brunswick</li> <li>Cégep Saint-Jean-sur-Richelieu</li> </ul>	<ul style="list-style-type: none"> <li>CEDUC UCN Antofagasta</li> <li>CEDUC UCN Coquimbo</li> <li>CFT Estatal Regional Coquimbo</li> <li>Ministry of Education, Chile</li> </ul>

ENTIRE REGION

## Technical assistance - Entire region

Project Code	Canadian Partners	Sectors/Themes	PA Partners
<b>A07.1</b>	<ul style="list-style-type: none"> <li>Collège Boréal</li> <li>Collège Communautaire du Nouveau-Brunswick</li> <li>Cégep Saint-Jean-sur-Richelieu</li> <li>Mining Industry Human Resources Council (MiHR)</li> </ul>	<ul style="list-style-type: none"> <li>Integrated model for private-sector engagement</li> </ul>	<ul style="list-style-type: none"> <li>PA Technical Groups: Education (ETG), Labour (LTG)</li> <li>Ministries of education, labour, and mining and energy</li> <li>Production sector</li> </ul>
<b>A07.2</b>	<ul style="list-style-type: none"> <li>Cégep Marie-Victorin</li> <li>Collège Montmorency</li> </ul>	<ul style="list-style-type: none"> <li>Quality assurance and regional qualifications framework</li> </ul>	<ul style="list-style-type: none"> <li>PA Technical Groups: Education (ETG), Labour (LTG), REMCAP, and RECCL</li> <li>Ministries of education, labour, and mining and energy</li> <li>Production sector</li> </ul>
<b>A08</b>	<ul style="list-style-type: none"> <li>Durham College</li> <li>Fanshawe College</li> <li>Vancouver Island University</li> </ul>	<ul style="list-style-type: none"> <li>Development and implementation of national campaigns to promote new training programs and employment opportunities in the extractive sector</li> </ul>	<ul style="list-style-type: none"> <li>PA Technical Groups: Education (ETG), Labour (LTG), Communication (CTG), and Gender (GTG)</li> <li>Ministries of Education: Chile, Colombia, Mexico, and Peru</li> <li>Beneficiary institutions of the PA-EFE program in Chile, Colombia, Mexico, and Peru</li> </ul>

# Contributions to the achievement of the sustainable development goals



Both the institutional partnerships and the forums are in alignment with the labour-related strategies of the PA-EFE, which recognizes the importance of the inclusion and training of people as the foundation for development. In accordance with the UN's Sustainable Development Goals (SDGs), the PA member countries and Canada are all committed to implementing policies, programs, and strategies that aim at improving people's lives, eradicating poverty, and caring for the planet.

Of the 17 SDGs, some are contributed to directly by the PA-EFE program: SDG 4 - Quality Education; SDG 5 - Gender Equality; SDG 8 - Decent Work and Economic Growth; SDG 10 - Reduced Inequalities; SDG 13 - Climate Action; and SDG 17 - Partnerships for the Goals.



## SDG 4. QUALITY EDUCATION



16 training programs

created or improved to respond to the needs of the sector and to consider the competency-based approach and the challenges related to gender equality (GE) and environmental sustainability (six in Chile, three in Colombia, five in Mexico, and two in Peru).

More than CAN\$1 million

was invested in energy-efficient equipment or teaching materials purchased and used appropriately by instructors.



## SDG 5. GENDER EQUALITY



25 national-level policies or guidelines

implemented through the project significantly touch on gender equality considerations and reinforce women's empowerment. At the local level, under Component B, 29 policies and new regulations aimed at closing gender equality gaps in training institutions were approved. National and local stakeholders trained in mainstreaming methodologies.

+8%

more national stakeholders sensitized to gender issues (from 49% to 57%).



## SDG 8. DECENT WORK AND ECONOMIC GROWTH



100

companies access services for further training or applied research.

2

Launch of 2 applied research centres (UTS and UTCAM) and 1 entrepreneurship centre (UTS), and competency development of 47 teachers and institute administrators in applied research and innovation (HDE).



SDG 10. REDUCED INEQUALITIES



10 REDUCCIÓN DE LAS DESIGUALDADES



Support services

Development of support services for students with disabilities at UTS.

+35%

more female students enrolled in the project's training programs.



SDG 13. CLIMATE ACTION



13 ACCIÓN POR EL CLIMA



8 policies or guidelines

implemented through the project significantly incorporate environmental considerations and sustainable development.

77

extra-curricular opportunities for environmental competency development were created through the project.



SDG 17. PARTNERSHIPS FOR THE GOALS



17 ALIANZAS PARA LOGRAR LOS OBJETIVOS



13

partnerships between 34 TVET institutes in the PA and Canada to improve socio-economic opportunities for youth living in the PA, within the extractive sector.

5

international forums brought together more than 3,006 leaders and administrators from the four PA countries and Canada to foster dialogue and exchange best practices.



Santiago, Chile



## Approach of CICan's EFE programs

CICan's Education for Employment (EFE) programs are designed to support the development of practical and demand-driven training regimes that respond to the needs of the economy. The EFE Program fosters private-sector development by training learners and supporting industry in sectors of the economy that lack skilled workers and entrepreneurs. By integrating labour market needs into applied education, the EFE programs contribute together with partners in the regions and with demand-driven technical and vocational education and training (TVET) systems to increase the employability of graduates.

The key factors in the EFE Program's approach are collaboration, mutual trust, and participation of all parties. Above all, it is about bringing together counterpart institutional partners—i.e., teachers with teachers, administrators with administrators, etc.—to work as peers and share knowledge to strengthen programs so that they are more suited to local circumstances. The colleges share proven Canadian expertise in higher technical and professional education, as well as in competency-based approaches (CBAs), applied research, and relationships with companies.

The approach<sup>2</sup> of the EFE programs was developed in 2007 through consultations with policy makers from around the world and industry leaders to determine what each country's economic and employment needs were and which educational institutions were best positioned to provide training to meet those needs. As a result, institutions in partner countries now select their preferred Canadian higher education partners, which is different to how it had been done previously. Demonstrating their firm belief in and commitment to supporting their peers in other countries, CICan's member institutions quickly adapted to this new model of co-creating international development projects.

<sup>2</sup> <https://www.collegesinstitutes.ca/cicans-50th-anniversary/international-partnerships/>



“We first contacted CICan, and then we had to evaluate the proposals of a few Canadian consortiums that had applied jointly to CICan to do this consultation. This evaluation of the proposals, based on a tool they had given us, as well as the interviews with these Canadian institutes, was our first contact with a different world, which definitely enriched us, through the dialogue we had with these professionals.”

### **BENJAMÍN RAMOS MONTOYA**

Manager of the Centro de Formación Técnica at the Universidad Católica del Norte de Chile (CEDUC UCN), Coquimbo campus, Chile

# 28,780,155

direct beneficiaries of the PA-EFE program

(including the people exposed to the communication campaigns)

## Unforeseen circumstances due to the COVID-19 Pandemic

The PA-EFE Program was originally planned to last five years, from 2016 to 2021. However, the COVID-19 pandemic forced the program's end date to be extended to 2023 (without any additional funding) and led participants to adapt and take mitigation measures to ensure the success of the initiative despite the change in instructional settings and the cancellation of country missions due to the restriction of international flights. In addition, the difficulty of studying technical programs without hands-on practice, coupled with the unavailability of computers or Internet connections at home, led many students in the region to drop out during the pandemic.

Nevertheless, CICan developed a strategic response to the pandemic for the Program, which was validated by GAC, by sending out formal surveys to the beneficiary institutes and ministries of education in the four PA countries to identify needs and priorities. It was also able to equitably distribute funds among the PA countries. Each PA country received CAN\$60,000 to mitigate the impacts of the pandemic. This support was administered with a special focus on the impact on female students, who were generally the most vulnerable and affected by the pandemic. For example, workshops were held on violence against women, on the precarious situation of young women staying in school (studying at home), and on the gaps in access to distance learning tools.

Participating institutions demonstrated a great deal of flexibility and creativity in dealing with the emergency while still making progress, by developing specific initiatives to respond to the challenges and priorities of their local partners. The actions taken to address the lack of face-to-face contact, especially in the classroom, included:

- the purchase of tablets to lend to students,
- development of an online teacher training system,
- equipment for a videoconferencing room,
- increased use of various digital platforms for communicating and sending information,
- toolkits to combat violence against women, and
- an awareness-building campaign on GE and gender violence.

“I think the biggest challenge the PA-EFE Program faced was the pandemic. This led the countries, the stakeholders involved in this program, and also CICan, to rethink absolutely everything. And I believe that these mitigation plans that were executed by the different technical assistance projects and by CICan's administration are what ensured its effectiveness. The majority of the technical assistance projects were carried out in the best possible way; the objectives that were originally set have been met; and the different participants in these initiatives are happy with the work that has been done and they hope this Program will be extended beyond 2023.”

### **NÉSTOR SUÁREZ**

Focal point (Colombia) for the Pacific Alliance Gender Technical Group (GTG)





The pandemic actually turned out to be a source of learning about new technologies and innovative ways of working, which have continued since the return to normality. In fact, teleworking, cross-sector communities of practice, and e-learning (both synchronous and asynchronous), continue to be part of the project's ongoing work. These new ways of working have also greatly facilitated more continuous communication among participants from different countries, in a much more cost-effective way. At the same time, issues that affect women and men differently in the household, where women are the primary ones responsible for more than 80% of housework and caregiving, have become more clearly visible.

One impact that can be considered negative was that remote work does not allow for the human relationships that develop when working face to face and that are so important for the effective progress of international cooperation projects. In some cases, this also slowed down the implementation of activities, especially for projects started in 2020 (at the start of the pandemic). For example, for projects B09 through B12, there was no opportunity for partners to meet in person so they had to make a special effort to implement project activities without being able to go to the field and see them for themselves.

Despite the contingencies of the pandemic, the initiative was successful and sparked interest among participants to continue collaborating in the future.

## Telling the story of the PA-EFE program

The process of gathering of experiences from the PA-EFE started in April 2022 and ended in March 2023. The objective was to "capitalize" on the outcomes, best practices, and lessons learned in order to formulate recommendations for the sustainability of the activities and avoid a loss of information with the wind-up of the Program.

The methodology for this process included 185 interviews with individuals from Canada, Chile, Colombia, Mexico, and Peru who participated in the Program. These interviews were systematized to identify key ideas and themes.

To close out this process, the fifth thematic forum of the Program was held in Mexico City on January 24-26, 2023. The event was focused on capitalization, and its main objective was to share experiences, approaches, and innovative tools developed as part of the institutional partnerships, in order to showcase the impact of the PA-EFE in the region and to promote the sustainability of the achievements and the Program's best practices.

180 interviews were conducted with the program's main stakeholders, ranging from ministerial authorities to students, companies, directors of TVET institutions, and teachers. The interviews were filmed by a Mexican production team (Edson Contreras Ornelas and Juan Pablo Vargas, from the agency Comite), who also produced the video of each project, which are available on the EPE-AP website.



Participants in the Program's institutional partnerships and technical assistance efforts, which implemented 16 projects, presented the themes and sub-themes of the forum through panels, mini-discussions, and sub-groups. The cross-cutting dimensions of gender equality & inclusion and environmental sustainability were integrated within each session, reflecting their importance in each program component for the five countries involved in the Program. All panels were related to the four themes specified for the capitalization process:

- **THEME #1**  
Collaboration and Alignment in the PA Region
- **THEME #2**  
Academic Enhancement, Access and Success, and Employability
- **THEME #3**  
Quality of Technical and Vocational Education and Training (TVET)
- **THEME #4**  
Business and Community Services

These four themes provide the structure for this publication, which is one of the capitalization outputs planned as part of the close-out of the PA-EFE Program. A website will be developed to go hand-in-hand with this book, as well as video capsules, which will be posted on different social networks.



Bogota, Colombia

Student from the welding program of the CONALEP  
021, Campeche, Mexico



# CROSS-CUTTING DIMENSIONS AND CAPITALIZATION THEMES



One of the outcomes specified for the PA-EFE Program was mainstreaming of gender equality and environmental sustainability, by incorporating these approaches into methodologies, strategies, and funding.

## CONTENTS

Cross-cutting Dimension 1: Gender Equality and Inclusion

Cross-cutting Dimension 2: Environmental Sustainability

# Cross-cutting Dimension 1: Gender Equality and Inclusion

Gender equality and inclusion is one of the Program's fundamental guidelines; this required greater commitment and accountability from the partner institutions due to the changes that needed to be made in institutional culture and in the people from the communities involved in training in each country. The Program worked with ministries, secretariats, and private institutions working on GE in the extractive sector, and with TVET institutions in 11 regions of the four PA countries.

An analysis of the preliminary overall gender diagnosis, which was carried out during the planning phase of the PA-EFE Program, showed that there were considerable gaps with respect to women's opportunities in training and employment. This diagnosis was expanded on by the institutional partnerships in each of the partner institutions at the local level. These reports showed that at the start, almost no attention was being paid to this issue. None of the institutions had gender equality and inclusion policies in place, and almost none of the people in management or leadership positions were aware of the approach, let alone its application in training.

Information from the NGO Women in Mining in the four countries showed that women's participation in the extractive sector was low, especially in positions of greater responsibility, and that options for generating their own income are limited by stereotypes around professions and occupations. Women also continue to play the primary role in caregiving and housework, which ends up being an obstacle to their training and integration into the labour market.



"The activities have been very interesting, since at times we have looked at gender from the perspective of what to do with women. But we have forgotten that men also play an important role in creating conditions of equity and non-violence. So, I think we need to work towards a culture of peace, in which men and women respect and value each other in our different dimensions and characteristics, and where we can complement each other."

**BILLIE DEL PINO RIVAS**  
Consultant, Institutional Partnership Project B12

**+8%**  
more stakeholders from national  
governments in the four countries  
sensitized to gender issues  
(up from 49% to 57%)

**25**  
policies implemented with the framework  
of the Program were developed with  
a gender equality analysis and include  
gender equality considerations.

## The Strategy

Within this context, the Program established a gender equality mainstreaming strategy aimed at working with all partners in the countries' institutions at both the national and local levels, and to include this approach in all actions. This challenge involved complex processes of exchange, dialogue, capacity building, and cultural change, as well as the participation of various stakeholders in all actions.

The strategy recognized that education for employment is a basic requirement for access to better living conditions and for stimulating vocational education of young men and women. This, in turn, was based on the understanding that their success depended on the design of public policies and training programs that met their requirements and needs.

The strategy was therefore developed with two objectives in mind:

- to foster multi-stakeholder work at the national and local levels, promoting dialogue among countries and institutions working for equality; and
- to recognize the differences in the policies of each country and institution, finding shared identities, progress, and obstacles, in order to learn from each of these and mainstream their actions from a gender equality perspective.

## Achievements

### At the national level: representatives of the public and private sectors and civil society

Program interventions at the country level were endorsed and supported by partner ministries and key individuals, which enabled exchanges and learning and dialogue processes. An initial finding was that the political bodies in charge of mainstreaming gender equality and inclusion in all public agencies face problems of compartmentalization, scarce resources, and dialogue with other sectors.

The Program aimed at improving inter-sector and inter-country dialogue, and opened up spaces for exchange, reflection, and skills development among officials from different sectors. This led to impressive results, especially in light of the need for peer-to-peer exchange and the positioning of the issue in the actions of all ministerial sectors in the countries.



Scan this QR code to view the full text of the report  
"Analysis of Gender Equality Policies and Best  
Practices in the Pacific Alliance Countries"

## Promoting Dialogue among the Four PA Countries

After the GE forum was held, four phases of work were specified; these were aimed at identifying GE and inclusion policies, documenting and disseminating best practices, and improving dialogue among the four PA countries at the national level. The process included several stages of exchange, research, analysis, and documentation:

1. identifying key GE policies in each country, as well as key interviewees, especially from the extractive sector and other partner ministries;
2. promoting participatory documentation through the experiences and testimonials of the persons responsible for implementing these policies;
3. disseminating the results; and
4. developing skills in partner ministries on GE policy design, aiming at driving change in their sector.

In the final phase, four workshops were held in which 154 officials from 39 public agencies, including ministries of finance and planning, participated. As a result of the group work, each workshop identified around 63 issues that need to be addressed in public agencies in order to mainstream gender equality. This result reflects the urgent need for PA countries to mainstream this issue in their policies. These challenges are detailed in each workshop report. In the few remaining months of the Program, at least 11 strategies were developed to implement actions identified in the workshops, although there are still challenges and obstacles to be overcome before they can be executed.

One noteworthy achievement is the awareness building around the need to address changes in the quality of government interventions so that they recognize GE as a factor of quality and relevance in public policies. The different needs of women and men and the government's responses to these differences will allow for policies centred around an equal-opportunities approach and programs that meet these requirements, especially in education, decent work, and caregiving. Targeting public policies at different population groups has more positive effects when these identify the differences in the roles of men and women, Indigenous communities, and other groups.



“It was very interesting to see where the Ministry of Public Education stands on the issue of strengthening technical and vocational education through the media. What is being done, what still needs to be done, and what about the coordination between the agencies and institutions? Every day we are collaborating or talking to one agency or another, but in practice this doesn’t happen naturally. So this coordination was also a challenge, but in the end I think it was a good thing that we worked in a multi-agency way.”

**VERÓNICA GUERRERO HUEPA**

Deputy Director of Cooperation and Multilateral Relations at the Mexican Ministry of Public Education (SEP) and Technical Secretary of the Pacific Alliance’s Education Technical Group (ETG)

“One of the things that most struck me was this program’s ability to connect different countries, different stakeholders, and different ministries, and to give the leading role in specifying the issues, priorities, and activities to those who are going to be its actual beneficiaries, which are the countries, and, in the end, the citizens of these four countries. Through CICan’s Education for Employment Program, I had the opportunity to meet representatives of other ministries from other countries. I have also worked at the Undersecretariat for International Economic Relations, which is part of the Chilean Foreign Ministry. But thanks to this program, other ministries, not only in Chile, but also in the other countries that make up the Pacific Alliance, have been involved. Therefore, the implementation of this program in our four countries allowed us to build connections and ties with officials, authorities, and representatives of other sectors, not only in international economic relations, but also, obviously, with the ministries of education, environment, energy, and mining, and other actors working in environmental sustainability.”

**ALEXANDRO CEA**

A lawyer, Mr. Cea worked for a long while in the Pacific Alliance Division of Chile’s Undersecretariat for International Economic Relations.



**Masculinity workshops**

Another effort that made significant contributions to effecting changes in institutional cultures in the countries at the national and local levels was the masculinities workshops, which aimed to develop a vision of equality based on male identities and the promotion of a culture of peace. A total of 70 officials and 190 management, administrative, and teaching staff from the partner TVET institutions participated. These were delivered over 10 training sessions, through the analysis of gender identities, stereotypes around being a man or a woman were changed, as was the perception of GE not only as an appeal by women, but also from the perspective of male identities. The testimonials show this, as both instructors and management-level staff acknowledged the impact of the changes in their perception of equality and inclusion.

One important finding from the interviews with instructors who participated in the workshops is that they assert that there is compartmentalization in place, where everyone loses. Not only for women, but for men too: a culture of discrimination has impacts on men’s and women’s roles and on the development of their identities.

82%  
of women very happy with the academic success services

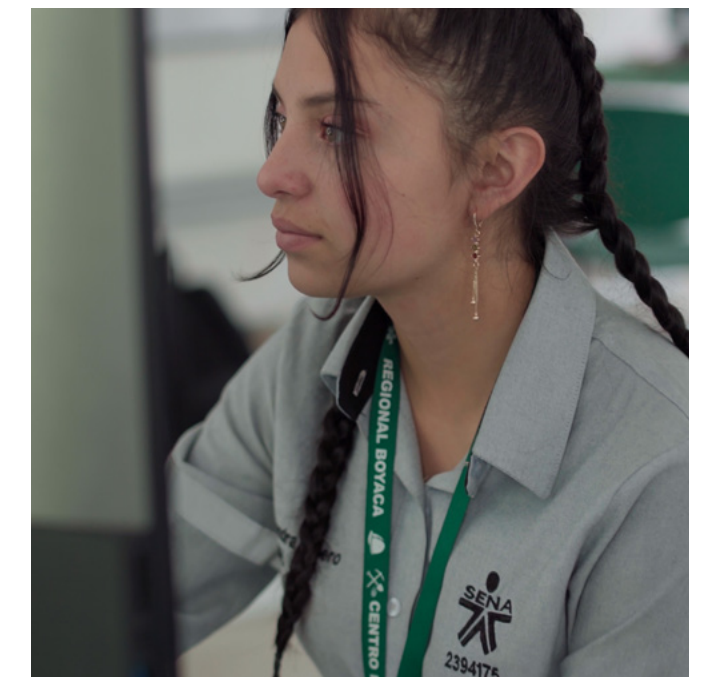
11 institutions  
have GE committees, strategies, policies, and procedures to work from a gender equality perspective and contributing to the empowerment of women, surpassing the target of 7

**At the local level: technical and vocational education and training institutions**

The gender equality strategy focused largely on coordination among partner training institutions in the four countries and Canadian partners. The strategy was mainly aimed at influencing institutional policies, forming GE committees as a necessary driver for institutional transformation, and supporting the partnerships led by Canadian institutions to drive substantive change. Throughout the Program, the partnership with the Canadian colleges enabled the development of joint actions and joint efforts to achieve greater impact. The CICan team worked to strengthen the gender equality committees and to promote the development of institutional policies to ensure the sustainability of the gender equality work. In parallel, distance GE training sessions on the theory and practice of equality in training were delivered. A toolkit of documents and guidelines was created for reference. Ongoing consultation was also provided for the transformation processes.

As a result, the training institutions were able to support and approve 29 actions around policies and plans that mainstream gender equality and inclusion in partner institutions. One example that should be pointed out is the awareness-building process in institutions, which resulted in substantial changes at the strategic and political level. It can be said that the Program was a milestone in the work of training institutions, since it positioned GE and inclusion as a factor for quality.

Another of the Program’s actions was aimed at supporting partner institutions’ communication strategies from a GE perspective, by supporting projects to promote educational programs without discriminating against women. More than 20 communication products were launched in the promotion campaigns for educational programs and calls for applications in 12 partner institutions.



## “I Am a Woman, I Am a Technician” Campaign - Chile

Through an agreement between CEDUC UCN and Women in Mining (WIM), Chile launched the “I Am a Woman, I Am a Technician” communication campaign, within the framework of the PA-EFE Program.

- This campaign was created as a result of an analysis of the characteristics of employment in the mining sector and the differences in women's educational choices in educational programs in the sector and the stereotypes that affect the selection of careers.
- The campaign contains ten capsules in which women who work in the extractive sector, who are successful, and who are accomplished as individuals and professionals, discuss topics such as sustainable mining, myths about women's participation in mining, female leadership in the extractive sector, and innovation and technologies in the industry.

## Learnings

The Program resulted in many learnings in the implementation of the GE strategy. There were many challenges, but the achievements exceeded expectations. A few lessons that will be useful for future interventions have to do with the understanding that gender equality is not only an issue of rights, but also a factor in the quality of training that enables the engagement of managers and policy makers in carrying out actions for institutional transformation.

In addition, it is not enough to just have the intention to mainstream gender equality in training institutions; political will is also required to develop a strategic plan for a medium-term transformation, including assignment of responsibilities and training for all staff. The project also requires a specific monitoring system that contributes to the knowledge management and dissemination process. Mainstreaming requires systematic work at all stages of the project or program, from the planning phase to implementation and funding. We also need to address issues around people's awareness and engagement, which are fundamental to institutional change.

The future of people's training will depend, to a large extent, on the evolution of labour demand. Technology is advancing by leaps and bounds, and a higher skill level is becoming more important than ever to access well-paid jobs. In this respect, technical training and digital skills will become more and more important. The COVID-19 pandemic has accelerated the digitization of many sectors, leading to an increase in demand for professionals with skills in technology, e-commerce, and digital marketing. Women generally do not have access to these positions, so a strategy for inclusion needs to be developed.

Therefore, training in these areas will be key for graduates who get a job and want to stay competitive in the labour market. However, soft skills such as teamwork, communication, problem solving, and creativity, all from an equity and inclusion approach, should not be underestimated.

Experience shows that gender mainstreaming processes in training institutions and public bodies take time. Changes in culture and people's awareness are at least medium-term prospects. Showing results and management efficiency is one way of showing their effectiveness. Each action carried out and every step taken to improve the commitment and conditions that make equality possible were essential and show a new way forward.



“For us at the CFT, being able to work with CICan has brought us a number of benefits in different areas. From the Gender Department, I would like to highlight the importance of understanding the mainstreaming of this unit, which is no longer limited to inclusion and communications, but now encompasses all units of the institution. Being able to work hand in hand with other teams has been both challenging and very productive, with great results. It has been very beneficial to learn about intersectionality and mainstreaming from the experience of the Canadian partners.”

### NICOLÁS CARADEUC

Head of Gender Equality, Centro de Formación Técnica (CFT) Estatal Regional, Coquimbo, Chile

“I think it is very important to discuss these issues with students because machismo is very much engrained in them, especially among men. We need to raise awareness among students, because this is something they have inherited from past generations. We need to advance little by little to transform society into a friendlier one, with an awareness that we are human above all—not just men or women.”

### OMAR SÁNCHEZ

Instructor, Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146), Mexico



# Cross-cutting Dimension 2: Environmental Sustainability

The Pacific Alliance member countries have expressed their objective of promoting sustainable and inclusive development in the region, thus contributing to the fulfilment of Agenda 2030 for Sustainable Development and its goals, in line with the PA's Strategic Vision for 2030<sup>3</sup>. Accordingly, the PA formed the Environment and Green Growth Technical Group (Spanish acronym: GT-MACV) in 2016, to develop and implement an agenda that drives sustainability in the PA countries. Its actions are geared towards economic development that ensures the continuity of environmental resources and services, considering the characteristics and circumstances specific to each country.

In addition to the work at the policy level, the PA-EFE Program has carried out more than 75 awareness-raising activities in partner training centres in order to work on environmental sustainability at all levels. The different actions carried out by the Program are summarized below, both at the strategic level with policy makers and at the operational level with young people in the field.

Initially, the GTMACV specified the following main lines of action:

1. Identify barriers and opportunities between the public and private sectors to advance towards green growth;
2. Engage in dialogue and define joint actions to promote and drive the development and implementation of environmental commitments;
3. Develop cooperation efforts between governments and the private sector;
4. Develop a platform to coordinate and promote a common environmental agenda that addresses shared environmental priorities and contributes to the implementation of the SDGs in the framework of the 2030 Agenda, advancing in information systems, measurement, and indicators.

<sup>3</sup> <https://alianzapacifico.net/wp-content/uploads/V.-final-ALIANZA-DEL-PACIFICO-V2030-version-final-julio-24.pdf>



“The extractive sector had not been not considered in the environmental sectors of our countries. There were even initial doubts as to whether one could be involved, to what level, and why, since the extractive sector is handled by our ministries of economy or ministries of mining, depending on the country. So, I think that was the biggest benefit: that as a Technical Group we learned that there is also an urgent need to work hand in hand on extractive sector issues.”

#### MOISÉS SENÉN HERNÁNDEZ SÁNCHEZ

Former official from the International Department of the Secretariat of Environment and Natural Resources (SEMARNAT), Mexico

The report concludes with a series of specific recommendations for each PA country, all of which emerged from the questionnaires and interviews, to assist in the development of public policies around environmental sustainability.



Scan this QR code to view the full text of the report “Analysis of Policies and Best Practices for Environmental Sustainability in the Pacific Alliance Countries”

Within this context, one of the intermediate outcomes sought by the PA-EFE Program was an increased long-term dialogue among the Pacific Alliance countries, with the support of Canada, on sustainable practices, policies, and guidelines, and to provide training for men and women in areas of the strategic sectors, in equality of conditions for training and employment. For this, an Environmental Sustainability Strategy was developed to identify the countries' actions around this cross-cutting theme in the extractive sector. Workshops directed at public-sector staff in Colombia, Mexico, Peru, and Chile were also held within the PA-EFE Program on the design, implementation, and monitoring of public policies for environmental sustainability.

The design and implementation of the policies and best practices relative to environmental sustainability in the extractive sector require the participation of all stakeholders, so the PA member countries have set up communication channels that have facilitated the analysis and opinions of the representatives from the private sector, civil society, academia, and Indigenous peoples and local communities. In addition, the growing use of virtual platforms and electronic media has driven the participation of non-government stakeholders that are located in remote areas or that have difficult access, since they no longer need to physically commute to the capital cities to have their voices heard in meetings with the government.

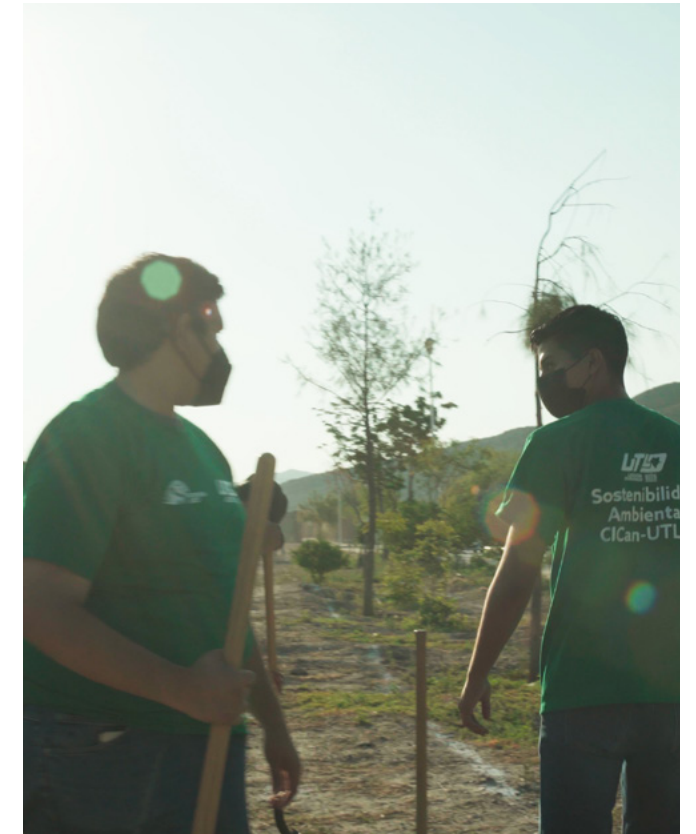
#### Analysis of policies and best practices for environmental sustainability in the PA

In order to contribute to the strengthening of the national policies and best practices on environment that were presented during the Intersectoral Forum on Environmental Sustainability (held virtually in November 2021), the PA-EFE Program analyzed their design, implementation, and monitoring. The result was the preparation of the report “**Analysis of Policies and Best Practices for Environmental Sustainability in the Pacific Alliance Countries**,” which was released and presented at the Capitalization Forum in January 2023.

The preparation of this publication was based both on the takeaways from the forum and on information obtained through document reviews and interviews with key actors in the four PA countries. In total, 22 policies and best practices were systematized.

# 22

policies and best practices were systematized



#### MAIN OUTCOMES

Outstanding results have been achieved in terms of environmental sustainability. Some of the most important ones are:

##### 1. Incorporation of sustainable practices in training

The Program has integrated environmental sustainability concepts into technical and vocational training, and this has provided graduates with the knowledge and skills to apply sustainable practices in their work.

##### 2. Promoting environmental practices in education

Program participants have been sensitized to the importance of environmental sustainability, which has enabled them to gain in-depth knowledge on environmental best practices and how to apply them in different industries and in their daily activities.

##### 3. Execution of sustainable projects

The Program has provided technical and financial support for various sustainability projects, such as the installation of lighting powered by renewable energy, and training in solid waste management and reforestation efforts. This has promoted the protection of the environment and the implementation of sustainable practices in the daily activities of the students.

#### 4. Strengthening collaboration between educational institutions and companies

The Program has established strategic partnerships between educational institutions and companies, and this has enabled students to develop specific skills and knowledge required by the industry and to implement sustainable practices in their work.

#### 5. Strengthening public policy (PP) with an environmental perspective

The Program has worked together with officials from 34 different ministries/secretariats and government agencies to strengthen and train their staff on environmental issues. This has led to improved natural resource management and biodiversity protection in the extractive sector.

The workshops had two objectives.

- The first was to analyze recent or ongoing PPs on environmental sustainability or that could include this topic in their approach, to identify their weaknesses and minimize them in the design or implementation process of PPs or in the modification of existing ones.
- The second was to formulate a PP using tools and recommendations for its design and implementation plan, and adopting different methodologies that can be applied in practice within the context of each ministry or government body.

### Conclusion

In summary, the implementation of the environmental sustainability strategy has been a success in terms of promoting sustainable practices and implementing environmental best practices at regional, national, and institutional levels. It also contributed to the strengthening of environmental issues, which will contribute significantly to the sustainable development in the Pacific Alliance region.

193

students sensitized on environmental sustainability

77

extra-curricular opportunities for developing environmental competencies created under the Program, exceeding the target of 40

91%

The Program has supported the implementation of green campuses in 91% of institutions.

124

people trained in policy design with an environmental sustainability perspective

“The idea is to be able to see how Canada advances in energy efficiency and how we CAN train students who will work in the future in this industry, which two or three years ago was perhaps not a very strong industry in Chile, but which today is migrating towards new renewable energies or green energies. It is important that future generations are well trained to contribute to this development.”

#### LUIS ALEJANDRO CORTÉS REBOLLEDO

Deputy Director, Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Antofagasta, Chile

“We chose this career because it is very important to take care of the environment and everything else, and the environmental problems that have been arising, not only in our country, but globally, climate change and all that. Most of all, to provide a solution for a better future.”

#### LEYDY PATRICIA ALVARADO CARVAJAL

Environmental Resources Management Technology student, Unidades Tecnológicas de Santander (UTS), Colombia

“Mining needs to include a component of care for the environment, which is an ISO standard. When the mining work is complete, the damaged area needs to be reforested. I think it's very important, because that's what we are going to leave to future generations, so we have to take care of those resources.”

#### TANIA ESPARZA

Mining Engineering student, Universidad Tecnológica de La Laguna Durango (UTLD), Mexico

“In the sustainability workshop we took with CICan, the topic of environmental education was recurrent. From the perspective of international affairs, this is a topic that we can use as a basis to collaborate on around more specific issues including the circular economy, sustainable management of plastics, blue carbon, and climate change. We have certainly collaborated through the PA-EFE Program, but we also need to complement this with the activities of the PA's Environment and Green Growth Technical Group.”

#### ANA KAREN EMBARCADERO LUNA

Manager of Commercial Affairs at the Secretariat of Environment and Natural Resources (SEMARNAT), Mexico

“In mining, the use of different types of chemical reagents has an impact on the environment. So, we obviously look at this as part of our career and we take it with a lot of responsibility. It is very important to take care of the environment because it affects the ecosystem; we provide training to our students on that: it's not just the technical side, but also care for the environment.”

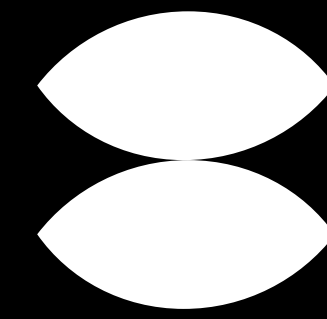
#### FELIPE EFRAÍN CUTIPA VILLALBA

Coordinator of the Metallurgy Studies Program, Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza (IESTP-HDE), Peru





# Collaboration and Alignment in the Pacific Alliance region



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- International Forums for the exchange of best practices
- Technical Assistance Project A07.1
- Technical Assistance Project A07.2

# Collaboration and Alignment in the Pacific Alliance region

One of the two main pillars of the Program was strengthening regional dialogue among Canada and the four Pacific Alliance countries on extractive sector policies and best practices. To meet this objective, CICan implemented different initiatives. One of these was the organization of four thematic forums to address the priority challenges of the extractive sector, by strengthening its governance, as well as the challenges of gender equality, environment, relations with Indigenous communities, and TVETs.

These international events brought together stakeholders from the public and private sectors and civil society to have a three-way dialogue and come up with best practices and recommendations. Each of these events was summarized in reports that were circulated in the four countries. In addition, CICan led systematization processes for policies and best practices in collaboration with the ministerial partners of the four PA countries, and organized training workshops on the design, implementation, and evaluation of policies from a gender equality and environmental sustainability perspective; all of this created more opportunities for productive and valuable dialogue.

Two technical assistance projects were also implemented to strengthen the institutionalization of regional dialogue and collaboration; these covered sub-themes relevant to these objectives: the alignment of training supply and labour demand, and the creation of a common regional qualifications framework. Both regional projects were managed by institutional partnerships led by Canadian institutes and involved the collaboration of some of the technical groups from the PA and the four member countries, through their respective ministries of education, labour, and mining/energy.

## Theme 1 Projects

### Technical Assistance Project A07.1

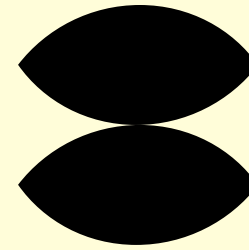
Sector-wide approach to close the gap between supply and demand, which sought to provide an analysis of best practices and associated tools to support greater collaboration among stakeholders in the extractive sector, in particular between the education and private sectors, in the development of skills and competences among youths.

### Technical Assistance Project A07.2

Development of a Pacific Alliance Regional Qualifications Framework, which sought to foster student and labour mobility, find solutions to the gaps in skills and qualifications, promote socio-economic resilience considering migratory movements, and enable comparability and recognition of qualifications acquired by people in the four PA countries.



Scan this QR code to see the video on Theme 1



# 116

agreements made between public, private, and community stakeholders in the extractive sector

# 5

international forums organized in the four PA countries and Canada to promote dialogue and exchange of best practices

# 3,006 leaders

and managers (54% women) trained in policy development & implementation and best practices

# +24%

more national stakeholders perceive themselves as having the capacity to design and implement GE policies and best practices

# 90

Support for the systematization of more than 90 policies, guidelines, and best practices to strengthen governance across the sector

# 213

stakeholders (53% women) involved in an improved body for aligning supply and demand in the ES labour market, exceeding the original target of 40

# RESULTS

# International Forums for the Exchange of Best Practices

## 1. Gender Equality Forum

The first action carried out as part of the program's GE strategy was the first Forum on Gender Equality in the Extractive Sector, held on March 21 and 22, 2019 in Santiago, Chile. This was the first of five thematic forums organized by CICan as part of the PA-EFE Program; it brought together 132 participants (108 women and 24 men) from the four PA countries and Canada. During the event, 14 policies and best practices were shared, as well as recommendations for implementing gender equality policies and programs.

The Forum addressed gender equality, women's inclusion and participation in technical training, employment and leadership in the extractive sector. Participants had the rare opportunity to interact with their counterparts from other PA countries and Canada. Bringing together a diverse group of decision makers and experts in the field was also a unique opportunity to address not only the problems and challenges with regard to gender equality in the extractive sector, but also possible solutions.



Scan this QR code to download the report on the Forum on Gender Equality in the Extractive Sector



Scan this QR code to view the video of the Forum on Gender Equality in the Extractive Sector

## 2. Indigenous Communities Forum

The second action for assessing the current situation in the PA countries was the Indigenous Communities Forum, held from November 4 to 6, 2019, in Saskatoon, SK, Canada. This event was in addition to the annual event on training and Indigenous communities organized by CICan.

Three main themes were covered:

1. Issues and challenges in the three-way relationship between government, Indigenous communities and companies;
2. Best practices and lessons learned, with the aim of proposing alternatives for a positive dialogue that meets the needs of all parties, taking into account the different situations of men and women;

3. Indigenous education, based on the experiences of the Canadian technological institutes, the representatives of the Indigenous populations, and of the PA countries.

The Forum provided an opportunity to learn about the situation of Indigenous peoples in PA countries and to exchange best practices from Canada and the PA countries.



Scan this QR code to download the report of the Forum on Indigenous Communities, Education for Employment, and Relations with the Extractive Sector



Scan this QR code to view the video on the Forum on Indigenous Communities, Education for Employment, and Relations with the Extractive Sector



## 3. Intersectoral Forum on Technical and Vocational Education and Training (TVET)

The Program's third forum focused on best practices, policies, priorities, and challenges in technical and vocational education and training (TVET) in the PA and Canada. It was held virtually, due to the COVID-19 pandemic. This allowed, however, for the forum to reach an audience of 3,368 people, which is a significant number that would not have been achieved in a face-to-face format. In total, four working days were held via webinar, on October 15, 22, and 29, and November 5, 2020.

The forum's objective was to build the capacities of national and regional stakeholders to track the development and implementation of policies and best practices around the priority challenges facing TVET, within the framework of developing competent human resources in the extractive sector. The event therefore focused on three main themes:

- **Inter-level coordination**, including qualifications frameworks, certification of labour competences, portability, and recognition of prior studies, as well as regional coordination;
- **Connection between TVET and the productive sector**, particularly in diagnosing the labour force, mechanisms of coordination between the training sector and the world of employment, upgrading of TVET, and the use of technologies and simulators in the training process;
- **Quality assurance**, covering learning evaluation, modes of practice (such as dual education), and distance learning.



Scan this QR code to download the report from the Intersectoral Forum for Technical and Vocational Education and Training (TVET)



Scan this QR code to view the video from the Intersectoral Forum for Technical and Vocational Education and Training (TVET)



## 4. Environmental Sustainability Forum

Recognizing the need to strengthen the sustainable growth and development of the PA member countries, the Intersectoral Forum on **Environmental Sustainability in the Pacific Alliance and Canada** was held virtually on October 28 and November 4, 11, and 18, 2021. The purpose of the event was to build the capacities of national and regional stakeholders to track the development and implementation of environmental policies, best practices, and guidelines. More than 500 people took part in the event, which provided an opportunity for intersectoral and three-way dialogue between actors from the public and private sectors and civil society from the four PA countries and Canada to:

- identify challenges and priorities for environmental sustainability;
- reflect on environmental best practices in the PA;
- identify environmental best practices, policies, and guidelines in the PA and formulate suggestions or recommendations for their proper implementation and risk management; and
- identify key players working in environment and the extractive sector to contribute to the construction of a sustainable dialogue in the Program's planned activities.



Scan this QR code to download the report on the Intersectoral Forum on Environmental Sustainability in the Pacific Alliance and Canada



Scan this QR code to view the video from the Intersectoral Forum on Environmental Sustainability in the Pacific Alliance and Canada



## 5. Capitalization Forum

The Program's fifth and final thematic forum was held in a hybrid format, with a face-to-face event in Mexico City on January 24-26, 2023, which was also live-streamed. The event was focused on capitalization, and its main objective was to share experiences, approaches, and innovative tools developed as part of the institutional partnerships, in order to showcase the impact of the PA-EFE Program in the region and to promote the sustainability of the achievements and the Program's best practices.

Members of the Program's institutional partnerships, which implemented 16 projects, presented the themes and sub-themes of the forum through panels, mini-discussions, and sub-groups. The cross-cutting dimensions of gender equality and inclusion and environmental sustainability were also integrated within each session, reflecting their importance for the five countries involved in the Program. All panels were related to the four themes specified for the capitalization process:

- **THEME 1**  
Collaboration and Alignment in the Pacific Alliance Region
- **THEME 2**  
Academic Enhancement, Access and Success, and Employability
- **THEME 3**  
Quality of Technical and Vocational Education and Training (TVET)
- **THEME 4**  
Business and Community Services



Scan this QR code for more information on the PA-EFE Program's Capitalization Forum

132

national stakeholders from the four PA countries participated in the GE forum

3,368

national and institutional actors from the 4 PA countries participated in the TVET Forum

521

national actors from the 4 PA countries trained in environmental sustainability within the framework of the forum

300

More than 300 national and institutional stakeholders from the 4 PA countries participated in the Capitalization forum



"I had the opportunity to participate in the Indigenous Peoples Forum in Saskatoon, Canada last year, and it was an enriching experience. Learning about the situation of Indigenous peoples in Canada was a totally new topic for me. My view is that we need to work on the issue. I think it is given a low priority in the four countries in general. Canada is quite advanced; they have many initiatives, they have inclusion policies, and that is very important. But I believe that Chile, Colombia, Mexico, and Peru need to make a greater effort to include these groups in our public policies."

**GABRIELA RUIZ DIÉGUEZ**

Deputy Manager for the Pacific Alliance, Secretariat of Foreign Affairs (SER), Mexico

## TECHNICAL ASSISTANCE PROJECT A07.1

# Addressing employment challenges through a regional/sectoral approach

### Project Description

The objective of the project was to support the four Pacific Alliance member countries (Chile, Colombia, Peru, and Mexico) to enrich or develop a sectoral approach to improve the alignment between supply and demand for training in the extractive sector.

The sectoral approach is designed to help employers within a given sector to address labour market challenges, to better align workforce supply with demand. The first step in this process was to clearly understand the imbalance between labour supply and demand, and then to identify the underlying factors that caused this imbalance, with a view to creating tools and programs to better support an improved alignment.

### Services provided

To achieve these objectives, the partners worked together with representatives of the extractive sector to carry out different participatory activities, such as:

- a diagnosis to understand the needs and priorities of the PA partners and to plan the timeline of the work in agreement with the actors involved;
- transfer of Canada's experience with sector councils, at both the national and provincial levels (for certain specific initiatives), to coordinate training with the productive sector;
- stakeholder mapping with each country (independently) to identify the relationships among them and see where these should be strengthened or formed with a view to creating an equivalent to Canada's sector councils;
- a regional workshop held in Chile in 2022 to identify the main labour market challenges in each country and which ones overlapped; a work plan was developed to strengthen multi-sector participation in technical education; and



- a regional workshop held in Colombia in 2023 to develop the framework for a gender equality certification for mining companies within the Pacific Alliance, working with representatives of Women in Mining from the four countries.

### Outcomes

- Dialogue fostered among parties from different countries for stakeholder mapping
- Communication of strategies with a gender & inclusion and environmental approach in the extractive sector
- Development of a **Best Practices Guide and Toolkit** aimed at providing the four PA countries with a compendium of programs, tools, and best practices to support the implementation of a sector-wide approach/ model to support skills development in the extractive sector. The ultimate goal is to ensure that education and training systems are aligned with the skills and competency requirements of employers in the extractive (and all) sectors.



Best Practices Guide and Toolkit



### PACIFIC ALLIANCE PARTNERS

- PA technical groups: Education (ETG), Labour (LTG)
- Ministries of education, labour, and mining and energy
- Extractive sector

### CANADIAN PARTNERS

- Collège Boréal (lead)
- Collège Communautaire du Nouveau-Brunswick
- Cégep Saint-Jean-sur-Richelieu
- Mining Industry Human Resources Council (MiHR)

Development of **1** best practices guide on pilot projects for the PA

**131** people and **96** organizations participated in the stakeholder mapping of the four PA countries

The only partnership led by a Canadian consortium that includes a civil society organization (MiHR Canada).



"We are working on this project [A07.1] with the four countries of the Pacific Alliance: Chile, Peru, Mexico, and Colombia. And what we are trying to do is explore with them how to better implement or integrate a sector-wide approach into their extractive-sector skills development initiatives in their countries."

#### DANA IMBEAULT

Senior Director of Operations, Mining Industry Human Resources Council (MiHR), Canada

"With regard to the A07.1 Technical Assistance Project, I think the effort around stakeholder mapping for the extractive sector in Colombia was a success. We managed to involve different stakeholders, such as academia and the mining sector, and I think it was also a good decision on Colombia's part to directly involve the Ministry of Mines and Energy, which heads the sector, in this project. We hope this technical assistance will make a huge contribution, just as the Sector Councils do in Canada and in other countries that already have them in place."

#### NÉSTOR SUÁREZ

Employee, Office of Cooperation and International Affairs, under the Colombia Ministry of Education and Focal Point for the Pacific Alliance Education Technical Group

## TECHNICAL ASSISTANCE PROJECT A07.2

# Fostering people's mobility by developing a Regional Qualifications Framework for the PA

### Project Description

The objective of the project was to develop a Pacific Alliance Regional Qualifications Framework (RQF). This involves promoting educational, training, and labour mobility among PA countries, which is achieved through mechanisms for the recognition of learnings, whether obtained formally (through studies) or informally (through work experience).

A qualifications framework makes it possible to classify qualifications into different levels and to compare them at a regional level. In this case, the aim is to establish equivalences between qualifications in order to improve their recognition in the region, and to thus ensure a certain level of socio-economic resilience for people, considering the migratory movements observed in the PA.

### Services provided

- Preparation of the report **An Overview of the Pacific Alliance Certification Systems**, to become familiar with certification systems and frameworks that already exist in the PA. The importance of using inclusive language in qualification frameworks was highlighted as a task for the future.
- Thirteen working groups were organized to discuss quality assurance mechanisms in each of the PA countries, for building confidence in the classifications of the qualifications. In these virtual roundtables, differences and similarities between the national qualifications frameworks were established, and this led to the creation of a roadmap to use as a basis for establishing the criteria within the RQF.

- With technical assistance provided by the Inter-American Centre for Knowledge Development in Vocational Training, under the International Labour Organisation (ILO/CINTERFOR), work was done on the development of an RQF, specifying scopes, correlation criteria, principles, and descriptors (through a partnership agreement with the consortium).
- Application of the RQF in the tourism sector, which had qualification classifications in all four PA countries.

### Outcomes

- Specification of a basic structure for the RQF, guided by the International Standard Classification of Education (ISCED), with eight levels of qualifications from the education and labour sector, across three dimensions: 1) knowledge; 2) skills; and 3) autonomy and responsibility.
- Agreement on a process for implementing the RQF in the region, including the recognition of qualifications and the use of mechanisms for the portability of qualifications in the region.
- Development of a roadmap to identify systems and correlate them. Mexico and Peru are in the process of developing their national frameworks, but these do not yet include qualifications. In the future, they could recognize those of Chile or Colombia or develop shared processes among PA countries to specify the competencies required in priority sectors.
- The next steps are to recognize equivalent qualifications and reach out to the stakeholders involved: a) training providers, so they can create programs with these qualifications that could be recognized in the region; b) employers, so they can recognize people arriving with these qualifications; c) Immigration authorities, so they can inform people who are rotating between countries to see what recognition they can get for their education; and d) the community at large, because this is a very powerful tool for equity and inclusion.



Pacific Alliance Regional Qualifications Framework



## UNEXPECTED RESULTS

Development of **1** Regional Qualifications Framework, comprising **8** levels, for the four countries

Execution of **1** agreement with ILO/CINTERFOR

Organization of **13** working groups with REMCAP and **3** country rounds. One of the working groups was aimed at analyzing how to integrate GE into qualification frameworks.

### PACIFIC ALLIANCE PARTNERS

- PA technical groups: Education (ETG), Labour (LTG)
- Pacific Alliance Network of Qualifications Framework Specialists (Spanish acronym: REMCAP)
- Pacific Alliance Network of Labour Qualifications and Certifications (Spanish acronym: RECCL)
- Inter-American Centre for Knowledge Development in Vocational Training (ILO/CINTERFOR)
- Ministries of education, labour, and mining and energy
- Extractive sector

### CANADIAN PARTNERS

- Cégep Marie-Victorin (lead)
- Collège Montmorency

“People are constantly moving around—academically, occupationally, and in terms of knowledge. We need to reach a starting point, which is to have coordination among educational systems and for them to have some sort of standard as a reference, so that academic and job mobility can reach a point where we understand that people will always be moving back and forth between different countries.”

#### DAVID MEZA TOLEDO

Deputy Director of Academic Mobility, General Directorate of Accreditation, Incorporation and Revalidation (DGAIR) in the Mexican Undersecretariat of Higher Education (SEP)

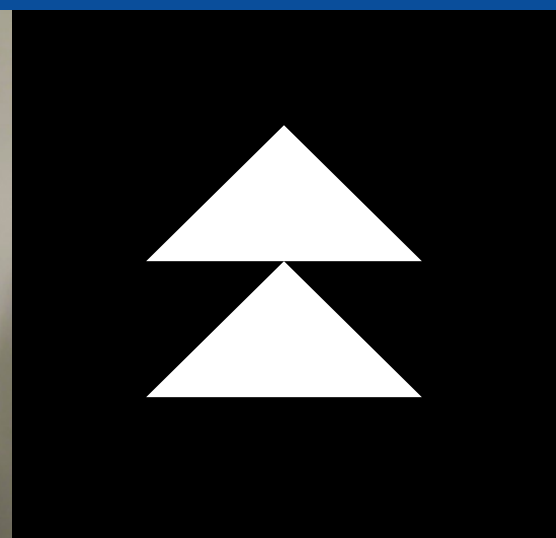
“From the perspective of the Ministry of Labour, we are very interested in quickly seeing what benefits citizens would have so that the need to follow through on the National Qualifications Framework can be seen.”

#### NADIEJDA QUINTANA VASALLO

Coordinator of the National Qualifications Framework, under the General Directorate of Standardization, Training for Employment, and Certification of Labour Competencies, Ministry of Labour, Peru



# Employability, educational success, access and recognition of TVET



## CONTENTS

- Technical Assistance Project A08
- Institutional Partnership Project B08.1 (Peru)
- Institutional Partnership Project B09 (Chile)
- Institutional Partnership Project B10 (Colombia)
- Institutional Partnership Project B11 (Mexico)
- Institutional Partnership Project B12 (Peru)

# Employability, educational success, access and recognition of TVET

The projects under Theme 2 focus on supporting academic access and success, as well as employability and labour market insertion. They include promotional activities, creation of online platforms, services to support student access and retention, and support with the additional COVID fund. Most of the beneficiaries were women, since women have specific circumstances and needs given their responsibility for household chores in addition to training.

The partners worked together to improve the services offered to students, both academically to promote academic success, and in terms of extra-curricular services such as psychology, academic counselling, adapted services, employability services, and student life (sports, arts, culture, etc.).

This has made it possible to keep students in class, provide them with a better environment, and to admit young people with disabilities to study programs, among other things. All these actions have been carried out with a special focus on females, who often face more obstacles in continuing with their education up until graduation. Thanks to the PA-EFE Program, UTS now welcomes deaf students, CONALEP has improved the number of women in its traditionally male programs, and Honorio Delgado Espinoza has signed an agreement with the Ministry of Labour for a recruitment program, to name but a few results.

## Theme 2 Projects

### Technical Assistance Project A08

Promotion of TVET through national campaigns and capacity building within ministries of education.

### Institutional Partnership Project B08.1 (Peru)

e-learning as a tool for high-quality TVET.

### Institutional Partnership Project B09 (Chile)

Student life and school services.

### Institutional Partnership Project B10 (Colombia)

Supporting inclusive access and retention of students.

### Institutional Partnership Project B11 (Mexico)

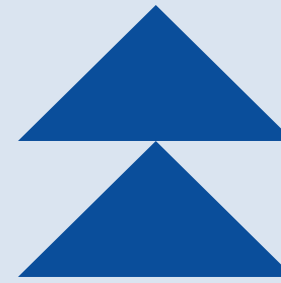
The power of pedagogy for inclusive TVET.

### Institutional Partnership Project B12 (Peru)

Coordination of services to promote academic success.



Scan this QR code to see the video on **Theme 2**



# 3,473

young beneficiaries of the project with access employability and job placement support services

# 82%

of women very satisfied with the suitability of the academic success services provided by the project

# 4

customized promotional campaigns for each PA country, on employment opportunities in the SE with an emphasis on recruiting women

# 28,755,933

people exposed to the promotion campaigns, exceeding the target of one million

# 78%

of women very satisfied with the suitability of the employability support services provided by the project

# 536

jobs offered by mining companies in the Project's regions in the labour market intermediation and job placement services

# RESULTS



**TECHNICAL ASSISTANCE PROJECT A08**

# Promotion of TVET through national campaigns and capacity building within ministries of education.

**Project Description**

One objective of this project was to develop and implement a campaign for the promotion, access, and enhancement of technical and vocational education and training (TVET) in each of the four PA countries. The idea was to promote the new training programs and employment opportunities in the extractive sectors, with a special emphasis on prioritizing the recruitment of women and breaking down gender stereotypes.

The second objective was to collaborate with the ministries of education in each PA country to develop communication capacities and implement best practices to ensure the sustainability of innovative promotion and marketing strategies. The project also sought to review and make recommendations for new policies for the promotion of TVET in the region.

These processes included changes within public bodies to incorporate a gender equality perspective in the institutional image and in the campaigns themselves, as well as competency building in ministries' communications teams.

**Services provided**

- A survey that revealed a general lack of awareness and an unfavourable perception of TVET. This pre-assessment was necessary to move from the specific promotion of a program or sector, to raising awareness about TVET at the national level in each of the countries.

5

story maps were developed to promote the work done by the other projects

27

Regional training of 27 ministry stakeholders for the design and implementation of promotion campaigns, through 8 modules

- Development of six virtual training modules led by Canadian experts, for the four PA countries. These included:
  - an action plan, research and diagnosis, ideation, development, delivery and implementation, monitoring and evaluation, learning and sustainability;
  - exchange of experiences and challenges in the development of national campaigns, analysis of similarities, differences, and best practices, as well as the formation of collaborative networks among countries.
- Mission to Canada, including to Durham College, in November 2022, which allowed the four ministry teams to meet face-to-face and included an exchange of lessons learned in the development of each of the national campaigns, discussion of best practices, and proposals to ensure the sustainability of the process.

**Outcomes**

- The development of four different networks and of different marketing communication plans was managed through regular network meetings (usually every two weeks) and progressed at different paces.
- The four networks have been set up and have progressed through the seven pillars identified in the work plan: research and analysis of the target audience and market, identification of key messages, development of a strategy, implementation of the campaign, monitoring and evaluation, and, finally, sharing of lessons learned. The regional training modules brought the four networks together; they were all well attended, enjoyed active participation, and resulted in an exchange of experiences,

challenges, and opportunities in the networks of the four countries. The final regional training module was held in Canada, with four representatives from each of the four countries.

- The national campaigns were created and designed in all four countries and were launched in Colombia, Mexico, and Chile. They have far exceeded the target of 250,000 publications/persons (per country).

**Gender Perspective**

- Gender equality and women's empowerment was one of the program's main strategies aiming at contributing to institutional transformation at the national and local levels. A clear message was provided to promote equality for men and women and various population groups that are discriminated against due to their cultural, ethnic, sexual orientation, immigration, or other status.
- The communication campaigns and all products were mainstreamed from a gender equality and inclusion perspective, as were various communication actions in the technical education institutes themselves. The level of political will and commitment of the participating institutions was demonstrated in the campaigns to guide women who choose non-traditionally female careers (which have a higher social and economic value) and in the campaigns against harassment and gender-based violence led by the partners.

6

marketing and communications training modules

28,755,933

More than 28,500,000 people exposed to the promotional campaigns developed



"The campaign went very well in November 2021, which was when the launch took place. We coordinated with Colombian higher education institutions, and we made them a toolkit with materials so that they could take that campaign and start working on marketing."

**GINA GARCÍA**

Employee from the Innovation Office of the Colombian Ministry of National Education

**PACIFIC ALLIANCE PARTNERS**

- PA technical groups: Education (ETG), Labour (LTG), Communication (CTG), and Gender (GTG)
- Ministries of education from Chile, Colombia, Mexico, and Peru
- Beneficiary institutions of the PA-EFE Program in Chile, Colombia, Mexico, and Peru

**CANADIAN PARTNERS**

- Durham College (lead)
- Fanshawe College
- Vancouver Island University

Scan the QR codes for more information about each of the promotional campaigns for technical and vocational education and training (TVET)



Colombia

'Trade and Technology pathways'



Mexico

'Get ready for the real world!'



Peru

'A better future, today'



Chile

'Technicians make it happen'



"I really liked this project because it was to promote technical and technological education in Mexico, which, to be honest, had been fairly quiet. We have several universities around the state, but we do need a little more promotion of technical and technological education."

MILDRED TOLEDO ANTÚNEZ

Head of the Department of International Projects and Programs at the Mexican Directorate General of Technological and Polytechnic Universities (DGUT y P)

"I'd like to point out that one key element was trying to represent young, diverse men and women who may not only break the gender stereotype, but also other stereotypes, such as ethnic/racial and age. There was diversity in the people who were represented in the campaign, as well as in the activities these people carry out, and their outlooks in technical and vocational training."

CAROLINA MUÑOZ R.

Undersecretariat for Higher Education, Chilean Ministry of Education

## INSTITUTIONAL PARTNERSHIP PROJECT B08.1 (PERU)

# E-learning as a tool for high-quality TVET



## Project Description

The objective of the project was to implement a national pilot platform for an online learning management system (LMS) for several institutes. The idea was to continue the development of the virtual educational service, which would be connected with DIGESUTPA's information systems (under MINEDU) and would facilitate a competency-based teacher training program.

The initiative benefited 342 public institutions offering technical and technological education to around 130,000 students in different regions of the country. This is a key contribution because not all students and teachers have the same access to the Internet in terms of connectivity and availability of devices.

The gender perspective was included throughout the project because women are a fundamental part of the academic communities of the educational institutes attached to DIGESUTPA, and gaps in access to technology and information still persist between men and women, both in urban and rural areas of Peru.

## Services provided

- Diagnosis to review the existing documentation submitted by the Ministry
- Evaluation of the e-learning management system development process, training, and implementation of the national pilot project.

## Outcomes

- While much progress has been made, the project has also faced some difficulties as a result of situations affecting the country:
  - Due to the instability of government (frequent changes) in Peru, the construction (programming) phase of the in-house LMS has not been completed. The design is ready, but the product is not yet ready for use.
  - Many users are resistant to taking on more work in this post-pandemic time; many state that they are saturated.
  - The current state of social conflict does not allow development priorities to be addressed, and this affects students.
- In this context, the team made the decision to adapt, and developed two training programs:
  - Change Management Training Program: Development of a program to change some perceptions and practices around online teaching in Peruvian technical education, which prevent schools from taking full advantage of the various e-learning methodologies and tools for virtual learning. Requires 30 hours of work.
  - Training Program in Online Teaching from a Competency-Based Learning Perspective: Development of a program including methodologies and materials for 50 hours of synchronous and asynchronous teaching

77

educational tools to develop different online teaching methods and content

2

training curricula developed for the Peruvian Ministry of Education on change management and e-learning

129,459

students of the DIGESUTPA's IESTs indirectly benefited by this project

#### PACIFIC ALLIANCE PARTNERS

- Peruvian Ministry of Education (MINEDU)
- Directorate for Higher Technological, Technical, Productive, and Artistic Education (DIGESUTPA)

#### CANADIAN PARTNERS

- Durham College (lead)



“The [Canadian] college is helping us a lot with the platform project, based on its experience. They already work with LMS and are integrated into the management of the institution. We are not there yet, so what helps us is that we can look at the best way to implement the LMS plan. Since they have been working with it at the college in Canada, they know much more about the shortest routes, and they have experience with resistance and changes in culture and in thinking. So, they are helping us to create an entire training process, not only in terms of the technical use of the tool, but also of the understanding of a new way of doing education using other media.”

#### ROSA MARÍA CRISTINA GIANOLI MOLLA

Coordinator of the Capacity Building Department and Coordinator of Teaching and Management, Peruvian Ministry of Education



Lima, Peru

**INSTITUTIONAL PARTNERSHIP PROJECT B09 (CHILE)**

# Student life and services

## Project Description

The project's primary objective was to build the capacities of higher education institutions for the gradual creation of student services at the CEDUC UCN (private) and in state-run CFTs, which were created by the Chilean government in 2017.

The main activities of the B09 project are related to two outputs, both with a particular focus on the challenges faced by women: services set up for students' academic success (selected by the state CFT); and employability and labour market insertion services (selected by CEDUC UCN, private CFT).



## Services Provided

- Mission to Canada to participate in workshops and learn about the experience of colleges in terms of services for students' academic success, employability, and job placement.
- Follow-up on the implementation of pilot experiences, taking into account gender equality and the challenges faced by women. One service per institution was selected for this pilot.
- Development of communication strategies for the dissemination of academic success services for students.

## Outcomes

- A services guide to serve as a pathway for CFTs to follow up with students and support them throughout their educational journey. It lists and describes 41 services. In turn, these services are categorized into four areas:
  - 18 academic services (e.g., support for students with learning difficulties)
  - 2 health services (e.g., mental health)
  - 9 student life services (e.g., student associations and networking)
  - 12 employability services (e.g., mock job interviews)
- The guide also includes a classification that helps to prioritize the services provided by CFTs from a lower level (Level 5) to a higher level of implementation (Level 1), based on the degree of impact on students' academic success and employability. For example, Level 5 includes services that require greater resource deployment and are implemented by much more robust institutions, while Level 1 includes whatever is essential for operation. Such a service is considered mandatory when an institution is opened, because there are major negative impacts in its absence.
- CEDUC UCN has developed the pilot "Student Life Activity Program" (Spanish acronym: PAVE) and has started to implement it among students with a wider range of services, including vocational, academic, psycho-educational, sports, and extracurricular, for successful and individualized gender-sensitive educational trajectories.

Guide on the academic success and employability



## PACIFIC ALLIANCE PARTNERS

- CEDUC UCN Antofagasta
- Colegio Técnico Industrial (CTI) Don Bosco
- CEDUC UCN Coquimbo
- Centro de Formación Técnica (CFT) Estatal Regional de Coquimbo
- Ministry of Education, Chile

## CANADIAN PARTNERS

- Collège Boréal (lead)
- Collège Communautaire du Nouveau-Brunswick
- Cégep Saint-Jean-sur-Richelieu

## UNEXPECTED RESULTS

CEDUC UCN decided to extend these academic success and employability services to the network of all six CEDUC UCN units. This will have a significant impact on the number of students served, as well as on the sustainability of the project.

# 41

services to follow up with students and support them throughout their educational pathway, described in a guide



"Gender equality is incorporated into all aspects of the project. In the case of state-run CFTs, it is always done keeping in mind that these student services could focus on promoting the inclusion or retention of women. Emphasis is also placed on the employability of the women in the programs, which are mainly in male-dominated fields, such as mining."

### CAROLINA ANDREA GONZÁLEZ ARRIAGADA

Employee, Division of Technical/Vocational Higher Education, Chilean Ministry of Education

"Since the project was mainly focused on mining plants, we started from that point. Although it started with something very small, which was to standardize the job profiles of the workers in the mining plants, it has grown to what we have today, which is a much larger project, with student services, with work in the community and, of course, with an extension into other specialities."

### CARLOS SAINZ LÓPEZ

Executive Director, Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Chile

## INSTITUTIONAL PARTNERSHIP PROJECT B10 (COLOMBIA)

# Supporting inclusive access and student retention

### Project Description

The project's primary objective was to contribute to the reduction of drop-out rates, the promotion of timely graduation, and the employability of students/trainees at the Unidades Tecnológicas de Santander (UTS) and the Centro Minero Regional Boyacá (CMRB) under the Servicio Nacional de Aprendizaje (SENA) in Sogamoso. At the national level, SENA trains technicians to work in companies within the country. To this end, a decision was made to implement three actions, in the form of a pilot project, for each of these institutions.

### Services Provided

Project B10 was based on four components, which were carried out through different actions:

- **Component 1 - Technical and Educational Enhancement:** Capacity building focused on academic success as a methodology. Three types of training were shared: academic success, inclusive education, and learning and assessment.
- **Component 2 - Support for Services Management:** The academic success support process was analyzed, specifically its critical pieces (management and teaching), and support was provided to job placement services for the development of students' soft skills.
- **Component 3 - Support for Applied Research Projects:** Research was carried out on the situations, needs, and protective factors of students/learners to promote academic success, with an inclusive and gender-equitable approach.
- **Component 4 - Support for the Creation of Collaborative Mechanisms with Stakeholders Focused on Academic Success:** In each institution, a virtual exchange space (community of practice) was created to promote reflections, exchanges, and mutual training on academic success in the context of distance learning, based on the experiences of students and instructors.

### Outcomes

#### Pilot projects selected by UTS:

- Development of an app to provide information on student services. This app was created by two scholarship students from the UTS computer science program, who were supervised by the project team. The app was chosen as the most suitable means of communication for improving access to student support services, and it includes the roadmap.
- Development of a roadmap, using a QR code, to quickly identify services available at the university and improve students' access to them.
- Creation of a community of practice among teachers and practitioners. Case studies, teacher training, or other materials are shared, according to the needs identified. The project ensured an equal number of men and women in the formation of the communities of practice.
- Development of a toolkit with different activities and trainings on topics related to teaching and education.

#### Pilot projects selected by SENA-Sogamoso:

- Implementation of the "pivot-instructor" role, which is a reference point for technical and technological apprentices over the entire educational dimension, including with other instructors.
- Implementation of the IES (individualized educational support) role for apprentices. This strategy was coordinated with the Godfather Plan and with the work carried out by the "pivot-instructors", i.e., instructors who play a central role and act as liaisons between the students and the practitioners at the institution's well-being services.
- Development of a follow-up strategy for first-year apprentices to promote their academic success.



Scan this QR code for more information on the mobile app for students: SoyUteista



A group of deaf students at the UTS Adapted Services Center.

## UNEXPECTED RESULTS

With respect to CMRB's activities, a documentation and transfer process was carried out with the general management of SENA, which is interested in and focused on disseminating and replicating the services developed within the framework of B.10 with the National School of Instructors and the other training centres.

# 670

UTS and SENA students and trainers access services focused on academic success and employability support

# 20,000

The mobile app developed to facilitate the UTS students' access to services has achieved its objective as there were more than 20,000 downloads of the app by students.



"Another thing also that we are learning from Project B10 is how to work with students who have different abilities or those who have sensory, motor, or cognitive problems; we have 11 deaf students, we have one blind student, we have several students with Asperger's, and with autism. Through the Alliance we have learned... We have to find a way to communicate to the instructors who interact with these students that an adjustment needs to be made in the way content is presented, how group activities are carried out, and how they are evaluated. All these experiences have been lovely."

#### RICHARD ALEXANDER CAICEDO RICO

Head of the Academic Development Office at Unidades Tecnológicas de Santander (UTS), Colombia

#### PACIFIC ALLIANCE PARTNERS

- Centro Minero Regional Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA), Colombia
- Unidades Tecnológicas de Santander (UTS)
- Ministry of Education, Colombia

#### CANADIAN PARTNERS

- Cégep de Chicoutimi (lead)
- Cégep de Jonquière

## INSTITUTIONAL PARTNERSHIP PROJECT B11 (MEXICO)

# The power of pedagogy for inclusive TVET

### Project Description

The objective of this project was to improve students' success. This was achieved by reviewing the causes of dropout and developing strategies to support their needs and enable them to continue and complete their studies.

The project also sought to improve employability and labour market insertion through the review of processes and services involving graduates and employers. In addition, a graduate follow-up system was developed to meet the needs of the extractive sector in the states of Campeche and Durango in Mexico.

### Services Provided

- The project involved training for teachers and institutional leaders, exchange of experiences, and co-design of new services.
- Work with CONALEPs 021 and 146 focused on educational success services (student success), including identification of the current status and improvement of the early warning tools used, options available for female drop-outs, a parents program, and safe spaces for women.
- Meanwhile, the work at UTCAM and UTLD focused on employability and labour market insertion services (graduate follow-up), including identifying the current status and improvement of processes and actions for gathering and analyzing information on graduates' professional and personal performance, as well as the satisfaction levels of graduates and employers.
- Ten training workshops were also held on topics including gender perspective, equity and equality, stereotypes, masculinities, bullying, and empowerment.



### Outcomes

- Training of institutional leaders and/or instructors in:
  - forming strategic community partnerships;
  - developing and using communities of practice for continuous improvement;
  - "early warning" systems (for at-risk students) to help teachers identify students who are struggling; and
  - inclusive instruction, including online teaching and Universal Design for Learning (UDL).
- Promotion campaign for the first intake, which included surveys, a communication plan, and design of promotional materials.
- Satisfaction survey of graduates, alumni, and employers
- Strategic project (CONALEP 146): Implementation of a rainwater harvesting and storage system for an organic vegetable garden with an automated irrigation system.

Leaflet on the educational success services offered at the CONALEP Centro Mexicano Frances 146



### PACIFIC ALLIANCE PARTNERS

- Universidad Tecnológica de Campeche
- CONALEP de Campeche 021
- Universidad Tecnológica de La Laguna
- CONALEP Centro Mexicano Francés 146
- Secretariat of Public Education, Mexico

### CANADIAN PARTNERS

- Fanshawe College (FC)
- Northern Lights College (NCC)

## UNEXPECTED RESULTS

The Mexican organizations involved now have agreements in place with the companies. Information on positions available through the job bank is also updated every four months by the Internship and Placement Department, with the names of the companies and jobs available for technicians.



"The inclusion program started by working with people with disabilities, and then we opened it up to all other so-called vulnerable groups. So now we no longer see inclusion as just one side of the issue, but as an integral part of it."

#### JESÚS OMAR MÁRQUEZ SOLÍS

Head of Human Resources and Inclusion, Universidad Tecnológica de La Laguna Durango (UTLD), Mexico

## 1 system

Implementation of 1 alumni tracking system

## 519 students

and teachers were surveyed in a diagnosis for the implementation of a peer mentoring system

## 40 hours

of training on the implementation of a mentorship program were offered to 24 teachers from UTCAM, UTLD, CONALEP 021, and CONALEP 146

"We have seen an increase; previously it had been a bit tough for women to study engineering. They didn't think they'd be successful within the industries or that they would be well accepted. But with the awareness and the programs that have been implemented, the decision to pursue a career in maintenance engineering has increased."

#### XOCHIL AGUILAR OSORIO

Director of the Industrial Maintenance and Petroleum Maintenance Program for the Technological University of Campeche (UTCAM) in Mexico

## INSTITUTIONAL PARTNERSHIP PROJECT B12 (PERU)

# Coordination of services to promote academic success



### Project Description

The project's primary objective was the implementation of the Well-being and Employability Units (UBEs) in two Institutos de Educación Superior Tecnológico Públicos (IESTP) in Arequipa, Peru: the Instituto Superior Honorio Delgado Espinoza and the Instituto Superior Pedro P. Díaz. The initiative is in response to a ministerial resolution (428-2018-MINEDU) that provides for the establishment of a service to support academic success and employability.

These institutes in Arequipa were used as pilot sites for the implementation of a national strategy that could be replicated throughout the country, especially in the 26 new institutes of excellence (IDEX) that were designated in 2017 in each region of Peru.

### Services provided

- Participatory diagnoses on educational success and well-being and on employability and labour market insertion support services, with a particular focus on women.
- Development and implementation of an action plan on educational success and well-being in each institute.
- Preparation and implementation of an action plan on employability and labour market insertion in each institute.
- Creation or strengthening of a Well-being and Employability Unit.

### Outcomes

- **Support Committee for the Implementation of Well-being and Employability Units (UBEs):** Serves as a bridge between the UBE management teams, committee members, authorities, and the community at large. The work of the Committee promotes, strengthens, organizes, trains, and communicates the activities of the EBU's.
- **Establishment of institutional partnerships:** Two agreements were signed. The first was an inter-institutional cooperation agreement with the Regional Labour and Employment Promotion Management Office, for enhancing the employability and integration of IESTP students into the labour market. The second is an agreement between the Women's Emergency Centre in Arequipa and the IESTP Honorio Delgado Espinoza, which will strengthen the work to fight sexual harassment.
- **Work approach used as a reference by the Ministry of Education:** This refers to the diagnostic models carried out, such as the development, implementation orientation sessions, and definition of guidelines for the UBEs focused on reducing dropout and withdrawal from the public Institutos de Educación Superior Tecnológica (IESTs) and Escuelas de Educación Superior Tecnológica (EESTs), with an emphasis on student follow-up with mentorship models.
- **Capacity building for the Student Well-being Service:** The Regional Education Management Office of La Libertad and the IESTP Fe y Alegría (CEFOP) organized a 120-hour online course with the participation of teachers and managers of both IESTPs and concluded with the development of the mentorship plan.

### PACIFIC ALLIANCE PARTNERS

- Instituto Superior Honorio Delgado Espinoza
- Instituto Superior Pedro P. Díaz
- Ministry of Education, Peru
- Regional Education Office, Arequipa

### CANADIAN PARTNERS

- Cégep Edouard-Montpetit (lead)
- Collège Montmorency

## UNEXPECTED RESULTS

Execution of an inter-institutional cooperation agreement with the Regional Labour and Employment Promotion Management Office, for enhancing the employability and integration of IESTP students into the labour market.

1,289 students and 136 teachers surveyed as part of a needs assessment around academic success and employability services

3 explanatory videos presenting Canadian best practices around educational success and student well-being



"Recently there was a legal provision that updated institutes' licences... Now that they are registered, they can work as employment centres. [...] What we want is for as many technical or vocational graduates as possible to secure a formal job as soon as possible."

#### JOSÉ LUIS CARPIO QUINTANA

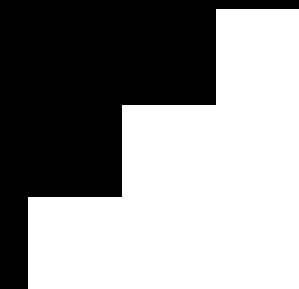
Regional Manager of Labour and Employment Promotion, Arequipa

"A great alternative has been the Support Committee, which has practically replaced the need for having professional psychologists, social workers, and other practitioners. So, with this Support Committee we have practically completed the start-up phase of this Well-being and Employability Unit."

#### BRAULIO PARIZACA

Head of the Academic Unit at the Instituto de Educación Superior Tecnológico (IEST) Pedro P. Díaz, Peru

# Quality of Technical and Vocational Education and Training (TVET)



## CONTENTS

- Institutional Partnership Project B01 (Chile)
- Institutional Partnership Project B02 (Chile)
- Institutional Partnership Project B03 (Colombia)
- Institutional Partnership Project B05 (Mexico)
- Institutional Partnership Project B06 (Mexico)
- Institutional Partnership Project B07 (Peru)



# Quality of Technical and Vocational Education and Training (TVET)

The projects from Theme 3: "Quality of Technical and Vocational Education and Training (TVET)" are those that focus on aligning supply and demand, from a competency-based approach that facilitates a meaningful response to an increasingly changing labour market. Another thing that contributes greatly to the quality of people's training is the gender equality approach, since this enables the identification not only of the needs of the market but also those of individuals. Adapting programs according to these needs, to a culture of non-violence, to breaking down stereotypes within programs and in teacher training, for improved delivery of new technical programs, is all part of quality education. One example was the development of specific training modules on entrepreneurship, which can be implemented at a later stage, aimed at women at risk of exclusion and in some cases Indigenous women.

All projects under this theme were aimed at creating or adapting training programs that were suited to the needs of the labour market. As such, these programs were developed jointly by local partners (institutes and universities) and Canadian colleges, in collaboration with the productive sector, through a labour situation analysis (LSA).

The programs were created using a competency-based approach (CBA), which recognizes the importance of practice in learning. As such, a budget of CAN\$100,000 has been allocated to each project for the purchase of state-of-the-art equipment to help students to be better prepared to enter the labour market. Gender equality and environmental sustainability perspectives were taken into account throughout the process of creating or improving programs. Technical and pedagogical training was also provided to trainers from local partner institutes on the use of the new tools in an instructional setting.

Finally, due to the COVID-19 pandemic, several distance learning courses—both synchronous and asynchronous—were developed and delivered to compensate for travel bans. However, when the situation allowed, exchanges and visits were held on both sides, both in Canada and in the partner country.

## Theme 3 Projects

### Institutional Partnership Project B01 (Chile)

Curriculum development in electricity and energy efficiency, entrepreneurship, and gender equality initiatives in the extractive sector

### Institutional Partnership Project B02 (Chile)

Curriculum development in mining plant operation, mining plant basics, and relationships with companies

### Institutional Partnership Project B03 (Colombia)

Strengthening institutes to serve the productive sector and curriculum development in mining supervision

### Institutional Partnership Project B05 (Mexico)

Leadership and change management in industrial mechanics and industrial electromechanics

### Institutional Partnership Project B06 (Mexico)

New paradigm for curriculum development in renewable energy and alternative energy sources

### Institutional Partnership Project B07 (Peru)

Supporting curriculum design in heavy machinery maintenance and metallurgy



Scan this QR code to see the video on **Theme 3**

# RESULTS



## 91 %

more employers have a positive view of the level of employability of students at the end of their placement

## +20 %

of extractive companies were satisfied with the quality of the programs created and/or adapted

## 16

training programs that cover both labour market needs in the extractive sector and challenges around gender equality and environmental sustainability

## 1,349

More than 1,349 students (43% women) enrolled in the training courses developed by the PA-EFE Program

## CAN\$ 1 million

More than CAN\$1 million invested in teaching equipment or materials

## 240,000 CAD

of funding in response to the COVID-19 pandemic

## INSTITUTIONAL PARTNERSHIP PROJECT B01 (CHILE)

# Curriculum development in electricity and energy efficiency, entrepreneurship, and gender equality initiatives in the extractive sector

### Project Description

Project B01 supported the revision and curricular improvement of two study programs (electricity and energy efficiency), as well as the development of a short training course on entrepreneurship for women. This was done in collaboration with local industry, which employs graduates from the participating institutions. In addition to supporting the procurement of energy-efficient educational equipment, the Canadian and Chilean partners worked on curriculum development, the implementation of business services (in terms of improvement, applied research, or technology transfer), and the mainstreaming of gender equality and environmental perspectives.

This was of particular importance for the Colegio Técnico Industrial Don Bosco, which will switch from an all-male school to a co-ed school in 2024. With this transition in mind, the B01 Partnership and CICan carried out activities to familiarize teaching and administrative staff, students, and their parents and guardians with gender equality issues.

### Services Provided

- Review of curriculum materials and lesson plans that take gender and industry into account, while integrating environmental sustainability considerations.
- Competency-based educational capacity building of trainers in curriculum development, teaching, and evaluation.
- Development of leadership and management skills.
- Assistance in applied-research activities.
- Development and implementation of strategies for gender mainstreaming in the curriculum.
- Extracurricular environmental sustainability activities involving students, teachers, and administrative staff.
- Development of a short-term entrepreneurship program for Indigenous women.

### Outcomes

In addition to the curricular and pedagogical advances described above, the project has achieved a number of significant results:

- At CEDUC UCN :
  - Formation of the Gender and Social Inclusion Committee (Spanish acronym: CGEIS)
  - Creation of the Institutional Gender Policy and its action plan
  - Training modules for teachers and staff on sexual misconduct and harassment wand violence-free workplaces



### PACIFIC ALLIANCE PARTNERS

- Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Antofagasta campus, Chile
- Colegio Técnico Industrial (CTI) Don Bosco, Antofagasta

### CANADIAN PARTNERS

- College of New Caledonia (lead)
- Niagara College Canada
- Nova Scotia Community College

- Extracurricular activities on environmental sustainability:
  - Installation of 10 photovoltaic panels donated by the Fundación Parque Ecológico Ecorayen
  - Zero-waste course on sorting different types of plastics and other recyclable waste
  - Workshop on setting up vegetable gardens, which covered the benefits of planting a home garden
  - Gardening workshop held in the front garden of the institution with Vivero Vida Verde de Antofagasta
- Applied Research and innovation course (48 hours) by Niagara College and adapted specifically for CEDUC UCN teachers and administrative staff
- Short course on entrepreneurship for women (110 hours). Niagara College performed a needs assessment on the beneficiaries and created this 13-module course to be delivered by CEDUC UCN.
- A communication campaign was developed under an agreement between CEDUC UCN and Women in Mining (WIM) Chile, called Soy Mujer, Soy Técnica (I Am a Woman, I Am a Technician), within the framework of projects B01 and B02. This campaign was created as a result of an analysis of the characteristics of employment in the mining sector and the stereotypes that affect career selection. The campaign contains 12, one-minute capsules in which women who work in the extractive sector, who are successful, and who are accomplished as individuals and professionals, discuss topics such as sustainable mining, myths about women's participation in mining, female leadership in the extractive sector, and innovation and technologies in the industry.

## UNEXPECTED RESULTS

Thanks to an agreement between CEDUC UCN and Women in Mining (WIM) Chile, a campaign was developed with 10 capsules to show the value of the work of women in the mining sector, called “Soy Mujer, Soy Técnica” (I am a woman, I am a technician).

# 199

students participated in an eco-construction workshop

# 149

A gender audit was conducted on 149 people with the aim of discerning staff perceptions of gender equality in the institution and in its curricula

→ At Colegio Don Bosco:

- Masculinity workshops tailored to teachers and managers to prepare for the upcoming switch from an all-male to a co-ed school in 2024.
- Extracurricular activities on environmental sustainability:
  - Tree-planting workshops with automated irrigation aimed at students and teachers to promote a culture of sustainability, as well as to reduce water consumption and contribute to the institution's environmental certification.
  - Eco-construction workshop, which covered everything from setting up a business to building with daily household waste.

→ At both institutions:

Seminar titled "Environmental Sustainability in Technical Education Institutes," delivered by Christina Olsen, Acting Director of Institute Sustainability and Manager of the Centre for Ecocities at the British Columbia Institute of Technology (BCIT).



Scan this QR code for more information on CEDUC UCN's gender policy



"The B01 project unified and sort of organized this work with the curriculum for the young people who study electricity at the school so that they get their documentation, get to CEDUC UCN, and be able to validate their studies. For example, instead of two years, they can take less time to earn a higher-level professional qualification quicker, since we serve very vulnerable youths at this school. The Alliance helped us a lot with this work."

**KISSY GUTIÉRREZ SOTELO**

Head of the Educational Improvement Plan, Colegio Técnico Industrial (CTI) Don Bosco, Antofagasta, Chile

"I chose Electricity and Energy Efficiency because I really like caring for the planet and it was very easy and accessible to study in the city... From what they told us, all the new boards and solar panels they bought are for models, which helps us on a practical level to do the hands-on work so we can do it better when we get into our jobs."

**LUIS IBARRA MUÑOZ**

Electricity and Energy Efficiency student, Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Antofagasta campus, Chile



## INSTITUTIONAL PARTNERSHIP PROJECT B02 (CHILE)

# Curriculum development in mining plant operation, basics of mining plants, and relationships with companies

### Project Description

Project B02 aimed at three major outputs. The first was the development and redesign of short- and medium-term programs for the mining plant operation course. The second was the purchase of equipment that would be needed to fill the gaps that would be created as a result of the new curriculum design. The project allowed the Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Coquimbo campus, to finance state-of-the-art equipment so that students could acquire and use the skills that would be required, based on the program improvements.

The third output aimed at improving relations with industry and services to companies. This work was also interesting because, although it had no tangible or material output, the relationship with the Canadian partners provided the Chilean partners with new perspectives so they could break down current paradigms around relations between educational institutions and the industrial and productive sector in Chile.

### Services Provided

- A mission by CEDUC UCN and the Centro de Formación Técnica (CFT) Estatal Regional Coquimbo to Canada to visit mining companies, vocational training centres, and the applied research centre of Cégep de l'Abitibi-Témiscamingue.
- Technical visits to mining companies in Chile.
- Analysis of the PA partners' curricula.

- Study and analysis of the training pathway of the Mining Skills Council (Spanish acronym: CCM).
- Analysis of Chile's Vocational Technical Qualification Framework.
- Labour situation analysis (LSA) workshop for the medium-duration program, with the participation of mining companies.

### Outcomes

- Development of a program for the operation of mining plants, including a graduation profile, four technical competencies, and 1,600 hours in workshops and classrooms, plus professional practice hours.
- Development of a virtual training course for teachers with 12 asynchronous modules over Moodle. Although it was designed this way to mitigate the impacts of the pandemic, it has been incorporated by CEDUC UCN on a permanent basis.
- Acquisition of the equipment and teaching materials necessary to meet the demand for training and continuing education by the mining industry in both institutions.
- Acquisition and installation of a virtual classroom at the CFT in Coquimbo with COVID funds; this will also be used to deliver distance learning courses to companies.
- Development of a short-duration program (280 hours in continuing education), consisting of a course on ore concentrator plant operation techniques. To achieve this, the needs of the productive sector were first determined; this enabled the design of a program that could be delivered on-demand to industry. In order to obtain codes that would allow companies to access the Chilean tax incentives for training, the course was subdivided into three specializations: crushing equipment operating techniques, grinding equipment operating techniques, and flotation circuit operating techniques.



### PACIFIC ALLIANCE PARTNERS

- Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Coquimbo campus
- Centro de Formación Técnica (CFT) Estatal Regional Coquimbo

### CANADIAN PARTNERS

- Cégep de l'Abitibi-Témiscamingue

## UNEXPECTED RESULTS

CEDUC UCN's permanent incorporation of 12 asynchronous pedagogical training modules on Moodle developed by the Cégep de l'Abitibi.

1 cooperation agreement signed with Women in Mining Chile

CAN\$136,000

invested in equipment or teaching materials



“We established three core competencies for the institution. I think the visit to Canada was very useful for this. The three competencies are occupational health and safety, associative entrepreneurship, and sustainability. These competencies need to be present in all of the institution's programs.”

### MANUEL FARÍAS

Former Rector of the Centro de Formación Técnica (CFT) Estatal Regional Coquimbo; currently in charge of the Technical Education and Training/Labour Trajectories Department at Fundación Chile

“We are the ‘pandemic cohort,’ since our generation was 2021-2022. It was a very difficult year of studying online, but in spite of that we were able to achieve our goal learning from our teachers in the very complex situation that was COVID... We achieved good results: now we are able to operate our equipment, and this was thanks to CICan and the Pacific Alliance. I was also awarded a scholarship by Women in Mining. As our partner said, we women are high-grade. I always keep this affirmation with me wherever I go, that we are high-grade, that we can do the same things as men do in mining.”

### NATALIA ANDREA SALINAS GONZÁLEZ

Graduate of Mining Plant Operations and Women in Mining Scholarship Holder, Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Coquimbo campus

## INSTITUTIONAL PARTNERSHIP PROJECT B03 (COLOMBIA)

# Strengthening institutes to serve the productive sector in mining supervision

### Project Description

The main objective of Project B03 was the revision/updating of the Mining Work Supervision Technology Program delivered by the Centro Minero Regional Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA). This made it possible to bring the program's curriculum in line with international standards and to involve employers in the productive sectors to improve competency standards and learning outcomes. This ensures that students are prepared for fieldwork, by incorporating new technologies.

In addition to this core outcome, in order to support its achievement, capacity building was required at CMRB. This meant enhancing instructors' technical and teaching skills, mainly in the area of new technologies, with the acquisition of state-of-the-art mining management software. This has greatly contributed to modernizing the program and bringing it up to the level of neighbouring companies, making it easier for young people to enter the labour market. The program's technological component is also more attractive to young women and has led to an increase in the number of female students in the classes. Finally, CMRB administrators took various management training courses to support the change in institutional culture.

### Services Provided

- A diagnosis was carried out and findings included the obsolescence of certain equipment, improper use of laboratory equipment, a lack of a management system in the laboratories, and the absence of technological services for the region.
- Teacher training mission to Canada to exchange experiences and learn about colleges' best practices.

- Training and technical assistance on the development of training programs following the competency-based approach (CBA), especially focusing on women. This includes the following workshops:
  - workshop on teaching techniques following the CBA,
  - workshop on competency evaluation, and
  - training workshop in the mining sector.
- Funding and technical assistance for the identification and acquisition of energy-efficient teaching material and equipment, as well as for the technical training of instructors (both men and women) on its proper use.

### Outcomes

- **Update to the Mining Process Supervision Program:** This work was carried out in 2019, and approval was obtained from the Ministry of Education in 2020. However, due to the COVID pandemic, which started right after the approval of the program, the start of the program at the CMRB was postponed until April 15, 2021, initially in a hybrid mode and now in face-to-face mode.
- **Implementation of an ISO 17025 certification process:** To enhance CMRB's existing services and laboratories, the accreditation process was developed according to ISO 17025:2017, the global quality standard for testing and calibration laboratories. In 2022, the Instituto Latinoamericano de la Calidad (INLAC) was hired to identify the laboratory's strengths and weaknesses, and to prepare the team for the audit by Colombia's National Accreditation Body (ONAC).
- **Purchase of software:** This included four software packages: planning, ventilation, drilling, and blasting. Training on each of the software packages was provided to different instructors in their respective fields. The use of software helps to improve the number of women in the program, the labour market insertion of CMRB trainees, and their results as professionals.



- **Cross-cutting environmental dimension:**
  - CMRB supported the participation of its students in a photography competition, which aimed to raise awareness around environmental protection. The CMRB trainees won second and third place in this competition.
  - CiCan's environmental specialist visited CMRB to oversee the extra-curricular "Solar Lamps" environmental project, with the aim of raising awareness around environmental issues among the students in the program.

## UNEXPECTED RESULTS

An increase of women in mining programs. For example, 25 out of the 30 students in the Health and Safety Program are women.

## ISO 17025

Assistance to CMRB - SENA in obtaining ISO 17025 certification

## 259

students enrolled in the program that was revised by the project



"It has been very important for me to really work with software. At the moment it is arguably one of the most important tools for entering the labour market, the best labour market. When you have these software skills, believe me, your professional world, your work life, and your results as a professional improve a lot."

### ANGÉLICA CASTAÑEDA

Student of the Mining Work Supervision Technology Program at the Centro Regional Minero Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA), Colombia

### PACIFIC ALLIANCE PARTNERS

- Centro Minero Regional Boyacá (CMRB) - Servicio Nacional de Aprendizaje (SENA)

### CANADIAN PARTNERS

- Collège Communautaire du Nouveau-Brunswick (lead)
- Cégep Saint-Jean-sur-Richelieu

## INSTITUTIONAL PARTNERSHIP PROJECT B05 (MEXICO)

# Leadership and change management in industrial mechanics and industrial electromechanics

### Project Description

Project B05 had two parts, one under Theme 3: "Quality of Technical and Vocational Education and Training (TVET)," and one under Theme 4: Business and Community Services." In both instances, work was done with the Colegio Nacional de Educación Profesional Técnica de Ciudad del Carmen de Campeche (CONALEP 021) and with the Universidad Tecnológica de Campeche (UTCAM).

Under Theme 3, the initiative focused on three main components:

1. Construction of an inter-institutional vision between CONALEP and UTCAM in order to understand the educational processes necessary to strengthen technical/vocational education and training institutions.
2. Promotion of competency-based education to strengthen UTCAM and CONALEP instructors with different clear, concrete, and concise tools to impart their knowledge.
3. Analysis of how to develop technological initiatives for training and communication for online courses.

### Services Provided

- Labour situation analysis (LSA) for the review of the competency-based approach (CBA) programs offered by the participating institutions: the Advanced Technical Degree (Spanish acronym: TSU) in Industrial Mechanics in the bilingual, international, and sustainable (BIS) modality at UTCAM; and the Industrial Mechanics Program at CONALEP 021.

- Support for the implementation of the BIS program. This required the development of teaching materials in English, an international exchange program for students and instructors, and training through the Teaching English as a Second Language (TESOL) program.
- Acquisition of equipment according to the priorities associated with the modules and with the needs of the companies and each Mexican institution (CAN\$50,000 each).
- Missions to Canada with instructors and staff from CONALEP 021 (Ciudad del Carmen) and UTCAM. The participants visited four educational institutions, saw the laboratories in the field, and observed how students are assessed.
- Creation of a customized Moodle platform wherein the 41 participating instructors had continuous access to content, exercises, and tests during the project.

## UNEXPECTED RESULTS

The inauguration of a specialized welding centre with attendance by the Canadian Embassy.

85 students from UTCAM and CONALEP trained in introduction to applied research and innovation

2 500

More than 2,500 beneficiaries, both instructors and students, were sensitized on gender and inclusion issues



### Outcomes

- **Creation of a "bridging" course for CONALEP 021 and UTCAM instructors on teaching strategies for the instruction and evaluation of curricula developed based on the competency-based approach (CBA).** The course includes training modules on gender equity and equality, leadership in change management, applied research and innovation, communication management, non-destructive testing, and welding processes.
- **Creation of the International Forum for the Mexico-Canada Community of Practice.** This is a space for reflection and exchange of potential projects and best practices.
- **Progress in the cross-cutting dimension of gender equality.** Development of a Gender and Social Inclusion Plan by the UTCAM Gender Committee. This included, among other initiatives:
  - Institutional Program for Substantive Equality;
  - Action protocol to guide, advise, and file complaints for the prevention, punishment, and eradication of gender-based violence;
  - Quality policy with a gender focus;
  - Four-monthly training plan for teachers and students; and
  - Inclusive language training plan for the university community.
- **Progress in the cross-cutting dimension of environmental sustainability.** Development of an environmental sustainability plan with the participation of the Environmental Committee and two environmental groups made up of UTCAM students (Mapaches Conscientes and Patrulla Ecológica). A committee was also created at CONALEP 021.



"We were fortunate enough to go to Canada to visit four educational institutions. They showed us the laboratories and how instructors evaluate students. To tell the truth, it was a very nice experience in terms of teaching and learning. In the case of young people, it gives me great pleasure when we see one of our students finish his or her degree, and then later we meet up and he or she greets us and says, 'You know what? We are working in the field we studied and we are doing well!'"

#### RUBÉN LÓPEZ

Head of the Technical Training Project at Colegio Nacional de Educación Profesional Técnica (Ciudad del Carmen, Campeche) (CONALEP 021), Mexico

### PACIFIC ALLIANCE PARTNERS

- Colegio Nacional de Educación Profesional Técnica (Ciudad del Carmen, Campeche) (CONALEP 021)
- Universidad Tecnológica de Campeche (UTCAM)

### CANADIAN PARTNERS

- Marine Institute (lead)
- Niagara College Canada
- Cégep de Trois-Rivières

## INSTITUTIONAL PARTNERSHIP PROJECT B06 (MEXICO)

# New paradigm for curriculum development in renewable energy and alternative energy sources

### Project Description

The B06 project concentrated its efforts on three outputs related to renewable energy and alternative energy sources:

1. the development of new curricula in the sustainable energy sector using the competency-based approach (CBA);
2. the purchase of equipment for these programs to support students' hands-on experience; and
3. strengthening business services, such as the refurbishment of a biodiesel plant that uses waste oils to produce biodiesel.

The initiative helped to broaden the range of job opportunities for graduates. To do this, it focused on the theoretical side, and then putting it into practice, which gives an additional advantage to the students of both the Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146) and the Universidad Tecnológica de La Laguna Durango (UTLD).

### Services Provided

- On-site training trips to Canada with instructors and members of CONALEP 146 and UTLD.
- Review and adaptation of the Renewable Energy and Alternative Energy Sources programs at UTLD.
- Training in chemistry and laboratory production processes to strengthen the teaching in the Bioenergy Technical Stream of CONALEP 146's Profesional Técnico Bachiller (technical secondary-level diploma) in Alternative Energy Sources.

- Training of UTLD and CONALEP 146 instructors in renewable energies (solar photovoltaic, wind, and bioenergies).
- Analysis of opportunities for waste oil collection.
- Analysis of differences and similarities between the educational models of Canadian and Mexican institutions.

### Outcomes

- **At the Universidad Tecnológica de La Laguna de Durango (UTLD):**
  - Installation of a biodiesel plant that will provide students with both practical and theoretical experience.
  - Creation of a short training program on biodiesel production
  - Creation of a study program on the application of biomass treatment methods.
  - Teaching and evaluation guide for the module on the application of biomass treatment methods.
- **At the Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146):**
  - Installation, in collaboration with the students and teachers of the school, of five solar panels connected to the power grid. In addition, sustainable energy teaching learning modules were built, equipped with a photovoltaic solar panel and a wind turbine.
  - Creation of a technical course on the installation, operation, and maintenance of bioenergy systems for students of the Profesional Técnico



Bachiller program in Alternative Energy Sources. The technical course is the specialization at the end of the program and covers the fourth to the sixth semester of the study program. The objective was to favour a circular economy, taking advantage of the availability of manure in the region of La Laguna due to the number of beef and dairy cattle. Although CONALEP has national curricula, the technical courses address specific needs of the region where it is located.

- Installation of a rainwater catchment system to irrigate the campus gardens in an economical and environmentally friendly way.

## 1 guide

Delivery of 1 renewable energies guide with the aim of enhancing the teaching practices offered in the Alternative Energy Sources and Renewable Energy programs at CONALEP 146 and UTLD

## 7

educational videos on solar photovoltaic energy delivered to the teaching staff of CONALEP 146 and UTLD

### UNEXPECTED RESULTS

Refurbishment of a biodiesel plant using waste oils for the production of biodiesel.



“The tools that CIGan has given us are very important, especially for solar panels for photovoltaic energy, biodigesters for biomass, and wind turbines. These are instruments that enable students to do hands-on practice for the work they would see in a company or at a residence. So this allows them to practice, touch, play, and really learn, not just in theory, and to go out into the labour market as novices.”

#### CARLOS VARGAS

Manager, Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146), Mexico

#### SPACIFIC ALLIANCE PARTNERS

- Universidad Tecnológica de La Laguna Durango (UTLD)
- Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146)

#### CANADIAN PARTNERS

- Collège Montmorency (lead)
- Cégep de Jonquière
- Camosun College

## INSTITUTIONAL PARTNERSHIP PROJECT B07 (PERU)

# Supporting curriculum design in heavy machinery maintenance and metallurgy

### Project Description

The direct beneficiaries of Project B07 were the Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza (IESTP-HDE) in Arequipa and the Instituto de Educación Superior Tecnológico (IEST) Pedro P. Díaz. The initiative focused broadly on the curricular revision and improvement of the Metallurgy and Heavy Machinery Maintenance programs, the training of instructors and administrative staff, the acquisition of equipment for these study programs, the introduction of applied research, and cross-cutting work on gender equality and the environment.

Due to the pandemic, the project had to address challenges such as adapting the content, methods, strategies, techniques, and resources of face-to-face education curricula to online learning. Challenges were also faced around the low level of knowledge of both faculty and students on the use and command of virtual technologies, resources, and IT tools suitable for each program of study. The goal was to make the virtual experience as close as possible to the experience of face-to-face education.

### Services Provided

- Procurement of equipment. In Metallurgy, 12 pieces of equipment were installed; Heavy Machinery Maintenance now has a backhoe, which is very important for student learning.
- Acquisition of 20 computers for students to carry out simulations. This allowed for the incorporation of technologies for technical and scientific learning.
- Support for the acquisition of a server for online training. The server's large capacity provided for improved speed and a greater amount of data, making it possible to expand the use of resources by teachers and students.

- Training for teachers and administrative staff to improve the institutional capacities of IESTP-HDE, IEST Pedro P. Díaz, and Instituto del Sur de Arequipa (ISUR). The trainings included: 1) re-integration of students into face-to-face education, and 2) technical literacy in English.
- Educational visit by representatives of IESTP-HDE's Metallurgy and Heavy Machinery programs to CNC and BCIT in Canada.

### Outcomes

- Revision and improvement of the Metallurgy and Heavy Machinery Maintenance programs, with the following benefits:
  - The number of female students in the traditionally male-dominated courses of Metallurgy and Heavy Machinery Maintenance has increased.
  - There are now more hours of practice (not just theory) for students, thus improving their preparation for the labour market.
  - Discussions have been conducted with local companies, which resulted in an increase in the number of IESTP-HDE graduates recruited.
- The server made it possible:
  - to meet the needs of 300 courses/teaching units, in virtual, hybrid, synchronous, and asynchronous education;
  - to serve 1,800 students in the 11 study programs, including Metallurgy and Heavy Machinery Maintenance; and
  - for 100 teachers from the 11 study programs to work with the Moodle platform.
- Development of an introductory course on applied research and innovation tailored to the needs of IESTP-HDE and its context. This included topics such as leadership in applied research; equity, diversity, and inclusion in educational institutes; communication management; and stress management in applied research teams.



- Promotion of gender equality and sustainability, through:
  - design of the toolkit with the institution's Gender Committee;
  - a talk on strategies for dealing with violence against women;
  - an agreement with the Ministry of Women and Vulnerable Populations (Spanish acronym: MIMP), for the ongoing training of teachers in gender equality; and
  - talks and workshops for students on environmental sustainability issues, with the support of local organizations and foundations.

# 500

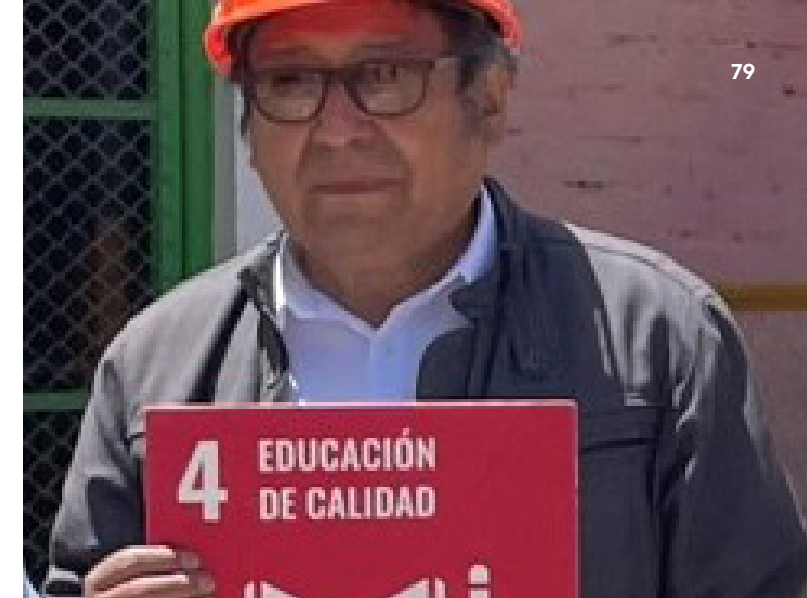
students and faculty of IESTP-HDE participated in a 240-hour workshop on the disposal of organic and inorganic waste

# 140

people benefited from a seminar on the reintegration of students into face-to-face education

### UNEXPECTED RESULTS

Forty-seven teachers and managers completed 114 hours of training in applied research and innovation tailored to the needs of IESTP-HDE and its context.



“During COVID-19 we had serious problems; we didn't know how to tackle the challenge of keeping education going, since it couldn't simply be paralyzed... We have 11 study programs at the Institute, and the Ministry of Education stipulated that in order to switch the process from face-to-face over to virtual education, we first had to review the programs, the syllabi, and the content, and we had to prioritize in order to make education accessible over virtual platforms.”

#### JOSÉ MIGUEL PEÑA MANRÍQUEZ

Head of the Academic Unit at the Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza (IESTP-HDE), Arequipa, Peru

#### PACIFIC ALLIANCE PARTNERS

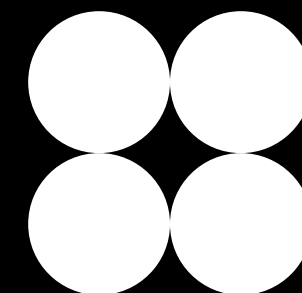
- Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza (IESTP-HDE)
- Instituto de Educación Superior Tecnológico (IEST) Pedro P. Díaz

#### SOCIOS DE CANADÁ

- Nova Scotia Community College (NSCC, lead)
- College of New Caledonia (CNC)
- British Columbia Institute of Technology (BCIT)



# Business and Community services



## CONTENTS

- Institutional Partnership Project B04 (Colombia)
- Institutional Partnership Project B05 (Mexico)
- Institutional Partnership Project B08.2 (Peru)

# Business and Community services

The projects from Theme 4: "Business and Community Services" focus on developing applied research centres and bridging the digital divide in the community.

Following the example of the Canadian model, in which colleges are stakeholders in the development of their communities, some partnerships have focused their efforts on relations with business and the community, developing services such as applied research centres, lifelong learning, or fab labs. This approach allows training institutions to have a closer relationship with the productive sector and to create "win-win" partnerships that foster trust and, ultimately, the integration of young graduates into the labour market.

Applied research provides real-world experience for students and helps the community or companies that would not have the means to carry out such research and development (R&D) studies on their own. Over the duration of the program, training on the establishment of applied research centres has been provided to almost all partner institutions, and two centres have been created and inaugurated, one at the Unidades Tecnológicas de Santander (UTS) in Colombia, and another at the Universidad Tecnológica de Campeche (UTCAM) in Mexico.

A Centro Académico para el Fomento del Emprendimiento, under the Unidades Tecnológicas de Santander (CAFE UTS) in Colombia has also been created, and this has enabled dozens of ambitious young people to start their own businesses and thus contribute to the economic growth of their community. In addition, short training courses for companies have been developed at some partner institutions to meet the immediate needs of the sector. Finally, support has been provided to the Peruvian Ministry of Education (MINEDU) to train IDEXs on the management and educational inclusion of fab labs in technical training.

All these efforts are aimed at improving the relationship and alignment between training institutes and the productive sector, so they can develop side by side and support each other to promote the hiring of young people in response to the sector's labour needs.

## Theme 4 Projects

### Institutional Partnership Project B04 (Colombia)

Applied research: innovation accessible to all and support for the promotion of entrepreneurship

### Institutional Partnership Project B05 (Mexico)

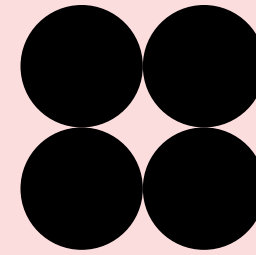
Leadership, change management, and development of an applied research centre

### Institutional Partnership Project B08.2 (Peru)

Innovation in institutes: the example of fab labs



Scan this QR code to view the video on **Theme 4**



# 47

IESTP-HDE instructors received **120 hours** of training in applied research and innovation

# 100

companies access services for further training or applied research

# 536

jobs offered by the mining companies in the project regions, available to the participating IESTs

# 2

applied research and innovation centres (UTS and UTCAM) and 1 welding certification centre (CONALEP 021)

# +20%

more extractive companies satisfied with the quality of the programs created and/or adapted

# 100

companies set up with advising by the new Centro Académico para el Fomento del Emprendimiento, under the Unidades Tecnológicas de Santander (CAFE UTS), Colombia

# RESULTS

## INSTITUTIONAL PARTNERSHIP PROJECT B04 (COLOMBIA)

# Applied research: innovation accessible to all and support for the promotion of entrepreneurship

### Project Description

Project B04 focuses on four main areas of interest: applied research, gender, entrepreneurship and innovation, and environment. The initiative benefited the Unidades Tecnológicas de Santander (UTS), a Colombian public institution with more than 22,000 students.

Under this framework, key aspects, values, and approaches were published that will guide the new work practices at the institution's two new centres: the Centro para el Desarrollo de Recursos Ambientales (Centre for the Development of Environmental Resources; CEDERA UTS), which focuses on applied research aiming at replicability and success, and the Centro Académico para el Fomento del Emprendimiento (Academic Centre for the Promotion of Entrepreneurship; CAFE UTS).

Through a cross-cutting approach, the work of all stakeholders, including instructors, administrators, employees, companies, and students, was supported. As such, the new cohorts were educated with a culture of innovation, by supporting the local community with on-site projects.

### Services Provided

- Mission to Canada by 16 UTS leaders who were inspired by various experiences at the colleges to implement services and innovations at UTS.
- Strengthening of the three-way bond between academia and the public and private sectors, and application for the centre's status as a legal entity.
- Fundraising to ensure the sustainability of CEDERA UTS and CAFE UTS.
- Donation of technological research equipment for the determination of physico-chemical properties (CAN\$100,000).
- Training for students and instructors on applied research and innovation, entrepreneurship, gender and social inclusion, environment and greening of the institution, the impact of change management, and change management leadership.



- Training for instructors on educational leadership.
- A discussion was held on gender and social inclusion with students from UTS.
- An International Change Management Forum was organized

### Resultados logrados

- Creation and inauguration of the Centro para el Desarrollo de Recursos Ambientales, under the Unidades Tecnológicas de Santander (CEDERA UTS), Colombia. Its mission is to serve both the academic side, by giving practical classes, and the business sector. The goal is for environmental companies to do their processes locally at the Centre. Through CEDERA UTS, assistance has already been provided to 48 companies. CEDERA UTS also supported the municipality of La Fuente in the analysis of the quality of drinking water consumed by its population, benefiting 1,200 families.
- Development of a training program on applied research, which provided comprehensive workshops by expert professionals through synchronous and asynchronous personalized learning in:
  - introductions to applied research;
  - a culture of research and innovation;
  - institutional entrepreneurship and innovation;
  - structure and process of applied research;
  - opportunities and business for applied research centres; and
  - management and administration of applied research.
- Building institutional capacities for the creation of other applied research centres. UTS now has five specialized centres.
- Creation of an inter-institutional committee on communication and coordination.
- Creation of the Centro Académico para el Fomento del Emprendimiento, part of the Unidades Tecnológicas de Santander de Colombia (CAFE UTS), which has expanded to the other UTS units. Advising has been provided for the formation of 100 companies, and CAFE UTS was visited by the Minister of Trade, Industry and Tourism in 2021.
- Creation of the Red de Instituciones para la Innovación (Network of Institutions for Innovation; REDIFI).
- Development of an environmental sustainability plan within UTS' strategic plan.

### PACIFIC ALLIANCE PARTNERS

- Unidades Tecnológicas de Santander (UTS)

### CANADIAN PARTNERS

- Niagara College Canada (NCC, lead)
- Fanshawe College (FC)
- Cégep de Trois-Rivières (CTR)



## UNEXPECTED RESULTS

After the inauguration of CEDERA, the applied research centre set up under the project, five other applied research centres were set up in various UTS departments.

100  
CAFE-UTS conducted a business  
incubator pilot that benefited 100 people  
who are now entrepreneurs.

48 companies  
assisted by CEDERA in applied  
research and services

“What led me to start up a tourism agency in the municipality of Betulia was the need, first of all, since there was no such agency there. People would arrive and there was no one to help them out. And secondly, because there are no jobs, so I created my own [...] I am an external student at the Unidades Tecnológicas de Santander and they have opened doors for me, with thanks to God. I am very grateful to CAFE UTS and the whole team that works with us, because they helped me to make my project a reality.”

#### LINA MARÍA QUINTERO BEDOYA

Participant of the Centro Académico para el Fomento del Emprendimiento, under the Unidades Tecnológicas de Santander de Colombia (CAFE UTS), and owner of Mohán Tours Betulia

“At the moment what we are doing is implementing techniques for analyzing water quality: wastewater, drinking water, raw water, and surface water. This equipment donated by Canada is very important because we can use it to set up automatic analyses. This project will be carried out with the support of students who are part of the introductory cycle of Environmental Resources Technology. The idea is for students to strengthen their skills. They will see their learning outcomes in the activities they'll be carrying out here on the La Fuente water pipeline.”

#### AURA VICTORIA BARRERA

Instructor at the Centro para el Desarrollo de Recursos Ambientales, part of the Unidades Tecnológicas de Santander de Colombia (CEDERA UTS)

## INSTITUTIONAL PARTNERSHIP PROJECT B05 (MEXICO)

# Leadership, change management, and development of an applied research centre

### Project Description

Project B05 had two parts, one under Theme 3: "Quality of Technical and Vocational Education and Training (TVET)," and one under Theme 4: Business and Community Services." In both instances, work was done with the Colegio Nacional de Educación Profesional Técnica de Ciudad del Carmen de Campeche (CONALEP 021) and with the Universidad Tecnológica de Campeche (UTCAM).

Under Theme 4, Project B05 focused on two approaches. The first was leadership in change management, and the second was the creation of an applied research centre (the CIACIP at UTCAM), through training and exchanges of experiences with other PA countries to build the develop the skills needed to drive applied research.

Within this context, Project B05 worked together with Colombia's B04 (applied research: innovation accessible to all) and CICA to create a space for dialogue. Other countries joined the initiative, so peers who were going through the same process could work together in an integrated manner, in spaces that were opened for collaboration and educational development.

### Services Provided

- Development and implementation of new strategies for sustainable school-business relations, especially in applied research and equipment supply.
- Canadian Government investment in equipment (CAN\$50,000) to set up the Centro de Investigación Aplicada Capacitación e Innovación Peninsular (CIACIP) at UTCAM. This makes it possible to offer this service to industry and to provide UTCAM students with practical experience through direct contact with the industrial setting.
- Training of research instructors on all equipment in CIACIP's non-destructive testing laboratory.
- Inclusion of female research instructors for applied science and more job opportunities.

1

Formation of 1 Centro de Investigación Aplicada, Capacitación e Innovación Peninsular (Peninsular Centre for Applied Research, Training and Innovation; CIACIP) at UTCAM

85

students from UTCAM and CONALEP learned about applied research and innovation

30

students and instructors participated in 2 advanced welding courses

### PACIFIC ALLIANCE PARTNERS

- Colegio Nacional de Educación Profesional Técnica (Ciudad del Carmen, Campeche) (CONALEP 021)
- Universidad Tecnológica de Campeche (UTCAM)

### CANADIAN PARTNERS

- Marine Institute (lead)
- Niagara College Canada
- Cégep de Trois-Rivières

- Training of instructors from CONALEP 021 and UTCAM in a course on Advanced Management and Leadership in Change Management. This last course included the following topics:
  - project leadership,
  - introduction to risk management,
  - personal and team stress management,
  - leadership in team management, and
  - gender and social inclusion management.



### Outcomes

- **Creation of the Centro de Investigación Aplicada Capacitación e Innovación Peninsular (CIACIP) at UTCAM.** At the time of press, 105 students from CONALEP 021 and UTCAM have been trained in the introduction to applied research and innovation. Companies no longer need to go to Mexico City or Monterrey to access these services.
- **Creation of the Specialized Welding Centre at CONALEP 021.** This will enable the development of a skilled workforce to serve the community and build well-being and economic sustainability for the region. This was an unexpected output of the project. The Welding Certification Centre at CONALEP 021 is the only certifying shop with TIG (tungsten inert gas) and MIG (metal inert gas) welding machines in the state of Campeche, and it provides services to the community.
- **Development of two short courses.** CONALEP 021 focused on welding, while UTCAM developed a course on non-destructive testing (NDT). A marketing plan was implemented to raise revenue for the centres by offering these short courses to companies. The welding course has already been delivered twice to at least 30 people, including students and professionals.

"Everyone benefits, including the institution, because its students will be better trained for the final client, whether it be Pemex or the new private companies we work for, since the work will be faster and closer to them. Currently we have to send this work out to Mexico City or Monterrey. Having it here means it's going to be safer because we're going to have the laboratory at hand."

### JESÚS TABAREZ MEDINA

Manufacturing Manager, CICSA, Campeche, Mexico

"I think Canadian technical education is in line with the needs of the labour market, the region, and companies. I think this is a concept that instructors here should develop, both in the training of students—through the connections they make in work placements—and in the services they want to provide to companies. Here, the Applied Research Centre is something new, and it pursues this approach."

### JANIE TRUDEL BELLEFEUILLE

Coordinator of the International Office at Cégep de Trois-Rivières, Canada



## INSTITUTIONAL PARTNERSHIP PROJECT B08.2 (PERU)

# Innovation in institutes: the example of fab labs

### Project Description

Project B08.2 was a partnership between the Peruvian Ministry of Education and Humber College to implement fab labs in Peru's 26 Institutos Tecnológicos de Excelencia (IDEX). The objective was to support the pilot implementation of a national network of fab labs within the framework of the PA-EFE, benefiting 25,428 young people (46% female and 54% male), corresponding to 19.5% of the national total of students in Institutos de Educación Superior Tecnológico Públicos (IESTPs).

The fab labs are digital fabrication labs—production workshops that use physical tools connected to the digital world to create real products that come to life through inexpensive, rapid prototyping. Fab labs revolve around two socio-technological movements: self-production, and the free flow of information and knowledge.

The training aimed to ensure that students developed the necessary skills to launch and strengthen fab labs. The other objective was to strengthen the soft skills required to lead innovation, while facilitating and managing change within the institution.

### Services Provided

- This project included three phases:
  1. A diagnostic phase with determination of the baseline and application of the Innovation 360 survey.
  2. A recommendations and preparation phase for the 60-hour training program (40 synchronous and 20 asynchronous) to build technical capacities and soft skills around the use of fab labs in teaching and learning processes, applied research, and business incubation, taking into account the gender perspective.
  3. Implementation of the training, wherein participants were required to develop a sustainability and change management plan, including gender perspectives, and the use and dissemination of the toolkit within their institutions.
- Mission to Canada of three leaders and a representative of MINEDU to replicate and disseminate knowledge.

- Training for the strategic educational management of the fab labs (FAB-LAB-MED) with four main modules:
  - 1) Introduction to Fab Labs;
  - 2) Adult Education;
  - 3) Innovation and Research;
  - 4) Gender and Social Inclusion.

### Outcomes

- Development of a toolkit to be used as a reference guide for scalability and replicability, for technical or vocational post-secondary institutions interested in implementing fab labs.
- Training of 130 people from 26 IDEXs (five from each institute, with every effort made to have at least two women from each one) and one specialist from the La Libertad Province Regional Education Office (Spanish acronym: DRE).
- Development of 25 inclusive project proposals by IDEXs that involve working with the community. There are videos for each one that can be viewed at: <https://idiprojects.ca/info-ES.html>
- Development of a website documenting the project in English and Spanish: <https://idiprojects.ca/index-ES.html>
- Documentation of the eight-week training, which is available for download from: <https://idiprojects.ca/workshop-ES.html>



Scan this QR code to get more information about the IDEX Projects

### PACIFIC ALLIANCE PARTNERS

- Peruvian Ministry of Education (Minedu)
- Dirección de Educación Superior Tecnológica y Técnico Productiva y Artística (DIGESUTPA)
- 26 Institutos de Excelencia (IDEX)

### CANADIAN PARTNERS

- Humber College (lead)
- Collège Communautaire du Nouveau-Brunswick
- Cégep Saint-Jean-sur-Richelieu

# 131 people

from the Institutes of Excellence (IDEX) trained to use fab labs in educational processes, applied research, and business incubation

# 10 IDEXs

developed a sustainability and change management plan including gender perspectives

# Innovation 360

diagnosis carried out with 26 IDEXs and the Peruvian Ministry of Education



“We did an INNO 360 diagnosis, which is based on an ISO innovation management standard (56002:2019); this was aimed at being able to measure 76 related capacities and skills. There was also a baseline survey to create a situational diagnosis of the installed capacities in terms of resources in general, including human, infrastructure, and equipment. We have also been working on the training program, because the main objective is for Humber to be able to train our instructors on the educational use of the fab labs so that they know how to use them in their teaching sessions and are able to develop students’ competencies.”

#### SÉBASTIEN ANDRÉ RAFAEL DÉSIR

Specialist of the Directorate of Technical/Productive and Higher Technological and Artistic Education Services (DISERTPA), under the Peruvian Ministry of Education

“The objectives of B08.2 are to enhance the teaching and learning experience of students and academic staff; foster applied research, entrepreneurship, and business incubation; and strengthen community engagement to improve the quality of education and foster innovation within the education system.”

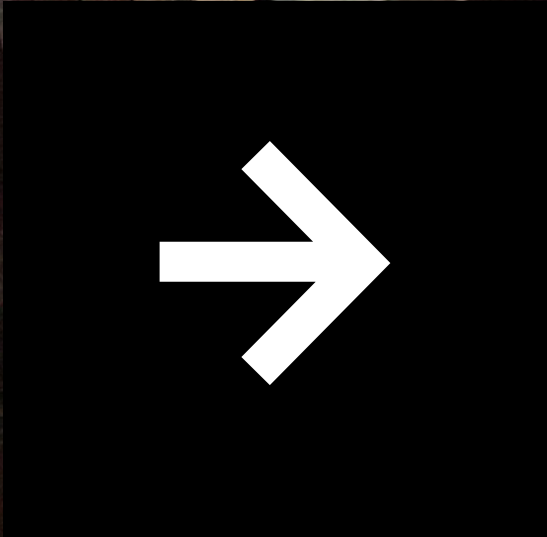
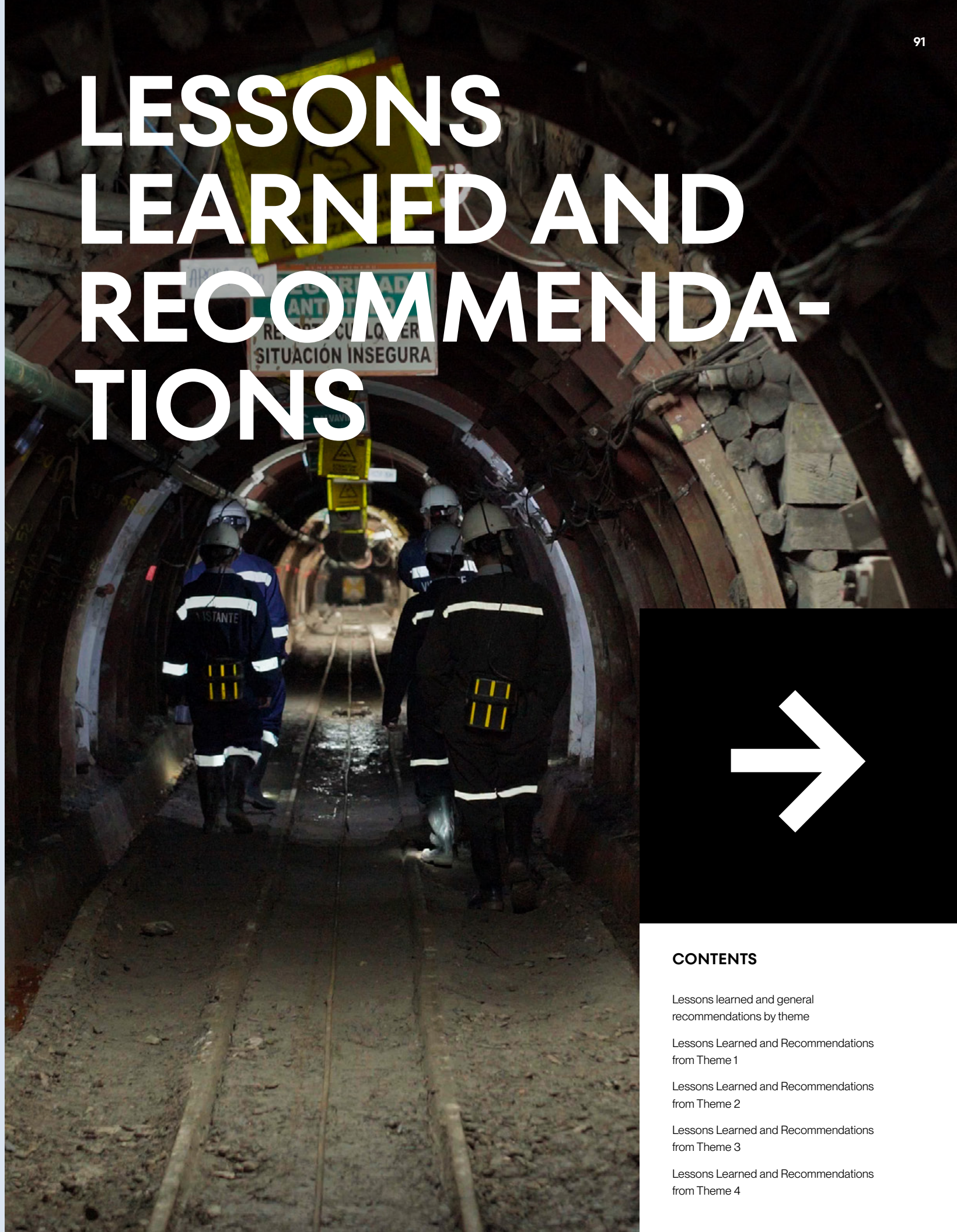
#### ANA GARCÍA

Program Analyst, Humber's International Development Institute (IDI), Canada



Mexico City, Mexico

# LESSONS LEARNED AND RECOMMENDATIONS



### CONTENTS

- Lessons learned and general recommendations by theme
- Lessons Learned and Recommendations from Theme 1
- Lessons Learned and Recommendations from Theme 2
- Lessons Learned and Recommendations from Theme 3
- Lessons Learned and Recommendations from Theme 4

# LESSONS LEARNED AND RECOMMENDATIONS

After seven years of implementation, CICan and its partners learned many lessons about the essential elements needed to achieve sustainable results. There is no doubt that the COVID-19 pandemic affected all participants, forcing them to cancel missions, suspend face-to-face classes, and find creative ways to move forward with planned activities despite the restrictions imposed. This section shares the main lessons learned and recommendations that were identified by the different stakeholders involved in the PA-EFE Program, which they presented at the Capitalization Forum held in Mexico City in January 2023.



## THEME 1

# Collaboration and Alignment in the Pacific Alliance Region

This section compiles lessons learned and recommendations from the A07.1 and A07.2 technical assistance projects. Accordingly, they focus on regional dialogue, cross-sectoral collaboration between national partners and Pacific Alliance (PA) countries, and the Regional Qualifications Framework (RQF).

“I think there are several lines of work ahead, mainly in the A07.1 project, with the development of a toolkit, which is very important in the next version. A 2.0 version would be to see how to set up that tool, how to download it, how to reach people. And there it would be interesting to develop a pilot. Maybe in the extractive sector, maybe in another sector (we'd need to determine which one), with the four countries also in agreement, but with real-world experience, because the A07.1 project allowed us to set up a working model after developing instruments and tools. But how does this reach the people in the end?”

**SEBASTIÁN MAURICIO ESPINOZA FARÍAS**

Employee, Division of Technical/Vocational Higher Education, Chilean Ministry of Education

## LESSONS LEARNED

- It is important to grow a workforce with the required skills in order to close the gap between training needs and demand from the sector.
- It is essential to implement environmental and social best practices to move towards a more robust sustainability policy.
- A cultural transformation is needed to increase the participation of women in the productive (extractive) sector.
- The power and value of creating collaborative networks among institutions should be acknowledged. This goes hand in hand with valuing peer and inter-institutional learning. Coordination among different stakeholders is also important, including government, the productive sector, and educational institutions.
- We need to differentiate between each country's priorities for their respective national qualifications frameworks (NQFs) and the efforts to move the RQF forward based on the national frameworks.

## RECOMMENDATIONS

- Perform a political/strategic analysis on how PA countries can establish some basic guidelines on issues such as environmental sustainability and gender equality.
- Establish regulatory or tax incentives for companies to drive research in institutions in order to generate further development.
- Reach agreement among PA countries on which sectors are priorities for strategic progress.
- Set up an autonomous body within each country, or a sectoral body, to coordinate the other institutions (ministries of education, ministries of labour, educational institutions, and companies) and to lend continuity and sustainability to the initiatives over time.
- Conduct training and employment prospecting based on the experiences of different countries, including Canada and PA members, in order to replicate experiences and seek synergies.
- Create mechanisms for the formal adoption of the technical document on the PA's RQF, as well as reports on correlations among qualifications.
- Establish commitments around the implementation of the PA's RQF and the adoption of its roadmap.

## THEME 2 ▲

# Academic Access and Success, and Enhancement of Technical and Vocational Education and Training (TVET)

This section compiles lessons learned and recommendations from the A08 technical assistance project and Institutional Partnerships B08.1, B09, B10, B11, and B12. They therefore focus on support, academic access and success, and employability and labour market insertion.

“The mining industry has always been dominated by men, hasn't it? But just recently a group of mostly women has joined. [...] And in the area of safety, for example, out of a group of 30 [students], five are men and the rest are women.”

**FREDDY URIEL CHAPARRO ORDUZ**

Workplace Health and Safety Instructor, Centro Minero Regional Boyacá (CMRB), under the Colombian Servicio Nacional de Aprendizaje (SENA)

## LESSONS LEARNED

- Sharing experiences is much more than transferring knowledge; it is about generating knowledge and joint learning. In this sense, one lesson learned is the value of dialogue among countries on communication strategies, recognizing both differences and commonalities.
- Sharing best practices is important, as student services contribute directly to young people's educational trajectories, while contributing to post-secondary institutions' quality processes.
- We need to identify the digital gap on a case-by-case basis and see how to connect these needs to further education that also guarantees jobs. We need a culture of digitization of education. Digitization is not only relevant and useful during the pandemic, but something that should remain in place on an ongoing basis in order to improve the quality of education.
- Unfortunately, people who enter technical and technological careers generally have lower salaries and less social protection, which causes a chain of inequalities to persist.
- Good communication of the services offered in training institutions is essential, through tools that reach the students so they can access them when they need them.

## RECOMMENDATIONS

- Foster comprehensive communication strategies that promote more than just access to TVET, and that highlight the contribution of TVET to the development of the country and of productive sectors, and especially of people, their territories, and communities. Their development should also involve interdisciplinary teams and teams from different units within ministries of education and educational institutions, and a gender perspective should be included throughout the process.
- Since there is a generation gap between instructors and students, who are younger and more used to new technologies, it is proposed that training be ongoing and that skills be developed so instructors and administrators can be trained on these technologies.
- We need to ask ourselves how education really leads to a guarantee of the right to a job, and not just to policies that may allow for precarious employment.
- Develop a customized training oriented to the talents and abilities of students and instructors. This provides an opportunity to develop new training programs in accordance with the strategic needs of the specific territory and the productive sector.
- Develop more detailed performance indicators for student services to be able to measure job retention and student satisfaction in real terms.

## THEME 3 ■

# Quality of Technical and Vocational Education and Training (TVET)

This section compiles lessons learned and recommendations from Institutional Partnerships B01, B02, B03, B05, B06, and B07. They therefore focus on aligning supply and demand, competency-based education, and the quality of TVET.

“I would love to continue working with CICan. I think we are learning more, and the contributions enable the institutions to mature. By taking the experiences from Canada, they can offer new programs that were developed with two new productive sectors that we may not have not looked at until now. But this also goes hand in hand with modernization; our career—industrial maintenance and mechatronics—is now bringing robotics into industry. So, it would be good to see how the productive sectors in our countries are working along these lines in order to learn from this experience.”

**LUIS ALEJANDRO CORTÉS REBOLLEDO**

Deputy Director, Centro de Formación Técnica at the Universidad Católica del Norte (CEDUC UCN), Antofagasta campus, Chile

## LESSONS LEARNED

- We need to understand and implement virtual teaching methodologies; this has led to a change in the paradigm that has been very focused on face-to-face learning. How to we work with new teaching methodologies, which involve new platforms, while also motivating students?
- It is important to focus on competencies, to observe and analyze what is happening in the market, to provide adaptability and co-creation of programs such as micro-certificates, which are shorter and more specialized certificates offered over a few sessions. It is not always necessary to have pursued a vocational or technical program to meet companies' needs, and it is very important for instructors and administrators to be continuously learning.
- Strategic partnerships between business, governments, and communities are needed. Labour market integration has to be a macroeconomic policy; not all the responsibility should be placed on one group alone.
- We need to work with industry to identify training needs and inputs for curriculum design.

## RECOMMENDATIONS

- Suggestions for new teaching methodologies include video capsules, the flipped classroom, virtual reality, augmented reality, and blockchain.
- Create an inventory of needs at the national level—a large, robust database that contains people's profiles and competencies, in order to achieve alignment between supply and demand.
- Offer programs according to the specific needs of the states or regions of the countries for effective labour market insertion; determine which sectors are located in each territory so that programs can be offered based on that.
- Create TVET programs that can grow and be added to, so that students can have access to further training. A ladder that leads to professional development and specializations.



## THEME 4 ▲

# Business and Community Services

This section compiles lessons learned and recommendations from Institutional Partnerships B4, B5, and B08.2. They therefore focus on developing applied research centres and bridging the digital divide in the community.

“There will always be an opportunity to work collaboratively, especially with the fab labs<sup>4</sup>. The one here has become an international network where practically the whole world is interconnected.

**SÉBASTIEN ANDRÉ RAFAEL DÉSIR**

Specialist at the Directorate of Technical/Productive and Higher Technological and Artistic Education Services (DISERTPA), under the Peruvian Ministry of Education

**LESSONS LEARNED**

- In order to achieve a win-win, the integration of the three-way integration between education institutions, government, and business must be achieved.
- It is important to exchange knowledge to see how programs can be developed to help industry and provide new knowledge and technologies to build students' skills and ensure that they can grow and enhance their value proposition to employers.
- The trust of our industry partners is required so we can work hand in hand to be able to offer innovative services that add value, and so they know that they can work with educational institutions in a mutually beneficial way, to improve the supply chain within the market.
- One thing that is essential to being able to deliver and hold on to programs is to celebrate everyone involved and train them so they know they are a key part of the system.

**RECOMMENDATIONS**

- Among universities, there is a need to evolve and move from basic research processes to applied research, by modifying and updating curricula, creating opportunities for residencies or visits, and shifting towards a managerial vision in order to formally institute research centres.
- On the government side, public policies and incentives need to be offered so that all entrepreneurs can return to universities and/or institutes.
- In terms of the productive sector, trust needs to be built so that companies see higher education institutions as their main ally for solving their problems or challenges.
- Five measures are suggested to move towards a university management strategy that focuses on applied research: 1) create research hubs to gather information from all current and potential partners; 2) have repositories with information and stratification or sectorization of all areas of interest; 3) continue to hold sectoral roundtables, fairs, or conferences to exchange best practices and conduct technology transfer; 4) build up communities of practice and networking, with very close partnerships among the three types of stakeholders; 5) consider creating of a multinational network of research centres.

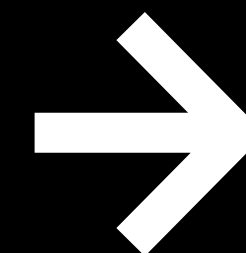
<sup>4</sup> “Fab lab” is a short form of fabrication laboratory, a small-scale workshop where anyone can make almost anything, using digital design and tools such as 3D printers, laser cutting, and other advanced technological tools.

# ACKNOWLEDGEMENTS

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The Team

Acknowledgements





CANADA



MEXICO

These pictures were taken at the Capitalization forum in January 2023.



CHILE



PERU



COLOMBIA

CICAN MEMBERS

We would like to thank all our partners from the Pacific Alliance and Canada for their dedication with the Program and its activities.



# The Team

## PA-EFE Program Working Team

### Ottawa Team:

- **Alain Roy**, Vice President, International Partnerships, Colleges & Institutes Canada
- **Marie-Josée Fortin**, Director of International Partnerships, Colleges & Institutes Canada
- **Brigid Shea**, Senior Program Officer; manages relationships with regional governments in the four countries and worked closely with Colombia and Mexico. She was also in charge of the technical assistance projects and organization of the forums.
- **Amélie Binette**, Senior Program Officer, responsible for institutional partnerships in the four countries. She was also in charge of the production of the program's capitalization videos together with Maude Fievet.
- **Maude Fievet**, Program Officer and in charge of the production of the program's capitalization videos. She supports both program components logistically for monitoring, evaluation, and communications.

### Field Team :

- **Sylvain Goudreau**, Senior Technical Advisor and Regional Coordinator in charge of Chile and Peru
- **Eliana Gallardo Paz**, Indigenous Communities and Gender Equality Specialist
- **Vicente Pável Montoya Jara**, Monitoring and Evaluation Specialist
- **Israel Jaime Ávila Flores**, Environmental Specialist
- **Mariella Sánchez De Bracamonte**, Administrative and Financial Coordinator in Chile

## Internal CIGan team in support of the program:

- **Elena Ceigua**, Financial Coordinator
- **Leila Faraj**, Gender Equality Specialist at CIGan
- **Matthew Smith**, Communications Manager
- **Pamela Hedderson**, Administrative Coordinator at CIGan
- **Ronald Rojas**, Monitoring and Evaluation Specialist for all CIGan Programs

## Canadian Team and Partners

### Government partners:

- Global Affairs Canada (GAC)

### Civil society institution:

- Mining Industry Human Resources Council (MiHR)

### CIGan member educational institutions by province:

#### British Columbia:

- British Columbia Institute of Technology (BCIT)
- College of New Caledonia
- Northern Lights College
- Vancouver Island University

#### New Brunswick:

- Collège Communautaire du Nouveau-Brunswick

#### Newfoundland and Labrador:

- Marine Institute

#### Nova Scotia:

- Nova Scotia Community College

#### Ontario:

- Collège Boréal
- Durham College
- Fanshawe College of Applied Arts and Technology
- Humber College
- Niagara College Canada

#### Quebec:

- Cégep de l'Abitibi-Témiscamingue
- Cégep de Chicoutimi
- Cégep Édouard-Montpetit
- Cégep de Jonquière
- Cégep Marie-Victorin
- Cégep Saint-Jean-sur-Richelieu
- Cégep de Trois-Rivières
- Collège Montmorency

## Pacific Alliance Team and Partners

- Pacific Alliance National Coordinators (formerly the External Relations Technical Group; ERTG)
- Pacific Alliance Education Technical Group (ETG)
- Pacific Alliance Communication Technical Group (CTG)
- Pacific Alliance Gender Technical Group (GTG)
- Environment and Green Growth Technical Group (Spanish acronym: GTMACV)
- Pacific Alliance Labour Technical Group (LTG)
- Technical Group on Mining Development (no longer in existence; collaboration between 2016 and 2019)
- Beneficiary institutions of the PA-EFE Program in Chile, Colombia, Mexico, and Peru

- Ministries of education from Chile, Colombia, Mexico, and Peru
- Ministries of mining and energy from Chile, Colombia, Mexico, and Peru
- Ministries of labour from Chile, Colombia, Mexico, and Peru
- Ministries of women/gender from Chile, Colombia, Mexico, and Peru
- Ministries of environment from Chile, Colombia, Mexico, and Peru
- Ministries of foreign affairs and/or economy from Chile, Colombia, Mexico, and Peru
- Pacific Alliance Network of Labour Qualifications and Certifications (Spanish acronym: RECCL)
- Pacific Alliance Network of Qualifications Framework Specialists (Spanish acronym: REMCAP)
- Production/private sector partners in the extractive sector

### Civil society partners:

- Women in Mining Chile, Colombia, Mexico, and Peru

## Chilean team and partners

- Centro de Formación Técnica de la Universidad Católica del Norte de Chile (CEDUC-UCN), Antofagasta campus
- Centro de Formación Técnica de la Universidad Católica del Norte de Chile (CEDUC-UCN), Coquimbo campus
- Centro de Formación Técnica (CFT) Estatal Regional Coquimbo
- Colegio Técnico Industrial (CTI) Don Bosco, Antofagasta

## Colombian team and partners

- Centro Minero Regional Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA), Colombia
- Unidades Tecnológicas de Santander (UTS)

## Mexican team and partners

- Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146)
- Colegio Nacional de Educación Profesional Técnica (Ciudad del Carmen, Campeche) (CONALEP 021)
- Universidad Tecnológica de Campeche (UTCAM)
- Universidad Tecnológica de La Laguna Durango (UTLD)

## Peruvian team and partners

- Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza (IESTP-HDE)
- Instituto de Educación Superior Tecnológico (IEST) Pedro P. Díaz
- Instituto del Sur de Arequipa (ISUR)

## In memoriam

We will always remember our colleagues who left us during the Program.



### Canada:

**Lina Amaya**, Senior Program Officer at CIGan

*Passed away in June 2022.*

Participated in the PA-EFE Program between 2016 and 2022, as Lead Program Officer.



### Colombia:

**Gustavo Guío Ayala**, Mining Instructor at the Centro Minero Regional Boyacá (CMRB), under the Servicio Nacional de Aprendizaje (SENA), Colombia

*Passed away in January 2023.*

Participated in projects B03 (Theme 3) and B10 (Theme 2).



### Mexico :

**Miguel García Mesta**, Manager, Colegio Nacional de Educación Profesional Técnica Centro Mexicano Francés de Durango (CONALEP 146), Mexico

*Passed away in August 2021.*

Participated in Project B06 (Theme 3).

# ACRONYMS AND ABBREVIATIONS

<b>GAC</b>	Global Affairs Canada
<b>PA</b>	Pacific Alliance
<b>IES</b>	Individualized educational support
<b>LSA</b>	Labour situation analysis
<b>BCIT</b>	British Columbia Institute of Technology
<b>BIS</b>	Bilingual, international, and sustainable
<b>CAFE UTS</b> (SPANISH ACRONYM)	Centro Académico para el Fomento del Emprendimiento (Academic Centre for the Promotion of Employment at the Unidades Tecnológicas de Santander (Santander Technological Units), Colombia)
<b>CCM</b> (SPANISH ACRONYM)	Consejo de Competencias Mineras de Chile (Chilean Mining Skills Council)
<b>CCNB</b> (FRENCH ACRONYM)	Collège Communautaire du Nouveau-Brunswick
<b>CEDERA UTS</b> (SPANISH ACRONYM)	Centro para el Desarrollo de Recursos Ambientales (Centre for the Development of Environmental Resources) at the Unidades Tecnológicas de Santander (Santander Technological Units), Colombia
<b>CEDUC UCN</b> (SPANISH ACRONYM)	Centro de Formación Técnica (Technical Training Centre) at the Universidad Católica del Norte (Catholic University of the North), Chile
<b>CEGEP</b> (FRENCH ACRONYM)	Collège d'enseignement général et professionnel (general and vocational College)
<b>CIACIP</b> (SPANISH ACRONYM)	Centro de Investigación Aplicada Capacitación e Innovación Peninsular (Peninsular Centre for Applied Research, Training and Innovation), Mexico
<b>CICAN</b>	Colleges and Institutes Canada
<b>CFT</b> (SPANISH ACRONYM)	Centro de Formación Técnica (Centre for Technical Training), Chile
<b>CGEIS</b> (SPANISH ACRONYM)	Comité de Género e Inclusión Social (Gender and Social Inclusion Committee) at the CEDUC UCN, Chile
<b>ISCED</b>	International Standard Classification of Education
<b>CMRB</b> (SPANISH ACRONYM)	Centro Minero Regional Boyacá (Boyacá Regional Mining Centre), Colombia
<b>CNC</b>	College of New Caledonia
<b>CONALEP</b> (SPANISH ACRONYM)	Colegio Nacional de Educación Profesional Técnica (National School for Technical/Vocational Education), Mexico
<b>CTI</b> (SPANISH ACRONYM)	Colegio Técnico Industrial (Industrial Technical School), Chile
<b>CTR</b> (FRENCH ACRONYM)	Cégep de Trois-Rivières
<b>DGUT Y P</b> (SPANISH ACRONYM)	Mexican Directorate General of Technological and Polytechnic Universities
<b>DIGESUTPA</b> (SPANISH ACRONYM)	Peruvian Directorate for Higher Technological, Technical, Productive, and Artistic Education
<b>DISERTPA</b> (SPANISH ACRONYM)	Directorate of Technical-Productive and Higher Technological and Artistic Education Services, under the Peruvian Ministry of Education
<b>DRE</b> (SPANISH ACRONYM)	Regional Directorate of Education for the Province of La Libertad, Peru
<b>TVET</b>	Technical and vocational education and training

<b>NDT</b>	Non-destructive testing
<b>CBA</b>	Competency-based approach
<b>EFE</b>	Education for Employment
<b>FAB LAB</b>	Digital fabrication laboratory
<b>FC</b>	Fanshawe College
<b>HLG</b>	Pacific Alliance High-Level Group
<b>CTG</b>	Pacific Alliance Communication Technical Group
<b>GENDES</b>	Género y Desarrollo S.A., a non-profit Mexican civil society organization
<b>GREAREQUIPA</b> (SPANISH ACRONYM)	Arequipa Regional Education Office
<b>ETG</b>	Pacific Alliance Education Technical Group
<b>GTG</b>	Pacific Alliance Gender Technical Group
<b>LTG</b>	Pacific Alliance Labour Technical Group
<b>GTMACV</b> (SPANISH ACRONYM)	Environment and Green Growth Technical Group
<b>IDEX</b> (SPANISH ACRONYM)	Institutos de Excelencia (Institutes of Excellence), Peru
<b>IDI</b>	Humber's International Development Institute, Canada
<b>UEST</b> (SPANISH ACRONYM)	Institutos de Educación Superior Tecnológico (Higher Institutes of Technological Education), Peru
<b>UESTP</b> (SPANISH ACRONYM)	Institutos de Educación Superior Tecnológico Públicos (Public Higher Institutes of Technological Education), Peru
<b>UESTP-HDE</b> (SPANISH ACRONYM)	Instituto de Educación Superior Tecnológico Público Honorio Delgado Espinoza
<b>GE</b>	Gender equality
<b>INLAC</b> (SPANISH ACRONYM)	Instituto Latinoamericano de la Calidad (Latin American Institute for Quality)
<b>ISO</b>	International Organization for Standardization
<b>LMS</b>	Learning management system
<b>MED</b> (SPANISH ACRONYM)	Strategic instruction management
<b>MIG</b>	Metal inert gas welding
<b>MIHR</b>	Mining Industry Human Resources Council, Canada
<b>MIMDES</b> ( SPANISH ACRONYM)	Peruvian Ministry of Women and Social Development (now MIMP)
<b>MIMP</b> (SPANISH ACRONYM)	Peruvian Ministry of Women and Vulnerable Populations
<b>MINEDU</b>	Ministry of Education (Peru)
<b>NQF</b>	National qualifications framework
<b>RQF</b>	Regional qualifications framework
<b>NCC</b>	Niagara College Canada
<b>NSCC</b>	Nova Scotia Community College
<b>ILO</b>	International Labour Organisation
<b>ILO/CINTERFOR</b> (SPANISH ACRONYM)	Inter-American Centre for Knowledge Development in Vocational Training, under the International Labour Organisation
<b>SDGS</b>	Sustainable Development Goals
<b>ONAC</b> (SPANISH ACRONYM)	Colombian National Accreditation Body
<b>CSO</b>	Civil society organization
<b>PIP</b>	Program implementation plan

<b>PIIS</b> (SPANISH ACRONYM)	Mexico's Institutional Program for Substantive Equality
<b>PA-EFE PROGRAM</b>	Pacific Alliance Education for Employment Program
<b>RECCL</b> (SPANISH ACRONYM)	Pacific Alliance Network of Labour Qualifications and Certifications
<b>REDIPI</b> (SPANISH ACRONYM)	Colombian Network of Institutions for Innovation
<b>REMCAP</b> (SPANISH ACRONYM)	Pacific Alliance Network of Qualifications Framework Specialists
<b>ES</b>	Extractive sector
<b>SEMARNAT</b> (SPANISH ACRONYM)	Secretariat of Environment and Natural Resources (Mexico)
<b>SENA</b> (SPANISH ACRONYM)	Servicio Nacional de Aprendizaje (National Learning Service), Colombia
<b>SEP</b> (SPANISH ACRONYM)	Undersecretariat of Public Education (Mexico)
<b>SER</b> (SPANISH ACRONYM)	Secretariat of Foreign Affairs (Mexico)
<b>SES</b> (SPANISH ACRONYM)	Undersecretariat of Higher Education (Mexico)
<b>TESOL</b>	Teaching English as a second language
<b>TIG</b>	Tungsten inert gas welding
<b>TSU</b> (SPANISH ACRONYM)	Técnico Superior Universitario (University Higher Technician)
<b>UBE</b> (SPANISH ACRONYM)	Well-being and Employability Units
<b>UCN</b> (SPANISH ACRONYM)	Universidad Católica del Norte (Catholic University of the North), Chile
<b>UTCAM</b> (SPANISH ACRONYM)	Universidad Tecnológica de Campeche (Technological University of Campeche), Mexico
<b>UTLD</b> (SPANISH ACRONYM)	Universidad Tecnológica de La Laguna Durango (Technological University of La Laguna Durango), Mexico
<b>UTS</b> (SPANISH ACRONYM)	Unidades Tecnológicas de Santander (Santander Technological Units), Colombia
<b>WIM</b>	Women in Mining



