EDUCATIONAL APPROACHES TO FOSTER CLIMATE ACTION LEADERSHIP AMONG YOUNG PROFESSIONALS USING VIRTUAL ENVIRONMENTS

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EDUCATIONAL APPROACHES TO FOSTER CLIMATE ACTION LEADERSHIP AMONG YOUNG PROFESSIONALS USING VIRTUAL ENVIRONMENTS

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1. Introduction

Developing countries have reiterated the need to urgently build, enhance, and maintain systemic, institutional, and individual capacities to carry out climate actions and fulfill the goals of the Paris Agreement. This urgent need appears in most NDCs[1] and encompasses capacities for adaptation and mitigation actions across a variety of sectors. Despite consensus concerning this need, we have a limited understanding of most effective methods and approaches to specific capacity-building for climate action.

The objective of this paper is to contribute to the debate around effective capacity-building for climate action in developing countries, through a descriptive and analytical overview of virtual educational approaches currently underway in the global South, as well as provide insights and recommendations for those that provide and fund capacity-building.

Capacity-building, international development, and the UNFCCC: a brief background

Capacity-building has a long history that started with development programs and international institutions. It is an umbrella concept with a flexible definition under which many different projects and programs can be packaged and legitimized. Millions of dollars have been spent by bilateral and multilateral development agencies on capacity-building in developing countries, yet some studies indicate that, despite immense investment, these efforts have had little effect in practice (Keijzer, 2013).

When it comes to the climate change agenda, capacity-building has been part of negotiations under the UNFCCC since its inception in 1992. Article 6 of the Convention is dedicated to promoting education, public awareness, public access to climate change information, public participation in addressing climate change, and training of scientific, technical, and managerial personnel. This Article was the main basis for subsequent decisions and activities related to capacity-building. Similarly, Article 10 of the Kyoto Protocol provides for strengthening of research capacity, education and training of personnel, and institutional strengthening in developing countries.

Capacity-building activities under the UNFCCC are carried out under the capacity-building framework adopted at COP7 in 2001 as part of the Marrakesh Accords. The framework's guiding principles and approaches established that capacity-building should: be country-driven and based on the priorities of developing countries; be continuous, progressive, and iterative; be undertaken in an effective, efficient, integrated, and programmatic manner; take into account the special circumstances of LDCs and SIDS; promote learning-by-doing; rely on and mobilize existing national, sub-regional, and regional institutions and the private sector; and build on existing processes and endogenous capacities (UNFCCC 2002).

[1] *https://unfccc.int/topics/capacity-building-0*

Furthermore, Article 11 of the Paris Agreement highlights the importance of capacity-building as a key element for effective climate change action, where technology development and dissemination support country-driven approaches, interventions are based on and responsive to national needs, and country ownership is fostered. In addition, Article 12 stipulates that promoting education, training, and public awareness can be regarded as foundational for all other institutions, mechanisms, and processes (UNFCCC 2015).

The Paris Committee on Capacity-building (PCCB) was created in 2016, marking an important step to strengthening capacity-building and training for climate action. It focuses on three priority areas: enhancing coherence and coordination of capacity-building under the Convention, identifying capacity gaps and needs, and promoting awareness-raising, knowledge and information sharing, and stakeholder engagement[2].

Capacity-building for climate action: challenges and needs

In recent years, progress has been made in the delivery of capacity-building activities for climate action. The UNFCCC reported that 681 capacity-building activities were undertaken in 2015 by 16 international institutions, an increase of over 80% compared to 2012 (UNFCCC, 2016). On the UNFCCC Capacity-building Portal, 2,012 capacity-building activities were registered from 2015 until 2023, out of which 322 deal with education, training, and public awareness.[3] Most of them are centered in Africa (41.1%), followed by Asia and the Pacific (34%), Latin America and the Caribbean (20.4%), and Eastern Europe (4.5%).

Another report shows that climate-related capacity-building increased by 34.2% from 2015 to 2019, with investment increasing from 8.8 billion USD to 11.8 billion USD during the same period. Both the number of activities (an average of 53,000 activities per year, gradually growing over time) as well as the investment (averaging 430,000 USD per activity) increased (Casado-Asensio et al, 2022).

Overall, more national policies and dedicated government entities concerned with climate change are in place, a variety of awareness-raising and educational activities are being undertaken, and climate change is increasingly being integrated into school curricula. Also, more regional, national, and international networks for information sharing and cooperation have been set up, which increases climate awareness and the capacities of network members.

Despite these signs of progress, developing countries report persistent capacity gaps and needs in their National Communications and submissions to the UNFCCC (UNFCCC 2016). According to the PCCB Technical Report to the Global Stocktake[4] (2023, page 10), these include challenges related to: standardized data generation, collection, and analysis; governance and coordination; development of endogenous capacity; access to climate finance; and gender responsiveness. These gaps and needs are noted in different sectors and at all levels of government.

[2] *https://unfccc.int/pccb-network?gclid=Cj0KCQjw0bunBhD9ARIsAA-Zl0E14XlsNehu3x66AVHYtHj3tLv2jsfob7JrtmZtQsCDL7dF49q3ArDgaAoDPEALw_wcB*
[3] *https://unfccc.int/capacitybuilding/activities.html*
[4] *https://unfccc.int/sites/default/files/resource/PCCB_SR_GST.pdf*

These capacity constraints persist for a number of reasons, including: inadequate resources; challenges of retaining staff and skills for institutions; lack of ownership and leadership; lack of institutional arrangements and enabling environments; lack of coordination and fragmentation between capacity-building efforts at the sub-national, national, and international levels; and an ad hoc, short-term, project-based approach to capacity-building by aid agencies (Khan et al. 2016).

The literature on capacity gaps and needs is quite consistent in its findings, but there is little reflection on how capacities are constructed, or which approaches and interventions work best to encourage climate action and transform systemic, institutional, and individual capacities to fulfill the goals of the Paris Agreement. This paper directly addresses the need for further research by providing a descriptive and analytical overview of current capacity-building programs for climate action that make use of virtual environments.

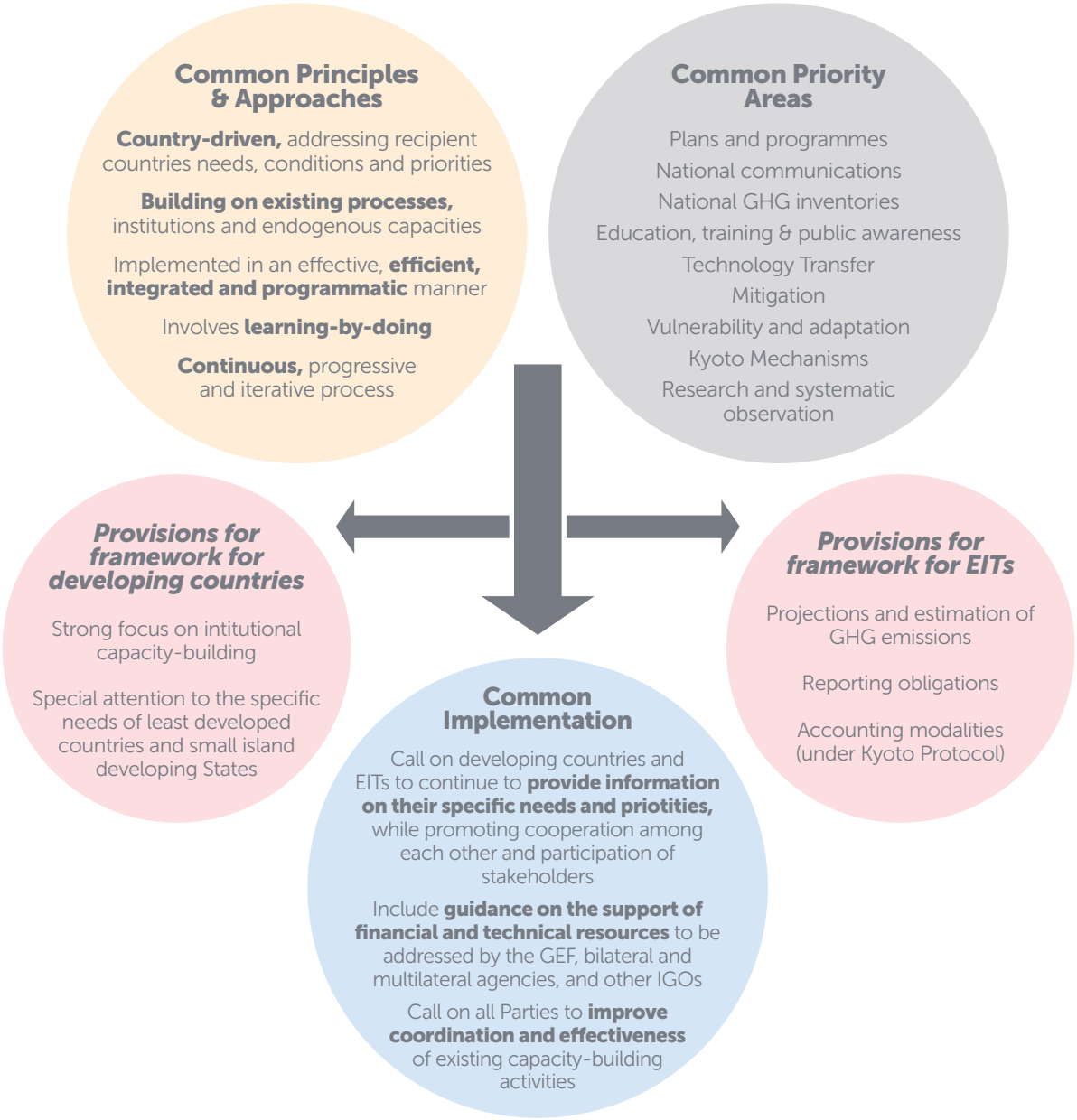
Framework for analyzing capacity-building in developing countries

For the purpose of this paper, we adopt the analytical framework proposed by the UNFCCC, we examine capacity-building at the systemic, institutional, and individual levels. Systemic capacity focuses on the overall structure within which institutions and individuals operate and interact, including policies, rules, and regulations; institutional capacity focuses on the capabilities and performance of institutions and their ability to adapt to change and cooperate with one another; lastly, individual capacity focuses on the development of knowledge and skills for effective participation, knowledge exchange, and behavioral change.

This paper also takes into consideration the capacity-building framework for developing countries as established in 2001 by the UNFCCC[5]. According to this framework, capacity-building for implementation of the Convention should be country-driven, build on existing processes and endogenous capacities, be implemented in an effective, efficient, and integrated manner, involve learning-by-doing, and be ongoing (see Figure 1).

[5] *https://unfccc.int/capacity-building%20frameworks#Reviews-of-the-implementation-of-the-capacity-building-framework-in-developing-countries*

Figure 1: Capacity-building Frameworks



Source: UNFCCC

A recent PCCB paper (2022) analyzes best practices and lessons learned with regard to enhancing country ownership of initiatives for building and maintaining capacity. According to the paper, holistic, multi-level, participatory, and collaborative approaches at all levels of capacity-building initiatives—from identification of needs to planning and design, implementation, and monitoring and evaluation—are essential to ensure country ownership, better informed and targeted interventions, efficiency, and effectiveness, thereby addressing the persistent challenge of building endogenous capacity.

Table 1. Recommendations and best practices for climate-related capacity-building. PCCB, 2022

Steps	Recommendations
Identification of capacity-building needs	The identification of such needs requires a holistic, multi-level, participatory, and collaborative approach to ensure that existing capacities and processes as well as perspectives of different stakeholders are appropriately reflected from the outset.
Planning and design of capacity-building intervention	Multi-level stakeholder approaches are key for enhancing country ownership of capacity-building. Building strategic alliances with non-Party stakeholders not only fosters ownership of capacity-building efforts, it also results in better informed and more targeted capacity-building interventions. The design and planning of capacity-building strategies, programs, and projects also needs to be based on national climate change policies and actions plans as well as on existing in-country expertise, experience, ability, and indigenous knowledge, to the extent possible; it should consider gender-balance and be gender-responsive; and it should reflect on how to best utilize existing capacity-building mechanisms, institutions, and processes to ensure coherence, efficiency, and effectiveness and avoid duplication of efforts. Adopt a flexible and adaptive management approach that allows for the readjustment of the type and scope of activities, if needed. Ideally, outcomes and results should not be designed and planned too narrowly.
Implementation of capacity-building	Capacity-building activities and materials need to be developed for or tailored to the national, sub-national, and local contexts, accessible in local language, and delivered by domestic experts and stakeholders as much as possible. Information and expertise need to be offered in a way that connects to the intended audience, for example showcasing relevance to their particular priorities, challenges, and needs. South-South cooperation is an effective modality for capacity-building for climate action that fosters country ownership, including at the national and local levels with the participation of Party and non-Party stakeholders.
Monitoring and evaluation of capacity-building	Working with a broad range of stakeholders can greatly facilitate data gathering and indicator-based evaluation approaches that may be impossible for government stakeholders. Monitoring and evaluation should be included with a focus on impacts, rather than on process, and requires provisions for evaluation efforts to take place about six to twelve months after the intervention has ended. Indicators for determining the effectiveness of capacity-building interventions need to be developed locally in line with local circumstances.

Different modalities for climate action capacity-building

There is a wide array of interventions and approaches used for climate action capacity-building. A synthesis report on the implementation of the framework for capacity-building in developing countries (SBI 2023) lists a number of them: "training, workshops, joint research projects by higher education institutions, scholarships, sharing of best practices on adaptation and mitigation, collaborative platforms for sharing climate data, establishment of networks, and awareness-raising campaigns."

According to Casado-Asensio et al (2022), some modalities, such as e-learning or networking and communication platforms, could provide an interesting alternative to traditional methods to support capacity development, in particular to raise awareness, train stakeholders, or offer educational programming. Studies show these approaches can be cost-effective, scalable, replicable, and impactful.

This paper centers on trainings using virtual environments and delivered by international organizations or NGOs.

This type of intervention is short-term in nature. It is worth noting that several authors have analyzed short-term training and longer-term programs. According to a qualitative study of adaptation capacity-building in Malawi (Mataya, Vincent & Dougill, 2020), there was an overwhelming consensus that the impact of customized, short-term training is more easily observable and immediately tangible than longer-term education. Reasons for this include the fact that the training programs were directly linked to adaptation interventions in which participants were involved through their organizations, and short-term workshops addressed immediate problems they faced. Trainers indicated that customized workshops often enable them to align case examples to issues relevant to participants.

Long-term education can include university-based or non-university programs lasting from several months to a few years. Some of the advantages include adequate time to learn and digest the material; availability of tutoring, mentorship, and research opportunities; and a deeper understanding of the issues. In Malawi, it was found that participants considered this type of education abstract, it requires more time, broad/generic, technical/scientific, and less relevant to the local context (Mataya, Vincent, and Dougill 2020).

There are clear disadvantages and advantages to both approaches. Long-term education programs have the goal of enhancing understanding, building knowledge, and laying the foundation for theories, concepts, and cognitive skills to foster creativity and critical thinking in designing adaptation strategies. Short-term training guides implementation and raises awareness of emerging technologies and approaches. Targeted training directly links the capacities built through education to the ability to implement adaptation strategies (Mataya, Vincent, and Dougill 2020). All these issues need to be considered when designing and planning capacity-building for climate action.

Furthermore, short-term training courses and workshops can be conducted virtually or in-person. In-person capacity-building can facilitate direct interaction between participants and trainers,

fostering better engagement and understanding, promoting valuable professional networks and relationships with peers and trainers, and providing other benefits. This type of training, however, involves logistical challenges, such as travel, venue availability, and accommodations, which can increase costs and limit accessibility, thereby excluding individuals who cannot travel to the physical location and limiting the reach of the program. On the other hand, virtual courses are accessible, flexible, and cost-effective, reaching a wider audience and eliminating geographical barriers.

Even among short-term virtual courses, there are significant differences between those that are asynchronous and self-paced, such as Massive Open Online Courses (MOOCs), and those that include synchronous sessions and more direct exchanges with teachers and fellow participants. MOOCs build on the active engagement of participants who self-organize their participation according to learning goals, prior knowledge and skills, and common interests (Hmoudova, 2014, cited in Coelho et al, 2015). Nevertheless, Spector (2014, cited in Coelho et al, 2015) argues that MOOCs are overstating the likelihood of having a significant and sustained impact as an educational technology. MOOCs can be used effectively to support existing learning and instruction, but as standalone environments they fall short without learning guidance, formative feedback, and overall assessment. In this regard, synchronous capacity-building may be better for facilitating group activities, discussions, and collaborative projects, thus fostering a sense of community among participants.

As mentioned above, this paper will center on capacity-building that uses virtual environments, including synchronous learning, to foster climate action leadership.

2. Methodology

The following methodological approach was used to map, select, and analyze short-term climate action training programs using virtual environments in the global south. These are referred to as capacity-building initiatives (CBIs) in this paper.

1. Selection. A set of criteria was developed to identify and select 10 CBIs to be analyzed. Those with in-depth knowledge of the field were consulted to identify courses that fit the criteria.

Criteria:

- Timeframe: 2015 - 2023
- Geography: Africa and Latin America (Global South)
- Language: Spanish, English, Portuguese
- Modality: virtual learning environments[6]

[6] *Massive Open Online Courses were excluded to prioritize courses with live interactions with trainers and peers.*

- Duration: 1-12 months
- Organizations involved: NGOs, governments, universities, United Nations system
- Goals: build climate leadership that leads to action
- Main topics covered: Climate change and cross-cutting issues such as: negotiations, gender mainstreaming, communications, climate finance, entrepreneurship
- Target audience: young professionals, women

2. Systematization. Desk research and inquiries concerning key subjects were performed to map potential CBIs to be analyzed. Based on recommendations of courses and the aforementioned criteria, 10 CBIs were selected. For each course, documentation was collected and the information was systematized in a factsheet, including key aspects (such as target audience, organizations involved, methodology, course content and approval, gender integration, and results). All 10 factsheets can be found in Appendix 1.

This approach helps to deeply and critically interpret experiences and places equal importance on both the process and result of knowledge development, specifically:

- examining the project and analyzing it from the real-life practices and experiences of its protagonists;
- reflecting on the actions carried out, assessing them, collecting learnings that could be applicable in similar settings, and taking into account institutional identities; and
- understanding the qualitative dimension through an interpretive and critical lens, moving beyond descriptive documentation to a process of collective reflection to capture the experiences and lessons learned from the perspectives of those involved.

3. Analysis. The CBIs were clustered according to their target audience, methodologies, results, and the way they lead to action. The analysis centered on results in terms of fostering climate action as well as ownership. Lessons learned and challenges were discussed, and conclusions were drawn based on the strengths and weaknesses of each approach after conducting a cross-comparison.

4. Discussion. To contribute to further understanding and debate, best practices and recommendations for educational programs to build gender-responsive climate action leadership are outlined.

3. Analysis of educational approaches to build climate action leadership

Overview of the selected Capacity-building Initiatives (CBIs)

Through the selection process, 10 CBIs were identified according to the criteria described in the methodology (Table 1). Eight CBIs engaged participants from Latin America and two, from Africa. An effort was made to include more case studies from Africa, but after wide consultation, it was difficult to find suitable experiences that fit the criteria.

Terminology used.

A ***course*** is a set of classes or a plan of study covering climate change and cross-cutting issues, usually leading to an exam or assessment.
An ***approach*** is a way of looking at teaching and learning. Underlying any teaching approach is a theoretical understanding of the subject and of how it can be taught/learned. An approach gives rise to methods, the way of teaching something, which use activities or techniques to help learners learn.
Teaching is fundamentally a ***process,*** including planning, implementation, evaluation and revision. Courses included in this research may be part of a larger program or grant-based initiative, and the course is one of the planned activities.
An ***initiative,*** in the context of this research, is a set of activities carried out to improve the capacity of people participating in climate change issues.
A methodology is a particular procedure or set of procedures. In education, it refers to a system of practices and procedures that a teacher uses to teach. It is based on beliefs about the nature of language and how a subject is learned (approach).

Table 1: Capacity-building initiatives selected for this analysis. Detailed information about each of the CBIs can be found in Appendix 1.

	Name of the Capacity-building Initiative	Implementing organization(s)	Timeframe	Action methodology
1	Academia Climáticas	Tremendas	4 months (2021 and 2022)	Development of solution idea linked to SDGs Calculation of carbon footprint through platform Field visits

	Name of the Capacity-building Initiative	Implementing organization(s)	Timeframe	Action methodology
2	Climate Change Adaptation and Mitigation in Africa	Institute for Climate, Energy & Disaster Solutions at The Australian National University	2 months (April 28 - June 9, 2023)	Development of adaptation action plan
3	Communicating climate change effectively	Fundación Futuro Latinoamericano and CDKN	2 months (May - June 2020)	Development of a proposal for a campaign/communication initiative related to a need in the sector of interest. 5 proposals were supported with seed funding for their implementation.
4	Implementing Climate Action in Latin America	Fundación Avina, GFLAC, FLACSO Argentina, in collaboration with ACTION LAC partners	3 months (2017 and 2018)	Development of a climate action plan. 5 plans were supported with seed funds for implementation.
5	Impulsouth Climate Leadership: from commitments to action - Latin America	FLACSO Ecuador, in collaboration with Fundación Avina, United Nations University – UNU – ViE	5 months (January - June 2022)	Presentation of a climate solution project. Selection of projects to participate at the Climate Solutions Lab (sessions and seed grant).
6	Impulsouth Climate Leadership: from commitments to action - Africa	United Nations University – UNU – ViE , in collaboration with Fundación Avina and FLACSO Ecuador	3 months (May - July 2022)	Presentation of a climate solution project. Selection of projects to participate at the Climate Solutions Lab (sessions and seed grant).
7	Integrating Gender into Climate Change Management	Fundación Futuro Latinoamericano - Government of Chile, UNDP, UN Women	9 months (March - Nov. 2021)	How to apply the gender lens to a project or current area of participants' work
8	Regional Capacity-building Process on Gender and Climate Change	Fundación Futuro Latinoamericano and CDKN	2 months (June and July 2022)	Proposal for the replication of the course in the locality of interest of the participant according to his/her field of action or professional field. Funding was provided to support improvement of their facilitation skills to replicate what they learned in their community.

	Name of the Capacity-building Initiative	Implementing organization(s)	Timeframe	Action methodology
9	Youth Climate Leaders	YCL Network	2 months, since 2018	Formation of hubs: YCL HUBs are focal points for the YCL Network in their respective regions and act as platforms to coordinate, promote, and multiply climate solutions and activities locally.
10	Youth for Sustainable Finance Program in Latin America and the Caribbean	Climate Finance Group for Latin America and the Caribbean (GFLAC)	2 months, in 2021 and 2022	Sustainable Finance Hubs created in 14 countries in the region, led by young people who took part in the program.

Source: the authors.

Some general insights on CBIs

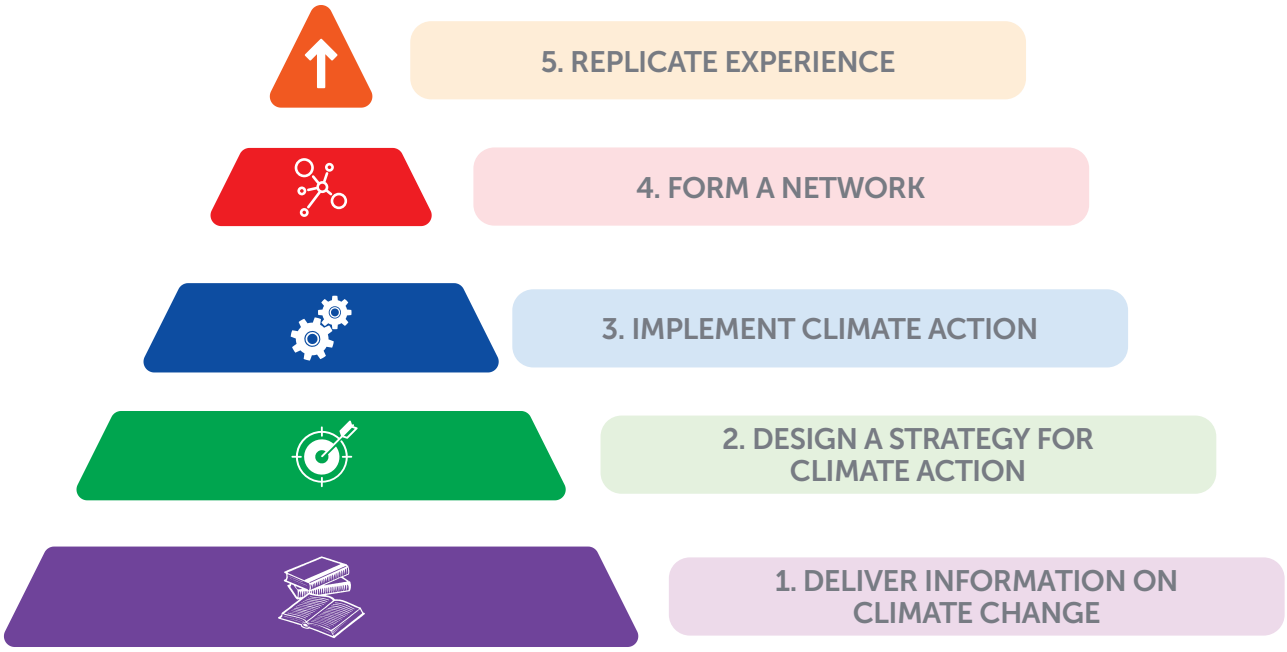
In this section, we explore and analyze the principal characteristics of the ten CBIs, defined here as short-term climate action trainings using virtual environments in the global South.

All of the selected CBIs were designed as a **process leading to climate action,** applying a comprehensive approach to build the capacity of participants, set actionable targets, and incorporate the knowledge acquired into their respective areas of practice. This approach aligns with the framework for capacity-building in developing countries (see Figure 1).

Another common characteristic of these 10 CBIs is that they went well beyond information delivery and provided **different types of incentives and requirements to foster action,** which were also prerequisites to obtain a certificate of course completion. For instance, some required participants to develop a strategy to implement a climate action, dealing with either adaptation and mitigation or cross-cutting issues such as communication, gender integration, or finance adapted to their local contexts. In some cases, there was the potential to scale up their actions through the formation of country hubs or by becoming trainers of other colleagues and country representatives on the topic.

While the 10 CBIs addressed capacity-building as a process and integrated requirements and incentives for action, they differed in their **levels of engagement to build climate action.** We identified five different levels (Figure 2).

Figure 2: Different levels identified in the climate action capacity-building process.



Source: the authors.

1. Deliver information on climate change. All of the CBIs imparted knowledge and information about different aspects of climate action (science, risks, vulnerability, adaptation, and mitigation) and then moved into other cross-cutting issues, depending on the course objectives, such as gender, finance, communication, etc.

2. Design a strategy for climate action. The first step toward action moving upward on the pyramid is the design of a plan or strategy for a climate action that could be implemented in the participant's country or local context. This is a key process where information is transformed into knowledge, knowledge being information in context to contribute to a specific action.

3. Implement Climate Action. The following step in capacity-building as a process is to offer participants the chance to present their ideas, either to the entire group or to a selected sub-group whose plans or strategies are selected through a pitching process. At this stage, participants access seed funding, mentoring, and other support services.

4. Form a network. This stage includes creating a formal network or hub of participants to further continue their engagement, laying the groundwork for sustainability.

5. Replicate experience. This ensures the scaling and replication of capacity-building concepts and approaches in other regions in a decentralized way.

When we applied the levels of engagement classification model to the ten CBIs described in this paper, we found that:

• **All CBIs enabled development of climate action strategies or plans, and 40% stopped at this level.** In all cases, participants needed to include the concepts covered in the course in a concrete plan or strategy tailored to their own contexts. This could be an adaptation action plan, communication strategy, or gender inclusion plan, among others. Each CBI employed its own methodology to help participants develop their plans and had specialized instructors/mentors available to support participants.

• **60% of CBIs advanced to the level of implementation of strategies or plans.** Five courses provided seed funding ranging from 2,000 to 5,000 USD to implement selected plans or strategies that participants developed through the course. This was an essential component to extend impact beyond the course, putting the designed action into practice, generating activities, developing products, and mobilizing climate action at the local level.

• **20% of CBIs advanced to establishing networks.** This was the case of the course Youth for Sustainable Finance Program in Latin America and the Caribbean, which formed Finance Hubs in 14 countries after the capacity-building process ended. Also, Youth Climate Leaders provided an incentive to form an alumni network after completing the course.

• **Only one CBI provided funding for scaling up or replicating** the capacity-building at the center of the training. This was the Regional Capacity-Building Process on Gender and Climate Change, which provided funds for replicating gender issue training in participants' local contexts. Three trainings took place in Apurimac (Peru), Loja (Ecuador), and Cartagena de Indias (Colombia).

Seed funding to promote climate action.

Impulsouth CBIs in both Latin America and Africa employed a comprehensive approach to promoting leadership through a special module called Climate Solutions Lab that focused on mentoring participants to design innovative climate solutions. Students then pitched their solutions, and those selected received seed funding to put them into action. Impulsouth invested 5,000 USD per solution, supporting 22 climate actions in Latin America and Africa.

In the course *Communicating Climate Change Effectively,* 5 of the 100 climate communication strategies presented by the participants were selected and received 2,000 USD each. These projects were diverse in nature and included communications campaigns and products to raise awareness of climate impacts suffered by children, adolescents, the rural poor, and women in Chile, Argentina, Peru, Ecuador, and Colombia. Project teams were in touch on a regular basis, and CDKN/FFLA facilitated a learning session at the end of the implementation period to exchange experiences and identify lessons learned. Five of

the projects were selected; they developed infographics, videos, web platforms, and short films that were recognized at a world film festival. Due the success of these projects, they received a further 5,000 USD each for a second phase of implementation.

Another pathway for scaling up and replicating impact was demonstrated by the *Regional Capacity-Building Process on Gender and Climate Change,* where participants from Ecuador, Colombia, and Peru were selected to participate in the virtual course. As part of the certification process, they had to develop a proposal for replicating the training in their local context. 15 of the participants were selected to attend a face-to-face training in Quito where they learned facilitation techniques to implement the training in their local communities. Gabriela Villamarín from CDKN said, "One of the challenges that we faced was choosing only three proposals to be replicated, one in each country, as all of them were high-quality." This train-the-trainers approach reached about 70 more people, in addition to those that participated in the initial training, and increased their knowledge and understanding of gender and climate change. The local capacity-building process reached 30 rural women leaders from the Peruvian regions of Ayacucho and Apurímac, 20 women from the province of Loja in Ecuador, and 21 participants from government agencies in Cartagena de Indias in Colombia.

The course *Implementing Climate Action in Latin America* also provided seed funding to implement selected climate actions. Furthermore, it offered participants the chance to go on an exchange trip. Two participants traveled to Costa Rica to learn from the experience of other participants. Students also had the opportunity to participate in that year's COP.

These examples show that concrete incentives provided an extra push, when compared with standard CBIs where a certificate was the only reward obtained after months of effort.

Description of CBIs: Diving deeper

The **main goal** of all analyzed courses was to build capacities related to climate action with a concrete focus on cross-cutting issues such as leadership, gender, communications, and climate finance. In terms of **topics covered,** though all the CBIs had different approaches to climate action issues, three focused specifically on the intersection between gender and climate change, one on communication, one on climate action, two on leadership, and one on finance; the rest took a more general approach and introduced participants to adaptation and mitigation issues.

The CBIs examined in this study covered a wide range of **target audiences.** One CBI concentrated on girls, adolescents, and young women from Latin America, two on young professionals, and the rest on representatives from civil society organizations and the public sector. Only one CBI in Chile was specifically targeted to government officials from different backgrounds that wanted to improve

their understanding of gender and climate change.

Several of the CBIs were **widely publicized** and generated high levels of interest. The CBIs where the most people expressed an interest in participating included the *Youth for Sustainable Finance Program in Latin America and the Caribbean,* for which a total of 3,720 applications were received for 500 spots in 2021, and 380 people successfully completed the program. This was followed by *Academia Climáticas,* where 1,470 young women and girls expressed interest in joining the 2021 and 2022 cohorts; *Implementing Climate Action in Latin America,* with 1,450 people showing interest in 2017 and 2018; and *Communicating Climate Change Effectively,* where 1150 people registered, 955 people started the course, 367 received certificates, and 109 presented a proposal for seed funding. *Climate Leadership: From Commitments to Action* received 818 applications for 40 spots in its Africa program, while in Latin America, 229 applications were received for 30 spots. Out of the 70 participants, 33 received certificates, and 31 presented their pitches for the Climate Solutions Lab. Eleven out of the 12 solutions developed were implemented.

All the CBIs had some sort of **criteria for entry, and most of them incorporated a selection process.** There was a strong focus on young adults, with at least 60% of the courses defining their target audience based on age. There was also an expertise criterion, with only 3 of the 10 courses having no sector-specific experience or level of expertise as an entry requirement. In this sense, three CBI were open to the general public, one to participants with a climate change background, and the rest targeted either NGOs, the private sector, academia, or government officials.

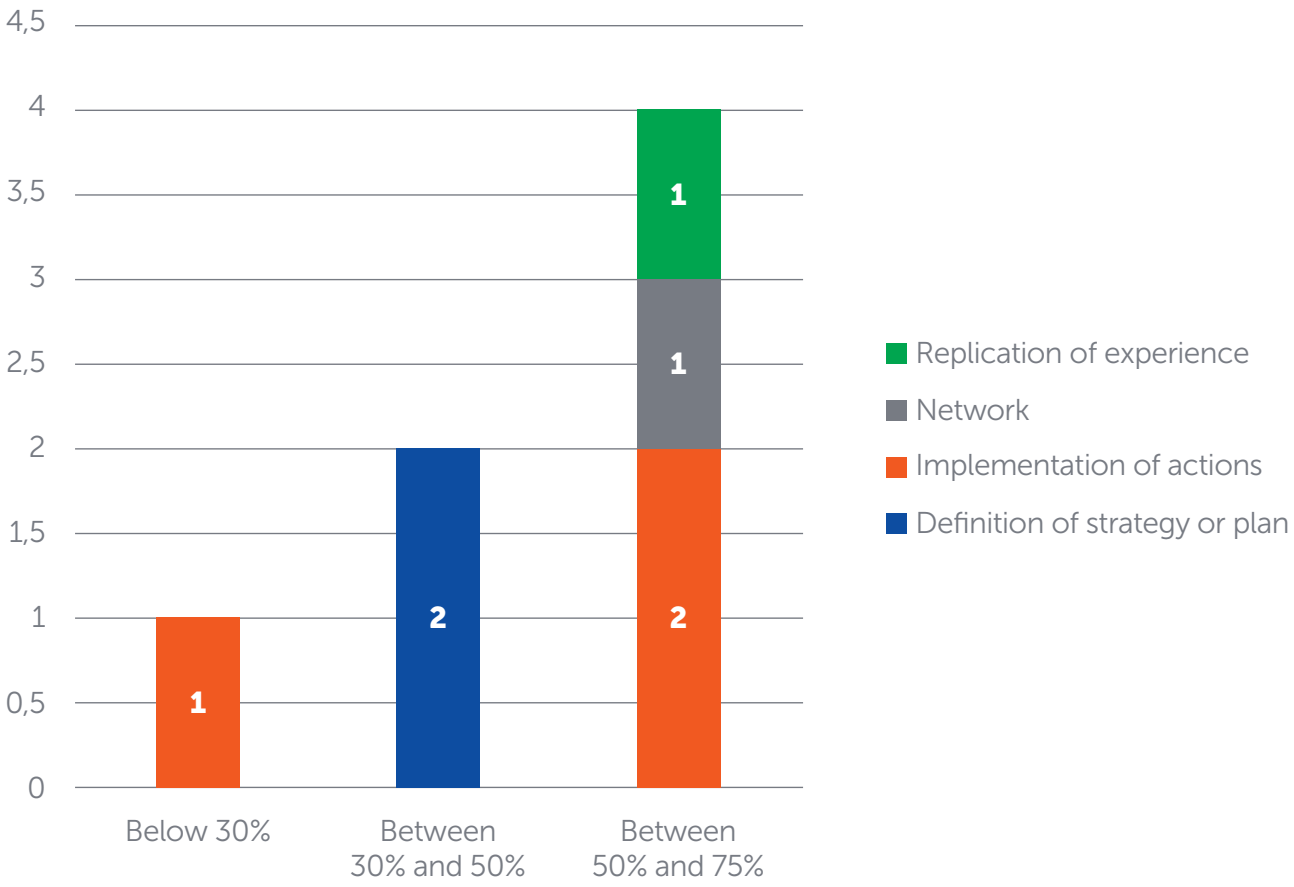
In terms of the **organizations involved** in the CBIs, 80% were led by civil society organizations (CSOs) that designed, coordinated and implemented the courses, but they also included other key stakeholders such as United Nations entities and government agencies. All received funding from bilateral donors, UN entities, or philanthropic organizations.

The **completion rate** was not available for all courses. Among the seven courses that recorded their completion rates, the majority (4 out of 7) had an average completion rate above 50%, two had completion rates between 30% and 50%, and one, below 30%. For those CBIs with lower completion rates, some participants (mostly women) indicated that job- or home-related responsibilities prevented them from allocating the time necessary to complete the course.

Overall, the completion rates were above average when compared to massive open online courses (MOOCs). The literature has shown that, on average, over 90% of participants abandon MOOCs (Ang, Ge, & Seng, 2020; Jordan, 2014; Reich & Ruipérez-Valiente, 2019), which is a far cry from what the CBIs in this analysis showed.

Our analysis also suggests that a focus on replication and network-building is associated with a higher completion rate. These findings make sense considering the structural causes of high MOOC abandonment rates, which often include a sense of being left to fend for oneself, feeling overwhelmed by difficult material, impersonal support, and time management challenges (Bañeres et al, 2023). Courses that are more personalized provide support for action and build community, thereby avoiding some of the pitfalls of MOOCs.

Figure 3: Completion rates by level of engagement to build climate action



Source: the authors.

When it comes to the **methodology for content delivery,** the main approach used was a combination of live sessions led by subject-matter experts and asynchronous activities that participants could complete on their own time, such as forums, chats, and social media engagement. This allowed participants to interact with one another and with instructors in different ways.

Most CBIs required participants to attend live sessions once or twice a week where an instructor would present key concepts, tools, and case studies. As will be analyzed in later sections of this paper, attendance of these live sessions posed a challenge for most of the CBIs, as course participants were occupied working, commuting, or performing caregiving duties. In general, these synchronous sessions lasted from 1.5 to 2 hours.

Some CBIs developed **their own materials.** For instance, Impulsouth developed a course designed by FLACSO Ecuador in collaboration with UNU that was used with both the Latin American and the African groups, with adaptations including the language of course delivery and contextualized case studies. CDKN based the course *Communicating Climate Change Effectively* on an existing

English-language guide developed by CDKN's Knowledge Management and Communications staff that was translated into Spanish.

This was also the case for the course *Integrating Gender into Climate Change Management,* for which a guide to mainstreaming gender into public policies[7] was developed; the *Regional Capacity-Building Process on Gender and Climate Change* used a toolbox[8]; and *Implementing Climate Action in Latin America* created a specific guide to support the design of a concrete climate action.

Students could **pass** a given course by fulfilling a combination of requirements, including:

- **Attendance.** In 50% of the CBI analyzed, minimum attendance of 80% of the live sessions was mandatory to obtain the certificate. If participants could not attend, there was a possibility of viewing recorded sessions, but it was a challenge to verify that participants viewed the recordings.
- **Assessments.** In all of the CBIs, after each session or group of sessions, participants had to complete a short assessment to verify that they understood the key concepts covered in the session(s).
- **Written assignment.** Also, in most CBIs that were synchronous, participants were required to develop a proposal or research document to put what they had learned into practice.

Certification. In all cases, the certificates issued were signed by the CSO, universities, or governments that provided the training[9].

Duration. 70% of the courses were 2 or 3 months long, while others lasted for 4, 5, or 9 months. The completion rate tended to decrease the longer the course. Most of the courses that lasted for 2 or 3 months had a completion rate above 40%, while courses that lasted longer show a completion rate below 30%. The only exception was the 4-month course *Academia Climáticas,* which showed a very high completion rate in the first year; it dropped, however, to below 30% for the second cohort.

Gender integration was a relevant topic. Three courses in Latin America and the Caribbean concentrated on the interface between climate and gender, addressing how women and girls are affected by climate change and how gender can be mainstreamed into climate policies and practices. In most of the CBIs analyzed, and for which data disaggregated by gender was available, the majority of participants were women, representing between 55% and 80% of participants.

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[7] *1. Vásquez, A., Clements, R., Pacha, MJ., Villamarín, G. (2021) Manual de gestión para la integración del enfoque de género en la acción climática. Ministerio de Medio Ambiente de Chile, Naciones Unidas Chile y Fundación Futuro Latinoamericano. Chile.*

[8] *"Toolkit for Capacity-building on Gender and Climate Change" (MAATE, UNDP, CDKN, FFLA, 2021).*

[9] *In the case of the Integrating Gender into Climate Change Management course, the certificate was signed by the Ministry of Environment at that time. In only two cases (Climate Adaptation in Africa and Youth for Sustainable Finance Program in Latin America and the Caribbean), universities (Cape Town and FLACSO Argentina, respectively) provided some type of certification, but it was not equivalent to a university degree or diploma. In the case of FLACSO Argentina, participants had the opportunity to apply the course as credits toward the master's certificate in Law and Economics on Climate Change and fulfill the necessary extra requirements.*

Shared challenges and best practices

The CBIs analyzed had a few features in common that led to both shared challenges and best practices. The following information was gathered mainly from interviews and desk study of websites and project reports.

- **CBIs often have ambitious goals and deliver complex course content in short periods of time for audiences from different backgrounds.**

  - **Challenge: Students lacked the basic understanding of climate change needed to follow the entirety of the course.** Climate change content can be extensive and complex, and therefore challenging to deliver in short periods of time. When participants lack a basic understanding of climate change, they may not be able to follow the course. Also, when the CBIs were co-offered by several organizations, it was often reported that it was time-consuming and complicated to obtain approvals of course content from all of the organizations involved.
  - **Best practice: Offering optional introductory sessions for leveling up knowledge.** Most CBIs included introductory sessions to leverage course participants' knowledge on climate change issues before diving deeper into specific topics such as gender, communication, and finance. For example, in the course *Integrating Gender into Climate Change Management,* the team included two extra sessions, in addition to the original eight sessions, for clarification of concepts and coursework.

- **CBIs often report a large number of applications and participants while employing a methodology that requires personalized attention and mentoring.**

  - **Challenge: High transaction costs.** For several CBIs, there was a high number of applications, ranging from 500 to 3,750. Processing this volume of applications was highly time- and resource-consuming. Furthermore, mentoring, follow-up, and personalized attention often entailed more work from the coordination team than expected. For one CBI, of the 500 young professionals selected, only 300 ended up participating, and representatives from the CSO that led the course indicated that they lacked the "human capacity to personally contact each of the remaining 200 people to follow-up."
  - **Best practices: Ensuring clear application requirements and publicizing the course in a targeted fashion.** To reduce the overload of applications, CBIs have explored different alternatives. For example, in the case of the *Youth for Sustainable Finance Program in Latin America and the Caribbean,* the application criteria were revised. For the second call for applications to the *Impulsouth Climate Leadership: From Commitments to Action - Africa* (2023), the selection criteria were revised to include one concrete climate action idea and English fluency was mandatory. This, together with a more targeted dissemination of the second call for applications, reduced the number of eligible applications from 229 to 19 for Latin America and the Caribbean, and from 818 to 222 for Africa.

- **CBIs that move up to the implementation level of engagement entail a competitive selection process.**

- **Challenge: Limited resources to support an abundance of worthwhile projects.** The three CBIs that offered seed funding for implementation faced difficulties in selecting only a few (3-10) of the proposals generated by participants when there were several of excellent quality.
- **Best Practice: Running pitching sessions and convening external evaluators to select projects.** The *Impulsouth courses Climate Leadership: From Commitments to Action* in Africa and Latin America convened external evaluators to assess participant proposals and pitches in a public session. Clear criteria guided the selection process.

- **CBIs generate engagement through live sessions.**

  - **Challenge: Lack of participant engagement in live sessions.** Students reported that this was mainly due to work and family obligations. Most CBI live sessions were on weekdays during times when people were commuting to and from work. It was reported that course participants were listening to sessions while traveling in their cars. This was not the case at the beginning of the COVID-19 restrictions when people had to work from home, but it was a challenge after people resumed commuting.
  - **Best practices: Providing a variety of flexible modalities for engagement.** Due to the complexity of dedicating time to the course, it is key to provide multiple engagement options to participants. For example, synchronous sessions need to be recorded so participants can view them on their own time if they could not attend in real time. Also, there needs to be asynchronous ways of interacting with course instructors and fellow participants via forums, social media, and online networks. For example, the CBIs had to adapt to the post-COVID context and some, such as the *Youth for Sustainable Finance Program in Latin America and the Caribbean,* allowed participants to attend the course asynchronously, but they were required to have a higher minimum score on the assessments.

- **CBIs sometimes have demanding requirements for completion.**

  - **Challenge: Course abandonment due to the perception of a high workload.** The CBIs often combined traditional academic requirements (like essays and surveys) with action-oriented requirements (like developing action plans) leading to an intense workload to complete the course and obtain a certificate. In the *Implementing Climate Action in Latin America* course, for example, participants were required to develop a climate action project in order to obtain a certificate. The key idea was to follow three main steps to design a climate action, and 55% of participants did not complete the project. Some of the reasons reported were that the guide to designing climate actions was considered difficult to follow and that participants lacked the time needed to complete the course requirements. *Impulsouth Climate Leadership: From Commitments to Action - Latin America* participants reported that it was difficult to fulfill all the course requirements, which combined attendance of theoretical and practical synchronous sessions, learning assignments, and presentation of a climate solution project.
  - **Best practice: Providing incentives for course completion and climate action.** Providing different types of incentives (certificates, seed funding, exchange trips, and COP travel

assistance) have proven to be key to ensuring participant retention.
• **Best practice: Incorporating participant feedback during the training.** A pause in the middle of the process to ask participants to provide feedback on the content, evaluate their progress, and gather their suggestions for improvement has a positive impact on the quality of learning outcomes and boosts active engagement among participants.
• **Best practice: Providing different learning paths to simplify course completion.**

• International aid does not ensure sustainability of CBIs.

• **Challenge: Keeping participant networks or hubs active beyond the course.** As mentioned in the previous section, two CBIs formed a network or hubs so participants could continue interacting and engaging in different climate actions. However,, keeping these networks active required human resources to follow-up, and it was difficult to maintain the energy and engagement of participants to continue with different actions without the right incentives in place. A post-program fund could be considered to support these networks.
• **Best practice: Incorporating group work.** Promoting group work during synchronous sessions encourages exchanges between participants and instructors. Also, group work creates synergies among participants that are from the same region or country.
• **Best practice: Promoting an institutional connection between the CBI and the participants.** Create a mechanism where institutions nominate and support staff with the interest and skills needed to receive the training. For example, in the case of *Impulsouth Climate Leadership: From Commitments to Action* in Latin America and Africa, a letter of support from the organization where the participant works was considered to be a plus in the application process. Students who had this institutional support developed climate action projects that could later be carried out in partnership with their organizations, such as the case of a solution using Geographic Information Systems (GIS) for the economic valuation of ecosystem services in Guatemala as an early alert tool for carbon emissions and carbon sequestration of cloud forests, led by a Guatemalan participant and supported by the Universidad del Valle.
• **Best practice: Collaborating with learning centers.** It is important that training courses are associated with universities or educational institutions that can provide sustainability to CBI beyond the lifespan of a project.

• CBIs often engage with diverse groups and contexts.

• **Challenge: Language barriers,** which appear in the case where participants speak different primary languages or dialects. One example is the case of *Academia Climáticas,* where the majority of participants were Chilean women who spoke very fast and with many idiomatic expressions, which presented a challenge for participants from other Latin American countries.
• **Best practice:** Some strategies to overcome language barriers include translation of written material, instructors' mindful adjustment of how they speak, and the use of simultaneous interpretation.
• **Challenge: Political and contextual obstacles.** Even though they were virtual, action-oriented courses asked participants to engage in real-life activities at local level, where

political and contextual factors can have a significant impact. For example, in the course *Regional Capacity-Building Process on Gender and Climate Change,* a face-to-face workshop coincided with a national strike that delayed the implementation of the replicated training.

• **Best practice: Flexibility.** Be mindful that, especially in the case of in-person activities, changes in schedules, plans, or locations may occur. Some suggestions include assessing the feasibility of rescheduling face-to-face trainings to a later date or a different venue, or exploring online alternatives.

4. Recommendations

In this section, we present our recommendations for **improving capacity-building in developing countries, based on our analysis of action-oriented capacity-building using virtual environments,** referred to as CBIs.

1. **To effectively produce concrete climate actions, define capacity-building as a process.** When the goal of capacity-building is to generate concrete climate actions, a CBI needs to go beyond imparting knowledge and information about recent climate change trends via online methods and actually facilitate a process that allows participants to apply, test, and build on training content as well as provide resources to put their ideas into practice via projects at the l ocal level. These can include networks, funds, mentoring, interactive sessions, etc.

2. **Know your target audience.** Climate change is a global issue, but its local impacts can look very different. For example, the impacts observed in Antarctica are not the same as those occurring in Africa; there is no one-size-fits-all solution. In this sense, knowing your audience is key to tailoring content about climate change and vulnerability. Understanding why and for whom capacity is built is essential and an important step in evaluating the effectiveness of capacity-building. Answering these initial questions can also help determine how the results will be evaluated.

3. **Promote local stakeholder engagement.** A comprehensive and participatory stakeholder engagement strategy helps ensure local knowledge and capacities are considered and captured in designing a CBI. Stakeholders can be assigned roles to help drive the process, foster ownership, or serve as champions during implementation. Potential roles can include: political and administrative oversight; assisting in designing the assessment; conducting research and participation in the assessment; analyzing and disseminating the results; and setting priorities for follow-up actions.

4. **Incorporate soft skills,** like leadership and empowerment, on top of issue-based skills, like

the science of climate change, risks, vulnerability, etc. This was key in the UNU-ViE experience in in delivering the Impulsouth course in Africa, especially in the Climate Solutions Lab, where participants were encouraged to develop entrepreneurial skills.

5. **Take a gender-sensitive approach** to virtual capacity-building to foster climate action leadership. Strategies include:

a. Integrate gender responsiveness objectives into the design and organization of the capacity-building process.
b. Ensure gender balance among participants and teachers.
c. Consult with partners and organizers to establish whether experts with relevant specialized gender expertise can be identified and included.
d. Encourage presenters, speakers, and resource persons to use gender-inclusive language. Gender-inclusive communication is specifically relevant in gendered languages where every noun has a gender associated with it.[10]
e. Ensure access to technology for women participating in the training.
f. Generate and strengthen technological capacities for using virtual tools.
g. Select times that are suitable for women to participate, so the capacity-building process does not conflict with the work and family responsibilities that continue to fall mainly to women.

6. **Adopt new approaches to teaching and learning.** To encourage climate leadership among young professionals, capacity-building should move away from traditional modes of delivery. Trainings should not only impart knowledge and information on climate change but also develop skills for responding to participants' local contexts. This involves action-research, leadership, and finding solutions to today's problems. The *flipped-classroom method of teaching and learning,* for example, was suggested in interviews as a possible approach, as it provides more flexible forms of engagement.

5. Conclusions

The aim of this paper has been to explore different educational approaches to foster climate action in the global South and provide insights and recommendations based on our analysis.

The first main conclusion is that capacity-building is a long-term process. More time needs to be dedicated by programs and donors to create innovative capacity-building models, as short-term

[10] *There are some examples and alternatives from Module 8 of the CDKN Gender and Climate Change Toolbox.*

courses are important, but on their own they are not enough to effectively build capacity (Mataya, Vincent, and Dougill 2020). It is widely accepted that effective capacity-building for climate action is a comprehensive and long-term process that requires ongoing interventions rather than ad-hoc and once-off engagements (PCCB 2022), either through short- or long-format capacity-building courses. Aid agencies have built-in incentives for project completion reports and short-term output-based results, but experience shows that countries where development aid plays a key role manage their own endogenous process to increase capacities (Khan et al. 2016). As highlighted in the Paris Agreement (Article 11.2), tackling climate change issues requires long-term, sustainable systems at the national level to carry out capacity-building functions for decades and generations to come. We examined different ways in which CBIs can ensure that ideas and plans are put into practice in local contexts, such as seed funding, formation of networks, replication of experiences, country exchanges, and attendance of key climate change meetings, among others.

Similarly, capacity-building must not be limited to imparting information; **it needs to convert information into individual knowledge that spurs public and private institutions into action.** Climate change information can be absorbed and put into practice through capacity-building efforts that encourage participants to develop strategies, plans, and projects that mainstream climate action in national and local contexts. This analysis shows that when extra support is provided in the form of seed funding, scaling up initiatives, or forming professional networks, capacity can extend beyond the training itself and become an ongoing process of knowledge transfer and co-creation at the community level. This opens up capacity-building to include multiple forms of knowledge and is a diverse, multidisciplinary, and more holistic approach, as suggested by other authors (Nautiyal and Klinsky 2022).

Furthermore, this analysis showed that domestic and international exchange of knowledge and expertise needs to be continuously supported to stay up-to-date with the latest developments (PCCB 2022). Forming professional networks and knowledge hubs in the countries where a CBI is implemented and providing financial support are other pathways to encourage the ongoing building and exchange of knowledge. This can also help foster local ownership and leadership of aid-supported capacity-building projects.

It is impossible to single out one approach to capacity-building for climate action as the most appropriate or effective. What the evidence points to is that capacity-building approaches need to be flexible, locally-driven and owned, and nurture a wide range of skills. This study also showed that capacity-building is a long-term process, and, in order to see concrete results, we must go beyond the idea of imparting climate change knowledge and encourage concrete action in the form of incentives, networks, and hubs.

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Appendix 1: Course Factsheets

Name of the training course	1. Academia Climáticas
Duration	16 weeks (4 months)
Target audience	Spanish-speaking girls, adolescents, and young women between the ages of 12 and 25 living in a Latin American or Caribbean country
Geography	Latin America and the Caribbean
Language	Spanish
Organizations involved	Organizer: Tremendas Sponsors: UNESCO, UNICEF, Chilean Ministry of Science, Technology, Innovation and Knowledge, Chilean Ministry of Women, Chilean Ministry of Education, Chilean Ministry of Environment, Catholic University of Chile, Facultad de Ciencias Agronómicas at Universidad de Chile, Universidad Adolfo Ibáñez, Universidad de Concepción, Universidad Austral de Chile, WWF, The Nature Conservancy, Sprite, ACCIONA, Fundación MERI, Fiis, Plastic Oceans Chile, Corporación Cultiva. Many of these universities and organizations provided lecturers and/or instructors for the different modules.
Goals	To train and empower girls and adolescents so that, through environmental knowledge with a gender perspective, they can lead local and global environmental collective action. Specific objectives: ● To create a space for intersectional and holistic environmental training with a focus on gender. ● To form a community of girls at the local and regional level for climate action with a gender perspective. ● To connect participants to local initiatives and networks. ● To integrate and bring together priority sectors of society. ● To promote youth socio-environmental action by promoting sustainable routines and initiatives.
Methodology	Classes are online and synchronous, held on Wednesday afternoons (1 hour and 15 minutes) and Saturday mornings (3 hours, with a 15-minute break). The classes are recorded, but do not count toward the certificate. There are 2 field trips, depending on the location of the participants, but attendance is not mandatory.
Course syllabus	Introduction to Climate Change: ● Causes and impacts of climate change ● Mitigation and climate resilience Forests: ● Forests and conservation

	● Native forests and biodiversity Fauna: ● Endangered species Oceans: ● Carbon sinks ● Marine ecosystems ● Ocean pollution Glaciers: ● Glaciers and biodiversity ● Glaciers and climate change Water: ● Water crisis ● Water crisis and how it is manifested Energy: ● ENRC ● Just energy transition Soils and agriculture: ● Agricultural production and climate change ● Food crisis ● Regenerative agriculture Responsible production and consumption: ● Production and globalization ● Consumption and local economy ● Circular economy Ecofeminism: ● Women and climate change ● Girls, education, and climate change ● Women and climate resilience Climate action: ● Activism ● Youth activism ● Change agents ● Collective action
Requirements to pass the course	Minimum attendance of 80% for a certificate of participation. 90% attendance or greater results in an honors certificate. In addition, a final group project must be presented.

How does the course lead to action?	There are 2 field trips, depending on the location of the participants, but attendance is not mandatory. In 2022, participants engaged in a field activity where they cleaned the banks of the Mapocho River in Santiago, with Map8 NGO. The activity involved more than 70 volunteers from Plastic Oceans, the Canadian Embassy, the Dutch Embassy, the Dutch School, and the participants of Academia Climáticas. 334.1 kg (~736.6 lb) of waste were cleared from 2.3 km (~1.4 mi) of the river bank, separating the materials with "Hope, recycling at home" carrying out the recycling of 11 kg (~24.3 lb) of waste. An invitation was extended to participants to engage in beach clean-ups in La Serena in Chile, Xcaret in Mexico, and Cartagena de Indias in Colombia. There is also a final group project: a solution idea linked to the SDGs that participants identify in their community. There are 4 project sessions and 4 mentoring sessions associated to this objective. They reach the design stage, not the prototype stage. Thirdly, the course provides participants and partner organizations with a digital platform associated with the carbon footprint, connections between communities, and promoting environmental causes. It includes: ● Eco-friendly actions with CO2 emissions equivalence ● Environmental dictionary and glossary ● Environmental panel and initiatives ● Conversation and outreach forum With these tools, participants can calculate the reduction of their emissions, publish it on their social networks, and encourage other participants to promote this type of action.
Is gender integrated, how?	● This is a course aimed only at women, or non-binary people who use she/her pronouns. It is built on the idea that girls' education is a climate solution. ● The modules are gender-sensitive. ● Ecofeminism issues are addressed. ● Efforts are made to have female instructors as well as female mentors.
Results	1,470 registered (824 in 2021, 646 in 2022) 1,199 participants (608 in 2021, 591 in 2022) 741 graduates (583 in 2021, 157 in 2022) The participants came from a total of 19 countries in Latin America and the Caribbean. In 2021, 597 actions were registered on the personal action platform, mitigating 8.4 tons of CO2.

Challenges	• After the pandemic, girls no longer want to spend so much time online, yet there is pushback against the face-to-face format. The biggest challenge is how to match a course aimed at the entire LAC region with face-to-face attendance, helping participants connect with other girls in their local area without fragmenting the community. • Many girls have been reached in a very short time. There was high enrollment at the beginning. • Challenge with financing: it is difficult to sell a non-formal education project. Funding has been mostly private. • Updating content: environmental information moves very fast. • Language issues: Chilean women speak very fast and with many idiomatic expressions, which was a challenge for participants from other Latin American countries. • Complexity of following up on projects. Not being able to help participants implement their projects because there is no funding available generates internal conflict. • Demands at school prevented some girls from connecting. The drop-out rate in the second year was 25%.
Comments from participants	"Climáticas has changed my life and my classmates' lives too, thank you very much." "These past few months have been very good and helped me realize that I am not alone on this path. Because it is always very lonely and very sad to start out on this, because you realize that many things are wrong." "It really is an experience that has changed me for the better. It has been the best thing so far this year. It opened up the doors to a wider sustainable environment, because I learned other options for sustainable consumption and zero waste; I reconnected with details about the ocean and forests, and I learned new ways to start a project. I am a different citizen before and after the Academy; and I say that, even as someone who has always been attracted to the environment, natural sciences, and earth sciences." "It was and is a very rich experience, rich in learning. There should be more opportunities like this, above all free of charge. Often girls stay away because they can't afford to pay. It was all very beautiful and meeting great people and sharing ideas was the best and incomparable."
Best practices	• Coordination of different knowledge and stakeholders from universities provided a diversity of viewpoints and expertise that enriched the course. • Follow up by email, Whatsapp or Instagram, class by class, with female participants, led to low rates of course abandonment. • Building a safe space with clear community guidelines, not allowing for bullying or disrespect among the participants or towards instructors, especially because the participants were very young.

	• Legal guardian permission is required to allow the participation of minors in the course, as many participants were under 21 years old.

Name of the training course	2. Climate Change Adaptation and Mitigation in Africa
Duration	April 28 – June 9, 2023 (2 months)
Target audience	Professionals from government agencies, non-government organizations (NGOs), the private sector, academia, and community-based organizations in Africa
Geography	Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, The Gambia, Togo
Language	English
Organizations involved	Institute for Climate, Energy & Disaster Solutions from the Australian National University; Australian Government Department of Foreign Affairs and Trade (DFAT)
Goals	To provide a contextual understanding of climate change impacts, adaptation and mitigation options available, and challenges to be overcome. By the end of this course, it is expected that participants who successfully completed all tasks will have the following skills and knowledge: • An understanding of the key foundational and advanced concepts and practices for effective climate change adaptation policy development and implementation. Also, a comprehension of the political, socioeconomic, regional and international risks, costs, and benefits these may entail. • An understanding of the science behind climate change impact and vulnerability assessment, including data collection and monitoring/surveillance mechanisms. Also, a comprehension of the methods and tools for developing and assessing climate change adaptation options with stakeholders. • A greater appreciation of the management of the environment, regulation, and legal aspects of governance as socioecological systems in which human behavior management is an intrinsic component. • Awareness of how to identify and critically consider the core components of international and regional legal frameworks, treaties, and institutions for responding to climate change for policy makers. • A greater appreciation of the complexities of national and regional coordination around climate change adaptation at different scales of governance, from the complexities of effective engagement with traditionally marginalized stakeholders to the complexities of multilateral action.

	• An appreciation of the shared challenges and contextual differences in climate change adaptation across the region, and the regional and national legal and policy responses and opportunities.
Methodology	This online course is delivered as an interactive mix of lectures and group discussions led by academics and practitioners with regional expertise in different aspects of climate change adaptation and mitigation. Monday – Lecture 1 & Lecture 2 (1-3 hour time block) Tuesday – no organized sessions (time available for individual work) Wednesday – Lecture 3 & Lecture 4 (1-3 hour time block) Thursday – no organized sessions (time available for individual work) Friday – Lecture 5 & AAP Session (1-3 hour time block) Note – Lectures include presentations, activities, group discussions and/or interactive sessions. Week 6 of the course is a flipped classroom, where participants present their Adaptation Action Plan (AAP) assignments to the other participants, lecturers, and government representatives. Overall, participants spend between 40-50 hours on the course. This includes between 5 and 8.5 hours per week online in weeks 1-5 of the course, 2 hours of individual work per week on the AAP assignment or preparation for Group Activity sessions, and attendance at the week 6 AAP presentations.
Course syllabus	The complexity and intersections of climate change adaptation and mitigation are delivered via 6 weekly modules, incorporating economics, ecology, sustainability, governance, politics, regulation, environment, human rights, gender, and social inclusion. • Week 1: Why Climate Change Adaptation? Understanding Drivers of Action, and Moving from Science to Action • Week 2: An Introduction to Systems Thinking for Climate Change Adaptation in Africa • Week 3: Health and Food Security in a Changing World • Week 4: The Importance of Systems Thinking, Gender and Finance in Responding to Climate Change • Week 5: Water Resource Management, the Role of Partnerships, and Disaster Preparedness • Week 6: Integration of Learning Outcomes and AAP Completion
Requirements to pass the course	To qualify for an ANU Certificate of Completion, participants must (at a minimum): • Develop and present a satisfactory Adaptation Action Plan (AAP). • Engage in the course online discussion forums – submitting at least 2 comments/questions. • Attend a minimum of 50% of the course's online sessions – recordings will be available for missed sessions. • Complete the course surveys.

How does the course lead to action?	Assignment: Adaptation Action Plan (AAP) The AAP assignment runs throughout the course, with a session devoted to AAP development each week. The development of the AAP is self-directed but with support from the Course Convenor and AAP Mentors. Over the first five weeks of the course, participants are supported to develop their AAP idea into an operational plan. In developing the plan, participants are asked to consider what type of adaptation action they want to undertake, who the active stakeholders would be, timelines, and expected outcomes. In week 6, participants present their AAPs within the online classroom to their fellow participants. The presentation of an AAP is one of the mandatory requirements to qualify for an ANU Certificate of Completion for this course.

Source: https://iceds.anu.edu.au/climate-change-adaptation-and-mitigation-africa-region-3

Name of the training course	**3. Communicating Climate Change Effectively**
Duration	May - June 2020 (2 months)
Target audience	Communications professionals and other climate action advocates working in developing countries. They do not necessarily need to be trained communications professionals, but can be technical, professional, and academic staff who want or need to apply elements of climate change communication to promote climate action in their field.
Geography	Latin America - Regional
Language	Spanish
Organizations involved	The course was coordinated and implemented by six networks from LAC members of CLIKHUB including: Fundación Futuro Latinoamericano/CDKN, Health Care Without Harm, Practical Action, ICLEI, ActionLAC/Avina, Red Regional de Cambio Climático y Toma de Decisiones
Goals:	The main goal was to share strategies, tools, and tips to help communicate climate change effectively. Specific Objectives: ● To provide a basic overview and the technical tools necessary to train course participants on how to communicate climate change for effective action. ● To examine opportunities to make connections between the big picture and people's local experience; between scientific knowledge and local knowledge. ● To strengthen participants' capacities on climate change issues.

Methodology	The course was composed of 7 virtual modules that were delivered via live sessions every Tuesday from May 5 to June 16, 2020. The course was based on the CDKN guide: Communicating Climate Change: A Practitioner's Guide This guide shares tips for communicating climate change effectively and was written by CDKN's Knowledge Management and Communications staff and translated into Spanish from the original English version. Supplemental materials were developed for each module with a specific case study from the participating networks on how they focus on climate change communication. Since August 2020, the modules have been available on the CDKN youtube channel.
Course syllabus	Areas covered by the course include: • Understanding the audience • Engaging with the audience at different stages of the communication process • Making climate communications more creative and using data visualizations well • Helping sound climate science go viral • Debunking myths about what kinds of communications and engagements work best for different audiences • Taking into account the knowledge of communities and citizens to effectively raise awareness and understanding of climate issues • Amplifying voices that are seldom heard
Requirements to pass the course	• Pass the online quiz at the end of each module • Minimum attendance of 80% to obtain the certificate • Prepare a proposal for a campaign/communication initiative related to a need in the sector of interest
How does the course lead to action?	The most interesting proposals were supported with a small seed funding grant to cover the full or partial implementation of the initiative. The projects were carried out in Argentina, Chile, Perú, Ecuador, and Colombia. More information here. Learnings from each experience is available here.
Is gender integrated, how?	• Gender was not mainstreamed in the course, but there was a specific module about women as seldom heard voices. • 70% of participants were women.
Results	• The course was very successful with 1,150 registrants from 26 countries. 955 people started the course. CDKN/FFLA provided seed funding for the implementation of five selected projects and communication campaigns in the region that produced several climate knowledge products. • 46% completed the course. • 367 people received a certificate and 109 presented proposals for seed funding.
Challenges	• A large number of people registered, and it was a challenge to manage all of them.

	• The course entailed more work from the coordination team than expected.
Comments from participants	"It is definitely one of the best courses I have taken. I loved participating in each topic, as it was simple, direct, and presented the theoretical part and case studies. I am a PhD researcher and I am currently coordinating a research project in Peru and Lima; however, this course was an inspiration and gave me a lot of ideas about how to communicate science effectively, something that was already in my plans and that I was able to practice during the course." Participant from Lima, Peru
Best practices	• **Design**: Engaging different stakeholders from the region (members of Clikhub) to be involved in the design and implementation of the course • **Audience:** Broad • **Students involvement:** High, over 500 people attended weekly live session • **Completion rate**: ⅓ of registrants obtained a certificate • **Course duration**: Short (7 modules) • **Modality:** Mix of 1 live session per week and self-paced with concrete case studies from the region in each module • **Approval rate:** High and flexible criteria for passing, as modules could be viewed on one's own time • **Climate action:** Seed funding available to selected projects that led to 5 climate change communications strategies being implemented locally

Name of the training course	4. Implementing Climate Action in Latin America
Duration	10 - 12 weeks
Target audience	Open to young professionals interested in climate change. 600 representatives of institutions from all three sectors of society from Latin America with a focus on local action and intermediate climate change knowledge.
Geography	Latin America
Language	Spanish
Organizations involved	Action LAC/Fundación Avina together with GFLAC, FLACSO Argentina, LabCis
Goals	The climate action capacity-building process seeks to strengthen the capacities of non-state actors and sub-national governments in implementing climate action aligned with their countries' NDCs and with the goal of keeping global warming below 1.5 degrees Celsius.
Methodology	45 hours total, combining 20 hours synchronous and 25 hours asynchronous. The methodology combined four learning styles: reflexive, theoretical, pragmatic and active. • 16 technical and interactive sessions with 27 climate leaders. • Supervised practical exercise to apply knowledge and design climate action goals.

	• Access to supplemental materials. • Exchange sessions between participants. • Exchange trip to Costa Rica (2018). • Opportunity to participate in COP23. • Opportunity to have a page on the ActionLAC website. • Certificate of participation. A specific guide was developed to support the design of climate actions.
Course syllabus	• Introductory Module: What is climate change? • Module 1: Changes in global climate governance and their connection to the SDGs • Module 2: Introduction: How to define actions to be taken towards low-emission and climate-resilient development • Module 2: Mitigation Session • Module 2: Adaptation Session • Mitigation Exchange Session • Exchange Session on Adaptation • Module 3: How to implement and monitor climate action
Requirements to pass the course	• 80% attendance of the online sessions and participation in at least 1 forum. Students could obtain a participation certificate. • On completion of the climate action planning process, a special mention certificate could be obtained.
How does the course lead to action?	• Students could develop a climate action plan following the course methodology. • Students needed to develop a climate action plan. 5 projects per year received a small amount of funding (2,000 USD) for implementing their actions. • Exchange trip to Costa Rica. • COP participation. In total, 24 participants from 12 institutions designed climate actions, and 10 reached the final stage of publishing their action on the ActionLAC website.
Is gender integrated, how?	Gender distribution of participants: 55% were women in 2017; 55% in 2018
Results	• 1,450 registrants: 779 in 2017, 671 in 2018 • 327 participants: 132 in 2017, 195 in 2018 from 46 institutions • 21 countries represented • 93 climate action plans designed, and 10 received 2,000 USD in seed funding to implement their plans • 65 certificates issued by FLACSO Argentina (2018) In 2018, 195 participants fulfilled all requirements for receiving a certificate by ActionLAC (80% attendance). Of those, 65 also received a FLACSO certificate.

	At the end of the course, an external evaluation was carried out, according to which 95% of the respondents considered that their knowledge about experiences in the region increased, as well as their knowledge about climate change (90%). 81% reported that they have more tools to build a climate action.
Challenges	Development of climate actions: A key component of the course was to follow 3 steps to build a climate action. 45% of participants completed the steps but the rest could not, due to different factors, including the perception that the guide to developing climate actions was considered too difficult and the lack of time to dedicate to it.
Comments from participants	"I liked the way of linking knowledge to action and the presentation of examples of important ongoing actions. They showed us how to build a climate action goal in a clear and simple way. It was an excellent course." "The course was particularly innovative in presenting a methodological and conceptual tool to develop climate action goals in a clear and informative way. In this sense, it has a lot to offer for all types of organizations and institutions as it facilitates the process and the collective construction of the objectives one wants to achieve."
Best practices	• The course provided a detailed **step-by-step guide** on how to develop a climate action plan that participants could apply it to their own context. • **Different types of incentives** (certificate, seed funding, exchange trip, and COP participation) were key to encouraging participants to complete the course.

Name of the training course	5. Impulsouth Climate Leadership: From Commitments to Action - Latin America
Duration	January 18 – June 18, 2022 (5 months)
Target audience	Open to 30 young leaders from 2 countries (Dominican Republic and Guatemala)
Geography	Latin America
Language	Spanish
Organizations involved	Fundación Avina together with FLACSO Ecuador, United Nations University – UNU – VIE Funded by IDRC

Goals	**General objective of the course:** To increase knowledge and capacities to improve climate action in global South countries and their involvement with the Paris Agreement ambition cycle. **Specific objectives:** ● To understand how the climate ambition cycle contributes to the implementation of the commitments set out in the NDCs. ● To apply the criteria for the design, monitoring, and verification of goals and indicators that go into reporting progress toward the NDCs. ● To identify opportunities for climate innovation, including practices, methodologies, technologies, and knowledge of state and non-state actors. ● To determine the climate rationale and the resources available to design bankable climate projects. ● To design the profile of a climate action / innovation project (applicable for the public sector or non-state entities).
Methodology	240 hours total, combining 80 hours synchronous and 160 hours asynchronous. The course was divided into four thematic modules: 1) Climate ambition cycle, 2) Climate innovation, 3) Climate monitoring and reporting, and 4) Climate finance. The 5th module (practical module) consisted of 8 synchronous interactive sessions every other Saturday (pre-incubation). This module ran in parallel to the other four, each of which was broken down into eight (8) sessions, four (4) of them theoretical-conceptual (thematic presentations) and four (4) practical sessions (problem-based learning, case studies, seminars, digital tools, among others) over the course of four (4) weeks.
Course syllabus	https://impulsouth.org/wp-content/uploads/2023/05/Spanish-Teaching-Guide.pdf
Requirements to pass the course	● 80% attendance of synchronous sessions. ● Learning assignments throughout the modules. ● Assignment at the end of modules 1-4. ● Presentation of climate solution project.
How does the course lead to action?	Students could develop a climate action plan following the course methodology. They pitched their solutions, and 4 projects from LAC were selected to participate in the Climate Solutions Lab (sessions and seed funding grant). In total, 8 solutions were presented (5 women and 3 men). 4 women's projects were selected to go on to the next phase of the capacity-building strategy.
Is gender integrated, how?	● Participation: 70% of selected participants were women. ● 62.5% of participants that completed the course were women. ● 100% of the selected solutions were designed by women.

Results	● 229 applicants ● 30 participants, 8 completed the course ● 2 countries ● 8 solutions were designed, 4 were implemented ● 20,000 USD was granted for implementing solutions 8 participants (26.7%) fulfilled all requirements to receive a certificate and presented their solutions for the Climate Solutions Lab, while another 4 participants passed between 2 and 4 modules. There was an assessment after each module, with 32 questions covering 7 different areas: module organization, session organization, session structures, content, teaching methods, assessments, and competencies after completing the module. Scale: 1-5 Highest rated module: Module 5 – Solutions Lab: 4.93/5 (equivalent to 98/100). Lowest rated module: Module 2 - MRV: 3.94/5 (equivalent to 78/100).
Challenges	● The course was designed during the pandemic and implemented when people were returning to work. This meant that at the time of registration, people had time to dedicate to online training, but as people returned to work, finding a time to take an online course was harder. This could also explain the results of the course in LAC. ● **Low attendance** of synchronous sessions. ● **Low participation** in the delivery of learning activities; 40% failed three modules (6 participants); and 40% failed two modules (6 participants); 80% of the participants failed the course due to not fulfilling the requirements (attending sessions, participating in the forum, submitting the final assignment). ● **Low completion rate.** Only 20% passed the course with high academic performance (3 participants). ● **Slow progress on the final projects.** As indicated in the analysis of the reports as well as in interviews, three projects have shown high levels of progress, but the remaining five have low levels of progress and participants have not attended class or requested support. ● **Course instructors had difficulties in moving from traditional teaching methods to more innovative ones.** As indicated in the interviews, FLACSO Ecuador was interested in making the classes more dynamic, with 15 minutes for theoretical content and more time for interaction with participants, questions, collaborative work, or practical exercises. To accomplish this, the theoretical content needed to be recorded by instructors in the form of short videos. However, this involved a lot of extra work for instructors, as they had to deliver a professional recording without the necessary experience. It was reported

	that instructors had to record a video over 8 times. So, it was easier to deliver the class directly.
Comments from participants	"I loved the course, but my work and other situations prevented me from finishing it. I hope that in the future I can do it as I am quite involved in this issue." "It was unsustainable for me due to workload and travel obligations. It seems to me that 3 classes a week, plus the dense content to read, was too much for a course." "It seems to me that the amount of mandatory tasks were too much considering that we also had to develop the final project. I would have liked to just concentrate on developing the final project and attend the virtual sessions or be able to see them on my own time." "The time required exceeds the reality of what participants can manage. It should be noted that we are people who already have work or family responsibilities. And the time demanded by homework, class assignments, and sessions was too much!"
Best practices	• **Different types of incentives** (certificate, seed funding, and participation at regional events and COP) were key to encouraging participants to complete the course. • The training program was very comprehensive with a variety of up-to-date content and the resources generated should be used in other climate change capacity-building processes. • The Climate Solutions workshop (module 5) was key and motivated participants to develop their climate action. • The methodology was adaptive and the same content/proposal could be deployed in different forms as best suited to each context. • Based on instructors' comments, participants that were able to complete the training program performed at a high academic level, and their logic and approaches to climate change were improved.

Name of the training course	**6. Impulsouth Climate Leadership: From Commitments to Action - Africa**
Duration	May 1 – July 31, 2022 (3 months)
Target audience	Open to 40 young leaders from 4 countries (Madagascar, Niger, Uganda and Zambia)
Geography	Africa
Language	English and French
Organizations involved	Fundación Avina together with FLACSO Ecuador, United Nations University – UNU – VIE Funded by IDRC

Goals	**General objective of the course:** To increase knowledge and capacities to improve climate action in global South countries and their involvement with the Paris Agreement ambition cycle. **Specific objectives:** ● To understand how the climate ambition cycle contributes to the implementation of the commitments set out in the NDCs. ● To apply the criteria for the design, monitoring, and verification of goals and indicators that go into reporting progress toward the NDCs. ● To identify opportunities for climate innovation, including practices, methodologies, technologies, and knowledge of state and non-state actors. ● To determine the climate rationale and the resources available to design bankable climate projects. ● To design the profile of a climate action / innovation project (applicable for the public sector or non-state entities).
Methodology	**282 hours total**, combining 26 hours of assisted learning (1-2 sessions, 2 hours each, per week), 84 hours of self-paced lectures, and 172 hours of offline learning (68 practical labs / 104 autonomous learning). The course was divided into five modules: 1) Climate ambition cycle, 2) Climate monitoring and reporting, 3) Climate Innovation, 4) Climate finance, and 5) Climate Solutions Workshop. The first 4 consecutive modules combined asynchronous lectures (self-paced) with 16 live sessions (average of 2 per module) spread among modules 1-4. The 5th module consisted of 12 synchronous sessions. This module started with one session in parallel to each module, and with a greater focus and concentration of sessions following the other four modules (Climate Solutions Lab).
Course syllabus	English: https://impulsouth.org/wp-content/uploads/2023/05/English-Teaching-Guides.pdf French: https://impulsouth.org/wp-content/uploads/2023/05/French-Teaching-Guides.pdf
Requirements to pass the course	● 2 self-assessments over the course of each module: a) theoretical/conceptual content, i.e. to actively engage and read all course materials; and b) by attempting all multi-choice questions in a quiz at the end of each session. ● A written essay at the end of modules 1-4. ● Submission of a project proposal for the Climate Solutions Lab. ● Each of the theoretical modules contributed 10% and the Climate Solutions Lab workshop contributed 60% to the final grade.
How does the course lead to action?	Students could develop a climate action plan following the course methodology. They pitched their solutions, and 8 projects from Africa were selected to participate in the Climate Solutions Lab (sessions and seed funding grant). In total, 23 solutions were presented (12 women and 11 men).

Is gender integrated, how?	• Participation: 62.5% of selected participants were women • 52.1% of participants that completed the course were women • 50% of the selected solutions were designed by women
Results	• 818 applicants • 40 participants, 23 completed the course • 4 countries represented • 23 solutions were designed, 7 were implemented • 40,000 USD was granted for implementing solutions 18 participants (45%) fulfilled all requirements to receive a certificate and 23 presented (57.5%) their solutions for the Climate Solutions Lab, while another 4 participants passed between 2 and 4 modules. There was an assessment after each module, with 20 questions covering 5 areas: module duration, workload, content, instructors, and participant performance. Scale: 1-4 Highest rated module: Module 5 – Solutions Lab: 3.50/4 (equivalent to 87/100). Lowest rated module: Module 2 - MRV: 3.06/4 (equivalent to 76/100).
Challenges	• In Africa, 62% of the initial cohort were women and 50% of those who received the certificate for completing the entire course were women. • Internet accessibility and bandwidth. • **Language issues** for francophone participants. As indicated in the comments provided in the participant survey, it was a challenge to francophone participants to follow the instructors, as live sessions were delivered in English with no direct interpretation into French. • A lot of participants are also **working** and were unable to attend the live sessions, but this was addressed by having recorded sessions available and fewer sessions per module.
Comments from participants	"In the future, maybe each module should be 4 weeks long to allow the participant to read more about the module." "The duration of the course is right only if you do not have a lot of other things to do (work, etc.) or if you are already familiar with topics of discussion." "The course was much appreciated. But there needs to be more live sessions to further explain the content, in particular to those joining the program later (new participants). Several work sessions, practical exercises, exchanges between participants ..... I really liked the approach."

	"It was useful in that I got to learn about the necessary tools for my professional development with regard to research. I learned how to transform ideas into a business venture well providing a climate solution to humankind impacted by climate change."
Best practices	• **Different types of incentives** (certificate, seed funding, and participation at regional events and COP) were key to encouraging participants to complete the course. • The training program was very comprehensive with a variety of up-to-date content and the resources generated should be used in other climate change capacity-building processes. • The Climate Solutions workshop (module 5) was key and motivated participants to develop their climate action. • The methodology was adaptive and the same content/proposal could be deployed in different forms as best suited to each context. • Based on instructors' comments, participants that were able to complete the training program performed at a high academic level, and their logic and approaches to climate change were improved.

Name of the training course	7. Integrating Gender into Climate Change Management
Duration	March - November 2021 (9 months)
Target audience	Chilean government officials and public servants dealing with 4 prioritized sectors (agriculture, fisheries, biodiversity, and infrastructure) as well as leaders on gender and climate change issues from other parts of Latin America. Specific government agencies include the Ministry of Environment (nationwide), members of the Gender and Climate Change Technical Roundtable, the Gender Equality Commission, and Chilean counterparts to the aforementioned Latin American leaders. The audience began with a low to medium level of knowledge regarding gender and climate change concepts, tools, and experiences.
Geography	Mainly Chile, but extended to leaders on gender and climate change issues from other parts of Latin America
Language	Spanish
Organizations involved	Fundación Futuro Latinoamericano - Chilean Ministry of Environment - UNDP - UN Women - CEPAL
Goals	To strengthen understanding of conceptual and methodological frameworks for gender mainstreaming in climate change management.
Methodology	Total training time: 30 hours including synchronous and asynchronous activities. • **11 synchronous sessions** on Zoom with the use of digital tools to encourage virtual participation such as Mentimeter, Mural, Kahoot, and Google Docs. These sessions took place weekly and lasted 1.5 hours each.

	• Support materials were shared via the Chilean Ministry of Environment's Adriana Hoffman platform. 8 synchronous sessions combined presentations of conceptual content delivered by facilitators, with additional presentations of case studies given by invited guests as well as group activities or other interactive components. 3 extra sessions were included at the beginning, middle, and end of the course to introduce the course; to review, discuss, and consolidate what was learned during the previous modules; and to give more space for questions, answers, and exchange. • **Self-directed learning / asynchronous activities included:** a virtual forum for interaction and one practical assignment per session to apply knowledge to participants' local context.
Course syllabus	Focus on gender, intersectionality, and climate change. Each of the 4 modules was comprised of 2 sessions for a total of 8 sessions. • Module 1: Sustainable development, climate action, and gender equality • Module 2: National and international regulations and instruments related to gender and climate change • Module 3: Introduction to gender mainstreaming in the policy and project cycle • Module 4: Gender indicators for climate action A special publication was designed for course delivery, *Handbook for Gender Mainstreaming in Climate Action*, which presents conceptual and methodological guidelines for gender mainstreaming in public policy instruments as well as in projects and initiatives related to climate change management.
Requirements to pass the course	• 80% attendance of synchronous sessions (or viewing the recording). • Complete individual work that consisted of 4 tasks to learn how to apply the gender lens to a project or current area of work.
How does the course lead to action?	Most of the participants were government officials, and the course could lead to strengthening and implementing institutional strategies for gender and the preparation of specific guidelines for different departments.
Is gender integrated, how?	• The entire course dealt with gender and climate change and how to mainstream it into public policies. • 80% of participants were women, and 50% of the total participants were between 31-40 years of age.
Results	• 73 people passed the course, and 21 people received a certificate of attendance without fulfilling the requirements to pass the course. • 84% of participants considered the course to be very relevant to their professional development. • 94% expressed that the course contributed to their understanding of the importance of integrating a gender approach into climate change management.
Challenges	• Covering a large amount of information in a short time during the live sessions. The team had to add 2 additional sessions to the 8 original sessions for clarification of concepts and coursework. • Getting course content approved by the many organizations involved.

Comments from participants	"I found the course innovative, with many practical and group activities in an online format (which is a challenge) to help us learn new information as well as get to know the different points of view and realities of our colleagues. Thank you very much for all the knowledge I gained and the opportunity to participate."
Best practices	• **Entry and exit surveys were conducted to identify the level of knowledge with which the participants started and finished the course** for comparison purposes. The survey consisted of a 13-question questionnaire. • **Maintaining a balance between the presentation of key content with a practical and participatory methodology,** and with the support of background, reinforcement, and reference documents. This course dynamic worked well to share content and boost learning. • **Incorporating feedback spaces throughout the training.** A pause in the middle of the course to provide feedback on the content and evaluate progress, as well as to gather suggestions for improvement, has an impact on the quality of the learning outcomes and strengthens active participant participation. • **Incorporating case studies and group work during synchronous sessions strengthens the training methodology.** This leads to an enriching exchange between participants and specialists while reinforcing participants' knowledge of both real-world experiences and conceptual aspects of the topic.

Name of the training course	8. Regional Capacity-Building Process on Gender and Climate Change
Duration	June – July 2022 (2 months)
Target audience	Stakeholders from public institutions and civil society organizations involved and interested in climate change and gender issues.
Geography	Colombia, Ecuador, and Peru
Language	Spanish
Organizations involved	Fundación Futuro Latinoamericano and CDKN
Goals	To strengthen the capacities of stakeholders in the region (Colombia, Ecuador, Peru) to facilitate the integration of a gender perspective into the climate change adaptation and management. The process developed knowledge, skills, and approaches and holistically combined key content areas with practical applications.

Methodology	The capacity-building process on gender and climate change included: i) *a regional virtual course* that lasted for 5 weeks with 5 live or synchronous sessions delivered weekly lasting 2 hours each, plus a minimum of 10 asynchronous hours of self-directed study. In parallel to the live sessions, throughout the course participants prepared a replication proposal for their locality to be presented at the end of the course. *ii) a face-to-face train-the-trainer program:* Once the virtual course concluded, the organizing team selected the best replication proposals presented, and 5 participants from each country had the opportunity to attend a 3-dayface-to-face train-the-trainer program that was held in Quito in May. To be eligible for this cohort, in addition to having a replication proposal selected, participants must have attended 100% of the synchronous sessions of the virtual course. During the face-to-face training course, the 15 selected participants updated their replication proposals; the 3 best ones (1 per country) received technical and financial support to implement the replication in their locality in May 2022. iii) *three local replications:* in Peru (Ayacucho), Ecuador (Loja), and Colombia (Cartagena) trained 70 people from public and civil society institutions.
Course syllabus	The virtual course consisted of 5 thematic modules, comprised of 5 synchronous virtual sessions each: ● Module 1: Sustainable development and climate action with gender equality ● Module 2: The interconnection between climate change and gender ● Module 3: Gender mainstreaming in climate change initiatives ● Module 4: Tools for gender mainstreaming in the climate change program and project cycle ● Module 5: Overcoming constraints to achieve gender equality The course content was based on the "Toolkit for Capacity-Building on Gender and Climate Change" (MAATE, UNDP, CDKN, FFLA, 2021). The in-person training of trainers involved facilitation techniques to develop a 3-day workshop in participants' local area.
Requirements to pass the course	To receive a certificate, participants were required to: ● Attend at least 80% of the weekly synchronous sessions ● Pass the mid-term assessments. After each session, participants had to complete a short assessment to verify that they understood the key concepts covered in the session. ● Submit a proposal for the replication of the course in the locality of interest of the participant according to his/her jurisdiction or professional field (guidelines were provided at the beginning of the course). Participants in the capacity-building process had to submit agendas and a final report once the replicated courses were completed.

How does the course lead to action?	Students received financial support to improve their facilitation skills and replicate what they learned in their local area.
Is gender integrated, how?	The course was about gender equality and mainstreaming. Most of the participants in the 3 stages of the process were women. In Cartagena, 45% were men.
Results	● 60 people applied to participate in the course ● 30 were selected for the virtual course ● 15 were selected for the in-person training ● Replicated trainings reached 70 people and increased their knowledge of gender and climate change Participants in the local capacity-building processes included: ● 30 rural women leaders from Ayacucho and Apurímac, Peru. ● 20 women in Loja, Ecuador. ● 21 participants from public institutions in Cartagena, Colombia, of which 55% were women.
Challenges	● Publicizing a broad and balanced call for applications from all three countries. ● Having to select only 3 replication proposals from a pool of many excellent ones. ● Dealing with short timeframes to organize the three phases: virtual, face-to-face, replications. ● In Ecuador, the course coincided with the national strike, which delayed the implementation of the replication proposals, so the organizers had to modify the schedule.
Comments from participants	“Ongoing training and awareness-raising on gender and climate change issues is key to contributing to understanding women's vulnerability in communities and understanding women and men in specific contexts, as well as the adaptive capacities of communities in the face of extreme climate change events. Also, making gender gaps visible at global, regional, and local levels shows us the long road we have ahead to achieving equality, equity, and social justice." (Ayacucho) “Without a doubt, the opportunity generated through this training workshop has opened up an important pathway toward the growth and development of capacities for a particular group of women, men, and young people; this group gained a new perspective on the current reality of climate change and how gender mainstreaming directly helps combat its effects." (Cartagena)
Best practices	● Capacity-building as a process that comprises 3 different stages. ● Incentives to replicate the knowledge acquired at a local level. ● A playful, interactive methodology to explore gender concepts. ● Combination of virtual and in-person capacity-building that builds trust

	and connections.

Name of the training course	9. Youth Climate Leaders Course. Climate Change: Overview, Challenges, and Opportunities for Young Professionals
Duration	Most recent cohort: March - April 2023 (2 months)
Target audience	Young professionals (18 to 35 years of age) looking for an overview of climate career opportunities. We are looking for young people who are willing to co-create the course and the YCL Network with us, who are proactive and eager to transform the society in which they are embedded. As a member of our Network, each YCL member will remain connected to facilitators and colleagues after the course, building lifelong professional and personal relationships.
Geography	Global, but the 8th edition took place in Brazil
Language	Portuguese and English
Organizations involved	Youth Climate Leaders (YCL) is an NGO founded in 2018 that believes that shared knowledge empowers young people to lead solutions to the climate crisis. YCL promotes the professional insertion of young people in the new economy through climate education and by building bridges with organizations that already work in the sector, thus generating more knowledge and information on the subject.
Goals	• To present different ways of getting involved in the field of climate change and sustainability. • To encourage the professional development as well as the transition of young professionals to work in careers and on projects that are in line with their sense of purpose. • To build a repertoire of practical competencies that have, thus far, not been prioritized by academic and corporate education and that respond to socio-environmental demands, in a context of equal opportunities, respect for diversity, and sustainable development. • To expand the YCL Network, connecting young professionals around the world and co-creating an increasingly influential and diverse network involved in processes of global social change.
Methodology	• 9 weeks of live classes, totaling 30 hours of content on climate and sustainability. • Participants are asked to devote up to 5 additional hours per week to reading supplemental materials. • Access to the recordings of the classes the day after sessions take place, making it possible to follow the course on one's own time and in different time zones. • A 1-hour session with an expert, to be held up to 1 month after the end of the course.

	● Certificate issued by Columbia Global Center Rio de Janeiro. ● Lifetime access to the YCL Network Platform.
Course syllabus	● Class 1 - Introduction and Conversation on Purpose and Career ● Class 2 - The Science of Climate Change ● Class 3 - Ocean and Climate Change ● Class 4 - The Economics of Climate Change ● Class 5 - Climate Change Policy ● Class 6 - Land Use Change and Forests ● Class 7 - Livestock ● Class 8 - Energy Transition: Brazil and Global Overview ● Class 9 - Cities: Opportunities for Mitigation and Adaptation ● Class 10 - Financial Instruments to Combat CC ● Class 11 - Climate Justice ● Closing Session - Declaration of the Future
Requirements to pass the course	After each class, there is an assessment with questions about the content presented. 90% of the assessments must be completed (that is, 11 out of 12) for the participant to receive the course completion certificate. Pricing: ● Discounted cost - 999 BRL (~205 USD) to guarantee a spot in the YCL course. ● True cost - 1,500 BRL (~307 USD) to participate in the YCL Course while helping sustain Youth Climate Leaders. ● Optional package of 3 sessions with a YCL Network career mentor - 500 BRL (~102 USD) - participants in the YCL course can purchase this package in addition to the 1 meeting with a specialist with experience in the area a participant wants to work in that is included in the course. ● Scholarships available for participants with low incomes, people of color, and people from traditional communities (indigenous, quilombolas, caiçaras, or riverside dwellers).
How does the course lead to action?	YCL HUBs are focal points for the YCL Network in their respective regions and act as platforms to coordinate, promote, and multiply climate solutions and activities locally. There are currently 14 HUBs and 3 Working Groups in Brazil, as well as HUBs in Portugal and Canada.
Is gender integrated, how?	64% of members of the YCL Network are women.
Results	● 7 cohorts ● 1,000 people trained ● 50 partner organizations ● 90 mentors in the YCL network ● 6 tailor-made trainings and immersions ● 17 HUBs in Brazil and in Portugal ● 202 YCL FELLOWS ● 20 countries

Best practices	Course participants can continue being involved in the YCL Network and Hubs.

Name of the training course	**10. Youth for Sustainable Finance Program in Latin America and the Caribbean**
Duration	May - June 2021 and May - June 2022 (2 months each)
Target audience	Citizens from Latin America or the Caribbean between 18 and 35 years old that have an interest in climate change issues, particularly climate and sustainable finance. It was targeted to participants that completed or were enrolled in a degree program related to climate change or public policy design, such as political science, international relations, economics and political science, international relations, economics, etc.
Geography	Latin America and the Caribbean
Language	Spanish
Organizations involved	GFLAC and FLACSO ARGENTINA, plus 20 organizations that supported the process as part of GFLAC Technical Committee. Supported in 2021 by Bulb Foundation, and in 2022 by an anonymous donor.
Goals:	The Youth for Sustainable Finance Program in Latin America and the Caribbean seeks to strengthen capacities and empower young people in Latin America and the Caribbean to participate in the Sustainable Finance for the Future Campaign as its spokespersons, and above all to take ownership of the use of the campaign's tools, in particular the Sustainable Finance Index. The second edition of the Program took place in 2022 and sought to train and mobilize new generations in the region in the transformation of finance as a way to accelerate the **decarbonization** of economies and their resilience to the effects of climate change, within a framework of respect for human, indigenous, and intergenerational rights, gender equity, and the life of species and ecosystems.
Methodology	• *Call for applications:* To participate in this program, a call for youth applicants from Latin America and the Caribbean was launched through digital media. • *Selection process*: Young women and men between 20 and 28 years old, residing in one of the 21 countries of interest for the Campaign and who desire to deepen their knowledge of climate change issues, particularly climate and sustainable finance, as well as young people seeking to lead actions to transform the realities of their countries towards sustainability. • *3-month training course:* 15 synchronous thematic sessions and 1 additional session on project structuring. The synchronous sessions took place 3 times a week on Tuesdays and Thursdays from 10:00 to 11:30 a.m. (Mexico City time).

	● *Thematic sessions:* Each session consisted of a 1-hour presentation on a specific topic with 20 minutes for questions and answers. ● *Interaction:* At the end of each thematic session, there was a networking session for an additional 30 minutes. 5 participants per session were invited to join the panelists along with members of the sustainable finance hubs to present their experiences and initiatives.
Course syllabus	During the 3-month training on sustainable public finance, participants learned how to use the Sustainable Finance Index (SFI) tool and navigate international climate finance and international climate change negotiation processes. The following topics were covered: ● The importance of national budgets as instruments for climate action ● Mainstreaming climate change in the budget cycles of Latin American and Caribbean countries and globally ● Alternative financing mechanisms: bonds, carbon taxes, and emissions trading schemes ● The role of the private sector in mobilizing climate finance ● Financing for local climate action ● Cross-cutting issues in financing: vulnerable groups and gender perspective ● The importance of budget and climate finance transparency ● Structuring projects to access climate finance: What makes a successful project?
Requirements to pass the course	Course requirements included: ● 2 multiple-choice assessments the fourth and eighth week of the program. To pass, participants that did not attend the live sessions had to answer 90% of the questions correctly, compared with 70% of those that attended the sessions. ● A final group project was handed in one week after the end of the program. Groups included 8 participants, depending on the country, and they had to submit a 5- to 7-page research paper. ● Minimum attendance of 85% of the sessions. ● Participants that fulfilled the requirements received certificates signed by GFLAC and FLACSO Argentina, but these did not count toward a university degree. There was an opportunity to obtain the master's certificate in Law and Economics of Climate Change from FLACSO Argentina by fulfilling a separate set of requirements.
How does the course lead to action?	● Participants could join the group of spokespersons for the Sustainable Finance for the Future campaign of the regional **Sustainable Finance Hubs**. ● They could also participate in different actions to be carried out on the national, regional, and international levels. ● They could access internship opportunities at GFLAC or partner organizations.
Is gender integrated, how?	● In 2021, 65% of course participants were women. ● The topic was addressed in the module titled "Cross-cutting issues in financing: vulnerable groups and gender perspective."
Results	In 2021, a total of 3,720 applications were received, of which 500 participants were selected and 380 successfully completed the program. Criteria for selection were

	improved, and in 2022, 670 people applied, 500 were selected, and approximately 300 completed the course. In addition, Sustainable Finance Hubs were created in 14 countries in the region, led by young people who took part in the program.
Challenges	• **Selection of participants** in the first session was very laborious and criteria were developed to improve the process. For the second session, applications included open-ended questions, which took time to process. • **People could not attend live sessions due to work-related constraints.** In response, the program allowed them to complete the course asynchronously, but they were required to have a higher minimum score on the assessments. • **Communication with participants**. Of the 500 selected, only 300 were actively participating, a sign that there were some communication issues. Those who abandoned the course were not contacted. • **There was not sufficient human capacity** to follow up with people who were not participating. • The course organizers would have liked it to be **more interactive** by using other tools (e.g. Mentimeter), but it was not considered in the initial course design. • **Assessments took a lot of time**. The two multiple-choice assessments were graded automatically, but the final project was labor-intensive to assess. • **High volume of participants.** Processing applications, the selection process, and follow-up demanded a lot of time. • It is an ongoing challenge to keep the hubs running and maintain motivation and action, since they are volunteer-run. • Post-program support should be considered, including follow-up and mentoring or technical assistance. The organizers said that they would do the following differently: • Support the hubs in some way, with funding or technical advice. • Gather more human resources to support participants. • Use more interactive platforms to avoid monotony and work in a more collaborative way.
Best practices	• The application process for the 2022 Program was more rigorous and selective. Criteria need to be developed to assess applications more easily. Also, people need to have some existing capacity or experience with climate change issues. This ensures that the conversations and the training are more ambitious and more in-depth topics can be covered. • Involve several organizations from the start. The Program was improved by the participation of experts and the GFLAC network. • Provide space during live sessions for interaction among participants and the presenter. This resulted in interesting conversations and dynamics. • Group work created synergies among participants that were from the same country. This allowed them to research their national context and provide knowledge on finance at their country level. • Hubs were formed after this group work, which went more smoothly

	because people already knew each other. ● Apart from the topic of sustainable finance, another session was included about climate advocacy, so participants could be spokespersons in their own countries.

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