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ESSENTIAL ATTRIBUTES OF ADAPTATION PROJECTS

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KEY POINTS

Adaptation projects —defined as a group of activities which address the negative impacts of climate change risks, with the aim of producing tangible and visible results that reduce vulnerability and increase the adaptive capacity of human beings and natural systems— have a set of general attributes, and there are five strategic attributes that stand out, and their approach enhances both the access to multilateral funds as well as success in adaptation. In addition to being integrated with the local reality, they ensure a coherent, systemic and comprehensive climate policy. These attributes are: robust assessment of climate hazards, risks and impacts; interdependencies and cascading effects; adaptation metrics; systemic relationship between mitigation and adaptation measures; gender, indigenous peoples and climate change.

Executive summary

Latin America and the Caribbean are a highly heterogeneous region, with great social inequality and geographic, economic and environmental diversity, and therefore are very sensitive to current and forecasted climate hazards.

Given this scenario, it is key to consider addressing attributes that boost opportunities to achieve funding and success in climate change adaptation from the outset of the adaptation projects. In this context, the challenge is identifying an adaptation rationale which includes a robust and reliable source of information, that enables a comprehensive perspective about the negative impacts of climate change that the project aims to address, and eventually, allows for a qualitative and quantitative assessment of the project's expected results.

This policy brief focuses specifically on five strategic attributes: robust assessment of climate hazards, risks and impacts; interdependencies and cascade effects; adaptation metrics; systemic relationship between mitigation and adaptation measures; gender, indigenous peoples approach. It is crucial to consider the coherence of the project within the framework of the local/regional reality in order to ensure a comprehensive climate policy.

Resumen ejecutivo

América Latina y el Caribe constituyen una región altamente heterogénea, con gran desigualdad social y diversidad geográfica, económica y ambiental, por ello, muy sensible a las amenazas climáticas actuales y proyectadas.

Frente a este panorama, es crucial considerar desde el inicio de los proyectos de adaptación el abordaje de atributos que potencien oportunidades para lograr financiamiento y éxito en los resultados de adaptación al cambio climático. En ese marco, surge el desafío de encontrar una lógica de adaptación (*rationale*) que contemple una base de información robusta y confiable, y que habilite el desarrollo de una mirada integral sobre los impactos adversos del cambio climático que el proyecto procura abordar, y que, finalmente, permita evaluar cualitativa y cuantitativamente los resultados esperados del proyecto.

Este *policy brief* hace especial énfasis en cinco atributos considerados estratégicos: evaluación robusta sobre amenazas, riesgos e impactos climáticos; interdependencias y efecto cascada; métricas de adaptación; relación sistémica entre medidas de mitigación y adaptación; abordaje del género y pueblos indígenas. Por último, es clave considerar la coherencia del proyecto en el marco de la realidad local/regional para garantizar una política climática integral.

Climate context in Latin America and the Caribbean

Latin American and the Caribbean¹ are experiencing significant increases in temperature and sea level; major retreats of glaciers; increases and decreases in precipitations, and rise in the frequency and intensity of extreme weather events (1). Consequently, being a highly heterogeneous region, with great social inequality and geographic, economic and environmental diversity, it is very sensitive to climate change (2). Regarding climate impacts for 2050, projections include: intensification of glacier retreat, reduction of staple crop yields, increase in floods and droughts, as well as increase and intensification of extreme events, among other phenomena (2).

Although it is widely acknowledged that LAC will suffer severe and multiple impacts, the analysis of the financing of the region's climate projects proves that the proceeds of multilateral funds for climate are not enough for adaptation. Between 2003-2017, mitigation projects accounted for six times the received funds for adaptation projects; i.e.: USD 2.5 billion and USD 400 million, respectively. Regarding sources, 78% of funding for the Region came from four multilateral public funds²: Clean Technology Fund (CTL)³; Amazon Fund; Global Environment Facility (GEF); and Green Climate Fund (GCF). Nevertheless, only 13% of the that funding⁴ was used for adaptation projects and 3% for projects with multiple approaches (3). Funding is not homogenous, since it is mainly destined to projects in Brazil and Mexico, where they receive half of the funds for the Region (3).

Another relevant aspect to consider, which is added to the analysis of forecasted climate impacts in LAC, is the annual added value of economic damages, which as a consequence of these impacts, will amount to between USD 85 billion and USD 110 billion in 2050, compared to the Region's GDP of around USD 4.6 trillion in 2010 (4).

These facts outline the challenges faced by LAC in dealing with the climate change hazards in a context where the priority of the Region is sustainable development. This will require changes in the approach to the needs arising from physical climatic threats and those arising to deal comprehensively with this phenomenon. This will imply addressing the institutional and financial constraints, and also those related to obtaining and processing reliable and robust information, with the objective of achieving integration of climate strategies and development policies (1). Therefore, it is necessary to use a multidimensional approach when developing an adaptation project. An approach which is based on the co-benefits of such integration will generate incentives at different time and space scales, which will boost the efforts made in terms of climate –both in mitigation and in adaptation– and in terms of general development, and that take into account the impact of climate measures on other areas (health, ecosystems, infrastructure, etc.) and which take advantage of the benefits that stem from that integration (5). Even more so, considering the needs and limitations of LAC, where highly vulnerable populations put at stake their opportunity of sustainable development. The issue of gender and indigenous peoples deserves special attention. The Intergovernmental Panel on Climate Change (IPCC) has been emphatic: “Climate change will impact world regions, generations, age groups, socio-economic groups and genders differently” (6). Perspectives, responses and impacts related to extreme environmental phenomena are perceived differently by men, women (7) and indigenous peoples, since they have different social responsibilities, different vulnerabilities and capacities to cope with change and adjustment.

¹ Hereinafter, referred to by the acronym LAC / ² Excluding the Caribbean. / ³ Managed by the World Bank. / ⁴ Excluding the Caribbean.

Attributes of adaptation projects

Climate change projects must express their climate contribution within the local and/or regional social, economic, environmental and institutional context (8-10). They must establish objectives, actions and competences for its implementation, and the budget. Additionally, it must include an execution, monitoring, follow-up and evaluation schedule, to evaluate the impact of its implementation. Moreover, the governance of the project needs to be established taking into consideration the interaction between key actors and their link with government entities (11), in order to ensure efficiency in the management and outcome of the project.

The Adaptation Fund, defines an adaptation project as a group of activities which address the negative impacts of climate change risks. Such activities aim at producing tangible and visible results that reduce vulnerability and increase the adaptive capacity of human beings and natural systems, as a response to the impacts of climate change (12). An adaptation project is expected to provide specific information about the impact, and its proposed actions should deal with the identified risks based on accurate and reliable information (13).

For this reason, not only the local and regional priorities where the project will be developed should be considered, but also the physical conditions related to climate change which highlight the relevance of implementing the project:

- ✓ Observed, current and future climate
- ✓ Climate hazards
- ✓ Climate impacts, considering interdependencies between systems, vulnerabilities and risks
- ✓ Benefits /co-benefits resulting from its implementation
- ✓ Economic-social-environmental context and data

Various aspects that adaptation projects nowadays hardly contemplate and that will help to guarantee the scope of an adaptation project must be included in each of these attributes. Moreover, they will need to demonstrate the additionality required by multilateral sources of financing. According to a recent document of the Green Climate Fund (10), many developing countries lack reliable observational data that contributes to the development of a rationale for adaptation in project formulation. This is understood as a justification of why an adaptation project offers solutions to the negative impacts of climate change -which requires a comprehensive perspective of the risks identified according to local or regional circumstances. Below are five attributes that intend to contribute to strengthening the design of an adaptation project that will lead to successful outcomes.

Recommendations

Out of all the attributes, five considered essential for the development of adaptation projects will be analyzed, since their approach enhances the access to multilateral funds, and if integrated to the local reality, will guarantee a coherent, systemic and comprehensive climate policy.

In order to respond to current and forecasted climate impacts in the LAC Region, it is necessary to strengthen and boost the implementation of adaptation projects with regard to climate change. These are the five essential attributes:

1. Robust assessment of threats, risks and climate impacts

The design of the actions of an adaptation project must be based on an assessment of climate risk that takes into account the probability of climate threats, their potential impacts and the degree of vulnerability and exposure to which the population and the territory are exposed.

Risk assessment is essential to prioritize actions and investments in adaptation and resilience projects with regards to climate change. Therefore, climate information needs to be robust. The Andes and the Caribbean regions require special attention and high resolution due to their landscape features. As a result, when assessing territorial impacts, regional climate models should be considered over global ones.

Within this framework it is essential to:

- ✓ Analyze physical events related to climate and how hazards vary across the territory
- ✓ Assess historical trends and the current situation, as well as future scenarios based on scientific evidence with suitable models
Comprender el grado de vulnerabilidad social, dado que es un componente clave para la configuración del riesgo de desastres
- ✓ Understand the degree of social vulnerability, since it is key for risk disaster configuration
- ✓ Territorialize risks according to the type of climate hazards and system vulnerability degree
- ✓ The co-production of risk knowledge: scientific, local and traditional; its adoption, understanding and resolution is effective when it involves all the actors⁵. It is essential to recognize and include women (7) and indigenous people (14), since they represent additional considerations regarding risks and impacts of climate change, whose characteristics should be taken into account in the design of adaptation projects to this phenomenon
- ✓ Prioritize or focus on low-regret actions, since they are strong in most climate scenarios (15)

2. Interdependencies and cascading effect

The challenges of climate change are huge and interconnected: an adaptation Project cannot be managed independently of others (16).

There is evidence about the links between ecosystems, at a species level, genetic diversity within species and ecological interactions and water resources, health and human settlements. This supports the idea that adaptation planning and practices are correlated in many areas (17). Therefore, we must consider the high level of interdependence between the systems, which have multiple connections, the feedback paths and intricate ramifications (18).

⁵ Government, academia, civil society, labor organizations, industrial chambers, companies, among others.

Climate change will negatively impact different systems due to the increase in the magnitude and frequency of extreme weather events. This highlights the cascading effect, meaning that, interruptions in a system cause second-order impacts on the environment, society and the economy. For example, interdependencies in the energy sector and the cascading risks from extreme precipitations can be: disruptions in telecommunications operations, ceasing the pumping of drinking water and wastewater treatment, interruption of food storage and processing chains, etc. These will also have negative consequences on the economic system (sales loss) social system (health) environment (water pollution), among others.

Within this framework it is essential to:

- ✓ Understand the scope of the interdependencies and implications of climate change of the system(s) that make up an adaptation project
- ✓ Involve infrastructure organizations (public and private) and generate collective actions from the beginning of the adaptation project

3. Adaptation Metrics

Address two aspects of metrics: the traceability of progress in the implementation of measures and the assessment of achieved results.

According to the Green Climate Fund (10), developing indicators that express the diversity of the different circumstances, in order to measure the impact of the adaptation activities, represents a great challenge due to the complexity of adaptation to climate change. The monitoring of the projects' actions must be carried out by different actors.

Within this framework it is essential to (10):

- ✓ Design quantitative and qualitative indicators that reflect the progress made in aligning the adaptation objectives with broader local or regional objectives
- ✓ Establish concrete goals for adaptation actions with short, medium and long term objectives
- ✓ Assess the progress of adaptation and its constant updating at the implementation stage of the project; this allows to understand whether it is taking place, how it is taking place, and what needs to be changed.
- ✓ Consider potential impacts with and without adaptation (e.g. number of people affected, cost of damage/investment, days of services lost)

4. Systemic relationship between mitigation and adaptation measures

Mitigation and adaptation strategies are usually dealt with separately, since they have different objectives and they operate in different time and space scales—mitigation will bring about long-term benefits to climate conditions, while adaptation brings benefits locally, both short and long term— (19).

Nevertheless, there is evidence of synergies between them —about the positive and negative effects that they cause each other— which need to be considered when designing and developing a project.

Within this framework it is essential to:

- ✓ Comprehensively analyze the mitigation and adaptation actions to achieve a systemic understanding of the evidence of the diagnose about measures to consider
- ✓ Prove that the adaptation actions of a project will not affect mitigation aspects
- ✓ Acknowledge that these interactions are part of the analysis of the broader associated co-benefits (socio-economically, energy security, creation of green jobs, public health; environmentally, protection of biodiversity, reduction of air, water and soil pollution; and institutionally, expanded participation, local and regional cooperation, among others) to both mitigation and adaptation.

5. Gender, indigenous peoples and climate change

Several studies (7, 20-23) show the advantages and challenges of integrating the gender and indigenous peoples dimensions in adaptation projects from the outset⁶.

In this context, it is important to develop and use information and knowledge from all sources, including the co-construction of traditional, local and contemporary scientific sources. These co-construction processes empower local communities, promote shared understanding of problems and strengthen the communities' ability to implement actions resulting from adaptation projects. Inclusive processes are those that involve all members of a community. Therefore, to design an adaptation project it is necessary to acknowledge cultural and gender sensitivities, and ensure that all such information is collected and validated through a systematic process. Including gender and indigenous policies in climate projects is required in multilateral funds such as GEF and GCF.

It is essential for both groups to:

- ✓ Include the gender and indigenous peoples approach from the early stages of design of climate adaptation projects
- ✓ Adopt plural participation goals and establish objectives that seek to transform gender relationships from the outset of the Project, to be able to monitor and assess it appropriately (20)

Conclusion

LAC faces severe climate hazards both in the present and in the future. Projections show that observed phenomena —such as increase in precipitations, intensified droughts, higher frequency and intensity of extreme events— will continue to escalate. The climate actions taken today will determine the Region's path towards sustainable development. The climate funding for adaptation is limited and mainly allocated to mitigation projects. This means that opportunities for adaptation projects must be enhanced.

Additionally, there are challenges in finding an adaptation rationale which considers a robust and reliable source of information — useful for the development of a comprehensive perspective of the negative impacts of climate change that the project intends to address— which prioritizes actions based on a multi-criteria analysis —according to local or regional circumstances, and in line with its climate policies— and finally, allows for a qualitative and quantitative assessment of the project's expected results.

Out of all the attributes that make up an adaptation project, five are highlighted, which refer to basic information (availability and access), prioritization of adaptation strategies, clear goals with intermediate temporary objectives, a holistic perspective between mitigation and adaptation actions, together with the inclusion of the gender and indigenous peoples' perspective as active local agents of change. All of these are key elements in the design of an adaptation project.

⁶The importance of working with indigenous peoples on climate change policies and actions has been widely recognized by the Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), included in the Cancun Agreement (decision 1/CP.16).

References

1. Magrin G. 2015. Adaptación al Cambio Climático en América Latina y el Caribe. Santiago de Chile, Chile: Naciones Unidas. CEPAL. Retrieved from: https://repositorio.cepal.org/bitstream/handle/11362/39842/S1501318_es.pdf?sequence=1
2. Galindo L, Samaniego J, Alatorre J, Ferrer-Carbonell, J. 2014. Procesos de Adaptación al Cambio Climático. Análisis de América Latina. Santiago de Chile, Chile: CEPAL.
3. Bird N, Watson C, Schalatek L. 2017. Reseña Regional sobre Financiamiento para el Clima: América Latina. Climate Funds Update. Retrieved from: <http://www.climatefundsupdate.org>
4. Vergara W, Rios A, Galindo L, Gutman P, Isbell P, Suding P. 2015. El Desafío climático y de Desarrollo en América Latina y Caribe. BID. CEPAL. WWF. Retrieved from: <https://publications.iadb.org>
5. Spencera B, Lawler J, Lowed C, Thompsone L, Hinckley T, Kimc S. 2017 . Case studies in co-benefits approaches to climate change mitigation and adaptation. Journal of Environmental Planning and Management, Journal of Environmental Planning and Management.; 60 (4): 647-667.
6. IPCC. 2001. Tercer Informe de Evaluación (TAR). Cambio Climático. Grupo Intergubernamental de Expertos sobre el Cambio Climático de las Naciones Unidas.
7. PNUD. 2008. Género y Cambio Climático. Retrieved from: <https://www.undp.org/content/undp/es/home/librarypage/environment-energy/resource-guide-on-gender-and-climate-change-in-latin-america-.html>
8. Green Climate Fund. 2018. Readiness and Preparatory Support Guidebook.
9. C40. Sistema de Planificación de la Acción Climática. 2018. Retrieved from: https://cdn.locomotive.works/sites/5ab410c8a2f42204838f797e/content_entry5b3634f974782060ae954eec/5c7438187a995b0011204ded/files/CAP_Framework_Spanish.pdf?1551183044
10. Green Climate Fund. 2018. Approach and scope for providing support to adaptation activities. GCF/B.21/Inf.03
11. Adaptation Fund Board. 2019. Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund. Annex 1, Strategic Priorities, Policies, and Guidelines of the Adaptation Fund Adopted by the CMP.
12. Adaptation Fund Board. 2017. Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund, parr. 10.
13. Green Climate Fund. 2018: "Review of the initial proposal approval process" en GCF/B.21/Inf.03 titulado "Approach and scope for providing support to adaptation activities". GCF/B.17/18.
14. IPCC. 2014. Quinto Informe de Evaluación (AR5) del Grupo Intergubernamental de Expertos sobre el Cambio Climático de las Naciones Unidas.
15. World Bank. 2010 International Bank for Reconstruction and Development (IBRD). Selective capital increase (English). Washington, DC: World Bank. Retrieved from: <http://documents.worldbank.org/curated/en/620371468329339707/International-Bank-for-Reconstruction-and-Development-IBRD-2010-selective-capital-increase>
16. C40; AECOM. 2017. Infrastructure Interdependencies + Climate Risks Report. Retrieved from: https://unfccc.int/sites/default/files/report_c40_interdependencies_.pdf
17. CMNUCC. 2015. Buenas prácticas y lecciones aprendidas en los procesos de planificación de la adaptación relativos a los ecosistemas, los asentamientos humanos, los recursos hídricos y la salud y en los procesos y estructuras para vincular la planificación de la adaptación a nivel nacional y local: síntesis de los estudios monográficos. FCCC/SBSTA/2015/4. Retrieved from: <https://unfccc.int/sites/default/files/resource/docs/2015/sbsta/spa/04s.pdf>
18. Rinaldi S, Peerenboom J, Kelly T. 2001 Identifying, understanding, and analyzing critical infrastructure interdependencies. IEEE Control Systems. 2001; 21(6): 11-25.
19. Swart R, Raes F. 2007. Making integration of adaptation and mitigation work: Mainstreaming into sustainable development policies? Climate Policy. 2007; 7(4): 288-303.
20. Kratzer S, LeMasson, V. CDKN. 2016. 10 things to know: Gender equality and achieving climate goals.
21. Ruiz Vilar A, Mastellarro C. Ciudades Sostenibles. Urban 20: Una plataforma para incorporar género y cambio climático en la agenda urbana. BID. 2018.
22. ONU Mujeres. 2015. El progreso de las mujeres en el mundo 2015-2016. Transformar las economías para realizar los derechos.
23. OIT. 2018. Los pueblos indígenas y el cambio climático: De víctimas a agentes del cambio por medio del trabajo decente. Oficina Internacional del Trabajo, Servicio de Género, Igualdad y Diversidad. Ginebra.

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