Funding Proposal

Programme title:	CATALI.5°T Initiative: Concerted Action To Accelerate Local I.5° Technologies – Latin America and West Africa
Country(ies):	Latin America: Argentina, Costa Rica, Dominican Republic, Honduras, Mexico West Africa: Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mauritania, Niger, Senegal, Togo
Accredited Entity:	Deutsche Gesellschaft fuer Internationalen Zusammenarbeit (GIZ) GmbH
Date of first submission:	2022/05/17
Date of current submission	21.09.2022
Version number	[V.007]

GREEN CLIMATE FUND

Contents

Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the GCF Information Disclosure Policy, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

"FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]"

PROJECT/PROGRAMME SUMMARY

A.1. Project or programme	Programme	**A.2. Public or private sector**	Private
A.3. Request for Proposals (RFP)	*If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.* Not applicable		

A.4. Result area(s)		**GCF contribution[1]**	**Co-financers' contribution[2]**
	Mitigation total	100 %	100 %
	☒ Energy generation and access	25 %	25 %
	☒ Low-emission transport	20 %	20 %
	☒ Buildings, cities, industries and appliances	25 %	25 %
	☒ Forestry and land use	30 %	30 %
	Adaptation total		
	☐ Most vulnerable people and communities		
	☐ Health and well-being, and food and water security		
	☐ Infrastructure and built environment		
	☐ Ecosystems and ecosystem services		

A.5. Expected mitigation outcome *(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)*	3.8 $MtCO_2e$ over 20-year programco-me lifespan	**A.6. Expected adaptation outcome** *(Core indicator 2: direct and indirect beneficiaries reached)*	*N/A*	
			N/A	*N/A*
			N/A	*N/A*

A.7. Total financing (GCF + co-finance[3])	36.5 million Euros	**A.9. Programme size**	Small (Upto USD 50 million)
A.8. Total GCF funding requested	26.8 million Euros *For multi-country proposals, please fill out annex 17.*		

[1] Result Area percentages are indicative, as the identities of the climate ventures supported by the CATALI.5°T Initiative will only be known during implementation. The percentages presented in A.4 are averages of the proportions expected (indicatively) in Latin America and West Africa. The regional breakdowns are: (i) Latin America: energy 10%, transport 30%, buildings 30% and AFOLU 30%; (ii) West Africa: energy 40%, transport 10%, buildings 20% and AFOLU 30%.

[2] Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e. GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.

[3] Refer to the Policy of Co-financing of the GCF.

A.10. Financial instrument(s) requested for the GCF funding	*Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.* ☒ Grant Euro 26.8 million ☐ Loan Enter number ☐ Guarantee Enter number ☐ Equity Enter number ☐ Results-based payment Enter number		
A.11. Implementation period	6 years	**A.12. Total lifespan**	20 years
A.13. Expected date of AE internal approval	6/14/2022	**A.14. ESS category**	I-2
A.15. Has this FP been submitted as a CN before?	Yes ☒ No ☐	**A.16. Has Readiness or PPF support been used to prepare this FP?**	Yes ☐ No ☒
A.17. Is this FP included in the entity work programme?	Yes ☒ No ☐	**A.18. Is this FP included in the country programme?**	Yes ☐ No ☒
A.19. Complementarity and coherence	*Does the project/programme complement other climate finance funding (e.g. GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1.* Yes ☒ No ☐		

A.20. Executing Entity information	Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) GmbH, besides being the Accredited Entity (AE) for the programme, will serve as an Executing Entity (EE). In addition to GIZ, the CATALI.5°T Initiative has 4 Executing Entities. • The Instituto Tecnólogico y de Estudios de Monterrey (or, for brevity, Tec de Monterrey), a secular and co-educational private university based in Mexico with the legal status of a non-profit civil association. Tec de Monterrey will receive a grant from GIZ to implement the pre-acceleration and acceleration programmes in Latin America. • One of three Executing Entities for the West Africa region is Impact Hub Abidjan (I-HUB ABIDJAN) a commercial pre-accelerator and accelerator (limited liability company) based in Cote d'Ivoire. Impact Hub Abidjan will receive a grant from GIZ to implement the technical assistance elements of the pre-acceleration programme in Cote d'Ivoire and to act as conceptual partner for the overall pre-acceleration programme in West Africa. • The second Executing Entity for the West Africa region is Investisseurs & Partenaires Entrepreneurs & Développement (IPED), a French non-profit pre-accelerator and accelerator with offices throughout the region. IPED is an entity of French/West African impact investor Investisseurs & Partenaires (I&P). IPED will receive a grant from GIZ to implement: (i) the financial element (venture grants) of the pre-acceleration programme in West Africa, and (ii) the technical assistance and financial element (repayable grants) of the acceleration programme in West Africa. • The Stichting Climate Knowledge and Innovation Community International Foundation (Stichting Climate-KIC International Foundation or, for brevity, Climate-KIC) is an independent Dutch non-profit with public benefit status. It will serve as the key Executing Entity for the CATALI.5°T Initiative's venture ideation and sourcing support in Latin America and West Africa, as well provision of climate impact assessment and gender climate entrepreneurship support to the pre-acceleration and acceleration programmes in both regions.

A.21. Executive Summary

Climate Change Problem

1. Climate start-ups and other micro and small enterprises, collectively known as climate ventures, are well placed to make a difference in delivering climate action. They can, at limited risk to the economy as a whole, demonstrate the market feasibility of innovative, low-emission technologies and business models, and inject pace and ambition into private-sector mitigation efforts. Climate ventures can provide solutions that are currently neglected by markets (so-called 'breakthrough technologies') as well as improving upon products and services that are already available ('incremental technologies').

2. In Latin America and West Africa, there is a significant opportunity to leap-frog emissions-intensive development pathways. Governments can play, and are playing, an important enabling role through the promotion of appropriate policies and regulatory frameworks. The context provided by post-COVID national recovery plans represents a timely entry-point for initiatives that support green growth. Venture capital (VC) flows into both regions are increasing rapidly, albeit from a low base (particularly in West Africa). VC finance directed at climate mitigation represents a small but growing fraction of overall venture capital, and there is a strong appetite among regionally-active VC firms to scale-up climate funding. Young, agile ventures can, in principle, play a prominent role in disrupting old, stagnant, emissions-intensive industries.

3. Climate ventures are currently being prevented from doing so by the nascent state of the cleantech sector in both regions – notably, the sector's limited technical capabilities, support networks and role-models, and the lack of 'industry standard' (widely-accepted, best-practice) tools and frameworks – and the mis-match between the current capacities of climate ventures and those required to successfully access VC finance.

Proposed Interventions

4. The CATALI.5°T (Concerted Action To Accelerate Local I.5° Technologies) Initiative will establish and implement regional technical assistance and investment grant platforms that build a portfolio of early-stage climate ventures in Latin America and West Africa. The objective of each regional CATALI.5°T will be to trigger venture capital investments in start-ups and young businesses with the highest climate mitigation impact and business growth potential. Each regional CATALI.5°T will provide support for: (i) climate ventures; (ii) pre-accelerators, accelerators and entrepreneur support organisations (ESOs); and (iii) VC firms and other venture investors.

5. At the core of each regional CATALI.5°T will be an **acceleration programme**. Each acceleration programme will focus on providing support to 30 seed-stage climate ventures to rapidly scale-up their minimum viable products (MVPs) and ensure investability by VCs. Specifically, the acceleration programmes will enable climate ventures to: (i) further develop or validate their products or services (e.g. through market surveys, product testing or product enhancement); (ii) enhance the success of their products and services through market demonstration, development of growth strategies, partnership development, etc.; and (iii) maximise the climate impact of their products and services through robust, internationally-recognised climate change mitigation assessment and, where relevant, assessment and strengthening of climate adaptation co-benefits. This support will take the form of technical assistance and financial assistance (in the form of a repayable grant to each climate venture of an average of EUR 100,000 (range: EUR 50,000-200,000) to cover pre-agreed costs).

6. Less mature, pre-seed ventures – 60 in each region – will receive support to develop minimum viable climate products or services through two regional **pre-acceleration programmes**, encompassing technical assistance (capacity building, mentoring, networking, etc.) and financial assistance (in the form of a grant to each climate venture of up to EUR 15,000 to cover pre-agreed costs.

7. Accompanying this support to climate ventures will be: (i) **community-building and ideation** activities for potential climate entrepreneurs, including a special focus on women and other under-represented groups in entrepreneurship; and (ii) technical assistance for the broader **venture ecosystem** in both regions, to enable ESOs and venture investors to leverage their current strengths in building businesses in order to build and sustain *climate* businesses. With CATALI.5°T Initiative support, regional ESOs and venture investors will be enabled to assess and enhance ventures' climate potential (emission reduction benefits and climate adaptation co-benefits), to steer ventures towards more disruptive and

transformational climate solutions, to promote women's participation in climate entrepreneurship, and to understand and apply emerging ESG frameworks in the VC industry.

Climate Benefits

8. By contributing to the successful development and growth of climate ventures, the CATALI.5°T Initiative will unblock their climate mitigation benefits, resulting in quantifiable GHG emissions reductions that are aligned with GCF mitigation results areas.

9. This will be achieved through the sale of low-emission products / services by the 60 climate ventures supported by the CATALI.5°T Initiative's two regional acceleration programmes. The CATALI.5°T Initiative will screen and nurture these climate ventures, providing them with the technical, financial, mentoring and networking support needed to build and shape them into robust, high-potential investment opportunities from a VC perspective. This VC investment will be enabled by the GCF but will, itself, take place outside of the GCF programme boundary – and, in the majority of cases, is expected to occur after the end of the 6-year GCF support. The CATALI.5°T Initiative will thereby create a clear pathway for venture-driven climate mitigation while (i) establishing a clear exit strategy for the GCF and (ii) making minimal demands upon GCF funds.

10. The CATALI.5°T Initiative is expected to reduce 58 $MtCO_2e$ of greenhouse gas emissions during its 20-year lifespan, of which $MtCO_2e$ will be directly attributable to the GCF. The GCF mitigation cost will be Euro 7.1/tCO_2e (US$ 7.12/tCO_2e).[4]

[4] The exchange rate used (1.05 EUR/US$) is the same as that was used in the financial and economic analysis.

PROJECT/PROGRAMME INFORMATION

B.1. Climate context

B.1.1 Strategic context

Climate Innovation and Climate Ventures

11. Limiting global warming to 1.5°C with no or limited overshoot, addressing already locked-in climate change impacts and achieving the Sustainable Development Goals (SDGs) will require enormous behavioural change by individuals and societies. [5] Additionally, social, business and technology innovations will be necessary in energy, land, urban infrastructure (including transport and buildings) and industrial systems at unprecedented scale.[6]

12. Transformative climate technology innovations are technologies and related business practices that enable achievement of the 1.5°C target through substantial GHG emissions reduction / avoidance. The term 'climate innovation' is purposefully broad in order to encompass the swathe of relevant technology innovations and the wide array of sectors in which they can be applied – for example, cutting emissions associated with energy generation and consumption, the built environment, mobility, light and heavy industry, and food and land use, as well as enabling better carbon management, such as through carbon accounting and improved monitoring, reporting and verification (MRV).

13. With few exceptions, only industrialised countries can finance expensive basic research and development of unexplored and nascent climate innovations.[7] However, to reduce future GHG emissions, developing countries can promote the development of transformative home-grown solutions (which might require less cost-intensive, locally/regionally-applied R&D), as well as transfer innovations whose technical feasibility and commercial competitiveness have already been proven in other countries and that can be introduced into domestic markets through product or business model adjustments.

14. 'Climate ventures' are micro or small enterprises that apply climate innovation. For the purpose of the CATALI.5°T Initiative, the definition of 'climate ventures' encompasses start-ups and growth companies that:

    Satisfy the IFC definition of a micro or small enterprise (MSE) according to the table below[8], and
    Offer or plan to offer products or services that offer climate change mitigation benefits (i.e. the reduction or avoidance of greenhouse gas emissions, or the sequestration of carbon).

Table 1: IFC Definition of Micro and Small Enterprises (MSEs satisfy at least 2 out of 3 criteria)

Criterion	Micro Enterprise	Small Enterprise
Employees	<10	10-49
Total assets	<$100,000	$100,000-$3 million
Annual sales	<$100,000	$100,000-$3 million

15. Within the climate ventures category:
    - Start-ups are defined as early-stage companies that are developing or already have a minimum viable product (MVP), but no significant revenues and/or profits yet.
    - Growth companies are businesses that already generate revenues and possibly profits but are unable to grow to their full potential (for instance, by making large investments) due to lack of technical capacity or capital.

[5] IPCC (2018), *Global Warming of 1.5°C*: *An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels:* https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_Chapter2_Low_Res.pdf
[6] Project Drawdown (2020), *The Drawdown Review: Climate Solutions for a New Decade*: https://drawdown.org/sites/default/files/pdfs/TheDrawdownReview%E2%80%932020%E2%80%93Download.pdf
[7] WIPO (2020), *Global Innovation Index 2020: Who Will Finance Innovation?:* https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf
[8] https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/priorities/ifcs+definitions+of+targeted+sectors

16. Climate ventures can target business models and/or technological solutions that would be beneficial to consumers and the global environment but which have not been introduced due to market failure, such as market rigidities, established oligopolies, capital misallocation or lack of consumer awareness. Climate ventures are well-placed to make a difference in delivering climate action: "they are considered to be more effective in exploiting new technologies and introducing radical innovations that can help address some of the major challenges of our times"[9], and are well positioned to disrupt old, stagnant industries, particularly carbon-emitting industries.[10] The venture environment is one that promotes problem-solving, with a flat structure, with the aim of getting a new product, service or process into the hands of customers at fast pace.[11] This mindset typically makes ventures nimble and willing to overcome the status-quo – technologically or organisationally – that would slow down more-established organisations.

17. Climate ventures are a means to overcome the "inertia of 'what we've always done'."[12] They can, at limited risk to the economy as a whole, demonstrate the feasibility of innovative ideas in new markets, which can then either be developed further and/or be adopted by established market participants. These innovative ideas may provide solutions that are currently neglected by markets (so-called 'breakthrough technologies') or they may improve upon products and services that are already available ('incremental technologies').[13]

18. While ventures are generally not the only option to introduce early-stage solutions into markets, research suggests that they have generally proved to be one of the most effective. "This is particularly true for nascent solutions that are differentiated from incumbents and that require a distinctive understanding of the market"[14] – features that apply in particular to transformative climate innovations. A recent report by PwC finds:

    > *"We need faster, bolder innovation in climate tech, and start-up innovation can help deliver this. The start-up/venture ecosystem is geared up to deliver fast-growing, highly scalable companies with a technological edge, which is exactly what is needed now for climate. The special recipe is the combination of human capital with novel technologies, often wrapped in business models which challenge or disrupt the status quo. […] Start-ups may play a key role in certain aspects of tackling the climate crisis, even if activity today is comparatively modest. They often presage the widespread availability of new products and services. The founder's art is in connecting technology plausibility with a latent demand signal in the market. The incentives for founders and the venture capitalists who support them are structured to help them explore uncertain areas with potentially large markets and high returns. The capital fuels the talent to create new products and services, driving adoption in the market and demand for complementary products."*[15]

19. Ideation-stage ventures are at the very earliest stage of their development, and may be little more than a speculative business idea. The pre-seed stage represents the point at which the venture moves from an idea to an entity: the venture is 'made real' in some way, typically through official company registration and/or through the commencement of early operations – acquisition of office space and equipment, hiring of initial staff, etc. The end-point of the pre-seed stage is the development of a minimum viable product (MVP): a product or service that has just enough features to satisfy customers or to test a hypothesis for business development. The objective of releasing an MVP to targeted customers (typically early adopters) is to gain feedback that can help with future development of the product or service. The seed stage represents a developmental phase in which the venture begins to generate its first revenues (but typically not profits) by selling a market-ready good or service. This phase tends to involve extensive market research and product re-design / innovation.

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[9] Breschi S., Lassebie J. and Menon C. (2018), *A Portrait of Innovative Start-Ups Across Countries*, OECD Science Technology and Industry Working Paper, 2018/2: https://www.oecd-ilibrary.org/deliver/f9ff02f4-en.pdf?itemId=%2Fcontent%2Fpaper%2Ff9ff02f4-en&mimeType=pdf

[10] UNFCCC TEC, GCF and CTCN (2018), *Climate Technology Incubators and Accelerators*: https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/incubators_index/ee343309e8854ab783e0dcae3ec2cfa6/c172d2f388234bdbbe3dd9ae60e4d7e9.pdf

[11] Cohaesus (2018), *Startup Mindset: How Established Corporates Succeed With a Lean Mentality: https://cohaesus.co.uk/blog/startup-mindset-established-corporates-succeed-lean-mentality/*

[12] Gelobter M. (2015), *Lean Startups for Social Change: The Revolutionary Path to Big Impacts*. EDS Publications.

[13] Rubio S. (2017), 'Sharing R&D investments in breakthrough technologies to control climate change', *Oxford Economic Papers*, 69 (2): https://doi.org/10.1093/oep/gpw067

[14] Burger S., Murray F., Kearney S. and Ma L. (2018), 'The investment gap that threatens the planet', *Stanford Social Innovation Review*: https://primecoalition.org/wp-content/uploads/2017/12/Winter_2018_the_investment_gap_that_threatens_the_planet.pdf?x48191

[15] PwC (2020): *The State of Climate Tech 2020: The Next Frontier for Venture Capital:* https://www.pwc.com/gx/en/services/sustainability/assets/pwc-the-state-of-climate-tech-2020.pdf

20. Pre-accelerators (also known as incubators) and accelerators facilitate the development of ventures. The distinction between the terms is not well defined in the literature. Typical practice, which is adopted for the purposes of the CATALI.5°T Initiative, is to use the term 'pre-accelerator' to refer to ideational and pre-seed stage support to smaller ventures that have not yet developed a prototype service or product, while the term 'accelerator' refers to seed-stage support for an established venture with a product or service that is ready to be commercialised or scaled-up beyond the pilot market. There are estimated to be around 2,000 technology pre-accelerators and 150 accelerators worldwide. However, fewer than 70 focus on climate ventures and just 25 are located in developing countries.[16]

21. The crucial role that pre-accelerators / accelerators can play in supporting ventures is widely recognised, including by the GCF itself: "Incubators and accelerators reduce risk, helping entrepreneurs to transform inventions into technologies that meet societal needs. They act as local intermediary institutions, strengthening the national ecosystem that nurtures entrepreneurship and the growth of small businesses. They facilitate linkages between entrepreneurs, other innovation actors and potential markets of suppliers and buyers, leading to the development of products that are marketable and enhance welfare. They also help entrepreneurs to connect with sources of finance, providing them with the means to innovate."[17] Mission Innovation, an inter-governmental platform addressing clean energy, notes that "incubators are one of the most important stakeholders for a solution agenda when more than incremental improvements in existing systems are possible and needed."[18]

Venture Financing

22. In mature venture ecosystems in Europe and North America, climate innovators and entrepreneurs meet their funding needs in the pre-seed and seed stages with: (a) their own personal assets, (b) investments from family and friends, c) angel investors[19] and/or (d) grants from public programmes.[20] As ventures have little or no valuable collateral in their early stages, they usually do not qualify for loan instruments. The term 'Valley of Death' is often used to describe this period of a venture's lifetime, when expenditures are growing and revenues are small in comparison.[21] During this period, the venture depletes the initial equity capital provided by its owners and funders. Ventures face a high degree of uncertainty in this period, but the overall support environment is sufficiently strong to allow many ventures to develop on the basis of a credible business idea. It is at the end of the seed stage that venture capital (VC) finance typically becomes available to ventures with strong potential for growth.

23. VC funding, generally in the form of equity, is typically injected into a venture at the end of the seed stage, in a succession of 'series' – A, B, C, etc. – if the venture achieves specified milestones. Series A funding normally materialises when the potential of the product or service is recognised in the market and requires investment to grow: typical expenditures include marketing and sales capacity and campaigns, retail channels and advertising space in media. The Series B funding round builds on the success of a Stage A round. At this stage, the product or service is established in the market and requires further investment to scale up and reach maturity. This investment may also aim to broaden geographical reach, with the product or service potentially entering other markets outside the initial one, and deepen the marketing and sales campaigns. This is the phase where initial flotations are considered. Series C funding is typically

[16] UNFCCC TEC, GCF and CTCN (2018), *Climate Technology Incubators and Accelerators*: https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/incubators_index/ee343309e8854ab783e0dcae3ec2cfa6/c172d2f388234bdbbe3dd9ae60e4d7e9.pdf

[17] UNFCCC TEC, GCF and CTCN (2018), *Climate Technology Incubators and Accelerators*: https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/incubators_index/ee343309e8854ab783e0dcae3ec2cfa6/c172d2f388234bdbbe3dd9ae60e4d7e9.pdf

[18] Mission Innovation (2021), *Incubators Accelerating the Uptake of Start-Ups with 1.5°C Compatible Solutions*: https://www.misolutionframework.net/pdf/Report-Incubators_accelerating_1_5C_climate_compatible_start-ups_with_PICU.pdf

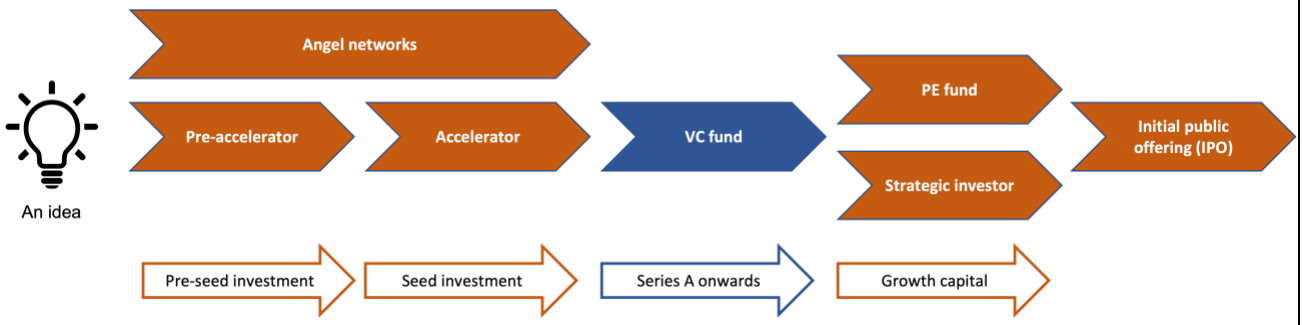
[19] Angel investors are high net-worth individuals, typically experienced entrepreneurs or businesspeople, who provide financial backing to early-stage (and hence risky) ventures, typically in exchange for equity ownership of the venture.

[20] For example, as part of the EU's Horizon 2020 programme, the EU SME Instrument supports high-risk, high-potential SMEs with grants of €50,000 in the concept and feasibility assessment stage; in phase 2 ('from concept to market'), ventures can apply for grants between €0.5-2.5 million. Climate-KIC runs an accelerator programme that provides EUR 95,000 equity-free grants to European seed-stage climate ventures. In the United States, the government issues grants through the US Small Business Innovation Research (SBIR) programme, the Advanced Research Projects Agency-Energy (ARPA-E) of the US Department of Energy provides grants to cleantech ventures, and USAID's Development Innovation Ventures (DIV) programme provides grant finance – of up to US$ 15 million – for breakthrough technologies that address development chllenges.

[21] DD Ready (2020), *'Run or Die!': How can a Start-Up Survive the Valley of Death?*: https://dd-ready.com/run-or-die-how-can-a-startup-survive-the-valley-of-death/

provided to sustain rapid market growth, for example through the acquisition of other companies or to diversify into new sectors.

Figure 1: Venture Investment Finance[22]



24. In emerging and frontier markets, by contrast, most entrepreneurs face a much more difficult situation when launching a venture: personal assets and assets of family and friends are usually very limited and venture promotion programmes funded by domestic governments are scarce or completely absent. Entrepreneurs, especially in frontier markets, also have limited access to business, VCs or (commercial) accelerators for seed capital. This latter situation is even more pronounced for climate ventures.[23] The vast majority of VC investors are new to understanding and assessing climate-related opportunities, technologies or business models; perceive market demand as unclear; and refrain from early investments in innovations outside known areas. Climate ventures are further disadvantaged in comparison to (for example) tech start-ups because they can have different requirements and longer payback horizons.[24] As such, even if they make it through the initial assessment of a VC funder, they are likely to lose out to non-climate competitors. Furthermore, the higher risk in emerging/frontier markets means that ventures have to be exceptionally strong in order to make it through the selection process for funding.

B.1.2 Baseline Scenario

Global Context

25. Annual VC investment has increased more than five-fold in the past 10 years, rising to US$ 284 billion in 2020.[25] VC investment is focused primarily on the technology sector, with investments in cloud computing, mobile apps, virtual market places and artificial intelligence (AI) accounting for over one-third of total VC financing. Other significant investment sectors include digital banking ('fintech'), healthcare, media and consumer services. [26] Climate-related investment, also commonly termed 'cleantech investment', accounts for just 6% of total VC investment, but it has grown over 3,750% in absolute terms since 2013, the equivalent of an 84% compound annual growth rate.[27]

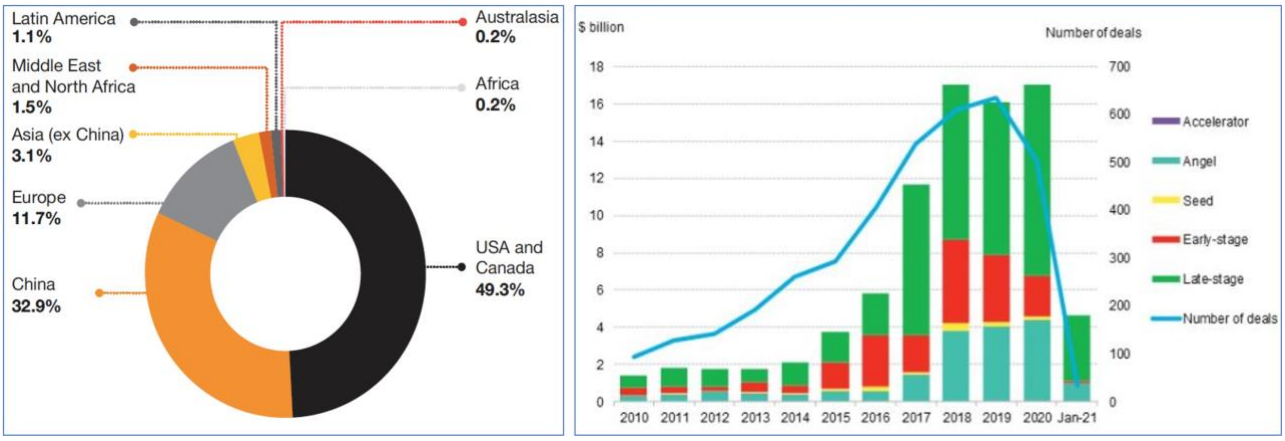
26. Climate-related investment is widely considered to be in its second phase of development, dubbed 'Cleantech 2.0'.[28] 'Cleantech 1.0' constituted a boom in investment in the 'climate tech' sector between 2006 and 2011, which – at least in terms of investor perceptions – eventually turned into an investment

[22] Adapted from: CDC and FMO (2020), *Responsible Venture Capital: Integrating Environmental and Social Approaches in Early-Stage Investing*: https://assets.cdcgroup.com/wp-content/uploads/2020/01/16092500/Responsible-Venture-Capital.pdf
[23] Of the incubators and accelerators worldwide, fewer than 2% focus on climate technology. UNFCCC TEC, GCF and CTCN (2018), *Climate Technology Incubators and Accelerators*: https://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/incubators_index/ee343309e8854ab783e0dcae3ec2cfa6/c172d2f388234bdbbe3dd9ae60e4d7e9.pdf
[24] GCF (2021), *Accelerating and Scaling Up Climate Innovation*: https://www.greenclimate.fund/sites/default/files/document/accelerating-and-scaling-climate-innovation_0.pdf
[25] CB Insights (2021), *State of Venture – Global: Q3 2021*: https://www.cbinsights.com/research/report/venture-trends-q3-2021/
[26] KPMG (2021), *Venture Pulse: Q2 2021*: https://assets.kpmg/content/dam/kpmg/xx/pdf/2021/07/venture-pulse-q2-2021.pdf
[27] TechCrunch (24 September 2020), *New Report Finds VC Investment into Climate Tech Growing Five Times Faster than Overall VC*: https://techcrunch.com/2020/09/23/new-report-finds-vc-investment-into-climatetech-growing-five-times-faster-than-overall-vc
[28] Financial Times (24 March 2021), *Clean Tech 2.0: Silicon Valley's New Bet on Start-Ups Fighting Climate Change:* *https://www.ft.com/content/f6cf7f42-5b61-4ff1-9ae9-d7c3ab8b17fd*

bust.[29] The financial crash of 2008, unexpectedly-cheap natural gas prices and the ascendancy of China's solar PV manufacturing capacity meant that, of the US$ 25 billion of capital invested into the energy sector by venture capitalists, they lost roughly half of it, rendering clean energy investing unattractive for the early part of the 2010s.[30] Cleantech 2.0 represents a resurgence in climate-related investment, as well as a reaction to the lessons learned from the first wave – notably, through the adoption of broader investment strategies that encompass decarbonisation across all sectors of the economy, not solely the energy sector. While there is no definitive list, there are now estimated to be at least 28 cleantech unicorns[31], spanning success stories such as Tesla Motors, Impossible Foods, Pivot Bio, Solugen, Indigo and Uplight.[32]

27. It is, however, notable that of the (approximately) 910 unicorn ventures worldwide, fewer than 3% are focused on climate.[33] Furthermore, 93% of the US$ 60 billion invested in cleantech in the period 2013-2019 went to North America, China and Europe, in that specific order, and none of the 28 cleantech unicorns is outside this geography.[34] While this heavy concentration is likely to be linked at least in part to data availability (which is itself an issue [35]), it is clear that ventures (in general) and climate entrepreneurship (in particular) in many developing countries struggle to access finance. Among emerging markets, only India attracts significant volumes of climate VC. The entirety of Africa – home to over 1.1 billion people and a 4% share of the world's GHG emissions – attracted just US$ 120 million of climate VC finance between 2013 and 2019, less than Hungary in 2019 alone.[36] The entirety of Latin America – home to over 660 million people and an 8% share of the world's GHG emissions – attracted just US$ 650 million[37]. Moreover, almost two-thirds of VC cleantech investment is directed towards large deals of over US$ 100 million, not at small, early-stage ventures.[38]

Figure 2: Climate Venture Investment by Region and Stage[39]



Latin America

28. A full baseline description is provided in the Latin America feasibility study (Annex 2b).

[29] For the conventional view, see, for example, Vandilay A. (2016), *Clean Tech VC: A Decade of Failure*: https://digital.hbs.edu/platform-rctom/submission/clean-tech-vc-a-decade-of-failure/. But also consider the contrarian view here: Mount D. (2021), *Climate Tech Has Left the Startup 'Valley of Death'*: https://blog.g2vp.com/climate-tech-has-left-the-startup-valley-of-death-ff9da038b388

[30] Gaddy B., Sivaram V. and O'Sullivan F. (2016), *Venture Capital and Cleantech: The Wrong Model for Clean Energy Innovation*: https://energy.mit.edu/wp-content/uploads/2016/07/MITEI-WP-2016-06.pdf

[31] A 'unicorn' is a privately-held company valued at over US$ 1 billion.

[32] Holon IQ (2021), *The Complete List of Global Climate Tech Unicorns*: https://www.holoniq.com/climatetech-unicorns/

[33] CB Insights (2021), *The Complete List of Unicorn Companies*: https://www.cbinsights.com/research-unicorn-companies

[34] PwC (2020): *The State of Climate Tech 2020: The Next Frontier for Venture Capital:* https://www.pwc.com/gx/en/services/sustainability/assets/pwc-the-state-of-climate-tech-2020.pdf

[35] Aspen Network of Development Entrepreneurs (2021), *Climate Entrepreneurship in Developing Economies: Supporting Entrepreneurs Tackling Climate Change*: https://www.andeglobal.org/?action=tracking&file=2021/03/Climate-Entrepreneurship-in-Developing-Economies.pdf

[36] OECD (2020), *Venture Capital Investments*: https://stats.oecd.org/Index.aspx?DataSetCode=VC_INVEST

[37] PwC (2020): *The State of Climate Tech 2020: The Next Frontier for Venture Capital:* https://www.pwc.com/gx/en/services/sustainability/assets/pwc-the-state-of-climate-tech-2020.pdf

[38] BNEF (2021), *Climate-Tech VC Investing Tops $17bn in 2020:* https://about.bnef.com/blog/climate-tech-vc-investing-tops-17bn-in-2020/

[39] PwC (2020): *The State of Climate Tech 2020: The Next Frontier for Venture Capital:* https://www.pwc.com/gx/en/services/sustainability/assets/pwc-the-state-of-climate-tech-2020.pdf ; BNEF (2021), *Climate-Tech VC Investing Tops $17bn in 2020:* https://about.bnef.com/blog/climate-tech-vc-investing-tops-17bn-in-2020/

29. Latin America contributed approximately 8% of GHG emissions in 2018, an increase from 5% in 2000. Both Mexico and Brazil are among the top 20 emitters in the world, though they each account for only 1.3% of global emissions. A significant proportion of emissions in Latin America come from the energy (46%) and agriculture, forestry and land use (AFOLU, 42%) sectors.[40] Rich in renewable energy capacity, Latin America has the potential to meet a major share of global power demand with renewable energy by 2050.[41] However, Mexico and many Central American states still rely heavily on fossil fuels, and others such as Brazil are at risk of seeing renewable shares slip as climate change makes hydropower generation less reliable.[42]

30. VC investment in Latin America reached a record of US$ 15.3 billion across more than 650 deals in 2021. The amount was greater than that of the preceding 7 years combined and far outstripped the previous record of US$ 4.8 billion set in 2019.[43] The figure is skewed by some very large deals, such as a US$ 1.15 billion capital raising by financial technology ('fintech') group Nubank, but the overall trajectory is nonetheless impressive. However, while the trend is generally positive, VC investment in Latin America has been uneven from the standpoint of:
    - **Country**: VC investment has almost exclusively targeted Brazil, Mexico, Colombia, Chile and Argentina, with the former two countries taking by far the largest shares: in 2021, 58% flowed to Brazil and 26% to Mexico.[44] Nor was 2021 a one-off. In 2020, only US$ 50 million out of US$ 4.1 billion was invested in 20 deals in Peru and the 'Rest of Latin America' (Ecuador, Costa Rica, Panama, Uruguay and Venezuela). Roughly the same number of VC deals (22) took place in Peru and 'Rest of Latin America' in 2019, for a value of US$ 176 million out of a total of US$ 4.6 billion of VC investments in the region that year.
    - **Sector**: a very marginal portion of VC investment in the region flows to sectors with close links to climate change mitigation. In 2021, fintech attracted 39% of all VC flowing into the region, followed by e-commerce (25%) and property technology ('proptech', 9%). VC investors in the region are focused on sectors that offer rapid growth on the back of digital trends, such as the widespread use of mobile phones. The only two sectors with strong links to mitigation are foodtech/agtech, which received only 3% of capital (US$ 115 million) in 15 deals in 2020.[45]
    - **Stage of venture development**: the vast majority of VC investment in Latin America occurs at the early and late stages, while intermediate, seed-stage investments play a very minor role and only in the largest geographical markets of Brazil and Mexico.[46] This is not unusual, as in most markets, including advanced ones, VC firms tend to invest post-seed; nonetheless, it emphasises the challenge that seed-stage ventures face in attracting finance.

West Africa

31. A full baseline description is provided in the West African feasibility study (Annex 2c).

32. GHG emissions from West Africa represent 2% of global emissions.[47] Between 1990 and 2014, regional GHG emissions grew by 17%, slower than the world average growth of 45%.[48] Land-use change and forestry accounts for the largest share (32%) of regional emissions, followed by energy (27%), agriculture

[40] ECLAC (2019), *Economics of Climate Change in Latin America and the Caribbean: A Graphic View*: https://repositorio.cepal.org/bitstream/handle/11362/43889/1/S1800475_en.pdf
[41] IDB (2013), *Rethinking Our Energy Future: A White Paper on Renewable Energy for the 3GFLAC Regional Forum*: https://publications.iadb.org/publications/english/document/Rethinking-Our-Energy-Future-A-White-Paper-on-Renewable-Energy-for-the-3GFLAC-Regional-Forum.pdf
[42] World Bank (2021), *Ten Key Points on Climate Change Impacts, Opportunities and Priorities for Latin America and the Caribbean*: https://blogs.worldbank.org/latinamerica/10-key-points-climate-change-impacts-opportunities-and-priorities-latin-america-and
[43] Financial Times (23 January 2022), *Latin American VC Investments Triple Record to Pass $15 billion in 2021*: https://www.ft.com/content/6f08aa97-ce65-44c8-9fe2-e5ed342c3cef
[44] S&P (24 September 2021), *VC Investments in Latin America Shoot for $10 billion in 2021, Already Outpacing FY 2020*: https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/vc-investments-in-latam-shoot-for-10b-in-2021-already-outpacing-fy-2020-66553406
[45] LAVCA (2021), *LAVCA's 2021 Review of Tech Investment in Latin America*: https://www.lavca.org/industry-data/lavcas-2021-review-of-tech-investment-in-latin-america/
[46] CB Insights (2021), *State of Venture – Global 2021*: https://www.cbinsights.com/research/report/venture-trends-2021/
[47] USAID (2019), *Greenhouse Gas Emissions in the West Africa Region*: https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_West%20Africa%20Regional%20GHG%20Emissions%20Factsheet.pdf
[48] USAID (2019), *Greenhouse Gas Emissions in the West Africa Region*: https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_West%20Africa%20Regional%20GHG%20Emissions%20Factsheet.pdf

(23%) and waste (11%).[49] Approximately 70% of West Africa's primary energy supply comes from biomass, biofuels and waste, followed by 20% from coal.[50] Africa as a whole is the most entrepreneurial continent, with an estimated 22% of its working age population starting businesses, and over 10 million people entering the job market each year. Already a leader in fintech, Africa has the potential to be a climate innovation venture leader, subject to investment barriers being addressed (see Section B.1.5).[51]

33. West Africa suffers from a clear lack of VC capital in absolute and relative terms – even compared with other regions of Africa. As observed by the World Bank in a note on Francophone African ventures, "many start-ups that are at the growth stage are facing what is known as the 'Valley of Death', a period where they are most susceptible to failure. The main challenge for these maturing tech start-ups is accessing the financing, specifically venture funding, that will help them take their business to scale." [52] A comprehensive 2020 annual report on African technology VC published by Partech notes persistent growth in venture investment across the whole continent but, at the same time, indicates a clear underweighting of the Francophone West Africa region. Specifically:

    - **Country**: the picture for the continent as a whole is encouraging: 347 African ventures raised equity capital in 2020 in 359 fund-raising rounds, up 44% (in deal count) from 234 ventures and 250 rounds in 2019. The number of equity rounds increased almost seven-fold between 2015 (55 deals) and 2020. The total amount of equity capital raised was approximately US$ 1.4 billion in 2020, down from US$ 2 billion in 2019 but still higher than the 2018 amount (US$ 1.2 billion) and over 5 times the amount raised in 2015 (US$ 277 million). The drop in average deal value in 2020 vs. 2019 likely reflects the pandemic, lock-downs and their effects on investor risk appetite. However, 80% of total VC funding in 2020 went to just 4 countries: Nigeria, Kenya, Egypt and South Africa. Ghana followed as a distant fifth. The remaining VC investment was spread among 21 other countries.[53] In Francophone West Africa, Senegal and Côte d'Ivoire were the biggest recipients of VC investment, but they each recorded investments of only US$ 10 million. Togo, Benin and Mali lagged further behind (US$ 3.8, 2.4 and 1 million, respectively, in 2020), and Burkina Faso, Niger, Guinea and Mauritania failed to register any VC investments at all.[54]

    - **Sector**: sectors with significant potential to address climate change represented less than 25% of VC investment in Africa in 2020. These sectors are agritech, which attracted US$ 179 million of VC funding in 2020 (13% of total VC funding in Africa), and off-grid power technologies, which attracted US$ 148 million in funding (10% of the total).[55] While the presence of agritech and off-grid power in the top 5 sectors targeted by VCs in Africa *as a whole* is encouraging, it should be noted that none of the investments in these two sectors occurred in Francophone West Africa. The vast majority of agritech investments took place in Kenya, followed by South Africa and Nigeria. Off-grid investments were roughly equally split between Nigeria and Kenya, with a very small portion going to South Africa and Egypt. There is also a paucity of capital flowing to female-founded ventures: in 2020, only 14% of total VC equity funding in Africa went to female-funded ventures.

    - **Stage of venture development**: While Francophone West Africa-specific data are not available, one positive trend highlighted by Partech with regard to the whole continent is the growth in late-seed ('seed+' in Partech's terminology) and Series A deals. 228 late-seed deals were recorded in 2020, some ten times the 2015 figure and 64% of all deals in 2020. 86 Series A deals took place in 2020, roughly four times the 2015 figure. In 2020, the average amount of equity raised was US$ 0.8 million for late-seed deals and US$ 4.6 million for Series A deals, in line with the previous 5-year average but a drop from 2019 levels (likely due to risk aversion caused by the pandemic). The propensity of African VC investors to fund early-stage deals is encouraging: if climate ventures can be rigorously selected and adequately prepared, early-stage VC firms that already have experience elsewhere in Africa may be drawn to investing in West Africa.

[49] WRI (2017), CAIT 2.0: http://cait.wri.org/
[50] IRENA and AfDB (2022), *Renewable Energy Market Analysis: Africa and Its Regions – A Summary for Policy Makers*: https://irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Market_Africa_2022.pdf
[51] Tony Blair Institute for Global Change (2022), *Closing the Funding Gap for Africa Tech Startups*: https://institute.global/policy/closing-funding-gap-africa-tech-startups-1
[52] World Bank (6 May 2019), *Francophone Africa Has the Most Promising Tech Start-Ups and They Are Looking for Investors*: https://blogs.worldbank.org/psd/francophone-africa-has-most-promising-tech-startups-and-they-are-looking-investors
[53] Partech (2021), *2020 Africa Tech Venture Capital Report*: https://partechpartners.com/2020-africa-tech-venture-capital-report/#section-1
[54] The Partech report excludes investments lower than US$ 200,000, many of which are not publicly disclosed. Even allowing for some investments on this scale, it is clear that Francophone West Africa suffers from limited VC interest.
[55] Partech (2021), *2020 Africa Tech Venture Capital Report*: https://partechpartners.com/2020-africa-tech-venture-capital-report/#section-1

B.1.3 Baseline Policies and Strategies

Nationally Determined Contributions, UNFCCC Assessments and Climate Policies

34. All countries in Latin America and West Africa have ratified the Paris Agreement. An overview of Nationally Determined Contribution (NDC) targets and UNFCCC reports and strategies, such as National Communications (NCs), technology needs assessments (TNAs) and national adaptation plans (NAPs), and key national climate policies, plans and strategies can be found in Annexes 2b and 2c. All countries in both regions have developed national, legal and institutional frameworks for addressing climate change, but their ability to ensure the effective implementation of those instruments is, in many cases, limited.[56]

Policies and Strategies: Latin America

35. A detailed review of the Latin American policy environment is provided in Annex 2b. In brief, venture promotion now forms an increasingly important part of industrial and innovation policy in the region. Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru and Uruguay have all introduced programmes to explicitly support ventures. Progress has been notable in 3 areas in particular:
    - Strengthening institutional frameworks for supporting ventures – notably in Mexico, which created the Instituto Nacional del Emprendedor (INADEM) as a national centre for the support of entrepreneurship in 2013,[57] and Chile, which created a division within CORFO[58] devoted to ventures. The region has also reformed its development banks, with ventures becoming priorities for Bancóldex in Colombia, Nacional Financiera S.N.C. (NAFINSA) in Mexico and Corporación Financiera de Desarollo S.A. in Peru.
    - Investing in transforming mind-sets and promoting a culture of entrepreneurship. Transforming ideas into a business is still not common in the region. Risk aversion is high in Latin American society and relatively few people see entrepreneurs as key contributors to national development. In Mexico, the launch of INADEM (now UDP) played a valuable role in raising awareness of the crucial role that entrepreneurship plays in the country's development.
    - Modernising support instruments, including a focus on integrated services that combine access to infrastructure, finance and services with access to contacts and networks – such as the role accorded to Start-Up Peru as a national pre-accelerator and accelerator.[59]

Policies and Strategies: West Africa

36. A detailed review of the West African policy environment is provided in Annex 2c. Africa as a whole has the highest rate of entrepreneurship in the world, with AfDB reporting that 22% of Africa's working-age population have started a business.[60] Most West African governments have policies and institutions to promote entrepreneurship and, in some cases, technological innovation. However, many public agencies have weak links with the rest of the venture ecosystem and limited capability to nurture climate ventures.[61]
    - Burkina Faso, for example, ranks fifth in its income group in the Global Innovation Index 2021 rankings, and 15th in Africa, following Côte d'Ivoire.[62] The 2020 Doing Business report ranks Burkina

[56] Konrad Adenauer Stiftung Foundation (2016), *Tackling Climate Change in Latin America*: https://www.kas.de/c/document_library/get_file?uuid=ba43934b-d004-4ca5-4519-58ce8a3dbd98&groupId=252038 ; Sorgho R., Quiñonez C., Louis V., Winkler V, Dambach P., Sauerborn R. and Horstick O. (2020), 'Climate change policies in 16 West African countries: a systematic review of adaptation with a focus on agriculture, food security and nutrition', *International Journal of Environmental Research and Public Health*, 17: https://www.mdpi.com/1660-4601/17/23/8897/pdf

[57] INADEM has since been absorbed into the Unidad de Desarrollo Productivo (UDP, Productive Development Unit): https://www.inadem.gob.mx/

[58] Corporación de Fomento de la Producción: the Chilean economic development agency: https://www.corfo.cl/sites/cpp/movil/webingles

[59] https://www.start-up.pe/

[60] AfDB, OECD & UNDP (2017), *African Economic Outlook: Entrepreneuship and Industrialisation*: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEO_2017_Report_Full_English.pdf

[61] fDi Intelligence (2021), *African Tech Ecosystems of the Future 2021/22*: https://www.fdiintelligence.com/content/download/79718/2609471/file/African%20Tech%20Ecosystems%20of%20the%20Future%202021.pdf

[62] WIPO (2021), *Global Innovation Index 2021*: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2021.pdf

Faso 151st, with relatively high scores for starting a business, protecting minority investors, trading across borders and resolving insolvencies.[63] In 2008, the government created the Agency for Financing and Promotion of SMEs (AFP-PME).[64] Under the Ministry of Economy and Finance, AFP-PME acts as a national fund and a technical assistance provider for ventures / SMEs.

- In Côte d'Ivoire, considerable progress has been achieved since 2011 in improving the business environment, particularly in legal areas – notably, in the form of revised legal codes relating to investment, mining, electricity and telecommunications – and institutions (in particular, the creation of the commercial court and a one-stop shop for ventures and SMEs). In 2014, the government enacted Law No. 2014-140 on the National SME Policy.[65] This Law created the Côte d'Ivoire SME Agency, the mission of which is to promote the creation of ventures / SMEs and improve their access to financing and markets.[66] In 2018 and 2019, Côte d'Ivoire gained 17 and then 12 places, respectively, in the Doing Business ranking, to reach 110th position out of 190 countries worldwide.[67]
- Senegal ranks first in francophone West Africa in the 2019 Global Entrepreneurship Index, and second in the 2021 VC & PE Country Attractiveness Index.[68] While Senegal ranks 123rd globally in the Doing Business 2020 report, it receives relatively high scores for categories such as 'starting a business', 'getting credit' and 'paying taxes'.[69] Ventures and SMEs collectively play an important role in the national economy, representing nearly 90% of all companies, 30% of GDP and 60% of the active population.[70] In 2013, the special programme, Programme for the Reform of the Business Environment and Competitiveness (PREAC), was launched.[71] This programme, which included 52 new measures to facilitate business, has propelled the country into becoming a continental leader in terms of reform.[72] In 2019, Senegal became the second African country[73] to pass a Start-Up Law.[74] This Law provides tax breaks and other benefits to innovative new businesses.

B.1.4 Baseline Projects and Programmes

37. Detailed assessments of baseline initiatives have been undertaken for global projects (Annex 2a), Latin American projects (Annex 2b) and West African projects (Annex 2c). A summary of the baseline initiatives assessed is provided in Table 2; graphical analyses are provided in
38. Figure 3 and Figure 4.

39. Overall, there are relatively few climate-focused venture support initiatives – as opposed to broader, development-focused initiatives – in both regions and there are a number of identified gaps in their coverage: (i) the provision of combined technical and monetary support: baseline initiatives tend to focus on one type of support or the other; (ii) the provision of intermediate levels of venture financing: in Latin America, for example, no climate-focused initiative has been identified that provides financial support to ventures in the US$ 10,000-200,000 range, and a similar gap exists in West Africa; and (iii) the provision of support to very early-stage ventures (i.e. pre-seed and early-seed): these are typically seen as riskier propositions than more mature businesses (which presents a challenge for risk-averse publicly-funded initiatives) and as more distant – and hence unattractive – commercial opportunities (which presents a challenge for private sector initiatives).

Table 2: Baseline Projects Analysed

[63] World Bank (2020), *Doing Business 2020*: https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf
[64] https://afppme.bf/
[65] Oxford Business Group (2019), *Côte d'Ivoire Empowers Entrepreneurs to Boost Small Businesses*: https://oxfordbusinessgroup.com/analysis/empowering-entrepreneurs-national-plans-facilitate-growth-small-businesses
[66] https://agencecipme.ci/?content=010&lang=en
[67] World Bank (2020), *Doing Business 2020*: https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf
[68] IESE (2021), *The Venture Capital and Private Equity Country Attractiveness Index 2021*: https://blog.iese.edu/vcpeindex/files/2021/06/report2021.pdf
[69] World Bank (2020), *Doing Business 2020*: https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf
[70] Republic of Senegal (2014), *Plan Emerging Senegal*: https://www.presidence.sn/en/pse/emerging-senegal
[71] https://www.economie.gouv.sn/en/invest-senegal/senegal-brief
[72] https://investinsenegal.com/faq/un-climat-des-affaires-tres-attractif/
[73] Reuters (2020), *Senegal's Start-Up Act to Boost Female-Led Businesses in First for West Africa*: https://www.reuters.com/article/us-senegal-entrepreneurs-law-trfn-idUSKBN20F1UZ
[74] http://www.numerique.gouv.sn/mediatheque/documentation/loi-relative-%C3%A0-la-cr%C3%A9ation-et-%C3%A0-la-promotion-de-la-startup-au-s%C3%A9n%C3%A9gal

Baseline Project	Country	Funding Entity Type
Global		
Adaptation Fund Climate Innovation Accelerator (AFCIA)	All developing countries	Vertical fund
Adaptation SME Accelerator Project (ASAP)	Developing countries across Latin America, Africa and Asia	Vertical fund
CEMEX-TEC Award	Global	Public-private partnership (PPP)
Climate fund managers	Countries in Africa, Asia and Latin America	Fund manager
InfoDev	Brazil, Caribbean, Ethiopia, Ghana, Kenya, Morocco, Pakistan, Senegal, South Africa, Tanzania, Vietnam	Development finance institution
Global Innovation Fund (GIF)	All developing countries, including many investments in West Africa	Investment fund
Global Cleantech Innovation Programme (GCIP)	Armenia, Cambodia, India, Indonesia, Kazakhstan, Malaysia, Moldova, Morocco, Nigeria, Pakistan, Senegal, South Africa, Thailand, Turkey, Uruguay, Ukraine	Vertical fund
UN Climate Change Global Innovation Hub (UGIH)	Global	Donor-funded UN
Latin America		
Accelerate2030	Mexico, Colombia and others	Accelerator
Cleantech Challenge Mexico / X Challenge	Mexico	Pre-accelerator / accelerator
Cleantech HUB	Colombia	Innovation centre
Dalus Capital	All Latin American countries	VC fund
IDB Lab	All Latin American countries	Development finance institution
Low Emissions and Climate Resilient Agriculture Risk Sharing Facility (GCF FP048)	Mexico and Guatemala	Vertical fund
New Ventures	Mexico	Pre-accelerator / accelerator
Non-profit Enterprise and Self-Sustainability Team (NESsT)	All Latin American countries	Impact investor (non-profit)
P4G Partnership Fund	Colombia, Mexico and others	Philanthropic fund
Viva Schmidheiny Awards	All Latin American countries	Think-action tank
500 Startups Latin America	All Latin American countries	VC fund
West Africa		
Accelerate2030	Côte d'Ivoire, Mali and others	Accelerator
Acumen Resilient Agriculture Fund (ARAF) (GCF FP078)	Ghana, Nigeria and others	Vertical Fund
African Guarantee Fund (AGF)	All African countries	Financial institution
ASIP (Africa Startup Initiative Programme) Accelerator Programme	All African countries	Accelerator
BIX Capital	Nigeria and others	Impact investors
Clean Technology Hub	Nigeria	Innovation centre
Délégation Générale à l'Entreprenariat des Femmes et des Jeunes (DER/FJ)	Senegal	Public institution
Empow'Her	Countries in Europe and West Africa	Entrepreneurial network
Energise Africa	14 African countries	Crowdfunding platform
FRAGG Impact Growth Accelerator Programme (FIGAP) and Impact Fund	Côte d'Ivoire	Impact investment management company
GroFin	14 countries in Africa and the Middle East	Investor fund
Incub'Ivoir	Côte d'Ivoire	Pre-accelerator
Investisseurs et Partenaires	Burkina Faso, Côte d'Ivoire, Senegal and others	Impact investor
Janngo Capital Startup Fund	All African countries	VC fund
Kosmos Innovation Center (KIC)	Côte d'Ivoire, Senegal and others	Accelerator
Nigeria Climate Innovation Centre (NCIC)	Nigeria	Innovation centre
Promoting Cleantech Innovation	Senegal	Vertical fund

for Climate Action in Senegal		
REACT SSA Innovation Fund	Burkina Faso, Liberia, Mali and others	Development institution
Seedstars Africa Ventures	25 countries in sub-Saharan Africa	VC fund
West Africa Regional Innovation Hub	Burkina Faso, Côte d'Ivoire, Senegal and others	Joint international initiative

Figure 3: Baseline Project Heat Map Analysis – Latin America (full details are provided in Annex 2b)

Figure 4: Baseline Project Heat Map Analysis – West Africa (full details are provided in Annex 2c)

B.2 (a). Theory of change narrative and diagram

B.2.1 Problem Statement

40. *The opportunity*: there is a significant opportunity in both regions to leap-frog increasingly emissions-intensive development pathways and, instead, transition to low-emission technologies and practices. Governments can play, and are playing, an important enabling role through the promotion of appropriate policies and regulatory frameworks. The context provided by post-COVID recovery plans represents a timely entry-point for initiatives that support green growth. Venture capital flows into both regions are increasing rapidly, albeit from a low base (particularly in West Africa). VC finance directed at climate mitigation represents a small but growing fraction of overall venture capital, and there is a strong appetite among regionally-active VC firms to scale-up climate funding. The private sector – and, in particular, young, agile ventures that can innovate rapidly and are well positioned to disrupt the status quo – can, in principle, play a prominent role in supplying low-emission goods and services.

    The problem: Governments are struggling with large deficits, partly driven by large public expenditures incurred during the COVID pandemic, as well as other pressing development challenges. The private sector needs to play a prominent role, but is currently prevented from doing so by the nascent state of the cleantech sector – notably, the sector's limited technical capabilities, support networks and role-models, and the lack of 'industry standard' (widely-accepted, best-practice) tools and frameworks – and the mis-match between the current capacities of climate ventures and those required to successfully access VC finance.

    The solution: The overarching objective of the CATALI.5°T Initiative is to build a pipeline of 60 high-potential and commercially-viable seed-stage climate ventures (30 in Latin America and 30 in West Africa) and 120 high-quality pre-seed climate ventures (60 in Latin America and 60 in West Africa), characterised by strong business execution and climate impact capabilities. The seed-stage ventures will be enabled to cross the 'Valley of Death', navigate the stringent VC due diligence process and successfully attract VC funding. The beneficiary ventures will be provided with financial and technical support to provide them with the opportunity to thrive in their respective markets. By contributing to the successful development of climate ventures, the CATALI.5°T Initiative will unblock their climate mitigation benefits, resulting in quantifiable GHG emissions reductions that are aligned with GCF mitigation results areas and Fund-level impacts.

B.2.2 Barrier Analysis

41. There is considerable evidence of emerging VC interest and nascent climate innovation in Latin American and West African markets, accompanied by improving (albeit sparse and incomplete) government policy signals intended to promote entrepreneurship, trigger innovation and facilitate private sector growth. A range of barriers that serve to constrain or prevent VC investment in climate innovation in both regions – in turn preventing large-scale GHG emission reductions – have been identified and placed into two clusters, namely: (i) complex sourcing of high-quality climate ventures in these markets; and (ii) limited information regarding the potential and actual climate impact of new ventures. These are presented in Table 3. The relative importance of these barriers, and their implications, varies between the regions and between the countries within each region. Full details are provided in the Latin America feasibility study (Annex 2b) and the West Africa feasibility study (Annex 2c). These barriers specifically apply to investment in climate ventures. General business and investment barriers – such as regulations, taxation, capital controls and foreign exchange risks – are not detailed here but are reflected in the CATALI.5°T Initiative design.

Table 3: Barriers to Climate Innovation in Latin America and West Africa

Barrier cluster	Barrier	Description
1. Complex sourcing of high-quality	1.1 Growing interest of entrepreneurs and investors in achieving climate impact, but	• Limited understanding of entrepreneurs on climate change causes, effects and market possibilities. • Limited knowledge of entrepreneurs on climate-related government objectives, international commitments and actions.

climate ventures	limited understanding of causalities, trade-offs and related business opportunities	● Perceived complexity, among entrepreneurs and investors, of climate solutions and the variety of markets they exist in. ● Even among impact investors (i.e. VCs and other investors with an explicit environmental or social investment mandate), limited exposure to, and technical capacities for appraising and supporting, climate ventures. ● Limited awareness of, or access to, solutions to reduce GHG emissions and climate vulnerabilities whose technical feasibility and commercial competitiveness have already been proven in other geographies. ● Limited means to adapt global solutions to local contexts due to a lack of research, prototyping and testing/validation infrastructure.
	1.2 Limited venture-building support infrastructure for entrepreneurs preparing climate ventures for VC investments	Limited knowledge and experience of skilled entrepreneurs in developing and validating climate business ideas and business models. Lack of prominent regional role models, and notably women role models, to inform and inspire climate entrepreneurs. Limited access to tried and tested operating procedures for reaching market fit due to a relatively low number of historical climate ventures. Widespread informality of ventures limits their access to business or finance support. Limited ability of pre-accelerators, accelerators and other entrepreneur support organisations (ESOs) to leverage their expertise in 'traditional' (non-climate) business support to address the specific needs of climate ventures. Difficulties entrepreneurs face when validating market opportunities for climate solutions and business ideas and, consequently, when pitching these ideas to professional VCs. Limited capabilities for turning nascent climate solutions into prototypes and, eventually, high-impact commercial climate products and services. VCs lack established stakeholder networks and relationships in the regions, leading to (i) higher-cost, time-intensive venture sourcing, (ii) a focus on more mature (and hence more easily identified) companies at the expense of early-stage (but nonetheless high-potential) ventures; and (iii) limited communication between VC funds and ventures, resulting in mismatches between the venture characteristics VCs demand and the venture characteristics ventures supply.
	1.3 Lack of pre-seed/seed funding available to climate entrepreneurs (grants)	● Few public venture promotion programmes that provide equity-free pre-seed and seed grants for ventures to cover vital expenditures. ● Lack of venture capital targeting ticket sizes between US$ 60,000 and US$ 200,000. ● Limited number of VCs with an explicit climate focus.
2. Limited information regarding actual and potential climate impacts of new ventures	2.1 Lack of methods and data	● Lack of robust, widely accepted ('industry standard') methodological frameworks and tools to measure the climate impact of climate ventures hinders comparison between ventures, disadvantages ventures offering genuine climate mitigation benefits, and limits the opportunities to claim and monitor climate impact.
	2.2. Limited capacity	● Limited capacity of entrepreneurs, pre-accelerators, accelerators, other ESOs and investors to assess climate impact, in particular with regard to new ventures. ● Limited ability of entrepreneurs, pre-accelerators, accelerators, other ESOs and investors to embed climate impact in broader contexts, notably institutional gender strategies and emerging VC ESG frameworks.

Barrrier cluster 1: Complex sourcing of high-quality climate ventures in Latin America and West Africa[75]

Barrier 1.1: Growing interest of entrepreneurs and investors in achieving climate impact, but limited understanding of causalities, trade-offs and related business opportunities

42. Climate innovation does not currently attract as much investor interest as other sectors, notably software and fintech. The application pipelines of investors such as Reach for Change in Senegal or Sinergi in Burkina Faso, for example, reveal that climate innovation rarely accounts for a large proportion of applicants, as it is not seen by entrepreneurs as a sector that attracts investment capital. That said, interest in key climate sub-sectors (mainly solar energy, recycling, water supply / pumping and sanitation) is growing in both regions– although not necessarily for their climate impact but, rather, for their market potential or other benefits. A sizeable minority of entrepreneurs offer a climate impact without valuing it appropriately or even realising it exists at all: between 10-20% of ventures in the pipeline of a VC firm

[75] Full literature references to support the barrier analysis, including references to specific stakeholder interviews and workshops undertaken during CATALI.5°T Initiative preparation, are provided in the Regional Feasibility Studies (Annexes 2b and 2c).

consulted during preparation of the CATALI.5°T Initiative failed to mention reduced GHG emissions as a positive feature of their goods / services when applying for finance, even though the VC firm assessed that benefit to be substantial. A minority of entrepreneurs, more so in Latin America, do market their offerings as 'green' or (far less commonly) 'climate-friendly', but without a real understanding of GHG emissions or low-emission technologies or business models.

43. This means that: (i) entrepreneurs are missing opportunities to attract VC funding and, effectively, monetise their emission reduction potential; (ii) those VC firms that *are* active in the cleantech / impact space struggle more than they should to source ventures offering climate benefits (since these benefits are not being marketed by entrepreneurs or are being marketed misleadingly); and (iii) the mismatch between demand (availability of VC finance for climate ventures) and supply (the number and quality of climate ventures) is perceived by both sides of the market to be considerably greater than it really is, resulting in artificially suppressed market activity.

44. Furthermore, there is a widespread perception, shared by both entrepreneurs and investors in both regions, that climate mitigation solutions are complex and need substantial up-front capital, know-how and skilled labour to implement. This perception is hindering the development of the sector.

45. The perception of complexity stems largely from the additional technical requirements associated with climate mitigation solutions: in addition to all the (already-challenging) issues that a 'normal' venture must grapple with – such as design and manufacturing, marketing, finance, etc. – a climate venture and its investors must, in addition, contend with a host of concepts (baselines, emission factors, global warming potentials, leakage, MRV, etc.) that they may not be familiar with – and which their usual sources of support, such as mentors and pre-accelerators / accelerators – are unlikely to be familiar with either. Moreover, the diverse range of sectors and technologies that offer potential climate mitigation benefits simultaneously presents an enormous opportunity and a considerable challenge. Technical and domain expertise are vital for ventures that are developing prototypes, demonstrating proof of concept and finessing business models. Pre-accelerators / accelerators and VC firms tend to have generalised strengths across all (or, at least, most) sectors and deep technical expertise in a small handful; where a venture is offering a climate solution in an under-served sector, it may struggle to attract the support and finance it needs.

46. The perception of high up-front capital requirements stems from a widespread misunderstanding of climate mitigation solutions as entailing large-scale renewable energy (e.g. wind farms) or cutting-edge manufacturing plants (the example of Tesla was mentioned spontaneously in a number of stakeholder interviews in West Africa). Neither ventures nor VC firms generally perceive high up-front capital opportunities as aligned with their mental models of high-growth investment opportunities, particularly compared with other typical VC sectors such as software and fintech.

47. It is certainly true that some climate technologies have relatively high upfront costs (e.g. recycling infrastructure) – even if they ultimately deliver higher value (profits, reliable cash-flow) over time. These costs may be associated with the technology itself or with market and geographical barriers, such as for importation, production, logistics or the costs of skilled labour. As an early-stage climate venture is unlikely to be able to command pricing power in the marketplace (because it has not yet gained customer acceptance or built an attractive brand), it may take an extended period of time for revenues to start paying-back upfront costs. However, there are numerous examples of climate ventures that have created value inexpensively by, for example, connecting customers through mobile phones to relevant real-time and actionable information crucial to their livelihoods (e.g. Ignitia in Burkina Faso, relaying actionable weather-related information to farmers). Another example is Sanergy in Kenya, a venture that provides affordable non-sewage sanitation services to urban residents and uses the waste to make and distribute organic fertiliser and animal-feed to farmers, or briquettes for cooking to urban and rural residents. There is also considerable potential to adopt and adapt technologies and business models already developed in higher-income countries and apply them in innovative and capital-light ways that are appropriate to the local context.

Barrier 1.2: Limited venture-building support infrastructure for entrepreneurs preparing climate ventures for VC investment

48. The entrepreneurial ecosystem is vital to the success of ventures. Countries in both regions tend to have relatively small formal business sectors but have successfully and organically developed thriving informal

entrepreneurial and financing networks. While this creates an environment that is conducive to innovation and risk-taking, it also suggests a very wide heterogeneity of entrepreneurs, some of whom lack strong fundamental business skills while others lack access to risk capital, networks or markets – and thus the means to grow a viable enterprise. This is one reason why there are few prominent climate venture success stories in either region – which is, by itself, a problem, as it means there are few case-studies that aspiring entrepreneurs can be inspired by or learn from. The Gender Assessment (Annex 8a) identifies the lack of prominent women entrepreneurs as being a particular challenge in the context of encouraging the emergence and development of women-led climate ventures.

49. The widespread market informality makes it difficult to access support and finance from the formal sector. If an enterprise is not officially established, it typically lacks the appropriate documentation to receive VC funding and, instead, has to resort to more challenging routes such as self-financing, informal financing or micro-finance. It also means that many promising ventures 'fly under the radar' of VC firms, at least until they are more mature and have achieved a degree of market prominence – with the result that VC venture sourcing is, at best, patchy, with many lost mitigation opportunities as a result, and that VCs become aware of investment prospects at a late stage, by which time the ventures' business models may be too far developed, and hence too rigid, to accommodate changes that improve their attractiveness to VC firms or that optimise their climate mitigation impact.

50. Pre-accelerators and accelerators provide a vital element of the venture support ecosystem, delivering opportunities for training, networking, collaboration, cross-fertilisation and mentoring. Despite a growing number of pre-accelerators / accelerators in both regions, the extent and quality of their support is heterogeneous. In Mexico, for example, only 22% of enterprises have received support from a pre-accelerator or accelerator. In West Africa, Afric'Innov is providing capacity building for pre-accelerators and accelerators. However, Afric'Innov and similar initiatives do not provide any climate-focused capacity building, and the ability of pre-accelerators and accelerators in both regions to leverage their expertise in 'traditional' business support to address the specific needs of climate ventures is very constrained.

51. In addition, there are large differences in the maturity of the markets within both regions. In Latin America, Brazil, Mexico, Colombia and Chile, dominate VC investment, while in West Africa a distinction can be drawn between more mature coastal economies and those of the Sahelian interior. Combined with the sectoral and technological diversity of climate ventures (see Barrier 1.2), this means that a 'one size fits all' approach to venture support is unlikely to be effective – and, indeed, counter-productive. One-to-one, tailored support is needed for climate ventures to a greater extent than both regions' pre-accelerators and accelerators are accustomed to providing.

Barrier 1.3: Lack of pre-seed / seed funding available to climate entrepreneurs

52. Accessing finance is an obstacle for ventures generally and climate ventures specifically. A majority of stakeholders interviewed in both regions (including an advisor to the Prime Minister of Cote d'Ivoire) acknowledge that this is a major barrier. There are gaps in the ecosystem, notably a lack of technical and financial support for pre-seed and seed stage ventures. Some pre-accelerators and accelerators offer limited financial support: grants typically extend up to approximately US$ 10,000-20,000. But the main financial gap is for ticket sizes between US$ 60,000 and US$ 200,000. There is a palpable sense of frustration among entrepreneurs, particularly in West Africa where financing opportunities are even more limited than those in Latin America: many receive initial finance of one kind or another (usually provided by the entrepreneurs themselves or by their friends and families, with angel investors playing an additional role in Latin America), but then lack ongoing support and are unable to cross the 'Valley of Death', when costs are ramping up but revenues remain limited. VC finance for climate ventures is certainly increasing in both regions, and the prospects for continued growth in VC financing are very good – but many high-potential ventures are simply unable to advance to the (post-seed) stage where Series A VC finance becomes a possibility.

53. Alternative funding opportunities are very limited. Banks and other traditional lenders, even those with a focus on SME finance, are risk-averse to novel technologies and business models. They perceive climate ventures as risky, even before other barriers to accessing bank finance – large ticket sizes, collateral requirements, favourable credit histories and high interest rates – are considered. These challenges are compounded for women, who are, in some countries / cultures, traditionally not official owners of land or assets that can be used as collateral. Conversely, for micro-finance, ticket sizes tend to be too low, with high interest rates and short durations (typically 6-12 months). As a result, the specific resource and

support needs of ventures as they enter the seed stage are too large to benefit from early pre-seed grants and too small for the minimal thresholds of VCs, including most impact investors. The general lack of available investment capital that would slot between high-risk venture capital and lower-risk private or corporate financing hinders the delivery of climate change solutions by ventures.

Barrier cluster 2: Limited information regarding actual and potential climate impacts of new ventures

Barrier 2.1: Lack of methods and data

54. An issue faced by most venture initiatives is access to widely accepted methodologies to measure climate mitigation benefits – or, indeed, adaptation-related co-benefits. This remains an important gap for three reasons:
    - It makes it difficult to evaluate climate impact ex-ante and to compare the potential climate impacts of different ventures. This, in turn, means that investment may flow to the 'wrong' ventures – those that do not offer the highest mitigation benefits.
    - It is inefficient. Ventures, pre-accelerators, accelerators, other entrepreneur support organisations (ESOs) and VC firms are all obliged to use – to the extent they can use – different tools to assess climate impact. These tools may not be robust or credible, are unlikely to be consistent with each other, entail duplicative efforts and may not be recognised by other ecosystem actors, such as international development organisations or the financiers (pension funds, foundations, etc.) that typically supply the capital for VC impact funds. It also renders the VC due diligence process more cumbersome and more time-consuming than it needs to be.
    - The lack of standard practices limits the opportunities for entrepreneurs to claim climate impact and, to the extent that this climate impact leads to positive VC funding decisions, limits the ability of entrepreneurs to effectively monetise their emission reductions.

55. Investors in climate-related ventures require verifiable information on the climate impact of their interventions prior to allocating scarce funds to them. While methodologies to measure the climate mitigation impacts of ventures do exist, they tend to be (slightly paradoxically) both highly complex and simultaneously opaque (built on unclear or unvalidated assumptions); they tend to focus on Scope 1 and 2 emissions, where ventures may not make much of an impact at all; they lack consistency, making comparative investment decisions challenging; and, even when they are theoretically robust, they often suffer from a lack of good-quality, locally-calibrated baseline data and a limited track-record of real-world application (which would have allowed refinements to be made and deficiencies to be rectified). Requiring impacts to be verifiable involves costs associated with maintaining systems for data tracking and monitoring, whereas the budgets of ventures are typically already tight. Methodologies for measuring the climate resilience of ventures are at an even earlier stage of development.

56. The problem of impact measurement, including robust MRV frameworks, is compounded when the inherent uncertainty associated with the success or failure of ventures is considered. Managers of the baseline projects interviewed during preparation of the CATALI.5°T Initiative cautioned against using naïve (overly optimistic) assumptions about venture survival rates (and hence the realisation of GHG reduction outcomes). Furthermore, ventures often need a long lead time to gain traction, only gradually generating climate impact as they gain market share: for climate ventures, the time to reach Series A funding is typically 1-3 years after the seed stage.

Barrier 2.2: Limited capacity

57. Ventures require entrepreneurs to be multi-skilled – having an understanding of technology, business processes, sales and marketing, HR and other functions – in order to grow their business successfully. Climate ventures require an additional understanding of climate impacts, some understanding of climate science, and the methodologies and restrictions of climate finance as a sub-set of generic finance. Finding this skill-set is difficult in developed markets, and even harder in Latin America and – especially – West Africa, where technical skills and knowledge networks are weaker.

58. Many of the entrepreneurs surveyed during preparation of the CATALI.5°T Initiative were engaged in renewable energy and energy efficiency activities, in part reflecting these sectors' prominence (high awareness, considerable body of successful investments worldwide), but also because donor agencies are most familiar with these sectors and there is certainly a considerable development opportunity associated with them in both regions. However, even in these relatively well-addressed sectors, climate-

specific knowledge and skill-sets – i.e. the ability to assess and monitor climate impact, as opposed to non-climate domain expertise such as electrical engineering – was found to be extremely limited. Climate-specific capacities are even lower in other high-potential mitigation sectors, such as agriculture, urban waste management and transport.

59. These limitations extend from entrepreneurs to pre-accelerators, accelerators, ESOs – and even to VC firms, which are operating in a fluid environment that is demanding ever-more emphasis on, and evidence for, 'impact' while equipped with ESG tools and frameworks that are lagging behind VC needs. While some pre-accelerators and accelerators have dedicated environmental programmes, these are relatively small, donor-dependent and not exclusively (or even primarily) climate-focused. Other programmes with a climate focus, such as the Adaptation Fund Climate Innovation Accelerator (AFCIA), are not directed at commercial acceleration and/or climate mitigation. Equipping ecosystem actors with the tools to accurately assess venture climate impact is crucial. But just as important is building their capacities to use these tools and enabling them to disseminate appropriate tool-use across the venture ecosystem.

B.2.3 Theory of Change

60. The CATALI.5°T Initiative theory of change is presented in Figure 5. The logic can be stated as follows:

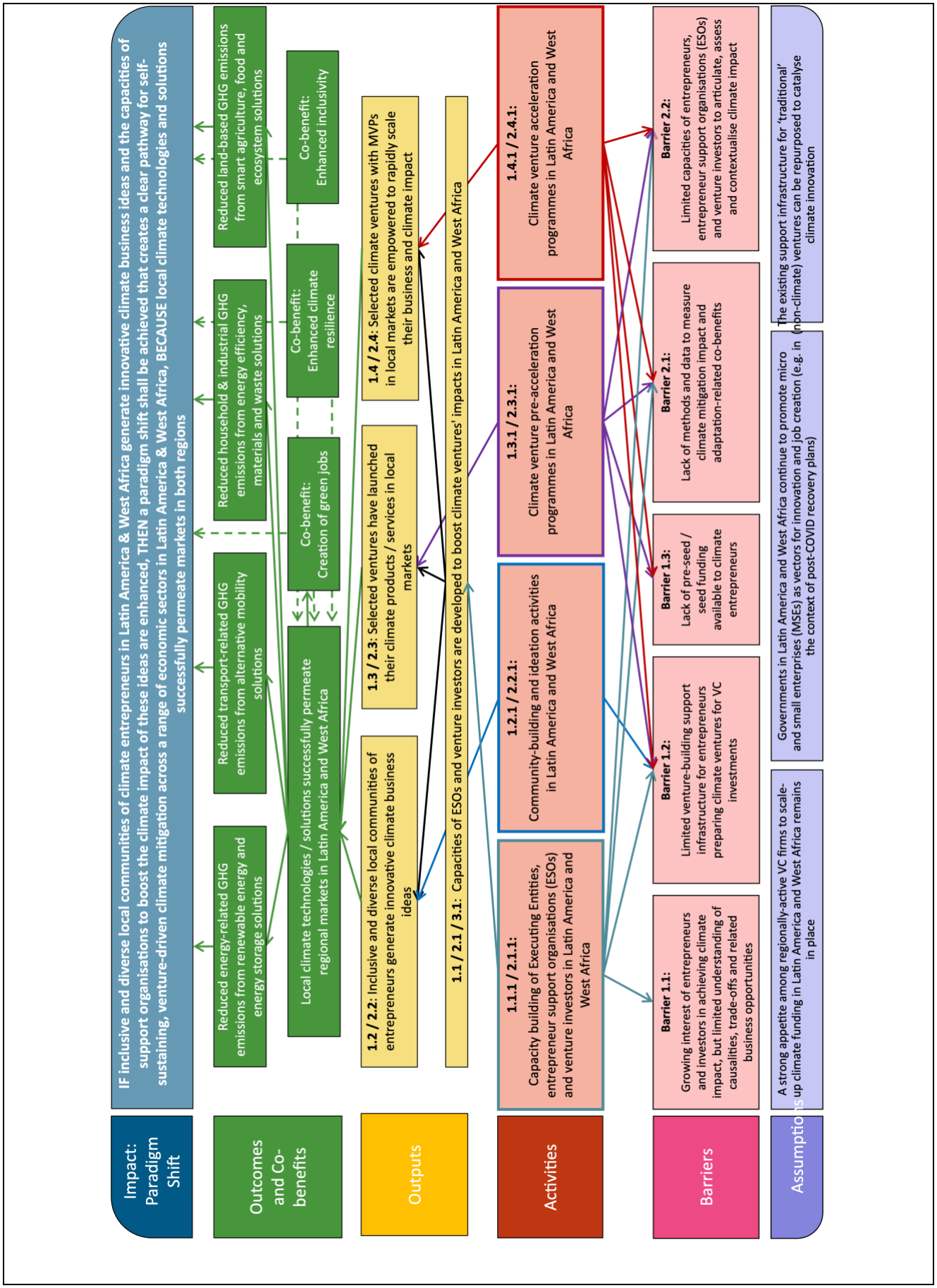
    IF inclusive and diverse local communities of climate entrepreneurs in Latin America and West Africa generate innovative climate business ideas and the capacities of support organisations to boost the climate impact of these ideas are enhanced, **THEN** a paradigm shift shall be achieved that creates a clear pathway for self-sustaining, venture-driven climate mitigation across a range of economic sectors in Latin America and West Africa, **BECAUSE** local climate technologies and solutions successfully permeate markets in both regions

61. The theory of change illustrates the causal progression from underlying barriers to activities, outputs, outcomes and impact. According to the logic of the proposed intervention, substantive, self-sustaining emission reductions across the GCF's Mitigation Result Areas can be achieved in Latin America and West Africa if locally-developed or locally-tailored climate technologies and business solutions can be enabled to permeate regional markets. This can be brought about if local communities of entrepreneurs are able to generate innovative climate business ideas and if these ideas can be commercialised and can achieve rapid market scale-up.

62. To ensure this is the case, targeted activities are required to overcome the identified barriers – knowledge, awareness, financial and tool availability – that prevail in the baseline and which currently hinder such commercialisation and scale-up. These activities include capacity building of existing entrepreneur support organisations (ESOs) – pre-accelerators, accelerators, government venture support agencies, etc. – and venture investors; the development of a vibrant entrepreneurial community that is able to generate mitigation ideas with commercial potential; and the provision of technical and financial assistance to the climate ventures with the greatest commercial and mitigation potential, so that they can attract venture capital and other financing that allows them to achieve market success.

63. Technical assistance in the context of the CATALI.5°T Initiative refers to training, capacity building, coaching, mentoring and networking: i.e. to support services geared to stakeholders' needs that are procured and financed by the CATALI.5°T Initiative. Financial assistance in the context of the CATALI.5°T Initiative refers to: (i) grants of Euro 15,000 to climate ventures in the regional pre-acceleration programmes (one such programme in Latin America and one in West Africa); and (ii) repayable grants averaging Euro 100,000 to climate ventures in the regional acceleration programmes (one such programme in Latin America and one in West Africa). The use of these grants and repayable grants is subject to terms outlined in individual grant agreements signed by each venture and the relevant Executing Entity.

Figure 5: CATALI.5°T Initiative Theory of Change


Impact: Paradigm Shift
IF inclusive and diverse local communities of climate entrepreneurs in Latin America & West Africa generate innovative climate business ideas and the capacities of support organisations to boost the climate impact of these ideas are enhanced, THEN a paradigm shift shall be achieved that creates a clear pathway for self-sustaining, venture-driven climate mitigation across a range of economic sectors in Latin America & West Africa, BECAUSE local climate technologies and solutions successfully permeate markets in both regions
Outcomes and Co-benefits
Reduced energy-related GHG emissions from renewable energy and energy storage solutions
Reduced transport-related GHG emissions from alternative mobility solutions
Reduced household & industrial GHG emissions from energy efficiency, materials and waste solutions
Reduced land-based GHG emissions from smart agriculture, food and ecosystem solutions
Local climate technologies / solutions successfully permeate regional markets in Latin America and West Africa
Co-benefit: Creation of green jobs
Co-benefit: Enhanced climate resilience
Co-benefit: Enhanced inclusivity
Outputs
1.2 / 2.2: Inclusive and diverse local communities of entrepreneurs generate innovative climate business ideas
1.3 / 2.3: Selected ventures have launched their climate products / services in local markets
1.4 / 2.4: Selected climate ventures with MVPs in local markets are empowered to rapidly scale their business and climate impact
1.1 / 2.1 / 3.1: Capacities of ESOs and venture investors are developed to boost climate ventures' impacts in Latin America and West Africa
Activities
1.1.1 / 2.1.1: Capacity building of Executing Entities, entrepreneur support organisations (ESOs) and venture investors in Latin America and West Africa
1.2.1 / 2.2.1: Community-building and ideation activities in Latin America and West Africa
1.3.1 / 2.3.1: Climate venture pre-acceleration programmes in Latin America and West Africa
1.4.1 / 2.4.1: Climate venture acceleration programmes in Latin America and West Africa
Barriers
Barrier 1.1: Growing interest of entrepreneurs and investors in achieving climate impact, but limited understanding of causalities, trade-offs and related business opportunities
Barrier 1.2: Limited venture-building support infrastructure for entrepreneurs preparing climate ventures for VC investments
Barrier 1.3: Lack of pre-seed / seed funding available to climate entrepreneurs
Barrier 2.1: Lack of methods and data to measure climate mitigation impact and adaptation-related co-benefits
Barrier 2.2: Limited capacities of entrepreneurs, entrepreneur support organisations (ESOs) and venture investors to articulate, assess and contextualise climate impact
Assumptions
A strong appetite among regionally-active VC firms to scale-up climate funding in Latin America and West Africa remains in place
Governments in Latin America and West Africa continue to promote micro and small enterprises (MSEs) as vectors for innovation and job creation (e.g. in the context of post-COVID recovery plans)
The existing support infrastructure for 'traditional' (non-climate) ventures can be repurposed to catalyse climate innovation

B.2 (b). Outcome mapping to GCF results areas and co-benefit categorization

Outcome number	GCF Mitigation Results Area (MRA 1-4)				GCF Adaptation Results Area (ARA 1-4)			
	MRA 1 Energy generation and access	**MRA 2** Low-emission transport	**MRA 3** Building, cities, industries, appliances	**MRA 4** Forestry and land use	**ARA 1** Most vulnerable people and communities	**ARA 2** Health, well-being, food and water security	**ARA 3** Infrastructure and built environment	**ARA 4** Ecosystems and ecosystem services
Outcome 1: Local climate technologies / solutions successfully permeate regional markets in Latin America and West Africa	☒	☒	☒	☒	☐	☐	☐	☐
• Reduced energy-related GHG emissions from renewable energy and energy storage solutions	☒	☐	☐	☐	☐	☐	☐	☐
• Reduced transport-related GHG emissions from alternative mobility solutions	☐	☒	☐	☐	☐	☐	☐	☐
• Reduced household and industrial GHG emissions from energy efficiency, materials and waste solutions	☐	☐	☒	☐	☐	☐	☐	☐
• Reduced land-based GHG emissions from smart agriculture, food and ecosystem solutions	☐	☐	☐	☒	☐	☐	☐	☐

Co-benefit number	Co-benefit					
	Environmental	**Social**	**Economic**	**Gender**	**Adaptation**	**Mitigation**
Co-benefit 1: Creation of green jobs	☐	☐	☒	☐	☐	☐
Co-benefit 2: Enhanced climate resilience	☐	☐	☐	☐	☒	☐
Co-benefit 3: Enhanced inclusivity	☐	☐	☐	☒	☐	☐

B.3. Project/programme description

B.3.1 CATALI.5°T Initiative Description

Overview

64. The CATALI.5°T (Concerted Action To Accelerate Local I.5° Technologies) Initiative will establish and implement regional technical assistance and investment grant platforms that build a portfolio of early-stage climate ventures in Latin America and West Africa. The objective of each regional CATALI.5°T is to trigger seed and venture capital investments in start-ups and young businesses with the highest climate mitigation impact and business growth potential. Each regional CATALI.5°T will provide support for: (i) climate ventures; (ii) pre-accelerators, accelerators and other entrepreneur support organisations (ESOs); and (iii) VC firms and other investors.

65. The design of the CATALI.5°T Initiative directly addresses the barriers identified in Section B.2.2.

Table 4: Barrier Removal by the CATALI.5°T Initiative

Barrier	Barrier Removal by the CATALI.5°T Initiative
1.1 Growing interest of entrepreneurs and investors in achieving climate impact, but limited understanding of causalities, trade-offs and related business opportunities	● Nurturing nascent climate entrepreneurship / cleantech ecosystems in Latin America and West Africa to ensure (i) mutually-supportive roles for, (ii) technical understanding by, and (iii) standardised tool-use across Executing Entities, ESOs, venture investors and climate ventures, thereby enabling entrepreneurs and investors to, in effect, monetise emission reductions and address mismatches – real and perceived – between demand (availability of VC finance for climate ventures) and supply (the number and quality of climate ventures) in Latin America (Activities 1.1.1, 1.2.1, 1.3.1, 1.4.1, 3.1.1, 3.1.2, 3.1.3) and West Africa (Activities 2.1.1, 2.2.1, 2.3.1, 2.4.1, 3.1.1, 3.1.2, 3.1.3).
1.2 Limited venture-building support infrastructure for entrepreneurs preparing climate ventures for VC investments	Community-building and ideation events ('climathons') in Latin America (Sub-Activity 1.2.1.1) and West Africa (Sub-Activity 2.2.1.1) to support and encourage entrepreneurs and potential entrepreneurs to develop early ideas for climate businesses – with a notable focus on mobilising and encouraging women entrepreneurs and other under-represented groups (e.g. rural-based entrepreneurs) in Latin America (Sub-Activity 1.2.1.2) and West Africa (Sub-Activity 2.2.1.2). ● Regional support programmes for pre-seed ventures to enable them to develop minimum viable climate products / services – including technical assistance, mentoring, networking and financial assistance: Activity 1.3.1 (Latin America) and Activity 2.3.1 (West Africa). ● Regional support programmes for seed-stage ventures to enable them to scale-up and commercialise their minimum viable climate products / services and ensure investability by VC firms and other investors – including technical assistance, mentoring, networking and financial assistance: Activity 1.4.1 (Latin America) and Activity 2.4.1 (West Africa).
1.3 Lack of pre-seed/seed funding available to climate entrepreneurs (grants)	<u>Regional pre-acceleration programmes</u> ● Euro 15,000 grants for climate ventures in Latin America (Sub-Activity 1.3.1.3) and West Africa (Sub-Activity 2.3.1.4). <u>Regional acceleration programmes</u> ● Euro 50-200,000 (average: Euro 100,000) repayable grants for climate ventures in Latin America (Sub-Activity 1.4.1.3) and West Africa (Sub-Activity 2.4.1.2).
2.1 Lack of methods and data	Methodologies, tools / toolkits and case-studies developed for Executing Entities, ESOs, venture investors and climate ventures: ● Assessment of venture / venture portfolio ex ante and ex post GHG mitigation impact – CIF and MORSE tools: Sub-Activity 3.1.1.1. ● Assessment of ventures' climate resilience / adaptation co-benefits: Sub-Activity 3.1.1.2. ● Assessment of venture transformational / paradigm-shifting climate potential: Sub-Activity 3.1.1.3.
2.2. Limited capacity	● Capacity building of Executing Entities, ESOs and venture investors to develop climate entrepreneurialism / cleantech expertise – and hence the ability to source, support, appraise and finance high-potential climate ventures: Activity 1.1.1 (Latin America) and Activity 2.1.1 (West Africa).

	● Capacity building of pre-seed climate ventures to enable them to develop minimum viable climate products / services: Activity 1.3.1 (Latin America) and Activity 2.3.1 (West Africa). ● Capacity building of seed-stage ventures to enable them to scale-up and commercialise their minimum viable climate products / services and ensure investability by VC firms and other investors: Activity 1.4.1 (Latin America) and Activity 2.4.1 (West Africa). ● Actionable and practical guidance to Executing Entities, ESOs, venture investors and climate ventures on how to integrate gender equity into their operations, become gender-smart and enhance diversity in climate entrepreneurialism: Activity 3.1.2. ● Awareness-raising, training and ad hoc support on E&S issues for climate ventures: Activities 1.1.1 and 1.3.1 (Latin America) and Activities 2.1.1 and 2.3.1 (West Africa). ● ESG toolkits developed for Executing Entities, ESOs and venture investors to build on asset management and late-stage buy-out / private equity tools but calibrated for emerging VC / climate investment needs: Activity 3.1.3.

66. At the core of each regional CATALI.5°T is an **acceleration programme** (Activity 1.4.1 – Latin America and Activity 2.4.1 – West Africa). Each regional acceleration programme focuses on providing support to seed-stage climate ventures to rapidly scale-up their minimum viable products (MVPs) and ensure investability by VCs. Specifically, the acceleration programmes will enable climate ventures to: (i) further develop or validate their products or services (e.g. through market surveys, product testing or product enhancement); (ii) enhance the success of their products and services through market demonstration, development of growth strategies, partnership development, etc.; and (iii) maximise the climate impact of their products and services through robust, internationally-recognised climate change mitigation assessment and, where relevant, assessment and strengthening of climate adaptation co-benefits. This support will take the form of Technical Assistance and Financial Assistance (in the form of a repayable grant to each climate venture of an average of EUR 100,000 to cover pre-agreed costs).

67. Less mature, pre-seed ventures will receive support to develop minimum viable climate products or services through a regional **pre-acceleration programme** (Activity 1.3.1 – Latin America and Activity 2.3.1 – West Africa). This support will take the form of Technical Assistance (capacity building, mentoring, networking, etc.) and Financial Assistance (in the form of a grant to each climate venture of up to EUR 15,000 to cover pre-agreed costs).

68. To promote the regional pre-acceleration and acceleration programmes, inspire entrepreneurs' interests in climate innovation and ensure a large number of high-quality applications to the pre-acceleration programme, the CATALI.5°T Initiative will run a number of **community-building and ideation activities** (Activity 1.2.1 – Latin America and Activity 2.2.1 – West Africa), some of them specifically targeting women and other under-represented groups in entrepreneurship.

69. In addition, **trans-regional advisory, capacity and knowledge support** (TRACKS) **(**Activity 1.1.1 – Latin America and Activity 2.1.1 – West Africa) will enable CATALI.5°T Initiative stakeholders to develop expertise in climate impact assessment; transformational climate mitigation solutions; women's empowerment in climate entrepreneurship; and Environmental, Social and Governance (ESG) frameworks. This will augment their current business and finance skill-sets and enable them, for example, to assess ventures' likely climate impacts (emission reduction potential and climate adaptation co-benefits), to steer ventures towards more disruptive and transformational climate solutions, to promote women's participation in climate entrepreneurship, and to understand and apply emerging ESG frameworks in the VC industry.

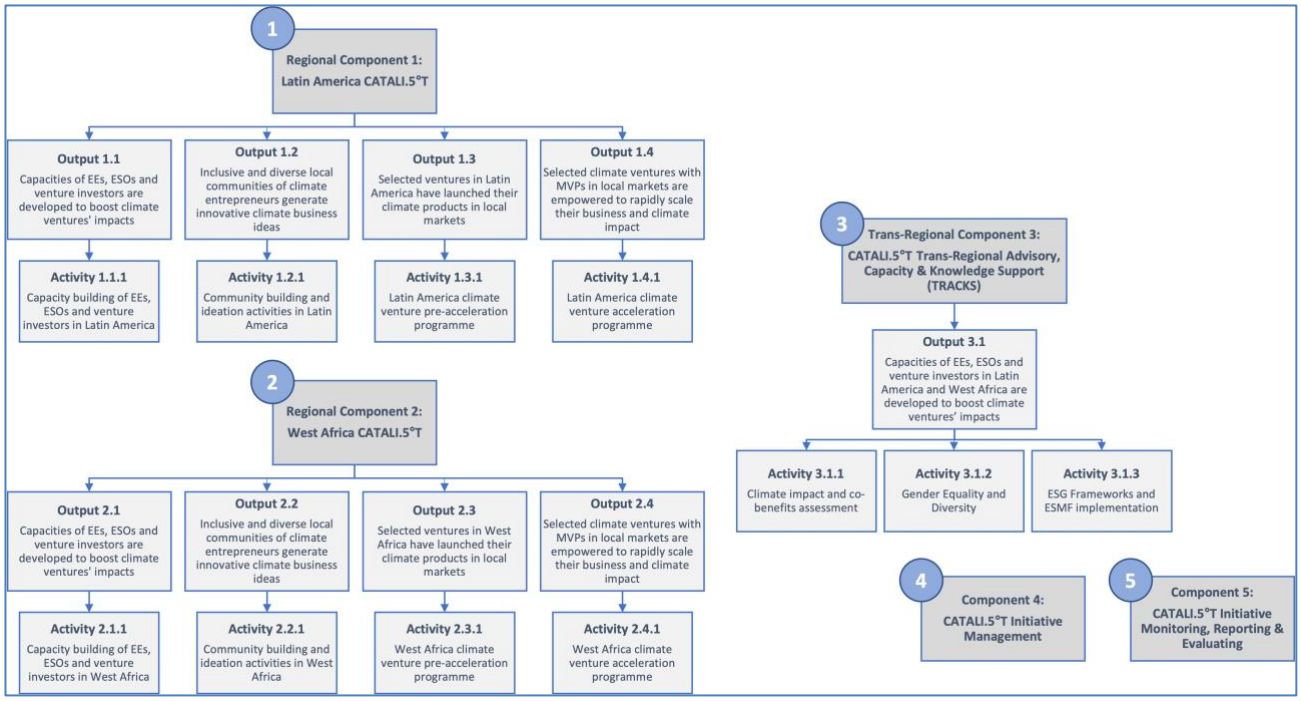
70. The CATALI.5°T Initiative is organised across 5 components:
    Component 1 encompasses the CATALI.5°T in Latin America.
    Component 2 encompasses the CATALI.5°T in West Africa.
    At cross-regional level, Component 3 aggregates provision of special advisory and capacity building services to ventures, Executing Entities, ESOs and investors involved in Components 1 and 2.
    Component 4 encompasses CATALI.5°T Initiative governance and management activities.
    Component 5 encompasses CATALI.5°T Initiative monitoring, reporting and evaluation activities.

CATALI.5°T Initiative Geography

71. The Latin America CATALI.5°T will be open to entrepreneurs and ventures from Argentina, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay and Peru (11 countries), provided the country's NDA has issued a No-Objection Letter (NoL).

72. The West African CATALI.5°T will be open to entrepreneurs and ventures from Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mali, Mauritania, Niger, Senegal and Togo (9 countries), provided the country's NDA has issued a No-Objection Letter (NoL).

Figure 6: CATALI.5°T: Concerted Action To Accelerate Local I.5° Technologies – Components, Outputs and Activities



Types of Climate Ventures to be Supported by the CATALI.5°T Initiative

73. The CATALI.5°T Initiative will be sector- and technology-agnostic: it will follow a market-led approach to scaling-up the most promising opportunities for GHG mitigation. Subject to some limitations on eligibility (screening) and competitive selection (see Sub-Activities 1.3.1.1 / 2.3.1.1 relating to venture selection for the pre-acceleration programmes in Latin America and West Africa, and Sub-Activities 1.4.1.1 / 2.4.1.1 relating to venture selection for the acceleration programmes in Latin America and West Africa), venture-types outlined in Table 5 that demonstrate the potential to reduce / sequester GHG emissions at scale in any of the GCF's mitigation Result Areas will, in principle, be able to participate. Eligible greenhouse gases for mitigation purposes will be: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorcarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). Table 5 provides a summary of the types of ventures that can, in principle, be selected for inclusion, subject to additional screening and competitive selection criteria.

Table 5: Types of Climate Ventures That Can Participate in the CATALI.5°T Initiative

Result Area	Archetype[76]	Description
Energy access & power generation ventures	Biomass energy	Clean technology solutions to produce energy from renewable biomass sourced sustainably (combustion, pyrolysis, gasification, anaerobic digestion, etc.).

[76] Please refer to Section D.1.1 for further details about archetypes.

	Energy storage	Energy storage solutions for consumers and businesses, particularly those that increase the usability of renewable energy solutions (e.g. home energy storage).
	Renewable energy systems	Scaling-up the deployment and rehabilitation of generation technologies such as wind, solar and run-of-river hydro.
	Small-scale solar	Easy-to-use and affordable solar systems for households and premises such as clinics and offices.
	Smart grids	Responsive grid infrastructure and associated software and tools capable of managing intermittent renewable energy supply and optimising customers' electricity consumption.
Low-emission transport ventures	E-mobility	Electric vehicles (cars, bikes, etc.) and associated business models and tools to change user behaviour to use electric alternatives to fossil-fuel solutions.
	Shared mobility	Business cases around shared mobility solutions (car-pooling, last-mile solutions, car/bike sharing, etc.).
	Smart mobility	Route planning; apps for minimising journey times and energy consumption.
Buildings, cities, industries and appliances ventures	Energy efficiency	Platforms, technologies and equipment that require less energy than baseline alternatives (e.g. energy efficient lighting, heating, cooling, household appliances and commercial applications).
	Alternative materials	Alternatives to traditional packaging and other materials that offer smaller carbon footprints (during production, transport, use or disposal) – e.g. bioplastics, multi-use plastics, recycled paper and cardboard, etc.
	Smart city solutions	Analytics for mobility in cities and regions; development of smart / combined transportation systems.
	Smart manufacturing	Manufacturing processes and equipment that use less raw material, produce less waste and consume less energy.
	Sustainable building materials	Materials – such as cement, wood and insulation foam – that have smaller carbon footprints (during production, transport, use or disposal) than baseline alternatives; materials may also be zero-emission (e.g. sustainably harvested wood) or negative-emission (e.g. CO_2 absorptive).
	Smart buildings	Systems and equipment that integrate discrete energy-saving or renewable energy technologies (e.g. smart lighting systems, smart cooling systems) or which incorporate low-emission features in their design (e.g. use of shading, orientation and natural ventilation).
	Urban planning	Solutions that address settlement-related emissions from a holistic perspective – e.g. integrated transport solutions, efficient zoning, provision of cycle routes, tree-planting schemes, etc.
	Sustainable consumption	Solutions that reduce the carbon footprint of consumer goods and services – e.g. reduced transport / logistics, multi-use or biodegradable packaging, reduced weight, alternative materials, improved power management, etc.
	Clean water / water availability	Technologies and processes – such as PV water pumping and solar disinfection – that lower the carbon footprint of the provision of clean water.
	Clean air	Solutions that reduce air pollution – where such solutions also reduce GHG emissions.[77]
	Sanitation	Technologies and processes that reduce GHG emissions associated with sewage management – e.g. variable-speed pumps, energy-efficient stirring, methane avoidance or capture, etc.
	Waste management	Solutions that avoid waste generation (e.g. composting, recycling) or reduce the GHG emissions from stored waste (e.g. landfill management).
Forestry & land use ventures	AgroTech (land)	Solutions to increase efficiency and sustainability of land management – e.g. reduced till agriculture, agro-forestry, alternative crops, smart crop rotation, alternative wetting and drying (in paddy fields), etc.
	AgroTech (nutrients / production)	Reduced use of nitrogenous fertilizers; alternative cattle feed; low-water agriculture that requires less water pumping; improved irrigation efficiency, etc.

[77] For example, this would not include vehicle catalytic converters – as they tend to increase carbon dioxide and nitrous oxide emissions (while also reducing non-GHG emissions, such as those of carbon monoxide and nitrogen oxides). However, improved cookstoves that use less firewood and produce less CO_2 would be eligible, for example.

	Alternative proteins	Alternatives to industrial meat production – e.g. plant-based and lab-cultivated meat, aquaculture, etc.
	Food security	Agricultural solutions that reduce inputs (fertilizers, pesticides, water, etc.) and/or increase outputs (more efficient farming practices), in the process reducing GHG emissions.
	Food waste	Solutions to reduce spoiling / wastage: e.g. more efficient transport, improved cooling technologies, new crop varieties, monitoring devices, etc.
	Monitoring land use	Technology solutions and analytics for livestock, soil and nutrient management – e.g. satellite data services, drones, mobile apps, GIS, etc.
	Ecosystem conservation, restoration and monitoring	Business cases and solutions for reversing ecosystem loss through (e.g.) reforestation, wetland rehabilitation, payments for ecosystem services, data provision and analytics, etc.

Regional Components (Components 1 and 2)

74. Component 1 (Latin America) and Component 2 (West Africa) have almost identical structures. Each encompasses 4 Outputs and 3 or 4 corresponding Activities (and associated Sub-Activities):

- Output 1.1 / 2.1: Capacities of Executing Entities, ESOs and venture investors in Latin America / West Africa are developed to boost climate ventures' impacts.
    - Activity 1.1.1 / 2.1.1: Capacity-building of Executing Entities, regional ESOs and venture investors in Latin America / West Africa.
        - *This Activity represents the regionally-specific implementation of Activities 3.1.1, 3.1.2 and 3.1.3, which are described in Component 3.*

- Output 1.2 / 2.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in Latin America / West Africa generate innovative climate business ideas.
    - Activity 1.2.1 / 2.2.1: Community-building and ideation activities in Latin America / West Africa
        - *Sub-Activity 1.2.1.1 / 2.2.1.1: Climathons*
        - *Sub-Activity 1.2.1.2 / 2.2.1.2: Open digital community for promoting women and diversity in climate entrepreneurship in Latin America / West Africa*

- Output 1.3 / 2.3: Selected Latin American / West African ventures have launched their climate products in local markets.
    - Activity 1.3.1: Climate venture pre-acceleration programme – Latin America
        - *Sub-Activity 1.3.1.1: Call for applications and venture selection*
        - *Sub-Activity 1.3.1.2: Pre-acceleration programme*
        - *Sub-Activity 1.3.1.3 Pre-acceleration programme – grants*
    - Activity 2.3.1: Climate venture pre-acceleration programme – West Africa
        - *Sub-Activity 2.3.1.1: Call for applications and venture selection*
        - *Sub-Activity 2.3.1.2: Pre-acceleration programme – Phase 1 (technical assistance)*
        - *Sub-Activity 2.3.1.3: Pre-acceleration programme – Phase 2 venture selection*
        - *Sub-Activity 2.3.1.4: Pre-acceleration programme – Phase 2 (TA & grants)*

- Output 1.4 / 2.4: Selected Latin American / West African climate ventures with MVPs in local markets are empowered to rapidly scale their business and climate impact.
    - Activity 1.4.1: Climate venture acceleration programme – Latin America
        - *Sub-Activity 1.4.1.1: Call for applications and venture selection*
        - *Sub-Activity 1.4.1.2: Acceleration programme: repayable grants*
        - *Sub-Activity 1.4.1.3 / 2.4.1.3: Acceleration programme: technical assistance*
    - Activity 2.4.1: Climate venture acceleration programme – West Africa
        - *Sub-Activity 2.4.1.1: Funding announcement, venture screening and selection*
        - *Sub-Activity 2.4.1.2: Acceleration programme – repayable grants*
        - *Sub-Activity 2.4.1.3: Acceleration programme – technical assistance*

75. Components 1 and 2 differ in some respects:
- Clearly, they serve different stakeholders in different market environments and baseline contexts, and are implemented by different regional Executing Entities.

- There are a few differences in the pre-acceleration and the acceleration programmes:
    - *Implementation arrangements:* while the pre-acceleration and acceleration programmes in West Africa are delivered in a decentralised manner, with local activities implemented by local pre-accelerators / accelerators and seed funds in the IPED network in participating countries (under the close coordination of the CATALI.5°T Initiative's Executing Entities in West Africa, Impact Hub, Climate-KIC and IPED), delivery of the pre-acceleration and acceleration programmes in Latin America is provided in and from Monterrey (Mexico) by the Executing Entity, Tec de Monterrey.
    - *Structure and duration of acceleration programmes*: the acceleration programme in Latin America adopts typical elements of acceleration programmes around the world, as it is structured in cohorts of 10 ventures and each cohort will benefit from programme support for 6 months. All 30 selected seed-stage ventures will receive acceleration support, in 3 cohorts, over the first 3 years of the CATALI.5°T Initiative. In West Africa, in contrast, the regional acceleration programme will be implemented on a venture-by-venture basis (and not a cohort basis). Venture screening and selection will occur continuously, on a rolling basis, in the first 3 years of the West Africa acceleration programme. In addition, each venture will stay in the acceleration programme for 3 years, receiving intense technical assistance support in Year 1 of its acceleration programme, followed by regular follow-up and monitoring meetings by IPED and 'light-touch' technical assistance in Years 2 and 3 if needed.
    - *Standardisation versus customisation*: more generally, the pre-acceleration and acceleration programmes in Latin America follow a more standardised approach (e.g. the indicator for triggering repayment of the repayable grant is the same for all funded ventures) while the programmes in West Africa will be delivered to supported ventures in a more customised manner, tailored to the specific profile and needs of each supported venture. This different approach reflects the less developed nature of the start-up sector in West Africa and the generally more challenging business environment.
- Despite these differences, the two programmes share extensive commonalities. For the sake of brevity, and to avoid unnecessary duplication, a description is provided below of Component 2. Much of this is directly applicable to Component 1. The reader is referred to the regional feasibility studies (Annex 2b – Latin America, Annex 2c – West Africa) for detailed descriptions of all Outputs, Activities and Sub-Activities in both regions.

Regional Component 1: Latin America CATALI.5°T

76. Please refer to Component 2 below and to Annex 2b.

Table 6: Execution Arrangements and Use of GCF Proceeds for Component 1

Regional Component 1: Latin America CATALI.5°T	Executing Entity[78]	Use of GCF Proceeds
Output 1.1: Capacities of Executing Entities, ESOs and venture investors in Latin America are developed to boost climate ventures' impacts		
Activity 1.1.1: Capacity-building of Executing Entities, ESOs and venture investors in Latin America	Climate-KIC, GIZ	Technical assistance
Sub-Activity 1.1.1.1: Climate mitigation impact assessment	GIZ, Climate-KIC	Technical assistance
Sub-Activity 1.1.1.2: Climate resilience co-benefits assessment	Climate-KIC	Technical assistance
Sub-Activity 1.1.1.3: Paradigm shift and systems transformation potential	GIZ, Climate-KIC	Technical assistance
Sub-Activity 1.1.1.4: Gender equality and diversity	Climate-KIC	Technical assistance

[78] Where a Sub-Activity is implemented by more than one Executing Entity, a Lead Executing Entity will coordinate the interventions of the other Executing Entities. The individual roles and responsibilities of each Executing Entity, for each Sub-Activity, are described in detail in the Project Activities chapter of each Regional Feasibility Study (Annexes 2b and 2c).

Sub-Activity 1.1.1.5: ESG frameworks	GIZ	Technical assistance
Output 1.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in Latin America generate innovative climate business ideas		
Activity 1.2.1: Community-building and ideation activities in Latin America	Climate-KIC, GIZ	Technical assistance
Sub-Activity 1.2.1.1: Latin America climathons	Climate-KIC	Technical assistance
Sub-Activity 1.2.1.2: Open digital network for promoting women and diversity in climate entrepreneurship in Latin America	GIZ	Technical assistance
Output 1.3: Selected ventures in Latin America have launched their climate products in local markets		
Activity 1.3.1: Latin America climate venture pre-acceleration programme	Tec de Monterrey, GIZ, Climate-KIC	Technical assistance, Financial assistance
Sub-Activity 1.3.1.1: Call for applications and venture selection	Tec de Monterrey, GIZ, Climate-KIC	Technical assistance
Sub-Activity 1.3.1.2: Pre-acceleration programme – technical assistance	Tec de Monterrey, GIZ, Climate-KIC	Technical assistance
Sub-Activity 1.3.1.3: Pre-acceleration programme – grants	Tec de Monterrey	Financial assistance
Output 1.4: Selected climate ventures in Latin America with MVPs in local markets are empowered to rapidly scale their business and climate impact		
Activity 1.4.1: Latin America climate venture acceleration programme	Tec de Monterrey, GIZ, Climate-KIC	Technical assistance, Financial assistance
Sub-Activity 1.4.1.1: Call for applications and venture selection	Tec de Monterrey, GIZ, Climate-KIC	Technical assistance
Sub-Activity 1.4.1.2: Acceleration programme – technical assistance	Tec de Monterrey, GIZ, Climate-KIC	Technical assistance
Sub-Activity 1.4.1.3: Acceleration programme – repayable grants	Tec de Monterrey	Financial assistance

Regional Component 2: West Africa CATALI.5°T

Output 2.1: Capacities of Executing Entities, ESOs and venture investors in West Africa are developed to boost climate ventures' impacts

Activity 2.1.1: Capacity-building of Executing Entities, ESOs and venture investors in West Africa

Executing Entities: Climate-KIC, GIZ
Use of GCF proceeds: Technical assistance

77. In advance of, and in parallel with, West Africa CATALI.5°T pre-acceleration and acceleration programme commencement in 2023, the Executing Entities in West Africa (Impact Hub Abidjan and IPED, and the local implementation partners), other regional ESOs and venture investors will be offered training and coaching to develop expertise and build capacity in climate impact assessments; transformational climate mitigation solutions; women's empowerment in climate entrepreneurship; and Environmental, Social and Governance (ESG) frameworks. This will augment their current business and finance skill-sets and enable them, for example, to assess ventures' likely climate impacts (emission reduction potential and climate adaptation), to steer ventures towards more disruptive and transformational climate solutions, to promote women's involvement in climate entrepreneurship, and to understand and apply emerging ESG frameworks in the VC industry.

78. With regard to the programme Executing Entities and implementation partners in each participating country, Activity 2.1.1 will ensure the smooth implementation of the capacity building and advisory services in the pre-acceleration and acceleration programmes in West Africa. Capacity-building on gender in climate entrepreneurship and ESG will directly contribute to implementing the CATALI.5°T Initiative's Environmental and Social Management Framework (ESMF, Annex 6a) and Gender Action Plan (GAP, Annex 8b), at the level of the Executing Entities and implementation partners and at the level of the climate ventures that they support.

79. With regard to other regional ESOs and venture investors, Activity 2.1.1 will build the capacity of selected additional ESOs and venture investors. Much of the training provided by the CATALI.5°T Initiative will be online, so the incremental costs to the programme of training additional participants will be negligible,

whereas the benefits (improved ecosystem capacities, awareness of the CATALI.5°T Initiative, stakeholder goodwill, etc.) are considered to be substantial. It is envisaged that the participation of ESOs and venture investors will be relatively fluid – most will only participate in workshops / training that applies to their specific needs (e.g. GHG assessment, gender, ESG, etc.). For this reason, no detailed eligibility criteria are envisaged, beyond a few general requirements. Participation will be by invitation-only and the CATALI.5°T Initiative retains the right to screen and select participants.

80. General requirements for additional ESOs and venture investors – they must:
    - Be active, or demonstrably planning to be active, in one or both of the programme regions (Latin America and West Africa).
    - Show a strong and credible commitment to supporting climate innovation and entrepreneurialism. For example, in the case of VC firms, this would extend to investments or planned investments in climate ventures.
    - Be private sector, public sector or non-profit entities.
    - Cover travel-related costs (in the case of in-person workshops or events) themselves.

81. Initially, in 2022 and 2023, capacity building measures under Activity 2.1.1 will be delivered by the Executing Entities Climate-KIC (climate impact, gender / diversity) and GIZ (ESG). In 2024 and 2025, these services will increasingly be delivered by the staff of Impact Hub Abidjan and IPED themselves and by trained local consultants. Most capacity-building measures will be delivered virtually (i.e. using the internet).

82. The planned capacity building measures regarding climate impact and transformation potential are described in detail in Activity 3.1.1, which will be implemented by Climate-KIC. Planned capacity building measures regarding implementation of the Gender Action Plan and Environmental and Social Safeguards Framework are described in detail in Activity 3.1.2 (GAP) and Activity 3.1.3 (ESMF / ESG).

    - Sub-Activity 2.1.1.1: Climate mitigation impact assessment – links to Sub-Activity 3.1.1.1.
    - Sub-Activity 2.1.1.2: Climate resilience co-benefits assessment – links to Sub-Activity 3.1.1.2.
    - Sub-Activity 2.1.1.3: Paradigm shift and systems transformation potential – links to Sub-Activity 3.1.1.3.
    - Sub-Activity 2.1.1.4: Gender equality and diversity – links to Sub-Activity 3.1.2.1.
    - Sub-Activity 2.1.1.5: ESG frameworks – links to Sub-Activity 3.1.3.1.

<u>Output 2.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in West Africa generate innovative climate business ideas</u>

<u>Activity 2.2.1: Community-building and ideation activities in West Africa</u>

83. To support and encourage entrepreneurs and potential entrepreneurs to develop early ideas for climate businesses and to ensure a large number of high-quality applications to the pre-acceleration programme, the local implementation partners of the pre-acceleration programme will run climathons (Sub-Activity 2.2.1.1) – unique community-building and ideation events – in the participating countries. Climathons will be promoted within each country through the local implementation partner's existing stakeholder network (social media, alumni, local partners, the Impact Hub Network, etc.). Calls for participation in local climathons will be actively promoted in women's networks and among entrepreneurs with backgrounds usually under-represented in start-up and innovation programmes (such as entrepreneurs living in rural areas). All community-building and ideation activities will be conducted in a gender-sensitive way (see GAP).

84. Following their participation in climathons, (potential) entrepreneurs will be invited to join an open digital community for advancing women and diversity in climate entrepreneurship in West Africa (Sub-Activity 2.2.1.2)**.** This Sub-Activity will strive to achieve high diversity among applicants to the pre-acceleration and acceleration programmes and start building a community of climate entrepreneurs in the region.

85. Activity 2.2.1 consists of 2 Sub-Activities:

    - <u>Sub-Activity 2.2.1.1: West Africa climathons</u>

      Executing Entities: Climate-KIC

Use of GCF proceeds: Technical assistance

A climathon [79] is a place-based programme that harnesses the power and imagination of stakeholders to co-create ideas to tackle local climate mitigation challenges. Over the span of 12-72 hours, a diverse group of participants, typically including entrepreneurs, business leaders, policy-makers, professionals, youth representatives, civil society organisations (CSOs), academics, students and software / technology hackers, come together to collaborate on forward-thinking ideas. Climathons represent a useful first step in the ideation and business creation process. Principally, climathons serve as a tool to bring together community stakeholders to identify pressing climate challenges, build collective knowledge and begin to co-create local solutions. Climathons are often cited by alumni as the catalyst that helped them move from idea to action. Entrepreneurs report that strengthening their networks through climathon participation enabled them to further develop their climate business ideas.[80] Through selected local delivery partners, Climate-KIC will execute one climathon per year over 3 years in each country that participates in the West Africa CATALI.5°T. It is intended that the local delivery partners for climathons will be the same entities as those assisting in the decentralised execution of the pre-acceleration programme (see Activity 2.3.1).

Climathons will be executed as follows:

First, Climate-KIC will:

- Recruit local delivery partners in all countries participating in the regional CATALI.5°T, in close coordination with GIZ, Impact Hub Abidjan and IPED (all Executing Entities for the pre-acceleration programme).
- Provide the local climathon delivery partners with formats and materials with which to reach out to key local stakeholders to identify priority areas / sectors for local climate action.
- In select cases, work with local climathon delivery partners to hold warm-up activities that help activate and frame specific thematic climate challenges that can be the focus of climathons (e.g. short workshops at universities / schools, presenting at related conferences, etc.).
- Connect all local climathon delivery partners to the global Climathon Network.
- Connect climathon participants to others in the global Climathon Network via existing climathon alumni activity.

Next, the local delivery partners will:

- Recruit participants and other relevant partners to participate in annual climathons.
- Manage and coordinate all climathon-related activities locally, including:
  - Recruitment of all participants from relevant organisations (universities, municipalities, businesses, central government, CSOs, etc).
  - Outreach, communications and PR.
  - Monitoring and evaluation, thereby contributing to the overall learning agenda of the regional CATALI.5°T.
- Manage ongoing relationships with participants post-intervention to:
  - Track progress of ideas and entrepreneurs.
  - Provide connections for the best ideas / entrepreneurs to further sources of support and other regions (e.g. via engagement with the CATALI.5°T pre-acceleration programme, via other existing activities of delivery partners or via the global Climathon Network).

Where possible, climathons will be held in October / November each year, in order to coincide with Climate-KIC's Global Climathon Week. This will serve to provide access to a network of 180+ like-minded organisers from around the world and a global repository of past ideas / solutions.

- <u>Sub-Activity 2.2.1.2: Open digital network for promoting women and diversity in climate entrepreneurship in West Africa</u>

[79] https://climathon.climate-kic.org/

[80] Global Climathon Participant Feedback Survey (2019) and Climathon Participant Impact Survey (2018) (participants surveyed one year later).

Executing Entities: GIZ
Use of GCF proceeds: Technical assistance

A strong professional network is key for female entrepreneurs to succeed. Before and after participation in the climathons and the pre-acceleration and/or acceleration programmes, (potential) entrepreneurs will be invited to join an open digital community for advancing women and diversity in climate entrepreneurship in West Africa. The digital community will be for female entrepreneurs to become inspired, build and successfully grow their businesses while learning from their peers and benefiting from the support of like-minded female founders. It will serve as an online gateway to useful and inspiring information (including upcoming events such as climathons and application information / materials for the pre-acceleration and acceleration programmes). The digital community will:

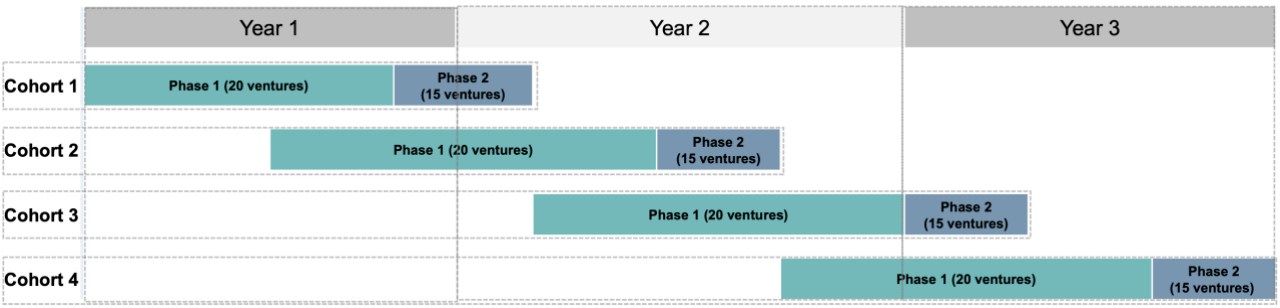
- Connect – like-minded entrepreneurs in the country, region and other continents.
- Share knowledge – from selected entrepreneurs, coaches and experts.
- Promote learning – about other relevant national and regional stakeholders and financing opportunities.
- Open up opportunities – calls for applications, etc.

Output 2.3: Selected ventures in West Africa have launched their climate products in local markets

Activity 2.3.1: West Africa climate venture pre-acceleration programme

86. Over 3 years (approximately 36 months), the West Africa pre-acceleration programme will support 60 climate ventures at the pre-seed funding stage to develop minimum viable climate products or services and to be ready to enter local / regional markets. The pre-acceleration programme will be implemented on a cohort basis, with approximately 4 cohorts over approximately 36 months. For each cohort, the programme will be implemented in two phases:
    - Phase 1: Climate ventures will be provided with technical assistance over a period of approximately 6 months.
    - Phase 2: Climate ventures from phase 1 with the highest climate impact will be selected for approximately 4 months of additional one-on-one coaching, as well as each receiving a up to EUR 15,000 grant to cover pre-agreed expenses.

Figure 7: West Africa Pre-Acceleration Programme: Indicative Schedule



In total, the pre-acceleration programme will support approximately 80 Phase 1 climate ventures and 60 ventures that complete both Phase 1 and Phase 2.
The technical assistance will encompass business development, climate impact, gender, and environmental, social and governance (ESG) elements; the latter will reflect the CATALI.5°T Initiative's Gender Action Plan (GAP) and its Environmental and Social Management Framework (ESMF).

Activity 2.3.1 consists of 4 Sub-Activities:

- Sub-Activity 2.3.1.1: Call for applications and Phase 1 venture selection

  Executing Entities: Impact Hub Abidjan, Climate-KIC, IPED, GIZ
  Use of GCF proceeds: Technical assistance

The pre-acceleration programme will be promoted within each country through Impact Hub Abidjan's existing stakeholder network (social media, alumni, local implementation partners, the Impact Hub Network, etc.). All promotional activities will be conducted in a gender-sensitive manner (see the GAP, Annex 8b). Promotional materials will be in French, outlining the specific criteria and the selection process. To achieve diversity among applicants, special events will actively promote the programme amongst women and entrepreneurs with backgrounds usually under-represented in pre-acceleration programmes. In order to select the best participants for the pre-acceleration programme – those with the highest likelihood of achieving climate impact and business success – Impact Hub Abidjan will adopt a multi-pronged publicity approach:

- Informational events with accomplished entrepreneurs: Impact Hub Abidjan, in conjunction with local implementation partners, will invite current entrepreneurs, particularly those involved in climate-related businesses, to participate in local events to sensitise early-stage entrepreneurs on the appeal of the programme. Inspirational peers will be solicited to facilitate webinars to share their experiences and outline how the programme could have supported (or has supported, for future cohorts) their growth.
- Request for referrals from regional pre-accelerators and accelerators: Impact Hub Abidjan will tap into the alumni networks of regional ESOs to request referrals of high-potential ventures.
- Invite applications through social media channels: While the quality of applicants through social media is typically lower, such channels can serve to increase general awareness and can reach segments of the population (notably, youth) who are more difficult to reach through traditional means (e.g. newspaper advertisements, flyers, etc.).

Ventures will initially be selected for Technical Assistance (TA)-only support (Phase 1). At the end of Phase 1, a sub-set of Phase 1 ventures will be selected for follow-on TA support (Phase 2) as well as financial support in the form of a EUR 15,000 grant. The application process to the pre-acceleration programme will consist of: (i) an initial eligibility screening process, and (ii) a subsequent selection process.

Venture Eligibility Screening

Initially, all applicants to the pre-acceleration programme will be screened against the following eligibility criteria by the Pre-Acceleration Screening Team:

- The applicant is an individual or a formally registered business in a francophone West African country that has supplied a No-Objection Letter (NOL). In case the applicant is already a formally registered business, it will need to fulfil the IFC definition of a micro or small enterprise (MSE): i.e. it meets 2 of the following criteria:
  - Fewer than 50 employees
  - Less than US$ 3 million of total assets
  - Less than US$ 3 million of annual sales

  If the applicant is a formally registered business, in order to comply with EU state aid law and German non-profit law its ownership structure must credibly indicate that support provided by this programme will primarily benefit beneficiaries from a developing (Non-Annex 1) country.

  If the applicant is an individual, he/she must be a citizen of a developing (Non-Annex 1) country and must have the right to live and work in a francophone West African country that has supplied a No-Objection Letter (NOL).
- The venture product or service presented for pre-acceleration support is: (i) at prototype or pre-sales stage; (ii) belongs to one or more of the categories listed in Table 5; and (iii) reduces or avoids greenhouse gas emissions or sequesters carbon in one or more of the GCF's Mitigation Result Areas ('climate mitigation impact'). The stated climate mitigation impact needs to be described in a qualitative manner, with the entrepreneur / venture demonstrating a reasonable understanding of GHG mitigation / avoidance and how the proposed product or service will achieve this.
- The proposed climate product or service is not on the IFC exclusion list or any other E&S exclusion list of GIZ.
- The applicant produces, or plans to produce, only one or more 'climate-friendly' (low-emission) products or services: i.e. it will not, in parallel, produce or sell 'climate-unfriendly' (baseline-emission or high-emission) products or services. (This ensures that support

provided by the CATALI.5°T Initiative will be directed only at low-emission products and services).

Those applicants that pass the first 4 screening criteria will be subject to two subsequent screening elements:

a) **E&S screening for pre-acceleration** (see ESMF, Annex 6a). This screening will serve to:
- Apply E&S exclusion criteria.
- Identify potential E&S 'red flags': that is, negative risks and impacts that would not be manageable during the pre-acceleration programme implementation period or afterwards.
- Assess a venture's needs in the context of environmental and social permits, licences and similar administrative requirements.
- Identify topics where the ventures could require dedicated support if they enter the pre-acceleration programme.
- Apply a media check for potential infringements of human rights or discrimination.

The ESMF provides the relevant E&S screening checklists. The list of excluded ventures, and the list of excluded activities, is provided in the ESMF. The exclusions pertain mostly to avoidance of resettlement (ESS5), negative impacts on biodiversity (ESS6) and negative impacts on indigenous people (ESS7), as well as to ventures that are required by national legislation to undertake an Environmental and Social Impact Assessment (ESIA). The list can be updated upon agreement of the Executing Entities.

b) **Gender screening** (see GAP, Annex 8b):
- The venture's product or service has obvious negative implications for women: e.g. exacerbating wage disparities or requiring long working hours without extra compensation.
- The venture has none of its founders and employees identifying as female and the venture has no intentions of diversifying its team members to include more women.

For acceptance into Phase 1 of the pre-acceleration programme, applications can be submitted by individuals. Formal business registration of the venture will only be required for Phase 2 application. The goal is to create a shortlist of approximately 40 applicants per cohort that pass the eligibility screening. The applicants that pass the eligibility screening will then proceed to the venture selection process.

The Pre-Acceleration Screening Team will consist of 7 members: 2 from Impact Hub Abidjan, 1 from an ESO, 3 from IPED (one of whom is the regional E&S specialist, the second is a gender specialist, the third is from the investment team) and 1 person experienced in climate entrepreneurship. The role of the climate entrepreneur expert will primarily be to assess the plausibility of: (i) the qualitative climate mitigation impact in the eligibility screening (above), and (ii) the climate impact self-assessment in the venture selection process (below). The decision to clear a venture to proceed to the selection process will, where possible, be by consensus, but Impact Hub Abidjan and IPED, as Executing Entities for the pre-acceleration programme, will exercise ultimate decision-making power. If Impact Hub Abidjan and IPED are unable to mutually agree on clearing a venture, the venture shall not proceed to the selection process.

<u>Venture Selection</u>

The selection process will consist of 2 elements:
- Climate impact self-assessment. Each of the ~40 ventures will be asked to complete a climate impact self-assessment, using the Climate Impact Hypothesis (CIH) tool.[81] This will provide a simple, part-qualitative / part-quantitative estimate of the venture's potential mitigation impact – essentially, one that provides: (i) a basis for subsequent structured discussion with the entrepreneur / venture (e.g. about the underlying assumptions used, future sales expectations, etc.); and (ii) a tentative means of comparing the climate impacts of the different ventures.
- Selection interviews. The ventures will be invited to online interviews. During the interviews, the candidates will be asked to present, in 5 minutes, their ventures / solutions. After the

[81] https://impact-forecast.com/impact-hypothesis

presentation, the members of the Phase 1 Selection Panel will have the opportunity to ask questions (10 minutes maximum) to challenge them on their ideas / business models, and also to assess their motivations to join the pre-acceleration programme. A scoring sheet will be provided to the Phase 1 Selection Panel to assess the candidates during the presentation and the Q&A session.

Selection criteria will include:

- *Climate mitigation impact potential:* using a combination of the results of the Climate Impact Hypothesis tool and the expert judgement of panel members. Climate mitigation impact potential will be assessed on the basis of: (i) the anticipated abatement effectiveness of the product / service, and (ii) the anticipated market penetration of the product / service. Climate mitigation impact potential will represent the single most important selection criterion (50% of the total score). Constituent elements of the climate mitigation impact potential will be:
  - *Understanding the problem and relevance of the solution:* Does the venture have a good understanding of the problem it wants to solve and good arguments to explain why it has the appropriate solution? (10% of total score).
  - *Business model:* Is the business model clear? Is there consistency between the different elements of the business model? Is the value proposition of the venture attractive? Does the product / service bring something different? How has the venture management team validated the business model? (20% of total score).
  - *Market attractiveness:* Does the venture have a good understanding of the market potential for its product / service? Does the product / service target an attractive market? Does the product / service have potential for local, regional or international expansion? Is the target market large enough for the business to be sustainable? (10% of total score).
  - *Competitive analysis:* Does the venture have a good understanding of its competitors and its competitive advantages? Is the market crowded? Is there one or more dominant players in the market? Are the barriers to entry significant? (10% of total score).

- *Paradigm shift potential*: in what way does the proposed climate product / service have the potential to be innovative and disruptive in the target market? Incremental climate solutions (for instance, an electrical appliance that is just 20% more energy-efficient than a baseline competitor) are eligible for inclusion in the pre-acceleration programme if their anticipated market penetration compensates for the relatively low per-unit GHG abatement potential. However, transformational solutions, representing a genuine rupture with business-as-usual, will be favoured, subject to considerations of execution risk, consumer receptiveness, etc. (10% of total score).

- *Climate resilience co-benefit:* Does the product / service offer potential climate adaptation co-benefits, either to the venture itself or (preferred) to its customers? How extensive and deep would these adaptation benefits likely be? All ventures must offer a substantial GHG mitigation impact. An additional climate adaptation impact is not necessary for inclusion in the pre-acceleration programme, but it will be positively assessed. (10% of total score).

- *Team:* Does the entrepreneur have the qualities and abilities to grow the business (enthusiasm, background, technical and managerial skills, devotion to the venture)? Does the venture have relevant positions filled by people with the skills and experience required to fulfil its value proposition, including an explicit interest in addressing climate change? (10% of total score).

- *Gender:* Is the venture female-led, defined as the founder being a woman? Where there is more than one founder, are the majority of founders (50% or more) women? Will the venture offer products or services that address a gender-related climate problem (e.g. gender stereotyping, increase women's wages / reduce women's unpaid work burden, unlock the potential of women-dominant sectors (e.g. improved agricultural practices or improving staple food value chains), or increase female participation in male-dominated sectors (e.g. high-yielding cash crops, climate-related technological innovation)? (10% of total score).

- *Quality of the presentation / pitch:* Is the presentation clear? Is the tone and rhythm of the voice engaging? Is the presentation dynamic? (10% of total score).

Once ventures have been scored by each Phase 1 Selection Panel member, deliberation among members will help calibrate the scores and enable the final selection of participants to be made for Phase 1 of the pre-acceleration programme (20 ventures per cohort). Participants who are not selected will nonetheless have access to the pre-acceleration programme's online training materials. The Phase 1 Selection Panel will consist of the same organisations as those represented in the Pre-Acceleration Screening Team, as well as GIZ. The decision to accept a venture into the pre-acceleration programme will, where possible, be by consensus, but GIZ will be able to exercise a veto (e.g. based on the climate relevance (or lack thereof) of the venture and compliance with the E&S safeguards and GAP).

- Sub-Activity 2.3.1.2: Pre-acceleration programme – Phase 1

Executing Entities: Impact Hub Abidjan, Climate-KIC, GIZ
Use of GCF proceeds: Technical assistance

Phase 1 of the pre-acceleration programme will provide technical assistance to 80 pre-seed climate ventures – 20 ventures per cohort, for a period of 6 months per cohort. Phase 1 will consist of a blend of online training and mentoring, as well as two in-person cohort workshops.

Online training: The online training will cover the following topics:

- Business management and planning:
  - Value proposition: improving understanding of market opportunities, customer needs and unique product benefits.
  - Competition mapping: identifying the strengths and weaknesses of the offer, how the venture distinguishes itself from its competitors, and finding its true competitive advantage.
  - Stakeholder mapping: determining the different partners the venture needs to launch and creating a map of its partner networks and distribution channels.
  - Business model and marketing: obtaining a clear picture of the activities essential to the growth of the business and learning how to attract customers and keep them coming back.
  - Pricing: better understanding the costs of attracting customers and discovering the optimal price level to make the business financially viable.
- Climate advisory services (see also Activity 3.1.1):
  - Building ventures' understanding of their potential climate mitigation impact: introduction to concepts (baselines, emission factors, leakage, etc.), tools and case-studies.
  - Understanding of how the venture's product / service climate impact can be improved.
  - Guiding ventures on how they can introduce systems thinking and systems innovation concepts into their business model design, with a view to promoting more transformational (higher-impact, disruptive) climate innovation.
  - For those ventures that offer a potential climate resilience co-benefit, providing the tools and methodologies to assess the scope and magnitude of this co-benefit, and approaches to maximising this co-benefit in the context of commercially-viable business models.
- Environment and social (E&S) topics and gender (see also Activities 3.1.2 and 3.1.3):
  - Compliance with safeguards on labour and working conditions, including health and safety.
  - Other E&S topics as relevant, depending on the characteristics of each cohort: e.g. advice on effluents and waste management, ESG frameworks used by VC funds, etc.
  - Business cases for gender in climate innovation and using a gender lens in ventures' own business models (e.g., market research, consumer segmentation).
  - Information on risks of sexual exploitation, abuse and harassment (SEAH), and gender-based violence (GBV), and on the project's zero-tolerance policy.

- Gender training, including on gender-based violence and reducing unconscious gender biases.

Mentoring: Following the online training, each venture will benefit from one-to-one mentoring, covering key topics such as production, sales, business management, climate innovation and leadership. The mentor will be based in (or affiliated with) the local implementation partner and will regularly follow-up on the venture's progress. The local mentor will also provide guidance and support on how to overcome country-specific entrepreneurship challenges. At the commencement of the CATALI.5°T Initiative, Impact Hub Abidjan and GIZ will build a gender-diverse pool of mentors. The ventures identified as having specific E&S risks will receive mentoring in E&S management from the CATALI.5°T Initiative's regional E&S specialist on relevant topics, such as performing an E&S self-assessment, implementing waste management, improving occupational safety management etc. Mentors are generally anticipated to be based in the same country (or a similar economic context) as the supported climate venture. However, in circumstances where a mentor has a unique offering (e.g. a track-record of making a similar climate product / service in a different market), the mentor may be based elsewhere.

Cohort workshops: A first in-person workshop (3 days in Abidjan, Dakar or Bamako) will be organised three months into Phase 1 of the pre-acceleration programme to reinforce the sense of community among participants and provide in-person training on key topics. At the end of Phase 1, participants will come together a second time for an in-person group workshop (4 days in Abidjan, Dakar or Bamako) to review the content of their Growth Plans and Impact Action Plans; and to network with each other, with the Executing Entities and with ESOs. All workshop participants will also receive support in finalising their application and preparing their oral pitches for Phase 2 of the pre-acceleration programme.

- Sub-Activity 2.3.1.3: Phase 2 venture selection

Executing Entities: Impact Hub Abidjan, Climate-KIC, IPED, GIZ
Use of GCF proceeds: Technical assistance

In Phase 2 of the pre-acceleration programme, 15 of the 20 ventures supported in each cohort in Phase 1 will be selected for 4 months of additional support. This will consist of:

- An in-depth climate mitigation assessment.
- One-to-one coaching.
- A EUR 15,000 grant payment

All Phase 1 participants will be encouraged to submit online applications for Phase 2 support. Applications will be reviewed against the following selection criteria:

- *Administrative compliance and eligibility criteria*: e.g. the venture is, or is in the process of being, formally registered as a business[82]; the venture has its own bank account (distinct from the personal bank account of the entrepreneur / founder); and satisfies ESMF requirements.
- *Quality of the venture's business idea and model, growth and impact plan:* likely climate mitigation impact, impact sustainability, level of innovation, quality of envisaged partnerships.
- *Quality of the grant request proposal:* relevance of the requested items (goods, services, equipment, technical assistance, etc.) to be covered by the EUR 15,000 grant.
- *Financial resources:* the venture is able to provide at least EUR 5,000 of its own resources to match the EUR 15,000 grant that will be provided in Phase 2 of the pre-acceleration programme.
- *Quality of the venture's organisation:* quality of the management / implementation team, quality of the methodological approach for implementation.
- *Budget and finance:* relevance of the budget vs. activities and desired outputs, financial planning.
- *Participation in Phase 1:* the venture registered good attendance and participation in Phase 1.

[82] Desirable at the time of application. If the venture is selected, legal incorporation / formal registration is required to receive grant funding.

- *Quality of the presentation / pitch:* the presentation is clear and dynamic. The tone is engaging. The entrepreneur is able to answers questions from the Selection Panel in a fluid manner.

The Phase 2 Selection Panel will consist of the following members, with the following responsibilities:

- Impact Hub Abidjan will ensure that the business model is strong and marketable.
- IPED will check that the financial structuring and projections are coherent; that the uses proposed for the grant are legitimate (e.g. are not likely to involve proscribed activities, such as payment of entertainment costs or the purchase of products and services from suppliers closely affiliated with venture employees) and are catalytic for the business; and that the grant request covers no more than 75% of the total cost of the venture's requested uses – 25% of the total budget must come from the venture's own resources (not in-kind) contribution (bootstrapping).
- The CATALI.5°T Initiative's regional E&S specialist will confirm the E&S screening (already performed before admission of the venture into Phase 1) and define specific needs for further coaching accordingly.
- GIZ will ensure that the climate impacts of the ventures' businesses are strong and well-articulated.

The Phase 2 Selection Panel will issue two types of decision:

- Positive opinion – if applicable, subject to the fulfilment of specified conditions (eg. obtaining a lease, recruiting an executive, etc.).
- Negative opinion, motivated by specific reasons. In this case, Impact Hub Abidjan will: (i) notify the venture of the refusal, (ii) provide reasons for the refusal, and (iii) provide constructive guidance on how the venture can improve its offering to other potential sources of support / finance.

The decision to accept a venture into Phase 2 of the pre-acceleration programme will be taken by majority vote, with an effort to reach broad consensus. GIZ will have a veto (e.g. based on the climate relevance (or lack thereof) of the venture and compliance with the E&S safeguards and GAP).

In the case of a positive opinion from the Phase 2 Selection Committee, a draft grant contract will be prepared by Impact Hub Abidjan, which will forward it, together with appendices, to IPED. One appendix will include the grant request proposal of the venture to IPED; another appendix will inform the venture about obligations pertaining to gender and E&S safeguards (including SEAH), that will be included in the grant agreement (see below). Once the contract has been approved by IPED, it will be signed by both the venture and IPED.

- Sub-Activity 2.3.1.4: Pre-acceleration programme – Phase 2

Executing Entities: Impact Hub Abidjan, Climate-KIC, IPED, GIZ
Use of GCF proceeds: Technical assistance, financial assistance (grants to climate ventures)

Support provided to the climate ventures (15 per cohort) in Phase 2 of the pre-acceleration programme will take the form of: (i) an in-depth climate mitigation impact assessment; (ii) one-to-one coaching, and (iii) a EUR 15,000 grant payment to cover pre-agreed expenses. These will be provided in parallel over a period of 4 months.

In-depth climate mitigation assessment: Each venture will be given the opportunity to advance the climate impact forecast self-assessment it conducted during the initial venture selection process (using the Climate Impact Hypothesis tool under Sub-Activity 2.3.1.1). This advanced assessment will be undertaken using the Climate Impact Forecast (CIF) tool[83] (see Activity 3.1.1) and will be guided by an independent, third-party certified CIF trainer. This exercise will provide an opportunity to revise the assumptions of the venture (e.g. to reflect changes to the venture's business plan, technology or market context), calibrate parameters (e.g. emission factors, projected sales, etc.) and, ultimately, provide an authoritative, quantitative and credible climate impact assessment that

[83] https://impact-forecast.com/impact-support

can be shared with VC funds and other potential investors (for more information, see Sub-Activity 3.1.1.1).

One-to-one coaching: The selected ventures will receive one-to-one coaching (online or face-to-face) to execute the business strategy and the Growth Plan and Impact Action Plan developed in Phase 1. Entrepreneurs will have regular coaching sessions (at least 4 hours per month) with their coaches and one monitoring / reporting session (at least 2 hours per month) with the local delivery partner in their country. The coaching will be growth-oriented and will address themes such as:

- Production
- Sales and marketing
- Business management
- Financial management
- E&S management for specific subjects, identified during the E&S screening
- Preparation of investment plan (investment readiness for grant payment)

Sessions will be held at specified intervals to share feedback, review progress toward goal attainment and provide advice for the next steps. These sessions will also allow the coaches to identify potential bottlenecks and brainstorm solutions with the ventures. Coaches will be able to tap into the Executing Entities' regional networks to seek advice and/or make useful connections with other experts / entrepreneurs who could provide support. Additionally, IPED will provide training to 3 Impact Hub Abidjan coaches on the investment readiness module.

Grant payment: Upon satisfactory completion of the grant contract between IPED and the climate venture, IPED will prepare a bank transfer to the venture and will send an e-mail to Impact Hub Abidjan confirming the disbursement. The EUR 15,000 grant payment will be made in instalments. The use of the grant will be disciplined by the grant contract. Grants will be eligible for a broad range of activities relevant to pre-acceleration of the venture – including R&D, business development and procurement of equipment, services or personnel – in recognition of the diverse needs a climate venture may have in order to develop technological, commercial and consumer viability.

The grant contract will include clauses that aim to minimise the possibility of grant misuse, including:

- The need for additional validation should a substantive change in the use of the grant occur after the Phase 2 Selection Committee's initial approval.
- Eligible items for grant financing: cost of newly hired staff, equipment, software / data / information services and professional services (e.g. legal, accounting) critical to the R&D, product development and business development functions. The venture will need to justify the essential nature of the expenses and generally show that it is managing its business in a lean manner.
- In-kind financing (e.g. an entrepreneur's own work time) will not count towards the 25% own-contribution of the venture towards the total grant amount. It is very unlikely that ventures will be able to borrow, given the very early stage of ventures in the pre-acceleration programme. The entrepreneurs themselves may borrow in a personal capacity to raise the own resources necessary for the minimum 25% contribution or raise funds in any other feasible way (e.g. advances or donations from friends and family). The format of such fund-raising on the part of the entrepreneurs is indifferent to the purpose of the grant. For instance, entrepreneurs may decide to give equity stakes to third-party capital providers (this would, in fact, be a sign of early-stage success, albeit small).
- Exclusion lists and spending caps (for instance, for travel and entertainment costs, or remuneration of the founders / owners). Exclusion lists and spending caps will be the same for both grant-funded and entrepreneur-funded expenses.
- Conflict of interest and anti-fraud clauses aimed at preventing the purchase of products and services from suppliers closely affiliated with climate venture and pre-accelerator staff members.
- Adherence to E&S requirements on excluded activities.
- Provision of reasonable conditions of employment, protection of the workforce, provision of a safe and healthy work environment.
- Non-infringements of human rights.

- Zero tolerance of gender-based violence (GBV), and of sexual exploitation, abuse and harassment (SEAH).

Phase 2 monitoring: The focal point within the local implementation partner will monitor progress and support the ventures in drafting and submitting monthly reports (progress on activities and finances). The focal point will also be a local link that the coach and Impact Hub Abidjan can use to collect information on the market and the venture. The monthly reports will include mention of significant E&S incidents, as per detailed procedures defined in the ESMF.

Cohort workshop: At the end of Phase 2, participants will come together for a third and final time for an in-person group workshop (3 days in Abidjan, Dakar or Bamako) to review the content of their Growth Plans and Impact Action Plans and to assess their readiness for: (i) entry into the acceleration programme or (ii) future business growth outside of the framework of the CATALI.5°T Initiative.

Output 2.4: Selected climate ventures in West Africa with MVPs in local markets are empowered to rapidly scale their business and climate impact

Activity 2.4.1: West Africa climate venture acceleration programme

87. The West Africa acceleration programme aims to achieve the commercial investment readiness of 30 West African climate ventures over 6 years (72 months), with each venture benefiting from 3 years of acceleration support. The acceleration programme will provide comprehensive technical assistance and repayable grant funding of EUR 100,000 on average (range: EUR 50,000-200,000) per venture. The technical assistance will encompass business development, climate impact, gender as well as environmental, social and governance (ESG) aspects; the latter will reflect the CATALI.5°T Initiative's Gender Action Plan (GAP) and its Environmental and Social Management Framework (ESMF). The acceleration programme will target both start-ups and growth companies (see 'target group' below), collectively referred to as climate ventures. Unlike the acceleration programme in Latin America, the West Africa acceleration programme will be implemented on a venture-by-venture basis (and not a cohort basis). Venture screening and selection will occur continuously in the first 3 years of the CATALI.5°T Initiative.

88. Activity 2.4.1 consists of 3 Sub-Activities:

- Sub-Activity 2.4.1.1: Venture screening and selection

  Executing Entities: IPED, Climate-KIC, GIZ
  Use of GCF proceeds: Technical assistance

  This will consist of 5 principal steps:
  1. Prospect identification and first assessment
  2. Mandate-fit check
  3. Due diligence
  4. Selection Committee
  5. Value Creation Plan

  For each venture, steps 1-5 will, together, typically take 5-6 months:
  - Identification and first assessment of the venture: approximately 1 month.
  - Mandate-fit check and due diligence: approximately 3 months.
  - Selection Committee and preparation of the repayable grant contract: approximately 1 month.
  - Co-development of the Value Creation Plan (IPED and the venture): approximately 1 month.

1. Prospect identification and first assessment: Unlike the Latin America CATALI.5°T, ventures will not be selected for the acceleration programme in West Africa through a regular call for applications; instead, ventures will be selected on a rolling, case-by-case basis through proactive canvassing by IPED. This continuous, rolling approach is driven by two considerations: (i) it will provide entrepreneurs with more flexibility around when and how they join, essentially building support around their needs rather than around the CATALI.5°T Initiative's preferences; and (ii)

financing 10 companies per year will require in-depth due diligence on at least 20 prospects per year; the IPED seed team will not be available to conduct 20 due diligence missions at the same time and will need to spread them over the year.

IPED will scope: (i) top participants of the West Africa CATALI.5°T pre-acceleration programme (see Activity 2.3.1); (ii) promising participants of other regional pitch competitions / entrepreneur network events; and (iii) promising ventures discovered through market surveillance. To achieve diversity among applicants, IPED will also run (iv) special outreach events with women entrepreneurs and entrepreneurs with backgrounds usually under-represented in acceleration programmes (see the GAP, Annex 8b). All scoping activities will be conducted in a gender-sensitive manner (see GAP). Information materials will be in French, outlining the specific criteria and the selection process.

Initial information submission. Interested participants will submit relevant information, including (list not exclusive): description of the business, description of funding needs and use of proceeds, team background and credentials, references, product demonstrations (e.g. by uploading videos), fund-raising track record (if any), tentative business plan, number of employees (disaggregated by sex), turnover generated over the last two years, time spent by the founders on the operations of the company, and – importantly – an explanation of how the venture meets the climate mitigation objectives of the programme and why grant support is necessary (versus other forms or sources of capital). If the climate venture has already filed audited accounts in the past, these will also be included in the application, together with corporate registration or similar documents.

Initial eligibility check. The most promising ventures will be invited to submit further information that will allow an initial assessment against the following eligibility criteria by the IPED screening team:

- The venture satisfies the IFC definition of a micro or small enterprise (MSE).
- The venture is legally incorporated or formally registered in a francophone West African country that has supplied a No-Objection Letter (NOL).[84]
- The venture has its own bank account (distinct from the personal bank account of the entrepreneur / founder).
- The ownership structure of the venture credibly indicates that support provided by this programme will primarily benefit beneficiaries from adeveloping (Non-Annex 1) country.
- The venture does not fail against the IFC exclusion list and further E&S and gender exclusion criteria:
  - *E&S screening.* The same E&S screening for the pre-acceleration programme is applied to the acceleration programme.
  - *Gender screening.* Ventures will be excluded if: (i) the venture's product or service has obvious negative implications for women: e.g. exacerbates wage disparities or requires long working hours without extra compensation; and/or (ii) the venture has none of its founders and employees identifying as female and the venture has no intentions of diversifying its team members to include more women.
- The venture's founder(s) is devoted to this one venture only or, alternatively, the venture is the founder's principal economic activity.
- The venture has a minimum viable product (MVP) in one or more of the categories listed in Table 5 that offers commercial traction and potential for large-scale avoidance / reduction of GHG emissions or carbon sequestration in one or more of the GCF's Mitigation Result Areas. To provide a consistent statement of how the venture's product / service reduces or avoids GHG emissions, and by roughly how much, the venture will be required to complete an initial climate impact self-assessment, using the Climate Impact Hypothesis (CIH) tool. Ventures that have graduated from the pre-acceleration programme will, instead, submit their in-depth climate mitigation assessments (undertaken as part of Sub-Activity 2.3.1.4).
- The venture produces, or plans to produce, only one or more 'climate-friendly' (low-emission) products or services: i.e. it will not, in parallel, produce or sell 'climate-unfriendly' (baseline-emission or high-emission) products or services. (This ensures that support provided by the CATALI.5°T Initiative will be directed only at low-emission products and services).
- The venture needs funding: the venture requires seed funding between EUR 50,000 and EUR 200,000 to carry out a pilot phase, strengthen its capacities, improve its preparation for investment, strengthen its climate impact or undertake other eligible uses of funds.

[84] Desirable at the time of application. If the venture is selected, legal incorporation / formal registration is required.

2. Mandate-fit check: Those ventures that pass the initial eligibility check will be invited to a 'mandate-fit check' meeting / interview, where the venture will be assessed against the following selection criteria[85]:

- *Climate mitigation impact potential* (40% of total score): Using a combination of the results of the Climate Impact Hypothesis tool (or, where relevant, the pre-acceleration in-depth climate mitigation assessment) and the expert judgement of the IPED screening team. Climate mitigation impact potential will be assessed on the basis of: (i) the anticipated abatement effectiveness of the product / service, and (ii) the anticipated market penetration of the product / service. Climate mitigation impact potential will represent the single most important selection criterion.

- *Business model and market traction* (20% of total score):

  - The start-up has a minimum viable product and some market experience – potentially actual product sales but, alternatively, early-adopter testing of an initial version of the product / service.
  - The start-up's product / service has reached at least Technology Readiness Level (TRL) 5 (technology validated in a relevant environment).
  - The start-up has a high-potential business model, backed up by evidence of market attractiveness, differentiation from competitors and sustainability.

- *Venture management team* (10% of total score):
  - The start-up has evidence of team competence / capabilities for growing the start-up (e.g. prior entrepreneurship experience or relevant skill-sets or prior exposure to relevant markets).
  - The start-up management team demonstrate an understanding of the main impacts and risks of their product / service (e.g. energy and materials sourcing, waste and effluent generation, etc.), which should not outweigh the expected climate benefits.

- *Paradigm shift potential* (10% of total score): In what way does the proposed climate product / service have the potential to be innovative and disruptive in the target market? Incremental climate solutions are eligible for inclusion in the acceleration programme if their anticipated market penetration compensates for the relatively low per-unit GHG abatement potential. However, transformational solutions, representing a genuine rupture with business-as-usual, will be favoured, subject to considerations of execution risk, consumer receptiveness, etc.

- *Climate resilience co-benefit* (10% of total score): Does the product / service offer potential climate adaptation co-benefits, either to the start-up itself or (preferred) to its customers? How extensive and deep are these adaptation benefits likely to be? All start-ups must offer a substantial GHG mitigation impact. An additional climate adaptation impact is not necessary for inclusion in the acceleration programme, but it will be positively assessed.

- *Gender* (10% of total score): Is the start-up female-led, defined as the founder being a woman? Where there is more than one founder, are the majority of founders (50% or more) women? Will the start-up offer products or services that address a gender-related socio-economic problem (e.g. gender stereotyping, increase women's wages / reduce women's unpaid work burden, unlock the potential of women-dominant sectors (e.g. improved agricultural practices or improving staple food value chains), or increase female participation in male-dominated sectors (e.g. high-yielding cash crops, climate-related technological innovation)?

Because applicants to the acceleration programme will be assessed on a rolling, continuous basis – and not as a group of applicants for entry into a cohort – the scoring system will play a different role in the acceleration programme than it does in the pre-acceleration programme. In the pre-acceleration programme, the scoring will enable direct ranking – and hence selection – of the top

[85] The criteria are slightly different for start-ups and growth companies. For brevity, only the start-up criteria are presented here. Please refer to Annex 2c for the growth company criteria.

20 venture applicants. In the acceleration programme, in contrast, the scoring system will serve two functions: (i) ventures that score less than 50% will be excluded from further consideration; and (ii) for those ventures that score 50% or more, the scoring will serve as a means of assessing each venture in a more informed, semi-structured manner, which will assist the qualitative judgement of the Selection Committee. (For details on the composition of the Selection Committee, see below).

If the IPED screening team judges that a venture is suitable for potential entry into the acceleration programme, IPED will sign a Non-Disclosure Agreement (NDA) with the venture and advance to the next stage: due diligence.

3. Due diligence: For those ventures that advance, comprehensive due diligence of the venture will be undertaken to:

- Undertake a know-your-customer (KYC) check.
- Establish the business growth potential, including detailed analysis of market size and competitors.
- Quantify the climate impact potential using the Climate Impact Forecast (CIF) tool. This will be done by each venture and the self-estimate will then be validated by a climate specialist appointed by GIZ. Ventures that have graduated from the pre-acceleration programme can use their existing in-depth climate mitigation assessments (undertaken as part of Sub-Activity 2.3.1.4), provided there has been no material change in the venture's product / service or business model.
- Evaluate programme additionality: i.e. whether acceleration support is necessary and will not crowd-out other potential sources of assistance.
- E&S due diligence (ESDD).
- Ensure that requirements relating to Sexual Exploitation, Sexual Abuse, and Sexual Harassment – SEAH) are met or required provisions can be established prior to acceleration support.

4. Selection Committee: The venture due diligence results will be presented to the Selection Committee, which will approve, decline or approve with conditions the venture's entry into the acceleration programme. The Selection Committee will consist of the following members, with the following responsibilities:

- The IPED Seed Funding Director will organise and head the Committee, and will prepare the minutes of the Committee to explain the final decision.
- A member of the IPED screening team will assess the business aspects of the venture (business model, competitive environment, growth prospects, execution risks, legal and regulatory issues, etc.).
- A second local investor or local private sector specialist will provide his/her knowledge of the local venture ecosystem.
- A IPED E&S and gender specialist will assess the E&S risks, impacts and management capacity, will define specific needs for further training accordingly and will ensurethat the selected venture complies with obligations under the Gender Action Plan.
- The GIZ representative will ensure that the climate impact of the venture is significant.

The decision to accept a venture into the acceleration programme will be taken by majority vote, with genuine effort made to reach broad consensus. GIZ will have a veto (e.g. based on the climate relevance (or lack thereof) of the venture and compliance with the E&S standards and gender policies).

Value Creation Plan: Each venture that is accepted into the acceleration programme will co-develop a 3-year Value Creation Plan in conjunction with IPED at the very start of the programme. The Value Creation Plan will also provide the basis for the repayable grant funding request (see Sub-Activity 2.4.1.2). The Value Creation Plan will focus primarily on the tasks that need to be accomplished to make the venture fully investment-ready, including key strategic issues, fund-raising support, climate impact, recruitment of key personnel, reliable financial reporting, the implementation of good operational management practices (including E&S standards), etc. The process for including E&S aspects in the Value Creation Plan follows the E&S due diligence (ESDD) and is described in detail in the ESMF. Relying on monthly meetings, quarterly reports and a set of scheduled technical assistance missions, IPED will closely monitor the implementation of the Value Creation Plan of each venture and will provide (in conjunction with partners such as Climate-KIC,

as required) targeted, bespoke needs-based coaching and mentoring support during the 3-year technical assistance phase (Sub-Activity 2.4.1.3).

- Sub-Activity 2.4.1.2: Acceleration programme – repayable grants

  Executing Entities: IPED
  Use of GCF proceeds: Financial assistance (repayable grants to climate ventures)

  A core support element of the acceleration programme is the provision of a repayable seed grant to each participating venture. Issuance of this grant, and the investments / activities paid for by the grant, will run in parallel to the suite of technical assistance interventions offered under Sub-Activity 2.4.1.3. The grant will be provided upon submission of a repayable grant proposal by the venture to IPED. Full details of the repayable grant are provided in Section B.4.5 of the Funding Proposal.

  Repayments of the repayable grants up to EUR 300,000 during Years 1-6 will be used to cover the operational costs of the acceleration programme implemented by IPED. Repayments above EUR 300,000 will be used to implement additional community-building and ideation activities, for the purpose of further strengthening the local climate innovation ecosystem and broadening the pool of entrepreneurs moving into the climate technology and innovation space. Community-building and ideation activities will encompass outreach and capacity-building measures for entrepreneurs in the CATALI.5°T Initiative countries of West Africa; the funds raised through the repayment of repayable grants will not be disbursed as new grants directly to ventures or other beneficiaries. Such community-building and ideation activities will be implemented by IPED itself or by a procured party, at the discretion of IPED.

- Sub-Activity 2.4.1.3: Acceleration programme – technical assistance

  Executing Entities: IPED, GIZ, Climate-KIC
  Use of GCF proceeds: Technical assistance

  This will be structured as follows:
  - Phase 1: In the first year of its participation in the acceleration programme, each venture will benefit from an intensive programme of technical assistance that includes business coaching, climate advisory support, gender support and E&S / ESG support – all structured around the Value Creation Plan.
  - Phase 2: for Years 2 and 3 of the venture's participation in the acceleration programme, light-touch mentoring will be provided, as well as an updated in-depth climate impact assessment.

  Phase 1 technical assistance: Technical assistance will be provided that is highly tailored to each venture's Value Creation Plan. Potential areas of support are described below, but each venture's precise mix of support activities will vary according to need. This high level of TA individualisation serves as a key differentiator between the acceleration programme and the pre-acceleration programme (especially Phase 1 of the pre-acceleration programme, which offers a standard training curriculum to all participating ventures). It also ensures that ventures that graduate from the pre-acceleration programme and subsequently enter the acceleration programme do not duplicate the support they have already received.

  - *Business coaching* from IPED staff or external experts can cover themes such as (non-exhaustive): investment readiness (inclusive governance, legal formalisation, trustworthy accounting, etc.); strengthening middle management; developing or refining a fund-raising strategy; technical and operational support (improvement of operational processes, certification process, E&S management, etc.); marketing, branding and packaging improvement; etc.

  - *Labour formalisation support and labour quality enhancement:* awareness-raising and ad hoc support to increase labour formalisation and, while on the path to formalisation, improvement of labour conditions, especially for unskilled workers, manual workers and/or vulnerable workers. IPED has built a track-record and acknowledged expertise on such formalisation training in West Africa, which the CATALI.5°T Initiative will leverage.

- *Climate advisory support* will be available on an as-needed basis, including (non-exhaustive):

    - Building ventures' understanding of their potential climate mitigation impact: introduction to concepts (baselines, emission factors, leakage, etc.), tools and case-studies.
    - Guiding ventures on how they can introduce systems thinking and systems innovation concepts into their business model design, with a view to promoting more transformational (higher-impact, disruptive) climate innovation. [Linked to Sub-Activity 3.1.1.3].
    - For those ventures that offer a potential climate resilience co-benefit, providing the tools and methodologies to assess the scope and magnitude of this co-benefit, and approaches to maximising this co-benefit in the context of commercially-viable business models. [Linked to Sub-Activity 3.1.1.2].

E&S and gender monitoring to ensure venture compliance with programme requirements (e.g. relating to labour management, health and safety, hazardous materials, waste, community engagement, biodiversity management, SEAH, etc.) will be undertaken as part of the Value Creation Plan. Among the E&S topics quoted, SEAH is an essential topic of GCF's policy and will receive specific attention. Monitoring of occurrences of SEAH will be carried out through a dedicated GRM.

In addition, *E&S / ESG and gender technical assistance* will be available for ventures under Sub-Activity 2.4.1.3. This will include (non-exhaustive):

- Tailored E&S support as relevant, depending on the characteristics of the venture – e.g. advice on effluents and waste management (Linked to Activity 3.1.3).
- ESG frameworks. (Linked to Sub-Activity 3.1.3.1).
- Frameworks for identifying and reducing sexual exploitation, abuse and harassment (SEAH)
- Frameworks for identoying gender-based violence and/or unconscious gender biases in the workplace).
- Gender climate entrepreneurship toolkits. (Linked to Sub-Activity 3.1.2.1).

Phase 2 technical assistance: In Years 2 and 3 of the venture's participation in the acceleration programme, light-touch mentoring will be provided, as well as an updated in-depth climate impact assessment. As with the more intensive technical assistance provided in Phase 1, Phase 2 support will be highly individualised to respond to ventures' unique needs. While Phase 1 will focus on providing ventures with the knowledge and tools needed to implement their Value Creation Plans, Phase 2 will be more outward-looking, with greater emphasis placed on networking, publicity and positioning for potential VC financing.

- *Mentoring support* will include (on an as-needed basis; non-exhaustive): mentorship sessions and office hours with IPED staff, domain experts relevant to the climate venture business (including prospective clients) and, importantly, senior VC professionals; ample opportunity to network with prospective investors, industry leaders and pioneering companies based in other markets through seminars, webinars, etc.; awareness-building for the venture through IPED's website and social media accounts, as well as proactive efforts by IPED to feature the venture on mainstream media (TV, radio, news sites, etc.); 3-year membership of IPED's alumni network and database of domain experts and service providers.

- The *in-depth climate impact assessment* developed by the venture (and validated by a third-party climate expert) during the due diligence process prior to entry into the acceleration programme (under Sub-Activity 2.4.1.1) will be updated by the venture using the Climate Impact Forecast (CIF) tool and will incorporate updated data and assumptions. The intention is to provide the venture with an independent, authoritative assessment of its climate mitigation impact, which it can then use as a sales tool when seeking finance from VC firms and other impact investors. In order to ensure that the climate impact assessment is as up-to-date as possible for external use, the assessment will be conducted in the final year (i.e. Year 3) of the venture's participation in the acceleration programme.

Component 3: CATALI.5°T Trans-Regional Advisory, Capacity and Knowledge Support (TRACKS)

Output 3.1: Capacities of Executing Entities, selected ESOs and venture investors in Latin America and West Africa are developed to boost climate ventures' impacts

89. Climate venture support programmes can play a unique role in helping specific climate innovations enter the market quickly and, crucially, also contribute to building regional ecosystems that can foster the systematic change required to move towards a low-emission world. To do this, 'impact' must be embedded into the way the pre-acceleration and acceleration programmes in Latin America and West Africa are designed and delivered, and the way lessons are learned from them. Most venture ecosystem stakeholders (e.g. pre-accelerators, accelerators, VC firms and climate ventures) in Latin America and West Africa have limited knowledge of climate innovation to fully understand and address these challenges. Advisory, capacity-building and knowledge support activities under Output 3.1 will, therefore, address: (i) the programme Executing Entities and implementation partners, (ii) other interested regional Entrepreneur Support Organisations (ESOs), (iii) venture investors, and (iv) the climate ventures themselves. These stakeholders will gain the capabilities to:
    - Assess the climate impact potential of climate ventures: measure, track and validate ventures' contributions to emission reductions / carbon sequestration, as well as – where relevant – their climate adaptation co-benefits.
    - Identify and support ventures with the most climate-transformative potential: to channel more support to ventures that have the potential to be innovative and disruptive in the target market, thereby catalysing genuine rupture ('paradigm shift') with respect to business-as-usual practices.
    - Shift mind-sets: arm entrepreneurs with the ability to apply the single-minded focus they need to scale-up their climate solutions, but also to understand where their solution fits into the bigger system/picture.

Activity 3.1.1: Climate impact and co-benefits assessment

90. The Climate Impact Framework deployed in Activity 3.1.1 is a tried and tested methodology that utilises the Climate Impact Forecast (CIF) tool[86] at its core. The Climate Impact Framework serves: (i) as a re-iterative learning tool for climate ventures to forecast their potential climate impact, and (ii) to help local pre-accelerator / accelerator managers to integrate climate impact measurement as part of the pre-acceleration / acceleration selection process and curriculum. The Climate Impact Framework will be applied at different stages of the pre-acceleration and acceleration programmes and will be administered in partnership with the regional Executing Entities. The Framework is important for three principal reasons:
    - As a key differentiator from other, non-climate, venture programmes to ensure that the CATALI.5°T Initiative's pre-acceleration and acceleration programmes select the climate ventures with the greatest mitigation potential.
    - To track impact during and beyond the life-cycle of the venture support programmes.
    - To provide VC funds and other impact investors with an objective, independently-validated, quantitative estimate of climate impact, thereby enabling them to deploy capital efficiently to the most climate-effective venture investments.

91. Activity 3.1.1 consists of 3 Sub-Activities:

    - Sub-Activity 3.1.1.1: Climate mitigation impact assessment

      Executing Entities: Climate-KIC, GIZ
      Use of GCF proceeds: Technical assistance

      Climate-KIC will collect and review suitable datasets (economy, emissions, etc.) from the relevant geographies / countries in order to update the Climate Impact Forecast (CIF) tool with locally-calibrated data (e.g. emission factors, market sizes) for the purpose of improving the accuracy of baseline and venture emission scenarios. The software, and accompanying user manuals and training materials, will be made available in Spanish and French. In parallel, the existing MORSE[87] model (which builds on the CIF tool to predict cohort-level climate mitigation impact) will be improved by expanding the input data from ventures across the EU, West Africa and Latin America. The improved MORSE model will serve as a free online resource for any stakeholder (worldwide)

[86] https://climate.impactforecast.org/about/
[87] MORSE: Model for Regional climate Start-up Ecosystem impacts. See Section D.1.1 for further details.

that manages portfolios of climate ventures (notably, pre-accelerators, accelerators and VC firms) to assess the ex ante and ex post climate mitigation impact of their portfolios, including in the context of 'what-if' scenario modelling.

Test-run workshops (accompanied by training) will be undertaken with the regional Executing Entities: Tec de Monterrey in Latin America and Impact Hub Abidjan and IPED in West Africa. A workshop will be run in each region at the start of each region's pre-acceleration and acceleration programmes (i.e. 4 workshops in total) to enable trainers to work with a small group of ventures at different stages of readiness (early to more mature) as a test / sample to ensure the Climate Impact Framework has good usability and suitability for different contexts. The workshops will focus, in particular, on the Climate Impact Hypothesis (CIH) and CIF elements of the Impact Framework, as these elements are needed from the outset of the CATALI.5°T Initiative in order to select ventures for inclusion in the regional pre-acceleration and acceleration programmes, and to undertake in-depth climate mitigation assessments of the ventures at various points in their development.

A training programme will be implemented in each region to train locally-based consultants for future delivery of the Climate Impact Framework. At the commencement of CATALI.5°T Initiative implementation in Latin America and West Africa, a call for potential impact trainers will be run. Staff members from Tec de Monterrey, Impact Hub Abidjan, IPED and local implementation partners are considered the principal beneficiaries of this training, but other local consultants will also be eligible to apply. The training will include at least 3 stand-alone training sessions per region, as well as participation of trainees in relevant CATALI.5°T Initiative-related work (e.g. serving as hands-on assistants in venture selection processes for the pre-acceleration and acceleration programmes).

Alongside the test-run workshops, Climate-KIC will facilitate a one-day workshop in each region – with Tec de Monterrey in Latin America and Impact Hub Abidjan and IPED in West Africa – in order to:

- Establish a learning framework for not only embedding the Climate Impact Framework into the pre-acceleration and acceleration programmes, but also to agree on an approach for capturing and analysing outputs from the climate impact tools (Impact Management and Monitoring, IMM). This will: (i) facilitate the establishment of baselines for individual ventures, against which (ii) mitigation progress can be assessed as ventures periodically update their climate impact assessments and (iii) aggregated climate impact (e.g. at the cohort, regional or programme level) can be periodically assessed; and (iv) feed empirical data back into the CIF and MORSE models for improved impact prediction.
- Establish a communications approach and a set of social media assets for sharing information about the Framework and tools and their importance to external stakeholders (other partners and ventures). For instance, it is critically important that the ventures that are supported by the pre-acceleration and acceleration programmes understand the importance of climate impact and can articulate what their impact is projected to be (and can communicate that they are, in fact, 'climate ventures').

Each time a venture undertakes a Climate Impact Hypothesis and (especially) an in-depth climate impact assessment (using the CIF tool), the CATALI.5°T Initiative will collect and store the data. The data will be collected by the relevant regional Executing Entity (Tec de Monterrey, Impact Hub Abidjan, IPED) and then shared with Climate-KIC, which will cut and analyse the data at various levels of aggregation, including:

- Cohort
- Sector / GCF result area
- SDG(s)
- Stage of venture maturity
- Type of business / impact domain (mitigation only, mitigation with adaptation co-benefits, etc.)
- Geography
- Product / service / digital / non-digital
- Impact lever (production, usage, waste treatment, transportation, re-use, etc.)

GIZ and Climate-KIC will publish an annual climate impact report to showcase ongoing CATALI.5°T Initiative achievements. The key impact findings will also be presented each year at an Open

ClimAccelerator[88] network workshop. Open ClimAccelerator is a global open-source programme coordinated by Climate-KIC that provides organisations (notably pre-accelerators and accelerators) that support climate ventures with the means to facilitate innovation, catalysis and scaling-up of climate solutions.

- Sub-Activity 3.1.1.2: Climate resilience co-benefits assessment.

  Executing Entities: Climate-KIC
  Use of GCF proceeds: Technical assistance

  The development of commercially-viable climate mitigation solutions that also offer climate adaptation benefits is particularly challenging to support, due to a range of issues associated with adaptation, such as: its context-specific nature, time-horizons (which may be different for mitigation and adaptation), the evolving frequency / severity of the climate hazards, and the difficulty in establishing effective revenue-generation models. These challenges can be overcome but most organisations lack the knowledge to fully understand and address them, including developing the support needed by entrepreneurs and ventures working to create these solutions. Sub-Activity 3.1.1.2 will provide specialised guidance and support to the regional Executing Entities and other interested regional ESOs to help them understand what constitutes an effective adaptation and resilience co-benefit, the challenges that need to be overcome to achieve such co-benefits, and the support they need to provide to the entrepreneurs developing mitigation solutions in order to maximise adaptation co-benefits. Through this support, the CATALI.5°T Initiative will be able to build a dedicated community of climate solution providers that are able to offer mitigation benefits and substantive adaptation co-benefits, accompanied by the ability to connect them effectively to potential clients and investors. In addition, the CATALI.5°T Initiative will introduce tools that help ventures to assess their adaptation co-benefit impact – complementary to the (mitigation-oriented) CIF tool.

  Climate-KIC will draw upon its existing, extensive experience of building adaptation and resilience innovation thinking and capabilities to develop a cohesive body of literature, case-studies and tools for CATALI.5°T Initiative stakeholders. These will then be deployed in support of building the capacities of the regional Executing Entities and the climate ventures. Climate-KIC will determine what types and levels of adaptation support are needed and in what form in each region (e.g. toolkits, guidance materials, sectoral priorities, etc.) by:
    - Undertaking a short survey for pre-accelerator / accelerator partners, augmented by structured interviews.
    - Organising a 2-hour workshop for each region to present the preliminary results to local partners and gather collective feedback to inform the design of a support framework.

  Based on this stakeholder input, Climate-KIC will then develop a regionally-specific support framework, adapted so that it is: (i) applicable to a primarily mitigation context (in which emissions reduction is the primary objective and climate adaptation co-benefits are subsidiary to the mitigation objective); (ii) tailored to regional interests (e.g. case-studies will be drawn from Latin America and West Africa, where possible); and (iii) translated into Spanish and French.

  Dedicated training, in the form of a one-day train-the-trainers workshop in each region, will be provided to Tec de Monterrey, Impact Hub Abidjan, IPED and local implementation partners, as well as other interested regional ESOs, on key adaptation topics and issues. The support framework will form the basis of the training, and will include methodologies, criteria and taxonomies (such as the Adaptation Solutions Taxonomy – ASAP) for assessing adaptation and resilience ideas and their strengths / weaknesses. The regional Executing Entities and local implementation partners will be enabled to:
    - Assess ventures for inclusion in the pre-acceleration and acceleration programmes on the basis of their likely climate resilience co-benefits.
    - Advise climate ventures in the pre-acceleration and acceleration programmes on how to enhance the climate resilience co-benefits of their goods / services and, crucially, how to leverage climate resilience co-benefits to reinforce business models.

[88] https://climaccelerator.climate-kic.org/

- Undertake in-depth climate resilience assessments of selected ventures using third-party (externally understood and accepted) tools and methodologies.

In the regional pre-acceleration programmes, and for relevant ventures only (those with adaptation co-benefits), the CATALI.5°T Initiative will provide:

- Direct support to groups of ventures through adaptation and resilience 'bootcamps', initially by Climate-KIC staff, with gradual transition of delivery by the regional Executing Entities. The support framework will form the basis of the training, but the emphasis will be on practical, venture-oriented questions, such as: Does my product / service offer climate resilience benefits? To whom? How can these resilience benefits be measured, priced and marketed? Can the resilience benefits be enhanced without jeopardising core business requirements (costs, profitability, technologies, etc.)?
- Peer-to-peer connections between participants in the cohorts and more advanced peers that have developed similar solutions.

In the regional acceleration programmes, and for relevant ventures only (those with adaptation co-benefits), the CATALI.5°T Initiative will provide:

- Those ventures that did not participate in the pre-acceleration programme will be invited to participate in one of the pre-acceleration bootcamps to obtain a basic technical understanding of climate resilience and how it relates to their business.
- 'Deep dive' training on specific topics, such as resilient agriculture or adaptation fintech (etc. – as applicable), by Climate-KIC or by specialists provided by Climate-KIC. To promote cross-fertilization of ideas, ventures in similar sectors or with similar adaptation co-benefits will receive the deep-dive training in groups.
- Introductions to specialised investors and agencies that are interested in cross-cutting (mitigation and adaptation) business ideas.

Throughout the training of the Executing Entities, ESOs and climate ventures, ongoing surveys will be conducted to collect feedback on the training programmes and to tailor future support to their needs, as well as to create knowledge products for use by the wider global community of practice.

- Sub-Activity 3.1.1.3: Paradigm shift and systems transformation potential

Executing Entities: Climate-KIC, GIZ
Use of GCF proceeds: Technical assistance

The Executing Entities, local implementation partners and other interested regional ESOs will:

- Inspire pre-accelerators / accelerators to do more: to shift from a narrow 'traditional business excellence' focus (e.g. profitability) or even an incremental climate impact focus ('lower-emission business-as-usual') to a broader perspective that emphasises transformational change - disruptive technologies and business models that facilitate 'doing things differently' in a way that is better aligned with 1.5 ºC compatibility.
- Provide practical tools to support the identification and capacity building of ventures that have transformative potential.
- Understand the transformational potential of the CATALI.5°T Initiative's pre-acceleration and acceleration programmes' venture portfolios and use the findings to influence and crowd-in others.

The approach towards Sub-Activity 3.1.1.3 is intentionally open: it is not the intention to be too prescriptive but, rather, to tailor support based on interest levels and local demand.

Climate-KIC will develop training materials for the regional Executing Entities and local implementation partners. These training materials will be made available in French and Spanish. Using these training materials, Climate-KIC will provide capacity building – 6 hours of training workshops per region – to pre-acceleration and acceleration programme staff, as well as other interested ESOs in the respective regions, on implementation of the paradigm shift and systems transformation framework. In addition, Climate-KIC will support the regional Executing Entities and local implementation partners in the areas of:

- Communications and outreach: To attract ventures with the greatest transformational potential, the communications materials for the pre-acceleration and acceleration

programmes, and for specific calls for ventures, will include a 'transformative impact lens'. Communications materials will be reviewed by relevant experts (e.g. for specific sectors or geographies) before they are distributed.
- Design of specific questions to be used in the online application forms for the venture selection process (pre-acceleration and acceleration programmes).

Leveraging the tools adapted and the training provided to the regional Executing Entities, local implementation partners and ESOs, Climate-KIC will support the regional Executing Entities and local implementation partners in providing light-touch opportunities for ventures in the pre-acceleration and acceleration programmes to incorporate systems thinking and systems innovation concepts into their business model design and ways of working:
- The regional pre-acceleration programmes: One 2-hour workshop per cohort per region on why and how to embed systems innovation into venture design. The full toolkit will be available for all ventures after the workshop.
- The regional acceleration programmes: For those seed-stage ventures that receive prior CATALI.5°T Initiative support at the pre-acceleration stage, such systems thinking will already be incorporated into the ventures' business models by the acceleration stage. For those seed-stage ventures that seek further assistance in revising their business models to achieve greater mitigation paradigm shift, and where such revision is consistent with their Value Creation Plans (see Sub-Activities 1.4.1.1 and 2.4.1.1), these ventures will be invited to participate in the pre-acceleration workshops. Additionally, Climate-KIC and a pool of technical advisors will be available on an ad hoc basis to respond to specific venture needs.

An annual impact report will be published that links directly to the overall results framework of the CATALI.5°T Initiative. The key impact findings will be presented each year at a global Open ClimAccelerator network workshop hosted by Climate-KIC.

Activity 3.1.2: Gender equality and diversity – implementing the CATALI.5°T Initiative Gender Action Plan (GAP)

92. Activities under Activity 3.1.2 will provide actionable and practical guidance to CATALI.5°T Initiative Executing Entities, local implementation partners, climate ventures and other ESOs on how they can integrate gender equity interventions, become more gender-smart and enhance diversity in climate entrepreneurship. Including women and under-represented societal members across the ecosystem as customers, entrepreneurs, trainers, mentors, investors and pre-accelerator / accelerator team members will generate innovative climate solutions that are more inclusive, leave nobody behind and, in many cases, open up new business opportunities:
    - In Latin America and West Africa, women disproportionately engage in GHG-emitting activities such as self-employed work, cooking and household management, and face the impacts of climate change, such as droughts, floods and crop losses. Women are, therefore, often in a better position to recognise some of the opportunities that climate change presents. Additionally, women entrepreneurs are more likely to innovate to address social needs.
    - A gender-diverse climate venture is likely to be more robust, generate more diverse ideas and tap into different markets.
    - A more diverse portfolio of pre-seed and seed-stage climate ventures is likely to be more resilient to market shocks.

93. Activity 3.1.2 consists of one Sub-Activity:

    - Sub-Activity 3.1.2.1: Gender equality and diversity.

      Executing Entities: Climate-KIC
      Use of GCF proceeds: Technical assistance

      Gender awareness and self-assessment tools will form the basis for the learning journeys of both the 'enablers' (primarily the regional Executing Entities – Tec de Monterrey, iHub Abidjan and IPED – and local implementation partners) and the climate ventures. There will be one gender climate entrepreneurship toolkit for enablers and one toolkit for ventures. Both toolkits will have the same structure and will include:
      - The climate-gender business case – to explore why partners should incorporate gender.

- Interventions checklist – to assess how well partners are doing on gender.
- Metrics overview – to track gender metrics.
- Climate acceleration / entrepreneurship examples – to see how others are doing it.
- Action planning – to provide manageable steps to change over time.

The toolkits will be supported by bespoke gender-climate training modules (based on demand from partners) to zoom-in on specific topics and create a roadmap for programmatic changes and cross-partner learning. Additionally, a gender dimension will be introduced in the climathon community building (Sub-Activities 1.2.1.1 and 2.2.1.1). By creating more gender-inclusive pre-acceleration and acceleration programmes, as well as community building activities, the CATALI.5°T Initiative will be able to attract more diverse entrepreneurs and climate innovations. This inclusivity is likely to lead to a more diverse innovation and entrepreneur portfolio.

A longitudinal study will be designed and implemented for each regional Executing Entity (Tec de Monterrey in Latin America; Impact Hub Abidjan and IPED in West Africa), focused on the following metrics – which determine how robust the institution's gender strategy / approach is (and based on assumed improvements due to programmatic interventions). The results and analysis will be consolidated in a report to inform individual and collective actions on gender:

- Organisational leadership – is there gender balance in the management team and board?
- Workplace culture – is there gender balance amongst employees; are there employment policies in place (e.g. parental leave and favourable working hours), is there training available (e.g. sexual harassment and gender bias training) and pay equality?
- Marketplace – is gender incorporated into brand values and programme design; is there a clear effort to support women-owned businesses (e.g. women trainers) and women in supply chains?
- Community and transparency – is there a gender strategy in place with measurable goals and targets (tracked over time)?

Similar indicators will be used to assess all the climate ventures that participate in the pre-acceleration and acceleration programmes. In the case of the ventures, data will be collected when ventures are admitted into the programme (to generate baseline data) and when they graduate from the programme (to assess impact). Aggregated data will be made public (with a particular emphasis on local ESOs), including good / best practices.

<u>Activity 3.1.3: ESG frameworks – implementing the CATALI.5°T Initiative Environmental and Social Management Framework (ESMF)</u>

94. The CATALI.5°T Initiative has developed an Environmental and Social Management Framework (ESMF) – see Annex 6a for detailed information. The ESMF essentially targets the activities of the supported climate ventures, because the CATALI.5°T Initiative's impacts occur as a result of these activities – i.e. as a result of the production, consumption and disposal of the goods and services sold by the climate ventures. The ventures will be screened for potential E&S impacts and will receive awareness-raising, training and ad hoc support on E&S matters. At the beginning of the regional acceleration programmes, they will be subject to Environmental and Social Due Diligence (ESDD), following which, if necessary, they will receive support in developing more detailed environmental and social management plans. They will then be coached in implementing and monitoring these plans. The plans will also include actions to enhance potential positive benefits of the ventures' activities. To ensure full integration of, and responsibility for, E&S matters in general CATALI.5°T Initiative management and oversight, implementation of the ESMF is included in Component 5 (monitoring, reporting and evaluating). Activity 3.1.3 includes those E&S actions that directly support the regional pre-acceleration and acceleration programmes.

95. In Latin America, GIZ will be responsible for the assessment of E&S risks and impacts of the supported climate ventures, for assisting the ventures to engage with appropriate E&S management, for reporting, and for compliance. GIZ will provide a regional E&S specialist for Latin America to oversee and carry out E&S management for the acceleration programme. In West Africa, IPED will perform the corresponding E&S role. The existing E&S capacity of IPED is very high, but the E&S capacities of Impact Hub Abidjan and Tec de Monterrey are more limited. To facilitate these Executing Entities' engagement with CATALI.5°T Initiative implementation, to strengthen their advisory roles vis-à-vis supported climate ventures in the pre-acceleration and acceleration programmes, and to build post-Initiative sustainability

(such that these institutions can continue to promote high-grade E&S standards in the context of future climate ventures), Activity 3.1.3 will provide capacity building for the regional Executing Entities. This capacity building will be provided by the CATALI.5°T Initiative's E&S manager and the regional E&S specialists. In some limited cases, the regional E&S specialists may contract external consultants to provide specialised training. Specific needs for capacity building will be defined as the CATALI.5°T Initiative progresses and will, to an extent, be shaped by the types of climate ventures (sectors, technologies, geographies) that are admitted into the pre-acceleration and acceleration programmes – and, hence, what types of E&S issues the Executing Entities will be exposed to.

96. All ventures that participate in the pre-acceleration and acceleration programmes will receive minimum awareness-raising and training on labour, working conditions, and occupational health and safety. If necessary, the regional E&S specialists will define actions, provide training and set targets so that specific ventures improve their management of human resources and occupational health and safety. For pre-acceleration, these measures will mostly be in the form of awareness-raising and ad hoc support, but, for the acceleration programme, more prescriptive requirements will be captured in management plans (depending on each venture's risks). Additional risks and impacts associated with the activities of each venture, relating to, inter alia, waste generation, biodiversity, water consumption, etc., will be assessed at intake into the pre-acceleration programme and the acceleration programme. Tailored E&S support will be provided as relevant, depending on the characteristics of the venture: e.g. advice might be provided on effluents and waste management, or on energy conservation.

97. An essential impact factor identified in the E&S Assessment (Annex 6a) is the opportunity to advance labour formalisation among small enterprises in Latin America and West Africa. Under Activity 3.1.3, an annual workshop will be held in each region for Executing Entities, local implementation partners and ESOs to exchange experiences and share best practices. Specific ventures may be invited to participate to act as case-studies or to inform their own labour strategies. As a result, the ESMF labour procedures may be periodically updated.

Sub-Activity 3.1.3.1: Environmental, social and governance (ESG) frameworks

Executing Entities: GIZ
Use of GCF proceeds: Technical assistance

Climate impact is at the core of the CATALI.5°T Initiative. However, to support truly 'good' and resilient climate businesses and to ensure long-term sustainability of programme interventions, the CATALI.5°T Initiative will also foster the integration of ESG aspects into internal practices, routines and processes of the pre-accelerated / accelerated ventures and VC firms. Young ventures are increasingly expected to integrate ESG into aspects of their business when they receive support from pre-accelerators and accelerators and / or funding from VCs. This expectation is also expanding to encompass the VC firms themselves.[89] In order to ensure the future viability of ventures supported by the CATALI.5°T Initiative, it is, therefore, crucial to: (i) support the regional Executing Entities and local implementation partners to develop the internal capacities needed to guide and assist the ventures in becoming 'ESG-ready'; and (ii) support the two regional VC communities to develop the ESG understanding, screening and assessment capabilities, and tool and methodology use increasingly expected of them by ventures and by other ecosystem actors.

Sub-Activity 3.1.3.1 will focus on adapting existing ESG tools that are not currently fit for purpose for the venture and VC investor ecosystem. Providers and standard-setting bodies, such as the Principles for Responsible Investing (PRI) and the Sustainability Accounting Standards Board (SASB) ESG tools, are explicitly focused on (public market) asset managers and late-stage buy-out/PE funds. The specificity of VC / early-stage companies (e.g. fast-changing, new markets and business models) is not captured by these tools, hence the need for adaptation. The exact set of tools will be defined in accordance with investors' needs in Latin America and West Africa. IPED already has an operational ESG framework; in its case, CATALI.5°T Initiative support will address specific gaps in coverage – e.g. impacts on biodiversity. Impact Hub Abidjan and Tec de Monterrey

[89] While little academic work has been done on the topic (and development) of ESG in venture capital, recent articles in both the Harvard Business Review and the Stanford Social Innovation Review substantiate the claim that VC is slowly starting to adopt ESG. See, for example, Alemany L. et al (2022), *How VCs Can Help Startups Set (and Meet) ESG Goals*: https://hbr.org/2022/01/how-vcs-can-help-startups-set-and-meet-esg-goals; and Lenhard J. and Winterberg S. (2021), *How Venture Capital Can Join the ESG Revolution*: https://ssir.org/articles/entry/how_venture_capital_can_join_the_esg_revolution

have less developed ESG understanding and capacities, and support will necessarily be more comprehensive. On the basis of discussions held with stakeholders during CATALI.5°T Initiative preparation, the regional toolkits are expected to include:

- An ESG due diligence framework / questionnaire (DDQ): this is an ESG-aligned framework / questionnaire used by investors when making investment decisions to add to their regular commercial / market / legal due diligence. DDQs come in a short-form 'check list' questionnaire format and could be adapted for immediate use by the programme pre-accelerators / accelerators, VC firms and other ESOs in the two regions.
- An ESG investment framework: a broader and longer ESG-focused framework to be used by the pre-accelerator / accelerator teams (and, subsequently, other ESOs) to work with the ventures admitted into the regional pre-acceleration and acceleration programmes to identify and improve ESG gaps and areas for improvement.
- An Internal Fund Management Framework: to help manage ESG within pre-accelerators, accelerators and VC funds by offering a tool / framework to record, measure and report ESG issues and the metrics that require adaptation. The Principles for Responsible Investing's (PRI) Reporting Framework (adapted mostly for buy-out/PE funds) will serve as a starting point.
- SASB-like materiality map: the SASB 'materiality map' is popular among investors in other asset classes to identify which ESG areas are relevant for a specific (portfolio / investee) company. In a recent white paper, KfW Capital made an attempt to extend this tool to the venture / start-up sector.[90] Adapting the eventual tool for Latin American / West African pre-accelerators, accelerators and VC firms will help them to zoom in on (financially) relevant ESG issues.

These tools will be adapted to the specific contexts of the target pre-accelerators, accelerators and investors. The geography (Latin America and West Africa), stage of venture support (e.g. pre-seed, seed, Series A, etc.) and investment focus will be considered. The tools will be provided in Spanish and French. The toolkits will be tested and refined with selected CATALI.5°T Initiative partners and revised versions will then be produced.

Explaining the rationale behind different tools (and ESG more broadly) as part of a broader education programme on the incentives, motivations and concrete practicalities will be essential to facilitate the use of the toolkits and, ultimately, enact a re-thinking of how pre-acceleration, acceleration and VC are done. A 6-unit training programme (and feedback session) will be developed – accompanied by prior input from key CATALI.5°T Initiative stakeholders in a dedicated co-development workshop – and delivered to the target Executing Entities, local implementation partners and VC funds in individual sessions.

Current ESG frameworks are not sufficiently detailed and prescriptive to guarantee compliance with typical international E&S policies and safeguards, and hence full implementation of the ESMF is required. But they do establish a useful focus on the realisation of positive results along many dimensions of sustainable development, as well as emphasising the importance of governance – issues such as board composition, executive compensation, workforce diversity, data security, privacy, bribery and corruption, lobbying, etc. It is ESG considerations, and not E&S considerations, that will govern the behaviour of the climate ventures, the regional pre-accelerators and accelerators, and the VC firms after the CATALI.5°T Initiative has ended. Accordingly, there is value in harmonising, to the extent possible, the CATALI.5°T Initiative's ESMF and the ESG toolkits developed, so that CATALI.5°T Initiative stakeholders are equipped to continue operating with minimal disruption after the GCF involvement ends: i.e. to smooth the transition from ESMF to ESG.

Accordingly, Sub-Activity 3.1.3.1 will identify governance-related gaps in the ESMF and will seek to address these gaps using the ESG toolkits. The intention is not to generate a lot of work or disruption for CATALI.5°T Initiative participants (hence the reliance upon the ESG toolkits that will be used anyway), and nor is to undertake a comprehensive gap-filling exercise. Instead, a small number of governance issues, potentially data safety and cybersecurity (to be confirmed following consultations with stakeholders), will be addressed and incorporated into the ESMF. The tools and materials developed will be made available to external stakeholders free of charge (available

[90] KfW Capital (2021), *Growing the Seeds of ESG: Venture Capital, Start-Ups and the Need for Sustainability*: https://kfw-capital.de/wp-content/uploads/ESG-Studie.pdf

online), to promote the uptake of best-practice governance practices in the wider venture community.

Component 4: CATALI.5°T Initiative Governance and Management

98. Governance. The Global Advisory Committee (GAC) will be established to provide strategic guidance. It will comprise representatives of: (i) GIZ, (ii) Climate-KIC, (iii) Tec de Monterrey, (iv) Impact Hub Abidjan and (v) IPED. During implementation of the CATALI.5°T Initiative, the GAC will periodically invite: (v) the NDAs of participating countries, (vi) external advisors from the VC industry and from the international pre-accelerator / accelerator community, and (vii) strategic stakeholders to share insights about national, regional and global trends that could be relevant to CATALI.5°T Initiative implementation.

99. Meeting twice a year, the GAC will review progress and provide recommendations on direction, linkages with relevant baseline initiatives and processes happening globally or in the regions, and on knowledge management and climate innovation. The GAC will be responsible for:
    - Providing guidance for the implementation of the pre-acceleration and acceleration programmes in both regions.
    - Making recommendations to strengthen CATALI.5°T Initiative execution and achievement of targeted results.
    - Ensuring CATALI.5°T Initiative momentum and coherence with the evolution of the international context.

100. Management units. The 3 management Units (MUs) will implement activities under Component 1, Component 2 and Component 3, respectively. The MUs will comprise management-level representatives of the corresponding Executing Entities responsible for the components' outputs and will be responsible for day-to-day administration, execution and technical coordination. The Latin America MU will be located in Mexico City and Monterrey, the West Africa MU will be located in Abidjan and Dakar, and the Trans-Regional MU will be located in Eschborn, Germany. The MUs will ensure CATALI.5°T Initiative execution proceeds according to pre-agreed activity descriptions and timetables, with clear work plans and in compliance with the CATALI.5°T Initiative's Environmental and Social Management Framework (ESMF) and Gender Action Plan (GAP). Each MU will hold, among others, regular operational meetings to:
    - Take management-related and technical decisions.
    - Discuss CATALI.5°T Initiative implementation and ways to strengthen it.
    - Develop, monitor and coordinate annual work plans (including procurement).
    - Ensure that budgets and work plans are on track and monitor programme progress.
    - Identify and resolve bottlenecks and implementation challenges and/or bring these to the attention of the AE.

101. At least twice a year, all 3 MUs will meet to undertake strategic thinking and planning, thereby connecting strategy with execution. At the same time, these meetings will serve to exchange on challenges, achievements and lessons learned (including in relation to gender and ESMF issues), and to discuss, monitor and promote the best possible synchronisation of implementation between the Executing Entities. All MUs will also meet on an additional, ad hoc basis whenever necessary.

Figure 8: CATALI.5°T Initiative Governance and Management

Component 5: CATALI.5°T Initiative Monitoring, Reporting and Evaluation

102. Please refer to Section E.7.1.

B.3.2 Alternative Operating Models

103. The design of the CATALI.5°T Initiative reflects best-practice. The GCF's own assessment of climate ventures' and entrepreneurs' needs is pertinent in this regard[91]:

> *Developing economies have an immense potential to accelerate the deployment of pivotal technologies to decarbonise high-emitting sectors…Unleashing the climate innovation potential of developing countries is imperative to meet their unique requirements and scale up global climate action. However, there are many barriers to the development and widespread adoption of inclusive and responsible climate innovation…At the emergence phase, the combination of sector- and country-specific barriers can be broadly clustered into four categories: (i) limited awareness of climate physical/transition/liability risks and new venture opportunities; (ii) limited capacity to ideate or tailor novel approaches; (iii) weak climate innovation and entrepreneurial ecosystems; and (iv) limited access to seed funding and early-stage capital.*
>
> *A public-private innovation ecosystem is required to drive climate innovation. In mature start-up ecosystems, a host of public and private start-up incubation and acceleration schemes makes available offices, technical expertise, manufacturing know-how, information on marketing strategies, help in developing business plans, assistance in raising funds, mentoring, legal guidance, patent application support, facility to benchmark peers, and interface to universities and laboratories, or digital platforms…The so-called 'valley of death' (the gap between initial seed funding and more mature, long-term finance) for climate start-ups in developing countries starts earlier and ends later – becoming a forbidding obstacle. This calls for new financing models to support climate technology ventures and accelerate climate innovation in developing countries.*

[91] GCF (2021), *Accelerating and Scaling-Up Climate Innovation: How the Green Climate Fund's Approach Can Deliver New Climate Solutions for Developing Countries:* https://www.greenclimate.fund/sites/default/files/document/accelerating-and-scaling-climate-innovation_0.pdf

104. GIZ recently produced a book, 'Strengthening Entrepreneurial Ecosystems'[92], that summarises the key lessons learned from GIZ entrepreneurship projects and programmes, and which have informed the design of the CATALI.5°T Initiative. Key among them are:
    - A healthy entrepreneurial ecosystem, supported by pre-accelerators and accelerators, can provide early, innovative ventures with the confidence to push forward and develop potentially life-changing products with an uncertain future. This dynamic ecosystem produces a self-reinforcing system of innovative job creation that attracts top talent – which, in turn, leads to more creative entrepreneurs and attracts even more talent.
    - Vital support actions for ventures include:
        - Capacity building for entrepreneur support organisations (ESOs) – improving their services by bringing in experts, facilitating peer learning and providing training.
        - Connecting ecosystem actors – outreach to entrepreneurs, recruiting mentors and coaches, mobilising the media, etc.
        - Facilitating international connections – e.g. with international ESOs and international investors.
        - Providing financial support to ESOs – necessary to manage risks.
        - Capacity building for financial organisations – bringing in experts, training, peer learning, developing guides and reports.
        - Establishing grant schemes – direct grants to entrepreneurs, matching capital to investors.
        - Improving the ability of entrepreneurs to access finance by supporting consulting, workshops and training.
        - Matchmaking between entrepreneurs and financial organisations – supporting the convening of events, competitions, technology-enhanced platforms and introductions.

B.4. Implementation arrangements

B.4.1 Role of GIZ

105. GIZ, with its head office located in Germany, is the Accredited Entity (AE) for the CATALI.5°T Initiative. GIZ will also operate as an Executing Entity in relation to specific activities of the CATALI.5°T Initiative. For the avoidance of doubt, GIZ as the Accredited Entity and GIZ as the Executing Entity are a single legal entity, but the two GIZ functions of Accredited Entity and Executing Entity will be strictly separated and are accountable to different management structures within GIZ.

106. GIZ is one of the largest international providers of capacity development and technical assistance on climate change worldwide. GIZ is currently carrying out over 300 climate-related projects, with combined funding of over US$ 1.9 billion. GIZ has a strong track-record in the area of green private sector and entrepreneurship promotion, sustainable economic development and climate change in the two CATALI.5°T Initiative regions, in addition to well-established relationships with the key stakeholders. GIZ operates permanent delegations throughout the CATALI.5°T Initiative regions: in Latin America: Bolivia (145 staff), Colombia (223 staff), Costa Rica (92 staff), Ecuador (174 staff), El Salvador (68 staff), Guatemala (111 staff), Honduras (87 staff), Mexico (239 staff), Nigaragua (15 staff), Paraguay (29 staff) and Peru (162 staff); and in West Africa: Benin (428 staff), Burkina Faso (362 staff), Côte d'Ivoire (289 staff), Guinea (140 staff), Mali (339 staff), Mauritania (97 staff), Niger (294 staff), Senegal (297 staff) and Togo (262 staff). In the CATALI.5°T Initiative countries in Latin America, GIZ is implementing a portfolio of 31 relevant entrepreneurship and green growth projects, and 51 relevant climate change projects (see Annex 2b); in the CATALI.5°T Initiative countries in West Africa, GIZ is implementing a portfolio of 38 relevant entrepreneurship and green growth projects, and 18 relevant climate change projects (see Annex 2c).

GIZ as Accredited Entity

107. As the AE, GIZ will have oversight responsibility for the CATALI.5°T Initiative, as defined in the Accreditation Master Agreement (AMA) between the GCF and GIZ. As AE, GIZ will administer funds on behalf of the GCF and provide oversight guidance and quality assurance for the Executing Entities. The GCF AE unit based at GIZ head office will be responsible for:

[92] GIZ (2021), *Strengthening Entrepreneurial Ecosystems: An Interactive Guide for Development Professionals*: https://www.giz.de/en/downloads/giz2021-en-entrepreneurial-ecosystems-guide.pdf

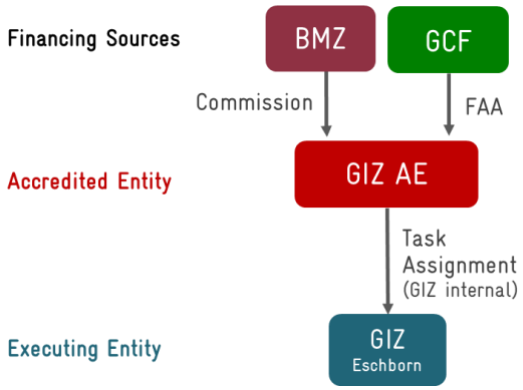
- Oversight of the programme during implementation:
  - Maintaining adequate documentation and communication with the GCF.
  - Establishing internal control routines.
  - Ensuring continuous programme risk assessment.
- Financial management**,** in particular receiving GCF proceeds as well as disbursing, administering and processing the funds. This implies:
  - Ensuring the proper use of GCF proceeds.
  - Assessing the integrity and capacity of the Executing Entities.
  - Setting up the subsidiary agreements.
  - Monitoring the subsidiary agreements and the performance of Executing Entities.
  - Ensuring that Executing Entities' procurement activities comply with GIZ's policies and rules.
  - Evaluating the programme, including the commissioning of independent interim and final reviews.

108. Oversight and quality assurance are supported by specific departments in GIZ head office:
- *Finance Department:* Responsible for strategic and operational financial control, maintaining standards of financial management, and accounting and elaboration of annual statements of accounts, among other responsibilities.
- *Procurement Department*: Responsible for procurement, contracting, setting up the financing agreements with the Executing Entities; and monitoring of tender processes through the procurement plan, among other responsibilities.
- *Compliance and Integrity Department*: Responsible for ensuring compliance with GIZ and government rules and regulations.

GIZ as Executing Entity

109. GIZ (head office in Germany and regional offices) will act as an Executing Entity (EE). GIZ will establish a Trans-Regional Management Unit (MU) for the implementation of Component 3 of the CATALI.5°T Initiative, which will also be responsible for providing coordination support to the 2 regional Management Units. Figure 9 illustrates the contractual arrangements between the GCF, GIZ and BMZ. The German Federal Ministry for Cooperation and Development (BMZ) will commission GIZ with the implementation of the CATALI.5°T Initiative through commissioning agreements. The GCF will transfer funds based on a Funded Activity Agreement (FAA) to the Accredited Entity, GIZ. The GIZ Eschborn Management Unit and GIZ regional offices (Executing Entity) will receive internal task assignments from the AE for the implementation of the GCF programme management function for Component 3, as well as for implementation of defined Activities and Sub-Activities across Components 1, 2 and 3 (see Table 7).

Figure 9: GIZ Contractual Arrangements



B.4.2 Executing Entities

110. In addition to GIZ, the CATALI.5°T Initiative will have 4 Executing Entities: Tec de Monterrey, IPED, Impact Hub Abidjan and Climate-KIC.

111. Tec de Monterrey: Instituto Tecnológico y de Estudios Superiores de Monterrey[93] (ITESM) (Monterrey Institute of Technology and Higher Education), also known as Tecnológico de Monterrey or Tec de Monterrey, is a secular and co-educational private university based in Monterrey, Mexico. Founded in 1943 under Mexican commercial law as an Asociación Civil sin fines de Lucro (non-profit civil association), it is one of only 45 universities in the world to be ranked with 5 QS Stars and is recognised as one of the most prestigious universities in Latin America. Tec de Monterrey has 26 campuses in Mexico and 18 offices overseas. Tec de Monterrey's Instituto de Emprendimiento Eugenio Garza Lagüera (IEEGL: Eugenio Garza Lagüera Entrepreneurship Institute,[94] founded in 2013, is responsible for designing, implementing and promoting entrepreneurship within the university's academic curriculum, as well as through external programmes that are open to the public. In 2021, IEEGL ranked sixth in The Princeton Review for International Undergraduate Entrepreneurship Programmes. IEEGL, and its institutional predecessors within Tec de Monterrey, has developed 8 high-impact business pre-accelerators, 24 basic business pre-accelerators and 14 technology parks. IEEGL's department in charge of supporting entrepreneurs is Zona Ei[95], which carries out pre-acceleration and acceleration activities, including the Institute's flagship TecLean programmes. Thus, under Tec de Monterrey as the Executing Entity, the Zona Ei department will be responsible for the Latin America pre-acceleration and acceleration programmes under the CATALI.5°T Initiative. The department will also manage the provision of the pre-seed grants (pre-acceleration) and repayable seed grants (acceleration) in Latin America.

112. IPED: Investisseurs & Partenaires Entrepreneurs & Développement (IPED) is a non-profit association dedicated to encouraging entrepreneurship in Africa. IPED receives public funding and subsidies to provide investment vehicles, MSMEs and entrepreneurship support structures with technical, operational, human and financial support, as well as contributions to the improvement of their legal, economic and institutional environment. IPED is affiliated with the impact investment group, Investisseurs & Partenaires (I&P). [96] The I&P Group has partnered with more than 170 investee companies and operates in 15 sub-Saharan African countries in a wide range of sectors, including agribusiness, energy, ICT, microfinance, health and business-to-business (B2B) products and services. To date, the I&P Group has recruited an operational team of more than 20 employees in 7 countries (Burkina Faso, Cameroon, Côte d'Ivoire, Madagascar, Mali, Niger and Senegal) fully dedicated to the implementation of acceleration programmes managed by IPED. IPED-managed venture acceleration programmes include:
    - I&P Acceleration in Sahel (IPAS)[97] is coordinated by IPED and deployed locally by I&P teams specialised in financing, coaching, education and training, as well as by 5 I&P-sponsored management companies, partners and capital investment funds dedicated to high-potential, local SMEs: Sinergi in Niger, Sinergi Burkina in Burkina Faso, Teranga Capital in Senegal, Zira Capital in Mali and Comoé Capital in Côte d'Ivoire. To date (2020 and 2021), IPAS has funded and supported 47 SMEs.
    - I&P Acceleration Technologies (IPAT) [98] , in conjunction with the Agence Française de Développement (AFD), targets digital ventures (or ventures for which a significant part of their activity is linked to digital) in sub-Saharan Africa. IPAT is financed by the Digital Africa seed fund, which is a component of AFD's Choose Africa programme. To date (2020 and 2021), IPAT has funded 7 ventures.
    - The PACE programme[99], in conjunction with USAID, operated a venture seed funding mechanism up to 2020, channelling financial support through a network of existing investment companies: this mechanism funded 26 new Small and Growing Businesses (SGBs) in West Africa.
    - IPED is working with GIZ in the context of DPP – Partnership for Growth and Jobs in Agro-Processing in Cote d'Ivoire.

    For the CATALI.5°T Initiative, IPED will be responsible for running the acceleration programme in West Africa. This support will take the form of Technical Assistance and Financial Assistance (in the form of a repayable grant to each climate venture). IPED will also manage the Financial Assistance element of the pre-acceleration programme, channelling grant payments to climate ventures to cover pre-agreed

[93] https://tec.mx/en
[94] https://tec.mx/en/entrepreneurship
[95] https://tec.mx/en/entrepreneurship/zone-ei
[96] https://www.ietp.com/en#:~:text=I%26P%20is%20an%20impact%20investment,inclusive%20growth%20on%20the%20continent.
[97] https://www.ietp.com/en/acceleration-sahel
[98] https://www.ietp.com/en/acceleration-technologies
[99] https://www.ietp.com/en/content/usaid-ip-partnership

costs. The Technical Assistance element of the West African pre-acceleration programme will be run by another Executing Entity, Impact Hub Abidjan.

113. Impact Hub Abidjan: Impact Hub Abidjan[100], or I-Hub Abidjan, is a commercial pre-accelerator and accelerator (limited liability company) founded in 2019, offering services to entrepreneurs and innovators in Cote d'Ivoire and the West Africa region. Impact Hub Abidjan is a member of the Impact Hub global network, a collaborative community of ~25,000 entrepreneurs, support organisations and investors in 60+ countries.[101] Impact Hub Abidjan is a small institution of 13 employees founded by 4 women entrepreneurs. It is affiliated with Go Impact Côte d'Ivoire, a non-profit organisation that was created in March 2021. Impact Hub Abidjan has run and hosted a number of entrepreneurial programmes, pitch competitions, boot camps and individual coaching sessions. It has implemented the following projects:
    - Pre-acceleration programmes (Incubabi 1.0 and 2.0).[102]
    - Acceleration programmes (Agri'Deminn with the Netherlands Enterprise Agency (RVO), NEXT STAGE TICs, NEXT STAGE EXPORT with GIZ).[103]
    - Investment readiness programme (Afrikhaliss, in collaboration with Village Capital and Impact Hub Dakar).[104]
    - Women entrepreneurs programmes (AWE 1.0 and 2.0 with the US Embassy).[105]
    - Planned training for entrepreneurs in aquaculture (with GIZ).

    For the CATALI.5°T Initiative, Impact Hub Abidjan will run the Technical Assistance element of the pre-acceleration programme in Côte d'Ivoire and will serve as the conceptual partner for the overall pre-acceleration programme in West Africa. Financial Assistance aspects of the pre-acceleration programme in West Africa will be managed by IPED. Outside Côte d'Ivoire, the in-country Technical Assistance elements of the pre-acceleration programme will be undertaken by local implementation partners coordinated by GIZ and Climate-KIC.

114. Stichting Climate Knowledge and Innovation Community (Climate-KIC) International Foundation: The Climate-KIC Group[106] is led by Stichting Climate-KIC International Foundation, an independent Dutch non-profit with public benefit status in the Netherlands. The Climate-KIC International Foundation owns 90% of Climate-KIC Holding B.V., a private limited liability company registered in the Netherlands that is focused on raising and allocating funds for climate-relevant innovation.[107] Climate-KIC Holding B.V. is essentially the operational arm of the Foundation. Climate-KIC's activities include pursuing public and private funding; incorporating, participating in and financing businesses and companies; and providing technical support to beneficiaries. Climate-KIC has created an extensive climate ideation, pre-acceleration and acceleration support ecosystem. Over the past 10 years, its three flagship programmes, Climathon[108], ClimateLaunchpad (CLP)[109] and Climate Accelerator[110], have supported more than 4,500 ventures in over 50 countries and ideation activities across 140 cities worldwide. Climate-KIC's financial and technical relationships include:
    - EIT: Climate-KIC's lead funder for the past 10 years, channelling over EUR 60 million to entrepreneurship activity over the past 5 years.
    - Irish Aid: Funder of the ClimateLaunchpad programme in 7 countries in Africa and Asia since 2019.
    - Climate Justice Resilience Fund (CJRF) and the African Development Bank (AfDB): invested Euro 1.5 million in Climate-KIC's WINnERS Programme to scale-up an agricultural supply chain de-risking programme in Africa.
    - Google.org: the Google.org Impact Challenge on Climate.
    - Other corporate funders: Facebook and Munich RE.

[100] https://abidjan.impacthub.net/une-nouvelle-vision-pour-l-agri-business/
[101] https://impacthub.net/
[102] https://abidjan.impacthub.net/demo-day-jour-de-pitch-incubabi-2-0/
[103] https://abidjan.impacthub.net/formulaire-de-candidature-au-programme-next-stage-export/
[104] https://afrikanheroes.com/2020/06/17/startups-in-french-speaking-west-africa-called-upon-to-apply-to-afrikhaliss-fund-raising-support-program/
[105] https://abidjan.impacthub.net/awe-2021/
[106] https://www.climate-kic.org/
[107] The other 10% of shares in Climate-KIC Holding B.V. are held by Association Climate-KIC, registered in the Netherlands and whose membership consists of European universities, research institutes, businesses and cities.
[108] https://climathon.climate-kic.org/
[109] https://climatelaunchpad.org/
[110] https://climaccelerator.climate-kic.org/

- EU: In the past 10 years, Climate-KIC has managed more EUR 630 million of Horizon2020 funding from EIT, delivering a venture accelerator programme in 31 locations in 29 countries, and supporting 1,600 climate ventures to raise over EUR 1 billion in follow-on investment.

Stichting Climate-KIC International Foundation will be the Executing Entity for the CATALI.5°T Initiative trans-regional activities. Stichting Climate-KIC International Foundation will receive a grant from GIZ to deliver targeted venture ideation services to trigger novel climate business ideas in Latin America and West Africa, as well as to deliver climate impact advisory services and climate-gender nexus support in the framework of the regional pre-acceleration and acceleration programmes; Climate-KIC will also coordinate – together with GIZ – the in-country Technical Assistance elements of the pre-acceleration programme which will be undertaken by local implementation partners. .

Table 7: Responsibilities of Executing Entities

CATALI.5°T Initiative Element	Executing Entity[111]
Regional Component 1: Latin America CATALI.5°T	
Output 1.1: Capacities of Executing Entities, ESOs and venture investors in Latin America are developed to boost climate ventures' impacts	
Activity 1.1.1: Capacity-building of Executing Entities, ESOs and venture investors in Latin America	Climate-KIC, GIZ
Sub-Activity 1.1.1.1: Climate mitigation impact assessment	Climate-KIC, GIZ
Sub-Activity 1.1.1.2: Climate resilience co-benefits assessment	Climate-KIC
Sub-Activity 1.1.1.3: Paradigm shift and systems transformation potential	GIZ, Climate-KIC
Sub-Activity 1.1.1.4: Gender equality and diversity	Climate-KIC
Sub-Activity 1.1.1.5: ESG frameworks	GIZ
Output 1.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in Latin America generate innovative climate business ideas	
Activity 1.2.1: Community-building and ideation activities in Latin America	Climate-KIC, GIZ
Sub-Activity 1.2.1.1: Latin America climathons	Climate-KIC
Sub-Activity 1.2.1.2: Open digital network for promoting women and diversity in climate entrepreneurship in Latin America	GIZ
Output 1.3: Selected ventures in Latin America have launched their climate products in local markets	
Activity 1.3.1: Latin America climate venture pre-acceleration programme	Tec de Monterrey, GIZ, Climate-KIC
Sub-Activity 1.3.1.1: Call for applications and venture selection	Tec de Monterrey, Climate-KIC, GIZ
Sub-Activity 1.3.1.2: Pre-acceleration programme – technical assistance	Tec de Monterrey, GIZ, Climate-KIC
Sub-Activity 1.3.1.3: Pre-acceleration programme – grants	Tec de Monterrey
Output 1.4: Selected climate ventures in Latin America with MVPs in local markets are empowered to rapidly scale their business and climate impact	
Activity 1.4.1: Latin America climate venture acceleration programme	Tec de Monterrey, GIZ, Climate-KIC
Sub-Activity 1.4.1.1: Call for applications and venture selection	Tec de Monterrey, Climate-KIC, GIZ
Sub-Activity 1.4.1.2: Acceleration programme – technical assistance	Tec de Monterrey, GIZ, Climate-KIC
Sub-Activity 1.4.1.3: Acceleration programme – repayable grants	Tec de Monterrey
Regional Component 2: West Africa CATALI.5°T	
Output 2.1: Capacities of Executing Entities, ESOs and venture investors in West Africa are developed to boost climate ventures' impacts	
Activity 2.1.1: Capacity-building of Executing Entities, ESOs and venture investors in West Africa	Climate-KIC, GIZ
Sub-Activity 2.1.1.1: Climate mitigation impact assessment	GIZ, Climate-KIC
Sub-Activity 2.1.1.2: Climate resilience co-benefits assessment	Climate-KIC
Sub-Activity 2.1.1.3: Paradigm shift and systems transformation potential	GIZ, Climate-KIC
Sub-Activity 2.1.1.4: Gender equality and diversity	Climate-KIC
Sub-Activity 2.1.1.5: ESG frameworks	GIZ

[111] Where a Sub-Activity is implemented by more than one Executing Entity, a Lead Executing Entity will coordinate the interventions of the other Executing Entities. The individual roles and responsibilities of each Executing Entity, for each Sub-Activity, are described in detail in the Project Activities chapter of each Regional Feasibility Study (Annexes 2b and 2c).

Output 2.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in West Africa generate innovative climate business ideas	
Activity 2.2.1: Community-building and ideation activities in West Africa	Climate-KIC, GIZ
Sub-Activity 2.2.1.1: West Africa climathons	Climate-KIC
Sub-Activity 2.2.1.2: Open digital network for promoting women and diversity in climate entrepreneurship in West Africa	GIZ
Output 2.3: Selected ventures in West Africa have launched their climate products in local markets	
Activity 2.3.1: West Africa climate venture pre-acceleration programme	Impact Hub Abidjan, Climate-KIC, IPED, GIZ
Sub-Activity 2.3.1.1: Call for applications and Phase 1 venture selection	Impact Hub Abidjan, Climate-KIC, IPED, GIZ
Sub-Activity 2.3.1.2: Pre-acceleration programme – Phase 1	Impact Hub Abidjan, Climate-KIC, GIZ
Sub-Activity 2.3.1.3: Phase 2 venture selection	Impact Hub Abidjan, Climate-KIC , IPED, GIZ
Sub-Activity 2.3.1.4: Pre-acceleration programme – Phase 2	Impact Hub Abidjan (TA), Climate-KIC (TA), GIZ (TA), IPED (grants)
Output 2.4: Selected climate ventures in West Africa with MVPs in local markets are empowered to rapidly scale their business and climate impact	
Activity 2.4.1: West Africa climate venture acceleration programme	IPED, GIZ, Climate-KIC
Sub-Activity 2.4.1.1: Funding announcement, venture screening and selection	IPED, Climate-KIC, GIZ
Sub-Activity 2.4.1.2: Acceleration programme – repayable grants	IPED
Sub-Activity 2.4.1.3: Acceleration programme – technical assistance	IPED, GIZ, Climate-KIC
Component 3: CATALI.5°T Trans-Regional Advisory, Capacity & Knowledge Support (TRACKS)	
Output 3.1: Capacities of Executing Entities, selected ESOs and venture investors in Latin America and West Africa are developed to boost climate ventures' impacts	
Activity 3.1.1: Climate impact and co-benefits assessment	GIZ, Climate-KIC
Sub-Activity 3.1.1.1: Climate mitigation impact assessment	GIZ, Climate-KIC
Sub-Activity 3.1.1.2: Climate resilience co-benefits assessment	Climate-KIC
Sub-Activity 3.1.1.3: Paradigm shift and systems transformation potential	GIZ, Climate-KIC
Activity 3.1.2: Gender equality and diversity – implementing the CATALI.5°T Initiative Gender Action Plan (GAP)	Climate-KIC
Sub-Activity 3.1.2.1: Gender equality and diversity	Climate-KIC
Activity 3.1.3: ESG frameworks – implementing the CATALI.5°T Initiative ESMF	GIZ
Sub-Activity 3.1.3.1: ESG frameworks	GIZ
Component 4: CATALI.5°T Initiative Governance and Management	
Latin America Management Unit	Tec de Monterrey, GIZ, Climate-KIC
West Africa Management Unit	IPED, Impact Hub Abidjan, Climate-KIC, GIZ
Trans-Regional Management Unit	GIZ
Component 5: CATALI.5°T Initiative Monitoring, Reporting and Evaluation	
CATALI.5°T Initiative monitoring, reporting and evaluation	GIZ (AE), supported by the 3 CATALI.5°T Initiative Management Units

B.4.3 Governance and management

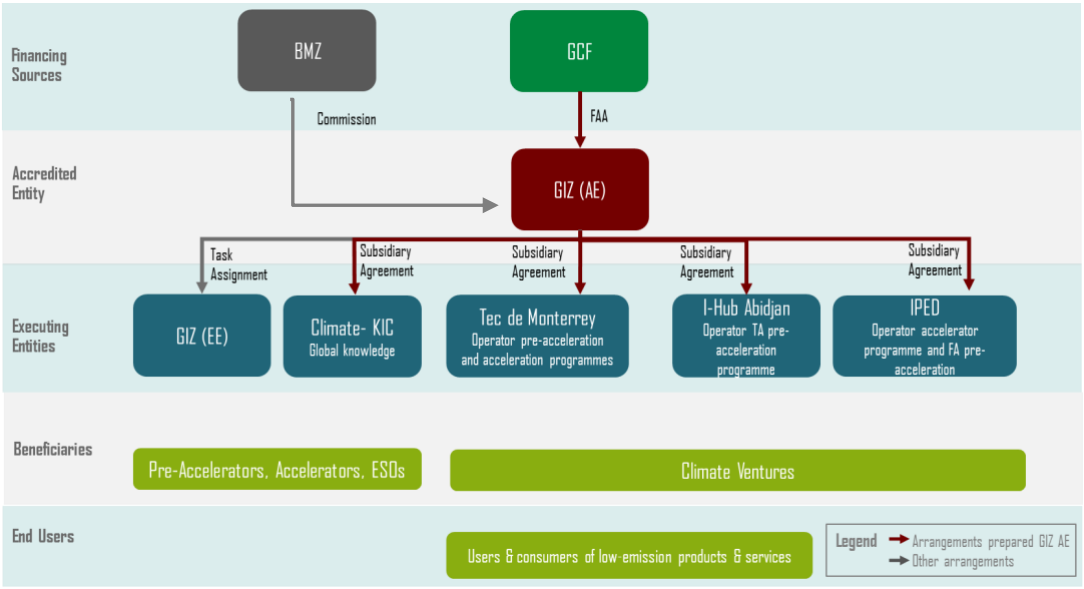
115. Please refer to Component 4 in Section B.3.1.

B.4.4 Legal and contractual arrangements

116. The German Federal Ministry for Cooperation and Development (BMZ) will commission GIZ with the implementation of the overall programme (commissioning agreement). The GCF will transfer funds based on a Funded Activity Agreement (FAA) to the Accredited Entity, GIZ. GIZ as Executing Entity will receive an internal task assignment from the AE for the implementation of defined CATALI.5°T Initiative activities (see Responsibilities of Executing EntitiesTable 7). The other Executing Entities (Tec de Monterrey, Impact Hub Abidjan, IPED and Climate-KIC) will sign subsidiary agreements with GIZ, based on GIZ standard operating procedures for grant agreements. These subsidiary agreements will establish

the legal basis on which GIZ makes the GCF proceeds available to the Executing Entities for the measures to be implemented by the Executing Entities, in accordance with the AMA and FAA.

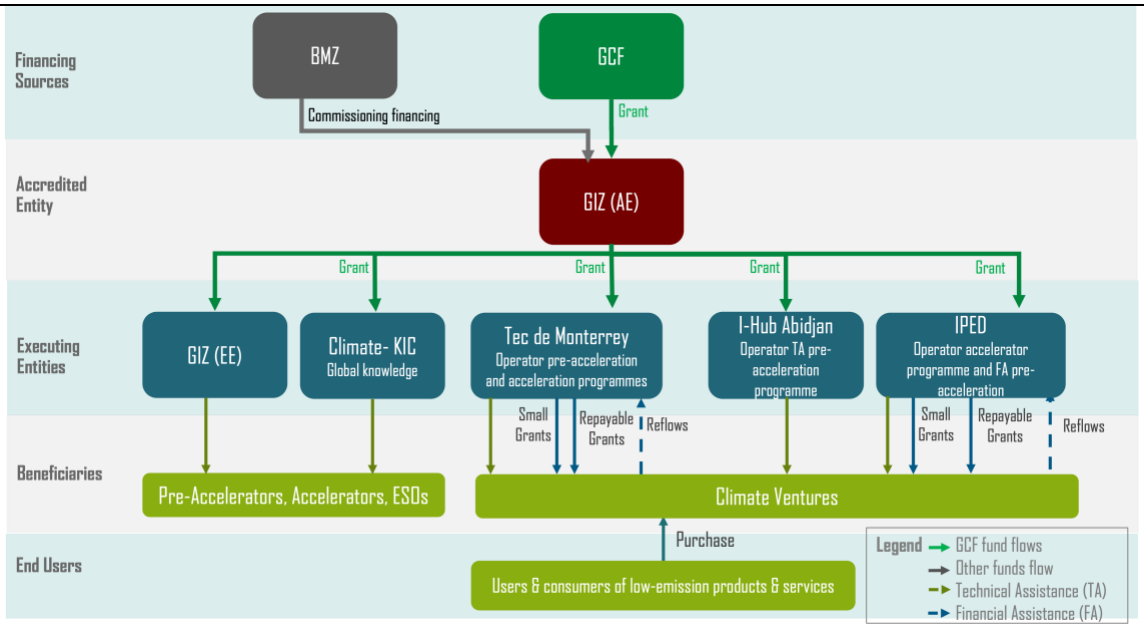
Figure 10: Contractual Arrangements



B.4.5 Financial Flows

117. GIZ (AE) will transfer GCF funds to 4 Executing Entities, as well as retaining a portion off the GCF funds to implement activities itself as an Executing Entity. GIZ (Executing Entity) and Climate-KIC will use the grant funds to finance technical assistance measures, which will benefit local implementation partners, pre-accelerators, accelerators and other entrepreneur support organisations (ESOs), as well as climate ventures, in both regions. Tec de Monterrey will use the GCF funds within Component 1 for technical and financial assistance for climate ventures. In the West African pre-acceleration programme (Activity 2.3.1), Impact Hub Abidjan will use the GCF funds for technical assistance in Côte d'Ivoire, GIZ will use the GCF funds for local implementation partners that will provide technical assistance in other West African countries, and IPED will use the GCF funds for financial assistance (venture grants). In the West African acceleration programme (Activity 2.4.1), IPED will use the GCF funds to provide technical and financial assistance (repayable venture grants).

Figure 11: CATALI.5°T Initiative Flow of Funds



Repayable grants

118. The financial support mechanism to pre-seed and seed stage ventures will occur in two steps: (i) the provision of up to EUR 15,000 straight grants to 120 ventures (60 per region) competitively selected to participate in a pre-acceleration programme (EUR 1.8 million total) and (ii) the provision of on average EUR 100,000 repayable grants to 60 ventures (30 per region) competitively selected to participate in an acceleration programme (EUR 6 million total). A total of EUR 7.8 million will therefore be spent in direct financial support to climate ventures.

119. Regional re-acceleration programmes: Tec de Monterrey (in Latin America) and Impact Hub Abidjan (in West Africa) will promote the pre-acceleration programme in the respective region and call for applications through their own marketing channels and venture ecosystem access. Four pre-acceleration (Phase 2) cohorts will be run in each region, with 15 participating ventures per cohort. Applicants can be individuals or formally-registered micro and small enterprises (MSEs) from countries that have signed a No-Objection Letter for the CATALI.5°T Initiative. Candidates will be screened based on the eligibility and selection criteria described under Sub-Activity 1.3.1.1 for Latin America and Sub-Activities 2.3.1.1 and 2.3.1.3 for West Africa (see Section B.3). The selected ventures, in addition to receiving the technical assistance described in Sub-Activity 1.3.1.4 (Latin America) and Sub-Activity 2.3.1.4 (West Africa), will receive a EUR 15,000 plain-vanilla grant, in one instalment after signing a grant contract with Tec de Monterrey (for Latin America) and IPED (which will manage grant provision in the pre-acceleration programme in West Africa), as applicable. Grants will be eligible for a broad range of activities relevant to pre-acceleration needs, as detailed in the grant contract – including R&D, business development and procurement of equipment, services or personnel – in recognition of the diverse needs a climate venture may have in order to develop technological, commercial and consumer viability. The grant contract will include clauses that aim to minimise the possibility of grant misuse, including exclusion lists, spending caps, validation in case of substantive change in grant use, conflict of interest and anti-fraud clauses, and adherence to E&S and gender requirements. Grants must be spent within the duration of the pre-acceleration programme.

120. Regional acceleration programmes: Tec de Monterrey and IPED will run acceleration programmes for 30 climate ventures in Latin America and West Africa, respectively. The programmes will operate on an annual cohort basis in Latin America and on a rolling basis – as new acceleration candidates are identified – in West Africa. The acceleration programmes will be open to top graduates / participants of the pre-acceleration programmes, promising participants of other regional pitch competitions / entrepreneur network events and promising ventures discovered through market surveillance. Application will be open only to formally-registered MSEs from countries that have signed a No-Objection Letter for the CATALI.5°T Initiative.

121. Ventures eligible for the acceleration programme will be start-ups in the case of Latin America and start-ups and growth companies in the case of West Africa. Start-ups are defined as early-stage ('seed stage') companies with a minimum viable product (MVP) and proof of traction in the market but no significant revenues yet, and which need funding for pilot phases, research and development, human resources or market testing, as well as for the purchase of equipment / technology. Growth companies' business models are known or predictable, as they are existing or young companies that are already operating in well-mastered sectors; they may be semi-formal or not very structured, but they have already started their activity (a product already sold, a team in place); their objective is to reach sustainability as soon as possible and they need financing for working capital, capex or capacity building, or to pivot from an existing business model to a business model with superior climate mitigation benefits.

122. Candidates will be screened and selected based on transparent criteria relating to their business and climate mitigation potential, as well as E&S and gender compliance (see Sub-Activity 1.4.1.1 for Latin America and Sub-Activity 2.4.1.1 for West Africa). The selected ventures, in addition to receiving the technical assistance described in Sub-Activity 1.4.1.3 (Latin America) and Sub-Activity 2.4.1.3 (West Africa), will receive a repayable grant for an amount of (i) EUR 100,000 (in US$ equivalent) in Latin America and (ii) EUR 50,000-200,000 in West Africa (depending on the venture's specific funding needs, with the expectation that the average grant size will be EUR 100,000). Unlike commercial accelerators, the Executing Entities will not receive an equity stake in the ventures supported, in recognition of the additional risks and barriers involved in investing in climate innovation and the paucity of VC capital targeting the sector, which justify additional concessionality for climate ventures in Latin America and West Africa.

123. The use of repayable grants will be disciplined by a grant agreement signed by each climate venture and the respective Executing Entity. In Latin America, one standard agreement will apply to all beneficiary ventures. In West Africa, the agreement will be tailored to each individual venture, reflecting a value creation plan developed by the venture and agreed by IPED. Repayable grants will be eligible for a broad range of activities relevant to accelerating market and product development. In Latin America, the repayable grant will be disbursed in two instalments. In West Africa, it will be disbursed in one or more instalments, at the discretion of IPED on a case-by-case basis. For both regions, the grant agreements signed will include clauses that aim to minimise the possibility of grant misuse, including exclusion lists, spending caps, validation in case of substantive change in grant use, conflict of interest and anti-fraud clauses, and adherence to E&S and gender requirements.

124. The repayable feature of the grants is deemed integral to the acceleration programme's effectiveness. It is meant to create a high sense of accountability among participating ventures and reduce moral hazard (obtaining a grant with no strings attached is a risk-free proposition for the recipient). It is also meant to instilinstil in the participating ventures the financial discipline that would be expected by commercial capital providers – be it VC funds or commercial banks (the latter being more applicable to growth companies) – and therefore build their future investability / bankability. Repayments will be accepted by Tec de Monterrey and IPED throughout the duration of the CATALI.5°T Initiative (i.e. during Years 1-6) and thereafter. In order to maximise the level of repayment, all 60 acceleration ventures (30 in each region) will be admitted into the acceleration programme in Years 1-3.

125. The triggers for grant repayment will differ in Latin America and West Africa. In Latin America, the repayment will be triggered in two circumstances: either (i) when a venture achieves annual incremental revenues of at least US$ 1 million (incremental compared to the venture's last reported annual revenues prior to admission to the acceleration programme, if any), the grant will be subsequently repaid in quarterly instalments equivalent to 3% of quarterly revenues; or (ii) when a venture closes a funding round of more than USD 5 million, in which case the grant (or any amount yet to be repaid under the previous point (i)) will be repaid in a bullet payment for the outstanding amount.

126. In West Africa, repayment will be triggered by milestones tailored to each venture and detailed in the grant agreement. During the due diligence phase, IPED will engage in an in-depth dialogue with the venture regarding the business plan, including milestones and financial projections. Discussions will aim at guiding the venture towards business and financial goals that are ambitious but achievable. The process will be iterative – IPED will not take for granted the plan proposed by the venture and will probe every aspect of it. Once this intensive vetting of the plan is done, IPED will be in a position to determine and agree venture-specific repayment criteria with a realistic (albeit never 100% certain, given the inherent volatility of any business) prospect of repayment. Examples of possible repayment milestones

include: achievement of a fund-raising of an amount equal to at least [% to be defined between 50% and 100%] of the amount of the fund-raising planned in the company's value creation plan; achievement of a turnover or EBITDA[112] equal to at least [% to be defined between 50% and 100%] of the turnover or EBITDA forecast in the company's value creation plan over a given period (subject to the venture having sufficient cash reserves when this milestone is triggered); and achievement of an operational performance indicator (e.g. obtaining a significant sales contract).

127. In both regional contexts, only the principal amount of the grant will be repaid, and the repayment schedule will be detailed in the grant agreement.

128. While the repayable grant instrument provides limited effective leverage to demand repayment in the event of a dispute, a risk mitigation process will be established, including: initial evaluation of the entrepreneur's integrity / track-record during the programme screening process; regular monitoring of the venture through meetings and calls; mandatory meetings in case of late payment; and positive incentives, by showing the venture that the acceleration programme will continue to generate value in the future. The venture ecosystems in both regions are relatively small: in the case of bad faith by a venture, the venture risks reputational damage with other financial and support organisations that could impair its business prospects. Accordingly, deliberate avoidance of repayment or contravention of the terms of the grant contracts presents considerable risks to ventures.

129. Repayments will be made by the ventures to Tec de Monterrey and IPED. IPED will systematically monitor and process anticipated repayments in Years 3-6 in the framework of the 6-year West Africa acceleration programme. Repayments after the end of the CATALI.5°T Initiative in Year 7 and later will continue to be accepted according to the agreed repayment schedule for ventures. Reflecting the shorter, 3-year duration of the Latin American acceleration programme, Tec de Monterrey will monitor and process anticipated repayments in Years 5-7 using its own financial resources. Financial modelling (see Annex 3a), informed by regional experience of similar schemes, anticipates repayments in Latin America of up to EUR 300,000 in Years 6-7 after programme start; in West Africa, repayments of EUR 1.1 million are estimated for Years 3-6.

130. In Latin America, repayments will be used to implement additional community-building and ideation activities, for the purpose of further strengthening the local climate innovation ecosystem and broadening the pool of entrepreneurs moving into the climate technology and innovation space. Community-building and ideation activities will encompass outreach and capacity-building measures for entrepreneurs in the CATALI.5°T Initiative countries of Latin America. Such community-building and ideation activities will be implemented by Tec de Monterrey itself or by a procured party, at the discretion of Tec de Monterrey. As no environmental or social safeguard obligations apply to such light-touch capacity-building measures for individual entrepreneurs, GIZ will not need to retain a no-objection veto regarding the beneficiaries of the community building and ideation measures in Latin America.

131. Use of repayments in West Africa will follow the same logic as in Latin America, with one difference: repayments of up to EUR 300,000 during Years 1-6 will be used to cover the operational costs of the acceleration programme implemented by IPED. The Executing Entity budget of IPED incorporates this amount. Repayments above EUR 300,000 will be used to implement the aforementioned community-building and ideation activities, with the same approach as in Latin America.

132. In both regions, the amounts raised by the Executing Entities through the repayment of grants under the regional acceleration programme will not be disbursed as new grants directly to ventures. Instead, the amounts will be spent by the Executing Entities themselves in ideation and community-building activities.

B.5. Justification for GCF funding request

[112] EBITDA: Earnings before interest, tax, depreciation and amortisation.

B.5.1 Additionality

133. Meeting the objectives of the Paris Agreement will require a shift from business as usual, driven in large part by a high level of entrepreneurial activity and innovation. Climate ventures in Latin America and West Africa face a range of barriers to development and growth that prevent them from realising their (substantial) climate mitigation potential. GCF resources will be used to address identified barriers to climate venture development. These barriers will persist in the business-as-usual scenario and will require GCF intervention to overcome them. The additionality of GCF intervention is thus clear: without such intervention, the barriers will persist and a pipeline of high-potential climate ventures – and their associated GHG mitigation impact – will not materialise or will materialise only over a much longer time period and in weaker (lower-capacity) form.

134. In order to reach the key objective of bringing high-potential climate ventures to the market, the design of the CATALI.5°T Initiative includes: (i) competitive entry of ventures into the pre-acceleration and acceleration programmes, accompanied by extensive due diligence – in order to ensure that only the highest-potential, most promising ventures are admitted; (ii) intensive technical assistance to climate ventures (delivered on a one-to-one basis in the acceleration programme), covering general business issues (technical, financial, marketing, staffing, etc.), climate impact assessment (mitigation and, where relevant, resilience co-benefits), and the gender-climate nexus – accompanied by mentoring and networking support; (iii) financial assistance to ventures – grants (pre-acceleration programme) and repayable grants (acceleration programme) – to enable them to finance self-determined priorities (technology, personnel, consultants, market surveys, etc.); and (iv) capacity building of CATALI.5°T Initiative stakeholders, including the Executing Entities, local implementation partners, VC funds and other stakeholders, to ensure high-quality delivery of technical assistance to ventures, engagement with market developments (e.g. evolving ESG frameworks) and post-programme sustainability of institutional capacities.

135. Successfully navigating climate ventures to the Series A funding milestone will serve to open up financing for their future growth. But it will also serve to enhance investor confidence in the regions' climate sectors, provide successful role-models for other entrepreneurs to replicate, and deepen the support network in the regions, all of which will serve as a positive feedback to further market growth.

B.5.2 Concessionality

136. A quantitative estimate of the level of concessionality of the pre-acceleration and acceleration grants is impossible, given the wide variety – in terms of sectors, business models and countries – of the ventures pre-accelerated and accelerated. Such analysis would entail computing the financial IRR for a prospective equity investor in a venture (including the venture's founders) with and without the pre-acceleration and/or acceleration grant, based on assumptions such as:
    - For the scenario without GCF grant:
        - The amount of equity injected by investors over one or more funding rounds.
        - The venture valuation in each funding round and, hence, the percentage stake in the venture owned by the investors.
        - The venture valuation at exit (IPO, sale of the company), which, in turn, would depend on the growth prospects and profitability of the business at the point of exit.
        - A realistic time period between investment and exit.
    - For the scenario with GCF grant:
        - The increase in valuation resulting from the venture's participation in the pre-acceleration and/or acceleration programme, which would entail estimating how much of the revenue, profit and cash flow increase is uniquely attributable to the GCF contribution.
        - The equity stake increase resulting from raising capital through a pre-acceleration and/or acceleration grant as opposed to an equivalent amount of equity.

137. This exercise would need to be undertaken for each venture in a model portfolio of – in the case of the acceleration programme – 60 accelerated ventures across the two regions and based on a realistic mix of business sectors. The number of arbitrary assumptions required would undermine the robustness of the analysis or, worse, make it malleable to a desired outcome.

138. Instead, the justification of the use of grants relies on: (i) the analysis of the financing gap faced by climate ventures in the two regions (as detailed in Annexes 3c and 3d, which survey the venture financing environments in Latin America and West Africa); (ii) the feedback received from the regional Executing Entities, which have long-standing experience in pre-acceleration and acceleration in the two regions; (iii) feedback received from VC funds investing in the two regions; and (iv) in the case of the acceleration grants, the use of repayable rather than straight grants. Specifically:

    - In West Africa, start-ups and growth companies have access to limited sources of long-term capital. VC activity has seen a significant increase in sub-Saharan Africa over the past 5-6 years, including in sectors with climate change potential, such as agri-tech and off-grid tech; to date, however, this VC capital has largely avoided the Francophone West Africa region. Only a few SME impact funds operate in the region, including I&P (the for-profit sister of IPED). While a number of private equity (PE) funds have been active in the region, their target companies are more mature and sizable than the start-ups and growth companies expected to graduate from the acceleration programme. The banking system is under-developed in Francophone West Africa compared with sub-Saharan Africa as a whole. The penetration of private sector credit is therefore low, especially for SMEs. While UEMOA[113] countries have a regional stock market, IPOs are not a realistic source of funding for companies at such an early stage of development. None of the financing sources described above have a primary focus on climate change, although several funds explicitly aim for impact, including contributing to the SDGs.

    - In Latin America, climate venture also have access to limited sources of long-term capital. VC activity has seen a significant increase in Latin America. VC capital, however, is predominantly focused on fintech, e-commerce and other digital sectors. Climate innovation sectors have been largely avoided by VCs operating in the region. Also, VC capital is highly concentrated in the largest Latin American economies, especially Brazil and Mexico, followed by Colombia, Chile and Argentina. Impact funds are active in Latin America and, while they represent a pool of capital much smaller than that of VCs, they focus on a number of sectors that have close linkages with climate change. While a number of PE funds have been active in the region, their target companies are more mature and sizable than the start-ups expected to graduate from the acceleration programme. Bank loans are an unlikely source of capital for climate ventures that graduate from the CATALI.5°T Initiative acceleration programme, since at graduation start-ups are unlikely to be cashflow-positive and considering the reluctance of Latin American banks to lend to MSMEs. Similarly, IPOs are not a realistic source of funding for companies at such an early stage of development.

    - The start-ups targeted by commercial accelerators such as Y Combinator in Silicon Valley operate primarily in the digital and online space. They address potentially very large sectors (e.g. e-commerce, fintech) offering the potential to scale-up user bases and revenues very quickly – a proposition that commercial accelerators and, later on, VC firms value and seek. Climate ventures operate in sectors that often require significant capital investment, have features specific to the country or sub-national territories where they operate and – in the two regions targeted – address the needs of vulnerable and/or low-income communities (e.g. smallholder farmers). These represent significant barriers for conventional VC firms. Grant capital from the CATALI.5°T Initiative, in addition to comprehensive technical assistance, is therefore essential to demonstrate the attractiveness of climate ventures from a business standpoint and help them to achieve a scale and level of development at which they become attractive to private sector investors.

    - In recognition of the additional risks and barriers involved in investing in climate innovation and the paucity of VC and impact capital targeting the sector in the two regions, the Executing Entities that will operate the pre-acceleration and acceleration programmes will not receive equity stakes in the climate ventures supported. In this respect, they differ from commercial accelerators, such as Y Combinator in Silicon Valley. Concessionality will vary in the pre-acceleration and acceleration phases in line with the level of risk associated in funding ventures in either phase. Specifically:

        - Pre-acceleration grants will be straight, non-repayable grants. Ventures in the pre-acceleration programme will be in the proof-of-concept stage and far from producing

[113] West African Economic and Monetary Union.

revenues, let alone profits. Small (EUR 15,000) non-repayable grants are considered an appropriate level of concessionality given the risk of these ventures and the extremely low likelihood they would be able to attract pre-seed funding from commercial investors.

- Acceleration grants will be larger in size (EUR 100,000 on average) but will be repayable (without any interest) upon the achievement of pre-agreed business and fund-raising milestones by the recipient ventures, as detailed in Section B.4.5. The repayable feature is deemed integral to the acceleration programme's effectiveness. It is meant to create a high sense of accountability among participating ventures and reduce moral hazard (obtaining a grant with no strings attached is a risk-free proposition for the recipient). It is also meant to instill in the participating ventures the financial discipline that would be expected by commercial capital providers – be it VC funds or commercial banks – and therefore build their future investibility / bankability and maximise the probability that they raise commercial capital at a later stage. The Executing Entities will closely follow the accelerated ventures to make sure they maintain financial discipline and implement their business plans in order to maximise the likelihood of repayment.

B.6. Exit strategy

B.6.1 Exit Strategy

139. The CATALI.5°T Initiative seeks to catalyse and crowd-in private sector investment. The Initiative's leverage ratio (even excluding the value of goods and services sold by the climate ventures) is approximately 15x. Expressed another way, the vast majority of the impact of the CATALI.5°T Initiative is attributable to non-GCF funding sources. The CATALI.5°T Initiative succeeds in establishing a clear pathway from pre-seed and seed-stage ventures to healthy, rapidly growing climate enterprises, and, moreover, it does so while (i) establishing a clear exit strategy for the GCF and (ii) making minimal demands upon GCF funds. The achievement of impacts is clearly not reliant upon GCF resources but, instead, upon the considerable additional resources unlocked and enabled by the CATALI.5°T Initiative. Consequently, the end of the CATALI.5°T Initiative need not, and will not, imply an end to ongoing investment and climate impact.

B.6.2 Sustainability

140. Sustainability of CATALI.5°T Initiative impacts will be assured in a number of ways:

141. Creation of a set of high-potential, high-capacity climate ventures. The CATALI.5°T Initiative will support 60 pre-seed (pre-acceleration) and 30 seed-stage (acceleration) ventures in each region. These climate ventures will be provided with financial and technical support (pre-seed/seed grants, mentorship, business skills training, business services, exposure to financiers, etc.) to thrive in the pre-seed and seed stages, and engagement and interactions with VC providers will be facilitated at a very early stage, thereby allowing ventures and VCs to build relationships and understand each other's needs. Strengthening climate ventures through this support will enable more of them to reach Series A funding decisions in better shape, and is expected to lead to lower attrition rates, compared to the counterfactual. Specifically:
    - More climate ventures will reach Series A financing than would be the case in the no-CATALI.5°T Initiative baseline.
    - Climate ventures arriving at Series A decisions will be stronger due to the support they received.
    - More climate ventures will pass Series A VC due diligence and receive funding than would be the case in the no-CATALI.5°T Initiative baseline.
    - The strengths of the climate ventures will also mean that fewer of them will falter or fail after Series A funding than would be the case in the no-CATALI.5°T Initiative baseline.

    Using conservative, stakeholder-validated assumptions about the ventures' growth and survival prospects (e.g. assuming that just 6 ventures in Latin America achieve Series A financing and 3 receive Series B financing, etc.), and using typical investment quanta for each financing event, it is estimated that the climate ventures accelerated by the CATALI.5°T Initiative in Latin America and West Africa will raise a total of approximately EUR 413 million of private finance over the programme's 20-year lifespan (see Annex 3a).

142. Network, ecosystem and first-mover effects. The CATALI.5°T Initiative's barrier removal measures, networking support (e.g. putting VC firms into contact with promising climate ventures) and first-mover impacts (creating successful ventures that act as inspirations and role models for subsequent climate entrepreneurs) will have sustained positive impacts well beyond the Initiative's lifetime.

143. Strengthened capacity of Tec de Monterrey, IPED and Impact Hub Abidjan (Executing Entities). All three institutions are already established, respected business pre-accelerators / accelerators in Latin America and West Africa. The CATALI.5°T Initiative will build their ability to support climate ventures through, inter alia, an enhanced capacity to: assess the GHG impacts of ventures' products and services; identify and strengthen the climate-transformational aspects of ventures' business models; assess ventures' climate adaptation and resilience co-benefits; support the gender climate entrepreneurship nexus; and apply and monitor ESS/ESG frameworks. Combining their existing business acceleration skill-sets and networks with this enhanced ability to support climate ventures specifically will have enduring benefits for the Latin American and West African climate venture ecosystem long after the CATALI.5°T Initiative comes to an end.

144. Strong emphasis on women-led ventures. The inclusion of women-led ventures as an integral element of CATALI.5°T Initiative outreach activities is expected to contribute to the Initiative's sustainability. Multiple studies concur that women-led companies in developing countries tend to be disadvantaged in terms of access to capital, social discrimination and in being largely confined to low-margin sectors such as hospitality and retail.[114] But, when these constraints are statistically controlled for, women-led companies are nonetheless found on average to be more profitable, more robust (i.e. less likely to fail) and more successful at reaching market segments, such as household goods and services, where women are the principal customers. The CATALI.5°T Initiative's focus on incorporating gender inclusivity tools and metrics to maximise the potential for men and women to participate on an equal footing means there will be a positive impact after GCF funding ends, not only through the successful ventures that pass through the pre-acceleration and acceleration programmes but also through the changing mindset and practices of ecosystem actors based on the knowledge created by the CATALI.5°T Initiative in two regions where female entrepreneurs are frequently overlooked.

145. Use of repayable grants. The use of repayable grants for seed-stage climate ventures in the regional acceleration programmes presents a significant deviation from common practice in publicly-funded acceleration programmes and underlines the market- and investment-oriented mindset of the CATALI.5°T Initiative . Repayable grants will allow GCF funds to support an additional round of climate venture ideational and sourcing activities, thereby extending the size and reach of the climate venture ecosystem in both regions.

[114] World Bank (2014), *Supporting Growth-Oriented Women Entrepreneurs: A Review of the Evidence and Key Challenges*: https://documents1.worldbank.org/curated/en/301891468327585460/pdf/92210-REPLACEMENT-Supporting-Growth-Oriented-Women-Entrepreneurs-A-Review-of-the-Evidence-and-Key-Challenge.pdf

FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	26.8	million euro (€)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	Enter amount	Enter years	Enter years	Enter %
(ii) Subordinated loans	Enter amount	Enter years	Enter years	Enter %
(iii) Equity	Enter amount			Enter % equity return
(iv) Guarantees	Enter amount	Enter years		
(v) Reimbursable grants	Enter amount			
(vi) Grants	26.8			
(vii) Results-based payments	Enter amount			

(b) Co-financing information	Total amount	Currency
	9.7	million euro (€)

Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
BMZ	Grant	9.7	million euro (€)			

Total financing (c) = (a)+(b)	Amount	Currency
	36.5	million euro (€)

(d) Other financing arrangements and contributions

Leveraged finance is expected to amount to Euro 413 million over the 20-year lifespan of the CATALI.5°T Initiative, in the form of external financing – convertible notes / SAFE notes[115], VC Series A equity, VC Series B and beyond equity, loans, etc. – for climate ventures that graduate from the regional acceleration programmes. A full breakdown of the leveraged finance is provided in Annex 3a. In summary, the anticipated amounts are:

- Convertible / SAFE notes: € 11.1m
- VC Series A: Euro € 14.5m
- VC Series B+: € 24.2m
- Loans: € 8.0m
- Middle- and late-stage funding and IPOs: € 355.2m

C.2. Financing by component

Component	Output / Activity	Indicative cost million euro (€)	GCF financing		Co-financing		
			Amount million euro (€)	Financial Instrument	Amount million euro (€)	Financial Instrument	Name of Institutions

[115] SAFE: Simple Agreement for Future Equity

Regional Component 1: Latin America CATALI.5°T	*Output 1.1*			*Grants*		*Grants*	-
	Activity 1.1.1	-	-	Grants	-	Grants	-
	Output 1.2	1.673.510	778.306	*Grants*	895.203	*Grants*	*BMZ*
	Activity 1.2.1			Grants		Grants	*BMZ*
	Output 1.3	2.281.902	1.118.415	*Grants*	1.163.487	*Grants*	*BMZ*
	Activity 1.3.1			Grants		Grants	*BMZ*
	Output 1.4	4.555.416	2.617.216	*Grants*	1.938.200	*Grants*	*BMZ*
	Activity 1.4.1			Grants	Enter amount	Grants	*BMZ*
Regional Component 2: West Africa CATALI.5°T	*Output 2.1*	-	-	*Grants*	-	*Grants*	-
	Activity 2.1.1	-	-	Grants	-	Grants	-
	Output 2.2	894.423	724.351	*Grants*	*170.072*	*Grants*	*BMZ*
	Activity 2.2.1		0.727	Grants		Grants	*BMZ*
	Output 2.3	3.314.376	3.172.391	*Grants*	*141.984*	*Grants*	*BMZ*
	Activity 2.3.1			Grants		Grants	*BMZ*
	Output 2.4	9.891.119	9.800.612	*Grants*	*90.506*	*Grants*	*BMZ*
	Activity 2.4.1			Grants		Grants	*BMZ*
Component 3: CATALI.5°T Trans-Regional Advisory, Capacity & Knowledge Support (TRACKS)	*Output 3.1*	*8.844.480*	*5.249.008*	*Grants*	*3.595.471*	*Grants*	*BMZ*
	Activity 3.1.1	4.879.122	2.736.099	Grants	2.143.023	Grants	*BMZ*
	Activity 3.1.2	2.024.051	1.294.240	Grants	729.811	Grants	*BMZ*
	Activity 3.1.3	1.941.306	1.218.669	Grants	722.637	Grants	*BMZ*
Component 4: CATALI.5°T Initiative Management	*Output 4.1*	*2.253.030*	*1.019.979*	*Grants*	*1.233.050*	*Grants*	*BMZ*
Component 5: CATALI.5°T Initiative Monitoring, Reporting and Evaluating	*Output 5.1*	*2.237.037*	*1.759.925*	*Grants*	*477.112*	*Grants*	*BMZ*
Contingencies		*600.000 €*	*600.000 €*				
Indicative total cost (Euro)		**36.5 million**	**26.8 million**		**9.7 million**		

C.3 Capacity building and technology development/transfer	
C.3.1 Does GCF funding finance capacity building activities?	Yes ☒ No ☐
C.3.2. Does GCF funding finance technology development/transfer?	Yes ☒ No ☐

C.3.1 Technology Development / Transfer

146. The barrier analysis and theory of change of the CATALI.5°T Initiative mirror best practice relating to technology transfer. For example, in the 51 UNFCCC Technology Needs Assessments (TNAs) prepared by August 2019, the most commonly reported barriers to the transfer of prioritised technologies are economic, financial and technical, including lack of financial resources, insufficient expertise, market

failure and imperfection, and information and awareness.[116] The CATALI.5°T Initiative addresses each of these barriers in a targeted approach. The CATALI.5°T Initiative is sector- and technology-agnostic: it follows a market-led approach to scaling-up the most promising opportunities for GHG mitigation. The most commonly prioritised mitigation sectors and sub-sectors in TNAs – solar PV, run-of-river hydropower, biomass/biogas, transport and AFOLU – are all eligible for CATALI.5°T Initiative support.

147. The CATALI.5°T Initiative will support a total of 120 pre-seed climate ventures in its regional pre-acceleration programmes and 60 seed-stage climate ventures in its regional acceleration programmes. These ventures will develop commercial/technological solutions that reflect local market needs and constraints while also building on and incorporating best-practices from other countries and regions. Building entrepreneurial communities in Latin America and West Africa, and connecting them to each other and elsewhere, will accelerate cleantech innovation, commercialisation and market uptake.

148. In a sense, the entire GCF programme budget can be said to promote technology development and transfer. However, if the supported climate ventures are regarded as the primary vector of such technology development, the GCF budget allocated specifically to the venture pre-acceleration and acceleration programmes (i.e. Components 1 and 2) can be regarded as a reasonable proxy for GCF support to technology development and transfer. The GCF support therefore amounts to Euro 16.7 million.

C.3.2 Capacity Building

149. Capacity building activities permeate the CATALI.5°T Initiative. They encompass a variety of stakeholders – notably, climate ventures, pre-accelerators, accelerators, entrepreneur support organisations (ESOs) and VC firms – and a variety of needs, including GHG impact assessment, systems transformation potential assessment, identification of climate adaptation co-benefits, gender toolkits, ESG frameworks and others.

150. The following CATALI.5°T Initiative elements are considered to be primarily oriented around capacity building:
    - Activity 1.1.1: Capacity building of Executing Entities, ESOs and venture investors in Latin America
    - Sub-Activity 1.3.1.2: Pre-acceleration programme (Latin America) – Phase 1
    - Sub-Activity 1.3.1.4: Pre-acceleration programme (Latin America) – Phase 2
    - Sub-Activity 1.4.1.3: Acceleration programme (Latin America) – technical assistance
    - Activity 2.1.1: Capacity building of Executing Entities, ESOs and venture investors in West Africa
    - Sub-Activity 2.3.1.2: Pre-acceleration programme (Latin America)
    - Sub-Activity 2.4.1.3: Acceleration programme (Latin America) – technical assistance

[116] UNFCCC (2020), *Fourth Synthesis of Technology Needs Identified by Parties not Included in Annex I to the Convention*: https://unfccc.int/sites/default/files/resource/sbi2020_inf.01.pdf

EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's Initial Investment Framework.

D.1. Impact potential

D.1.1 Emission Reductions Estimation Methodology

150. When GIZ embarked on developing the CATALI.5°T Initiative in mid-2019, there was no methodology available to estimate the mitigation potential of a portfolio of ventures whose precise composition is necessarily unknown ex ante. To provide the GCF with an informed, robust and transparent climate impact estimate, GIZ partnered with Climate-KIC and the consulting company, Impact Forecast, to build a sophisticated bottom-up model – MORSE: Model for Regional climate Start-up Ecosystem impacts. Full details are provided in Annex 22b and Annex 22c; a brief overview is provided below.

151. The Avoided Emissions Potential (AEP) – defined as the difference in lifecycle GHG emissions between an existing baseline solution (e.g. an internal combustion engine vehicle) and a climate venture's product (e.g. an electric vehicle) – was calculated for individual ventures. The selected ventures were sourced from Climate-KIC entrepreneurial initiatives in the European Union for which climate impact (i.e. emission reductions) was an eligibility criterion and was consistently reported with the Climate Impact Forecast (CIF) tool[117], making them well-suited for building a climate venture database. Additionally, this allowed access to detailed information on a large sample of current ventures, which would otherwise be hard to achieve in a coherent manner, as noted by other studies.[118]

152. Twenty-four ventures were randomly selected from a pool of 104 EU ventures and were complemented by an additional 5 ventures from Latin America and 4 from sub-Saharan Africa: i.e. 33 ventures in total. The CIF impact reports for these 33 climate ventures were reviewed by Climate-KIC and validated by an expert third-party.

153. The selected climate ventures were each assigned to represent a venture 'archetype'. An archetype refers to a type of innovation within a GCF Result Area: for example, 'energy storage' within 'energy access and power generation' or 'e-mobility' within 'low-emission transport' or 'alternative proteins' within 'forestry and land use'.[119] Each archetype also represents a CAIT sub-sector[120] and an economic sector as defined by the World Bank's development indicators. Archetype categorisation was participatory (GIZ, Climate-KIC, Executing Entities and VC funds) and underwent a number of rounds of review and revision. Table 8 provides an overview of the 28 archetypes used. Annex 24d provides an overview of the types of climate ventures in each GCF Result Area and in each archetype.

Table 8: GCF Result Areas and Constituent Archetypes

GCF Result Area	Archetypes
Energy access and power generation	Biomass, energy storage, renewable energy systems, small-scale solar, smart grids
Low-emission transport	E-mobility, shared mobility, smart mobility
Buildings, cities, industries and appliances	Alternative materials, energy efficiency, smart city solutions, smart manufacturing, sustainable building materials, smart buildings, urban planning, sustainable consumption, clean water/water availability, clean air, sanitation, waste management
Forestry and land-use	Agrotech (land), agrotech (nutrients/production), alternative proteins, food security, food waste, land-use monitoring systems, ecosystem conservation, restoration and monitoring

[117] https://impact-forecast.com/
[118] Leendertse, J., van Rijnsoever, F. and Eveleens, C. (2020), 'The sustainable start-up paradox: predicting the business and climate performance of start-ups', *Business Strategy and the Environment,* 30: https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/bse.2667?download=true
[119] 'Alternative proteins' encompasses alternatives to industrial meat production – e.g. plant-based and lab-cultivated meat, edible insects, aquaculture, etc. Annex 24d provides descriptions of the archetypes.
[120] The Climate Access Indicators Tool (CAIT), maintained by the World Resources Institute.

154. Economic data (GDP and local market data) were used to identify the type and size of the economic sector associated with each venture archetype in each region. The total GHG emissions covered by the relevant venture markets were determined using two key variables: the sector and sub-sector emissions (tCO_2e) based on CAIT GHG emissions data, and the percentage of addressable sub-sector emissions that reflect the ventures' maximum possible market share in that sector.[121] The variables are then multiplied together to represent the upper boundary on emission savings: the maximum Avoided Emissions Potential or AEP_{max}.[122]

155. In practice, the total emissions in the sub-sector typically greatly exceed those in a venture's AEP_{max}. For example, in Year 1 of operations, most ventures are expected to achieve emission reductions below 0.001% of the maximum attainable in theory – and, at best, 0.03%.

156. The Year 1 Avoided Emissions Potential (AEP_{y1}) of a climate venture – or, at a higher level of aggregation, an archetype, a GCF result area, a region or the overall CATALI.5°T Initiative – is calculated as the climate impact per functional unit[123] multiplied by the number of functional units sold in Year 1. In a typical group of early-stage ventures, their first-year climate impact varies widely, ranging from tonnes to kilotonnes of CO_2e, and with the occasional high-performing outlier ('impact unicorn').

157. Because the AEP represents the entire *lifecycle* emission reductions of a product or service (i.e. the total emissions associated with production, use and disposal of the product or service), the MORSE model annualises each venture's AEP by allocating the product/service emission reductions achieved equally across the expected lifetime of the good or service being sold. Thus, the AEP associated with the sale of an energy-efficient refrigerator in Year 3 of the CATALI.5°T Initiative, for example, is distributed equally over the 10-year product lifetime of the refrigerator between Years 3-13, while the AEP associated with the sale of low-emission packaging, such as bioplastics or recycled cardboard, is distributed over just 1 year.[124] The archetype-specific product/service lifetimes used by the MORSE model are provided in Annex 22c. This step serves to provide an *annual AEP*. While this annualisation process has no impact on the overall mitigation estimates, it does enable emission reductions to be presented in a manner compatible with GCF practice – i.e. for defined time-periods, such as the CATALI.5°T Initiative implementation period and the CATALI.5°T Initiative lifespan.

158. The lifespan AEP of the CATALI.5°T Initiative is determined by a number of variables:
    - The **duration of the programme lifespan** (i.e. the CATALI.5°T Initiative's 'influence period'). A lifespan of 20 years has been chosen because this is approximately the average expected lifespan of a listed company in the USA today[125] – and therefore, in the absence of an equivalent figure for Latin America or West Africa, represents a reasonable upper-bound on the lifespans of the climate ventures supported by the CATALI.5°T Initiative. Most (85%) of the CATALI.5°T Initiative's supported ventures are expected to survive only a fraction of this time, but a small minority (15%) may exceed 20-year lifetimes. It should be noted that, in reality, even when a venture fails (i.e. ceases business activity) its climate influence may not necessarily disappear entirely: its goods / services may continue to be sold by an acquiring firm or its founders may go on to apply their learning elsewhere, for example. Consequently, the imposition of a finite programme influence period, of whatever duration, is itself considered to be a conservative assumption.

      The effect of the 20-year lifespan on the estimation of emission reductions is three-fold: (i) CATALI.5°T Initiative-supported ventures that survive more than 20 years contribute zero climate impact after Year 20; (ii) climate ventures supported in Year 1 of the CATALI.5°T Initiative have a (marginally) greater opportunity to generate emission reductions than climate ventures supported in Years 2 and 3 of the CATALI.5°T Initiative; and (iii) the emission reductions associated with goods / services sold by CATALI.5°T Initiative-supported ventures are only counted up to and including Year 20 – thus, for example, an energy-efficient appliance sold by a venture in Year 15 that has a 10-year expected product lifetime would only contribute

[121] For example, software for power stations can run in every power station: if the venture supplying this software were – theoretically – able to achieve the maximum possible market share (i.e. all power stations), it could affect 100% of the electricity sector's emissions. In contrast, a venture supplying green roofing material could not affect 100% of building sector emissions, as building emissions are attributable to other sources (e.g. lighting and HVAC), not just roofs.

[122] Maximum Avoided Emissions Potential (AEP_{max}): the theoretical maximum emissions of the market or sector that a company is able to target. AEP_{max} is analogous to TAM or 'Total Addressable Market', which is typically measured in terms of revenue. The AEP_{max} is quantified as the addressable share of regional maximum avoidable emissions (tCO_2e) a venture has in its target market / sector.

[123] A functional unit is the good or service that provides the basis of comparison between the baseline and the venture's innovation.

[124] Packaging lifetimes can vary from 1 day (e.g. plastic straws) to 10+ years (e.g. toys, crates); a 1-year lifetime covers 'typical' applications, such as food & drink containers, cosmetics, etc.: https://www.resourcefutures.co.uk/the-lifetime-of-plastic/

[125] McKinsey (2020), *Europe's Start-Up Ecosystem: Heating Up, But Still Facing Challenges*: https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/europes-start-up-ecosystem-heating-up-but-still-facing-challenges

emission reductions to the CATALI.5°T Initiative for 6 years (up to and including Year 20) rather than for the full 10-year product lifetime.

- The **number of climate ventures** included in the analysis. The CATALI.5°T Initiative will provide technical and financial support to 60 pre-seed climate ventures in each region (i.e. 120 ventures in total) through its regional pre-acceleration programmes, and to 30 seed-stage climate ventures in each region (i.e. 60 ventures in total) through its regional acceleration programmes. Estimating the future climate impact of pre-seed climate ventures – which, on graduation from the pre-acceleration programme, may have no, or very little, actual market exposure – is challenging and would inevitably necessitate considerable speculation and guesswork. Accordingly, only the 60 more advanced, market-exposed climate ventures that graduate from the regional acceleration programmes are included in the mitigation impact analysis.[126]

- The **types of climate ventures** supported by the CATALI.5°T Initiative. In Latin America, the regional acceleration programme will support only start-ups – defined as early-stage companies that are developing or already have a minimum viable product (MVP), but no significant revenues and/or profits. In West Africa, the regional acceleration programme will support start-ups as well as growth companies – defined as businesses that already generate revenues, and potentially profits, but are unable to grow to their full potential (for instance, by making large investments) due to lack of technical capacity or capital. In West Africa, the anticipated proportion of growth ventures in the acceleration programme will be approximately 50%. Both types of venture will satisfy the IFC definition of a micro or small enterprise (MSE) and both will sell products or services that offer climate mitigation benefits. However, the growth companies differ from the start-ups in having more favourable failure schedules (i.e. a lower risk of failure each year – see below).

- The **failure schedule of each CATALI.5°T Initiative-supported venture**: i.e. the number of years after graduation from the regional acceleration programme at which each venture ceases to operate. Until the time of failure, a venture actively generates emission reductions through sale of its goods/services; after failure, the venture is considered to generate zero emission reductions. Ongoing use of products/services sold before venture failure does continue to generate emission reductions. Thus, if a venture sells an emission-reducing product in Year 10 and then fails in Year 11, the product sold in Year 10 will continue to generate a stream of emission reductions for the remaining product lifetime (up to and including Year 20), even though the venture is no longer selling new products.

- The **success schedule of each CATALI.5°T Initiative-supported venture**: i.e. the performance of each venture in accessing VC finance (and when), as well as non-VC sources of finance (e.g. debt)[127], up until the point of venture failure or, for long-lived ventures, until Year 20. The success and failure schedules are inter-related. Ventures are unable to sustain themselves for protracted periods of time – and hence fail – without periodic injections of finance, and ventures that have recently raised financing are less likely to fail than those that have not managed to do so. The financing events modelled over the 20-year timeframe are: first-round financing (convertible notes / equity), second-round financing (Series A), second-round financing (debt), third-round financing (Series B), third-round financing (debt), fourth-round financing (Series C), fourth-round financing (debt) and Initial Public Offerings (IPOs). Ventures may benefit from none, one or more of these financing events, depending on their type (start-up or growth company) and longevity.

- The **growth rate of each CATALI.5°T Initiative-supported venture** after graduation from the regional acceleration programme: i.e. the evolution of its annual sales performance (market share) over time. The growth rate determines the number of functional units (goods or services) sold in each successive year, up to the point of venture failure. The annual growth rates that populate the model have been calibrated with expert input from stakeholders (regional VC funds, pre-accelerators / accelerators, etc.: see below), and are differentiated in the MORSE model in two respects:
  Regionally: different growth rates are applied in Latin America and West Africa.
  Venture survival: a venture's growth prospects are related to its survival prospects, such that a short-lived venture tends to grow more slowly than a long-lived venture in each corresponding year of its life. The annual growth rates of ventures that survive for 1-3 years are discounted by 30%, and

[126] Some of the ventures that graduate from the pre-acceleration programmes may then advance to the acceleration programmes – subject to competitive entry requirements. Indeed, this is actively expected and welcome, as it will ensure a supply of high-quality candidates for acceleration-stage support. However, the point stands: only ventures graduating from the acceleration programmes are included in the emission reduction calculations.

[127] Debt instruments are considered for growth companies only.

ventures that survive for 4-6 years by 10%, relative to those of ventures that survive for 7 or more years.

- The **taper rate**. In early iterations of the MORSE model, ventures continued to enjoy sustained, uninterrupted growth until the point when they suddenly failed. However, this was considered unrealistic and tapering was introduced to represent gradual deceleration in a venture's growth in the years leading up to a venture's failure.

  Ventures fail for a variety of reasons. According to CB Insights (2021)[128], based on a sample of 111 venture failures, the main reasons for failure are:
  - Ran out of cash / failed to raise new capital (38%)
  - No market need for product (35%)
  - Got out-competed (20%)
  - Flawed business model (19%)
  - Regulatory / legal challenges (18%)
  - Pricing / cost issues (15%)
  - Not the right team (14%)

  Some of these factors (such as regulatory / legal challenges or internal team dynamics) may, indeed, manifest themselves suddenly and lead to abrupt venture failure, rather than a gradually decelerating growth rate. However, other factors (such as cash burn, market competition and market saturation) are likely to produce precisely the sort of growth slow-down prior to eventual business failure that the tapering is designed to replicate. A user-adjustable parameter in the model enables the user to dictate the number of years of (approximately) linear decline before venture failure. The default value of 30% makes the linear decline commence in the final 30% of years of the venture's lifetime.

- The **GCF attribution coefficient**. Not all of the climate impact achieved by the CATALI.5°T Initiative-supported climate ventures can, justifiably, be attributed to the GCF. The CATALI.5°T Initiative will produce a set of 60 accelerated climate ventures that are well positioned to grow and prosper; however, whether the ventures do, indeed, grow and prosper is also attributable to how much VC (and other) finance they can attract. The CATALI.5°T Initiative funds represent a small fraction of the Series A, Series B, etc. finance that these ventures will subsequently mobilise.[129] Accordingly, a GCF attribution coefficient is applied to the CATALI.5°T Initiative's GHG impact – essentially, scaling the MORSE-derived mitigation total by a parameter that tries to capture the proportion of the mitigation that is directly attributable to the GCF.

  The GCF attribution coefficient is calculated as the amount of GCF budget funding relative to the total VC and other financing expected to be leveraged by the programme: i.e. the GCF contribution to the GHG impact achieved by the CATALI.5°T Initiative-supported climate ventures is deemed to be proportional to the amount of funding spent on the ventures by the GCF compared with the amount of funding spent by other parties. The GCF budget is Euro 26.8 million and the expected leveraged finance is Euro 413 million; hence the GCF attribution coefficient is 6.5%. (See Annex 22c for detailed calculations).

D.1.2 Model Parameterisation

159. For the purpose of providing an ex ante estimate of the CATALI.5°T Initiative's mitigation impact, in-depth interviews with relevant actors – pre-accelerators, accelerators, VC funds and other financiers, entrepreneurs, government officials, international organisations and donors – were held in Latin America and West Africa. These discussions then formed the basis for regionally-differentiated quantified estimates of: (i) the composition – archetypes and/or result areas, start-ups vs growth companies – of the 30 climate ventures that will graduate from each region's seed-stage acceleration programme, (ii) the failure schedule of the ventures, (iii) the success schedule of the ventures, and (iv) the annual growth rates of the ventures – all over a 20-year influence period. These parameters then underwent 3 rounds of stakeholder and GCF Secretariat review and revision, such that they are now considered to be: (i) extremely robust and (ii) at the low (conservative) end of empirical expectations. These parameters form the basis of the 'central estimate' – essentially, the 'best guess' – for the CATALI.5°T

[128] https://www.cbinsights.com/research/startup-failure-reasons-top/

[129] This is, of course, one of the CATALI.5°T Initiative's key strengths. The CATALI.5°T Initiative establishes a clear pathway from pre-seed and seed-stage ventures to healthy, rapidly growing climate enterprises, and, moreover, it does so while: (i) establishing a clear exit strategy for the GCF and (ii) making minimal demands on GCF funds.

Initiative's GHG mitigation impact in each region. Full details of the parameter values and assumptions used are provided in Annex 22c.

D.1.3 Emissions Reduction Impact

160. The CATALI.5°T Initiative is expected to reduce 58 $MtCO_2e$ of greenhouse gas emissions during its 20-year lifespan (influence period). This will be achieved through the sale of low-emission products / services by the 60 climate ventures supported by the CATALI.5°T Initiative's two regional acceleration programmes. The CATALI.5°T Initiative will screen and nurture these climate ventures, providing them with the technical, financial, mentoring and networking support needed to build and shape them into robust, high-potential investment opportunities from a VC perspective. This VC equity investment (and, in the case of growth companies, debt investment) will be enabled by the GCF but will, itself, take place outside of the GCF programme boundary – and, in the majority of cases, is expected to occur after the end of the 6-year GCF support. Accordingly, a GCF attribution coefficient is applied to the CATALI.5°T Initiative's overall mitigation impact to capture the impact that is directly attributable to the GCF itself. Table 9 summarises the modelling results after this GCF attribution has been applied.

161. For Latin America, the cumulative total GCF-attributable mitigation impact by the end of the CATALI.5°T Initiative implementation period (Year 6) is 141 $ktCO_2e$, and 1.1 $MtCO_2e$ by the end of the Initiative lifespan (Year 20). For West Africa, the cumulative total GCF-attributable mitigation impact by the end of Year 6 is 89 $ktCO_2e$, and 2.7 $MtCO_2e$ by the end of Year 20. Total GCF-attributable mitigation impact is expected to be 3.8 $MtCO_2e$ over the 20-year programme lifespan.

Table 9: Central Estimate of the GCF-Attributable CATALI.5°T Initiative Mitigation Impact

Region	Programme Implementation Period (Years 1-6), $ktCO_2e$	Programme Lifespan (Years 1-20), $ktCO_2e$
Latin America	141.2	1,099.2
West Africa	88.8	2,674.8
Total	**230.0**	**3,774.0**

162. The expected breakdown of emission reductions by GCF Result Area is provided in Table 10. As with the mitigation estimates, this breakdown should be considered to be indicative rather than definitive, as there are considerable uncertainties associated with predicting the mitigation characteristics of 60 climate ventures, across 2 regions, whose identities and characteristics will only be known when they are admitted into the regional acceleration programmes during the course of programme implementation (see the sensitivity analysis below). Moreover, the composition of emission reductions will evolve each year over the 20-year programme lifespan; Table 10 shows the composition of *cumulative* emissions for the programme lifespan.

163. In Latin America, energy access and power generation is expected to contribute the bulk of emission reductions, due to a combination of factors. Structurally, ventures providing energy products and services have widely applicable solutions with a large addressable market share, in an impactful sector. The group of ventures modelled also contains two 'impact unicorns' that manage to survive for reasonable periods and thereby sustain their climate impact; while this is essentially a chance (rather than structural) aspect of the model, outlier performance by particular ventures is an intrinsic element of venture finance and such probabilistic factors cannot be ignored.[130] In West Africa, the most significant impact is made by ventures in the agriculture, forestry and other land use (AFOLU) result area, due to this sector's economic importance in the region. In both regions, there is a small but nonetheless substantive contribution from buildings, cities, industries and appliances.

164. The contribution of transport is predicted to be negligible in both regions. This may be partly a reflection of the challenges presented by many transport sub-sectors (capital-intensive, global supply chains, offshore manufacturing, multinational incumbments) to start-ups in particular. However, this is not universally true: smaller-scale transport options, such as such as e-mobility (e.g. electric bikes) or shared mobility solutions (e.g. business models built around car-pooling), could represent more promising opportunities for ventures. Moreover, the negligible contribution from transport is not aligned with VC firms' expectations: VC firms consulted during the

[130] See, for example, Preuss M. (2020), *Understanding Power Law Curves to Better Your Chances of Raising Venture Capital*: https://visible.vc/blog/understanding-the-power-law-curve-of-vc/

GHG modelling predicted that transport ventures would account for approximately 20% of the ventures in the regional acceleration programmes.

165. Further analysis of the transport modelling result is provided in Annex 22e. The negligible emission reductions attributed to transport is partly a chance outcome in the MORSE model, due to the presence of 5 successful energy-sector ventures that serve to reduce the relative impact of other Result Areas. Alternative modelling scenarios can be constructed in MORSE that generate solutions in which transport is a considerably more impactful result area. More fundamentally, however, the transport sector is currently under-served by the MORSE model. The MORSE model generates emission reduction estimates by using an underlying database of 33 'real-world' ventures, which are used – singly or in multiples – to construct higher-level archetypes. These ventures were sourced from a Climate-KIC database. Unfortunately, transport is not a key focus area for Climate-KIC, with the result that high-quality data was only available for 3 transport ventures: electric powerboats, smart public transport analytics and low-impact delivery services. These are not high-impact mitigation sub-sectors, with the result that the data that the MORSE model uses to generate transport mitigation impacts tends to under-estimate such impacts.

166. Improvement of the MORSE model, including expansion of the underlying venture database, is planned under Sub-Activity 3.1.1.1. A key emphasis of this work will be on strengthening the breadth of transport sector coverage.

167. It should be noted that selection of ventures for admission into the CATALI.5°T Initiative's pre-acceleration and acceleration programmes will not suffer from these MORSE-related deficiencies. Assessment of these ventures' mitigation impacts will be done on a case-by-case basis using the CIF tool, as the identities of the ventures will be known at the time of screening / selection. The challenge that arises with the use of the MORSE tool is that the identities of the ventures are not known – and hence archetypical analogues need to be used in their place.

Table 10: GCF Result Area Composition of the Central Estimate of CATALI.5°T Initiative Mitigation Impact

GCF Result Area	Latin America	West Africa
MRA 1 – Energy generation and access	89%	9%
MRA 2 – Low-emission transport	~0%	~0%
MRA 3 – Buildings, cities, industries and appliances	7%	9%
MRA 4 – Forestry and land-use	4%	81%

D.1.4 Sensitivity Analysis

168. Clearly, the central estimate is subject to considerable uncertainty. If, for example, during CATALI.5°T Initiative implementation one or more ventures performs markedly better (or worse) than expected, the GHG impact of the CATALI.5°T Initiative will deviate from the central estimate, potentially quite significantly. Accordingly, to complement the central GHG estimate, a 'downside GHG estimate' has also been calculated. This entirely removes the top 10% of ventures – defined in terms of their mitigation performance – from the GHG mitigation calculations. This is considered to be an extremely conservative scenario – there seems little plausible reason why it should be the CATALI.5°T Initiative's top-performing ventures that fail, and fail so spectacularly – but it nonetheless provides a useful 'almost-worst-case' baseline against which the central estimate can be compared. The downside estimate is presented in Table 11.

Table 11: Downside Estimate of the GCF-Attributable CATALI.5°T Initiative Mitigation Impact

Region	Programme Implementation Period (Years 1-6), $ktCO_2e$	Programme Lifespan (Years 1-20), $ktCO_2e$
Latin America	29.1	476.2
West Africa	54.1	620.2
Total	**83.2**	**1,096.3**

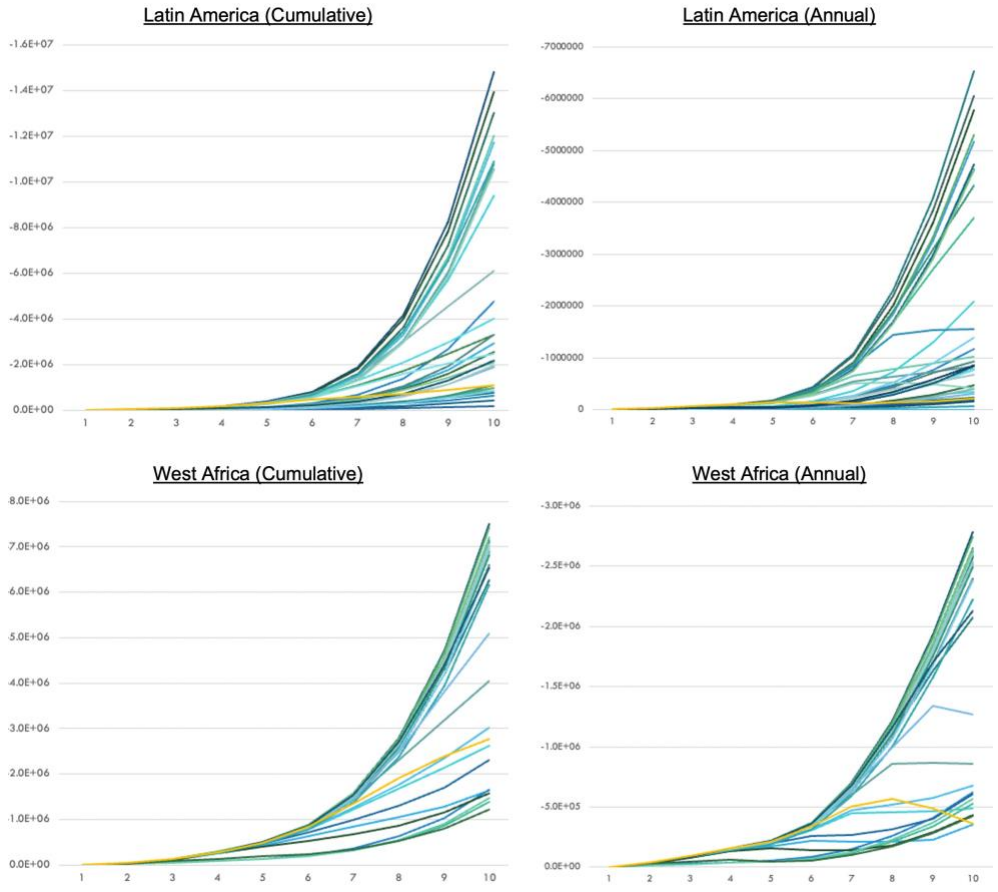
169. The downside mitigation impact – 1.1 $MtCO_2e$ – is 29% the size of the central estimate, which shows the disproportionate impact that the top-performing ventures can exert on the overall mitigation performance of the CATALI.5°T Initiative. This mirrors the skewed financial impact that a small number of ventures typically exert on VC investment portfolios. It is not unusual for investments in 1-2 successful ventures to "return the fund" – i.e.

compensate for the under-performance of a much larger number of ventures in a VC's portfolio.[131] Nonetheless, even the downside estimate represents a substantial climate impact from a GCF perspective.

170. The downside estimate has been augmented by probabilistic – Monte Carlo – modelling, in which 50 random survival schedules for the 30 accelerated climate ventures in each region have been drawn through repeated sampling. This provides a statistical distribution of potential GHG outcomes in each region.

171. Figure 12 is interpreted as follows: cumulative mitigation impact is shown on the left-hand side and annual mitigation impact is shown on the right-hand side. Latin America is shown in the top charts, West Africa in the bottom charts. The yellow line represents the downside estimate. The downside estimate tends to be optimistic relative to probabilistic scenarios in the first six years, and pessimistic thereafter. Expressed another way, the probabilistic modelling suggests that the downside estimate may be lower than expected in the near-term and greater than expected in the longer-term. Over the course of the CATALI.5°T Initiative's lifespan, the downside estimate – which is already, by design, conservative – is likely to be extremely conservative: CATALI.5°T Initiative mitigation impact is likely to be higher, and potentially substantially higher, than predicted by the downside estimate.

Figure 12: Downside Estimate (Yellow) Compared With Probabilistic Model Runs



172. Table 12 provides a complementary means of contextualising the downside estimate against the probabilistic simulations. It shows the value of the downside estimate as a percentile of the distribution of simulations. Thus, even in Year 1 the Latin American downside estimate is already in the top percentile: i.e. is amongst the highest of all mitigation estimates across the scenarios run. The West African central estimate shows a similar trajectory, starting in the 97th percentile in Year 1. The downside estimate of the programme's mitigation impact is, in other words, very optimistic in the early years, compared with randomly-drawn alternative scenarios. However, after Year 5 the downside estimate becomes progressively smaller relative to alternative scenarios. By Year 10, both

[131] See, for example, CB Insights (2020), *Eight Laws Driving Success in Tech*: https://www.cbinsights.com/research/report/tech-laws-success-failure/ and Preuss M. (2019), *Understanding Power Law Curves to Better Your Chances of Raising Venture Capital*: https://visible.vc/blog/understanding-the-power-law-curve-of-vc/

regions' downside estimates are in the bottom third of impact estimates. By Year 20, the Latin American downside estimate is in the bottom 15% of impact estimates and the West African estimate is amongst the lowest 1% of estimates. Thus, over time the downside estimate can be said to become increasingly conservative, with confidence correspondingly high that the CATALI.5°T Initiative will significantly out-perform it.

Table 12: Comparing the Downside Estimate to Probabilistic Model Runs

Percentile of downside estimate to distribution of simulations								
	Year 1	**Year 2**	**Year 3**	**Year 5**	**Year 7**	**Year 10**	**Year 15**	**Year 20**
Latin America	100%	100%	100%	92%	63%	29%	18%	15%
West Africa	97%	100%	81%	69%	31%	26%	0%	0%

D.2. Paradigm shift potential

D.2.1 Potential for Scaling Up and Replication

173. The design of the CATALI.5°T Initiative is flexible and allows for scaling to additional regions, sub-regions or countries at a later stage. By developing two slightly different regional programmes – one for emerging markets (Latin America) and one for frontier markets (West Africa) – the CATALI.5°T Initiative will address different regional development stages and business climates. This approach will allow the CATALI.5°T Initiative model to be replicable in different markets:
    - The emerging markets version will target ecosystems with an established VC scene and growing engagement of catalytic capital, but with limited dynamics in the climate solutions space and limited geographical diversity.
    - The frontier markets version is designed for dynamic developing countries with enormous investment needs in home-grown or locally-adapted climate solutions and where traditional and impact VCs face an array of daunting barriers to investment.

    As the CATALI.5°T Initiative will initially focus on two distinct regions, the lessons learned in these regions can inform similar interventions in emerging and frontier markets elsewhere.

D.2.2 Potential for Knowledge-Sharing and Learning

174. The CATALI.5°T Initiative's knowledge management plan is provided in Annex 23a. Providing new opportunities for the climate venture sector in Latin America and West Africa will generate important lessons to be used in successive climate venture sourcing, ideation, pre-acceleration and acceleration activities; in developing a stronger climate venture ecosystem in the regions; and boosting confidence in investments that are currently limited within the sector. Given the lack of resources currently focused on this sector in the regions, from both private and public sources, the CATALI.5°T Initiative will place considerable emphasis on: (i) collecting and sharing knowledge, and (ii) building tools, frameworks and capacities for stakeholders – e.g. pre-accelerators and accelerators in the context of assessing (and shaping) ventures' climate impact, and VC funds in the context of applying industry-standard ESG frameworks – to enable them to sustain and apply their learning long after the end of GCF involvement.

175. The CATALI.5°T Initiative will facilitate continuous exchange of knowledge and lessons learned amongst stakeholders within and between the regional programmes. All knowledge products, such as annual climate impact reports that collect and analyse data from actual venture cohorts, will be made available online, free of charge, in every participating country and globally, thereby facilitating widespread diffusion of knowledge. Through this feedback loop, learning from the CATALI.5°T Initiative's climate ventures' impacts can then be embedded into the way climate venture support programmes in Latin America, West Africa and beyond are designed and delivered.

176. Knowledge products to be created by the CATALI.5°T Initiative include (not exhaustive):

- Ideation and community-building. The CATALI.5°T Initiative will hold one climathon per year in each participating country, with delivery partners and entrepreneur participants inducted into the global Climathon Network to establish networking connections. Where possible, climathons will be held in October/November each year, in order to coincide with Climate-KIC's Global Climathon Week. Evaluation reports for each climathon will be produced in order to refine subsequent climathon design and to contribute to the overall learning agenda of the CATALI.5°T Initiative.
- Regional pre-acceleration programmes. Each climate venture participating in Phase 2 of the pre-acceleration programmes will benefit from an independently-validated in-depth climate assessment using the CIF tool (which will, itself, be updated and enhanced with CATALI.5°T Initiative support). This will provide an authoritative, quantitative and credible climate impact assessment that can be shared with VC funds and other potential investors, as well as informing CATALI.5°T Initiative M&E needs.
- Regional acceleration programmes. Each venture that is accepted into the acceleration programmes will co-develop a three-year Value Creation Plan. The Value Creation Plan will focus primarily on the tasks that need to be accomplished to make the venture fully investment-ready, including key strategic issues, fund-raising support, climate impact management and monitoring, recruitment of key personnel, reliable financial reporting, the implementation of good operational management practices (including E&S standards), etc. Each climate venture participating in the acceleration programmes will also benefit from an independently-validated in-depth climate assessment using the CIF tool.
- Climate gender entrepreneurship toolkits. There will be one gender climate entrepreneurship toolkit for 'enablers' (primarily the regional Executing Entities – Tec de Monterrey, Impact Hub Abidjan and IPED) and one toolkit for ventures. Both toolkits will have the same structure and will include:
    - The climate-gender business case – to explore why partners should incorporate gender.
    - Interventions checklist – to assess how well partners are doing on gender.
    - Metrics overview – to track gender metrics.
    - Climate acceleration / entrepreneurship examples – to see how others are doing it.
    - Action planning – to provide manageable steps to change over time.

  The toolkits will be supported by bespoke gender-climate training modules (based on demand from partners) to zoom-in on specific topics and create a roadmap for programmatic changes and cross-partner learning. By creating more gender-inclusive pre-acceleration and acceleration programmes, the CATALI.5°T Initiative will be able to attract more diverse entrepreneurs and climate innovations. This inclusivity is likely to lead to a more diverse innovation and entrepreneur portfolio. Furthermore, if the regional Executing Entities are able to codify parameters around diversity, this will improve their ability to create, support and sustain diverse, fundable, high-impact climate ventures. Climate innovations will be lifted to a higher level, will come from a wider scope of innovation types and will reach a wider range of customers.
- ESG tools for pre-accelerators, accelerators and VC funds. The CATALI.5°T Initiative will develop a comprehensive, first-of-its-kind regional toolkit to equip pre-accelerators and accelerators (including the Executing Entities and local implementation partners) and regionally-active VCs with practical resources to start and sustain their ESG integration in a co-production effort. By co-developing the toolkits with expert input, the beneficiaries will not only 'learn by doing' but will automatically develop a stronger buy-in into the usage of 'their' tools moving forward. On the basis of discussions held with stakeholders during CATALI.5°T Initiative preparation, the regional toolkits are expected to include:
    - An ESG due diligence framework / questionnaire (DDQ): an ESG-aligned framework / questionnaire used by investors when making investment decisions to add to their regular commercial / market / legal due diligence. DDQs come in a short-form 'check list' questionnaire format and could be adapted for immediate use by the CATALI.5°T Initiative.
    - An ESG investment framework: a broader and longer ESG-focused framework (or long-list / universe of relevant issues) to be used by the pre-accelerator / accelerator teams (and, subsequently, other actors in the region) to work with the ventures admitted into the regional support programmes to identify and improve ESG gaps and areas for improvement.
    - An Internal Fund Management Framework: to help manage ESG within pre-accelerators, accelerators and VC funds by offering a tool / framework to record, measure and report ESG issues and the metrics that require adaptation. The Principles for Responsible Investing's (PRI) Reporting Framework (adapted mostly for buy-out/PE funds) will serve as a starting point and VentureESG is in the process of developing and releasing an internal fund management tool.
    - SASB-like materiality map: the SASB 'materiality map' is popular among investors in other asset classes to identify which ESG areas are relevant for a specific (portfolio / investee) company. In a recent white paper, KfW Capital made an attempt to extend this tool to the venture / start-up sector.

Adapting the tool for Latin American and West African pre-accelerators, accelerators and VC firms will help them to zoom in on (financially) relevant ESG issues.

D.2.3 Contribution to the Creation of an Enabling Environment

177. The CATALI.5°T Initiative directly contributes to creating an enabling environment through its activities, notably:
    - Activities 1.1.1 and 2.1.1: capacity-building of Executing Entities, local implementation partners, entrepreneur support organisations (ESOs) and venture investors.
    - Activities 1.2.1 and 2.2.1: awareness-raising, ideation and programme marketing.
    - Activities 1.3.1, 1.4.1, 2.3.1 and 2.4.1: capacity-building of pre-seed and seed-stage climate ventures.
    - Component 3: Trans-regional advisory, capacity and knowledge support to climate entrepreneurship. This component will be divided into three strands, each contributing to a different element of the enabling environment: (i) Activity 3.1.1 on climate impact; (ii) Activity 3.1.2 on women's empowerment and diversity; and (iii) Activity 3.1.3 on environmental and social safeguards and governance.

178. The CATALI.5°T Initiative approach rests on the assumption that the supported climate ventures will have direct climate impacts (assured through a rigorous selection process and subsequent technical and financial support) and that the direct channel for this impact is for each venture to grow and successfully sell its products and/or services. This is a conservative approach to assessing beneficial CATALI.5°T Initiative impact, including its impact on the enabling environment, because secondary (indirect) impact channels are also anticipated. While a particular venture may not succeed: (i) its idea can be replicated by other companies; (ii) the venture founders can use the knowledge and networks gained through the CATALI.5°T Initiative to develop new climate ventures with greater impacts; and (iii) the enabling environment – and especially the awareness and capacities of ecosystem actors such as other climate entrepreneurs, pre-accelerators, accelerators and investors – is sufficiently strengthened, such that it enables additional climate innovation and investment activity outside the scope of the CATALI.5°T Initiative. While it is challenging to account for these secondary channels, this indirect contribution to the enabling environment is nonetheless considered an important aspect of the CATALI.5°T Initiative.

D.2.4 Contribution to the Regulatory Framework and Policies

179. Government actions to create or enhance markets for technologies that reduce GHG emissions are a critical element of the technological innovation process, and their absence will lead to innovation lag. Latin America and West Africa have already made some progress related to its venture ecosystems, both in terms of government policies and the emergence of venture support systems (e.g. Start-Up Acts in three of the target African countries), as well as in terms of attracting greater investment from VC funds. The CATALI.5°T Initiative builds on these positive developments by creating capacities, tools, regional networks and partnerships.

180. The CATALI.5°T Initiative is well-aligned with the policy context, notably (but by no means exclusively) in terms of supporting governments' climate policies, including their NDCs, and by supporting post-COVID recovery plans, which prioritise MSMEs as engines of economic growth and innovation. While the CATALI.5°T Initiative does not have a direct policy element, it is expected to provide positive examples that demonstrate the potential of climate ventures, as well as a more granular understanding of barriers and opportunities in the region. Case-studies and other knowledge products will be disseminated, with the aim of contributing to informed policy-making.

D.2.5 Contribution to Climate-Resilient Development Pathways

181. The CATALI.5°T Initiative is mitigation-focused. The objective is to reduce GHG emissions by identifying and supporting climate ventures that offer the greatest GHG abatement / avoidance potential. However, it is acknowledged that many low-emission products and services offer complementary adaptation benefits: for example, energy-efficient cooling as a response to warming temperatures, off-grid renewable energy solutions as a means of reducing households' reliance upon climate-vulnerable grid infrastructure, or sustainable agricultural practices that simultaneously reduce emissions and reduce exposure to climate-induced hazards (e.g. soil erosion, pests, desiccation, etc.). Consequently, in the assessment criteria that the CATALI.5°T Initiative uses to select climate ventures for pre-acceleration and acceleration support, the principal emphasis will be on mitigation potential, but ventures that offer additional adaptation co-benefits will be preferentially considered. Furthermore, the Executing Entities and other venture ecosystem stakeholders (e.g. other accelerators, VC firms) will be provided with capacity building on climate adaptation and resilience, to enable them to assess and support ventures' adaptation co-benefits (Sub-Activity 1.1.1.2 in Latin America and Sub-Activity 2.1.1.2 in West Africa).

D.3. Sustainable development

D.3.1 Sustainable Development Goals

182. The CATALI.5°T Initiative directly contributes to the following SDGs:
    - SDG 5: Achieve gender equality and empower all women and girls: The CATALI.5°T Initiative will address barriers that women entrepreneurs face, including the cost of leaving the informal sector, limited knowledge of available funding opportunities, a lack of women role models in business, and unequal access to educational and professional networks.
    - SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all: by promoting the development and sustained growth of climate ventures, accompanied by formalisation measures for these ventures, the CATALI.5°T Initiative will promote economic growth, technological and business innovation and job creation.
    - SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation: by increasing entrepreneurs' access to finance and supporting domestic technology development and innovation.
    - SDG 10: Reduce inequality within and among countries: by ensuring equal opportunities and encouraging investment in Latin American and West African countries (including LDCs).
    - SDG 13: Take urgent action to combat climate change and its impacts: through direct contribution to NDC targets and by building the regional knowledge base and capacity for climate change action. Adaptation co-benefits are also likely to be generated.
    - SDG 17: Strengthen the means of implementation and revitalise the global partnership for sustainable development: by mobilising financial resources towards Latin America and West Africa, sharing knowledge for technology and innovation, promoting sustainable technologies and enhancing the capacity of countries to address the climate emergency.

183. Moreover, beneficiary climate ventures will generate further contributions to other SDGs. The expected sectoral breakdown of beneficiary ventures in the West African acceleration programme, for example, is expected to be (approximately): 40% energy access and power generation; 30% agriculture, forestry and land-use; 20% buildings, cities, industries and appliances; and 10% low-emission transport. Such ventures have the potential to contribute to the following SDGs:
    - SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture: through ventures that focus on agritech, land-use monitoring systems, rural infrastructure and improved agricultural practices.
    - SDG 6: Ensure availability and sustainable management of water and sanitation for all: through ventures that offer, for example, enhanced sanitation or water quality solutions that simultaneously reduce GHG emissions (e.g. through more efficient pumps or enhanced sewage treatment) and offer adaptation co-benefits (e.g. more efficient use of water).
    - SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all: through ventures that focus on energy efficiency, distributed renewable energy solutions or pay-as-you-go energy access models.
    - SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable: through ventures that offer mobility solutions, waste management products or services, and alternative and sustainable building materials for inclusive and sustainable urbanisation.
    - SDG 12: Ensure sustainable consumption and production patterns: through ventures that focus on smart manufacturing, alternative food sources, waste management, recycling, composting and resource efficiency.

D.3.2 Environmental Co-Benefits

184. Improved land-use and soil conservation practices: Ventures with significant impact on land use (e.g. through alternative fuels, more efficient agricultural processes, ecosystem restoration) will have a significant environmental impact going beyond decarbonisation.
    Reduced water stress on regions with limited access to adequate water sources: by reducing water consumption and contamination in economic activities and improving access to safe drinking water and sanitation.

D.3.3 Social Co-Benefits

185. Improved livelihoods of customers through the provision of locally-relevant, low-emission climate solutions: the low-emission climate products and services created and sold by CATALI.5°T Initiative-supported ventures will provide their users with the opportunity to reduce their carbon footprints as well as improve their livelihoods. This could be because of energy savings, improved resource efficiency, reduced travel times or improved product reliability, depending on the nature of the climate solution.
Improved adaptive capacities of consumers: by deploying products and services that are climate-resilient and adaptive in sectors with strong impacts on livelihoods (e.g. agriculture, energy and transport).

D.3.4 Economic Co-Benefits

186. Private investment mobilised for climate ventures will strengthen the overall innovation ecosystem. This investment is key in a region like West Africa, for example, where one-fifth of the working-age population are starting businesses[132] and in countries such as Senegal, where MSMEs represent nearly 90% of all companies and 30% of GDP.[133]
Green job creation: The supported climate ventures will create jobs in a range of 'green' technologies and sectors. Moreover, the programme's support to venture formalisation will help to ensure that these jobs are accompanied by other benefits: workplace insurance, health and safety, etc.

D.3.5 Gender-Sensitive Development Benefits

187. Women's empowerment in climate entrepreneurship and broader climate action: Women are significantly under-represented among entrepreneurs and venture founders. The CATALI.5°T Initiative will put in place measures to actively source women-led ventures, will preferentially score women-led ventures during the selection processes for the pre-acceleration and acceleration programmes, will equip all supported ventures – as well as other ecosystem actors, including pre-accelerators, accelerators and VC funds – with tools and frameworks to strengthen gender aspects of their operations, and will build mentoring and support networks to encourage and guide women climate entrepreneurs.

D.4. Needs of recipient

D.4.1 Climate Risk and Vulnerability

Latin America

188. The IPCC identifies the following key regional changes to the climate:[134]
- Temperatures: mean temperatures have increased across the region and will continue to increase at rates greater than the global average. 2020 was the second-hottest year on record for Latin America after 2014.[135] Andean glaciers shrank by nearly one-third between 2000-2016, melting faster than in any other mountainous region of the world.[136] This has resulted in the loss of a major source of freshwater for consumption, irrigation and hydropower. Marine heat waves are also predicted to increase, which threaten the region's fishing and tourism industries.
- Precipitation: mean precipitation is projected to change, with shifting patterns of rainfall, increases in precipitation in north-west and south-east South America, and decreases in north-east and south-west South America. Heat extremes and changing precipitation patterns will impact cities, agricultural productivity, hydrological regimes and biodiversity.
- Sea level: relative sea-level rise is extremely likely to continue in the oceans around Central and South America, contributing to increased coastal flooding in low-lying areas and shoreline retreat along most sandy coasts. The large coastal Latin American population (60% of Latin America's population reside in coastal urban centres[137]) is additionally threatened by contamination of freshwater aquifers and the

[132] fDi Intelligence (2021), *African Tech Ecosystems of the Future 2021/22*: https://www.fdiintelligence.com/content/download/79718/2609471/file/African%20Tech%20Ecosystems%20of%20the%20Future%202021.pdf
[133] Republic of Senegal (2014), *Plan for an Emerging Senegal:* https://www.presidence.sn/en/pse/emerging-senegal
[134] IPCC (2021), *Regional Fact Sheet: Central and South America – Sixth Assessment Report of Working Group 1: The Physical Science Basis*: https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Central_and_South_America.pdf
[135] NOAA (2021), *State of the Climate: Global Climate Report – Annual 2020*: https://www.ncdc.noaa.gov/sotc/global/202013
[136] Seehaus et al. (2019), 'Changes of the tropical glaciers throughout Peru between 2000 and 2016 – mass balance and area fluctuations', *The Cryosphere*, 13: https://doi.org/10.5194/tc-13-2537-2019
[137] IADB (2020), *Inmigrando: Fortalecer Ciudades Destino*: http://dx.doi.org/10.18235/0002267

increasing risk of storm surges. By 2050, coastal flooding due to sea-level rise could generate approximatelty US$ 940 million-1.2 billion of mean annual losses for the region's 22 largest coastal cities.[138]

- Extreme climate events: Latin America has been experiencing increasing climate variability and extremes due to climate change, with climate change-related disasters increasing in frequency and intensity. On average, aproximately 1.7 % of GDP is lost each year due to climate related disasters.[139] According to the IPCC, over 600 extreme climate events occurred between 2000 and 2019.[140] These events included typhoons and hurricanes, thunderstorms, hailstorms, tornados, blizzards, heavy snowfall, avalanches, coastal storm surges, floods, flash floods, drought, heatwaves and cold spells. This has resulted in the displacement of people, numerous fatalities and significant economic losses.[141] The hurricane season of 2020 was unprecedented, with two major hurricanes hitting Central America in less than two weeks, causing tens of billions of dollars in damage to homes, power lines and workplaces during a time of overlapping economic and social crises.[142]. Amazonia, the North-East of Brazil, Central America, the Caribbean and some parts of Mexico will likely see increased drought conditions. More frequent extreme droughts in the Amazon are of concern, as it could push the region to a 'tipping point', increasing the likelihood of a large-scale dieback of the Amazon Forest.[143]

189. Physical and biophysical climate change impacts will challenge human livelihoods. Climate change will, *inter alia*, reduce agricultural yields, livestock and fisheries, increase water and food insecurity, threaten terrestrial biodiversity following species range shifts and further degrade the Amazon rainforest.[144] Human health, coastal infrastructures and energy systems are also likely to be negatively affected. Climate change is predicted to push 3 million people a year into extreme poverty by 2030.[145] Annex 2b provides details of individual countries' climate risks and adaptation capabilities.

West Africa

190. West Africa is considered one of the most vulnerable regions to climate change.[146] Increasing temperatures, shifting rainfall patterns and sea-level rise are already affecting livelihoods, food security, and economic and governance stability. Extreme climate variability since the 1970s has resulted in agricultural losses, recurrent food crises, water scarcity, extreme flooding and environmental degradation.[147] Climate change vulnerability in the region is compounded by a high dependence on rain-fed agriculture, high population growth, widespread poverty and limited access to safe water and sanitation.

191. Annex 2c provides details of historical and future climate change, as well as individual countries' climate risks and adaptation capabilities. In summary:
    - Temperatures: A warming trend has been observed over the whole of sub-Saharan Africa since the 1960s; this is more rapid than the global average and includes an increase in the number of warm spells in West Africa.[148] Historical data suggest a rate of temperature increase of 2.3°C (1950-2018) and 3.9°C (1990-2018) per century.[149] Countries including Côte d'Ivoire, Guinea and Senegal have experienced the most

[138] Reyer et al. (2015), 'Climate change impacts in Latin America and the Caribbean and their implications for development', *Regional Environmental Change*, 17: https://link.springer.com/article/10.1007/s10113-015-0854-6
[139] Global Centre on Adaptation (2021), *A Green and Resilient Recovery for Latin America*: http://gca.org/wp-content/uploads/2021/01/Green-and-Resilient-Recovery-for-LAC-Jan-2021-.pdf
[140] IPCC (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*: https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_FullReport.pdf
[141] WWF (2021), *Climate Change Impacts in Latin America*: https://www.wwfca.org/en/our_work/climate_change_and_energy/climate_change_impacts_la/
[142] World Bank (2021), *10 Key Points on Climate Change Impacts, Opportunities and Priorities for Latin America and the Caribbean:* https://blogs.worldbank.org/latinamerica/10-key-points-climate-change-impacts-opportunities-and-priorities-latin-america-and
[143] WWF (2021), *Climate Change Impacts in Latin America*: https://www.wwfca.org/en/our_work/climate_change_and_energy/climate_change_impacts_la/
[144] Reyer et al. (2015), 'Climate change impacts in Latin America and the Caribbean and their implications for development', *Regional Environmental Change*, 17: https://link.springer.com/article/10.1007/s10113-015-0854-6
[145] World Bank (2021), Promoting Climate Change Action in Latin America and the Caribbean: Results Briefs: https://www.worldbank.org/en/results/2021/04/14/promoting-climate-change-action-in-latin-america-and-the-caribbean
[146] USAID (2018), *Climate Risks in West Africa: Regional Risk Profile*: https://reliefweb.int/sites/reliefweb.int/files/resources/West_Africa_CRP_Final.pdf
[147] WMO (2021), *State of the Climate in Africa 2020*: https://library.wmo.int/doc_num.php?explnum_id=10929
[148] World Bank (2021), *Climate Change Knowledge Portal: Western and Central Africa*: https://climateknowledgeportal.worldbank.org/region/africa-western-and-central/
[149] Sylla M. et al. (2016), 'Climate change over West Africa: recent trends and future projections", in Yaro J. and Hesselberg J. (eds.), *Adaptation to Climate Change and Variability in Rural West Africa*: https://www.researchgate.net/publication/301338612_Climate_Change_over_West_Africa_Recent_Trends_and_Future_Projections

significant warming signals, ranging from 0.2°C to more than 0.5°C per decade.[150] 2019 was the third-warmest year on record.[151] Temperatures in the region are expected to increase nearly by 1°C over the next 20 years, 2.1°C by 2065 and 4.0°C by the end of the century.[152] By 2050, temperature increases are expected to reach +1.6-2.9°C in Niger, Burkina Faso and Mali, +1.4-2.5°C in Senegal and +1.3-2.3°C in Côte d'Ivoire, Togo and Benin.[153] This will be accompanied by the increased occurrence and duration of heat waves (+6-28 days) and hot days and nights. By the end of the century, under RCP 8.5, tropical West Africa is expected to experience warm nights 95% of the time. The area of arid regions is projected to grow by 10% under RCP 8.5 by 2080-2100, relative to 1986-2005.[154]

- Precipitation: West Africa has experienced a shift in rainfall patterns and increased variability, with marked periods of decadal rainfall variability shifting toward inter-annual fluctuations. There has been an overall reduction in mean annual rainfall, but more intense summer monsoon rainfall. Rainfall has reduced in Senegal, Burkina Faso, Mali and Côte d'Ivoire – by -6%, -4%, -4% and -3% per 30 years, respectively – but there has been no discernible change in Niger, Togo or Benin.[155] Projected rainfall patterns are still uncertain, with annual rainfall projected to reduce in the Western Sahel sub-region and increase along the Guinea Coast sub-region, accompanied by a likely delay in the onset of the spring rainy season.[156]
- Sea level: West Africa is experiencing sea-level rise and coastal erosion, with implications for coastal populations, coastal aquifers, fisheries and agriculture. For example, Togo's GDP decreased by over 2% in one year because of coastal degradation and erosion.[157] By 2081-2100, relative to 1850-1900, the sea level is expected to rise by an average of 48 cm and to result in: i) accelerated coastal erosion; ii) flooding of low-lying areas; iii) increased elevation of storm surges, as frequency and intensity of storms increases; iv) salinisation of soil and water; v) degradation and modification of ecosystems; vi) changes in groundwater levels; vii) infrastructure losses; viii) involuntary migration; ix) reduced economic activity; and x) increased health risks.[158] Over the same time period, ocean surface pH and temperature changes are expected to increase acidity and surface temperatures by 0.6-2°C and result in changes to the marine and estuarine habitat, causing altered plant and animal species distribution and survival.[159]
- Extreme climate events: Extreme precipitation is becoming more frequent and intense, with the proportion of rainfall from heavy rainfall events increasing from 17% (1970-1990) to 21% (2001-2010) in the Sahel.[160] Climate models project a range of different trends in annual rainfall, but it is generally understood that heavy rainfall events will occur with increased frequency (+1-43% by 2050) and intensity (+1-12%) over the region.[161] Countries including Senegal, Côte d'Ivoire, Benin and Togo are projected to experience more intense future rainfall increase, while other countries, including Mali, Burkina Faso and Niger, will undergo more moderate intensity increases.[162] These heavy precipitation events will threaten widespread flood occurrences, particularly around the monsoon season.[163]

192. By 2100, the combined effect of extreme rainfall patterns, increased temperatures and increased frequency of hot extremes is expected to result in changes to water resources, leading to issues such as water scarcity, land

[150] Sylla M. et al (2016), 'Climate change over West Africa: recent trends and future projections", in Yaro J. and Hesselberg J. (eds.), *Adaptation to Climate Change and Variability in Rural West Africa*: https://www.researchgate.net/publication/301338612_Climate_Change_over_West_Africa_Recent_Trends_and_Future_Projections
[151] WMO (2021), *State of the Climate in Africa 2020*: https://library.wmo.int/doc_num.php?explnum_id=10929
[152] IISD (2015), *Climate Change and State Fragility in the Sahel*: https://www.iisd.org/system/files/publications/climate-change-and-state-fragility-in-the-Sahel-fride.pdf
[153] USAID (2018), *Climate Risks in West Africa: Regional Risk Profile*: https://reliefweb.int/sites/reliefweb.int/files/resources/West_Africa_CRP_Final.pdf
[154] World Bank (2021), *Climate Change Knowledge Portal: Western and Central Africa*: https://climateknowledgeportal.worldbank.org/region/africa-western-and-central/
[155] USAID (2018), *Climate Risks in West Africa: Regional Risk Profile*: https://reliefweb.int/sites/reliefweb.int/files/resources/West_Africa_CRP_Final.pdf
[156] IPCC (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*: https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_FullReport.pdf
[157] World Bank (2021), *Climate Risk Country Profile: Togo*: https://reliefweb.int/sites/reliefweb.int/files/resources/15859-WB_Togo%20Country%20Profile-WEB.pdf
[158] Nyadzi E. et al (2021), 'Taking stock of climate change induced sea level rise across the West African coast', *Environmental Claims Journal*, 33: https://www.tandfonline.com/doi/pdf/10.1080/10406026.2020.1847873?needAccess=true
[159] Crespo L. et al (2018), 'The role of sea surface temperature in the atmospheric seasonal cycle of the equatorial Atlantic', *Climate Dynamics*, 52: https://link.springer.com/content/pdf/10.1007/s00382-018-4489-4.pdf
[160] USAID (2018), *Climate Risks in West Africa: Regional Risk Profile*: https://reliefweb.int/sites/reliefweb.int/files/resources/West_Africa_CRP_Final.pdf
[161] Vizy E. and Cook K. (2022), 'Distribution of extreme rainfall events and their environmental controls in the West African Sahel and Soudan', *Climate Dynamics*, 58: https://link.springer.com/article/10.1007/s00382-022-06171-x
[162] Sylla M. et al. (2016), 'Climate change over West Africa: recent trends and future projections", in Yaro J. and Hesselberg J. (eds.), *Adaptation to Climate Change and Variability in Rural West Africa*: https://www.researchgate.net/publication/301338612_Climate_Change_over_West_Africa_Recent_Trends_and_Future_Projections
[163] Wagner S. et al (2021), 'When does flood risk become residual? A systematic review of research on flood risk management in West Africa', *Regional Environmental Change*, 21: https://link.springer.com/content/pdf/10.1007/s10113-021-01826-7.pdf

degradation, reduced agricultural production, population displacement and potential conflict between humans, sectors and countries. Reductions are projected in per capita food availability as median crop yields fall by 0-2% per decade, while demand for crops is expected to increase by 14% per decade until mid-century.[164]

D.4.2 Financing Needs

Latin America

193. Annex 2b provides a comprehensive overview of the economic, financial and post-COVID contexts in Latin America. Overall, the region has seen steady socio-economic progress over the past two decades. Most countries in the region have significantly increased their GDP and have become more integrated into the global economy. The region's GDP at purchasing power parity (PPP) amounts to US$ 6.1 trillion, with a median GDP per capita of US$ 5,710, making it a low-income region.[165] Only Chile, Costa Rica, Panama and Uruguay have a median GDP per capita over US$ 10,000. Two of the region's economies, Brazil and Mexico, are among the largest economies in the world and have historically been the economic powerhouses of the region.

194. Social inequality is a notable characteristic of the region. Poverty is mostly concentrated in rural areas, where 49% of the population is poor and 23% is extremely poor.[166] Furthermore, despite consistent food production surpluses, millions of Latin Americans regularly go hungry or suffer from malnutrition: the share of the region's population suffering from undernourishment exceeds 10% in seven countries.[167]

195. The COVID-19 pandemic caused an economic contraction of 7.7% in 2020, followed by positive growth of 3.7% in 2021. UN-ECLAC expects that a full recovery will not take place until 2024; in the meantime, the pandemic has deepened the region's social and economic inequalities.[168] Given the limited financial resources of many countries in the region, only six have dedicated more than 0.1% of their GDP to recovery spending. Furthermore, an analysis of over 1,100 policies shows that approximately 77% of the region's total recovery spending has been allocated to rescue measures addressing short-term threats and saving lives, while only 16% has focused on long-term recovery plans to revitalise the economy.[169] While enterprises of all sizes faced economic hardship during COVID-19, MSMEs were hit harder than larger firms. Support for MSMEs has been an important element of governments' economic relief strategies, including deferred payments, facilitating access to credit and offering grants or subsidies. However, due to their constrained fiscal space, many Latin American governments have faced challenges in providing adequate support to MSMEs.[170]

196. The largest Latin American banks are headquartered in four countries: Brazil, Mexico, Colombia and Chile. The five largest banks, according to asset size, are all in Brazil. The formal financial system is characterised by: i) low and unequal access by households and MSMEs; and ii) a limited number of instruments and mechanisms for supplying finance to productive agents.[171] Corporate lending in Latin America indicates that there is still a significant financing gap. Domestic credit to the private sector is only 47.4% across Latin America and the Caribbean, compared with 198.9% in the US. There is significant variation across Latin American countries, with Argentina posting the lowest percentage (16%) and Chile the highest (112%).[172] The situation is particularly

[164] IPCC (2022), *Climate Change 2022: Impacts, Adaptation and Vulnerability*: https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_FullReport.pdf
[165] World Bank (2022), DataBank: Latin America and Caribbean: https://data.worldbank.org/country/ZJ
[166] FAO (2021), *Towards Sustainable and Resilient Agriculture in Latin America and the Caribbean: Analysis of Seven Successful Transformation Pathways*: https://www.fao.org/americas/priorities/sustainable-and-resilient-agriculture/panorama-2021/en/
[167] World Bank (2020), *Future Foodscapes: Re-imagining Agriculture in Latin America and the Caribbean*: https://openknowledge.worldbank.org/bitstream/handle/10986/34812/Future-Foodscapes-Re-imagining-Agriculture-in-Latin-America-and-the-Caribbean.pdf?sequence=1&isAllowed=y
[168] UN-ECLAC (2021), *Social Panorama of Latin America 2021*: https://repositorio.cepal.org/bitstream/handle/11362/47719/1/S2100654_en.pdf
[169] Global Recovery Observatory (2021), *Are We Building Back Better? Evidence from 2020 and Pathways to Inclusive Green Recovery Spending*: https://wedocs.unep.org/bitstream/handle/20.500.11822/35281/AWBBB.pdf
[170] UNDP (2021), *Small Businesses, Big Impacts: Supporting Productive SMEs as an Engine of Recovery in LAC*: https://www.latinamerica.undp.org/content/rblac/en/home/presscenter/director-s-graph-for-thought/small-businesses--big-impacts--supporting-productive-smes-as-an-.html
[171] ECLAC (2018), *Financial Inclusion of SMEs and Development Bank Financial Innovation Policies*: https://www.cepal.org/en/inclusion-financiera-pymes/background
[172] World Bank (2021), *Global Financial Development Database*: https://thedocs.worldbank.org/en/doc/92631f5aa8ecaed440d9b2e0ab8810e7-0050062021/original/Global-Financial-Development-Database-11-1-2021.xlsx

difficult for Latin American MSMEs. Total credit demand from MSMEs in Latin America and the Caribbean is US$ 2.15 trillion, while total supply of funding from financial institutions is US$ 347 billion (2017). This US$ 1.8 trillion funding gap is equivalent to 41.7% of regional GDP or 5.2 times the current supply of credit to MSMEs.[173]

West Africa

197. Annex 2c provides a comprehensive overview of the economic, financial and post-COVID contexts in West Africa. The majority of the population and economic activity – 85% and 93%, respectively – in the Economic Community of West African States (ECOWAS) member states[174] is concentrated in the 12 coastal countries, representing less than half of the total ECOWAS land area.[175] Nigeria alone accounts for over 62% of regional GDP, followed by Ghana at ~10%. While average GDP per capita stands at ~US$ 5,100 (purchasing power parity), the average for the French-speaking countries of the West African Economic and Monetary Union (WAEMU) is ~US$ 2,700.[176]

198. Six of the ten fastest-growing economies in Africa are in West Africa, and Côte d'Ivoire and Senegal are among the ten fastest-growing economies in the world.[177] Although West Africa has experienced significant economic growth in recent decades, which has to some extent been reflected in an associated reduction in poverty, levels of inequality in West African countries are unprecedented and rising.[178] Crops and livestock form the basis for about 60% of livelihoods and 35% of GDP regionally.[179] However, with declining agricultural sectors and limited manufacturing sectors, most West African economies are commodity-dependent and service sector-led.[180]

199. Of the 8 WAEMU states, Côte d'Ivoire is considered a middle-income country, while Benin, Burkina Faso, Guinea, Mali, Niger, Senegal and Togo are all considered least developed countries (LDCs).[181] French-speaking West African countries are among the lowest-ranking countries on the UN Human Development Index, ranging in rankings from 157 to 189 out of 189.[182]

200. Due to the COVID-19 pandemic, GDP in West Africa contracted by 1.5% in 2020 – a relatively limited fall relative to other regions in the world, but nonetheless markedly different from the 3.5% growth in 2018-2019 and the 4% growth rate forecast before the pandemic.[183] A number of countries with less strict lockdowns experienced mild, positive growth, including Benin (2.3%), Côte d'Ivoire (1.8%) and Niger (1.2%).[184] COVID-19 has highlighted the weaknesses of West African economies, particularly for vulnerable groups such as women, young people and informal workers: in 2020, the socioeconomic impacts of the COVID-19 pandemic doubled the number of food-insecure people in the region to 43 million.[185] Fourteen West African countries are planning to reduce national budgets by a combined US$ 26.8 billion by 2026 in order to partly address the loss of ~US$ 49 billion in 2020 due to the pandemic.[186]

[173] IADB (2020), *MSME Financing Instruments in Latin America and the Caribbean During COVID-19*: https://publications.iadb.org/publications/english/document/MSME-Financing-Instruments-in-Latin-America-and-the-Caribbean-During-COVID-19.pdf
[174] ECOWAS comprises 15 member states – Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo – and is mandated to promote economic integration in the region.
[175] https://countryeconomy.com/countries/groups/economic-community-west-african-states
[176] IMF (2021), *West African Economic and Monetary Union: Staff Report on Common Policies for Member Countries*: https://www.imf.org/-/media/Files/Publications/CR/2021/English/1WAUEA2021001.ashx
[177] Coulibaly B. (2019), *Reconciling Financing Needs and Debt Levels*: https://www.brookings.edu/wp-content/uploads/2019/01/BLS18234_BRO_book_006.1_CH2.pdf
[178] Oxfam (2019), *The West Africa Inequality Crisis: How West African Governments Are Failing to Reduce Inequality and What Should be Done About It*: https://oxfamilibrary.openrepository.com/bitstream/10546/620837/1/bp-west-africa-inequality-crisis-090719-en.pdf
[179] USAID (2018), *Climate Risks in West Africa: Regional Risk Profile*: https://reliefweb.int/sites/reliefweb.int/files/resources/West_Africa_CRP_Final.pdf
[180] AfDB (2021), *West Africa Economic Outlook 2021*: https://www.afdb.org/en/documents/west-africa-economic-outlook-2021
[181] UNCTAD (2021), *The Least Developed Countries Report 2021*: https://unctad.org/system/files/official-document/ldc2021_en.pdf
[182] https://hdr.undp.org/en/content/latest-human-development-index-ranking
[183] AfDB (2021), *West Africa Economic Outlook 2021*: https://www.afdb.org/en/documents/west-africa-economic-outlook-2021
[184] African Development Bank Group. 2020. Annual Report 2020.
[185] UN News (2020), *Food Insecurity in West Africa Could Leave 43 Million At Risk as Coronavirus Hits*: https://news.un.org/en/story/2020/05/1063232#:~:text=Well%20over%2040%20million%20people,(WFP)%20said%20on%20Tuesday
[186] Oxfam International (2021), *COVID-19 Recovery in West Africa is "Austerity on Steroids" and Sets the Region on a Destructive Path Ahead*: https://www.oxfam.org/en/press-releases/covid-19-recovery-west-africa-austerity-steroids-and-sets-region-destructive-path

201. The financial sector in WAEMU countries is markedly underdeveloped.[187] Official statistics on domestic credit to the private sector as a percentage of GDP show that credit availability in francophone West African countries is significantly constrained: domestic bank credit to the private sector is 21% of GDP on average in francophone West Africa, compared with 27% in sub-Saharan Africa – which is, by itself, already much lower than the global average of 99%.[188] SMEs, in particular, struggle to attract bank lending. As noted by the World Bank, "access to financial services remains one of the most acute constraints for SMEs in West Africa. Due to their smaller size, limited experience and undocumented performance, SMEs can be very risky to lenders – especially when they operate in fragile markets or more challenging environments."[189] Only 34% of the trade finance assets of African banks are dedicated to SMEs, despite SMEs representing 90% of businesses and 80% of employment on the continent.[190]

202. Furthermore, francophone West Africa has a relatively simple financial system in which banks are essentially the sole providers of credit to the private sector. WAEMU has its own stock exchange, the Bourse Régionale des Valeurs Mobilières (BRVM).[191] 58 companies are listed on the BRVM, for a total market capitalisation of US$ 10.5 billion (local currency equivalent) at the end of 2021.[192] The vast majority of companies listed on BRVM are banks, former state-owned enterprises or local subsidiaries of large multinationals such as Nestle and Unilever. Free floats and trading volumes are limited, as is the institutional investor base that holds and trades stocks. A few bonds are also listed on the BRVM, but all the issuers are WAEMU sovereigns. No corporate bonds are listed, emphasising the point that banks are effectively the sole providers of credit to the private sector in the region.

D.5. Country ownership

D.5.1 Alignment with Climate Policies

203. The CATALI.5°T Initiative is aligned with NDCs, national climate policies and strategies, National Communications to the UNFCCC, Technology Needs Assessments and National Adaptation Plans (see Section B.1.3 and Annexes 2b and 2c).

D.5.2 Engagement with Stakeholders During CATALI.5°T Initiative Preparation

204. A number of workstreams have informed the design of the CATALI.5°T Initiative, including a scoping assessment study (Annex 2a), two regional feasibility studies (Annexes 2b and 2c), two regional VC finance assessments (Annexes 3c and 3d), an ESS assessment (Annex 6a) and a gender assessment (Annex 8a).

205. All of these studies incorporated extensive stakeholder consultations, at global, regional and national levels, spanning a diverse range of stakeholders, including ventures and SMEs; entrepreneur support organisations (such as pre-accelerators and accelerators); VC funds and other sources of finance (angel investors, banks, micro-credit institutions, impact funds, philanthropic foundations); ministries of finance, industry, environment and gender, as well as parastatal bodies; CSOs, including educational / research organisations and environmental and gender-based NGOs; and multilateral / donor organisations and baseline projects. These consultations were augmented by extensive dialogue with NDAs and by validation workshops in December 2021: for Latin America, an in-person workshop in Mexico City and a regional virtual workshop, and for West Africa, an in-person workshop in Abidjan and a regional virtual workshop. Full details of meetings, interviews and workshops held, including the names and institutional affiliations of stakeholders, are provided in Annex 7. A summary is provided below in Table 13.

206. Consultations with venture founders were useful, in particular, for understanding what activities could be financed by the grants and the repayable grants, and what could be potential impacts (climate, business, E&S, gender, co-benefits, etc.) of small enterprises at their early development stages. Consultations held in West Africa, in

[187] Illy O. and Ouedraogo S. (2020), *Developing Countries Navigating Global Banking Standards: WAEMU*: https://www.geg.ox.ac.uk/project/waemu
[188] World Bank (2022), *DataBank: Domestic Credit to Private Sector*: https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS?name_desc=false&view=chart
[189] World Bank (2021), *Jumpstarting Small and Medium-Sized Businesses in West Africa:* https://www.worldbank.org/en/news/feature/2021/07/07/jumpstarting-small-and-medium-sized-businesses-in-west-africa
[190] AfDB (2021), *SMEs and Trade Finance in Africa*: https://www.mfw4a.org/sites/default/files/resources/aeb_vol_12_issue_11_smes_and_trade_finance_in_africa_brief.pdf
[191] Guinea and Mauritania do not have a stock exchange.
[192] BRVM website: https://www.brvm.org/fr

particular, were very useful in understanding the challenges of informal labour. The consultations with pre-accelerators, accelerators, and investors served to assess their own needs (climate knowledge and mitigation impact assessment, ESG frameworks, E&S management principles, etc.), as well as those of the ventures they support and finance. Ongoing consultations were held throughout the programme development process with the Executing Entities – Climate-KIC, Tec de Monterrey, Impact Hub Abidjan and IPED – to validate the barrier analysis, theory of change, ESMF, gender assessment, paradigm shift and other aspects of the CATALI.5°T Initiative.

Table 13: Stakeholder Consultations Undertaken During CATALI.5°T Initiative Preparation

Stakeholder-Type	Stakeholder[193]	
Latin America		
Multilateral projects and international organisations	Agence Française de Développement (AFD) (global) Antired (Argentina) Climate Launchpad (global) European Union Commission's Directorate-General for International Partnerships (DG INTPA) (global) FELICITY programme (Brazil, Ecuador, Mexico) Inter-American Development Bank Lab (regional) KfW Development Bank (global) Lightsmith Group – Adaptation SME Acceleration Programme (global) Mission Innovation (global) Pegasus Capital Advisors CRAFT – Catalytic Capital for First Private Investment Fund for Adaptation Technologies in Developing Countries (global) South Pole (global) UNFCCC Secretariat (global) UNIDO – Global Cleantech Innovation Programme (global) Young Leaders of the Americas Initiative (YLAI) (regional)	
Public entities	Ministry for Economy (Mexico) Profonanpe (Peru) Programa ProInnóvate (Peru) NDAs of all CATALI.5°T Initiative countries (and, through the NDAs, relevant line ministries)	
NGOs	Agora (regional) Bayer Foundation (global) Circular Influence (global) Cleantech Hub (regional) Climate-KIC (global)	
Universities	Anahuac University (Mexico) Tec de Monterrey (Mexico) UNAM University (Mexico) Universidad Tecnológica de Tehuacán (Mexico) University of Cambridge (global)	
Investors / finance	Andes Impact Partners (Peru) Angel Ventures (Peru) Dalus Capital (regional) Impaqto Capital (Ecuador)	
Ventures and Entrepreneur Support Organisations (ESOs)	Ventures Alimentarte (Ecuador) Ambient (Mexico) Artigiano (Mexico) Bicho (Mexico) Blue Energy (Mexico) Carbon Fraction (Mexico) Centro Empresarial El Champal SAC (Peru) Clair (Mexico) Cultivo (Mexico)	ESOs Aspen Network of Development Entrepreneurs (ANDE) (global) Bictia (regional) Cleantech Challenge (Mexico) Cleartech Hub (Colombia) Disruptivo (regional) Gender Smart (global) Impacto Consulting (regional) INCmty (Mexico) Kaya Impacto (Colombia and regional)

[193] To avoid unnecessary duplication, global initiatives or entities are listed only for Latin America, even if their mandates or operations also extend to West Africa.

	G2E (Mexico) Genes Peru (Peru) Grupo Promesa (Mexico) ImaGeau (global) Innpactia (Colombia) J3M Global (Ecuador) Light Up The World (Peru) Muebles La Tabla (Mexico) Nimbus (Mexico) Semilla Pof (Ecuador) Trading Solutions (Ecuador) UTEC Venture (Peru) Verdecanande SE (Ecuador) Vertmonde (Ecuador) Waykana (Ecuador) Whole Forest (Ecuador) Yakupura (Ecuador)	Lucha Startup Studio (Peru) Makesense (Mexico, Peru) PFAN (global) SVX (regional) Value for Women (global)
West Africa		
Multilateral projects and international organisations	Water and Energy for Food (WE4F) – West Africa Regional Innovation Hub (regional)	
Public entities	ADEPME (Senegal) Advisor to the Prime Minister for Innovation (Côte d'Ivoire) Agence Côte d'Ivoire PME (Côte d'Ivoire) Délégation de l'Entreprenariat Rapide (Senegal) NDAs of all CATALI.5°T Initiative countries (and, through the NDAs, relevant line ministries)	
NGOs	AfricInnov (regional) Impactum (regional) Reach for Change (Senegal)	
Investors / finance	Brightmore Capital (regional) Comoé Capital (regional) FONSIS (Senegal) Investisseurs & Partenaires (regional) SEPHIS Foundation (Côte d'Ivoire) Sinergi (Burkina Faso)	
Ventures and Entrepreneur Support Organisations (ESOs)	<u>Ventures</u> CIPMEN (Niger) Corail Immobilier (Côte d'Ivoire) Donilab (Mali) Ecoenvie (Côte d'Ivoire) Ecoplast INNOV (Côte d'Ivoire) Eveil En Forêt (Côte d'Ivoire) FabLab Network (regional) Ferme Permacole (Côte d'Ivoire) Green Agro Valley (Côte d'Ivoire) Green Skills Africa (Côte d'Ivoire) Hygiène Solution (Niger) La Fabrique (Burkina Faso) Lono (Côte d'Ivoire) Nowelli (Senegal) Tiamanline (Côte d'Ivoire)	<u>ESOs</u> Afric'Innov (regional) Catalystas (Côte d'Ivoire) Impact Hub Abidjan (regional) Impact Hub Dakar (Senegal) Incub'Ivoir (Côte d'Ivoire) Makesense (Burkina Faso, Côte d'Ivoire, Senegal)

D.5.3 Engagement with Stakeholders During CATALI.5°T Initiative Implementation

207. The Global Advisory Committee (GAC) will be responsible for providing strategic direction to the CATALI.5°T Initiative (see Component 4, Section B.3.1). The GAC will consist of the Executing Entities: GIZ, Climate-KIC, Tec de Monterrey, Impact Hub Abidjan and IPED. The GAC will meet twice a year and, additionally, on an ad hoc basis, as required. During implementation of the CATALI.5°T Initiative, the GAC will periodically invite: (i) the NDAs of participating countries, (ii) representatives from the VC industry and from the international pre-accelerator / accelerator community; and (iii) other stakeholders – such as academia, NGOs, public sector institutions and development partners – in order to ensure full engagement and coordination with stakeholders.

ESS Stakeholder Engagement Plan (SEP) for CATALI.5°T Initiative implementation

208. The stakeholder engagement plan during CATALI.5°T Initiative implementation has four dimensions:
    - At global level, GIZ and Climate-KIC will regularly engage with stakeholders in the VC finance industry. At least annually, a programme evaluation workshop will be held (or possibly, two regional workshops to account for language differences), including financers and interested ventures and other companies.
    - At regional level, the regional Executing Entities and local implementation partners will permanently engage with the beneficiary ventures during CATALI.5°T Initiative implementation. Annually, the beneficiaries will be asked to assess CATALI.5°T Initiative quality and usefulness.
    - For each venture participating in the acceleration programmes, the regional E&S specialist will recommend inclusion of fit-for-purpose stakeholder engagement activities in the ventures' business plans. The ventures will carry out stakeholder engagement as needed. This could include engagement with prospective customers, with people potentially affected (negatively or positively) by the ventures' impacts, with people living near the ventures' premises, etc.
    - The regional E&S specialists may, in some cases, decide to consult directly with specific groups of persons, either related to the activity of one specific venture, to verify that the CATALI.5°T Initiative successfully applies principles of inclusion and non-discrimination, and/or to verify application of the Gender Action Plan.

Information disclosure

209. The CATALI.5°T Initiative will meet the requirements of the GCF Information Disclosure Policy and Section 7.1 of GCF's E&S policy.

External communication, Grievance Redress Mechanism (GRM) (including workers) and GRM for SEAH

210. According to the GCF's E&S policy, the purpose of the GRM is to receive and facilitate the resolution of concerns and grievances about the environmental and social performance of GCF-financed activities. The GRM will be implemented at global level and at regional level, as well as at country level for West Africa:
    - Use of the existing internet mechanisms of GIZ[194], IPED[195] and Tec de Monterrey.[196]
    - Collection of grievances by phone or in person by the regional E&S specialists.
    - Workers will be able to use the generic GRM. In addition, a survivor-centred and gender-responsive GRM will be implemented for SEAH-specific complaints / incidents.

211. The regional Executing Entities and, ultimately, the GIZ E&S manager, are responsible for resolving grievances, and for reporting on grievance resolution. Where the GIZ E&S manager is unable to resolve a grievance to the satisfaction of all involved stakeholders (the complainant, the venture, the Executing Entity, etc.), an ad hoc evaluation committee shall be constituted on a case-by-case basis to review the decision and, where necessary, amend the decision. The committee shall seek to make decisions on the basis of consensus but will, where necessary, make decisions by majority vote. Composition of the committee will vary from case to case, as this will determine what E&S, legal and sectoral skills are required. The committee members will be appointed by GIZ (as the AE) and will include 1 representative of GIZ (as the AE), 1 representative of the relevant Management Unit (Latin America, West Africa or Trans-Regional) and 3 independent representatives (e.g. academics, professionals (legal, consultants, etc.), NGO staff, etc.) who are selected for their relevant technical or geographical backgrounds. In the event that the evaluation committee is unable to resolve a complaint to stakeholders' satisfaction, the grievance shall be communicated to the GCF's Independent Redress Mechanism.

D.5.4 NDA Approval Process

212. NDAs have been involved throughout the CATALI.5°T Initiative development process, spanning early scoping, development of the concept note and development of the funding proposal. In both regions, all NDAs have been regularly updated on progress and consulted via e-mail. Additionally, GIZ has held video calls and in-person meetings with the NDAs of Brazil, Colombia, Honduras and Mexico in Latin America, and Benin, Côte d'Ivoire, Mali and Senegal in West Africa. All NDAs were invited to attend the validation workshops in December 2021 and a follow-up online consultation for West African NDAs was held in May 2022. No-objection letters are provided in Annex 1.

213. As of September 21st, 2022, GIZ has received 12 NOLs from:

[194] https://www.giz.de/en/aboutgiz/39089.html
[195] https://www.ietp.com/fr/node/1861/#plainte
[196] https://letica.mx/ethos?locale=es

- Latin America: Argentina, Costa Rica, Dominican Republic, Honduras, Mexico
- West Africa: Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mauritania, Niger, Senegal, Togo

GIZ is in advanced discussions with several other countries, including (without limitation):

- Latin America: Colombia, Paraguay, Peru
- West Africa: Mali

Many of these countries have expressed significant interest in the CATALI.5°T Initiative but have not been able to complete their internal sign-off processes due to COVID-19 and other reasons. Nonetheless, GIZ expects to receive NOLs from most, if not all, of these countries before the Funding Proposal publication deadline. Additional countries may be added to the programme after initial Board approval, provided they submit a NOL and the addition is approved by the Board.

D.6. Efficiency and effectiveness

D.6.1 Mitigation Cost

214. The CATALI.5°T Initiative's GCF budget is EUR 26,8 million. Over 20 years, the CATALI.5°T Initiative will achieve GCF-attributable emission reductions of 3.8 $MtCO_2e$. Accordingly, the mitigation cost to the GCF is EUR 7.1/tCO_2e.

D.6.2 Economic Analysis

Economic IRR and NPV

215. This section should be read in conjunction with the Excel economic model (Annex 3a).

216. The main quantifiable economic benefit of the CATALI.5°T Initiative is the GHG emission reductions resulting from the ventures accelerated in the two regions.

217. The central estimate of emission reductions, discussed in detail in Section D.1, indicates cumulative emission savings of approximately 3.8 million tCO_2e over 20 years from CATALI.5°T Initiative inception, across the two regions. The annual allocation of emission savings over the 20-year period reflects the ventures' survival and revenue growth rate schedules presented in the relevant worksheets of the Excel model.[197] Survival and growth rates were estimated after extensive and detailed discussions with regional stakeholders, including VC firms and pre-accelerators / accelerators. All of these stakeholders have extensive on-the-ground experience in accelerating and investing in ventures and are, therefore, best qualified to produce reliable estimates of venture prospects.

218. It is important to note that the 3.8 $MtCO_2e$ central estimate represents the emission reductions after the application of a 6.5% attribution coefficient. This coefficient is intended to represent a realistic level of causality between the CATALI.5°T Initiative's activities and the venture survival and growth rates: it would be unrealistic to assume that the CATALI.5°T Initiative is *entirely* responsible for the business success and corresponding emission reduction of the accelerated ventures over 20 years. The attribution coefficient is calculated as the ratio of the GCF grant (EUR 26.8 million) to the total capital estimated to be raised by the ventures over 20 years, well beyond the expiry of the GCF programme. A total of EUR 413 million is expected to be raised by the ventures over 20 years – approximately EUR 186 million in Latin America and EUR 227 million in West Africa. These figures are based on estimates of mid-stage and late-stage VC funding for start-ups, debt financing[198] and the amounts raised at IPO per venture. The total figure for West Africa is higher than the total figure for Latin America due to the strong presence in the West African acceleration programme of growth companies that have a higher chance of survival than pure start-ups.

219. The base-case assumption for the shadow price of carbon is EUR 60/tCO_2e. The OECD recently published a study on the effective carbon price needed to meet the Paris Agreement's goal of limiting global temperature

[197] Worksheets: 'LAT – survival rates' and 'AFR – survival sheets'.
[198] Applicable to growth companies in West Africa.

increase to 1.5°C by mid-century.[199] Based on a comprehensive review of studies by academic and policy institutions, the OECD selected EUR 60 as its mid-range estimate of the required carbon price. The OECD's low-end estimate is EUR 30 and its high-end estimate is EUR 120. To put the OECD's mid-range estimate in context:

- The High-Level Commission on Carbon Prices estimates that carbon prices at a level of EUR 40-80 are needed in 2020 for countries to decarbonise in line with the Paris Agreement. In 2030, prices should reach EUR 50-100.[200]
- The IMF recommends an increase in carbon prices by EUR 75 from current levels through to 2030 in a scenario that assumes optimal support for clean technology development.[201]
- Emission allowances in the EU Emission Trading Scheme (EU-ETS), the world's largest, stand at approximately EUR 80 as of May 2022.

220. The OECD's mid-range estimate therefore appears reasonable – and possibly even conservative in the light of EU market prices.

221. With cumulative emission reductions of 3.8 $MtCO_2e$, a carbon price of EUR 60/tCO_2e, and a total programme budget of EUR 36.5 million (GCF grant + co-finance), the CATALI.5°T Initiative yields an attractive economic internal rate of return (EIRR) of 18,7%. The economic net present value is estimated at EUR 30.5 million, based on a 10% discount rate as customarily used in economic analyses.

222. A sensitivity analysis indicates that the EIRR and NPV are robust in a downside scenario. For the purposes of the sensitivity analysis, two variables have been considered: (i) different carbon price levels, in increments of EUR 10/tCO_2e, and (ii) a change in the volume of emission reductions from base case, in 10% increments. The analysis (see Table 14 and

223. Table 15) shows that:

- The EIRR remains double-digit even if carbon prices drop to EUR 30, in line with the OECD's low-end estimate, and the emission reduction volume is in line with the central estimate.
- The EIRR only turns negative in the extreme scenario where carbon prices drop to EUR 10 and emission reduction volumes are lower than the central estimate.
- As carbon prices move closer to the OECD's high-end estimate of EUR 120, EIRRs increase to the 30% range.
- The economic NPV is positive as long as carbon prices are at least EUR 30 and the emission reduction volume is in line with the central estimate.

Table 14: Economic IRR Sensitivity

		EIRR sensitivity						
		Change in emission reduction vs. central estimate						
		-30%	-20%	-10%	0%	10%	20%	30%
	10	-2,5%	-1,5%	-0,6%	0,3%	1,0%	1,7%	2,4%
	20	3,1%	4,2%	5,3%	6,3%	7,2%	8,0%	8,8%
	30	6,7%	8,0%	9,2%	10,3%	11,4%	12,3%	13,2%
	40	9,6%	11,0%	12,3%	13,5%	14,7%	15,7%	16,8%
Carbon	50	12,0%	13,5%	14,9%	16,3%	17,5%	18,7%	19,8%
price	60	14,1%	15,7%	17,3%	18,7%	20,1%	21,4%	22,6%
(EUR/t)	70	16,0%	17,8%	19,4%	20,9%	22,4%	23,8%	25,1%
	80	17,8%	19,6%	21,4%	23,0%	24,6%	26,1%	27,5%
	90	19,4%	21,4%	23,2%	25,0%	26,6%	28,3%	29,8%
	100	20,9%	23,0%	25,0%	26,8%	28,6%	30,4%	32,0%
	110	22,4%	24,6%	26,6%	28,6%	30,5%	32,4%	34,2%
	120	23,8%	26,1%	28,3%	30,4%	32,4%	34,4%	36,3%

[199] OECD (2021), *Effective Carbon Rates 2021 – Pricing Carbon Emissions Through Taxes and Emissions Trading*: https://www.oecd-ilibrary.org/taxation/effective-carbon-rates-2021_0e8e24f5-en
[200] Ibid.
[201] Ibid.

Table 15: Economic NPV Sensitivity

		NPV sensitivity						
		Change in emission reduction vs. central estimate						
		-30%	-20%	-10%	0%	10%	20%	30%
Carbon price (EUR/t)	10	(21,8)	(20,8)	(19,8)	(18,8)	(17,8)	(16,9)	(15,9)
	20	(14,9)	(12,9)	(10,9)	(9,0)	(7,0)	(5,0)	(3,0)
	30	(8,0)	(5,0)	(2,1)	0,9	3,9	6,8	9,8
	40	(1,1)	2,9	6,8	10,8	14,7	18,6	22,6
	50	5,8	10,8	15,7	20,6	25,5	30,5	35,4
	60	12,7	18,6	24,6	30,5	36,4	42,3	48,2
	70	19,6	26,5	33,4	40,3	47,2	54,1	61,0
	80	26,5	34,4	42,3	50,2	58,1	66,0	73,9
	90	33,4	42,3	51,2	60,1	68,9	77,8	86,7
	100	40,3	50,2	60,1	69,9	79,8	89,6	99,5
	110	47,2	58,1	68,9	79,8	90,6	101,5	112,3
	120	54,1	66,0	77,8	89,6	101,5	113,3	125,1

Other Effects Not Included in Economic IRR and NPV Estimates

224. The CATALI.5°T Initiative is expected to produce significant socio-economic co-benefits. However, given that the identities / sectors of the accelerated ventures will not be known until implementation of the CATALI.5°T Initiative is underway, the value of these co-benefits is very difficult to quantify in advance, unless heroic assumptions are made. Conservatively, therefore, the value of these co-benefits is not captured in the above estimates of economic IRR and NPV. These co-benefits, discussed in Section D.3, include:

- Employment creation during and after the CATALI.5°T Initiative implementation period. To the extent that the employees of the ventures accelerated are not already employed elsewhere and switching jobs, such employment creation would be a net contributor to economic growth in the concerned countries. Importantly, there would also be an increase in labour quality, formalisation of businesses and improvement in occupational health and safety practices, due to the ventures' compliance with rigorous E&S standards. The jobs created by the ventures are also likely to entail higher skill levels than jobs in the broader economy. Job creation effects would also extend to companies operating in the ventures' value chains. In Africa, the African Development Bank estimates that each year more than 10 million young people enter the workforce but only 3 million new jobs are created, leaving vast numbers unemployed or in unstable and informal employment.[202] The climate transition could become one of the drivers of job creation for Africa's young population in the coming decades, across different sectors and value chains, supporting the goal of promoting more diversified economies.

- Impact on health and livelihoods. Climate ventures can meaningfully contribute to the health and livelihoods of communities, for instance through food security (in the case of innovative agricultural ventures), energy savings and stability of energy supply, improved resource efficiency, reduced travel times and improved product reliability, depending on the nature of the climate solution.

- Climate change adaptation benefits. Accelerated ventures may produce significant adaptation co-benefits. Ventures that address water security through, for example, sustainable pumping or nature-based solutions could make farmers (users of water) more resilient. Ventures that implement off-grid renewable energy solutions would make communities more resilient to natural disasters that can affect the electricity grid. Energy access and affordability, access to reliable and safe drinking water, comfort and living conditions, agricultural productivity or sustainable buildings can enhance the adaptive capacity and resilience of vulnerable populations as they face the impacts of climate change.

- Pollution prevention. Recycling, sustainable agriculture and nature-based approaches, as well as many other solutions, are likely to result in a reduction in pollution, which, in turn, can have positive effects on health and livelihoods. (On a purely indicative basis, the OECD estimates that a 1µg/m^3 reduction in particle matter concentration in Europe could boost GDP by 0.8%).[203]

- Biodiversity conservation. Climate ventures in sectors such as agroforestry and ecosystem restoration can have a positive impact on the conservation of biodiversity. Significant research efforts have attempted to estimate the value of restored ecosystems and forests, in particular. Such value arises from multiple factors such as: avoided erosion, watershed protection, flood protection and associated insurance savings, availability of water resources, biodiversity habitat, pollination and tourism revenues. Estimates of the value of restored ecosystems are subject to a wide range of variables and are highly country-specific.[204]

- A range of other co-benefits can be envisaged, depending on the climate solution implemented and business model, including improved living conditions and opportunities for vulnerable persons (through low-emission transport or energy-efficiency building retrofits, for instance) and empowerment of women.

225. The presence of such a wide range of socio-economic co-benefits, not included in the estimate of economic IRR and NPV, underscores the conservative nature of the quantitative analysis.

D.6.3 Financial Analysis

226. A quantitative estimate of the level of concessionality of the pre-acceleration and acceleration grants is impossible, given the wide variety – in terms of sectors, business models and countries – of the ventures that will be pre-accelerated and accelerated. Please refer to Section B.5.2 for a detailed, albeit qualitative, analysis of programme concessionality.
227.

D.6.3 Financial Analysis

228. A quantitative estimate of the level of concessionality of the pre-acceleration and acceleration grants is impossible, given the wide variety – in terms of sectors, business models and countries – of the ventures that will be pre-accelerated and accelerated. Please refer to Section B.5.2 for a detailed, albeit qualitative, analysis of programme concessionality.

D.6.4 Best Available Technologies and Practices

229. The CATALI.5°T Initiative will be guided by market realities and will adopt a highly pragmatic approach to screening and selecting climate ventures for pre-acceleration and acceleration support. The objective will be to select the ventures with the most promising market prospects, as this is how climate mitigation impact will be achieved. The definition of 'best available technology' in this context will, therefore, be market-conditioned: a cutting-edge mobile app or drone technology may represent a good business in one particular sector or national market, but composting or recycling or restoring old bicycles – as examples of technologies that are not necessarily cutting-edge – may represent equally good business ideas in other market settings. The ventures supported by the CATALI.5°T Initiative will always be the 'best' in their own particular market contexts.

[202] IRENA and AfDB (2022), *Renewable Energy Market Analysis: Africa and Its Regions – A Summary for Policy Makers*: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Market_Africa_2022.pdf
[203] OECD (2020), *The Economic Cost of Air Pollution: Evidence from Europe*: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2019)54&docLanguage=En
[204] See, for instance, TEEB (2012), *Mainstreaming the Economics of Nature: A Synthesis of the Approach, Conclusions and Recommendations of TEEB:* http://www.teebweb.org/wp-content/uploads/Study%20and%20Reports/Reports/Synthesis%20report/TEEB%20Synthesis%20Report%202010.pdf

LOGICAL FRAMEWORK

E.1. Project/Programme Focus

☒ Reduced emissions (mitigation)

☐ Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	**Rating**		
Scale	At the time of this Funding Proposal formulation (mid-2022), both Latin America and West Africa have very under-developed climate venture sectors. Latin America in its entirety accounts for just 1.1% of climate VC investment, and West Africa less than 0.2%. Both regions contribute substantially more to global GHG emissions (Latin America ~8%, West Africa ~2%) and both are experiencing accelerating increases in GHG emissions. Commercially-viable opportunities to innovate, develop new business models and disrupt markets with alternative, low-emission goods and services are being missed.	Low	Paradigm shift would involve a shift away from current markets in Latin America and West Africa – which pay little attention to GHG emissions and in which incumbent firms have limited incentive to innovate – to markets characterised by nimble firms capable of rapid problem-solving and the ability to deliver new, low-emission products and services into the hands of customers at fast pace. This paradigm shift should be accomplished at limited risk to the economy as a whole and with minimal demands on already-tight (post-COVID) national public budgets.	The CATALI.5°T Initiative is conservatively projected to deliver $MtCO_2e$ of GCF-attributable emission reductions over 20 years, which would represent a significant step towards paradigm shift on GHG emissions. The Initiative's sector-agnostic approach and focus on leveraging growing climate VC interest in the two regions, accompanied by proactive support for ventures that (i) offer climate-resilience co-benefits and/or (ii) are female-led, will ensure inclusive impacts that span a broad swathe of each region's economy.
Replicability	In mature venture ecosystems in Europe and North America, climate entrepreneurs meet their funding needs in the early stages (pre-seed and seed) of venture development with a combination of their own personal assets, investments from family and friends, angel investors and grants from public programmes, allowing them to cross the 'Valley of Death' and	Low	If pathways for climate ventures to successfully access VC funding can be demonstrated, the approach could be further replicated across Latin America and West Africa, and across other countries and regions.	The design of the CATALI.5°T Initiative is flexible and allows for scaling to additional countries or regions at a later stage. By developing two slightly different regional programmes – one for emerging markets (Latin America) and one for frontier markets (West Africa) – the CATALI.5°T Initiative will address different regional development stages and business climates, allowing the lessons learned in these regions to inform interventions in emerging and frontier markets elsewhere.

	reach the point at which VC finance becomes available. This support ecosystem is, at best, under-developed in Latin America and West Africa. It is extremely challenging for entrepreneurs, and especially climate entrepreneurs, to position themselves to receive VC funding. Thus, even if VC investment flows to the two regions increase (which they are beginning to do, albeit from a low base), the scope for replication – for scaling-up the number of ventures successfully accessing VC finance – is limited.			
Sustainability	The sustainability of climate venture finance in Latin America and West Africa is questionable. While climate VC flows are increasing in both regions, and the interest of ecosystem actors – including entrepreneurs, pre-accelerators, accelerators and governments – is currently high, the foundations for sustained engagement are brittle: ventures struggle to make themselves 'VC-ready' (because of limited technical capacities, limited understanding of VC needs, limited pre-seed / seed finance and other barriers) and VC firms face high sourcing and due diligence costs in climate-related sectors and regional geographies that are new to them. Without support, the nascent climate venture sector in both regions may run out of momentum, with the result that commercially-viable emission reduction opportunities remain unaddressed.	Low	Paradigm shift would see the development of a self-sustaining ecosystem in which climate ventures – with the support of pre-accelerators, accelerators, mentors and an extensive network of peers – are able to successfully overcome the 'Valley of Death' and access VC finance to sustain their market growth. Successful role models would provide both entrepreneurs and VC firms with confidence that realisable commercial mitigation opportunities exist, leading to further rounds of climate innovation and investment.	The CATALI.5°T Initiative will target identified market barriers to create the enabling conditions for sustained market development. These barriers span technical capacities; financial capacities; tools, frameworks and other knowledge gaps; and networking and mentor support (including for women entrepreneurs). Climate ventures will be enabled to thrive in their respective market niches, thereby unblocking their climate mitigation potential.

E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

GCF Result Area	IRMF Indicator	Means of Verification (MoV)	Baseline	Target[205]		Assumptions / Note
				Mid-term (End of Year 3)	Final	
All Result Areas (i.e. total emission reductions)	Core 1: GHG emissions reduced, avoided or removed/sequestered	Application of the Climate Impact Forecast (CIF) tool[206] (with third-party expert validation) will take place 2 times: when a venture is accepted into the acceleration programme and – using updated data (updated emission factors, latest sales data, etc.) – in the final year of the venture's 3-year acceleration support. These CIF applications will provide ex ante estimates (and, for those ventures that are already engaged in market activity, actual estimates) of each venture's GHG impact. At the end of the CATALI.5°T Initiative (i.e. in Year 6), the MORSE model will be re-run using the updated venture-specific (CIF) data. Almost all supported ventures – particularly in Latin America – will by then have recorded at least some (1-3 years) post-acceleration programme experience (with some also having successfully raised	0 (In the absence of the CATALI.5°T Initiative, no climate ventures receive acceleration support)	38,200 tCO_2e	Programme implementation period (6 years): 230,000 tCO_2e Programme lifespan (20 years): 3,774,000 tCO_2e	GHG emission reductions for MRA1, MRA 2, MRA 3 and MRA 4 are calculated as the total emission reductions achieved by climate ventures that: • Are associated with each Result Area: i.e. energy ventures (MRA 1); transport ventures (MRA 2); buildings, cities, industries and appliances ventures (MRA 3); and AFOLU ventures (MRA 4). Ventures will be classified by archetype and Result Area when they start to receive programme support (with periodic checks thereafter to ensure that the classification remains valid as the ventures' business models potentially evolve); and • Receive support through the programme's regional acceleration programmes (30 such ventures in each region). Emission reductions are achieved through the use of goods / services sold to customers by the ventures; emission reductions are calculated on the basis of consumers' annual usage.[207] The mitigation context of each venture is unique: each venture sells a different product or service in a particular market context, in a particular country, in
MRA1 Energy generation and access	Core 1: GHG emissions reduced, avoided or removed/sequestered		0	25,600 tCO_2e	Programme implementation period (6 years): 147,500 tCO_2e Programme lifespan (20 years): 1,225,500 tCO_2e	
	SUPPLEMENTARY 1.2: INSTALLED ENERGY STOARAGE CAPACITY		0	TBD	TBD	
	Supplementary 1.3: Installed renewable energy capacity		0	TBD	TBD	
	Supplementary 1.4: Renewable energy generated		0	TBD	TBD	

[205] Target values refer to GCF-attributable emission reductions: i.e. emission reductions achieved by the CATALI.5°T Initiative after the GCF attribution coefficient has been applied. GCF-attributable emission reductions represent a fraction of the total emission reductions achieved by the CATALI.5°T Initiative. See Section D.1.1 for further details.
[206] https://impact-forecast.com/
[207] Product / service life-cycle emission reductions are annually averaged over the product / service lifespan.

MRA2 Low-emission transport	Core 1: GHG emissions reduced, avoided or removed/sequestered	Series A or equivalent financing). Re-running the MORSE model with 'actuals' in Year 6 will, therefore, provide an accurate update of expected post-CATALI.5°T Initiative mitigation performance. Ventures' sales data will be validated (to the extent possible) through provision to the Executing Entity of ventures' sales receipts and/or bank records	0	~0 tCO_2e[208]	Programme implementation period (6 years): ~0 tCO_2e Programme lifespan (20 years): ~0 tCO_2e	competition with (higher-emission) baseline alternative products / services. The CIF tool enables unique, very specific GHG mitigation estimates to be computed for each venture, incorporating (for example) Tier 2 and Tier 3 emission factors. Combined with (validated) market sales data, the result is extremely accurate GHG mitigation estimates. Achievement of the mid-term and final mitigation targets is subject to a number of factors, notably: Empirical venture survival rates that are aligned with ex ante expectations. Ventures' sales growth, which may be affected by macroeconomic conditions and exogenous shocks (e.g. COVID-related lock-downs). The allocation of emission reductions across the 4 Result Areas (and hence the values of the mid-term and final targets for each Result Area) has been informed by detailed MORSE modelling (see Section D.1.3) which, in turn, was informed by interviews and consultations with VC funds and other stakeholders active in Latin America and West Africa. However, the MORSE modelling should be interpreted as indicative rather than definitive: it is essentially a 'best guess' of climate impact achieved by a set of climate ventures whose identities / sectors are not known in advance. If the ex ante expectations of sectoral composition and
	Supplementary 1.5 Improved low-emission vehicle fuel economy		0	TBD	TBD	
MRA3 Buildings, cities, industries and appliances	Core 1: GHG emissions reduced, avoided or removed/sequestered		0	850 tCO_2e	Programme implementation period (6 years): 9,800 tCO_2e Programme lifespan (20 years): 323,250 tCO_2e	
	Supplementary 1.1: Annual energy savings		0	TBD	TBD	
MRA4 Forestry and land use	Core 1: GHG emissions reduced, avoided or removed/sequestered		0	11,600 tCO_2e	Programme implementation period (6 years): 2,225,250 tCO_2e Programme lifespan (20 years): 444,500 tCO_2e	

[208] The negligible mid-term and final GHG emission reduction estimates for transport should be considered with some caution. Annex 22e provides a detailed analysis. In brief, the negligible mitigation impact attributed to transport is partly: (i) a chance outcome in the MORSE model, due to the presence of 5 successful energy-sector ventures that serve to reduce the relative impact of other Result Areas; and (ii) attributable to poor coverage of transport in the underlying venture database that informs the MORSE model. In reality, the mitigation impact of the transport Result Area is expected to be significantly higher than that predicted by the MORSE model; this mitigation impact will be estimated with considerably greater accuracy during CATALI.5°T Initiative implementation (as the CIF tool will then be deployed to assess known ventures); and the current weaknesses of the MORSE model will be addressed by the CATALI.5°T Initiative during programme implementation (Sub-Activity 3.1.1.1).

						performance of the supported climate ventures are not met, the actual allocation of emission reductions across Result Areas may differ from expectation. This is particularly relevant for transport (see footnote). Targets for the Supplementary Indicators (1.1-1.5) will be set during programme implementation, when the identities (and hence technological / sectoral nature) of the supported climate ventures are known. Targets will be reported in the programme APRs. The Supplementary Indicators will be reported annually. GHG emission reductions will be reported as follows: - An ex-ante estimate of each venture's future mitigation impact will be generated using the CIF tool when each venture enters the acceleration programme. These ex-ante estimates will be reported to the GCF in the relevant Annual Performance Report (APR), on a venture-by-venture and aggregated basis (e.g. by Result Area, by archetype, by cohort, by region, etc.). - Where a venture generates sales during its participation in the acceleration programme, these sales will be collected, validated and stored on a quarterly basis by the relevant Executing Entity or local implementation partner. Using the per-functional-unit mitigation parameter generated by the CIF tool at the beginning of the venture's acceleration support, these sales data will be used to produce ex post emission reduction estimates. Such estimates will be generated on a quarterly basis (matching the frequency of sales data collection) and will be reported to the GCF on an annual basis, in APRs.

						- At the end of a venture's acceleration programme, the CIF tool will be re-run. As a result, the per-functional-unit mitigation parameter may be updated – e.g. to reflect more precise emission factors or new baseline conditions. Where relevant (i.e. where a venture has recorded sales during the acceleration programme and where it is felt appropriate to retrospectively apply the updated per-functional-unit mitigation parameter to these past sales), emission reduction estimates for the previous years will be updated using the new per-functional-unit mitigation parameter. These amendments will be reported to the GCF in the APR of the year in which the amendments are made.

E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the programme will contribute	Coverage
Core indicator 7: Degree to which GCF Investments contribute to market development/transformation at the sectoral, local, or national level	Both regions currently have very under-developed climate venture sectors. Latin America attracted just US$ 650 million of VC cleantech investment between 2013-2019. Brazil and Mexico together account for 84% of Latin American investment, meaning that the remaining 14 countries in the region collectively attracted barely US$ 100 million of cleantech investment. The entirety of Africa attracted just US$ 120 million of VC cleantech investment between 2013 and 2019, less than Hungary in 2019 alone. Moreover, 80% of this flowed to just 4 countries (Nigeria,	<u>Latin America</u> medium <u>West Africa</u> low	The central objective of the programme is to reduce GHG emissions through sectoral transformation – both: • Within the cleantech sector, through supporting climate ventures to grow and prosper; and • Within the sectors that span the 4 GCF mitigation areas (energy, transport, industry, consumer applicances, agriculture, etc.) in which the climate ventures will operate. Climate ventures will:	The target scenario will be achieved through technical assistance and financial assistance to targeted climate ventures that offer the potential to sell low-emission products or services at scale (and hence achieve considerable GHG mitigation impact), as well as through guiding – where market realities allow – early-stage ventures towards climate solutions that offer system-level climate impacts (e.g. avoiding the need for private passenger travel altogether, instead of 'just' reducing the emission	Multi-countries

	Kenya, Egypt and South Africa); in francophone West Africa, only Senegal and Côte d'Ivoire each received more than US$ 10 million. In both regions, the majority of cleantech investment is directed at large deals rather than at early-stage climate ventures. And, in both regions, cleantech represents a small minority of total VC investment, with sectors such as fintech and e-commerce being preferred. Although both regions are clearly struggling to kick-start vibrant, high-growth cleantech sectors, the context is different in each region. As a broad generalisation, the Latin America venture sector is more developed than that of West Africa, with more technical and financial support available to ventures. To describe the Latin American baseline as 'medium' is something of an exaggeration, but a distinction between the Latin American ('medium') and West African ('low') baselines is useful in this context.		• Disrupt existing markets and/or create new markets. • Generate direct emission reductions through the sale of low-emission goods and services. • Contribute to indirect emission reductions through replication effects (e.g. competitors emulating ventures' business strategies), the creation of role models for future entrepreneurs, the unlocking of future VC finance through real-world cleantech venture success stories, and through heightened consumer awareness and understanding.	factor of a particular form of private transport). Capacity building support to regional pre-accelerators / accelerators and to regionally-active VC firms, in combination with networking support for all actors, will help to create a self-sustaining cleantech investment ecosystem in both regions.	
Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	The cleantech sector is young. There is a widespread perception, shared by both entrepreneurs and investors in both Latin America and West Africa, that climate mitigation solutions are complex. This perception is hindering the development of the sector. The perception of complexity stems largely from the additional technical requirements associated with climate mitigation solutions: in	<u>Latin America</u> low <u>West Africa</u> low	The CATALI.5°T Initiative seeks to create a venture ecosystem that contains: (i) informed, motivated entrepreneurs (men and women) who are equipped with the knowledge and tools to build 'VC-ready' ventures; (ii) entrepreneur support organisations (ESOs, such as pre-accelerators and accelerators) that are able	The CATALI.5°T Initiative's knowledge management plan is provided in Annex 23a. Knowledge products to be created by the CATALI.5°T Initiative include (not exhaustive): (i) climathon reports that will be disseminated at Climate-KIC's Global Climathon Week, (ii) updated versions of the CIF and MORSE tools that	Multi-countries

	addition to all the (already-challenging) issues that a 'normal' venture must grapple with – such as design and manufacturing, marketing, finance, etc. – a climate venture and its investors must, in addition, contend with a host of concepts (baselines, emission factors, global warming potentials, leakage, MRV, etc.) that they may not be familiar with – and which their usual sources of support, such as mentors and pre-accelerators / accelerators – are unlikely to be familiar with either. A lack of case-studies, 'industry-standard' mitigation assessment methodologies and robust, transparent tools (and capacities to deploy these methodologies and tools) serve to: (i) limit entrepreneurs' ability to claim – and hence monetise – emission reductions; (ii) make the VC due diligence process unnecessarily cumbersome and time-consuming; and (iii) misallocate capital (as investments may flow to the 'wrong' ventures – those that do not offer the highest mitigation benefits.		to provide high-quality technical assistance to climate ventures in the context of VC needs; and (iii) VC firms with climate finance capabilities that are firmly embedded in their in-house ESG systems and practices. Moreover, (iv) all ecosystem actors will be able to quantify emission reductions potential (and ongoing mitigation performance) and climate resilience co-benefits using a standard set of robust, high-quality tools, thereby facilitating communication and knowedge exchange and reducing frictions to investment.	are calibrated for the 2 programme regions; (iii) venture climate impact assessments using the CIF tool; (iv) climate gender entrepreneurship toolkits for ESOs and ventures; and (v) ESG tools for ESOs and VC funds. All knowledge products will be made available online, free of charge, in every participating country and globally, thereby facilitating widespread diffusion of knowledge. Through this feedback loop, learning from the CATALI.5°T Initiative will be embedded into the way climate venture support programmes in Latin America, West Africa and beyond are designed and delivered. The language used in knowledge products will be inclusive of all genders and will showcase (where relevant) successful women entrepreneurs who can serve as examples and role models for other women.	

E.5. Project/programme specific indicators (project outcomes and outputs)

Project / programme results (outcomes / outputs)	Project / programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term (Year 3)	Final (Year 6)	

Cross-Component OUTCOME						
Outcome 1: Local climate technologies / solutions successfully permeate national and regional markets in Latin America and West Africa	Number of venture graduates from the CATALI.5°T Initiative's regional acceleration programmes that succeed in commercial fund-raising to rapidly grow their user / customer base in national and regional markets	Tec de Monterrey and IPED follow-up engagement with ventures for 12 months after graduation. Term sheets between ventures and venture investors	0 seed-stage ventures	8 ventures	24 ventures	Because of the rigorous selection process, the small number of selected ventures, and the intensive, continuous, one-on-one support provided to each venture (including grant support), it is assumed that all ventures graduating from the acceleration programme will actively engage in market-based activity (but with varying levels of success in the following years – please refer to Sections D.1 and D.6). As the purpose of the CATALI.5°T Initiative is to select, support and nurture the ventures that offer the greatest emissions reduction benefits, no targets will be set for women-led ventures being admitted into the regional acceleration programmes. Instead, competitive selection processes for the pre-acceleration and acceleration programmes will ultimately determine which ventures receive technical and financial assistance. Which ventures then go on to succeed in commercial fund-raising after graduating from the acceleration programmes is extremely difficult to predict in advance, and therefore attaching gender targets to such success is largely meaningless. However, support for women entrepreneurs permeates the CATALI.5°T Initiative, with the explicit intention of enabling women-led ventures: (i) to be sourced (i.e. to be set up and/or discovered); (ii) to be able to successfully compete for entry into the pre-acceleration and acceleration programmes; and (iii) to grow and prosper after graduation. The gender composition (male-led, female-led) of the ventures supported by the CATALI.5°T Initiative will be collected, recorded and reported to the GCF and other programme stakeholders.
	Total volume of finance raised by the accelerated ventures		0	Euro 13.2 million	Euro 35.8 million	Where a venture produces more than one product or service, the leveraged finance relates only to those goods and services ('climate products / services') that serve to reduce GHG emissions. Indicator data will be collected on a venture-by-venture basis and can therefore be analysed and reported according to need. For example, it will be possible to determine the amount of Series A finance leveraged by energy-related ventures in Latin America by Year 6, or the amount of debt finance
	Total volume of finance raised by the accelerated ventures, broken down by source:		0	TBD	TBD	

	• Private finance • Public finance					leveraged in West Africa, or the total amount of VC finance leveraged, etc. Financial and GHG impact modelling have been undertaken during preparation of the CATALI.5°T Initiative. As part of this modelling, assumptions (validated by regional stakeholders) have been made regarding the leverage potential of different types of financial instruments (convertible notes, Series A equity,loans, etc.) and the Result Area composition of the ventures in the regional acceleration programmes. The financial assumptions are provided in Annex 3a and the composition assumptions are provided in Annex 22c. However, these assumptions are subject to considerable uncertainty. While the leveraged finance totals for each region can be presented as mid-term and final targets with a degree of confidence, the precise means by which these totals are met (by which instruments, by what archetypes and Result Areas, etc.) is considered to be too uncertain to present as ex ante targets. Instead, the targets will be set as soon as possible during programme implementation, when there is sufficient clarity on the identities of the supported ventures. The data needed to inform each of the indicators will be collected from the outset of the CATALI.5°T Initiative; it will therefore be possible to track progress against the targets (once set) with ease, including retrospectively. Indicator data and targets will be communicated to the GCF through APRs.
	Total volume of finance raised by the accelerated ventures, broken down by instrument: • Convertible note / SAFE note[209] • VC Series A • VC Series B+ • Loan • Other (e.g. grant)		0	TBD	TBD	
	Total volume of finance raised by the accelerated ventures, broken down by GCF Result Area: • Energy generation and access • Low-emission transport • Buildings, cities, industries and appliances • Forestry and land-use		0	TBD	TBD	
	Total volume of finance raised by the accelerated ventures, broken down by: • Archetype		0	TBD	TBD	
	Total volume of finance raised by the accelerated		0	Country: TBD Region:	Country: TBD Region:	

[209] SAFE: Simple Agreement for Future Equity

	ventures, broken down by geography: • Country • Region (Latin America, West Africa)			• Latin America: Euro 11.4 million • West Africa: Euro 1.8 million	• Latin America: Euro 23.8 million • West Africa: Euro 13.4 million	
	Venture survival rate	Quarterly reports from ventures to acceleration programme Executing Entities (Tec de Monterrey in Latin America; IPED in West Africa)	0 seed-stage ventures	60 ventures	34 ventures	The venture survival rate will be recorded each quarter as a binomial variable: 'alive' (= the venture is still operating and doing business) or 'failed' (= the venture has ceased operating and is no longer selling its low-emission product / service). Because data will be collected for individual ventures, it can be analysed at various levels of aggregation – e.g. by archetype, GCF Result Area, region, etc. No gender-differentiated survival rates are presented as targets. This is because: (i) the CATALI.5°T Initiative will, of course, strive to achieve 100% survival rates: any shortfall from full survival (which, realistically, is to be expected given the risky and uncertain start-up environment) is an unfortunate event, not a targeted outcome; and (ii) when a venture fails, this will largely be because of factors outside of the programme's control: such lack of control will apply equally to male-led and female-led ventures, making any targets largely meaningless. The CATALI.5°T Initiative will keep a full record of venture failures, including gender-differentiated statistics: this will generate an invaluable source of empirical data on venture failures and possible gender dimensions of such failures.
	Total sales (number of functional units sold) per accelerated venture	Quarterly reports from ventures to acceleration programme Executing Entities (Tec de Monterrey in Latin America; IPED in West Africa)	0	Sales of functional units that are, across all accelerated ventures, consistent with the mitigation target of 38,200 tCO_2e	Sales of functional units that are, across all accelerated ventures, consistent with the mitigation target of 230,000 tCO_2e	The definition of a 'functional unit' varies between archetypes. For example, it might be the number of energy-efficient appliances sold, or rooftop PV units installed, or tonnes of compost produced, or hectares of low-emission agriculture applied (etc.). Functional units form the basis of emission reduction calculations in the CIF tool. Given their heterogeneity, presenting an aggregate number of functional units sold makes little sense as a target. Instead, the target is defined by the GHG mitigation impact that must be achieved by the appropriate mix (types, numbers) of functional units sold by the accelerated ventures. Sales data will be collected from the accelerated ventures on a quarterly basis by the Executing Entities responsible for the regional acceleration programmes – Tec de Monterrey in Latin

						America and IPED in West Africa – as part of their venture engagement processes. Indicator data will be collected on a venture basis and can therefore be analysed and reported according to need – for example, by archetype, Result Area, region, male-led ventures vs female-led ventures, etc. Ventures' individual growth rates (i.e. change in sales with respect to time) will be derived from the sales data. Because sales data will be collected on a quarterly basis, growth rates can also be derived on a quarterly basis. Because data will be collected for individual ventures, it can be analysed at various levels of aggregation – e.g. by archetype, GCF Result Area, region, male-led ventures vs female-led ventures, etc.
	Number of supported Entrepreneur Support Organisations (ESOs), broken down by: • Country	Workshop attendance sheets; climathon attendance sheets; online training attendance sheets	0	1 per participating country	1 per participating country	ESOs can include pre-accelerators, accelerators, VC firms, banks, consultancy firms, NGOs, philanthropic organisations, universities, government agencies, parastatals and others. An ESO is defined in this context as any organisation that provides direct technical or financial support to micro and small enterprises; this support might be holistic or confined to a particular aspect of venture operations (e.g. marketing, engineering, gender, ESG, etc.). For the purposes of this indicator, CATALI.5°T Initiative Executing Entities are excluded and local implementation partners are included. A participating country is defined as one that has supplied a No-Objection Letter to participate in the CATALI.5°T Initiative.
Regional Component 1: Latin America CATALI.5°T						
Output 1.1: Capacities of Executing Entities, ESOs and venture investors in Latin America are developed to boost climate ventures' impacts	Proportion of ESO and venture investor staff in Latin America who are coached in assessing venture climate impacts and co-benefits and, as a result of the coaching, confirm a very good understanding of the use and business case of such tools	Workshop / training session questionnaires	0	65% of ESO staff (with no significant gender skew: i.e. the gender composition of the trained staff will be approximately the same as the gender composition	75% of ESO staff (with no significant gender skew: i.e. the gender composition of the trained staff will be approximately the same as the gender composition	Proportions based on regional stakeholder experiences with past capacity building initiatives. ESOs can include pre-accelerators, accelerators, consultancy firms, NGOs, philanthropic organisations, universities, government agencies, parastatals and others. For gender and ESG, NGOs that specialise in these topics will also be supported. Venture investors include VC firms, impact investors, local banks with MSE-facing operations, foundations, etc.

				of the total ESO workforce)	of the total ESO workforce)	
	Number of ESOs and venture investors in Latin America whose staff benefit from training in gender equality and diversity for ventures and venture portfolios	Gender training attendance sheets	0	TBD (to include at least 60% of the EE's senior and middle management)	TBD (to include at least 80% of the EE's senior and middle management)	
	Number of ESOs and venture investors in Latin America whose staff benefit from training in applying an ESG framework that is compliant with international E&S standards to their own organisations as well as supported ventures	ESG training attendance sheets	0	TBD	TBD	
Output 1.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in Latin America generate innovative climate business ideas	Number of innovators and entrepreneurs who participate in climathons implemented in Latin America	Climathon attendance sheets	0	TBD	TBD	1 climathon will be held in each participating country per year. Climathons will be attended by a range of stakeholders, including public sectors, ESOs, academics, NGOs, software developers, etc. – not just innovators and entrepeneurs. The estimated proportion of attendees who are innovators / entrepreneurs is based on past Climate-KIC climathons, as well as expectations of regional stakeholders. Mid-term and final target number of attendees can be only determined once the number of climathons is known which depends on the number of Latin American countries which express interest in participation in this programme and provide a NoL.
	Number of climate business solutions ideated during climathons in Latin America	Climathon reports	0	TBD	TBD	
	Proportion of climathon keynote speakers and jury members in Latin America who are women	Climathon reports	0	30%	30%	

	Number of institutions with an explicit gender-oriented mandate (public sector, parastatal, NGO and/or private sector) that participate in each climathon in Latin America	Climathon attendance sheets	0	2	2	
Regional Component 2: West Africa CATALI.5°T						
Output 2.1: Capacities of Executing Entities, ESOs and venture investors in West Africa are developed to boost climate ventures' impacts	Proportion of ESO and venture investor staff in West Africa who are coached in assessing venture climate impacts and co-benefits and, as a result of the coaching, confirm a very good understanding of the use and business case of such tools	Workshop / training session questionnaires	0	55% of ESO staff (with no significant gender skew: i.e. the gender composition of the trained staff will be approximatel y the same as the gender composition of the total ESO workforce)	70% of ESO staff (with no significant gender skew: i.e. the gender composition of the trained staff will be approximatel y the same as the gender composition of the total ESO workforce)	Proportions based on regional stakeholder experiences with past capacity building initiatives. ESOs can include pre-accelerators, accelerators, consultancy firms, NGOs, philanthropic organisations, universities, government agencies, parastatals and others, including local implementation partners. For gender and ESG, NGOs that specialise in these topics will also be supported. Venture investors include VC firms, impact investors, local banks with MSE-facing operations, foundations, etc.
	Number of ESOs and venture investors in West Africa whose staff benefit from training in gender equality and diversity for ventures and venture portfolios	Gender training attendance sheets	0	TBD (to include at least 60% of EEs' senior and middle management)	TBD (to include at least 80% of EEs' senior and middle management)	
	Number of ESOs and venture investors in West Africa whose staff benefit from training	ESG training attendance sheets	0	TBD	TBD	

	in applying an ESG framework that is compliant with international E&S standards to their own organisations as well as supported ventures					
Output 2.2: Inclusive and diverse local communities of climate entrepreneurs and innovators in West Africa generate innovative climate business ideas	Number of innovators and entrepreneurs who participate in climathons implemented in West Africa	Climathon attendance sheets	0	TBD	TBD	1 climathon will be held in each participating country per year. Climathons will be attended by a range of stakeholders, including public sectors, ESOs, academics, NGOs, software developers, etc. – not just innovators and entrepeneurs. The estimated proportion of attendees who are innovators / entrepreneurs is based on past Climate-KIC climathons, as well as expectations of regional stakeholders. Mid-term and final target number of attendees can be only determined once the number of climathons is known which depends on the number of West African countries which express interest in participation in this programme and provide a NoL.
	Number of climate business solutions ideated during climathons in West Africa	Climathon reports	0	TBD	TBD	
	Proportion of climathon keynote speakers and jury members in West Africa who are women	Climathon reports	0	30%	30%	
	Number of institutions with an explicit gender-oriented mandate (public sector, parastatal, NGO and/or private sector) that participate in each climathon in West Africa	Climathon attendance sheets	0	2	2	
Component 3: CATALI.5°T Trans-Regional Advisory, Capacity & Knowledge Support (TRACKS)						
Output 3.1: Capacities of Executing Entities, selected ESOs and venture investors in Latin America and	Proportion of ESO and venture investor staff in Latin America and West Africa who are coached in	Workshop / training session questionnaires	0	60% of ESO staff (with no significant gender skew:	73% of ESO staff (with no significant gender skew:	Proportions based on regional stakeholder experiences with past capacity building initiatives. ESOs can include pre-accelerators, accelerators, consultancy firms, NGOs, philanthropic organisations, universities, government agencies, parastatals and others, including local

West Africa are developed to boost climate ventures' impacts	assessing venture climate impacts and co-benefits and, as a result of the coaching, confirm a very good understanding of the use and business case of such tools			i.e. the gender composition of the trained staff will be approximately the same as the gender composition of the total ESO workforce)	i.e. the gender composition of the trained staff will be approximately the same as the gender composition of the total ESO workforce)	implementation partners. For gender and ESG, NGOs that specialise in these topics will also be supported. Venture investors include VC firms, impact investors, local banks with MSE-facing operations, foundations, etc.
	Number of ESOs and venture investors in Latin America and West Africa whose staff benefit from training in gender equality and diversity for ventures and venture portfolios	Gender training attendance sheets	0	TBD (to include at least 60% of EEs' senior and middle management)	TBD (to include at least 80% of EEs' senior and middle management)	
	Number of ESOs and venture investors in Latin America and West Africa whose staff benefit from training in applying an ESG framework that is compliant with international E&S standards to their own organisations as well as supported ventures	ESG training attendance sheets	0	TBD	TBD	
Project/programme co-benefit indicators						
Co-benefit 1: Creation of green jobs	Number of additional full-time jobs (employees) created by climate ventures that are graduates of the regional	Quarterly reports from ventures to acceleration programme Executing Entities (Tec de Monterrey in Latin America;	0	TBD	TBD	Green jobs are defined as: (i) full-time positions (minimum of 35 hours' work per week); (ii) employees of the ventures (i.e. excluding consultants and contractors); and (iii) additional jobs created during the implementation period of the CATALI.5°T Initiative (i.e. net of any jobs that already existed when a venture joined the acceleration programme).

	CATALI.5°T acceleration programmes in Latin America and West Africa, broken down by: • Formal sector • Informal sector	IPED in West Africa)				Job creation by early-stage ventures is complex, subject to various unknowns, including the national economic context, venture failure and growth rates, the sectoral and technological context, etc.[210] Mid-term and final targets will be set during programme implementation, as soon as the national and sectoral profiles of the accelerated ventures are known with sufficient detail to be able to develop meaningful job estimates. Because of these uncertainties, no gender-related targets will be set. However, the CATALI.5°T Initiative will monitor job creation at the individual venture level, which will enable gender-differentiated statistics to be generated: (i) job creation by male-led ventures and female-led ventures; and (ii) the gender composition of the jobs created. This will provide an invaluable source of empirical data on green job creation and possible gender dimensions of such job creation.
Co-benefit 2: Enhanced climate resilience	Number of climate ventures that are graduates of the regional CATALI.5°T acceleration programmes in Latin America and West Africa and whose products / services are actively providing climate resilience co-benefits to consumers	Climate resilience assessments of accelerated ventures, undertaken by Climate-KIC and (later) by Tec de Monterrey (Latin America) and IPED (West Africa)	0 ventures	5% (3 ventures)	10% (6 ventures)	Climate resilience of good / services will be assessed and quantified by tools developed and utilised by the CATALI.5°T Initiative: i.e. resilience co-benefits will be assessed in a standardised way across climate ventures. Climate resilience must contribute to one or more of the GCF adaptation Result Areas. The resilience co-benefit must, in this context, be considered substantive. Many goods / services can be said to offer climate adaptation co-benefits, but these co-benefits may be negligible in magnitude or indirect in terms of causality. To count towards the target, the resilience co-benefit of a good / service must be direct and must achieve a minimum score using a standardised assessment methodology. This threshold score will be determined (by GIZ and Climate-KIC) after the CATALI.5°T Initiative resilience toolkit has been developed and calibrated. The mid-term and final targets assume that half of the accelerated climate ventures that are actively selling low-emission goods / services at those times are offering goods / services with substantive resilience co-benefits. This fraction has been estimated on the basis of consultations with regional stakeholders, including pre-accelerators / accelerators and VC firms.

[210] For example, see: Harvard Business Review (2016), *Do Start-Ups Really Create Lots of Good Jobs?*: https://hbr.org/2016/06/do-startups-really-create-lots-of-good-jobs

						Indicator data will be collected on a venture basis and can therefore be analysed and reported according to need – for example, by archetype, Result Area, region, male-led ventures vs female-led ventures, etc.
Co-benefit 3: Enhanced inclusivity in climate entrepreneurialism	Proportion of female entrepreneurs supported by the CATALI.5°T Initiative	Workshop attendance sheets Climathon attendance sheets Selection Committee records for ventures accepted into the pre-acceleration and acceleration programmes	0 ventures	33%	33%	The gender targets apply to entrepreneurs who receive direct support from the CATALI.5°T Initiative: they receive capacity building support, they actively participate in a climathon or they are inducted into the pre-acceleration or acceleration programmes. Less direct support, such as being reached by CATALI.5°T Initiative awareness-raising or media outreach, is not included. Given the gender imbalance evident in the cleantech / venture sector in Latin America and West Africa, the mid-term and final targets are regarded as ambitious. Based on past experience, the Executing Entity responsible for organising the climathons, Climate-KIC, estimates the number of participants per climathon per year per country to be approximately 100.

E.6. Project/programme activities and deliverables

Activities	Description	Sub-Activities	Deliverables
Output 1.1: Capacities of Executing Entities, ESOs and venture investors in Latin America are developed to boost climate ventures' impacts			
Activity 1.1.1: Capacity-building of Executing Entities, ESOs and venture investors in Latin America	At the start of Output 2.1 in 2023, climate advisory services (climate impact potential assessments, paradigm shift and systems transformation potential assessments, and climate resilience potential assessments) and gender-climate entrepreneurship and ESG advisory services will be delivered by staff of the Executing Entity Climate-KIC, as well as its delivery partners. In 2024 and 2025, however, these services will be increasingly delivered by the staff of Tec de Monterrey and by local consultants. To facilitate this transition, Climate-KIC will provide comprehensive capacity-building of Tec de Monterrey and associated consultants in 2023 to be able to apply the climate and gender tools and frameworks. GIZ will also develop the capacities of Tec de Monterrey to comply with the CATALI.5°T Initiative's Gender Action	Sub-Activity 1.1.1.1: Climate mitigation impact assessment Sub-Activity 1.1.1.2: Climate resilience co-benefits assessment Sub-Activity 1.1.1.3: Paradigm shift and systems transformation potential Sub-Activity 1.1.1.4: Gender equality and diversity Sub-Activity 1.1.1.5: ESG frameworks	• 2 test-run workshops on updated CIF and MORSE tools are held in Latin America. • A training programme for Tec de Monterrey staff as well as other ESOs, venture investor staff and associated consultants, consisting of at least 5 stand-alone training sessions / workshops, is implemented in Latin America to cover the tools and frameworks utilised by the CATALI.5°T Initiative (e.g. CIF, transformation potential, etc.). • A 1-day workshop is held to develop a learning framework and a communications strategy of Tec de Monterrey. • An annual climate impact report is published to showcase ongoing CATALI.5°T Initiative achievements. • Communications and outreach material is developed by Tec de Monterrey • A longitudinal study of Tec de Monterrey gender capacity and improvement is implemented, with the results / lessons learned published.

	Plan (GAP) and Environmental and Social Safeguards Framework (ESMF), additionally incorporating the latest ESG developments in venture capital.		
Output 1.2: Inclusive and diverse local communities of climate entrepreneurs in Latin America generate innovative climate business ideas			
Activity 1.2.1: Community-building and ideation activities in Latin America	To source and develop early ideas for climate ventures and to ensure a large number of high-quality applications to the pre-acceleration programmes, the local delivery partners of the pre-acceleration programme will run climathons – community-building and ideation events. Climathons will be promoted within each country through the local delivery partner's existing stakeholder network (social media, alumni, local partners, etc.). Calls for participation in local climathons will be actively promoted in women's networks and among entrepreneurs with backgrounds usually under-represented in start-up and innovation programmes (such as entrepreneurs living in rural areas). Following their participation in the climathons, (potential) entrepreneurs will be invited to join an open digital community for advancing women and diversity in climate entrepreneurship in Latin America.	Sub-Activity 1.2.1.1: Latin America climathons Sub-Activity 1.2.1.2: Open digital network for promoting women and diversity in climate entrepreneurship in Latin America	• 1 climathon is held in each participating country in Years 1-3 of CATALI.5°T Initiative implementation, synchronised (where possible) with Global Climathon Week. • Climathon participants are inducted into the global Climathon Network. • The regional digital network for promoting women and diversity in Latin American climate entrepreneurship is established to connect like-minded entrepreneurs and share knowledge.
Output 1.3: Selected ventures in Latin America have launched their climate products in local markets			

Activity 1.3.1: Latin America climate venture pre-acceleration programme	The Latin America pre-acceleration programme will support climate ventures at the pre-seed funding stage to develop minimum viable climate products or services and to be ready to enter local / regional markets. The programme will be implemented on a cohort basis, with 4 cohorts over 36 months.
	
	The technical assistance will encompass business development, climate impact, gender and ESG.
	
	In total, the pre-acceleration programme will support 60 climate ventures.
		Sub-Activity 1.3.1.1: Call for applications and venture selection
		
		Sub-Activity 1.3.1.2: Pre-acceleration programme
		
		Sub-Activity 1.3.1.3: Pre-Acceleration programme: straight grants
			• 60 climate entrepreneurs / ventures are admitted pre-acceleration programme (15 per cohort), subject to competitive entry on the basis of scored criteria. They will benefit from
			  • a combination of online training (business, climate, gender, E&S), mentoring and 2 cohort workshops.
			  • an in-depth climate mitigation assessment,
			  • one-to-one coaching
			  • and grant payments to cover pre-agreed business / climate costs.

Output 1.4: Selected climate ventures in Latin America with MVPs in local markets are empowered to rapidly scale their business and climate impact			
Activity 1.4.1: Latin America climate venture acceleration programme	The Latin America acceleration programme aims to achieve the commercial investment readiness of 30 Latin American climate ventures over 3 years, with each venture benefiting from 10 months of acceleration support. The acceleration programme will provide comprehensive technical assistance –related to business development, climate impact, gender and ESG – and	Sub-Activity 1.4.1.1: Call for applications and venture selection Sub-Activity 1.4.1.2: Acceleration programme - technical assistance	• Approximately 60 climate ventures (approximately 20 per cohort) are assessed for entry into the acceleration programme. • 30 climate ventures (approximately 10 per cohort) are accepted into the acceleration programme (1 cohort per year for Years 1-3 of CATALI.5°T Initiative implementation), having successfully passed a highly selective assessment.

	repayable grant funding of EUR 100,000 (on average) per venture. Unlike the acceleration programme in West Africa (Activity 2.4.1), the Latin America acceleration programme will be implemented on a cohort basis (and not on a rolling, venture-by-venture basis): 3 cohorts of 10 ventures over 36 months.	Sub-Activity 1.4.1.3: Acceleration programme - repayable grants	• At the beginning of the acceleration programme, each of the 30 ventures will develop an individual growth and impact plan and have to pass a due diligence to receive a repayable acceleration grant. • The grant repayment will be triggered in two circumstances: (i) when a venture achieves annual revenues of at least USD 1,000,000, the grant will be subsequently repaid in quarterly instalments equivalent of 3% of quarterly revenues; (ii) when a venture closes a funding round of more than USD 5,000,000, in which case the grant (or any amount yet to be repaid under the previous point (i)) will be repaid in a bullet payment for the outstanding amount.
Output 2.1: Capacities of Executing Entities, ESOs and venture investors in West Africa are developed to boost climate ventures' impacts			
Activity 2.1.1: Capacity-building of Executing Entities, ESOs and venture investors in West Africa	At the start of Output 2.1 in 2023, climate advisory services (climate impact potential assessments, paradigm shift and systems transformation potential assessments, and climate resilience potential assessments) and gender-climate entrepreneurship and ESG advisory services will be delivered by staff of the Executing Entity Climate-KIC, as well as its delivery partners. In 2024 and 2025, however, these services will be increasingly delivered by the staff of IPED and Impact Hub Abidjan (both Executing Entities) and associated local delivery partners. To facilitate this transition, Climate-KIC will provide comprehensive capacity-building of IPED, Impact Hub Abidjan and associated delivery partners in 2023 to be able to apply the climate and gender tools and frameworks. GIZ will also develop the capacities of IPED, Impact Hub Adidjan and local implementation partners to comply with the CATALI.5°T Initiative's Gender Action Plan (GAP) and Environmental and Social Safeguards Framework (ESMF), additionally incorporating the latest ESG developments in venture capital.	Sub-Activity 2.1.1.1: Climate mitigation impact assessment Sub-Activity 2.1.1.2: Climate resilience co-benefits assessment Sub-Activity 2.1.1.3: Paradigm shift and systems transformation potential Sub-Activity 2.1.1.4: Gender equality and diversity Sub-Activity 2.1.1.5: ESG frameworks	• 2 test-run workshops on updated CIF and MORSE tools are held in West Africa. • A training programme for Impact Hub Abidjan, IPED and local implementation partner staff as well as other ESOs, venture investor staff and associated consultants, consisting of at least 5 stand-alone training sessions / workshops, is implemented in West Africa to cover the tools and frameworks utilised by the CATALI.5°T Initiative (e.g. CIF, transformation potential, etc.). • A 1-day workshop is held to develop a learning framework and a communications strategy for Impact Hub Abidjan and IPED. • An annual climate impact report is published to showcase ongoing CATALI.5°T Initiative achievements. • Communications and outreach material is developed by Impact Hub Abidjan and IPED • A longitudinal study of Impact Hub Abidjan and IPED gender capacities and improvement is implemented.
Output 2.2: Inclusive and diverse local communities of climate entrepreneurs in West Africa generate innovative climate business ideas			
Activity 2.2.1: Community-building and ideation	To source and develop early ideas for climate ventures and to ensure a large number of high-quality applications to the pre-acceleration programme, the local implementation partners of the pre-acceleration	Sub-Activity 2.2.1.1: West Africa climathons	• 1 climathon is held in each participating country in Years 1-3 of CATALI.5°T Initiative implementation, synchronised (where possible) with Global Climathon Week.

activities in West Africa	programme will run climathons – community-building and ideation events. Climathons will be promoted within each country through the local delivery partner's existing stakeholder network (social media, alumni, local partners, the Impact Hub Network, etc.). Calls for participation in local climathons will be actively promoted in women's networks and among entrepreneurs with backgrounds usually under-represented in start-up and innovation programmes (such as entrepreneurs living in rural areas). Following their participation in the climathons, (potential) entrepreneurs will be invited to join an open digital community for advancing women and diversity in climate entrepreneurship in West Africa.	Sub-Activity 2.2.1.2: Open digital network for promoting women and diversity in climate entrepreneurship in West Africa	• Climathon participants are inducted into the global Climathon Network. • The regional digital network for promoting women and diversity in West African climate entrepreneurship is established to connect like-minded entrepreneurs and share knowledge.
Output 2.3: Selected ventures in West Africa have launched their climate products in local markets			
Activity 2.3.1: West Africa climate venture pre-acceleration programme	The West Africa pre-acceleration programme will support climate ventures at the pre-seed funding stage to develop minimum viable climate products or services and to be ready to enter local / regional markets. The programme will be implemented on a cohort basis, with 4 cohorts over 36 months. For each cohort, the pre-acceleration programme will be implemented in two phases: • Phase 1: 20 climate ventures will be provided with technical assistance over a period of 6 months. • Phase 2: 15 climate ventures from Phase 1 will be selected for 4 months of additional one-on-one coaching, as well as each receiving a EUR 15,000 grant to cover pre-agreed expenses. The technical assistance will encompass business development, climate impact, gender and ESG. In total, the pre-acceleration programme will support 80 Phase 1 climate ventures and 60 ventures that complete both Phase 1 and Phase 2.	Sub-Activity 2.3.1.1: Call for applications and Phase 1 venture selection Sub-Activity 2.3.1.2: Pre-acceleration programme – Phase 1 Sub-Activity 2.3.1.3: Phase 2 venture selection Sub-Activity 2.3.1.4: Pre-acceleration programme – Phase 2	• Approximately 160 applicant climate entrepreneurs / ventures are shortlisted for entry into the pre-acceleration programme (40 per cohort). • 80 climate entrepreneurs / ventures are admitted into Phase 1 of the pre-acceleration programme (20 per cohort), subject to competitive entry on the basis of scored criteria. • 80 climate entrepreneurs / ventures (20 per cohort) benefit from a combination of online training (business, climate, gender, E&S), mentoring and 2 cohort workshops. • 60 climate entrepreneurs / ventures are admitted into Phase 2 of the pre-acceleration programme (15 per cohort), subject to competitive entry on the basis of scored criteria. • 60 climate entrepreneurs / ventures (15 per cohort) benefit from an in-depth climate mitigation assessment, one-to-one coaching and grant payments to cover pre-agreed business / climate costs.
Output 2.4: Selected climate ventures in West Africa with MVPs in local markets are empowered to rapidly scale their business and climate impact			
Activity 2.4.1: West Africa climate venture acceleration programme	The West Africa acceleration programme aims to achieve the commercial investment readiness of 30 West African climate ventures over 6 years, with each venture benefiting from 3 years of acceleration support. The acceleration programme will provide comprehensive technical assistance –related to business development,	Sub-Activity 2.4.1.1: Venture screening and selection Sub-Activity 2.4.1.2: Acceleration programme – repayable grants	• Approximately 60 climate ventures (approximately 20 per year for 3 years) are assessed for entry into the acceleration programme. • 30 climate ventures (approximately 10 per year for 3 years) are accepted into the acceleration programme, having successfully passed first assessment, a mandate-fit check and due diligence.

	climate impact, gender and ESG – and repayable grant funding of EUR 100,000 (on average) per venture. Unlike the acceleration programme in Latin America (Activity 1.4.1), the West Africa acceleration programme will be implemented on a rolling, venture-by-venture basis (and not a cohort basis). Venture screening and selection will occur continuously in the first 3 years of the West Africa acceleration programme.	Sub-Activity 2.4.1.3: Acceleration programme – technical assistance	• Tailor-made Value Creation Plans are co-developed (venture and IPED) for 30 climate ventures. • Repayable acceleration grants are issued to 30 climate ventures to enable them to accelerate market and product development in the context of the ventures' Value Creation Plans. • Grant repayment is triggered by a milestone associated with each venture.
Output 3.1: CATALI.5°T Trans-Regional Advisory, Capacity & Knowledge Support (TRACKS)			
Activity 3.1.1: Climate impact and co-benefits assessment	Climate impact' must be embedded in the way the pre-acceleration and acceleration programmes in Latin America and West Africa are designed and delivered, and the way lessons are learned from them. Most venture ecosystem stakeholders (e.g. pre-accelerators, accelerators, VCs and ventures themselves) in Latin America and West Africa have limited knowledge of climate innovation to fully understand and address these challenges. Advisory, capacity-building and knowledge support activities under Activity 3.1.1 will, therefore, allow stakeholders to gain the capabilities to: • Assess the climate impact potential of climate ventures: measure, track and validate ventures' contributions to emission reductions / carbon sequestration, as well as – where relevant – their climate adaptation co-benefits. • Identify and support ventures with the most climate-transformative potential: to channel more support to ventures that have the potential to be innovative and disruptive in the target market, thereby catalysing genuine rupture ('paradigm shift') with respect to business-as-usual practices. • Shift mind-sets: arm entrepreneurs with the ability to apply the single-minded focus they need to scale-up their climate solutions, but also to understand where their solution fits into the bigger system/picture.	Sub-Activity 3.1.1.1: Climate mitigation impact assessment Sub-Activity 3.1.1.2: Climate resilience co-benefits assessment Sub-Activity 3.1.1.3: Paradigm shift and systems transformation potential	• Tools are developed, including updated, regionally-calibrated versions of the CIF and MORSE tools; climate resilience assessment tools and methodologies, accompanied by case-studies and training materials; and transformation potential assessment tools. • 4 test-run workshops on updated CIF and MORSE tools are held in the 2 CATALI.5°T Initiative regions. • A training programme for Executing Entities' staff, as well as local implementation partners, other ESOs, venture investor staff and associated consultants, consisting of at least 10 stand-alone training sessions / workshops, is implemented in Latin America and West Africa to cover the tools and frameworks utilised by the CATALI.5°T Initiative. • Bootcamps are held for pre-acceleration ventures on practical application of climate resilience tools and deep-dive training is provided on priority topics for acceleration ventures. • Two 1-day workshops are held to develop a learning framework and a communications strategy for the Executing Entities. • An annual climate impact report is published to showcase ongoing CATALI.5°T Initiative achievements. • Communications and outreach material is developed by Executing Entities
Activity 3.1.2: Gender equality and diversity – implementing the CATALI.5°T Initiative Gender Action Plan (GAP)	Activity 3.1.2 provides actionable and practical guidance to programme Executing Entities, local implementation partners, climate ventures and other ESOs on how they can integrate gender equity interventions, become more gender-smart and enhance diversity in climate entrepreneurship.	Sub-Activity 3.1.2.1: Gender equality and diversity	• 2 gender climate entrepreneurship toolkits are developed – 1 for 'enablers' (Executing Entities, local implementation partners and ESOs) and 1 for ventures. • Bespoke gender-climate training modules are designed and provided (based on demand from partners) to zoom-in on specific gender-related topics.

			• A longitudinal study of Executing Entities and supported ventures (in the pre-acceleration and acceleration programmes) is implemented to track gender capacities and improvement, with the results / lessons learned published.
Activity 3.1.3: ESG frameworks – implementing the CATALI.5°T Initiative ESMF	To facilitate the Executing Entities' and local implementation partners' engagement with CATALI.5°T Initiative implementation, to strengthen their advisory roles vis-à-vis supported climate ventures in the pre-acceleration and acceleration programmes, and to build post-Initiative sustainability (such that these institutions can continue to promote high-grade E&S standards in the context of future climate ventures), Activity 3.1.3 will provide capacity building for the regional Executing Entities and local implementation partners. Specific needs for capacity building will be defined as the CATALI.5°T Initiative progresses and will, to an extent, be shaped by the types of climate ventures (sectors, technologies, geographies) that are admitted into the pre-acceleration and acceleration programmes – and, hence, what types of E&S issues the Executing Entities and local implementation partners are exposed to. The CATALI.5°T Initiative will also foster the integration of ESG by: (i) supporting the regional Executing Entities and local implementation partners to develop the internal capacities needed to guide and assist supported climate ventures in becoming 'ESG-ready'; and (ii) supporting the two regional VC communities to develop the ESG understanding, screening and assessment capabilities, and tool and methodology use increasingly expected of them by ventures and by other ecosystem actors.	Sub-Activity 3.1.3.1: ESG frameworks	• A comprehensive, first-of-its-kind toolkit is designed to equip pre-accelerators, accelerators and VCs with practical resources to start and sustain their ESG integration (e.g. ESG due diligence material and portfolio support) in a co-production effort. • The toolkit is tested on a cohort of CATALI.5°T Initiative partners and is revised based on their feedback. • A training course (online or in-person) is designed and provided, consisting of 6 interactive sessions on ESG-topics (including the toolkit) and based on internationally-informed best practices and co-production. • The training curriculum and materials are tested on a cohort of CATALI.5°T Initiative partners and are revised based on their feedback. • A training-of-trainers plan to deliver the training to the full range of CATALI.5°T Initiative partners is developed and implemented.

E.7. Monitoring, reporting and evaluation arrangements

E.7.1 Monitoring, Reporting and Evaluation Arrangements

226. Monitoring, reporting and evaluation arrangements (in addition to ESMP and GAP monitoring) will comply with the relevant GCF policies, as stipulated in the AMA, FAA and programme-related Financing Agreements and Implementation Agreements with Executing Entities and Implementation Partners, which Executing Entities will extend to sub-grantees.

227. The CATALI.5°T Initiative will apply a customised results-based Monitoring and Evaluation (M&E) system. The system will be based on:
    - GIZ Standard Operating Procedures ('GIZ's evaluation policy – principles, guidelines and requirements').
    - The CATALI.5°T Initiative logical framework.

- The CATALI.5°T Initiative implementation schedule.
- Requirements of the GCF's Annual Performance Report.
- Procedures and requirements of programme partners and stakeholders.

228. The M&E system will track CATALI.5°T Initiative Outputs, Activities, Sub-Activities and Impacts, as well as associated financial flows, across all components. The overall responsibility and oversight for M&E and reporting will lie with the GCF AE Unit of GIZ head office. The GIZ AE Unit will coordinate with the 3 CATALI.5°T Initiative Management Units – Latin America (Component 1), consisting of Climate-KIC, GIZ and Tec de Monterrey; West Africa (Component 2), consisting of GIZ, Impact Hub Abidjan and IPED; and trans-regional (Component 3), consisting of GIZ Executing Entity – to carry out the M&E operations.

229. The budget for implementing M&E measures is presented separately in the Programme Budget (Annex 4a) and is outlined in the Monitoring and Evaluation Plan (Annex 11a).

Recruitment of M&E staff

230. Immediately when the CATALI.5°T Initiative commences, GIZ's GCF AE Unit at head office in Germany will make available one expert to oversee, coordinate and manage the programme M&E and reporting routines. He/she will cooperate closely with the 3 CATALI.5°T Initiative Management Units and GIZ Executing Entity staff to coordinate the implementation of the CATALI.5°T Initiative's M&E system. As soon as GCF proceeds become available in Latin America and West Africa, the regional Management Units will recruit one full-time M&E specialist.

Independent monitoring and evaluation studies

231. GIZ's AE unit will initiate an **interim evaluation** in Year 3 of the CATALI.5°T Initiative (or at any time that GIZ, the NDAs and/or the Global Advisory Committee (GAC) consider necessary). GIZ will competitively select and assign an independent consultant for this task. The Interim Evaluation will duly involve CATALI.5°T Initiative stakeholders, including target groups, beneficiaries and contributing partners. The Interim Evaluation will include:

    - A review of the institutional, administrative, organisational, environmental, social, economic, technical and financial aspects of the CATALI.5°T Initiative based on the assumptions and risks included in the design (among others, as specified in the Funding Proposal and the Regional Feasibility Studies) and M&E system.
    - A review of covenants to assess whether they are still relevant or need to be changed or waived due to altered conditions.
    - A review of the viability of remaining planned impacts.
    - An assessment of the need to restructure or reformulate the CATALI.5°T Initiative and the effects of such restructuring on the Initiative's objective and long-term goals.

    GIZ's AE Unit will make available an Interim Evaluation report to the GCF Secretariat and CATALI.5°T Initiative stakeholders.

232. **Final evaluation:** In due time before the completion of the CATALI.5°T Initiative, GIZ's AE Unit will initiate a programme completion mission, in which the implementation of the CATALI.5°T Initiative based on the financing and implementation agreements, the delivery of outputs and the achievement of

CATALI.5°T Initiative targets will be evaluated. The mission will duly involve CATALI.5°T Initiative stakeholders, including target groups, beneficiaries and contributing partners. At the time of the CATALI.5°T Initiative's physical completion and commissioning, and before the expiry of the guarantee period, GIZ's AE Unit will make available a final report to the GCF Secretariat and CATALI.5°T Initiative stakeholders.

233. **Interim evaluation and final evaluation**: GIZ evaluations are carried out by GIZs' independent evaluation unit. This unit is steered by a corporate unit that is separate from operational business and reports directly to the Management Board. Moreover, evaluations are conducted with the support of external evaluators. GIZ applies the 'Evaluation criteria for German bilateral development cooperation' (2006, revised 2020) on a standard basis in project evaluations. These are based on the 6 evaluation criteria agreed by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD): relevance, effectiveness, efficiency, overarching development results (impact), coherence and sustainability. Additional to the 6 OECD DAC evaluation criteria, the following 5 GCF criteria will be evaluated: gender equity, country ownership, innovativeness in results areas, replication and scalability, as well as unexpected results.

234. Regarding GCFs' Evaluation Principle: Impartial, Objective and Unbiased and Relevance, Use and Participation: all provisions for upholding the GCF evaluation principles described in Chapter V (a-d) of the Evaluation Policy will be followed (see DAC standards and DeGEval evaluation standards). In line with UNEG norms, evaluation team members selected by GIZ will not be directly responsible for the policy setting, design or management of an evaluation project. Regarding GCFs' Evaluation Principle: Credibility and Robustness: as a matter of principle, GIZ takes care to use an appropriate combination of quantitative and qualitative methods of empirical social research in evaluations. The mix of methods is adapted to the object of the evaluation and the evaluation questions. To ensure robust evidence, GIZ uses a theory-based approach as a minimum standard for its central project evaluations. The contribution analysis has proven to be a suitable design. The aim of contribution analyses is to collect empirical evidence on whether and to what extent contributions to observed changes can be associated with a project. Furthermore, the analyses should increase the understanding and knowledge of what works, what does not work and why.

235. The GCF programme will be rated based on the 6 OECD/DAC and on the 5 GCF evaluation criteria. Each of the OECD/DAC and GCF criteria is rated on a scale of 1 to 100. Using a points system serve to increase the transparency of ratings, whilst enabling better comparability between individual projects.

Data collection and frequency

236. The Trans-Regional Management Unit will coordinate data collection for implemented activities (indicators, implementation challenges and financial status) with the two regional Management Units on a regular base.

E.7.2 Measurement, Reporting and Verification (MRV) of Climate Mitigation Impacts

Scope of MRV

237. The CATALI.5°T Initiative's emission reductions will be achieved through the use of low-emission goods / services sold to customers by the Initiative-supported ventures. Because ventures in the regional pre-acceleration programmes will be selected precisely for the purpose of developing minimum viable products (MVPs), they are not expected to be at a sufficient stage of development to make any commercial sales of products / services – and certainly not at scale. Seed-stage ventures may make some commercial sales while they are receiving intensive technical assistance in the regional acceleration programmes, and their market activity is expected to truly ramp-up in the latter ('light touch') stages of the regional acceleration programmes and thereafter. Thus, the bulk of the CATALI.5°T Initiative's emission reductions will be generated by the accelerated ventures.

238. Indirect emission reduction benefits are certainly anticipated from the CATALI.5°T Initiative – for example, stemming from venture sourcing and ideational support (including among women entrepreneurs), capacity building of ventures and entrepreneur support organisations (ESOs), the replication and role-model effects of building successful climate ventures, etc. However, such indirect mitigation impacts are challenging to track and attribute, so they are not considered in the CATALI.5°T Initiative's MRV.

Data Collection for MRV

239. To calculate CATALI.5°T Initiative emission reductions, two data points are required:
    - An emission reduction estimate per functional unit of each good / service sold: for example, the emission reduction associated with each energy efficient appliance sold, or each rooftop PV unit installed, or each tonne of compost produced, or each hectare of low-emission agriculture applied. These per-unit emission reductions will be calculated using the Climate Impact Forecast (CIF) tool.[211]

      Application of the CIF tool, accompanied by third-party expert validation, will take place 3 times during programme implementation: (i) at the end of the pre-acceleration programme; (ii) when a venture is accepted into the acceleration programme (except the case where the applicant venture has recently graduated from the pre-acceleration programme); and (iii) at the end of the acceleration programme, using updated data (updated emission factors, updated baseline context, etc.). The CIF tool enables unique, very specific GHG mitigation estimates to be computed for each venture, incorporating (for example) Tier 2 and Tier 3 emission factors.

      The CIF tool generates life-cycle emission reduction estimates, encompassing a good / service's production, consumption and disposal. To ensure consistency with the GCF's approach to emissions accounting, the CIF tool's life-cycle emission reduction estimates will be annualised: the life-cycle emission reductions will commence at the time of sale and will be evenly distributed across the years spanning the product / service expected lifetime – for example, 8 years for home battery solutions, 20 years for rooftop solar PV systems or 1 year for low-emission packaging (bioplastics, multi-use plastics, etc.). Product / service lifetimes are provided in Annex 22c.

    - Sales data – the number of functional units sold by each venture per time interval. This data will be collected from the accelerated ventures on a quarterly basis by the Executing Entities responsible for the regional acceleration programmes – Tec de Monterrey in Latin America and IPED in West Africa – as part of their venture engagement processes.

      The Executing Entities will endeavour to validate the reported sales data to the extent possible – for instance, by requesting ventures' sales receipts or bank records, or through discussions with retailers and other distribution channels. Where sales figures cannot be validated with reference to venture or retailer records, suitable documentation measures will be put in place by the relevant venture(s) to ensure reliable data reporting in the future.

      The Executing Entities will pass the sales data onto the Trans-Regional Management Unit for aggregation, processing and onward reporting (e.g. to GIZ AE, the GCF, programme publications, etc.).

[211] https://impact-forecast.com/

240. At the end of the CATALI.5°T Initiative (i.e. at the beginning of Year 7, after all venture support operations have ceased), the MORSE model will be re-run using the updated venture-specific (CIF) data. Almost all programme-supported ventures – particularly in Latin America – will by then have recorded at least some (1-3 years) post-acceleration programme experience (with some also having successfully raised Series A or equivalent financing). Re-running the MORSE model with 'actuals' in Year 7 will, therefore, provide a more accurate update of expected post-programme mitigation performance.

Reporting of Climate Impacts

241. An ex-ante estimate of each venture's future mitigation impact will be generated using the CIF tool when each venture enters the acceleration programme. These ex-ante estimates will be reported to the GCF in the relevant Annual Performance Report (APR), on a venture-by-venture and aggregated basis (e.g. by Result Area, by archetype, by cohort, by region, etc.). They will also be reported in other literature generated by the programme, for both internal and external audiences.[212]

242. Where a venture generates sales during its participation in the acceleration programme, these sales will be collected, validated and stored on a quarterly basis. Using the per-functional-unit mitigation parameter generated by the CIF tool at the beginning of the venture's acceleration support, these sales data will be used to produce ex post emission reduction estimates. Such estimates will be generated on a quarterly basis (matching the frequency of sales data collection). They will certainly be reported on an annual basis, in APRs to the GCF; they may be reported more frequently than an annual basis in programme literature.

243. At the end of a venture's acceleration programme, the CIF tool will be re-run. As a result, the per-functional-unit mitigation parameter may be updated – e.g. to reflect more precise emission factors or new baseline conditions. Where relevant (i.e. where a venture has recorded sales during the acceleration programme and where it is felt appropriate to retrospectively apply the updated per-functional-unit mitigation parameter to these past sales), emission reduction estimates for the previous years will be updated using the new per-functional-unit mitigation parameter. These amendments will be reported to the GCF in the APR of the year in which the amendments are made. They may also be reported in programme literature.

244. The updated CIF tool will also be used to generate updated ex ante GHG emission reduction estimates for the programme lifespan. These updated ex ante estimates will be reported in GCF APRs, as well as other programme literature.

245. The updated per-functional-unit mitigation parameter will be used to produce ongoing quarterly ex post emission reduction estimates for each venture. They will certainly be reported on an annual basis, in APRs to the GCF; they may be reported more frequently than an annual basis in programme literature.

Mid-Term and Final Evaluations

246. A mid-term evaluation will be undertaken after Year 3 of programme implementation and a final evaluation will be undertaken after Year 6 of programme implementation. Among other functions, these evaluations will provide opportunities for evaluators to assess (i) the CATALI.5°T Initiative's GHG impact methodology and (ii) the ex-post and ex-ante estimates of programme mitigation impact. The evaluations will be shared with the GCF. Where the evaluations make recommendations to improve the methodology or the numerical impact estimates, these recommendations will be discussed with programme stakeholders (notably, Executing Entities) and with the GCF Secretariat, and will be acted upon accordingly.

[212] Where a venture's sales data are considered to be commercially-sensitive, it may not be possible to report GHG mitigation on a venture-by-venture basis to external audiences. In such cases, mitigation impacts (ex ante and ex post) will be reported on an aggregated basis (e.g. by Result Area or region). Venture-specific data will, though, be reported on a confidential basis to the GCF.

RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures

A detailed analysis of CATALI.5°T Initiative implementation risks is provided in the Regional Feasibility Studies (Annexes 2b and 2c). Environmental and social risks are considered in the Environmental and Social Management Framework (ESMF, Annex 6). Gender-specific risks are considered in the Gender Assessment (Annex 8a) and the Gender Action Plan (Annex 8b).

From a safeguards perspective, the ESMF rates the CATALI.5°T Initiative risk as medium (I-2).

Selected Risk Factor 1: Economic shocks impacting the venture economy

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

A country / regional / global financial or economic crisis that impacts either or both regions and leads to low liquidity / market opportunities or changed government priorities, negatively impacting ventures and venture financing, and jeopardising a sufficient pipeline of robust, high-quality climate ventures for induction into the CATALI.5°T Initiative. Both regions enter 2022 facing an uncertain outlook, notably in the context of the evolution of the COVID pandemic, a potential deceleration of economic growth and, in a number of Sahelian West African countries, domestic security. There are signs of potential macroeconomic distress, partly due to growing national debts and inflationary pressures.

Mitigation Measure(s)

This risk is not directly manageable by the CATALI.5°T Initiative. However, it is important to note that as the world emerges from the COVID crisis and as the climate crisis accelerates, it is likely that pent-up demand for 'green' products and services will be an important part of the recovery, which is expected to underpin market opportunities for climate ventures. Governments have demonstrated their ongoing commitment to addressing climate change, as reflected in updated NDCs and a range of domestic policies and strategies.

A healthy SME sector is essential to both regions' economic recovery, and it is expected that the sector will remain supported and will play an increasingly significant role in shaping growth strategies, employment and social cohesion. Governments have already enacted a raft of policy packages to support SMEs, as they increasingly recognise the importance of ventures as a driver of growth. In 2021, ventures in both regions received record amounts of VC funding and early indications are that H1 2022 has out-performed H1 2021.

Multilateral institutions such as the IMF, the IFC, the World Bank and regional development banks are launching post-COVID recovery programmes in both regions. These explicitly support government policies that recognise the importance of ventures and SMEs as drivers of post-COVID green growth.

While an economic shock may disrupt longer-term trends, these trends are well-established and are unlikely to be entirely erased by such a shock, as indicated by governments' commitment to addressing climate change, accelerating investments into SMEs and growing market size due to population growth and rising incomes. Nonetheless, the CATALI.5°T Initiative will continuously monitor the overall economic situation in Latin America and West Africa, and will be prepared to put in place dynamic and specific responses, as required.

Selected Risk Factor 2: Political instability and policy reversals

Category	Probability	Impact
Governance	Low	Medium

Description

Political instability, leading to downgrading of climate change as a policy priority and/or lower confidence in economic prospects – and, consequently, lower demand and support for climate ventures and innovation. Historically, both regions have experienced a combination of high inequality, poor economic performance and weak political institutions, leading to periodic political volatility and social discontent. The political instability risk is country-specific rather than an overall regional risk, with 3 West African countries in particular – Burkina Faso, Mali and Niger – facing domestic security challenges.

Mitigation Measure(s)
This risk is not directly manageable by the CATALI.5°T Initiative. However, the risk is somewhat mitigated by the fact that the CATALI.5°T Initiative is not tied to a single country's political stability for success and that the largest national economies in each region – for example, Mexico in Latin America and Senegal and Cote d'Ivoire in West Africa – tend to be the most politically stable. Screening and due diligence of ventures prior to their admission into the pre-acceleration and acceleration programmes will place heavy emphasis on ventures' market growth prospects, and potential political instability will form part of this assessment. Climate change mitigation and SME support are increasingly significant areas of policy development: although there may be targeted policy reversals (such as the Mexican government's recent closure of the Climate Change Fund), it is unlikely that future governments will wholly disregard the development of these sectors. Moreover, the CATALI.5°T Initiative works through the private sector – climate ventures, pre-accelerators, accelerators and VC firms – as its 'transmission mechanism' for climate impact; public sector involvement is welcome (and will be encouraged), but it is not central to the CATALI.5°T Initiative's theory of change or implementation. The CATALI.5°T Initiative is supportive of national climate policies and objectives (including NDCs), but is not so closely tied to them that changes to them will jeopardise programme progress. NDAs will be invited to participate in the CATALI.5°T Initiative's Global Advisory Committee (GAC) meetings, which will be held twice a year (plus ad hoc meetings as required). This will enable the CATALI.5°T Initiative to closely follow local policy and political developments through liaison and dialogue.

Selected Risk Factor 3: Executing Entity performance		
Category	**Probability**	**Impact**
Technical and operational	Low	Medium
Description		
Executing Entities fail to perform satisfactorily. This could include sub-optimal delivery of the pre-acceleration or acceleration programmes – for example, by insufficient sourcing and retention of high-quality climate ventures, or through provision of irrelevant or poor-quality technical assistance that jeopardises the climate ventures' ability to grow sustainably and attract VC funding.		
Mitigation Measure(s)		
GIZ has selected Executing Entities on the basis of robust eligibility criteria that require, inter alia, demonstrated experience in supporting ventures over a sustained period of time, track-records of implementing technical support programmes in conjunction with international development partners, and regional expertise (see also section B.4.2). GIZ has undertaken detailed due diligence assessments and capacity needs assessments of all the Executing Entities. The CATALI.5°T Initiative contains dedicated activities precisely to address Executing Entity capacity needs identified during Initiative preparation. GIZ will, as the AE, closely monitor the performance of the Executing Entities to ensure that they perform satisfactorily and will remedy any performance shortcomings through contractual or capacity building measures.		

Selected Risk Factor 4: Access to VC funds for growth stage		
Category	**Probability**	**Impact**
Technical and operational	Low	Medium
Description		
Venture sustainability is negatively affected if access to follow-on VC finance for the venture growth stage is not available. More than 40% of entrepreneurs in Africa cite access to finance as the major factor limiting their growth, and the majority of venture failures in Latin America are attributable to lack of finance (or, just as importantly, lack of knowledge of how to access this finance).		
Mitigation Measure(s)		
The CATALI.5°T Initiative will integrate 'VC readiness' into the regional pre-acceleration and acceleration programmes at every stage, also giving entrepreneurs the opportunity to meet and pitch to VC funds, and to adapt business ideas and models on the basis of VC feedback. Such close familiarity, accompanied by the ability to shape ventures at an early stage, is expected to increase VC funds' readiness to invest in the CATALI.5°T Initiative-supported ventures. I&P,		

a key VC fund active in West Africa (and parent to IPED, an Executing Entity) and Dalus Capital, a key VC fund active in Latin America, have, among other investors, collaborated closely with GIZ to design the CATALI.5°T Initiative to make it genuinely useful and attractive to VC funds. Their extensive networks in both regions (including multiple offices in the regions), and beyond, will ensure that CATALI.5°T Initiative beneficiaries have maximum exposure to potential financiers.

Additionally, the CATALI.5°T Initiative's technical assistance for the ventures has been designed in such a way that it is responsive to VC needs: i.e. it is explicitly intended to equip entrepreneurs with the business skills and resources needed to pass through the stringent selection processes of VC funds, with the aim of increasing their attractiveness and enhancing their prospects for receiving Series A finance. The record funding by VC funds in both regions in 2021 is indicative of the strong expectation – expressed by many, diverse stakeholders during programme preparation – that the VC sector generally, and the climate VC sector specifically, will keep growing with appropriate barrier-removal interventions in place.

Selected Risk Factor 5: Challenging local business environments

Category	Probability	Impact
Technical and operational	Medium	Low

Description

The business environment in both regions can, in certain national and sectoral contexts, be challenging for enterprises – particularly for new ventures that lack experience, an entrenched market presence and brand, and established stakeholder networks (business groups, suppliers, customers, etc).

In addition to general 'ease of doing business' challenges, climate ventures in particular may struggle to: (i) find qualified workers and/or contractors to support them with the development and implementation of climate solutions, running their day-to-day business, and servicing and maintaining new technologies. In addition, (ii) internet connections are geographically patchy (particularly in rural areas) and often unstable, which could impede climate businesses with a significant digital component (e.g. data telemetry, app-based services, etc.).

Mitigation Measure(s)

The CATALI.5°T Initiative will be guided by market realities. Regardless of the theoretical attractiveness of particular technologies or services, the CATALI.5°T Initiative will adopt a highly pragmatic approach to screening and selecting climate ventures for pre-acceleration and acceleration support: if such ventures do not represent attractive prospects for significant market growth (in the context of all the challenges, deficiencies and delays apparent in that particular market), they will not be selected for inclusion in the CATALI.5°T Initiative. Given: (i) the highly entrepreneurial populations of both regions, (ii) the CATALI.5°T Initiative's emphasis on seeking out women entrepreneurs (and thereby increasing and diversifying the talent pool available to the Initiative), and (iii) the involvement of 3 respected pre-accelerator / accelerator organisations – Tec de Monterrey, Impact Hub Abidjan and IPED – that have established track-records of launching and nurturing new businesses in the regions, the CATALI.5°T Initiative expects to successfully navigate the challenges presented by the local business environment.

Particularly in the acceleration programme, but even in the pre-acceleration programme, ventures will be able to exercise a high degree of flexibility in 'picking and choosing' types of CATALI.5°T Initiative technical assistance. This flexibility extends to the EUR 15,000 pre-acceleration grants and EUR 100,000 acceleration repayable grants, which, subject to some exclusion criteria, can be spent by ventures on a broad range of potential activities, including staff, temporary contractors, market surveys and technologies. This will enable supported climate ventures to focus on the specific challenges that they face in their particular market contexts.

The CATALI.5°T Initiative's emphasis on mentoring and networking will also serve to pair ventures with role-models, who can advise ventures on how particular market challenges have been successfully addressed in the past or in other countries.

Selected Risk Factor 6: Limited mitigation benefits or climate maladaptation

Category	Probability	Impact
Technical and operational	Low	Medium

Description

Ventures pursue climate solutions that are either unambitious or positively climate-harmful – for example, entailing climate maladaptation or increased GHG emissions.
Mitigation Measure(s)
The CATALI.5°T Initiative will screen and select ventures in a competitive, transparent environment, using a set of explicit criteria and weightings – the most important of which will be ventures' prospects for market growth and reducing / avoiding GHG emissions. A secondary criterion will be ventures' potential climate adaptation co-benefits. Ventures' mitigation impacts will be assessed using a credible, internationally-recognised assessment tool (CIF) and will be validated by third-party experts. Even allowing for significant programme mitigation under-performance – the equivalent of setting the GHG impact to zero for the top 10% of supported ventures – the programme would still be expected to generate 1.1 $MtCO_2e$ of abatement benefits (compared with $MtCO_2e$ under the expected, 'central', scenario). Incremental climate solutions will be eligible for CATALI.5°T Initiative support, provided they offer substantial overall mitigation benefits: for example, a product or service may offer only a 5% reduction in GHG emissions compared with its baseline functional equivalent, but if this product / service is expected to achieve large-scale, rapid market penetration then its aggregate mitigation performance may justify programme support. However, during the pre-acceleration and acceleration programmes (and particularly during pre-acceleration, when ventures' business models are fluid and still being formed), climate ventures will be educated on transformational climate mitigation approaches that represent genuine ruptures with business-as-usual practice. Where disruptive, highly transformational business ideas emerge, the ventures developing these ideas will be strongly supported by the CATALI.5°T Initiative to move forward and commercialise these ideas – subject to commercial viability considerations and the feedback provided by VC firms (risk vs reward trade-off). The CATALI.5°T Initiative will closely monitor the development of supported ventures and will modify or cease its support should signs emerge that ventures' mitigation performance is significantly falling short of expectations or if environmental and social harms, including maladaptation, are being generated. Under Activity 1.1.1 (Latin America) and Activity 2.1.1 (West Africa), ecosystem actors, including the ventures, the regional Executing Entities and VC firms, will be educated on climate mitigation, climate adaptation, gender and ESG frameworks.

GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment

G.1.1. Environmental and Social Management Framework (ESMF)

247. The ESMF (Annex 6a) ensures that the CATALI.5°T Initiative will comply with GIZ's Safeguards and Gender (S+G) management system and with the GCF's Revised Environmental and Social Policy (dated September 2021). The CATALI.5°T Initiative will also comply with the national legislation of countries that supply climate ventures to the Initiative's pre-acceleration and acceleration programmes. IFC's Interpretation Note on Financial Intermediaries (IFC, 2012) has been used as guidance on the environmental and social management systems of some of the Executing Entities.

248. From an environmental and social safeguards perspective, the ESMF rates the programme risk as **medium (I-2)**. The potential negative environmental and social impacts of the CATALI.5°T Initiative during its implementation phase are limited, because the activities that could generate physical impacts – such as research and development, small-scale production, or testing of agricultural solutions on land plots, carried out by the CATALI.5°T Initiative-supported climate ventures – will be small in scale. The environmental and social footprint of the ventures' activities will be limited to employment, small-scale land use, moderate generation of pollution and waste, and use of moderate quantities of input materials, water and energy. Their negative impacts and risks will be limited, site-specific and can be reduced to acceptable levels with appropriate E&S management.

249. The ESMF is accompanied by a Stakeholder Engagement Plan (SEP) and a Grievance Redress Mechanism (GRM). Gender-specific risks, including SEAH, are considered in the Gender Assessment (Annex 8a) and the Gender Action Plan (Annex 8b).

G.1.2. Summary of Main Impacts, Risks and Mitigation Measures

250. The CATALI.5°T Initiative's principal environmental impact is the reduction of GHG emissions, which will be achieved through consumers' use of low-emission products and services that are sold by climate ventures supported by the CATALI.5°T Initiative. Additional environmental and social co-benefits, including enhancement of consumers' climate resilience, specific sectoral impacts (such as energy efficiency, resource efficiency or restored ecosystems), job creation and enhanced capital investment in low-emission technologies, are anticipated.

251. Negative environmental and social impacts may occur when the CATALI.5°T Initiative involves "specifically identified physical elements, aspects and facilities that are likely to generate environmental and social impacts" (as per the terminology employed in ESS1).

- During implementation, such impacts are mostly related to the activities of the climate ventures. The pre-acceleration programme in each region will encompass early-stage start-ups with fewer than (approximately) 5 workers; the acceleration programme in each region will encompass more developed climate ventures that already have minimum viable products, some pre-existing market presence and up to a maximum of 49 workers (though probably far fewer). Impacts and risks would occur if ventures perform activities such as construction of small buildings, prototyping, research, production, small-scale agriculture, etc. The travel associated with the CATALI.5°T Initiative's technical assistance activities will also generate moderate greenhouse gas emissions.
- After the implementation period, successful ventures are expected to substantially scale up their activities. The bulk of the CATALI.5°T Initiative's positive climate change mitigation impact will be realised at this stage. This is also the period when the ventures may realise significant co-benefits, as well as unintended negative impacts or risks, due to the larger scale of their activities. After the CATALI.5°T Initiative implementation period, the ventures exit the direct responsibility of the programme; however, the CATALI.5°T Initiative has the potential to prepare them for appropriate E&S management, and hence mitigate future risks.

G.1.3. Detailed Safeguards Assessment and Programme Risk Mitigation Approach

Environmental and Social Standard 1: Assessment and management of environmental and social risks and impacts

To ensure that the CATALI.5°T Initiative reaches its overall climate mitigation target, in compliance with the principles of ESS1, the Executing Entities will adopt the following principles for E&S management:

- The CATALI.5°T Initiative's climate change mitigation impacts will be maximised, while ensuring that potential negative E&S risks and impacts are appropriately mitigated ('do-no-harm' approach).
- The CATALI.5°T Initiative does not support ventures with activities in the IFC exclusion list.
- The CATALI.5°T Initiative does not fund activities, carried out by the CATALI.5°T Initiative-supported climate ventures, that would have unmanageable E&S risks, considering the short time duration of CATALI.5°T Initiative support.
- Potential negative E&S risks and impacts of the ventures' activities are managed in compliance with the mitigation hierarchy.
- Potential positive environmental and social impacts of the ventures' current and future activities (other than their climate change mitigation impacts) are identified and enhanced.

The CATALI.5°T Initiative will offer support to the ventures with the highest potential climate mitigation impact. Among ventures with similar mitigation impacts, it will prioritise ventures that: (a) offer climate adaptation co-benefits, and (b) are women-led. The CATALI.5°T Initiative will not necessarily select ventures with the lowest negative environmental and social risks and impacts (as much as can be assessed at early business stages). This is because such practices may: (i) result in over-representation of certain types of ventures, such as those in the information technology sector, compared with other sectors, such as those in the agriculture, forestry and other land use (AFOLU) sector, that are in important need of assistance; and (ii) prevent ventures with strong climate change mitigation potential, but higher E&S management challenges, to benefit from the opportunity offered by the CATALI.5°T Initiative to improve their capacity for E&S management and their overall performance.

The CATALI.5°T Initiative will further develop methodologies for capturing E&S co-benefits as one of its outputs.

Following the principles of ESS1:

- Ventures that receive funding should comply with the GCF ESS for their complete activities, not only for the funded activities; but
- E&S assessment management will be adapted to the level of risks and impacts, and to the level of control that can reasonably be exerted.

Environmental and Social Standard 2: Labour and working conditions

- ESMF observation: Labour law exists in all the potential participating countries, but it is not always sufficiently enforced. Depending on the activity sector, enforcement may vary from zero to complete. Enforcement is expected to be weakest in the agricultural sector, where high risks of poor working conditions exist, and where some workers can be vulnerable. In sectors with higher-skilled personal, national labour regulations are expected to be better applied, and skilled workers are generally not vulnerable. Working conditions are generally expected to be poorer in small businesses than in large companies. In general, small businesses will not have workers' representation or workers' grievance mechanisms. From the consultations held with different stakeholders, it appears that there is a high risk of informal labour occurring among the funded ventures. Informal labour is not prohibited as such by international E&S standards, but informality increases the risk of non-compliance with relevant standards on health and safety, non-discrimination, inclusion of vulnerable people and workers' representation. According to the stakeholder consultations carried out with venture founders, health and safety risks can exist at early-stage business development, mainly in research and development activities involving chemicals, in prototyping/small-scale production activities, construction activities, and agricultural activities. These risks will typically be minor during pre-acceleration, but can, in some cases, become significant during acceleration.

- Impact rating: The magnitude of impacts and risks will depend on the sector and on the growth stage of the venture but is expected to vary from negligible to low in the pre-acceleration stage, and from negligible to moderate in the acceleration stage.

- Mitigation approach: All beneficiaries of the pre-acceleration and acceleration programmes will receive minimum awareness-raising and training on labour, working conditions, occupational health and safety. More detailed risks and impacts of the activities of each venture, relative to ESS2, will be assessed at intake into both the pre-acceleration and the acceleration programmes. If necessary, the regional Executing Entity will define actions, provide training and set targets so that the ventures improve their management of human resources and occupational health and safety. For pre-acceleration, these measures will mostly be in the form of awareness-raising and ad hoc support, but for acceleration more prescriptive requirements will be captured in management plans (depending on each venture's risks). The following minimum measures will be applied to all ventures:
    - Awareness-raising and training on occupational health and safety (OHS) as soon as pre-acceleration.
    - Identification of significant risks, and requirement for immediate solution for ventures receiving CATALI.5°T Initiative grants.
    - Awareness-raising, including on risks of the worst forms of labour and safety risks among sub-contracted workers and workers in the supply chain and in their sourcing of materials, in compliance with ESS2 requirements for third-party workers.
    - Training on avoidance of discrimination in employment.
    - Access to a workers' grievance mechanism.
    - Incident reporting.

Environmental and Social Standard 3: Resource efficiency and pollution prevention

- ESMF observation: At pre-acceleration stage, prototyping activities could use water and energy and generate solid waste and effluents, but on a very minor scale. At acceleration stage, small-scale production activities are likely to use water, energy and materials, and to generate solid waste and effluents. In the agroforestry sector, and if some activities involve small-scale construction, besides use of water/energy and generation of waste, other types of impact sources – such as pest management, erosion and invasive species – may exist. In the manufacturing and IT sectors, the use of energy and the impacts of the use of equipment should be considered.

- Impact rating: The impact level will depend on the sector and on the growth stage of the ventures but is expected to vary from negligible to low in the pre-acceleration stage, and from negligible to moderate in the acceleration stage.

- Mitigation approach: All supported ventures will comply with national environmental laws. Supported ventures with physical impacts, such as use of resources and generation of waste, will comply with national environmental legislation and with ESS3 on resource efficiency and pollution prevention. For countries where national environmental legislation is insufficient, or insufficiently implemented, IFC/World Bank health, safety and environmental guidelines can be used, as well as WHO recommendations.

  Risks and impacts of the activities of each venture, relative to ESS3, will be assessed during intake into the pre-acceleration stage and the acceleration stage. The ventures will perform assessments with the CIF tool, which is designed for climate assessment, but is also a powerful tool in understanding other impacts relevant to ESS3, such as use of energy, supply chain, use of water, use of materials, and generation of waste. All supported ventures will receive awareness-raising and training on energy efficiency, GHG emissions, water conservation, pollution control and waste management at pre-acceleration and acceleration stages. For those ventures in the acceleration programme, additional support for environmental management will be provided on a case-by-case basis: e.g. advice on solutions for effluent, materials and waste management, site visits, support for environmental permitting, etc. Additionally, for those ventures where potential impacts are identified during the screening, the ventures, assisted by the Executing Entities, will develop fit-for-purpose environmental management plans, including monitoring plans addressing relevant environmental parameters, and for monitoring environmental legal compliance if relevant.

  A significant challenge in most of the CATALI.5°T Initiative countries is the lack of well-functioning waste management and sanitation infrastructure. Lack of complete management solutions remain acceptable at pre-acceleration and acceleration stages, but ventures will be encouraged to develop alternative waste management solutions, to circumvent poor local infrastructure and services, in their final business plan.

Environmental and Social Standard 4: Community health, safety and security

- ESMF observation: At pre-acceleration stage, impacts of the ventures' activities on communities are very unlikely. At acceleration stage, the ventures will start some scale of production, and may therefore generate minor to moderate risks and impacts for the public and communities living near production sites.

- Impact rating: The impact level will depend on the sector and on the growth stage of the ventures but is expected to vary from negligible to low in the pre-acceleration stage, and from negligible to moderate in the acceleration stage.

- Mitigation approach: ESS4 applies to the CATALI.5°T Initiative as follows:
  - The funded ventures' activities should not generate negative risks and impacts for the public.
  - All end-products should be safe and healthy for end-customers.

  Risk mitigation is required in cases when technical assistance activities lead to gathering of people in buildings, concerning: (i) transmission of diseases and (ii) building safety. Impacts and risks will be identified during the venture screenings. Supported ventures will receive awareness-raising and training, and will be required to comply with ESS4. A special warning will be issued for all testing programmes involving customers. Such testing will not be allowed at the pre-acceleration stage. If it occurs at acceleration stage, a specific support programme will need to be developed.

Environmental and Social Standard 5: Land acquisition and involuntary resettlement

- ESMF observation: Some of the beneficiary ventures may require the use of land during their early development stages:
  Urban land for construction of buildings or offices.
  Land for testing of infrastructure solutions.
  Land for demonstration or research purposes in the nature, forestry and agricultural sectors.

  Use of land, or restrictions of access to land, may result in negative impacts on livelihoods, biodiversity, sacred sites, buried archaeological remains, etc. Such impacts may be difficult to manage in countries where the institutional frameworks for land tenure, for protection of human rights, for stakeholder engagement and for protection of cultural heritage are still weak or not sufficiently enforced. Due to the scale of the activities, the CATALI.5°T Initiative will not cause any significant involuntary resettlement. There are, however, very minor remaining risks that ventures would want to use land where:
  - Previous owners have evicted dwellers in view of selling the land to the ventures.
  - Small-scale informal economic activities, such as street vending, take place, provide a major fraction of the vendor's revenues, and cannot be easily relocated.
  - The land is used for collection of flora and fauna, the activity is significant for the affected persons, and the activity cannot easily take place elsewhere.

  Such cases of economic/physical displacement can be difficult to identify, and hence are more difficult to avoid.

- Impact rating: The risk of occurrence of such impacts is extremely low, as it would concern only a very small number of ventures. Impact magnitude (even without mitigation) would vary from very low to moderate.

- Mitigation approach: Under no circumstances will involuntary resettlement be tolerated by the CATALI.5°T Initiative. The approach of the CATALI.5°T Initiative regarding ESS5 is complete avoidance of involuntary economic or physical displacement, and restrictions of access to land, during pre-acceleration and acceleration. Ventures will be assessed for this risk during screening and will be excluded from CATALI.5°T Initiative support if a risk is presented. Furthermore, risks will continue to be assessed on an ongoing basis. To this end, the CATALI.5°T Initiative will implement the following procedures:
  - In case of any new land use by a supported venture: screening by the E&S specialist will verify that ESS5 does not apply or that ESS5 has been appropriately applied before the land is used by the venture.
  - Awareness-raising of supported ventures on risks and impacts of land use and land acquisition (when relevant for their activity sector).

- Training on ESS5 (when relevant), with a view to developing appropriate post-CATALI.5°T Initiative E&S management capacity for ventures that 'graduate' from the programme.
- Where potential temporary or partial impacts can be anticipated at the screening / due diligence stage, the CATALI.5°T Initiative will, in consultation with the relevant venture, stipulate prescriptive avoidance / remedial measures that are explicitly included in the venture's management plan.

Environmental and Social Standard 6: Biodiversity conservation and sustainable management of living natural resources

- ESMF observation: At the pre-acceleration and acceleration stages, the activities of the climate ventures are expected to have minimal adverse impacts on biodiversity, because of their limited scale. Minor impacts could be related to the use of land, to disturbance from construction activities, to noise or pollution, etc. A potentially significant impact is the risk of introduction of invasive species, because this impact could be irreversible even if starting at a small scale. Some activities could have biodiversity impacts in their supply chain, but, at this stage, these would be limited in magnitude. Outside of the bio-sector, any activity requiring construction of infrastructure could impact animal and plant species at a moderate scale. Interventions in biological corridors and rivers, even at a relatively small scale, require precautions because they can disrupt ecological continuity. Any significant reduction of river flows, and impacts on rivers bottoms, can be irreversible if not properly managed and should be avoided.

- Impact rating: The likelihood of occurrence of such impacts is low, and their magnitude would generally vary from low to moderate. However, some impacts can potentially be irreversible (invasive species, aquatic habitat destruction).

- Mitigation approach: Risks and impacts on biodiversity of the activities of each venture will be screened at pre-acceleration stage and assessed in a more detailed way at acceleration stage. Supported ventures with physical activities that could impact biodiversity will comply with standard ESS6 on biodiversity conservation and sustainable management of living natural resources. Biodiversity risk assessment and management will be included in capacity building programmes for the sectors concerned. If relevant, programme beneficiaries will receive training on ESS6 and on applicable standards such as organic/sustainable forestry certification programmes.

  The implementation of ESS6 is challenging for impacts in natural and critical habitats[213]; therefore, activities that would take place in habitats that are potentially natural and critical habitats, among which are nature protected areas[214], will not be eligible for support. They would require an in-depth biodiversity assessment, which is not feasible in the CATALI.5°T Initiative time-frame. The concerned ventures can receive training to prepare for such assessments in their future business stages. Activities that are also excluded from the CATALI.5°T Initiative are:

  Clear cutting of forest (as per the FAO[215] definition of forests);
  Disturbance of sea bottom or river beds;
  Damming and/or diversion of rivers and streams.

  In case of impacts in other types of habitats, the biodiversity screening will determine if a further biodiversity assessment is still necessary, and if a biodiversity management plan should be prepared.

Environmental and Social Standard 7: Indigenous peoples

- ESMF observation: Most of the CATALI.5°T Initiative countries include population groups who self-identify as indigenous, tribal or autochthonous, whose lives are strongly related to certain territories and who, as such, have specific rights in international law – for example, under ILO's Convention No. 169 (Indigenous and Tribal Peoples Convention, 1989). The IWGIA (2020 and 2021), a mainstream source of information, identifies indigenous people (according to the ILO definition) in all Latin American countries except El Salvador and Honduras, where such groups are, however, identified by Minority Rights Group International. In West Africa, the IWGIA identifies indigenous people in Burkina Faso, Mali and Niger. The NGO, Minority Rights Group International (2022), provides more detailed information on other countries; it identifies potential risk situations

[213] As per the definition of IFC PS6 and the guidance note dated June 2019.
[214] Except when it can be justified that the classification is no longer relevant.
[215] https://www.fao.org/forest-resources-assessment/en/

related to disadvantaged ethnic groups in Mauritania in particular and also, to some extent, in Guinea (although no country should be considered to be entirely without risk).

- CATALI.5°T Initiative policy: The programme's policy with respect to indigenous people is as follows:
  - The CATALI.5°T Initiative will ensure that indigenous people (and historically under-served traditional local communities in sub-Saharan Africa) have equitable access to the programme's benefits and co-benefits.
  - The programme will ensure that potential negative impacts on indigenous people and other similar groups are avoided during the funding period.
  - The programme will increase the supported ventures' capacities to comply with the GCF's indigenous peoples policy in the longer term (post-implementation period).
  - Access of indigenous people to the programme's benefits:

    The CATALI.5°T Initiative will encourage individuals or groups from ethnic minorities (including those qualifying as indigenous communities, as per the GCF's policy) with viable business ideas to apply for pre-acceleration or acceleration support. To this end, the Executing Entities will communicate by means and languages that are culturally adapted to indigenous peoples, and identify what kind of specific support is needed by indigenous-led ventures, so that they can fully benefit from the programme.

    Such business ideas will be screened for full compliance with ESS7 and the GCF's indigenous people policy (as per the paragraphs below).
  - Impact assessment, impact avoidance and mitigation:

    The Executing Entities will screen all ventures on applicability of ESS7 and the GCF's indigenous people's policy and will identify risks of negatively affecting indigenous people when ventures apply to the pre-acceleration and acceleration programmes, as follows:

    By means of the E&S checklist provided in the ESMF.

    By means of the due diligence at acceleration stage. Indigenous peoples experts will be involved in the due diligence.

    These risks are more frequent in some sectors, such as the agroforestry sector, and more generally all sectors using land and water in rural areas.
  - The CATALI.5°T Initiative's policy is to avoid, during the pre-acceleration and acceleration stages, the funding of activities that could negatively impact indigenous people (including in the supply chains). However, the programme may in some cases accept into the programme ventures that are planning such activities in the longer term, provided their climate benefits outweigh such impacts, and provided compliance with the GCF's indigenous people's policy appears achievable. The CATALI.5°T Initiative will build the capacity of the ventures (when relevant: ventures in the agroforestry sector, for instance) to identify any potential risks and impacts and to manage these risks and impacts according to the GCF's policy. This will include training on the preparation of Indigenous People Plans (IPPs).
  - Some ventures may suggest business ideas that are not expected to negatively impact indigenous people, but which may still trigger the need to ensure equitable benefit sharing with indigenous people. In such cases, the GCF's policy requires, at minimum, careful and participative impact assessment of the proposed activities, as well as meaningful long-term stakeholder engagement and, in some cases, consent of the indigenous people. In such cases, Indigenous People Plans (IPPs) will be developed to define and ensure such meaningful participation and full impact mitigation, as well as benefit sharing.

Environmental and Social Standard 8: Cultural heritage

- ESMF observation: Potential impacts of the CATALI.5°T Initiative on cultural heritage are mainly related to the use of land and the risk of affecting burial places, archaeological remains, sacred sites or other types of tangible and intangible cultural heritage.

- Impact rating: As for the other land-related impacts, the risk of occurrence of such impacts is extremely low, as it would concern only a very small number of ventures. Impact magnitude without mitigation would vary from very low to moderate.

- Mitigation approach: The risks will be identified at an early stage in compliance with ESS8, and impacts either avoided or fully mitigated. Use of cultural heritage in a commercial manner will not be allowed. Significant risks will be eliminated during the intake screening, and the general CATALI.5°T Initiative's mitigation hierarchy will be applied to this topic.

Chance finds: The use of new land by ventures is expected to be extremely limited. In case of construction during the acceleration stage, the ventures will be required to develop a dedicated construction environmental and social management plan, which will include a chance finds procedure.

Non-discrimination and inclusion of vulnerable people

ESS1 establishes a requirement to include identification of vulnerable individuals or groups and assess potential impacts of CATALI.5°T Initiative activities on these persons. In the case of the CATALI.5°T Initiative:

- Vulnerable persons among venture founders or staff with specific needs of support will be identified by the E&S specialist at screening stage and will receive specific mentoring/coaching.
- Vulnerable individuals could exist among informal workers. Mitigation to this end is included under ESS2.
- For relevant sectors and activity-types (for instance, climate solutions in public transportation), where identification of vulnerable persons is important among end-customers, ventures will receive capacity building on these subjects at the acceleration stage.

Sexual Exploitation, Abuse and Harassment (SEAH)

SEAH is covered under the GCF's revised E&S policy and is, therefore, included in this section of the Funding Proposal and in the ESMF.

- Potential risks and impacts: For the CATALI.5°T Initiative, risks of sexual abuse, exploitation and harassment (SEAH) exist in the context of venture work relations, and when there are contacts between venture employees and the public. In Guinea, for example, women report that they are sometimes asked for sexual services in exchange for jobs. The CATALI.5°T Initiative does not exacerbate such risks, but it is necessary to include mechanisms to avoid SEAH, to monitor occurrence, and to implement a zero-tolerance policy.

- Mitigation: The following minimum measures in relation to SEAH risks are applied to all ventures:
  - All beneficiaries of the pre-acceleration and acceleration programmes will receive minimum awareness-raising and training on SEAH, as part of the ESS awareness-raising and training 'workstream' that is built into the programmes. Awareness-raising will include the topics of contracted workers and workers in the supply chain.
  - The Executing Entities will assess the risks and impacts of the activities of each venture relative to SEAH, at intake into the pre-acceleration programme (screening) and the acceleration programme (screening + due diligence).
  - Ventures receiving grants will be required to apply a zero-tolerance policy with regard to SEAH.
  - All workers and customers will have access to the SEAH grievance mechanism.
  - All ventures will report on SEAH occurrence as part of the E&S incident reporting.
  - In the pre-acceleration phase, ventures that are screened by the Executing Entities as having higher risks will receive additional training on handling complaints and enforcement of zero tolerance. Workers of these ventures (limited in numbers at this stage) will receive individual information on SEAH and each worker will be surveyed at least once individually during the programme.
  - In the acceleration phase, as part of the ESDD the Executing Entities will ensure that higher-risk ventures are sensitive to the zero-tolerance policy for any kind of SEAH, and sufficiently equipped to address this policy. To this end, they will use IPED's existing SEAH checklist for West Africa and develop an adapted version for Latin America. Actions will be integrated in each venture's action plan (for example: implementation / formalisation of a zero-tolerance policy for SEAH, raising awareness for the staff, implementation of mechanisms to respond, assess and improve).

- Grievance Redress Mechanism (GRM) and monitoring: A survivor-centred and gender-responsive GRM for SEAH-specific complaints / incidents, as well as dedicated monitoring, are included in the CATALI.5°T Initiative.

Emergency preparedness and response

During CATALI.5°T Initiative implementation, emergency preparedness and response standards apply to premises receiving members of the public during training, capacity building or co-working spaces. The Executing Entities have affirmed that they comply with building safety regulations and will be required to reaffirm compliance every year.

It is unlikely that any of the ventures will need to develop emergency preparedness and response procedures, but capacity building will be provided if relevant. This topic is included in the E&S screening and E&S assessment checklists.

Human rights

GCF's E&S policy, as well as GIZ's safeguards management system, put a significant emphasis on avoiding infringement of the human rights of others and addressing adverse human rights impacts that ventures may cause or contribute to. Each of the ESSs has elements related to human rights dimensions that a project may face in the course of its operations. For the CATALI.5°T Initiative, human rights risks and impacts are essentially related to employment (including in the supply chain and extraction of primary materials) and are assessed under this topic. The continuous impact screening and assessment process of the CATALI.5°T Initiative will enable potential human rights issues to be addressed under the different ESS categories.

G.2. Gender assessment and action plan

G.2.1 Gender Assessment

252. The Gender Assessment (GA) is provided in Annex 8a. The GA was conducted to ensure: a gender-sensitive, gender-responsive and gender-transformative approach and implementation of the CATALI.5°T Initiative, and to meet the standard requirements of the GCF and GIZ. The specific objectives of the GA were to: (i) provide an assessment of the gender dynamics in the two CATALI.5°T Initiative regions, including the gender equality issues faced by climate entrepreneurs and entrepreneur support organisations (ESOs); (ii) assess the gender equality policies and practices of the CATALI.5°T Initiative's Executing Entities; and (iii) provide recommendations on how the CATALI.5°T Initiative design can contribute to reducing gender inequalities and discrimination, as well as promote gender mainstreaming and increase women's access to the Initiative.

Gender and climate innovation

253. In order to drive the rapid economic transformation required to achieve the Paris Agreement, all sectors of the economy, from energy to agriculture, must adopt climate mitigation strategies. Significant technical and market innovation is needed, and this cannot be achieved without the support and participation of all stakeholders, including women. Women's unique experience, knowledge and skill-sets can – and do – strengthen climate mitigation efforts, as highlighted by the '2XClimate Finance Task-Force', in its recently launched Toolkit.[216] There is mounting evidence, particularly in Europe but also recognised and stated by one of the stakeholders consulted in Colombia[217], that women have different perceptions of the significance of climate change, and behave differently as a result. Women appear to be more likely to undertake actions that are perceived as beneficial to the environment: for example, consuming locally produced foods, recycling household waste and making decisions about the purchase of household appliances that take energy efficiency into account. The same stakeholder mentioned that women develop more mission-driven businesses, such as green ventures or inclusive businesses. It is not clear how far such findings can be generalised, but, at the very least, they point to the need to take gender into account in the design of entrepreneur support measures and consumer marketing strategies.

254. A World Bank study concludes that interventions in the energy sector can have significant gender co-benefits when interventions are carefully designed and targeted, based on a context-specific understanding of energy scarcity and household decision-making.[218] Likewise, in urban redevelopment and in the development of public transport systems, there is growing evidence that gender awareness in the design of such programmes can result in innovations that bring significant gender co-benefits.[219] The agriculture sector is a major contributor to climate change, producing ~25% of all greenhouse gas emissions globally. Industrial agriculture is also a major cause of ecological degradation, directly reducing the resilience and future productivity of lands and ecosystems. Women have important roles across agricultural value chains – as entrepreneurs, producers, processors, distributors and

[216] 2XClimate Finance Taskforce (2021), *The Gender-Smart Climate Finance Guide*: https://www.2xcollaborative.org/2x-green-toolkit
[217] Stakeholder consultation meeting with CleanTech Hub in Colombia.
[218] World Bank (2011), *Gender and Climate Change: Three Things You Should Know*: https://openknowledge.worldbank.org/bitstream/handle/10986/27356/658420REPLACEM00Box374367B00PUBLIC0.pdf?sequence=1&isAllowed=y
[219] Women's Budget Group (2021), *Towards Gender-Inclusive and Sustainable Transport Systems*: https://wbg.org.uk/wp-content/uploads/2021/06/Gender-inclusive-transport-systems-V3.pdf

consumers.[220] Yet significant gender gaps across these value chains limit the ability of women to innovate, implement and lead climate solutions in agriculture. Empowering women throughout the sector can act as a key enabler of climate mitigation (and adaptation).

Status of regional gender equality

255. At the international level, West African and Latin American countries have ratified most international conventions and regional instruments, including the Committee on the Elimination of Discrimination against Women (CEDAW) and its Optional Protocol. The countries also have committed to implement the recommendations of international and African or Latin American conferences, including those of Mexico City (1975), Copenhagen (1980), Nairobi (1985), Cairo (International Conference on Population and Development, ICPD, 1994), Beijing+5 (2000), the African Women's Decade Programme 2010-2020, the 1994 Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women (Convention of Belém do Pará) and the Sustainable Development Goals (SDGs). Additionally, the West African countries have operationalised UN Resolution 1325 on women, peace and security in Africa, for which Côte d'Ivoire was the first signatory. They are also State Parties to the Solemn Declaration of African Heads of State and Government on Gender Equality in Africa adopted in July 2004 (the so-called Maputo Protocol). Overall, Latin American countries have made greater progress in gender equality compared with those in West Africa. For example, they are generally ranked higher in the Human Development Index (HDI)[221] and the Gender Inequality Index (GII).

256. Latin America. Over the past 30 years, women participating in Latin America's workforce has increased by 11%. More than half of all women (aged 15 or over) in 18 countries in the region are working, with Peru taking the lead at 69% and, among the lowest, Costa Rica at 45% and Mexico at 44%. In Peru, for example, 90% of women with advanced education (which, in this case, refers to schooling beyond high-school level) are working, and 80% in Venezuela, with similar correlations in other countries in the region.[222] In addition to improvements in education, the increasing involvement of women in the labour market is attributable, inter alia, to the steady reduction in discriminatory regulations against women in the workforce. Nonetheless, there is still a substantial wage gap, with women earning on average 17% below men of the same age and economic status; unpaid labour (such as housework and childcare) is disproportionately allocated to women, resulting in an uneven balance of workload and compensation.[223] Latin America has the highest female entrepreneurship rates in the world: for example, over 33% and 32% of working-age women are engaged in early-stage business activities in Ecuador and Chile, respectively.[224] Approximately 17% of ventures in the region that successfully attract VC funding are female-founded, a higher proportion than any other region of the world.[225] Entrepreneurship in Latin America is generally characterised by optimism, innovation and growth: two-thirds of Latin American entrepreneurs enter the field because they recognise the opportunity and potential innovation, rather than out of necessity.[226]

257. West Africa. Since the mid-2000s, almost every West African country and regional organisation has adopted a gender policy or strategy and is increasingly mainstreaming gender issues in different policy sectors.[227] However, large gender disparities persist. Women and girls are disadvantaged in many areas and do not enjoy the same opportunities as their male counterparts. This is true for access to basic social services, property rights and the labour market. Only 10% of the West African ventures that have cumulatively raised US$ 1 million or more in the past decade have had at least one female co-founder.[228]

Key barriers faced by women entrepreneurs in Latin America and West Africa

[220] FAO (2011), *The Role of Women in Agriculture*: https://www.fao.org/3/am307e/am307e00.pdf
[221] Measures differences in male and female achievements in three basic dimensions of human development: health, education and command over economic resources.
[222] ECLAC/ILO (2019), *Employment Situation in Latin America and the Caribbean: Evolution of, and Prospects for, Women's Labour Participation in Latin America*: https://www.cepal.org/en/publications/44917-employment-situation-latin-america-and-caribbean-evolution-and-prospects-womens /
[223] ECLAC/ILO (2019), *Employment Situation in Latin America and the Caribbean: Evolution of, and Prospects for, Women's Labour Participation in Latin America*: http://repositorio.cepal.org/bitstream/handle/11362/44917/1/S1900832_en.pdf
[224] Statista (2020), *Start-Ups in Latin America – Statistics & Facts*: https://www.statista.com/topics/4786/startups-in-latin-america/
[225] Tech Crunch (2020), *Latin America Takes the Global Lead in VC Directed to Female Co-Founders*: https://techcrunch.com/2020/02/06/latin-america-takes-the-global-lead-in-vc-directed-to-female-co-founders/
[226] The Startup VC (2020), *Women Entrepreneurship in Latin America?*: https://www.thestartupvc.com/startup-news/women-entrepreneurship-in-latin-america
[227] OECD/Sahel and West Africa Club Secretariat (2019), *Women and Trade Networks in West Africa*: https://read.oecd-ilibrary.org/development/women-and-trade-networks-in-west-africa_7d67b61d-en#page1
[228] Vogue (2021), *Meet 6 Women at the Forefront of West Africa's Tech Boom*: https://www.vogue.in/culture-and-living/content/west-africa-women-technology-industry-professionals

258. Urban-rural divide. The most significant difference in the ability for women to become entrepreneurs is determined by where they live – in rural or urban settings. This disparity is grounded in unequal educational levels, diminished access to finance, and traditional social burdens of household care and childbearing (unpaid care work). For example, in Côte d'Ivoire, rural women represent 67% of the workforce and produce 60-80% of food – yet, 75% live under the poverty line.[229] In Latin America, only 30% of the women who live in rural areas own agricultural land and fewer than 5% have access to technical assistance. Land tenure is a major barrier for women, as many have limited access to land tenure or formal land use rights. This has major implication for women's livelihood security and makes it difficult for many women to access credit/finance. In addition, access to essential services and actors is often limited to the capital cities. In Côte d'Ivoire, for example, international actors are almost entirely based in Abidjan, which is well serviced in terms of women's entrepreneurship empowerment programmes, but other large cities and rural areas are left out of programme implementation. There are a few exceptions, such as the Institut National Polytechnique Félix Houphouët-Boigny in Yamoussoukro, the political capital of Côte d'Ivoire, which has a pre-accelerators, and some organisations have occasional satellite programming, but this is not a widespread phenomenon.

259. Customary and traditional norms and practices. In both West Africa and Latin America, child marriage and teenage pregnancies are common. West Africa is said to have the highest rate of child marriage in the world and is unlikely to meet the 2030 SDG of ending child marriage.[230] In Burkina Faso, 52% of girls are married before the age of 18 years, 10% of whom are younger than 15. In Niger, the rate is even higher, with 76% of girls married before the age of 18.[231] Maternal mortality in West Africa averages 26 deaths a day, a rate that is four times higher than anywhere else in the world.[232] Latin America, on the other hand, has the highest rates of pregnancy among adolescents, with 74 births per 1,000 adolescents between 15 and 19 years of age, as well a high maternal mortality of 34.6 deaths per 100,000 live births. Customary laws continue to be applied on a regular basis in many countries in West Africa. These customary laws are often based on patriarchal structures that negatively affect women, notably in terms of inheritance rights, land rights, access to credit and accessibility of the justice system.[233] In Latin America, significant legal strides have been made in the past decade, and many countries have repealed laws identifying the husband as the head of the household, which was seen to limit women's capacity to administer properties.

260. Sexual and gender-based violence (SGBV) and Sexual Exploitation, Abuse and Harassment (SEAH). Although a number of measures have been implemented to combat SGBV on paper, SGBV remains prevalent in West African countries. A major form of SGBV in West Africa is female genital mutilation (FGM). Although laws criminalising FGM exists in most West African countries, Mali and Burkina Faso, for example, continue to record rates above 75% amongst women aged 15 to 49 years.[234] In addition to loss of life, the practice causes life-long problems that hinder women from achieving their full potential. In Latin America, gender-based violence (GBV) remains a serious issue in Mexico. According to surveys conducted by INEGI and the National Institute for Women, around 63% of Mexican women (aged 15 or older) have been victims of GBV at some point in their lives. Femicide (the killing of women) is also a regional problem[235], with Brazil reporting the highest number of cases at 1,738 and Mexico at 948 cases in 2020.

261. Access to entrepreneurship support and capacity building. Gender inequality with regard to illiteracy and lack of education is probably the most important factor affecting women's entrepreneurship potential in most countries in West Africa. For example, the latest census of Côte d'Ivoire (in 2014) indicates that 60% of Ivorian women are not educated, or only completed primary school, and that illiteracy is more pronounced among older generations.[236]. In Latin America, the problem is not typically related to education, as the region has one of the

[229] Catalystas Consulting (2020), *Scoping Mission: Catalysing Women's Entrepreneurship in Cote D'Ivoire*: https://www.rvo.nl/sites/default/files/2021/03/Scoping-Mission-Catalyzing-Womens-Entrepreneurship-in-Cote-dIvoire.pdf
[230] Plan International / Girls Not Brides (2020), *COVID-19 and Child Marriage in West and Central Africa*: https://plan-international.org/uploads/2021/12/waca-plan_and_gnb_joint_policy_brief_on_cm-final_eng-aug2020.pdf
[231] UNICEF (2011), *Child Marriage Database*: https://data.unicef.org/topic/child-protection/child-marriage/.
[232] OCHA Reliefweb (2021), *Child Marriage Kills More Than 60 Girls A Day:* https://reliefweb.int/report/world/child-marriage-kills-more-60-girls-day
[233] UN Human Rights / UN Women (2013), *Realising Women's Rights to Land and Other Productive Resources*: https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2013/11/OHCHR-UNWomen-land-rights-handbook-WEB%20pdf.pdf
[234] UNICEF Global Database (2021), *Prevalence of Female Genital Mutilation/Cutting Among Girls and Women (% of girls and women ages 15-49)*: https://data.unicef.org/topic/child-protection/female-genital-mutilation/.
[235] CEPAL (2020), *The Pandemic in the Shadows: Femicides or Feminicides in 2020 in Latin America and the Caribbean*: https://www.cepal.org/sites/default/files/infographic/files/21-00792_folleto_the_pandemic_in_the_shadows_web.pdf.
[236] Catalystas Consulting (2020), *Scoping Mission: Catalysing Women's Entrepreneurship in Cote D'Ivoire*: https://www.rvo.nl/sites/default/files/2021/03/Scoping-Mission-Catalyzing-Womens-Entrepreneurship-in-Cote-dIvoire.pdf

highest literacy levels. However, as in West Africa, alternative education such as accelerators or business support programming are mostly limited to the wealthy part of the population, including women coming from well-off families, and are virtually unavailable outside of the cities. In West African capital cities, entrepreneurship support projects are located mostly in the same urban neighbourhoods, frequented by groups with access to the best educational institutions both in-country and abroad. The situation is similar in Latin America: for example, Mexico City hosts over 30% of all operational ventures in Mexico. This is also the case in Colombia, where more than half of all ventures are based in Bogotá and its immediate neighbourhood.

262. Lack of access to information. No matter the socio-economic or education level, women face an overall lack of access to information related to registering and opening a business, as well as accessing (or preparing to access) financial services. In West Africa, it was noted during stakeholder consultations that supportive government legislation and policies remain largely unknown beyond capital cities and are thus under-utilised. Women are under-represented in networking events and conferences where investors meet and network with entrepreneurs, partly because of the smaller numbers of women entrepreneurs but also because of the stigma of going out alone to an event, for safety reasons and due to the need (and/or expectation) of taking care of family and household tasks.

263. Limitations in access to finance. First, the lack of information makes accessing financial markets challenging beyond mobile money systems. The lack of information also limits women's ability to prepare themselves to apply for investment. Second, , women's lack of access and control over collateral assets limits their access to credit more than men. Third, there is an exaggerated gap in finance between micro- and large loan amounts that hinders business expansion, especially for women.[237]

264. Narrow perceptions of entrepreneurship. Consultations during preparation of the Gender Assessment reveal that the local perception of what entrepreneurship is, in both Latin America and West Africa, tends to be narrowly limited to an idea of Western businessmen and women in offices. For many women, the concept of entrepreneurship is reserved for suits and ties, formal offices and fast-paced environments with high revenue, expanding teams of employees and observable short-term growth. However, many of these same women engage in work – often entrepreneurial buying and selling in the informal economy – outside their primary role or occupation. In Latin America, stereotypes and gender roles continue to prevail. In Mexican society, for example, 48% of women aged 15 and older think women who work are not able to take care of their children properly; while 10% consider men and not women should hold decision-making positions.[238]

265. Under-representation of women trainers / coaches. The combination of needing general business experience, climate change knowledge and, typically, deep expertise in one or more sectors serves to limit the number of staff members of pre-accelerators or accelerators who can advise climate ventures. When the gender element is layered on top of this, the numbers of qualified women trainers / coaches reduces yet further. In general, female trainers have more empathy for other women and, by sharing own experiences during the training and coaching, they can support women to confront their challenges.

G.2.2 Gender Action Plan

266. The detailed Gender Action Plan (GAP), including interventions at the Activity and Sub-Activity levels, is provided in Annex 8b. For reasons of brevity, only the strategic recommendations are summarised below.

General recommendations for CATALI.5°T Initiative design

267. Recommendation 1: Ensure that the Executing Entities and local implementation partners have the capacities and necessary tools for gender-climate mainstreaming. Based on the institutional capacity assessment (see the Gender Assessment, Annex 8a), there is already strong, demonstrable gender commitment from all of the Executing Entities. However, gender expertise and capacities for gender mainstreaming in climate innovation is not the same across each of the Executing Entities. In this regard, the following recommendations are regarded as crucial for the CATALI.5°T Initiative:
    - Develop a unified gender-mainstreaming document for the CATALI.5°T Initiative that provides essential tools for gender and climate innovation, addressing the two regional contexts.

[237] Catalystas Consulting, 2020. Scoping Mission: Catalyzing Women's Entrepreneurship in Cote D'Ivoire. Accessible at https://www.rvo.nl/sites/default/files/2021/03/Scoping-Mission-Catalyzing-Womens-Entrepreneurship-in-Cote-dIvoire.pdf
[238] GIZ (2018), *Gender Analysis for NAMA Project: 'Energy Efficiency in SMEs as a Contribution to a Low-Carbon Economy in Mexico'* [Internally shared document].

- Ensure Executing Entities and local implementation partners are adequately trained on gender mainstreaming in climate innovation. This training could, among other benefits, provide practical measures for creating more gender-smart and inclusive pre-acceleration and acceleration programmes and be able to advise and train climate ventures on gender-climate issues.
- Rather than appointing and training one focal point individual from each Executing Entity, ensure the staff of the two regional initiatives, including top and middle management of the Executing Entities, are trained. This will also create more buy-in and momentum for gender mainstreaming in the planning, implementation and monitoring of the Executing Entities' activities and, ultimately, lead to effective realisation of the Executing Entities' commitment towards implementation of the GAP.

268. Recommendation 2: Encourage, support and document cross-learning on climate gender mainstreaming between Executing Entities and regions. There is currently little documented evidence to gauge which strategies work best in securing a healthy pipeline of female ventures. But anecdotal evidence gathered from interviews with the Executing Entities reveals some promising strategies, such as focusing on ventures / value chains where women are predominant, establishing partnerships with women-oriented platforms and networks, and anchoring the pre-acceleration / acceleration programmes on coaching and mentoring programmes run by women. It is, therefore, recommended that such promising strategies are further tested during implementation of the CATALI.5°T Initiative and the most effective pathways are identified for learning and scaling. There is an opportunity for more deliberate and systematic learning, based on what gender and climate innovation strategies are found to work and where (particularly feeding country- and community-level voices and insights into gender and climate change innovation at the global level), and then replicating the lessons among the Executing Entities through, for example, workshops and reporting of best practices.

269. Recommendation 3: Review and update the CATALI.5°T Initiative's gender indicators. These indicators should be integrated in the CATALI.5°T Initiative's learning framework.

270. Recommendation 4: Include gender diversity in the CATALI.5°T Initiative's governance structure in both regions.

Recommendations for CATALI.5°T Initiative Executing Entities

271. Recommendation 5: Ensure calls for applications and scouting are inclusive and encourage applicants of all genders:
    - Use different channels and networks to reach all genders.
    - Hold information events and consider holding separate women-only events.
    - Create promotional materials that are gender-inclusive and that integrate gender-sensitive language to avoid confusion in the French and Spanish interpretation of some gender-sensitive words.[239]
    - In marketing materials, include messages to counteract negative stereotypes to encourage and attract female entrepreneurs: for example, by designing inspiring messages[240], featuring female role models, or highlighting success stories of female and minority entrepreneurs that could help disrupt, for instance, the notion of what a stereotypical coder or climate entrepreneur or engineer (etc.) looks like.

272. Recommendation 6: Apply a gender lens when selecting ventures for the pre-acceleration and acceleration programmes in order to ensure that all genders have equal opportunity to be selected. This can be achieved through:
    - Setting clear exclusion and selection criteria, including their weightings.
    - Establishing gender-diverse selection panels. A study by the Global Accelerator Learning Initiative (GALI) found that "having more than 45% women on a selection committee is associated with significantly more women-led ventures in applicant pools."[241]

273. Recommendation 7: Adapt the pre-accelerator and accelerator programme curriculum language to be inclusive of all genders, including showcasing successful women entrepreneurs to provide role models and examples that women participants can relate to.

[239] Including unambiguous use of plural pronouns. In both languages, masculine pronouns are applied to groups of mixed genders, which can cause confusion for female readers (are they being addressed or not?).
[240] A simple note stating female and minority applicants are strongly encouraged to apply could go a long way in reassuring applicants.
[241] GALI (2020), *Accelerating Women-led Start-Ups: A Knowledge Brief by the Global Accelerator Learning Initiative*: https://www.galidata.org/publications/accelerating-women-led-startups/

274. Recommendation 8: During pre-acceleration and acceleration programme delivery, identify and enhance the capacity of the supported ventures to maximise gender benefits:
    - At an early stage, introduce gender mainstreaming issues to the ventures, integrate gender into the ventures' capacity assessments and make available mechanisms for strengthening identified capacity gaps. Specific training should focus on: (i) raising ventures' awareness of gender disparities and power dynamics that impact their own entrepreneurial journeys, (ii) how to apply a gender lens to product / service development, (iii) how to reduce conscious and unconscious gender bias arising from their own actions, and (iv) mechanisms for identifying and eliminating SEAH.
    - The ideation process should also capture women's and minority views. In West Africa, given the structural issues perpetuated by patriarchal norms, it is essential that ideation sessions are conducted separately, or at least have some sort of facilitation support, for male and female entrepreneurs to achieve maximum input from both sexes.
    - Ensure training, mentoring and coaching venues and timings are suitable for female entrepreneurs to avoid exacerbating their time constraints.

275. Recommendation 9: Aim for gender diversity in programme delivery. This includes building a gender-diverse pool of mentors and coaches so that all participants', including female entrepreneurs', perspectives and experiences are understood and accommodated.

276. Recommendation 10: Help to create and maintain network support communities by:
    - Inviting successful women climate entrepreneurs as keynote speakers and role models to community-building and promotional events.
    - Ensuring the times for networking events are suitable for female entrepreneurs. Where events are undertaken online, video recordings (data protection mechanisms allowing) should be made available to the female entrepreneurs who were not able to attend.
    - Creating a safe and supportive community of practice for women entrepreneurs. The strength of this community of practice will be rooted in the collaboration and support that women give to each other. In addition, creating exposure and linking venture founders with networks of individuals or groups containing sector experts, funders and other like-minded individuals will lower the informational barriers that women entrepreneurs can face.
    - Inviting key institutions responsible for gender and gender mainstreaming, including public institutions supporting entrepreneurs in the respective regions, to community-building events.

Recommendations for supported climate ventures

277. Recommendation 11: At the pre-acceleration stage, ventures' leadership and management tend to be fluid. This provides an opportunity for the CATALI.5°T Initiative to make an early start on gender mainstreaming in ventures' management and operations. A tailored approach (products / services, venture needs, context and venture capacity) will be essential. For the ventures to become gender-smart, the following topics for specific training are recommended:
    - Ventures should gain awareness of gender issues, including SEAH (see Recommendation 8).
    - Ventures should recognise the value of including sex-disaggregated data in their market research and in their employee recruitment practices. Clarifying gendered differences will reveal opportunities, enable validation of specific products or services, and help refine and strengthen the business value proposition.
    - Ventures should be willing to identify priority areas and the type of support needed to have their own capacities built in gender mainstreaming during their participation in the pre-acceleration programme.

278. Recommendation 12: At the acceleration stage, ventures, and especially those that have not gone through the pre-acceleration programme, may already have rigid structures in place and may not initially be interested in learning how to incorporate gender into their business. For many, the lack of awareness of the connection between gender inclusion and business performance will keep them focused only on trying to scale their business. If gender is not viewed as something that can impact the bottom line, it is less likely to be prioritised by the ventures. Accordingly, the commercial benefits of gender inclusion should be emphasised, including:
    - Tailor-made products and services.
    - Gender-disaggregated data, which can inform marketing tactics, strategic messaging and sales efforts.
    - Attracting investment, particularly from international financiers with gender strategies and gender Key Performance Indicators.

    Acceleration-stage ventures should also:

- Commit to ensuring equal opportunities and equal pay for the same jobs among their employees / labourers: for example, they should create a salary scale that does not discriminate based on gender, age, race, colour or religion.
- Continually and deliberately analyse their team compositions, particularly gender ratios among: (i) the top and middle management teams, and (ii) part-time vs full-time employees.
- Ensure gender inclusion in products and services. The ventures should be able to clearly specify what gender inclusion means for their products and services, what their ultimate target is, and how they intend to get there.
- The ventures should make women visible in order to challenge stereotypes and create market opportunities for their products. The ventures should provide senior women managers in their teams with opportunities to represent the business publicly through marketing and other channels. The advertisement of their products and services should also refrain from negative gender stereotypes and present women and marginalised groups in a dignified way.

G.2.3 Incorporation of the Gender Action Plan in the CATALI.5°T Initiative design

Table 16: Incorporation of GAP Recommendations

	GAP Recommendation	Response in CATALI.5°T Initiative Design
1	Ensure that the Executing Entities have the capacities and necessary tools for gender-climate mainstreaming	Activities 1.1.1 (Latin America) and 2.1.1 (West Africa) provide capacity building for the Executing Entities, local implementation partners, entrepreneur support organisations (ESOs) and venture investors. Sub-Activities 1.1.1.4 (Latin America) and 2.1.1.4 (West Africa) focus specifically on gender equality and diversity.
2	Encourage, support and document cross-learning on climate gender mainstreaming between Executing Entities and regions	Sub-Activities 1.1.1.4 and 2.1.1.4 include development of regional reports and a consolidated cross-regional report based on longitudinal studies of the Executing Entities. The report will inform individual and collective actions on gender.
3	Review and update the CATALI.5°T Initiative's gender indicators	The log-frame contains gender-differentiated indicators and targets, as well as Activities and Sub-Activities that specifically address gender-related issues.
4	Include gender diversity in the CATALI.5°T Initiative's governance structure	The CATALI.5°T Initiative will establish minimum quotas for women's participation in the Global Advisory Committee (GAC) and the 3 Management Units.
5	Ensure calls for applications and scouting are inclusive and encourage applicants of all genders	Calls for applications for the pre-acceleration and acceleration programmes will be in Spanish / French, will use gender-inclusive language, will be disseminated across women-oriented networks and will be accompanied by special events for women and other under-represented backgrounds. All major communications materials will be reviewed and approved by the CATALI.5°T Initiative's regional gender specialist (one per region).
6	Apply a gender lens when selecting ventures for the pre-acceleration and acceleration programmes	Gender considerations are incorporated in venture screening and venture selection, in both the pre-acceleration and acceleration programmes. Screening: ventures will be excluded if: (i) the venture's product or service has obvious negative implications for women: e.g. it would exacerbate wage disparities or require long working hours without extra compensation; and/or (ii) the venture has none of its founders and employees identifying as female and the venture has no intentions of diversifying its team members to include more women. Additionally, at commencement of the CATALI.5°T Initiative, a lean mechanism will be developed by the regional Executing Entities to reduce unconscious gender bias in the screening process; this will be approved by GIZ in its AE role. Selection: as part of the scoring system, a venture is favoured (up to 10% of the overall score) if: (i) it is female-led, defined as the founder being a woman or, where there is more than one founder, the majority of founders (50% or more) are women; and/or (ii) it will offer products or services that address a gender-related climate problem (e.g. gender stereotyping, increasing women's wages, increasing female participation in male-dominated sectors, etc.)
7	Adapt the pre-accelerator and accelerator programme curriculum	Activities 1.3.1 and 1.4.1 (Latin America) and 2.3.1 and 2.4.1 (West Africa) will ensure curriculum materials are inclusive of all genders, includes examples of successful women entrpreneurs and content that women can relate to.

	language to be inclusive of all genders	All materials will be reviewed and approved by the CATALI.5°T Initiative's regional gender specialist (one per region).
8	Identify and enhance the capacity of the supported ventures to maximise gender benefits	The training programmes at pre-acceleration and acceleration stages will include gender modules. These will cover a range of topics, including (not exhaustive): business cases for gender in climate innovation and using a gender lens in ventures' business models (e.g., market research, consumer segmentation); and mechanisms for identifying and eliminating sexual exploitation, abuse and harassment (SEAH), as well as reducing unconscious gender biases.
9	Aim for gender diversity in programme delivery	The CATALI.5°T Initiative will establish minimum quotas for women's participation in the Global Advisory Committee (GAC) and the 3 Management Units. At the commencement of the CATALI.5°T Initiative, the Executing Entities will build gender-diverse pools of coaches and mentors in each region.
10	Help to create and maintain network support communities	Sub-Activities 1.2.1.2 (Latin America) and 2.2.1.2 (West Africa) will create digital networks for promoting women and diversity in climate entrepreneurship. The digital communities will be for female entrepreneurs to become inspired, build and successfully grow their businesses while learning from their peers and benefiting from the support of like-minded female founders. They will serve as online gateways to useful and inspiring information (including upcoming events such as climathons and application information / materials for the pre-acceleration and acceleration programmes).
11	Make an early start on gender mainstreaming in ventures' management and operations	While in the pre-acceleration and acceleration programmes, the climate ventures will receive intensive tuition and guidance on gender issues, including in relation to staff recruitment, staff retention, training, and workplace rules and norms (e.g. SEAH), as well as operational and strategic aspects (e.g. market segmentation, understanding consumers' gender-differentiated needs, etc.).
12	Emphasise the commercial benefits of gender inclusion	The commercial benefits to the ventures of gender inclusion will be emphasised throughout, including access to finance (which is a key consideration for most early-stage ventures that are navigating the 'Valley of Death').

G.3. Financial management and procurement

279. The Executing Entities – Climate-KIC, Tec de Monterrey, Impact Hub Abidjan and IPED – will sign subsidiary agreements with GIZ as the Accredited Entity, based on GIZ standard operating procedures for financing contracts. These agreements will establish the legal basis by which GIZ makes GCF funding available to the Executing Entities to manage and operate the programme. The Executing Entities are responsible for implementing and administering their activities in accordance with GIZ and their own standard operating procedures. As the Accredited Entity, GIZ has assessed the capacities of the Executing Entities and is satisfied that they are able to implement their respective tasks within the programme.

G.3.1 Disbursement and Procurement Arrangements

Fiduciary standards

280. The financial management of the programme will follow GIZ's internal rules and regulations. GIZ has bank accounts with Deutsche Bundesbank and Commerzbank. GIZ will not open a specific bank account for GCF proceeds and other GCF funds but will ensure that all funds provided are clearly identifiable and distinguishable from GIZ's other funds by setting up separate cost units exclusively for the funds disbursed by the GCF for each funded activity (ledger accounts). Funds received and expenditures incurred will be booked to the respective cost unit according to generally accepted accounting principles and procedures accepted by the German Government. As a general principle, GIZ disburses funds to recipients in accordance with the progress of the programme.

Procurement

281. In the case of procurement by GIZ, GIZ will follow its own procurement guidelines. GIZ is required to comply with the relevant contracting rules established in the German Act against Restraints of Competition (GWB), the German Regulation on the Award of Public Contracts (VgV) and, if applicable, the Contracting Rules for the Award of Public Service Contracts when procuring services, construction work and supplies. When awarding contracts for supplies and services (including consultancy services) to be financed in full or in part from the financing contract / grant agreement, the external Executing Entities will observe their own national regulations for public procurement and will in any case comply with the provisions mentioned in the Procurement Guidelines for projects and programmes funded by GCF/GIZ. The Procurement Guidelines shall not contradict the applicable

national procurement law and/or regulations for public procurement, which apply in the Executing Entities' countries. In principle, the regulations of the Executing Entities' country are to be observed; the procurement procedures mentioned in the Guidelines are obligatory minimum standards. While implementing a programme with public funds the Executing Entities should take reasonable account of economic efficiency as well as ecological and social aspects.

282. The CATALI.5°T Initiative's procurement plan is available in Annex 10a.

Independent external auditing

283. Independent external auditors will perform annual financial audits of the programme in line with International Auditing Standards. GIZ will be responsible for selecting and engaging the external auditors.

G.4. Disclosure of funding proposal

☒ No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.
☐ With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

ANNEXES

H.1. Mandatory annexes

☒	Annex 1	NDA no-objection letter(s) **(template provided)**
☒	Annex 2	Feasibility study - and a market study, if applicable
☒	Annex 3	Economic and/or financial analyses in spreadsheet format
☒	Annex 4	Detailed budget plan **(template provided)**
☒	Annex 5	Implementation timetable including key project/programme milestones **(template provided)**
☒	Annex 6	E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3): **(ESS disclosure form provided)** ☒ Environmental and Social Management Framework (ESMF) ☐ Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People's Plan, Land Acquisition Plan, etc.)
☒	Annex 7	Summary of consultations and stakeholder engagement plan
☒	Annex 8	Gender assessment and project/programme-level action plan **(template provided)**
☒	Annex 9	Legal due diligence (regulation, taxation and insurance)
☒	Annex 10	Procurement plan **(template provided)**
☒	Annex 11	Monitoring and evaluation plan **(template provided)**
☒	Annex 12	AE fee request **(template provided)**
☒	Annex 13	Co-financing commitment letter, if applicable **(template provided)**
☒	Annex 14	Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

☒	Annex 15	Evidence of internal approval **(template provided)**
☒	Annex 16	Map(s) indicating the location of proposed interventions
☒	Annex 17	Multi-country project/programme information **(template provided)**
☐	Annex 18	Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
☒	Annex 19	Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
☒	Annex 20	First level AML/CFT (KYC) assessment
☐	Annex 21	Operations manual (Operations and maintenance)
☒	Annex 22	Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)
☒	Annex X	Other references

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

Annex Number	Annex Document[242]
1. NDA Approval	
1.1. Latin America	
1.1.1	NDA Letter of No Objection: Argentina
1.1.2	NDA Letter of No Objection: Costa Rica
1.1.3	NDA Letter of No Objection: Dominican Republic
1.1.4	NDA Letter of No Objection: Honduras
1.1.5	NDA Letter of No Objection: Mexico
1.2 West Africa	
1.2.1	NDA Letter of No Objection: Benin
1.2.2	NDA Letter of No Objection: Burkina Faso
1.2.3	NDA Letter of No Objection: Côte d'Ivoire
1.2.4	NDA Letter of No Objection: Guinea
1.2.5	NDA Letter of No Objection: Mauritania
1.2.6	NDA Letter of No Objection: Niger
1.2.7	NDA Letter of No Objection: Senegal
1.2.8	NDA Letter of No Objection: Togo
2. Feasibility Study	
2a	Scoping assessment study
2b	Feasibility study: Latin America
	Annex 1: Country tables
	Annex 2: NDCs and climate policies
	Annex 3: Baseline projects
	Annex 4: Stakeholder engagement
	Annex 5: Validation process and results
2c	Feasibility study: West Africa
	Annex 1: Country tables
	Annex 2: NDCs and climate policies
	Annex 3: Baseline projects
	Annex 4: Stakeholder engagement
	Annex 5: Validation process and results
2d	Report on current ESG integration status among VCs and accelerators in Latin America and West Africa
3. Economic and Financial Analysis	
3a	Economic and financial valuation model
3b	Economic and financial valuation summary
3c	Venture financing environment – Latin America
3d	Venture financing environment – West Africa
4. Programme Budget	
4a	Programme budget
5. Implementation Timetable	
5a	Programme implementation timetable
6. Environmental and Social Documents	
6a	Environmental and Social Management Framework (ESMF)
7. Stakeholder Consultations and Engagement Plan	
7a	Summary of stakeholder consultations
8. Gender Assessment and Action Plan	
8a	Gender assessment
8b	Gender action plan
9. Legal Due Diligence	
9a	Legal due diligence – regulation, taxation and insurance
10. Procurement Plan	
10a	Procurement plan

[242] Greyed-out annexes have not been included in the first submission. They will be made available to the GCF shortly.

10b	Procurement guidelines
11. Monitoring and Evaluation Plan	
11a	Monitoring and evaluation plan
12. AE Fee Request	
12a	AE fee request
13. Co-finance Letters	
13a	Co-finance letter - BMZ Division of Sustainable Economic Policy & Financial System Development
13b	Co-finance letter – BMZ Division Latin America
13c	Co-finance letter – BMZ Division of Coordination of Operations in Africa
14. Term Sheet	
14a	Term sheet
15. Internal Approval	
15a	GIZ letter of internal legal approval
16. Maps	
16a	Map of programme countries
17. Multi-Country Programme Information	
17a	Multi-country programme information
19. Procedures for Controlling Procurement by Executing Entities	
19a	Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
20. KYC Assessment	
20a	Capacity needs assessments of Executing Entities
22. Assessment of GHG Emission Reductions	
22a	MORSE model (Excel)
22b	MORSE model overview
22c	GHG methodology, impacts and sensitivity analysis
22d	Types of climate ventures – classified by GCF result area and archetype
22e	Transport emission reductions - explanation
23. Other References	
23a	Knowledge management plan
23b	Theory of change diagram
23c	IPED certificate of incorporation
23d	Case-studies of climate ventures – Climate-KIC
23e	Case-studies of climate ventures – IPED