

GENDER ASSESSMENT

PRESENTED TO

DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH DAG-HAMMARSKJÖLD-WEG 1 - 5 65760 ESCHBORN

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ACRONYMS

AfDB African Development Bank
AgTech Agricultural Technology

AMEXCAP Mexican Association of Private Capital

ANADER National Rural Development Support Agency
ANDE Aspen Network of Development Entrepreneurs

ANUIES National Association of Universities and Institutions of Higher Education

AR4D Agricultural Research for Development

AVEC Association Villageoise d'Epargne et de Crédit

BAU Business-as-usual

BCE Bureau for the Support and Creation of Businesses

BDS Business Development Service

BMZ Federal Ministry for Economic Cooperation and Development
CEDAW Committee on the Elimination of Discrimination against Women

CEO Chief Executive Officer

CGECI General Confederation of Enterprises of Côte d'Ivoire
CGFE Gender and Woman Entrepreneurship Commission

C-KIC Climate Knowledge and Innovation Community International Foundation

CIMMYT International Maize and Wheat Improvement Centre

CONACYT National Council for Science and Technology

COVID-19 Corona Virus Disease 2019
CSR Corporate Social Responsibility

CTO Chief Technology Officer
CSO Civil Society Organisation

CO₂ Carbon Dioxide

DER La Délégation Générale à l'Entreprenariat Rapide

EAIF Emerging Africa Infrastructure Fund

ECA U.S. Government's Office of Cultural and Educational Affairs

ECLAC Economic Commission for Latin America and the Caribbean

ECOWAS Economic Community of West African States

EDIC Estudio de Diversidad e Inclusión en el Capital Privado

EE Executing Entity

ESG Environmental, Social and Governance
ESO Entrepreneur Support Organization

FAFCI Support Fund for Women of Côte d'Ivoire

FAO Food and Agriculture Organization of the United Nations

FinTech Financial Technology



FCFA West African Franc

FGM Female Genital Mutilation

FJN Fondation Jeunesse Numérique

FP Funding Proposal
GA Gender Assessment

GAMMA Gender Assessment Method for Mitigation and Adaptation

GAP Gender Action Plan

GBV Gender-Based Violence GCF Green Climate Fund

GDP Gross Domestic Product
GHG Greenhouse Gas Emission
GEF Global Environment Facility
GII Gender Inequality Index
GIL Gender Innovation Lab

GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit

GUCCI Gender into Urban Climate Change Initiative

GOM Government of Mexico

HDI Human Development Index
HGC Heineken Green Challenge
I&P Investisseurs & Partenaires

IBAN Ivorian Business Angels Network

ICPD International Conference on Population and Development

ICT Information and Communication Technology

IDB Inter-American Development Bank

IDB Lab/ WX Inter-American Development Bank Innovation Laboratory / WeXchange

IFC International Finance Corporation

iHub Impact Hub

INADEM National Entrepreneur Institute

INEGI National Institute of Statistics and Geography

INMUJERES National Institute of Women

ILO International Labour Organization

I&P Investisseurs & Partenaires

IPED Investisseurs & Partenaires Entrepreneurs and Development

JTH Jiggen Tech

KII Key Informant Interview
KPI Key Performance Indicators
LAC Latin American and Caribbean

LACGIL Latin American and Caribbean Gender Innovation Lab



LATAM Latin America

LGBTI Lesbian, Gay, Bisexual, and Intersex

LPG Liquefied Petroleum Gas

MIT Massachussetts Institute of Technology
MFFE Ministry of Women, Family and Children

NAP National Adaptation Plan

NDA National Designated Authority

NDC Nationally Determined Contribution

NDP National Development Plan

NGO Non-governmental Organisation

NoL No-objection letter

OECD Organisation for Economic Co-operation and Development
OHADA Organisation for the Harmonisation of African Business Law

PDESFI National Financial Inclusion Strategy

PE Private Equity

PEF Federal Expenditure Budget
PES Plan for an Emerging Senegal

PME Agency for Promotion of Entrepreneurship

PROIGUALDAD The Equality Programme (spanish: El Programa para la Igualdad)

PSEAH Prevention of Sexual Exploitation, Abuse and Harassment

CATALI.5°T Initiative Concerted Action To Accelerate Local I.5° Technologies – Latin America and West Africa

R&D Research and Development RFS Regional Feasibility Study

RGEM Red de Género y Medio Ambiente SDG Sustainable Development Goal

SEMARNAT Secretary of Environment and Natural Resources

SENER Secretary of Energy

SGB Small and Growing Business

SGBV Sexual and Gender-based Violence

SME Small and Medium Enterprise

SNEEG National Strategy for Gender Equality and Equity

SNLVBG National Strategy for Combating Gender-Based Violence

STEM Science, Technology, Engineering and Mathematics

TRECC Transforming Education in Cocoa Communities

TVET Technical and Vocational Education and Training

UN United Nations

UNAM National Autonomous University of Mexico
UNDP United Nations Development Programme



UNESCO United Nations Educational, Scientific and Cultural Organisation

UNICEF United Nations Framework Convention on Climate Change
UNICEF United Nations International Children's Emergency Fund

USAID United States Agency for International Development

VC Venture Capital

VC4A Venture Capital for Africa

WB World Bank

WEA WeEmpowerAsia

We-Fi Women Entrepreneurs Finance Initiative



0 EXECUTIVE SUMMARY

Governments, international organizations and stakeholders across the globe have recognized that gender equality and women's empowerment are fundamental to socioeconomic development. A strong business case for gender in entrepreneurialism and the SME sector exists and is cogently articulated by recognized institutions. Even though women, low-income populations, and other disadvantaged groups are disproportionately vulnerable to the effects of natural disasters and climate change, harnessing gender equality is one of the most powerful instruments available to implement the Paris Agreement and an unequivocal way to mitigate trade-offs between climate and sustainable development action while leading to substantial development cobenefits. Gender equality is also key to reducing the existing gender credit gap in both regions e.g. Latin America's gender- related credit gap in 2019 stood at US\$ 93 billion (€88.2 billion) for women-led SMEs. In Africa, the finance gender gap in 2022 is estimated at US\$ 42 billion (€39.8 billion).

The Latin American countries are ranked higher in the Human Development Index (HDI) and the Gender Inequality Index (GII). Many West African countries are ranked among the bottom two deciles of the 189 HDI countries. Most of the countries in both regions (notably, Côte d'Ivoire, Senegal, Burkina Faso, Mexico, Ecuador, Colombia and Paraguay) have put in place measures to improve gender equality: e.g. ratification of international conventions and protocols, equal rights enshrined in the constitution, development of own gender strategies, etc. However, concrete actions – backed, crucially, with the necessary resources – have lagged behind, with the result that gender gaps in three key sectors that have direct links to climate entrepreneurialism (education, agriculture and energy) are prominent and persistent. Some of the existing gender barriers that continuously exacerbate factors of inequality, and thus the underlying drivers of gender inequality, include persistent Sexual and Gender-based Violence (SGBV) that is common in the two regions: e.g. high prevalence rates of Female Genital Mutilation (FGM) and child marriage in West Africa and femicide in Latin America. In West Africa, the problem is compounded by discriminatory customary and traditional norms, practices and beliefs.

In the Executing Entities' (EEs') host countries of Côte d'Ivoire, Senegal and Mexico, women entrepreneurs face numerous hurdles, stemming from a combination of structural and rigid social-cultural barriers and lack of broader enabling gender ecosystem. Although the lived experience of women entrepreneurs in West Africa is very different from that in Latin America, lack of status equality, lack of business training and role models, and lack of access to finance are common challenges across the two regions. For the Executing Entities, difficulties in recruiting large numbers of women into their pre-acceleration and acceleration programmes, and the limited number of female role models and mentors, are common features across the two regions. Due to the nascent status of 'cleantech', engagement with gender issues in the 'climate venture' space is less developed. While not all EEs have strong capacity in the gender and climate change nexus, all the project EEs have devised resourceful ways to tackle gender-related challenges and to create innovative strategies for women's inclusion. Sufficient gender mainstreaming capacities therefore exist among the EEs. IPED in West Africa, for example, demonstrates a substantive track-record of engagement with the gender-entrepreneur nexus, though not specifically in a climate change context. Climate-KIC, as a trans-regional EE, has well-recognized global capacity in the gender and climate change nexus and represents a considerable asset in the project gender capacity building measures.

Based on the findings of the Gender Assessment (GA), concrete recommendations have been developed. The recommendations act as the basis for the project Gender Action Plan (GAP) to be implemented by Impact Hub Abidjan and IPED in West Africa and Tecnológico de Monterrey in Latin America, with trans-regional support from Climate-KIC and GIZ.



1 INTRODUCTION

The CATALI.5°T initiative, hereafter named "the project", is grounded in local knowledge and context, an investor mind-set and a determination to unlock entrepreneurial potential in order to avoid greenhouse gas emissions at scale and in accelerated timeframes. The project works with local/ regional pre-accelerators and accelerators to co-design and co-implement regional climate venture support programmes, one in Mexico for Latin America (CATALI.5°T América Latina) and one in Côte d'Ivoire/ Senegal for French-speaking West Africa (CATALI.5°T Afrique de l'Ouest). Each regional programme consists of a pre-acceleration element and an acceleration element for climate ventures, accompanied by technical assistance – tools, training and networking – to reinforce the capacity of the broader innovation ecosystem and financial assistance in the form of grants and repayable grants to cover pre-agreed costs.

The project has three main regional Executing Entities (EEs), which will coordinate the <u>regional</u> <u>pre-acceleration and acceleration programmes</u>:

- IPED in West Africa
- Impact Hub (iHub) Abidjan in West Africa
- Tecnológico de Monterrey in Latin America

A fourth EE, Climate-KIC International Foundation, will support beneficiaries in the climate change impact assessment of their solutions, and provide capacity building to the executing entities, as well as to a wider network of interested Entrepreneur Support Organizations (ESOs) including regional investors. Additionally, Climate-KIC will provide capacity building on how to integrate gender equality in interventions, support ventures to become gender-smart and enhance diversity in climate entrepreneurship.

GIZ will serve as a fifth EE, responsible for overseeing the project, providing capacity building to the executing entities running the pre- and acceleration programmes, and manage local implementation partners where required (primarily in the context of the West African pre-acceleration programme).

The following section details the structure of the Gender Assessment:

Chapter 1 details assessment background. In particular, the chapter provides the overview of the study objectives and enumerates the methodologies and tools used in the Gender Assessment (GA). It also enumerates the stakeholders consulted.

Chapter 2 presents the case for gender equality, including details on the nexus between gender and climate change.

Chapter 3 provides the progress and challenges of gender equality in Latin America and West Africa. First, the chapter introduces the status of gender equality in the two regions, including the typical gender-related risks that are often the underlying drivers of inequalities. Second, the chapter goes a step further and provides an overview of key barriers faced by women entrepreneurs in the two regions.

Chapter 4 undertakes a deep dive and provides extensive details on gender and climate innovation in the three Executing Entity (EE) host countries¹ of Côte d'Ivoire, Senegal and Mexico. This chapter provides details on the existing institutional mechanisms that govern the entrepreneurial ecosystems in the three countries. It also details the status of climate innovation in the education, agriculture and energy sectors, and identifies specific gender-related barriers on the demand (ventures²) and supply (incubators, pre-accelerators, accelerators and venture capital) sides of climate innovation.

¹ EE host countries are understood as those countries from which the envisioned CATALI.5°T pre-acceleration and acceleration programmes will be coordinated – through local partners, technical assistance missions and virtually.

² The term 'venture' is used in this document to refer to early-stage companies, businesses or start-ups that meet the IFC definition of a micro- or small-scale enterprise: i.e. if the business meets two out of three of the following criteria (employees, assets and sales): Micro enterprises: Employees: < 10 employees; Total assets US\$: <\$100,000 (€9,481) or Annual Sales US\$: <\$100,000(€



Chapter 5 provides an overview of the existing gender-related capacities of the Executing Entities (EEs).

Chapter 6 provides details of projects that could provide opportunities for learning and leveraging, particularly at the nexus between gender and climate innovation.

Chapter 7 draws the general conclusions of the assessment.

Chapter 8 provides recommendations for the project and its key stakeholders. These recommendations form the basis for the development of the Gender Action Plan (GAP).

1.1 OBJECTIVE OF THE GENDER ASSESSMENT

Gender mainstreaming is a core element of the project. This is because climate change initiatives are more sustainable, equitable and more likely to achieve their objectives when gender equality and women's empowerment considerations are integrated into the design and implementation of projects (see Testimony 1).

Testimony 1

"Gender-smart business is better business. If we can help apply a gender lens within the broader entrepreneurial ecosystem, the result will be more thriving businesses and better outcomes for all."

Richenda Van Leeuwen, Executive Director, ANDE

The GA has been conducted to ensure: a gender-sensitive approach and implementation of the project, and to meet the standard requirements of the Green Climate Fund (GCF) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) gender strategy.

The specific objectives of the GA are to: i) provide an assessment of the gender dynamics in the two project regions, ii) assess the gender equality situation in the three Executing Entities' (EEs) host countries of Côte d'Ivoire, Senegal and Mexico by assessing gender equality status in key sectors as well as analysing the gender equality issues for climate entrepreneurs and entrepreneur support organizations (ESOs), iii) assess the gender equality, policies and practices of the project's EEs, iv) provide recommendations on how the CATALI.5°T project design could contribute to reducing gender inequalities and discrimination as well as increase women's access to the project. The GA is complemented by a Gender Action Plan (GAP) in order to make the CATALI.5°T Initiative a gender-responsive project.

1.2 METHODOLOGY

The implementation of the GA and the development of the Gender Action Plan (GAP) are based on the following approaches and stages:

- A. Concept phase with desk review; development of gender 'baseline' topics and a concept paper which formed the basis for the GA and GAP. During this phase, a list of stakeholders to be consulted as well as a guiding list of questions for the stakeholder's consultation meetings and interviews were developed.
- B. The consultant conducted stakeholder consultations with the key stakeholders identified by GIZ and the Regional Feasibility Study (RFS) consultants that were considered to be important for supporting and/or promoting women's entrepreneurship. These stakeholders include all the EEs, namely GIZ, Climate-KIC International Foundation, Tecnológico de Monterrey for Latin America, and Investisseurs & Partenaires Entrepreneurs and Development (IPED) and Impact Hub Abidjan for West Africa. In addition, interviews with selected entrepreneurs took place. Due to the COVID-19 pandemic, stakeholder consultations were primarily conducted through online key informant interviews (KIIs). Analysis of secondary data and extensive literature review also provided essential data and information for the regional and country overviews. The table in Annex 1 provides a summary of the stakeholders consulted and the tools used.

^{94,810).} Small enterprises: Employees: 10-49 employees; Total assets US\$: \$100,000 (€ 94,810) - < \$3 million (€ 2.8 million) or Annual Sales US\$: \$100,000(€ 94,810) - < \$3 million (€2.8 million).



C. Initial findings were presented at the regional validation workshops that were held on 30.11.2021 and 10.12.2021 in West Africa and Latin America, respectively.

2. GENDER EQUALITY, CLIMATE CHANGE AND CLIMATE INNOVATION

2.1. WHY DOES GENDER EQUALITY MATTER FOR CLIMATE **CHANGE?**

Both governments and international organizations have recognized that gender equality and women's empowerment are fundamental to socioeconomic development. The commitment to gender equality and women's empowerment is a central feature of the 2030 development agenda - as evidenced by Sustainable Development Goal (SDG) 5 on gender equality and assertions that gender is interrelated to achieving many other SDGs.

At the core of these international agreements lies the shared global understanding that women should enjoy the same social, politi- S. Kaplan & J. VanderBrug cal and economic rights as men, including

Testimony 2

Paying attention to gender is not just about having a social conscience, nor is it about adding to our list of environmental, social, and governance investment screens. Instead, gender capitalism is about applying a gender lens to highlight the ways that gender is material to financial outcomes and financial outcomes are material to gender."

the right to education, access to health services, employment and participation in decision-making processes3. Gender equality is a question of societal development and women's rights and is a prerequisite for the achievement of the SDGs⁴ (see Testimony 2⁵).

Gender equality is, at the same time, an opportunity for business development. Unlocking the full potential of the female economy and building inclusive work environments are key to boosting economic growth and individual company performance. Improving access to financing for women is, for example, vital to unlocking the potential of female entrepreneurship. However, there is significant gender credit gap in both Latin America and West Africa. Latin America's genderrelated credit gap in 2019 stood at US\$ 5 billion (€4.74 billion) for women's microenterprises and US\$ 93 billion (€88.2 billion) for women-led SMEs. In Africa, the finance gender gap in 2022 is estimated at US\$ 42 billion (€39.8 billion) and costs the continent US\$ 95 billion (€90.1 billion) per year7.

The empowerment of women and girls is a crucial element in the guest for inclusive, sustainable growth and development. The ripple effects of investing in women serve to accelerate sustainable local and global development given that women often make the best investments and their economic empowerment leads to better outcomes for society. This is because women typically invest 90% of their earnings back into their families and communities, compared to 30 to 40% for men^a. Besides being an imperative for social justice, closing the gender gap in the labour force also offers an opportunity to increase total global gross domestic product (GDP) by US\$ 12 trillion (€11.4 trillion). The female economy – covering women in business, women in the value chain

³ Asian Development Bank (ADB), 2016. Mainstreaming Gender into Climate Mitigation Activities: Guidelines for Policy Makers and Proposal Developers. Accessible at https://www.adb.org/sites/default/files/publication/217771/gender-climate-mitigation.pdf

⁴ DEG and Syspons GmbH, 2020. Gender Lens Investing Paper. Accessible at https://www.deginvest.de/DEG-Documents-in-English/About-us/What-is-our-impact/DEG_Gender-Lens-Investing-Paper_Final.pdf

⁵ Kaplan,S & Vanderbrug,J.(2014). The rise of Gender Capitalism. Accessed at https://ssir.org/articles/entry/the_rise_of_gen-

⁶ Pro Mujer(2019) Pro Mujer & New Venture's VIWALA Join Forces: Financing Entrepreneurs with Impact. Accessed a https://promujer.org/2019/11/25/pro-mujer-new-ventures-viwala-join-forces-financing-entrepreneurs-impact/

Toesland Finbarr(2022) Africa Finance and services: Finance gender gap costs Africa \$95bn (€90.1 billion) per year. African Business blog. Accessed at https://african.business/2022/03/finance-services/finance-gender-gap-costs-africa-95bn-per-year/

⁸ Toesland Finbarr (2018) Women-led tech startups on the rise in Africa: Daunting obstacles remain in the tech industry. Africa Renewal E-magazine. https://www.un.org/africarenewal/magazine/august-november-2018/women-led-tech-startups-rise-africa.

⁹ McKinsey and Company (2019) One aspiration, two realities: Promoting gender equality in Mexico. Accessed at https://www.mckinsey.com/featured-insights/americas/one-aspiration-two-realities-promoting-gender-equality-in-mexico



and women in the community – therefore carries enormous potential and will be a key driver of future growth.

The Green Climate Fund (GCF) sees mainstreaming of gender perspectives as an essential decision-making element for the deployment of its resources and has thus placed gender as a key element of its programming architecture. Its commitment to gender equality centres on gender-responsive climate action programmes and projects that benefit women and men. The GCF Governing Instrument states that gender equality considerations should be mainstreamed into the entire project cycle to enhance the efficacy of climate change mitigation and adaptation interventions, and ensure that gender co-benefits are obtained.

UN Women sees the harnessing of gender equality and women's rights concerns as one of the most powerful instruments available to implement the Paris Agreement¹⁰ and an unequivocal way to avoid or mitigate trade-offs between climate and sustainable development action, and instead lead to substantial development co-benefits.

The 2012 World Development Report makes the case that gender equality is intrinsically important to development, as well as being smart economics¹¹. The mainstreaming of gender-transformative approaches is starting to happen across a range of climate actions, but much more needs to be done. According to the World Bank¹², in order to know 'why and how' to do more on gender mainstreaming, the following three key aspects related to gender and climate change need to be taken into account:

- 1. Women, low-income populations, and other disadvantaged groups are disproportionately vulnerable to the effects of natural disasters and climate change where their rights and socio-economic status are not equal to those of men, and where they have less voice and influence than men in shaping policies and prioritizing how climate finance is used. Women's rights, socio-economic status and voice can all be strengthened through gender-sensitive and climate-smart development assistance. The World Bank (WB) framework allows for a shift away from a singular focus on women's and girls' vulnerability and their role as victims towards emphasizing their agency. This encourages a more nuanced and forward-looking approach to gender and climate change. In addition, gender equality and women's leadership can jump-start climate action and climate-smart solutions, to build environmental sustainability and resilience.
- 2. Empowerment of women is an important ingredient in building climate resilience. There are countless examples where empowering women to exercise leadership within their communities contributes to climate resilience, ranging from disaster preparedness efforts in Bangladesh, Indonesia and Nicaragua, to better forest governance in India and Nepal, to coping with drought in the Horn of Africa. There is also strong and mounting evidence at the country level that improving gender equality contributes to policy choices that lead to better environmental governance, whether through increased representation and voice of women within their communities, in society at large, and at the political level, or through increased labour force participation.
- 3. Low-emission development pathways can be more effective and more equitable where they are designed using a gender-informed approach. Billions of women around the world make decisions every day that influence the amount of carbon that is released into the atmosphere. This influence differs from that of men, owing to women's socially ascribed roles as home-makers (where decisions influence energy emissions: e.g. from domestic cooking), as farmers (influencing soil carbon emissions) and as consumers (purchasing decisions: influencing emissions throughout the entire lifecycle of production, consumption and waste disposal): see Chapter 4 below for sector specific

¹⁰ UN-Women, 2016. Leveraging co-benefits between gender equality and climate action for sustainable development – Main-streaming gender considerations in climate change projects. Accessible at https://unfccc.int/files/gender-and-climate-change/ap-plication/pdf/leveraging-cobenefits.pdf

¹¹ World Bank, 2012. World Development Report 2012: Gender Equality and Development. World Bank. © World Bank. Accessible at https://openknowledge.worldbank.org/handle/10986/4391.

¹² World Bank, 2011. Gender and Climate Change: Three Things You Should Know. Washington, DC. © World Bank. Accessible at https://openknowledge.worldbank.org/handle/10986/27356



information. Women and men's choices can be expanded in ways that reduce carbon footprints, through gender-sensitive approaches – for example, through the design and commercialisation of improved cook stoves, advice on low-tillage agriculture, or product labelling and recycling, among many other examples. The strengthening of women's political representation and leadership roles within wider society is likely to contribute to the kinds of institutional transformation that are required to put countries onto low-emission development pathways.

2.2. GENDER AND CLIMATE INNOVATION

In order to drive the rapid economic transformation required to reach net zero emissions for meeting the Paris Agreement on temperature rise of 1.5 °C, all sectors of the economy, from energy to agriculture, must adopt climate mitigation strategies. While huge technical innovation is needed, transformation of this scale and speed cannot be achieved without the support and participation of citizens, including women. Women's unique experience, knowledge and skill-sets can – and do – strengthen climate mitigation efforts, as highlighted by the 2XCollaborative organisations of the '2XClimate Finance-Task-Force', in its recently launched Toolkit¹³. Furthermore, existing evidence demonstrates the importance of women's leadership as enablers of emission reductions and energy transition. Given the importance of clean energy to climate change mitigation, adaptation, resilience and just transition, together with the under-representation of women in the sector, the needs and potential opportunities for connecting climate and gender impact are undeniable.

There is mounting evidence, particularly in Europe but also recognized and stated by one of the stakeholders consulted in Colombia¹⁴, that women have different perceptions of the significance of climate change, and behave differently as a result¹⁵. 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 generalized, but, at the very least, they point to the need to take gender into account in the design of measures to reduce carbon intensity across different sectors.

A World Bank study concluded that interventions in the energy sector could have significant gender co-benefits when interventions are carefully designed and targeted based on a context-specific understanding of energy scarcity and household decision-making¹⁶. 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, regardless of whether or not they also seek to lower net carbon emissions. The energy and transport sectors therefore offer opportunities for financing and addressing multiple climate and gender challenges in tandem, across regions and value chains.

The agriculture sector is a major contributor to climate change effects, producing an estimated 19-29% of all greenhouse gas emissions globally¹⁷. Industrial agriculture is also a major cause of ecological degradation, directly reducing the resilience and future productivity of lands and ecosystems. Allowing emissions to grow in a business-as-usual scenario will significantly undermine mitigation efforts in other sectors. A gender lens should be a central component in food system

¹³ 2XClimate Finance Taskforce, 2021. The Gender-Smart Climate Finance Guide. Accessible at: https://www.2xcollaborative.org/2x-green-toolkit

tive.org/2x-green-toolkit

Stakeholder consultation meeting with CleanTech Hub from Colombia.

¹⁵ Agarwal, Bina, 2010. Gender and Green Governance: The Political Economy of Women's Presence Within and Beyond Community Forestry. Oxford: Oxford University Press. In: World Bank, (2011). Gender and Climate Change: Three Things You Should Know. Washington, DC. © World Bank. Accessible at https://openknowledge.worldbank.org/handle/10986/27356

¹⁶ Köhlin, Gunnar, Erin O. Sills, Subhrendu K. Pattanayak and Christopher Wilfong, 2011. Energy, gender and development: What are the linkages? Where is the evidence? Background paper prepared for WDR 2012. Policy Research Working Paper 5800. Washington, DC: The World Bank. In: World Bank, 2011. Gender and Climate Change: Three Things You Should Know. Washington, DC. © World Bank. Accessible at https://openknowledge.worldbank.org/handle/10986/27356

¹⁷ Climate Change, Agriculture and Food Security (CCAFS) (Website). Food systems. Accessible at https://ccafs.cgiar.org/big-facts/#theme=food-emissions



transformation. Women have important roles across agricultural value chains – as entrepreneurs, producers, processors, distributors and consumers. 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, contributing to a just transition by building an inclusive and resilient global food and agriculture sector.



3. THE STATUS OF GENDER EQUALITY AT REGIONAL LEVELS: PROGRESS AND CHALLENGES

3.1. STATUS OF REGIONAL GENDER EQUALITY

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 have also committed to implement the recommendations of international and African or Latin American conferences, depending on which region they belong to, 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, they have also operationalized 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. The implementation of all these international conventions, protocols and laws has been the biggest challenge to the realization of gender equality in the two regions and West Africa in particular.

The Latin American countries have made significant progress in gender equality – e.g. progress in increasing women's access to labour force participation, advancement in women's education, etc – compared to West Africa. These changes are analysed in the sections below and at the focus country level. The Latin American countries tend to be ranked higher in the Human Development Index (HDI)¹⁸ and the Gender Inequality Index (GII)¹⁹. Of the total 189 countries, most of the West African countries are ranked above 160 in the HDI, with Burkina Faso ranking 182²⁰. Table 1 below provides an overview of some of the gender and human rights related inequalities in selected West African and Latin American countries²¹.

Table 1: Overview of selected Gender and Human Rights related inequalities in West Africa and Latin America

INDICATORS	CÔTE D'IVOIRE	SENEGAL	BURKINA FASO	MEXICO	COLOMBIA	ECUADOR
Human Development Index ranking	162	168	182	74	83	86
Gender Inequality Index (GII) ranking	153	130	147	71	101	86
Human Development Index (HDI), female	0.476	0.475	0.418	0.760	0.761	0.743

The paragraphs below provide some specific regional gender inequalities.

¹⁸ Measures differences in male and female achievements in three basic dimensions of human development: health, education and command over economic resources.

¹⁹ Factors that account for the loss of human development due to inequality between the genders. It is the measurement of gender disparity to quantify the loss of achievement within a country due to gender inequality. It uses three dimensions to measure opportunity cost: reproductive health, empowerment, and labour market participation (UNDP, Human Development Report 2020. Accessible at http://hdr.undp.org/sites/default/files/hdr2020.pdf)

²⁰ Ibid and UN data Statistics, at: http://data.un.org/DocumentData.aspx?id=415

²¹ Sources UNDP Human Development Report 2020. Accessible at http://hdr.undp.org/sites/default/files/hdr2020.pdf. And: http://hdr.undp.org/en/countries.



Latin America

According to the United Nations, over the past thirty years, women participating in the Latin America region's workforce increased by 11%. A study undertaken by the International Labour Organization (ILO) reveals that, overall, over half of all women (aged 15 or over) in 18 countries in the region are working, with Peru taking the lead at 68.7% and among the lowest, Costa Rica at 45.1% and 43.5% in Mexico. 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 neighbouring countries²². Apart from improvement in educa-

tion, the change is, among other drivers, attributable to the steady reduction in discriminatory regulations against women in the workforce. Nonetheless, the same study finds that there is still a substantial wage gap, with women earning on average 17% below men of the same age and economic status, and unpaid labour is disproportionately allocated to women, resulting in an uneven balance of workload and compensation.

Entrepreneurship in Latin America is also a dynamic sector; younger generations are pursuing venture efforts at impressive rates. According to a 2018 study from TechCrunch, 28% of ventures selected for accelerator programmes were female-founded. This is, in part, due to creative inspiration, education, resourcefulness and increased access to venture support initiatives²³. In 2017, the Global Networks Perspective deemed Latin America to be the second-most enterprising environment in the world. The 2020 Statista report identifies Latin America as having the highest female entrepre-

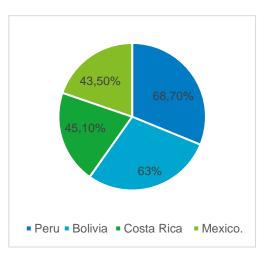


Figure 1: Percentage of women working in selected Latin American countries (ECLAC/ILO, 2019)

neurship rates in the world; specifically, over 33% of working-age women are working in early-stage business activities in Ecuador and close behind is Chile, with 32.4%. The Global Networks Perspective estimates as much as 8-25% of the working-age population in Latin American countries to be involved in forming a venture. As a result, entrepreneurship in Latin America is generally characterised by optimism, innovation and growth. The World Bank reports that two-thirds of Latin American entrepreneurs enter the field because they recognize the opportunity and potential innovation, rather than out of necessity. These opportunities appear most often in countries like Colombia, Mexico, and Brazil according to the 2020 Statista report²⁴. Unfortunately, women entrepreneurs have been impacted more than their male counterparts by the COVID-19 pandemic. The Mastercard Index of Women Entrepreneurs²⁵, which assessed the success of 58 economies in advancing women entrepreneurship, revealed that more than 50% of companies led by women in Brazil, Argentina, Ecuador and Uruguay have been negatively affected by the pandemic²⁶.

West Africa

According to the Organisation for Economic Co-operation and Development (OECD), in West Africa, 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 almost all public sectors, ranging from unequal access to basic social services, unequal property rights, persistent gender gaps in the labour market and in the public sphere. Since the mid-2000s, however, almost

²² ECLAC/ILO, 2019. Employment Situation in Latin America and the Caribbean: Evolution of and prospects for women's labour participation in Latin America. Accessible at https://www.cepal.org/en/publications/44917-employment-situation-latin-america-and-caribbean-evolution-and-prospects-womens/ and/or https://news.un.org/en/story/2019/10/1050121
²³ The Startup VC, 2020. Accessible at https://www.thestartupvc.com/startup-news/women-entrepreneurship-in-latin-america

The Startup VC, 2020. Accessible at https://www.thestartupvc.com/startup-news/women-entrepreneurship-in-latin-america
 Statista, 2020. Start-ups in Latin America – statistics & facts. Accessible at https://www.statista.com/topics/4786/startups-in-latin-america/

²⁵ Mastercard, 2020. The Mastercard Index of Women Entrepreneurs. 2020 Report Accessible at https://www.mastercard.com/news/media/1ulpy5at/ma_miwe-report-2020.pdf

<u>card.com/news/media/1uipy5at/rna_rniwe-report-2020.pdi</u>

26 International Policy Digest (Website). Women Entrepreneurship in Latin America. Accessible at https://intpolicydigest.org/female-entrepreneurship-in-latin-america/



every West African country and regional organization has adopted a gender policy or strategy and is increasingly mainstreaming gender issues in different policy sectors²⁷. Most West African countries have developed policy plans on science and technology dubbed ECOPOST: an integration plan which envisages investment laws being harmonized and forms the basis for creation of a regional investment promotion agency. Through the plans, the signatory states are urged to promote viable but efficient small and medium-sized enterprises that focus on technology and innovation as a path to increased productivity. In addition, a sub-regional development blueprint with a proposed road map for fostering public-private partnerships, improving governance and accelerating economic growth has been developed in most regions. However, ad-hoc approaches, operational ambiguity and lack of incentives have led to little progress being made on these goals. Key challenges cited include poor commercialization of research findings, limited technology transfer, and lack of stronger university-industry ties and inadequate boosting of indigenous knowledge²⁸. Political instability in the region – e.g. Liberia, Sierra Leone and Mali – have also slowed progress²⁹.

Overall, West Africa's tech scene has witnessed a boom in recent years, albeit at infant stage, with a dramatic increase in innovators and tech entrepreneurs using technology to provide simple and accessible solutions to numerous everyday problems. A major focus of the innovation has, however, been on creating access to easy and inclusive digital-banking solutions and less on other innovations. While it is worth celebrating such milestones, women's inclusion and participation in this booming tech sector has been challenging: since only 10% of the West African ventures that have cumulatively raised US\$ 1 million (€ 948,100) or more in the past decade had at least one female co-founder³⁰. In the broader sub-Saharan Africa region, women constitute only 30% of professionals in the tech industry.

Overall, there are a number of differences between West Africa and Latin America regions, as well as within each country in each region. Although there are a few aspects that might be mentioned as more generally applicable for each region, it is almost impossible to make generalisations. This is because of the differences in contextual dynamics and intersectionality of women, given that women are not a homogeneous group, and gender inequality cannot be seen as separate from other forms of discrimination and disadvantage that women (and/or men) in society face, such as racism, colonialism, ableism, homophobia and religious discrimination. Within regions, gender disparity also exists: for example, in Colombia and Ecuador, though both are Andean countries, differences exist between women belonging and living in the Andean regions compared to those living in other regions. The same applies to women from the Amazon region; although they are also part of the population of these countries, many indigenous women, from either the highlands or the tropical forest, have to face more challenges than women not belonging to indigenous groups.

3.2. GENDER-RELATED RISKS AND BARRIERS IN WEST AFRICA AND LATIN AMERICA

The following sections describe some of the general gender risks and barriers that exist in both regions. The barriers exacerbate factors of inequality and, in most cases, are the underlying drivers of gender inequalities.

3.2.1. THE RURAL VS. URBAN DIVIDE

The most significant difference in the ability for women to become entrepreneurs is not based on religion, ethnicity or political association but, rather, where they live – in rural or urban settings. This is because the settings and situations have an impact on the capacity, opportunities and potential for women, particularly when it comes to becoming business leaders and entrepreneurs.

²⁷ OECD/Sahel and West Africa Club Secretariat (Website). Gender. Analysing how women's trade networks function. Accessible at https://www.oecd.org/swac/topics/gender/

²⁸ The Conversation (Website). West African states have a science and technology plan. But it's going nowhere. Accessible at https://theconversation.com/west-african-states-have-a-science-and-technology-plan-but-its-going-nowhere-121273

³⁰ Vogue (Website). Meet 6 women at the forefront of West Africa's tech boom. Accessible at https://www.vogue.in/culture-and-living/content/west-africa-women-technology-industry-professionals



This disparity is based on unequal educational levels, diminished access to finance, and traditional social burdens of household care and childbearing (unpaid care work) which often widens the rural-urban divide.

For example, in Côte d'Ivoire, rural women represent 67% of the workforce and produce 60-80% of food31. Yet, according to the World Bank, 75% of women live under the poverty line. The majority of women in Côte d'Ivoire fall into the rural grouping, a significantly more disadvantaged category than urban women, who have high higher levels of education and the capacity to build scalable businesses, access finance and business-related information.

According to Oxfam³², in Latin America only 30% of 58 million women who live in rural areas own agricultural land and less than 5% have access to technical assistance. Further, in the agricultural sector, Latin American women are employed less than men, with Chile and Peru at 5% and 26%, respectively. Land tenure is a major barrier for women, as women in many countries in Latin America have lower 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.

The rural-urban divide also has a major influence on women's perceptions and attitudes. Generally, across the regions there is a major difference in perceptions between rural and urban women when it comes to their belief in their own entrepreneurial abilities. Despite the seemingly impossible tasks of balancing family and career, urban women are afforded more opportunities, including a more accepting society. Urban women are also more likely to be literate and have access to higher education, which paves their way for more work and entrepreneurial opportunities which is out of reach for many rural women, who are structurally and culturally conditioned to accept roles of caring for children, a husband and extended family. The metropolitan nature of the cities often means that individuals have less traditional patriarchal influence over women's roles in society as compared to those of the rural or more traditional areas of the country. However, not all urban women enjoy these rights: for example, in both regions poor women in urban neighbourhoods could even be more disadvantaged than rural women, given their lack of access to basic inputs and social support systems.

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 an incubator, and some organizations have occasional satellite programming, but this is not a widespread trend.

3.2.2. CUSTOMARY AND TRADITIONAL NORMS, PRACTICES AND BELIEFS

In both West Africa and Latin America, child marriage and teenage pregnancies are common practices. West Africa is said to have the highest rate of child marriage in the world; UNICEF, in a 2020 brief³³, estimates that countries in the West African region will have the highest number of girls forced to marry by 2050 and that West Africa will not meet the 2030 SDG of ending child marriage. Burkina Faso has 52% of its girls married before the age of 18 years, 10% of whom are even married before they turn 15. In Niger, 76% of girls are married before the age of 18³⁴(see figure 2 below). The Latin America region, 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, and a high maternal mortality of 34.6 deaths per 100,000 live births. Maternal mortality is even higher

³¹ Christiaensen, Luc and Patrick Premand (editors), 2017. Côte d'Ivoire Jobs Diagnostic — Employment, Productivity, and Inclusion for Poverty Reduction. World Bank, Washington, DC. In: 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-dlvoire.pdf

32 Oxfam International (Website). How rural women are adapting to climate change in Latin America and the Caribbean. Accessible

at https://www.oxfam.org/en/how-rural-women-are-adapting-climate-change-latin-america-and-caribbean

Plan International/Girls Not Brides, 2020. COVID-19 and Child Marriage in West and Central Africa. Accessible at https://plannternational.org/publications/covid-19-child-marriage-west-central-africa

³⁴ UNICEF Child Marriage Database August 2021. Accessed at https://data.unicef.org/topic/child-protection/child-marriage/.



in West Africa, at 26 deaths a day, a rate that is four times higher than anywhere else in the world³⁵. In addition, child marriage and pregnancies affect girls' education and limit their choices later in life.

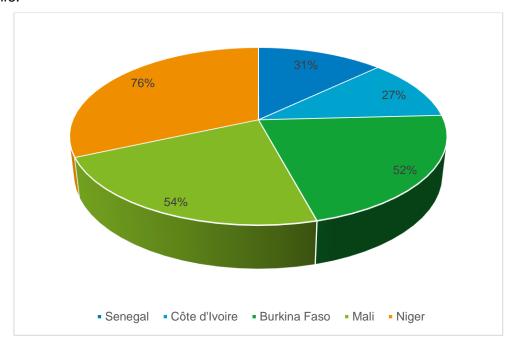


Figure 2: Percentage of girls married before they are 18 years old in West Africa (UNICEF Child Marriage Data 2021)

Catalystas Consulting's research³⁶ identifies a number of other cultural factors that hold back women from exploitation of their entrepreneurial potential. In West Africa, traditional beliefs, superstitions and shamanistic practices have, over the years, shaped a patriarchal structure that assigns value and mysticism to women based on virginity, chastity, menstruation and pregnancy, often with a negative impact. These breed detrimental systems that hinder women's autonomy and ability to participate in the economy. In addition, polygamy is still widely practised across all religious groups in West Africa. The practice prevents autonomy for women. Polygamists' value systems often make women dependent on their husbands, as it can be used to cut women - and their children - off economically should they behave in a way disapproved by their husband, such as finding work outside of the house.

Customary laws continue to be applied on a regular basis in many countries in West Africa. These customary laws differ for each region and tribe and are often based on religious, ethnic or traditional heritage that stems from patriarchal structures and negatively affect women. There are a number of examples where the implementation of customary laws over statutory laws affects women's ability to become entrepreneurs. These can be noted in areas of: i) access to inheritance rights; ii) access to credit; iii) access to land rights; and iv) accessibility of the justice system.

In West Africa, women's land rights and access and control have further weakened by the unpredictable weather changes that affect small landholders, who are often women with little capacity to adapt through technology or diversification. The proportion of women negatively affected by climate-related crop changes has significantly increased, with up to 48% reported in Burkina Faso. As a result, women are often the first to lose their claim on fertile soils³⁷.

In Latin America, significant legal strides have been made in the past decade, and many of the countries have repealed laws identifying the husband as the head of the household, which was

³⁵ Reliefweb (Website). Child Marriage Kills More Than 60 Girls A Day. Accessible at https://reliefweb.int/report/world/child-mar-riage-kills-more-60-girls-day

³⁶ 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-dlvoire.pdf
³⁷ UN Human Rights/Un Women, 2013. Realizing Women's Rights to Land and Other Productive Resources. Accessible at https://www.ohchr.org/documents/publications/realizingwomensrightstoland.pdf



seen to limit women's capacity to administer properties. FAO sees this as a positive opportunity to provide female household members with access to land, but it may also undermine women's bargaining power within the household – and thus their social position, since the land titles are often issued in the husband's name³⁸.

3.2.3. SEXUAL AND GENDER-BASED VIOLENCE (SGBV)

Women in West Africa and in Latin America encounter many challenges related to their physical integrity, such as violence against women. Shocks and disasters can contribute to an increase in Sexual and Gender-based Violence (SGBV). A case in point is the level of SGBV reported during the COVID-19 pandemic. Although a number of measures have been implemented to combat SGBV on paper, as shown by the treaties and conventions listed in Section 3.1, SGBV is very much prevalent in West African countries and not all countries have a specific law in place to address this problem, while others are not implementing the laws that do exist. A major form of SGBV in West Africa is female genital mutilation (FGM). Although laws criminalizing FGM exists in most West African countries, high prevalence rates still persist: e.g. according to data from UNICEF, Mali and Burkina Faso have rates at above 75% amongst women aged 15 to 49 years³⁹ (see figure 3 below). In addition to loss of life, the practice causes lifelong problems that hinder women from achieving their full potential.

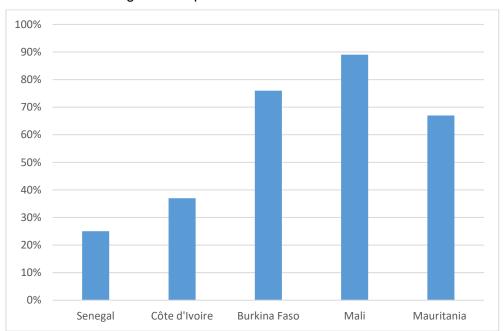


Figure 3: FGM Prevalence rates in selected West African countries (UNICEF Global Database 2021)

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³⁸ ibid

³⁹ UNICEF Global Database July 20221. Prevalence of female genital mutilation/cutting among girls and women (% of girls and women ages 15–49). Accessed at https://data.unicef.org/topic/child-protection/female-genital-mutilation/.



Table 2: Reported cases of femicide in Latin America in 2020 (CEPAL 2020)

COUNTRY	REPORTED CASES
Brazil	1,738
Mexico	948
Colombia	182
Argentina	251
Ecuador	79

In Latin America, gender-based violence (GBV) remains a serious issue in Mexico. According to surveys conducted by National Institute of Statistics and Geography (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 relatively common in Latin America⁴⁰, with Brazil reporting the highest number of cases at 1,738 and Mexico at 948 cases in 2020 (see table 2 below). SGBV not only affects women's well-being but also their ability to be confident entrepreneurs.

3.3. KEY BARRIERS FACED BY FEMALE ENTREPRENEURS IN WEST AFRICA AND LATIN AMERICA

Existing research on the entrepreneurial environment in both regions shows that the following challenges hinder women from becoming both entrepreneurs and successful business leaders.

- Little to no accessible entrepreneurship education and capacity building: A lack of literacy continues to be a big challenge in many West African countries. 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: e.g. the latest census of Côte d'Ivoire (in 2014) indicates that 59.4% of Ivorian women are not educated, or only completed primary school, and that illiteracy is more pronounced among older generations⁴¹. In Latin America, the problem is not typically related to education, as the region has one of the highest literacy levels. However, as in West Africa, alternative education such as incubators or business support programming are mostly limited to the wealthy part of the population, including women coming from families with high resources, 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. Women in the capital cities also have a higher degree of autonomy than women in other regions of the country.
- Challenges in legal rights related to ownership and inheritance: In Burkina Faso, Côte d'Ivoire, Benin and Togo, for example, given the dualism in the law where customary and statutory laws are both recognized, local customary laws still mainly govern the ownership, use and transfer of land. Though few smallholders are legally registered land-owners, given the predominant use of customary laws women have de facto no secure access to land. In Côte d'Ivoire, despite the fact that there is progressive legislation related to women's rights, the reality is that more than 75% of the country continues to operate under customary law and these practices serve to limit women's ability to obtain and maintain the fixed capital often needed to access finance. Though not a common problem, legislative obstacles in some Latin America countries, e.g. Chile, have been noted, where the marriage law stipulates that a woman must seek permission from her husband before she can start a business, thereby making it difficult for women to start a business.

⁴⁰ CEPAL (2020). The pandemic in the shadows: Femicides or feminicides in 2020 in Latin America and the Caribbean. Access at https://www.cepal.org/sites/default/files/infographic/files/21-00792 folleto the pandemic in the shadows web.pdf.

⁴¹ Care, 2019. Context and policy analysis, action & advocacy strategy for the Women in Enterprise program. Report on their policy review as part of their Women in Enterprise program. In: 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-Enterpreneurship-in-Cote-dlvoire.pdf



- Lack of access to information: Given women's limited access to networks, that 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, the government's legislation and policies
 remain largely unknown beyond capital cities and are thus underutilized or unimplemented.
- 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, entrepreneurs' growth potential is restricted when they are denied credit as a result of excessive demands or interest rates that are too high. Third, women's lack of access and control over collateral assets limits their access to credit more than men. Fourth, there seems to be an exacerbated gap in finance between micro- and large loan amounts, hindering business expansion, research and development (R&D), and long-term success especially for women⁴².
- Narrow perceptions of entrepreneurship: According to Catalystas Consulting⁴³, the local perception of what entrepreneurship is tends to be narrowly limited to an idea of Western businessmen and women in offices. For many women, both public and private sector employees, 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 outside their primary role or occupation. In West Africa, for example, the largely individualized, small scale and informal economy of buying and selling activities is known as "Gombo". While Gombo is not limited to women, because traditional West African culture relegates the role of women to the home and family, income-generating activities conducted by women outside of formalized and salaried jobs are usually considered Gombo. In large part, this definition stems from a lack of entrepreneurial training opportunities in the educational system, especially outside of the capital cities.

In Latin America, stereotypes and gender roles continue to prevail. In Mexican society, for example, 47.6% of women aged 15 and older think women who work are not able to take care of their children properly; while 10.4% consider men and not women should hold decision-making positions⁴⁴. In Latin America, although employment opportunities are increasing for women in the region, there remains a steep gender pay gap. The Economic Commission for Latin America and the Caribbean (ECLAC) and the International Labour Organization (ILO) researched the issue in 2019⁴⁵. After analysing the data and figures, researchers concluded that for every hour worked, women earn 17% less than men in Latin America. In the study, researchers held position, education, age and economic status constant. The United Nations, along with countless other organizations and studies, recognize that resolving these problems is a top priority. Elevating women in the workforce will create a positive domino effect for the economy and Latin America overall. In addition, in Latin America and the Caribbean, according to a report published by the Inter-American Development Bank (IDB)⁴⁶, women hold only 15% of management positions and own only 14% of companies. According to the IDB, the participation of women

 ⁴² 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-dlvoire.pdf
 ⁴³ 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-dlvoire.pdf
 ⁴⁴ INMUJERES – Instituto Nacional de las Mujeres/National Institute of Women, 2017. In: GIZ, 2018. Gender Analysis for NAMA Project 'Energy Efficiency in SMEs as a contribution to a low carbon economy in Mexico". [Internally shared document].
 ⁴⁵ ECLAC/ILO, 2019. Employment Situation in Latin America and the Caribbean: Evolution of and prospects for women's labour participation in Latin America. Accessible at https://www.cepal.org/en/publications/44917-employment-situation-latin-america-and-caribbean
 ⁴⁶ IDB, 2021. An Unequal Olympiad: Gender Equity in Latin America and Caribbean Companies. Accessible at https://www.iadb.org/en/news/study-reyeals-high-gender-inequality-companies-latin-america-and-caribbean



in leadership positions, the level of training of the workforce, the use of advanced technologies, and a favourable business culture are the main factors that affect gender equality in companies in the region⁴⁷.

• Formalization of business is blocked by a burdensome, bureaucratic and expensive regulatory system: in West Africa, although some governments have made great efforts toward formalizing the informal economy, which accounts for 64% of business, the business registration and tax burdens are a major deterrent for existing informal businesses, as well as potential entrepreneurs, with regard to formalization and growth. Due to the fact that the majority of women-owned businesses remain in the informal sector, the impact of these complex business regulations has a heavily compounded negative effect on women.

While these issues are not exhaustive, they present a very clear snapshot of the current challenges women face when it comes to entrepreneurship, and provide the basis for creating a number of potential pathways for support and improvement which the foreseen CATALI.5°T initiative might support.

⁴⁷ Ibid



4. FOCUS ON THE EXECUTING ENTITY HOST COUNTRIES OF THE CATALI.5°T INITIATIVE

This chapter provides extensive details on gender and climate innovation in the three EE host countries (Côte d`Ivoire, Senegal and Mexico). It also provides details on the existing institutional mechanisms that govern the entrepreneurial ecosystems in the countries and describes the status of climate innovation in three key sectors: education, agriculture and energy. Finally, the chapter looks at specific gender-related barriers faced by climate ventures and entrepreneur support organizations (ESOs), including pre-accelerators, accelerators and venture capitalists.

4.1. CÔTE D'IVOIRE

4.1.1. INSTITUTIONAL MECHANISMS GOVERNING IVORIAN ENTREPRENEURIAL ECOSYSTEMS

Given the use of customary laws outlined in Chapter 3, the root cause of gender inequality in Côte d'Ivoire stems from patriarchal cultural norms⁴⁸. A study by Catalystas Consulting, conducted in 2020⁴⁹, found that although there are efforts towards women's empowerment in the country in the form of structural policies and cultural reforms as a pillar of development in national strategy, as far as gender equality is concerned the country presents an image of "an elephant with feet of clay"⁵⁰.

At the national level, the formal framework for gender equality is established by the Constitution of 2016, which enshrines the principles of gender equality between women and men, fights against discrimination in access to resources and their control, and equal opportunities in the labour market, in employment and elected assemblies.

Among the most important *action plans and national strategies* relating to gender are: the National Development Plan (NDP 2012–2015 and 2016-2020); the National Policy on Equal Opportunities, Equity and Gender was updated in 2018, but has not yet been adopted, and the National Strategy for Combating Gender-Based Violence 2014–2016 (SNLVBG). A national strategy for the empowerment of women is in the process of being finalized. Furthermore, it is noteworthy that the NDP addresses gender issues with a dedicated budget. The country is in the process of domesticating its international gender commitments. In this regard, the Ivorian legal system has been enriched by new laws that are more favourable to gender issues, such as the Marriage Act; abolishing the notion of head of family and moving towards joint management of households by the couple; and the Compulsory School Act for all children (girls and boys) from 6 to 16 years of age.

The Ivorian government has a ministry focusing on gender - the Ministry of Women, Family and Children (MFFE) – as well as an Office of the Special Advisor on Gender, which reports directly to the Prime Minister. However, gender equality has been noted as being considered as a single-subject concept, rather than a cross-cutting issue in policy and implementation, with frustration often expressed by bureaucrats attempting to reform or implement gender-empowering policy.

A key objective of the 2016–2020 National Development Plan (NDP) included economic programming aimed at pushing Côte d'Ivoire into the emerging market economies category, generally understood to mean a middle-income economy. Although the country has not yet reached this goal, there have been significant efforts made through the use of strategies such as the 2019 National Financial Inclusion Strategy (PDESFI), which has looked to expand credit availability at large scale, especially for rural areas, through the use of mobile banking, micro-financial institu-

⁴⁸ As recognized by UN Security Council Resolution 1325: on Women, Peace, and Security it is internationally recognized that war and conflict have a disproportionately higher negative impact on women. This higher vulnerability also includes a longer-lasting impact on the equality and value of women in post-conflict settings, especially in contexts where gender equality levels were unbalanced prior to the conflict.

 ⁴⁹ 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-dlvoire.pdf
 ⁵⁰ Meaning these policies and reforms may appear powerful but in reality, they are weak, and can easily collapse.



tions, and specific strategies for formalizing and connecting SMEs, which make up 80% of businesses in Côte d'Ivoire. Despite all these initiatives, currently it is estimated that women account for only 15% of all SME owners.

As a national agenda topic, gender is still not seen as a cross-cutting issue across government ministries and the private sector, a reflection of the untapped potential and underserved population of would-be women entrepreneurs. There remain extensive challenges in the implementation of legislation throughout the various regions of the country. Though the country has made landmark improvements in legislation, the reality is that more than 75% of the country does not actively apply statutory law. Instead, many areas utilize customary law. In addition, given the weak legislative structure, many laws remain unknown to women, who, as a result, continue to lack understanding of – as well as having the ability to exercise – their legal rights as Ivorian citizens. As a result, resources and factors of production are unequally distributed between women and men, which most likely creates an imbalance in the evolution of Ivorian society⁵².

In the promotion of entrepreneurship, since 2011 Côte d'Ivoire has been a member of the Organization for the Harmonization of African Business Law (OHADA). OHADA is designed to streamline registration processes for businesses and entrepreneurs, create tax incentives, programmes and business centres to help existing informal businesses as well as potential entrepreneurs register and formalize their businesses.

In 2014, the government passed a number of regulations that led to the creation of the Agency for Promotion of Entrepreneurship (PME). Placed under the supervision of the Ministry of Commerce, the PME is charged with: i) supporting entrepreneurs, including the provision of technical and financial support; ii) providing advisory support services; iii) establishing a mechanism to provide bankruptcy support services to SMEs; iv) assisting in the establishment and administration of municipal & regional funds for SMEs; v) supporting the establishment and administration of a state-sponsored public procurement process, for which a designated percentage of contracts will be reserved for SMEs at both the local and national levels; vi) creating state-sponsored nurseries and business incubators in each territory across the country based on sector-specific needs, and to promote and maintain emerging projects via PME; and vii) establishing relations with banking institutions and finance mechanisms, and taking all necessary measures to facilitate reduced credit rates for young people and women entrepreneurs. The PME has also created a digital registration system for entrepreneurs and SMEs. In addition, the government has set up two funds, the Innovative Management Project of the National Fund "Women and Development" and the "Support Fund for Women of Côte d'Ivoire" (FAFCI).

However, a number of limitations have hindered entrepreneurs from full exploitation of PME's services. These are: i) much of PME's information and forms focus on digital pathways for accessibility and submission, thereby limiting rural women's access; ii) PME has three business centres, all located in the capital and none in other major cities or rural areas; iii) extensive record-keeping becomes obligatory once an applicant is registered as an entrepreneur, with limited information and support; iv) a number of tax breaks for SMEs have been established as incentives for formalization but often prohibitive registration processes, lengthy paperwork, stringent taxation through mandatory quarterly and annual declarations become exceptionally challenging for women who lack business experience. With the tax breaks, small enterprises could access corporate lending interest rates at 8-11% rather than the higher individual SME rates of 15-29%. It is, however, noted that SMEs have a low success rate (68%) when applying for these more concessional loans⁵³. This is attributed to a lack of knowledge about corporate borrowing and lending practices and investment readiness, which, in turn, often render the SMEs as risky investments from the perspective of traditional banking mechanisms that follow the international banking regulations of Basel I & II on lending and risk; and v) PME was provided with neither

⁵³ 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-dlvoire.pdf.

Land Governance Assessment Framework (LGAF). 2014-2020 Land Portal Foundation / RSIN 854330045. Land Portal - Côte d'Ivoire. Accessible at https://www.landportal.org/community/projects/land-governance-assessment-frameworks-completed
 FAO, 2020. Gender Assessment. SAP015: Promoting zero-deforestation cocoa production for reducing emissions in Côte d'Ivoire. Prepared by FAO, Côte d'Ivoire, 2020. Accessible at https://www.greenclimate.fund/project/sap015



adequate budget nor the necessary capacity to fully serve the Ivorian ecosystem within its mandates.

Entrepreneurship regulations are also becoming a major issue for the informal sector in the country. In 2019, the country introduced new agreements to tax the informal sector, shifting the burden of tax collection to formal sector companies working with informal actors. The tax applies a rate of 2-5% on goods and services. The informal sector tax is lower than normal transaction taxes, but it is a starting point in the ongoing effort to strengthen regulation. Many business representatives in Côte d'Ivoire believe that this is evidence that the government is eager to regulate the informal economy. They therefore assume that considerably more regulations will be introduced in the coming years to address and regulate the informal economy. This could mean economic disadvantages for many small businesses, many of which are owned by women with limited technical capacity and an inability to bear the financial burden necessary to operate as fully formalized businesses.

During the project stakeholder feedback meeting in West Africa held on 30 November 2021, the workshop participants pointed out the presence of female entrepreneurship networks, platforms and partnerships in Côte d'Ivoire. Women entrepreneurs are organized into platforms and federations. The Women's Entrepreneurship Development Commission of the General Confederation of Businesses of Côte d'Ivoire is the largest in this respect. The Ivorian Federation of SMEs also has a Gender-Women-Entrepreneurship Commission. Other groups of entrepreneurs include the Ivorian Network of Women Entrepreneurs, the Coalition of Women Leaders of Côte d'Ivoire, the Federation of Women Entrepreneurs, the Women Entrepreneurs of the World-Côte d'Ivoire, the Federation of Entrepreneurs and Businesswomen of West Africa, and the Association of Women Inventors and Entrepreneurs of Côte d'Ivoire. They all promote the collective successes of female entrepreneurship in the country and influence decisions within institutions such as the General Confederation of Enterprises of Côte d'Ivoire (CGECI). Despite their low numerical weight, the CGECI has set up an entrepreneurial commission aimed at building the future generation of Ivorian entrepreneurs, which also contains the Gender and Woman Entrepreneurship Commission (CGFE). Among others, CGECI holds business plan competitions targeting women, as well as an accelerator offering theoretical and practical training, including a Masterclass and Speaker series, mentoring, and networking.

Despite these array of seemingly promising national mechanisms for the promotion of gender equality, studies⁵⁴ reveal that major gaps exist within the national mechanisms, which can be summarized as follows: i) lack of tools and mechanisms for integrating gender into policies, plans, development programmes and budgets, at both central and decentralized levels; ii) lack of disaggregated databases and up-to-date harmonized gender indicators in different sectors in order to provide information on the inequality situation in each sector of activity; iii) the lack of a comprehensive and integrated coordination framework between the structures in charge of gender promotion; iv) insufficient budgetary resources allocated to structures in charge of gender promotion – for instance, the percentage of the national budget allocated to the MFFE is 0.1%; and v) the persistence of socio-cultural factors that limit the understanding and ownership of the principles of gender equality - for example, the fact that gender mainstreaming continues to be treated as a separate issue whose added-value is not well perceived⁵⁵. All these factors have an effect on women entrepreneurs, on both the demand and supply sides of the market.

EU/MFFE/UN Women, 2017. Pour une analyse sur l'égalité de genre en Côte d'Ivoire. [Internally shared document]
 FAO, 2020. Gender Assessment. SAP015: Promoting zero-deforestation cocoa production for reducing emissions in Côte d'Ivoire. Prepared by FAO, Côte d'Ivoire, 2020. Accessible at https://www.greenclimate.fund/project/sap015.



4.1.2. STATUS OF CLIMATE INNOVATION IN EDUCATION, AGRICULTURE AND ENERGY SECTORS

4.1.2.1. GENDER AND CLIMATE INNOVATION IN EDUCATION

Currently, Côte d'Ivoire maintains a rate of 65% illiteracy rate for women in the country, and it is particularly high in rural areas (78.2%). This is further disaggregated as 59.4% for those without any education level and 23.5% for those who stopped at a primary school level. The low literacy levels constrain female entrepreneurship, as well as blocking access to higher-paying jobs⁵⁶. Illiterate and/or poorly educated women are disadvantaged in terms of training and therefore will have difficulty assimilating the fundamentals and basics of management⁵⁷. The illiteracy problem not only hinders women from joining the venture world of entrepreneurs, but also the ability to create innovative products and stimulate demand for products and services that can favourably compete and attract accelerators and incubation services.

Based on 2018 data from the World Bank, only 7.6% of women and 11.0% of men in Côte d'Ivoire were enrolled in university. These low figures are further exacerbated by the fact that the higher education institutions in Côte d'Ivoire have mainly focused on teaching basic-science research, which has a weak link to private enterprises. Further, the institutions were not established from the outset to be the incubating grounds for entrepreneurs and inventors⁵⁸. The public sector and the universities also do not provide opportunities for mainstreaming gender-sensitive pedagogy and design. Often, the only space where students are provided with training applicable to entrepreneurship and the space to explore creativity and build business models is in student associations, while the study programmes provide the students more with the theoretical background⁵⁹.

In the Technical and Vocational Education and Training (TVET) centres, the proportion of men and women is almost equal (48% of women against 52% of men). However, the majority of girls/women attend training in tertiary activity sectors, and only 10% of female learners are found in training courses in industrial sectors. Hence, tertiary sectors are commonly called "female sectors" and industrial sectors are called "male sectors". These gender stereotypes negatively affect the economic participation of women in non-traditional jobs. For example, in the construction sector, only 2.3% of workers are women, while there is a much higher percentage of women working in the tertiary and informal sectors (68% of hotels and restaurants workers). Such stereotypes can kill innovation in these crucial sectors where women are under-represented.

At the ministry level, the Ministry of Higher Education and Scientific Research has a gender unit that works on gender mainstreaming. Actions, such as workshops to reflect on the access of young girls to scientific courses in higher education, have already been carried out. These workshops provide spaces for discussion and reflection to analyse and understand the factors that contribute to limiting girls' access to science and technology education. The appointment of a female university president from the six public universities symbolises the advancement of women in this Ministry. However, the discussions need to be moved into practicable actions that support and mentor women-led innovations. Budget constraints are a key challenge faced by the institution.

The technology-related education – "EdTech" – ecosystem in Côte d'Ivoire still remains nascent and is not focused on climate innovation. So far, none of the EdTech start-ups in the country have raised significant capital or reached considerable scale. According to a Transforming Education in Cocoa Communities (TRECC) report in 2018, grants of insufficient size are the main source of funding and there is a general lack of know-how about fundraising by founders⁶⁰. According to the report, investors criticized the average quality of ventures, which were seen to be

Mohamed. "Context and Policy Analysis, Actions & Advocacy Strategy for the Women in Enterprise Program" May 2019 CARE. In: 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
For Ibid

The Conversation (Website). West African states have a science and technology plan. But it's going nowhere. Accessible at https://theconversation.com/west-african-states-have-a-science-and-technology-plan-but-its-going-nowhere-121273
 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
 Trecc/Seedstars, 2018. The State of EdTech in Côte d'Ivoire. Accessible at https://treccprogram.org/en/publications/the-state-of-edtech-in-ivory-coast/



affected by three factors: first, the investors find it very hard to work with government schools, as the sales cycles are very long; second, EdTech ecosystem support is seen to be lagging in Côte d'Ivoire compared with other countries in sub-Saharan Africa. Third, many ventures are trying to serve the under-served with low disposable incomes while the costs of the solutions being offered are too high.

Women entrepreneurs face these challenges just like their male counterparts. In addition, structural issues, low education levels and perceptions limit their ability to get their products in front of the right audience and reach a mature stage. A number of public, private and CSO initiatives have been making efforts to bridge the gap in education among female entrepreneurs. Catalystas Consulting's study found that, despite their high potential to create impactful business ventures, some of these actors (e.g. NGOs that are providing essential incubation services in the form of training), do not have the capacity to provide the individualized business and pre-incubation training necessary to boost the educational capacity of promising women entrepreneurs and enable their participation in more elite incubation programmes. This study also found although some of the actors provide quality training that focuses purely on women, they often focus on serving very specific, elite and niche types of services. Some these actors includes: i) "Empow'Her's" programme, with a small-scale approach, ii), "She Is The Code", which focuses on women on a larger scale, and iii) Fondation Jeunesse Numérique (FJN), an incubator that focuses on women. While these actors offer gender benefits, their focus on the elite niche leaves out the majority of the Ivorian population that does not fit into this small socio-economic and educational segment. Until recently, EdTech incubators and accelerators were lacking in the country. This gap has been recently addressed by Investisseurs & Partenaires (I&P)62 through its work with the TgMaster University: a new institution that, since October 2020, offers innovative training courses in digital technologies and management on-campus in Abidjan, and soon in delocalized branches throughout Côte d'Ivoire. It also supports students wishing to access business school education in Europe through private tutoring, coaching and mentoring services to enable them to take certified international tests in support of their applications. Given that the University has just started its operations, its initiatives towards gender mainstreaming are mainly guided by I&P's and Comoé Capital's women empowerment strategy, which is a key aspect of their EU-funded programme.

4.1.2.2. GENDER AND CLIMATE INNOVATION IN AGRICULTURE

A general analysis of the Ivorian context reveals that there is poor consideration of women's interests in actions to combat climate change and, in addition, there is insufficient proven expertise on gender issues in natural resource management⁶³.

In the agriculture sector in Côte d'Ivoire, women represent 90% of actors in the food crops subsector, which employs 85% of the active agricultural population and represent two-thirds of the agricultural workforce. However, the income generated by their agricultural activities is derisory given that the production is not always valued or counted but is, instead, intended mainly for the subsistence of the family. In cash crops such as coffee, cocoa, cotton, oil palm and cashew nuts, men dominate the sector and women constitute 62% of the unpaid labour force⁶⁴. In addition, only 8% of women hold a land title or a sales certificate, compared to 22% for men. In general, men are involved in export crops and high value-added perennial crops. Women, on the other hand, are involved in both perennial and food crops.

In rural areas, women have organized themselves through the Association Villageoise d'Epargne et de Crédit (AVEC) system. In addition, with the support of development partners, women's groups benefit from funding to strengthen their activities and are supported by the National Rural Development Support Agency (ANADER). Indeed, to promote women's empowerment,

⁶¹ 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
⁶² Investisseurs & Partenaires (I&P) is a pioneering group in impact investment, entirely dedicated to the financing and support of start-ups and small and medium-sized enterprises (SMEs) in Sub-Saharan Africa.

 ⁶³ EU/MFFE/UN Women, 2017. Pour une analyse sur l'égalité de genre en Côte d'Ivoire. [Internally shared document].
 ⁶⁴ FAO, 2020. Gender Assessment. SAP015: Promoting zero-deforestation cocoa production for reducing emissions in Côte d'Ivoire. Prepared by FAO, Côte d'Ivoire, 2020. Accessible at https://www.greenclimate.fund/project/sap015



ANADER and its partners have developed approaches so that women have access to technological innovations and are trained in good agricultural practices, both in terms of food crops and in export crops like cocoa. Specifically, female field schools are sometimes set up to facilitate learning for women.

In Côte d'Ivoire, like many other West African countries, the bulk of "green tech" has hitherto been used to support enterprises that have significant local environmental impacts, such as recycling ventures and the energy sector, and less on agriculture. In recent years, technological advancement in agriculture has established a foothold in Côte d'Ivoire and is causing significant excitement: for example, the use of drone technology by local start-up *Investive* is a case in point. The technology is envisaged to reduce extensive farm labour and increase productivity while also benefiting the environment. While such developments merit acknowledgement, caution is needed when introducing such technologies, as they may not be gender-friendly. First, the large-scale land required, as well as technological input cost, is out of reach for many smallholder women farmers. A reduction in labour requirements also reduces the opportunities for female employment, given that they are often the backbone of agriculture.

A number of ventures in agriculture further down the value chain (such as processing of agricultural foods), where women have a stronger presence, are emerging in the country. Innovative ventures in the food processing sector have been recently supported by I&P and Comoé Capital accelerators. Recent ventures that benefited from these accelerators and venture capitalists include; i) *Citrine Corporation*; a company that specializes in the processing of cassava into fresh attiéké (cassava semolina) and placali (cassava paste) in the Grand-Bassam area south of Côte d'Ivoire, ii) Épices et Essences de Côte d'Ivoire (E'Sens), an agro-food venture that is specializing in the production of essential oils of citrus fruits (bitter orange, bergamot) and relies on own production and supplies from small producers in Côte d'Ivoire, iii) *Syn'el*; a female-headed agro-food company specialized in the artisanal production of sorbets on sticks under the *Paletas* brand, made from entirely natural juices and in Côte d'Ivoire the only producer of natural sorbets. Though growing steadily, most of these ventures are facing teething challenges, with poor governance and management and limited access to finance key among them.

4.1.2.3. GENDER AND CLIMATE INNOVATION IN THE ENERGY SECTOR

According to the World Bank, private operators in Côte d'Ivoire are currently responsible for 70% of energy production and 100% of its distribution. The grid is expected to cover 99% of the population by 2035, and 42% of the energy produced is envisaged to come from renewable sources⁶⁵.

According to African Development Bank (AfDB) research⁶⁶, much of the rationale for looking at energy through a gender lens in Côte d'Ivoire has been on the demand side: i.e. what happens once electricity arrives at the community and household: who has access, what is it used for, and how is it paid for? This is primarily because women's roles in the energy sector are seen to be important in the consumption stage.

The country's energy balance shows the predominance of traditional fuels. Fuelwood is dominant in rural areas, with a consumption of around 3.2 million tonnes; charcoal is more dominant in urban areas, with a consumption level of 0.8 million tonnes, which is double that of rural areas (0.46 million tonnes). As for butane gas, it is the fuel for urban areas, with a consumption level of around 0.3 million tonnes compared to 0.05 million tonnes in rural areas. To change these patterns of energy consumption, there are huge opportunities for innovative ventures based around clean household energy. As major consumers and managers of wood and biomass resources, women will play an essential role in the transition to a cleaner energy development path.

One noteworthy example to mention on gender mainstreaming in the energy sector is the regional policy adopted by the Economic Community of West African States (ECOWAS), which focuses on empowering the region's female population to have an active stake in West Africa's

⁶⁵ World Bank (2020) The secret to Côte d'Ivoire's electric success. Accessed at https://www.worldbank.org/en/news/feature/2020/07/23/the-secret-to-cote-divoires-electric-success?msclkid=01e020e6cd3911ec993d48298b25dd27.

⁶⁶ FAO, 2020. Gender Assessment. SAP015: Promoting zero-deforestation cocoa production for reducing emissions in Côte d'Ivoire. Prepared by FAO, Côte d'Ivoire, 2020. Accessible at https://www.greenclimate.fund/project/sap015



energy sector. The impetus for the policy was threefold: i) men and women in the community typically exhibited distinct patterns of energy needs, levels of access and impacts, ii) significant aspects of the community's energy policy and institutional architecture were gender-blind, and iii) women represent a significant untapped pool of workers, entrepreneurs and decision-makers who could be positively contributing to the regional transition to cleaner, more just and sustainable energy systems.

Based on the government's projections and IFC estimates, achieving Côte d'Ivoire's renewable energy target in full can create a US\$ 9 billion (€8.53 billion) investment opportunity by 2030. In the energy sector, the clearest opportunities lie in expanding renewable energy access that responds to the gender-differentiated needs of women, their households, businesses and communities. In addition, a gender lens may be applied to large-scale climate mitigation projects such as wind farms, as well as increasing opportunities for women's employment and innovation.

In order not to miss out on such opportunities, new ventures are engaging within the energy sector. For example, *Proparco Emerging Africa Infrastructure Fund (EAIF)*-funded *Biovéa Energie* in Aboisso, a town in Côte d'Ivoire, is expected to be the biggest agricultural waste-powered plant in West Africa, generating renewable energy for 1.7 million people every year and aiming to reduce 450,000 tonnes of palm tree waste that will, instead, be supplied to the power plant. The project will support 12,000 local farmers in the supply chain and increase their income by 20% as they provide biomass to the power plant. Once operational, it is anticipated that the *Biovéa Project* will prevent emissions equating to approximately 340,000 tonnes of CO₂ per annum. Such a project has the capacity to improve gender equality through the jobs created as well as increase the number of local farmers in the supply chain, a majority of whom are women.

4.1.3. KEY BARRIERS AND CHALLENGES FOR CLIMATE VENTURES AND ENTREPRENEUR SUPPORT ORGANIZATIONS (ESOs)

A. THE CLIMATE VENTURES

Discussions with Impact Hub Abidjan, IPED and a number of ventures have revealed the following key gender-related challenges faced by female-led ventures in Côte d'Ivoire.

1. Access to Finance: Ventures in Côte d'Ivoire often face extremely high barriers to source initial seed funding. Generally, access to bank financing is scarce, the legal and fiscal framework is often unsuited to the needs of ventures and there is very little reliable market data. In addition, the cost of credit is excessive (12-15% per annum) for long-term investments and the supply of financing from banks, which tend to favour short-term financing, is inadequate. These initial high capital costs are often out of reach for many women and have overall effects on women entrepreneurs that serve to limit the expansion of their businesses. Specifically, female entrepreneurs' access to finance is further hampered by:



i) The lack of a regulatory mechanism for ensuring gender equality at the financial institution level. This is because Côte d'Ivoire currently has no commissions, regulations or laws that prohibit gender-based discrimination for accessing credit based on marital status. Women interviewed during the gender assessment reported how they were seen to be risky borrowers if unmarried (see Testimony 3); and ii) single female founders or female-only entrepreneurs have difficulties accessing credit from financial institutions. A survey conducted by Briter Bridges and the World Bank's Africa Gender Innovation Lab67 found that unconscious bias against female loan applicants results in higher rejection rates for female borrowers, lower amounts of credit granted, and higher levels of collateral required. Although some authors find that the bias against female loan applicants is driven primarily by male em-

Testimony 3

Women entrepreneurs interviewed reported that they were asked about their marital status when applying for a loan, noting that if they were unmarried, they were considered risky for default, and if they were married with children, they were deemed at risk of default.

Female entrepreneurs' KII

Testimony 4

"My loan requests have been rejected twice because the bank claimed the business is less risky when there is "gender parity" and offered me advice that I should get a male associate if I want to get my credit approved".

KII with Female venture founder in Côte d'Ivoire

ployees, others find that bias is rooted in institutional norms and is common among both

Testimony 5

"When I apply for a loan, despite having all the necessary documentation, I am often asked by the bank credit officers how many men work in my company or if I have male technicians. Often, because they are not convinced enough about my capability, they offer me loans with very little amount e.g. CFAs 3M -5M (€ 4,575 -7,625) instead of the full amount I applied for. I don't know any other sources of funding and such little amounts from the bank will not help me realize my dream of using more environmentally friendly materials and revolutionizing the real estate industry in Côte d'Ivoire".

female and male staff. Women entrepreneurs interviewed during the gender assessment expressed their disappointment over how the formal financial institutions in Côte d'Ivoire insist on seeing a male either as a key decision maker or at least in charge of the technical areas in the venture before they will approve female applicants' loans (see Testimonies 4 and 5).

KII with female venture in Côte d'Ivoire

2. Capacity challenges: According to Impact Hub Abidjan and IPED, female entrepreneurs often lack confidence and are unable to structure and position their product proposals, as well as articulate their business strategy and products, in front of potential investors. These capacity challenges lock them out of competitive processes for obtaining funding from angel investors and other funding sources (see Testimony 6).

Testimony 6

"The investment team notice that women running small companies are less aware about their market, customers, they will not push the reflection as men. But when they passed that level of acceleration, women are more confident, more prepared and know what they want for their businesses."

KII with IPED's ESG impact experts

3. Lack of comprehensive business understanding: The majority of female entrepreneurs undertake small scale businesses for subsistence reasons and often lack comprehensive business understanding, such as identifying market niches for their business, developing business ideas/products that respond to market needs, conducting market research, re-evaluating revenue streams, looking for partnerships etc. As a result, according to Impact Hub Abidjan, women often

⁶⁷ WB Group Africa Gender Innovation Lab and Briter Bridges, 2021. In Search of Equity – Exploring Africa's Gender gap in Startup Finance. Accessible at https://documents1.worldbank.org/curated/en/297001633493250648/pdf/In-Search-Of-Equity-Exploring-Africa-s-Gender-Gap-in-Startup-Finance.pdf0



have difficulties in letting go of ideas that are not responding well to market needs (see also the supply-side challenges below).

- 4. Female entrepreneurs face more technical challenges than their male counterparts. Most ventures that attract funding in Côte d'Ivoire and the greater West Africa region are technologydriven. According to Impact Hub Abidjan, women entrepreneurs often pursue classical business and shy away from technology-related business. This is because women often feel they are not tech-savvy and therefore cannot develop technology-based products and services. This stops them from pursuing tech-related ventures that are crucial for driving innovation in the renewable energy and agricultural sectors, for example, in Impact Hub Abidjan's support groups, men who had similar level of education and background more readily came up with ideas and often pushed for more technological innovation.
- 5. Female-led ventures find it harder to acquire talent and quickly constitute a team. This is where core competencies in renewable energy, construction, ecosystem conservation/restoration and protection are required. Female education in these fields is rare. In addition, the female-led ventures are often careful and hire male team members only after considering the impact the potential male team members would have on their team dynamic and overall leadership. According to Impact Hub Abidjan, in female-led ventures where 80% or more of the team members (including venture employees) are female, group members have been seen to work well together and complement their abilities. On the other hand, in female-led ventures with 80% or more male members, some of the male members were seen to be questioning the female leader's management capacity and often assuming the leadership role themselves. In the latter group, Impact Hub Abidjan has noticed overall negative impact on the group's productivity. While this cannot be

generalized across all mixed groups and regions, it is an aspect Testimony 7 that needs to be paid close attention to when working with mixed groups.

6. Female entrepreneurs in nontraditional enterprises such as construction have difficulty finding clients. Even Although it is heartening positive that more and more women are becoming construction engineers and undertaking masonry work, still the clients continue to question the technical capacity of women and do not trust that they

"I lost some contracts just because I am a woman. In some of these contracts my company wins the contracts but after agreeing with the client and completing all the formalities, I receive calls from the client that they are sorry, but they have found a man who can do the job for them and just like that the contract is gone ... I have tried to advertise my company around the town especially at construction sites. People see the adverts but often potential clients insist on talking to my husband or to the Managing Director (man) and when I tell them that I am the Managing Director and my husband does not work in this position, they do not show further interest"

KII with female venture in Côte d'Ivoire

are capable of doing the job right (see Testimony).

B. ENTREPRENEUR SUPPORT ORGANIZATIONS (ESOs): PRE-ACCELERATORS, **ACCELERATORS AND VCs**

Pre-accelerators and accelerators

In Côte d'Ivoire, there is a general lack of a strong entrepreneurial ecosystem, which constrains the development of pre-accelerator and accelerator models for climate innovation. Compared with other sectors, such as information and communications technology, where the idea of venture pre-acceleration/acceleration first emerged, many accelerator models are not designed for climate technologies, given that such technologies typically require longer pre-acceleration/acceleration periods.

Approximately 20% of the ventures Impact Hub Abidjan is supporting are engaged with climaterelated business models in the sectors of renewable energy (solar power), energy efficient construction of modern buildings, household energy-saving devices, forestry, environmental conservation and sustainable agriculture. Impact Hub Abidjan shared some of the key gender challenges they face in its pre-acceleration programmes:



- Difficulties in recruiting women ventures into its programmes: Although this has been resolved with time, it took a long time before Impact Hub Abidjan could find the right channels to attract female entrepreneurs into its pre-acceleration programmes. With time, targeting of specific NGOs, designing of calls that specifically target women and building networks has helped ease this problem.
- Resource constraints: Women entrepreneurs have additional needs that must be factored into the design of pre-acceleration programmes. These are broadly categorized as follows:
 - i. Women entrepreneurs need additional soft skills in the pre-acceleration modules, as well as longer training time: Often the courses are held twice a week, but this becomes hard for women to attend given their need to balance the training time with other unpaid work burdens. To afford them more time, Impact Hub Abidjan holds one session a week for female entrepreneurs only, which stretches the training time and the costs. In addition, the course module includes an additional sub-module specifically designed to help women voice their own challenges arising from unpaid work, family pressure etc. in a safe and non-judging environment. Every three weeks, Impact Hub Abidjan provides an additional session where women meet role models, share technical and social experiences and tips.
 - ii. Given their limited business skills, women entrepreneurs need more support and accompaniment time to develop and test ideas compared to most male entrepreneurs in pre-acceleration programmes. To start with, women entrepreneurs were seen to have a hard time sharing their business ideas before they were ready for market. During the ideation stage, while most male entrepreneurs took two weeks to share their ideas, female entrepreneurs needed twice as long (a month). In addition, as stated at the ventures section above, many women have emotional attachment to ideas⁶⁰ and have difficulty confronting their ideas / letting go, even after they have been supported by Impact Hub with market research and the available information clearly shows a different idea/product is needed. Male entrepreneurs, in contrast, iterate more "first" ideas and are more willing to quickly try something else.

Both issues have resource implications for Impact Hub's programme. As a rule of the thumb, Impact Hub Abidjan increases the final resources for female venture trainings by one-third to take care of the additional time and extra training modules required. Impact

Hub Abidjan also increases women entrepreneurs networking opportunities through ecosystem events that they hold every three months and pairing women entrepreneurs with the existing over 200 (including 100 women-mainly in business and technology sector) role models and mentors in Côte d'Ivoire.

3. High drop-out rates: Even with the above efforts, women entrepreneurs disproportionately dropped out of Impact Hub pre-acceleration training or did not fully pursue entrepreneurship-related work after the course. For example, at least 50% of the 35 women targeted in Impact Hub Abidjan's second pre-acceleration programme are no longer actively engaged in entrepreneurial activities. In con-

Testimony 8

"What I learnt from Academy for Women Entrepreneurs (AWE) incubation programme at Impact Hub Abidjan was so valuable for me. Since 2020 when I took part in the incubation programme, my overall turnover has increased five times from 30M CFAs (€45,762) in 2020 to 150M CFAs (€228,812) in 2022. However, I have come across a number of my female course mates who have stagnated and are in the same financial situation as when they joined the course. These women often ask why they have been left on their own without further accompaniment and linkages to financial support after the incubation programme"

KII with Female venture in Côte d'Ivoire

⁶⁸ Women entrepreneurs interviewed are passionate about their business ideas and often want to solve socio-economic challenges in their community.



trast, over 70% of the male entrepreneurs are still actively engaged in businesses. A discussion with a female entrepreneur revealed that some of women who go through the programmes continue to expect support and handholding after the pre-acceleration programme ends (see Testimony 8).

At the acceleration stage, IPED and Impact Hub Abidjan shared the following challenges:

- 1. Difficulties in finding mature female-led ventures for acceleration. Women ventures often operate at small scale and few women entrepreneurs have mature businesses that are ready for acceleration. According to IPED, in Côte d'Ivoire the majority of the businesses are in the informal sector (62%). However, they tend to be entrepreneurs of necessity rather than opportunity and are usually engaged in low-value-added activities, especially in the agri-business field. Shifting from the informal sector to the formal sector remains a crucial issue in this context. To overcome this challenge, IPED had to devise strategies to attract female ventures into its acceleration programmes. For example, when they realized their initial target of high-performing ventures with €500,000 to €3000,000 grants attracted mostly male ventures, they introduced smaller grants of €30,000 to €300,000. Nevertheless, attracting mature female-led ventures remains a challenge.
- 2. Women entrepreneurs need more prepping time to effectively pitch their ideas/products: Given the confidence challenges described under the ventures section above, more time is needed in the acceleration programme for confidence building, pitching to investors and further business development.
- 3. Stereotypical gender roles become an obstacle to mainstreaming gender equality among the ventures supported in acceleration programmes: According to IPED, efforts to ensure gender equality in the management and operation of the ventures are sometimes met with resistance: e.g. positions for men referred to as directors or managers and women managers as assistants; or men given supervisory roles that women can easily do with the allegation that "women are less qualified to be supervisors and that they are less authoritative to maintain discipline in the team"; or where men and women are paid differently for doing the same job (e.g. packaging products because men are seen to be strong and can carry heavy loads). To deal with such issues, IPED mainstreams a code of conduct and insists on ventures having women among their top management. The latter is not initially easy, as the positions are often already occupied by men: but, following the acceleration programme, most of the ventures grow and IPED uses this opportunity to support the venture to restructure and increase women leadership at the venture management level.
- 4. Female entrepreneurs' lack of ability to prepare and present adequate business cases and well-structured financial models. In the application process for acceleration programmes, IPED has noted that proposals submitted by female ventures often have more of these challenges than those of their male counterparts. To deal with these challenges, IPED has adopted a pro-active approach: e.g. spending more time analysing projects submitted by women and enabling them to structure the proposals more effectively.

Venture Capital (VC) firms in Côte d'Ivoire and Senegal

The following information has been gathered from the literature review and discussion with the EEs. From the discussions, most of the challenges at the VC levels for Côte d'Ivoire and Senegal are similar and are, therefore, combined under this chapter instead of repeating the same information again under Senegal (4.2).

According to the UNFCCC⁶⁹, climate technologies are often capital-intensive and can sometimes take more than 10 years for the technology to reach profitability at scale. The potentially long period required for breaking-even also discourages most investors, who would rather lock-in investments in other low-capital alternatives that provide quicker returns. In addition, investors are discouraged by the inherent risk in technology development associated with experimentation and learning from failure, which investors view as high risk and therefore unattractive.

⁶⁹ UNFCCC, 2018. Climate Technology Incubators and Accelerators. Accessible at https://unfccc.int/ttclear/misc_/Static/incubators_index/ee343309e8854ab783e0dcae3ec2cfa6/c172d2f388234bdbbe3dd9ae60e4d7e9.pdf



According to VC4A⁷⁰, the VC ecosystem in West Africa is characterised by a lack of early-stage finance and fractured ecosystem as a result of limited investor interest; and a lack of local mentor-

driven capital⁷¹ (also see Testimony). For female ventures, the situation is worse, given that women-led businesses are generally operating at a very small scale generating, on average, less than (€ 190,000) in revenue per year or at an informal level and often operate without a business license, thereby leaving them

Testimony 9

"Major brands want to have the image of being close to the digital pioneers, but it's only an institutional positioning. Start-ups win competitions and small envelopes but do not focus on the essentials"

Raymond Mendy, former Director of CTIC Dakar

ineligible for legal benefits and funding opportunities. As a result, about 44 % of women entrepreneurs finance their businesses by borrowing money from relatives, and only 3.5% borrow from banks, microfinance and other institutions72. Access to financing and accurate market information therefore continue to limit women-led businesses' opportunities for substantial growth.

According to Africa The Big Deal, in 2021 start-ups in Africa raised more than 2.5 times the amount they raised in 2020, with a combined total of about 4 billion(€4.05 billion)⁷³. However, across the continent, ventures with a female founder or a founding team made up exclusively of women still attracted barely any of the funding going to ventures in Africa. As shown in figure 4, it is evident that female single founders and female-only founding teams raised only 0.7% (less than 1%) of all the funding raised by start-ups in Africa in 2021. Male single founders and maleonly founding teams raised 81.3% of the funding across the continent in 2021. In other words, for every € 1(€0.9) raised by female-only founding teams, male-only founding teams raised € 28,8 (€27,381).

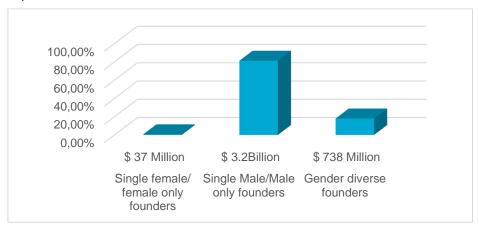


Figure 4: Funding raised by African venture in 2021 by gender (Africa: The Big Deal 2021)

A study by Harvard, MIT and Wharton School⁷⁴ showed investor discrimination at the level of pitching of business ideas. The study found that when the same idea was pitched by a male and a female voice, two-thirds of investors picked the male voice. This bias could be a product of the fact that 88% of decision-makers in venture capital firms are men⁷⁵. According to Catalystas Consulting, in West Africa it is estimated that only 5.1% of major VC companies have women on their boards.

⁷² USAID Marketlinks blog (2021) Women Investing in Women in Senegal: A Look at How One Fund is Using Gender Lens Investing to Reach Women-Led Businesses in West Africa. Accessed at https://www.marketlinks.org/blogs/women-investing-womensenegal-look-how-one-fund-using-gender-lens-investing-reach-women-led.

Africa the Big Deal blog (2021) 2021 Strat-up funds in Africa in Numbers. Accessed from https://thebigdeal.substack.com/.

⁷⁰ VC4A, 2018. Senegal Startup Ecosystem Analysis. Accessible at: https://vc4a.com/senegal/

⁷⁴ A. Wood Brooks et all, 2014. Investors prefer entrepreneurial ventures pitched by attractive men. Article published in Proceedings

of the National Academy of Sciences of the United States of America (PNAS). Accessible at https://www.pnas.org/con-



Investors follow perception patterns and continue to be attracted to the same kinds of companies that have been supported before, leaving female founders behind⁷⁶ (see Testimony 10) In addition, female entrepreneurs are affected by a funding gap at early stage⁷⁷. This is largely because local founders in Africa tend to focus on building business that address problems they face in their home environment, whereas current financial models discourage them from doing so because they do not fit

Testimony 10

"Most small businesses on the continent are not built for a venture capital trajectory" because "investors feel more comfortable investing in founders who speak their language, who adhere to the narrative of hyper-scale and have the same risk appetite—unfortunately, for many local founders, these attributes are not immediate priorities, and this has been detrimental to their capital-raising processes".

Rajiv Daya from the Founders Factory Africa.

into the "Silicon Valley VC model"⁷⁸. Such challenges hinder VC fund managers from convincing investors to back ventures in Africa.

According to the 2021 Venture Capital Journal, there is also an expectation of a rapid investment cycle, from initial funding through to exit, which is not practically feasible, especially for womenled enterprises since they face not only financial challenges but also lack management experience. The Venture Capital Journal concludes that venture capital in Africa needs to be more risk-taking and need to be more patient⁷⁹.

With regard to Côte d'Ivoire and Senegal, the two countries have emerging but dynamic entrepreneurial ecosystems. The Ivorian entrepreneurial ecosystem is still very young and has yet to produce a significant number of ventures at scale. However, in recent years Côte d'Ivoire has developed a rapidly-growing economy but with a limited pool of early-stage investors, attributed by many to: i) national wealth being reserved among government officials and the upper class, who do not invest in private sector development and are not directly affected by the general lack of investor and angel network culture, ii) a lack of trust among investors due to hostile takeover practices and a general lack of guidelines and experience for investors, as well as the perception that big companies or investors are often out to steal ideas⁸⁰ and, iii) a lack of investor confidence in the fast-growing economy due to perceptions of risk based on political volatility and outbreaks of violence.

Senegal, on the other hand, has the most mature start-up ecosystem in Francophone Africa, and serves as a hub for the emerging regional venture capital industry⁸¹. The country has significant consumer and business markets, sophisticated entrepreneurship talent, and a strong corporate sector⁸². According to VC4A, Senegal's growth has been driven by: i) a strong effort from the private sector to organize through associations, ii) investment from corporate Senegal in accelerators, incubators and innovation programmes, iii) funds available for skill development, enterprise development and supplier development of SMEs, iv) investment from governments (local and international) in innovation funding, and v) a growing community of successful investors and entrepreneurs with growing track record⁸³.

⁷⁶ Lefcourt, J. 2021. Understanding the Venture Capital Gender Gap. HBR IdeaCast, episode 795. Accessible at https://hbr.org/podcast/2021/05/understanding-the-venture-capital-gender-gap

⁷⁷ Forbes (Website). This Female-led VC Fund Believes Democratizing Access to Venture Capital will drive Top Returns. Accessible at https://www.forbes.com/sites/marijabutkovic/2021/10/26/this-female-led-vc-fund-believes-democratizing-access-to-venture-capital-will-drive-top-returns/

⁷⁸Venture Capital Journal. (Website). African VC gets ready for take-off. Accessible at https://www.venturecapitaljournal.com/african-vc-qets-ready-for-take-off/

⁷⁹ Jackson Ben (2021) African VC gets ready for take-off. Venture Capital Journal. (Website). Accessible at https://www.venture-capitaljournal.com/african-vc-gets-ready-for-take-off/
⁸⁰ Catalystas Consulting mention in their report that they had heard from FGDs with female entrepreneurs that they have person-

⁸⁰ Catalystas Consulting mention in their report that they had heard from FGDs with female entrepreneurs that they have personally experienced investors with motives to either steal trade secrets or attempt a hostile takeover of their businesses, making them wary of private investment. In: Catalystas report: 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
⁸¹ VC4A (2018) Senegal start-up ecosystem overview. Accessible at https://vc4a.com/senegal/

⁸³ Ibid.



The following is a summary of the gender-related challenges VCs face, gathered from KIIs with Impact Hub and IPED as well as from an extensive literature review:

- 1. Difficulties in finding mature female entrepreneurs in climate innovation that have reached certain growth: three reasons were given for this: i) women-led ventures in climate innovation are concentrated in the early, pre-acceleration stages, where less funding is required, rather than in later stages of acceleration, i.e. when moving from prototypes to commercialization, where the required amount of funding is higher. As a result of financial challenges, a lot of women innovators are forced to give up before reaching this stage84; ii) female entrepreneurs have less confidence in believing in their competence. A review of World Bank impact evaluations⁸⁵ finds that female entrepreneurs in Africa are less likely than men to have confidence in their skills or think they make a good leader; and iii) the World Bank review also finds that female entrepreneurs "do not have the same access as men to large and diverse social networks that can support the growth and competitiveness of their business"86. Given the cultural constraints that women face, female entrepreneurs are less likely to enter sectors with high potential for venture growth⁸⁷.
- 2. Most women entrepreneurs are attracted to smaller funding packages. Related to the above challenge, most investors find that women often apply for smaller loans than their male counterparts, which investment firms assess as not profitable (see Testimony 11). I&P, for example, realized that, at the seed funding stage, there is a 50:50 ratio of women to men applying. However, even with their efforts to reach out to business associations and to provide specific services to support women, the larger funds only attract 20% female applicants88. This might indicate that women business owners lack self-confidence in their ability to take on greater levels of investment than their male counterparts and are in need of confidence and capacity building support to expand their busi-

Testimony 11

"Many development finance institutions were looking to support funds with investment ticket sizes closer to US\$ 5 or 10 million (€4,740,500 or €9,481,000) per investee, and other funds were looking to deploy US\$ 1 million (€ 948,100). We believe that's too much money for women-led businesses in the region; they aren't ready for that amount of capital quite yet. That's why I urge development actors to first think small, and later look for a big impact. In West Africa, we need to build the pipeline of women-led SMEs first, and for that to happen, we need smaller, focused pools of capital."

Evelyne Dioh Simpa, Managing Director at WIC Capital - excerpt from USAID Marketlinks blog (2021), Women Investing in Women in Senegal: A Look at How One Fund is Using Gender Lens Investing to Reach Women-Led Businesses in West Africa

nesses beyond the initial start-up phase. In addition, I&P identified that even with the 20% female applicants, after due diligence, it is often noted that the companies pre-selected were not actually "investment-ready", meaning that they did not have the capacity to design business plans to attract additional outside investment or qualify for bank loans. Some venture capital programmes, such as Comoe Capital and GroFin for example, take a specific approach, by enrolling businesses they choose to back in long-term capacity building programming in their specific field, often sourcing industry experts from outside the country to help support the businesses' fast-paced growth and adaptation.

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⁸⁴ Ewens. M, and Townsend: R. (2020) Are Early Stage Investors Biased Against Women? Journal of Financial Economics (JFE), vol. 135(3), pp 653-677

⁸⁵ The World Bank Group (2019) profiting from Parity . Accessed at https://openknowledge.worldbank.org/bitstream/han-ProfitingfromParityFullReport.pdf?sequence=1&isAllowed=y.

⁸⁶ The World Bank Group (2019) profiting from Parity . Accessed at https://openknowledge.worldbank.org/bitstream/han-parity. dle/10986/31421/135420-ProfitingfromParityFullReport.pdf?sequence=1&isAllowed=y.

The World Bank Group (2019) profiting from Parity . Accessed at https://openknowledge.worldbank.org/bitstream/han- dle/10986/31421/135420-ProfitingfromParityFullReport.pdf?sequence=1&isAllowed=y

⁸⁸ This has been confirmed during interviews with stakeholder Investisseurs & Partenaires (I&P). See Annex 3 as well.



3. Women entreprenures are less visible in networking events and conferences where investors meet and network with potential investees. Women are also less likely to network as frequently as men, due to the stigma of going out alone to an event, for safety reasons, or due to the need (and/or expectation) of taking care of family and household tasks or the fact that women often have to rely on their husband's / male

relatives' permission (see Testimony 12).

Testimony 12

"In one of our Ivorian enterprises that produces and processes cassava: the only woman among the four shareholders was forced to withdraw because her husband found that she worked too much and came home too late"

IPED -KII

4.2. SENEGAL

4.2.1. INSTITUTIONAL MECHANISMS GOVERNING SENEGALESE **ENTREPRENEURIAL ECOSYSTEMS**

Senegalese gender relations are shaped by socio-cultural norms and customs that establish hierarchical relationships in which males are dominant and females are subordinate. Although the degree and dynamics of these relationships vary by urban/rural residence and ethnic group and religion, in general the majority of women are expected to be wives and mothers, performing (unpaid) household responsibilities such as housework, child rearing and subsistence agricultural labour. Men are expected to be primary decision-makers, earn income through formal employment or entrepreneurship, and take active roles in public life, often as leaders and public officials. Ongoing gender issues, such as forced child marriage, a discriminatory family code (laws and institutional practices governing marriage, divorce and inheritance), and many forms of sexual and gender-based violence (SGBV), including female genital mutilation (FGM), limit Senegalese girls' and women's rights, dignity and well-being®

The Government of Senegal has made significant progress in creating a gender-sensitive environment through the adoption of the Parity Law, the Standard Operating Procedures on GBV, a National Action Plan on GBV/Human Rights & the Empowerment of Women, and the validation of the new National Strategy for Gender Equality and Equity. These measures have been developed and implemented under the technical leadership of the Ministry of Women, Family and Childhood90.

These policies and plans have formed the basis for a strong legal and policy framework for women's rights and gender equality in every sector and sphere, from the household to community to local and national politics and civic life. Highlights of progress include:

- Legal guarantees and political representation. The 2001 Constitution and current legal framework establishes substantial equal rights for women and men. It reaffirms the principle of gender equality and equity and the prohibition of all discrimination based on sex. All development strategies must take into account a better balance between men and women in terms of both representativeness and decision-making. Articles 7 (gender equality) and 15 (equal access to land) of the constitution provide a key framework for gender equality.
- Senegal has also endorsed the Convention on the Elimination of All Forms of ii. Discrimination Against Women (CEDAW, 1985), the Maputo Protocol to the African Charter on the Rights of Women (2004) and has ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (2005).
- Additional key measures, while not without gaps, also provide key protections for women iii. and girls: e.g. the Violence Against Women Act (1999), the Reproductive Health Act (2005), the HIV Act (2010), the Gender Equality Act (2010) and the Tax Equality Act (2008).

⁸⁹ USAID, (2017). Gender Analysis for the USAID/Senegal CDCS (2019-2024). Accessible at: ttps://pdf.usaid.gov/pdf_docs/PA00N5TN.pdf

⁹⁰ UN Women Portal. Accessible at: https://africa.unwomen.org/en/where-we-are/west-and-central-africa/senegal



- iv. There is greater openness among political leaders, ministers, and parliamentarians, with increased willingness to women's political participation and to ensuring gender mainstreaming in public policies.
- v. There have been attempts to strengthen protection and promotion of equal rights in agriculture, fisheries, livestock, health, education, employment and social protections.,
- vi. The numbers of women in occupations traditionally reserved for men, such as mechanical and civil engineering, are increasing. Small but encouraging gains include: of the 500 students enrolled in the *Programme d'Appui au Développement et à l'Intégration de l'Apprentissage*⁹⁷ in the regions of Thiès, Kaolack, and Fatick, young women make up 2% of metalwork, 8% of cooling and refrigeration, and 9% of auto mechanics etc.

The Plan for an Emerging Senegal (PES), adopted in 2014, is Senegal's new development strategy and economic policy reference framework. It is based on three strategic pillars: (i) structural transformation of the economy and growth; ii) human capital, social protection and sustainable development; and iii) governance, institutions, peace and security. Aligned with the PES is the National Strategy for Gender Equality and Equity (SNEEG 2005-2015), which was developed with the support of UN Women and updated in 2016 (2016-2020). SNEEG aims at "contributing to making Senegal an emerging country in 2035 with a society without discrimination, where men and women will have the same opportunities to participate in its development and enjoy the benefits of its growth"⁹².

In addition, the National Parity Observatory, which was established by Decree No 2011-819 of 7 March 2011, is tasked with monitoring, evaluating and making proposals for promoting parity between men and women in public policy. The National Parity Observatory: i) undertakes annual gender monitoring exercises and develops sectoral gender profiles; ii) provides sex-disaggregated data on gender, best practices, constraints and gaps linked to gender; and iii) makes proposals to accelerate progress towards gender equality in Senegal.

La Délégation Générale à l'Entreprenariat Rapide – "la DER" – is a 30 billion FCFA (US\$ 50 million or €47,405,000) fund managed by the Delegation/ Commission for Rapid Entrepreneurship, with co-funding and management provided by both the public and private sectors. DER is an innovative fund for young entrepreneurs in Senegal, in technology as well as across a variety of other sectors. The principal aim of the fund is to catalyze entrepreneurship all around Senegal, targeting men up to 40 years and women from 18 years old and above with no upper age limit.

Under the fund, the model for entrepreneurs' financing is structured as follows; i) Small Financing, which focuses on "smaller, projects/businesses"; ii) Incubation funding, for incubation, empowerment or training programmes for young entrepreneurs; iii) Equity financing, a corporate finance fund that offers capital in exchange for equity in young companies that have been validated by external DER partners; and iv) Low-interest loans: at 4-5% interest rate with a specific focus on certain clustered economic activities or certain value chains (e.g. artisanal industries, livestock raising, food processing, agriculture production, digital/ICT, tourism etc.).

In 2019, Senegal became the second country in Africa to pass a Startup Act. The Act aims to positively impact the national economy by providing a governance framework and contains recommendations for tax policies, financing, data collection and data sharing with start-ups. The Act also provides a suitable legal condition for registering new start-ups in the country.

The implementation of the Act was reinforced by the provisions for amending the general tax code, which were introduced in the 2020 Finance Law that allows for, among others, certain tax exemptions for the first three years and the reduction in registration fees paid for the creation of companies from CFA 25 000 to CFA10 000 (about € 38 to € 15.2).

Though both the Startup Act and the tax provisions are at early stage of implementation, they are expected to boost female-led businesses in the country, by providing tax breaks and other

⁹¹ The programme had the objective to mobilize, train and integrate young people in Senegal into the job market.

⁹² UN Women Portal. Accessible at: https://africa.unwomen.org/en/where-we-are/west-and-central-africa/senegal



benefits to innovative businesses in fields from agriculture to mobile banking. The tax burden and complexity of the laws were initially seen as reasons why many talented businesswomen refrained from creating companies. Given that the reforms are new and implementation has been affected by the COVID-19 situation, the extent to which they are achieving their objectives remains to be seen.

Another reform from the Senegalese government is the initiative to ease the creation and legalisation of start-ups through creation of a dedicated government bureau: Bureau d'appui à la Création d'Entreprise, or "Bureau for the Support and Creation of Businesses" (BCE). The Bureau permits start-ups in Senegal to complete their registration process and officially create a business in six days only⁹³.

Given the cultural challenges faced by women entrepreneurs described above, it remains to be seen whether women can effectively exploit these new opportunities. However, at the very least, all the above reforms provide essential conditions for building vibrant and robust women- and youth-led enterprises.

Despite these advancements, and the fact that Senegal has ratified the main international and regional women's rights protection instruments, many of those provisions are not enforced in practice. The remaining major gaps at the country level include:

- Persistent discriminatory legislation, notably in family law that results in lack of women's legal
 rights and/or weak enforcement of such rights in marriage, divorce, and inheritance of wealth,
 land and other properties. This is exacerbated by the increasing influence of conservative
 cultural traditions, which limit women's equal rights in marriage, divorce and inheritance, as
 well as equal access to productive agricultural land and financial capital.
- Persistent prevalence of harmful traditional practices that perpetuate SGBV, such as early
 and forced marriage and female genital mutilation (FGM). Given the weak legal protection for
 women and girls, the practitioners exploit the existing gaps in legal and social services.
- Limited access to education, employment, decision-making positions, health services, land and property rights⁹⁴.
- Lesbian, gay, bisexual, transgender, and intersex (LGBTI) identifying groups and lower caste Senegalese also face severely restricted space, especially for the LGBTIs who face physical attacks, police harassment, arrest, and fines or prison sentences.
- Various forms of forced child labour and sex trafficking are also of significant concern.
- Low employment rates for women: according to a World Economic Forum report in 2021⁹⁵, only 36.4% of women in Senegal are in the labour force, corresponding to a gender gap of 62%.

There are also gaps within national institutions that need to be addressed, such as: i) lack of resources and staff with appropriate skills, knowledge and capacities to integrate gender in plans, policies, procedures and practices across government line ministries; ii) stereotypes in the government's gender units: e.g. positions in all ministry gender units are typically given to women without the necessary technical capacity in gender and/or sectoral expertise. In addition, unit staff are not provided with clear job descriptions, scope of work or specific results to achieve. Additionally, no men are employed in these units, thus isolating and stigmatizing the work of the units.

⁹³ Enpact blog (2021) SFI Overview of Senegal, https://enpact.org/blog/news/sfi-overview-of-senegal/#/.

⁹⁴ UNIDO, 2021. Policy Assessment for the Economic Empowerment of Women in Green Industry. Country report: Senegal. Accessible at: https://www.unido.org/sites/default/files/files/2021-06/Senegal Country Report ENG Final.pdf

⁹⁵ World Economic Forum (2021) Global Gender Gap Report. https://www3.weforum.org/docs/WEF_GGGR_2021.pdf.

⁹⁶ USAID, (2017). Gender Analysis for the USAID/Senegal CDCS (2019-2024). Accessible at: https://pdf.usaid.gov/pdf_docs/PA00N5TN.pdf



4.2.2. STATUS OF CLIMATE INNOVATION IN EDUCATION, AGRICULTURE AND ENERGY SECTORS

4.2.2.1. GENDER AND CLIMATE INNOVATION IN EDUCATION

Senegal is considered to be one of the sub-Saharan African countries that has made the most significant progress in girls' primary education. As early as the 1990s, even when the rest of the continent had an average enrolment of 30% for girls, Senegal had almost gender parity in primary school enrolment, with 77.3% and 80% enrolment for girls and boys, respectively.

However, while primary school gender parity has been achieved, it is not a reflection of true gender parity in education, given that transition and drop-out issues disproportionately affect girls from pursuing higher education. According to the World Bank, in 2016 87.9% of girls were enrolled in primary schools but only 63.5% of girls actually complete their primary education and only 48.4% enroll in secondary education⁹⁷. A Human Rights Watch report⁹⁸ states that more than 54% of young mothers dropped out of school between 2011 and 2014, and only 15% resumed their education. Reasons for dropping out include, among others, child marriage, teenage pregnancies and economic hardships. As a result, according to UNESCO, Senegal's literacy rate for the population aged 15 years and above is 64.81% for males and 39.8% for females, with rural areas having the highest difference between the sexes.

As in Côte d'Ivoire, a significant number of women and girls are in the technical and vocational education sector, representing an overwhelming majority of students (71%); far smaller numbers are active in industrial sectors (14%). Different factors and issues, such as socio-cultural, economic, lack of information and domestic work burdens, are significant causes of disparities in education. In fact, the allocation of domestic work time is estimated at around 30 minutes per day for men, against around seven hours for women. Although efforts are being made to remove the barriers limiting the attendance of women in male-dominated sectors, it is still rare to see women mechanics, agricultural technicians or electricians.

The information and communication technology (ICT) sector is the driving force behind Senegal's start-up successes in recent years. Though not focused on climate-related innovation, Senegalese women constitute 45% of ICT specialized baccalaureate students. Female researchers are mostly represented in medicinal sciences (31%), followed by social, agricultural and natural science, with 26%, 24% and 16%, respectively⁹⁹.

Despite having many educational institutions, no Senegalese university is listed in the global ranking of universities. The education system is not necessarily focused on climate innovation and most universities are strongly focused on theory, do not teach problem-solving skills and are more or less a copy of the French colonial university system¹⁰⁰. Senegalese educational institutions need to play a more prominent role in the climate venture ecosystem, "not only as producers of human capital but as capacity builders, enabling incubator and accelerator programmes for students at university levels"¹⁰¹.

4.2.2.2. GENDER AND CLIMATE INNOVATION IN AGRICULTURE

The agriculture and livestock sector is Senegal's main economic activity, representing approximately 17% of gross domestic product (GDP) and employing 70% of the population ¹⁰². Climate change is projected to lead to rising temperatures, increased droughts and decreased rainfall in Senegal, which would have significant impacts on the agriculture sector and food security.

According to national data used to prepare the Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), the agricultural sector contributes approximately 49% of the country's total GHG emissions. The Government of

⁹⁷ World Bank (2016) Education Statistics (EdStats) girls enrolled in secondary education

⁹⁸ Submission by Human Rights Watch to the Committee on Economic, Social and Cultural Rights on Senegal 64th pre-sessional, 2019. https://www.hrw.org/news/2019/01/15/submission-human-rights-watch-committee-economic-social-and-cultural-rights-senegal

⁹⁹ UNIDO/GEF Proposal, 2020. Promoting cleantech innovation for climate action in Senegal. Accessible at: https://www.thegef.org/projects-operations/projects/10715

¹⁰⁰ Enpact blog (2021) SFI Overview of Senegal, https://enpact.org/blog/news/sfi-overview-of-senegal/#/.

¹⁰¹ Enpact blog (2021) SFI Overview of Senegal, https://enpact.org/blog/news/sfi-overview-of-senegal/#/

¹⁰² USAID Feed the Future; Climate-Smart Agriculture in Senegal. https://climateknowledgeportal.worldbank.org/sites/dault/files/2019-06/SENEGAL_CSA_Profile.pdf.



Senegal recognizes the urgent need to implement adaptation and mitigation measures to increase the resilience of its ecosystems and populations to the impacts of climate change and to reduce greenhouse gas (GHG) emissions by 2030. Nevertheless, the government is struggling with capacity issues. According to UNDP¹⁰³, the country has experienced a low level of integration of nationally determined contribution (NDC) and national adaptation plan (NAP) priorities, particularly in the planning and budgeting process of the agriculture, livestock and fisheries sectors. Other challenges include: i) lack of coordination of climate actions and poor capacity in inter-sectoral planning and implementation, ii) lack of availability of data and information on climate risks and access to adaptation and mitigation measures for actors, especially at the farming level, iii) lack of effective monitoring and evaluation of transformative climate mitigation and adaptation actions¹⁰⁴.

These challenges affect women more than men, given the underlying socio-economic and structural barriers that women face in Senegalese society. Rural women represent almost 70% of Senegal's workforce and produce 80% of the country's food. Although gender equality is guaranteed under the 2001 Constitution, as stated above, in practice traditional and religious norms tend to dictate women's use of and rights to land and resources. For example, only 13% of women have access to land ownership in Senegal and even those that own land do not have the ability to assert themselves and make livelihood decisions independently¹⁰⁵. In addition, women are often susceptible to eviction if men claim the need for space for farming, thus displacing women to areas of lower quality105 or most rugged land which is difficult to work with and has limited access to water¹⁰⁷.

Given all of these factors, in Senegal men are mostly identified as the farmers while women are considered to provide support on the farm¹⁰⁸. In addition, just as in Côte d'Ivoire, women's agriculture practices are often intended mainly for the subsistence of the family. As a result, cash crops sectors such as cocoa, cotton, oil palm and cashew nuts are male-dominated. However, women are, slowly but steadily, constructing new identities and labour market participation 109.

Unlike many other African countries, Senegal is making progress in climate innovation. The country's overarching policy framework, the Plan Sénégal Émergent (PSE), explicitly recognizes climate change issues as a national priority. The scope for mainstreaming climate adaptation and mitigation into thematic and sectoral policies in the country – e.g. the country's on-going effort to update various policy frameworks such as youth employment, women's economic empowerment or food security - can offer opportunities to incorporate gender-related climate resilience considerations¹¹⁰.

In recent years, innovative loan products, such as obligatory agricultural insurance to mitigate the effects of climate change on agriculture through Banque Agricole, have emerged. Other commercial banks operating in Senegal have been providing loans to acquire solar-powered water pumps and domestic biogas systems for some years. There are a number of ongoing initiatives that provide access to information to farmers that the GCF project could tap into. Examples include a small start-up, "PayDunya, Niokobok", which is offering paid climate-related

¹⁰³ UNDP (2021) climate change adaptation: Strengthening transformative approaches in Senegal's climate action plans. https://www.adaptation-undp.org/scala-strengthening-transformative-approaches-in-senegal-climate-action-plans.

¹⁰⁵ Adesugba, M., Oughton, E. and Shortall, S. (2020) 'Farm household livelihood strategies', in Sachs, C. E. et al., Routledge Handbook of Gender and Agriculture. 1st edn. Edited by C. E. Sachs et al. Routledge, pp. 315-325. doi: 10.4324/9780429199752-

¹⁰⁶ USAID Feed the Future(2016); Climate-Smart Agriculture in Senegal. https://climateknowledgeportal.worldbank.org/sites/de-106 USAID Feed the Future(2016); Climate-Smart Agriculture in Senegal. https://climateknowledgeportal.worldbank.org/sites/de-106 USAID Feed the Future(2016); Climate-Smart Agriculture in Senegal. https://climateknowledgeportal.worldbank.org/sites/de-106 USAID Feed the Future(2016); Climate-Smart Agriculture in Senegal. https://climateknowledgeportal.worldbank.org/sites/de-106 USAID Feed to the future of the fu

fault/files/2019-06/SENEGAL CSA Profile.pdf.

107 Abastado, M.-F. (2018) Des agricultrices sénégalaises luttent pour l'accès à la terre, un lopin à la fois, Radio-Canada.ca. Radio-Canada.ca.

¹⁰⁸ Adesugba, M., Oughton, E. and Shortall, S. (2020) 'Farm household livelihood strategies', in Sachs, C. E. et al., Routledge Handbook of Gender and Agricultu-re. 1st edn. Edited by C. E. Sachs et al. Routledge, pp. 315-325. doi: 10.4324/9780429199752-

¹¹⁰ OECD(2021) Lessons on Engaging with the Private Sector to strengthen climate resilience. https://www.oecd-ili- brary.org/docserver/09b46b3f-en.pdf?expires=1640188274&id=id&accname=quest&checksum=8925D5D1C3347F9C7A39A821EBE8CCBA.



data and information to end-users in the agriculture and fisheries sector¹¹¹. In addition, large companies, many of which are French multinationals, such as *Orange, Free, Société Générale and BNP Paribas*, are engaged in Corporate Social Responsibility (CSR) programmes that provide climate information push alert text messaging systems¹¹². However, the biggest challenge is the limited digital penetration rate in the country, given that not all end-users, especially women, use digital technologies to access information.

There is a growing use of drones in the agricultural sector to increase productivity in Senegal. While the use of drones is nothing new, the initiatives led by the Senegal Programme of UN Women and BICIS¹¹³/BNP Paribas, which facilitate disadvantaged women farmers to become certified to use remote-controlled drones for mapping and data interpretation, is encouraging. When used on large farms, where women typically represent the majority of the workers, the technology can help to reduce women's workload and enable them to focus their time and energy on increasing their yields and the distribution chain while improving their environmental practices¹¹⁴.

The agricultural technology innovation hub, "Yesaal Agrihub", supported by BMZ/GIZ in Thiès region, focuses on Youth, ICT and Agribusiness, and acts as a focal point for IT-based technological innovation within the Senegalese agribusiness sector. Yesaal Agrihub offers a meeting place for interdisciplinary experts, entrepreneurs and agricultural and livestock producers, as well as a space for project collaboration, training and mentorship to network young ICT and agribusiness innovators and support start-up businesses with an agricultural focus. This hub could provide essential lessons for integrating women and youth in the CATALI.5°T initiatives' agricultural climate-related innovations.

Senegal is also one of the key players behind the *Great Green Wall Project*. Conceived by the African Union, the project entails cooperation among eleven countries in the region and aims to halt the advance of the Saharan desert through tree planting and growing¹¹⁵. The Senegalese National Strategy for Green Jobs was created in November 2015 and covers the period 2015-2030. In the strategy, the country identified the most promising sectors for providing green jobs as: agriculture, forestry, fishing, renewable energies, resource-intensive processing industries, recycling and recovery of waste, and construction using local materials.¹¹⁶

4.2.2.3. GENDER AND CLIMATE INNOVATION IN THE ENERGY SECTOR

A key component of Senegal's Plan for an Emerging Senegal (PSE) is the development of the power sector. The government aims to achieve universal access to electricity by 2025 by combining off- and on-grid energy with priorities aimed at: lowering the cost of generating power by increasing access to electricity, particularly in rural areas; reduction in dependence on imported liquid fuels; exploitation of the country's potential for developing solar and wind power; and development of its offshore natural gas.

According to the Minister of Petroleum and Energy, Senegal is looking not just to boost the development of the oil and gas sector, but also to develop new industries that are linked to hydrocarbons, such as petrochemicals, pharmaceuticals and fertilizers, as well as broad utilization of gas-to-power projects to lower the costs of production in sectors such as automotive manufacturing and mining. Recent changes in policies, driven by concerns over energy security, have improved the financial attractiveness of renewable energy and energy efficiency

¹¹¹ OECD (2021) Lessons on Engaging with the Private Sector to strengthen climate resilience. https://www.oecd-ili-brary.org/docserver/09b46b3f-en.pdf?expires=1640188274&id=id&accname=guest&check-sum=8925D5D1C3347F9C7A39A821EBE8CCB.
¹¹² ibid.

 $^{^{\}rm 113}\,{\rm BCIS}$ Senegal is a national commercial bank and a subsidiary of BNP Paribas.

¹¹⁴ https://africa.unwomen.org/en/news-and-events/stories/2021/02/innovation-et-technologie-au-service-des-femmes-agricultrices-du-nord-du-senegal.

¹¹⁵ The Great Green Wall (https://www.greatgreenwall.org/). In: UNIDO, 2019. PCP Annual Report, Senegal. In: UNIDO, 2021. Policy Assessment for the Economic Empowerment of Women in Green Industry. Country report: Senegal. Accessible at: https://www.unido.org/sites/default/files/files/2021-06/Senegal Country Report ENG Final.pdf
116 UNIDO, 2019. PCP Annual Report, Senegal. In: UNIDO, 2021. Policy Assessment for the Economic Empowerment of Women

¹¹⁶ UNIDO, 2019. PCP Annual Report, Senegal. In: UNIDO, 2021. Policy Assessment for the Economic Empowerment of Women in Green Industry. Country report: Senegal. Accessible at: https://www.unido.org/sites/default/files/files/2021-06/Senegal Country Report ENG Final.pdf



technologies in the country¹¹⁷. Although solar and wind energy, including the Taiba N´Diaye wind farm, are currently two of the sub-sectors that comprise the bulk of renewable energy projects in the country, the government is eager to explore other sources of renewables, such as biofuels to capitalize on cheap and readily available local input from agriculture by utilising more biomass and agricultural waste products.

A recent gender audit on energy policies in Senegal identifies a number of gender challenges in the energy sector:

- Senegal's Renewable Energy Policy includes women as a target group and the Policy incorporates gender awareness in its approach, operationalized by the development of gender desks or focal points within the line ministries. However, these desks/focal points lack focused activities and deliverables and they have not been allocated specific budg-
- At the macro-level, there is a political will to mainstream gender, as evidenced by the inclusion of gender in development plans. However, macro-level intentions are not translated into gender actions at the sectoral level because policy-makers lack the knowledge on how to mainstream gender. In addition, there is limited recognition of gender analysis as a planning tool and of gender mainstreaming strategies and action plans.
- iii. There have been no appropriate consultations on the needs of men and women during the formulation of energy policies. The majority of those who took part in the formulation process were male and therefore no proper assessment of women's energy needs was conducted.
- There is an absence of gender-disaggregated data that would inform national energy iv. budgets. The financial resource data used at the higher levels of decision- and policymaking are not disaggregated by gender. In addition, there is lack of financial resources to support gender programmes and policies.

The most recent data from 2018 indicates that the electricity access rate in Senegal is 67%; 44.2% of rural areas and 92.4% of urban areas have access to electricity¹¹⁸. Since women play a significant role in energy systems as part of their subsistence and productive tasks, they are disproportionately affected by energy shortages¹¹⁹. Women are disproportionally affected by energy poverty¹²⁰ because they lack "sufficient choice in accessing adequate, affordable, reliable, high quality, safe and environmentally safe energy services to support economic and human development"121. Even where energy supply infrastructure is physically available, women (especially poor women) are often hindered in its use by lack of finance, appliances, information and training or education. In addition, institutional structures are often skewed towards men and, in many households, men have a stronger decision-making role. For example, obtaining subsidized electricity connection or liquefied petroleum gas (LPG) registration may require a bank account and extensive paperwork, which places women and their enterprises (which are mostly informal) at a disadvantage¹²².

¹¹⁷ OECD (2021) Lessons on Engaging with the Private Sector to strengthen climate resilience. https://www.oecd-ilibrary.org/docserver/09b46b3f-en.pdf?expires=1640188274&id=id&accname=quest&check-

sum=8925D5D1C3347F9C7A39A821EBE8CCBA.

118 https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=SN. In: UNIDO, 2021. Policy Assessment for the Economic Empowerment of Women in Green Industry. Country report: Senegal. Accessible at: https://www.unido.org/sites/default/files/files/2021-06/Senegal_Country_Report_ENG_Final.pdf

Energia (2017) Energy Access and Gender Getting the Right Balance . https://documents1.worldbank.org/cu-

rated/en/463071494925985630/pdf/115066-BRI-P148200-PUBLIC-FINALSEARSFGenderweb.pdf.

120 The World Economic Forum defined energy poverty as the lack of access to sustainable modern energy services and products. conditions where there is a lack of adequate, affordable, reliable, quality, safe and environmentally sound energy services to support development.

¹²¹ Clancy et al. (2002). The Gender-Energy-Poverty Nexus: Finding Energy to Address Gender Concerns in Development. London: DFID (UK Department for International Development). In: UNIDO, 2021. Policy Assessment for the Economic Empowerment of Women in Green Industry. Country report: Senegal. Accessible at: https://www.unido.org/sites/default/files/files/2021-06/Senegal Country Report ENG Final.pdf 122 Energia (2017) Energy Access and Gender Getting the Right Balance . https://documents1.worldbank.org/cu-

^{5630/}pdf/115066-BRI-P148200-PUBLIC-FINALSEARSFGenderweb.pdf.



Understanding energy use and decisions in household dynamics is key to delivering sustainable energy. According to the findings of a study conducted in Senegal¹²³, socio-economic characteristics (age, household size, land and house ownership, wealth, earnings, religion, region, type of residence, education) matter in the adoption of clean fuel. For example, an increase of a woman's intra-household bargaining power leads to an increase of clean fuel adoption and that households using clean fuel tend to contain women having high levels of bargaining power. Consequently, households with more empowered women would be more likely to engage in the uptake of clean fuel and thereby curb the harmful health and environmental effects of traditional fuels.

Overall, this research shows that empowering women is an effective response to climate change, as it would foster the adoption of clean technologies. Furthermore, a study by Energia¹²⁴ reveals that "while women prioritize electric cookers, sewing machines and clothes washers, men prefer mobile/smart phones, hand power tools and televisions. These differences are particularly significant given the fact that, as a result of gender roles, women are generally in a worse position than men, with fewer opportunities, less decision-making power and limited influence". Thus, a "gender-neutral" approach that overlooks gender differences could have unintended differential impacts and benefits in relation to energy use and greenhouse gas emissions.

4.2.3. KEY BARRIERS AND CHALLENGES FOR CLIMATE VENTURES AND ENTREPRENEUR SUPPORT ORGANIZATIONS (ESOS)

A. CLIMATE VENTURES

The following is a summary of the key challenges in Senegal gathered from discussions with female climate ventures, Impact Hub and IPED.

- 1. Limited access to finance is a key barrier for female-led cleantech ventures at early, growth and scale-up phases: The reasons provided are similar to those for Côte d'Ivoire. In addition, the existing state-led funds that target women (e.g. La Délégation Générale à l'Entreprenariat Rapide "la DER") are not focused on climate innovation entrepreneurs, often offer smaller loans and are not well structured. Women entrepreneurs interviewed found the internal procedures of DER to be bureaucratic and discouraging for female entrepreneurs.
- 2. Lack of training and mentoring services for thematic sectors related to climate innovation: The major challenges faced by most female ventures are related to education. A high level of education often a university degree in a relevant field is required to be able to effectively incubate and accelerate ideas. Ventures in climate innovation sectors such as the circular economy (focused on recycling), ecological conservation, energy and water conservation, etc. identified the lack of thematic expertise and specific information to be a key challenge. Women climate entrepreneurs, in particular, lack key skills and knowhow on how to transform climate innovation into a viable enterprise and the ability to develop robust business models. The problem is compounded by lack of female role models in renewable energy, ecological protection, integrated waste management and other 'climate' sectors in Senegal. According to IPED, the provision of technical assistance is key, also for improving environmental and social safeguards inherent in climate innovation initiatives: e.g. finding ways to value waste or reduce waste, improving health and safety at work practices, hygienic aspect of products, etc.

¹²³ Wang Sonne(2016) Understanding the determinants of clean fuel adoption in Senegal: do informal institutions and women's intra-household bargaining Understanding the determinants of clean fuel adoption in Senegal: do informal institutions and women's intra-household bargaining power matter? https://www.greengrowthknowledge.org/sites/default/files/C1 Sonne Understanding determinants of clean fuel adoption Senegal.pdf.

124 Ashden (2019) Revisiting the gender-energy nexus through a productive use lens. Dec 2019. Off-grid appliances boost gender-

¹²⁴ Ashden (2019) Revisiting the gender-energy nexus through a productive use lens. Dec 2019. Off-grid appliances boost gender-positive 'productive uses' of energy – Ashden.



3. Lack of pre-acceleration support at the ideation Testimony 13 stage. Female ventures more time consider their business ideas, understand their viability, weigh options to take etc. This is even more important for climate ventures, given that climate innovation is relatively new in Senegal. Yet few pre-acceleration programmes exist Senegal. There are also funding flexible no sources to test entrepreneurs' ideas. The result is often high rates of venture failure. Impact Hub Dakar, for example,

"Inspired by my own health experience and having suffered from allergic reactions as a result of paints and other materials used in modern houses, I intend to build ecological villages in Senegal. For the last two years, I have been looking for an incubator to help what me further develop my idea of creating an ecological village using local recycle sustainable materials and creating self-sustaining water and energy at household level. But it has been difficult to find an incubation programme until two months ago when I joined Impact Hub Dakar's new programme. I have started developing the first prototype and conducted early market research. One of the biggest challenges I face is the lack of technical information and existing research on ecological housing in Senegal. It is also already becoming clear to me that Senegalese people are not ready for ecological housing and the business might not be profitable, but I am passionate about my idea and would like to create cheap sustainable housing for many women who have health challenges"

> Female entrepreneur at Impact Hub Dakar's ideation incubation programme.

has recently started its first pre-acceleration programme to deal with these challenges(see Testimony 13).

- 4. Youth as the target group for existing pre-acceleration programmes: Most of the existing pre-acceleration and acceleration programmes in Senegal offer programmes for young people under the age of 35. This locks out women, given that most women often focus on serious business engagement at a later stage in life.
- 5. Lack of adequate follow-up support after pre-acceleration programmes: Many women entrepreneurs feel they have been "abandoned" after graduating from pre-acceleration programmes and many drop out of pursuing business. There are currently no structured monitoring and bridging technical support initiatives: e.g. advice and linkages to public and private sector financial service providers, continuous mentoring and coaching support post-pre-acceleration. In addition, current pre-acceleration and acceleration programmes are not well integrated and dovetailed such that female ventures that achieve early growth can be quickly incorporated into the programmes.

B. ENTREPRENEUR SUPPORT ORGANIZATIONS (ESOs): PRE-ACCELERATORS. **ACCELERATORS AND VCs**

Pre-accelerators and accelerators

Impact Hub Dakar supports ventures at both pre-acceleration and acceleration stages. In its circularity programme, for example, women-led ventures are developing innovative ideas such as designing toilets made of local recycled materials that have the capacity to recycle water and building ecological villages with self-sustaining energy.

 Similar to Côte d'Ivoire, Senegalese female entrepreneurs need more personal development and lack business skills at pre-acceleration stage. They need more confidence building in pitching their products in front of investors. In a survey conducted by Briter Bridges and the World Bank's Africa Gender Innovation Lab¹²⁵ female survey respondents showed less confidence in their ability to pitch to investors and in their firms' ability to grow. This confidence gap occurred despite the fact that the female entrepreneurs in the

¹²⁵ Alibhai, S., Donald, A.A., Goldstein, M., Oguz, A.A., Pankov, A. and Strobbe, F., 2019. Gender Bias in SME Lending: Experimental Evidence from Turkey. World Bank Policy Research Working Paper, (9100). In: WB Group Africa Gender Innovation Lab and Briter Bridges, 2021. In Search of Equity - Exploring Africa's Gender gap in Startup Finance. Accessible at https://documents1.worldbank.org/curated/en/297001633493250648/pdf/In-Search-Of-Equity-Exploring-Africa-s-Gender-Gap-in-Startup-Finance.pdf



survey sample were more educated, had the same professional experience as the male founders, and experienced similar revenue changes in the previous year.

- 2. Women entrepreneurs face significant time constraints due to the persistence of traditional gender roles that forces them to work more than the men and affect their ability to benefit from pre-acceleration services. For example, Jiggen Tech (JTH) an Engineering, Technology and Science & Mathematics (STEM) pre-accelerator, which is aimed at integrating women to the tech ecosystem in Senegal with networking, training, entrepreneurship coaching, mentoring and knowledge sharing, faced challenges emerging from women's time constrained. For example, in 2017, JTH enrolled 695 women to participate in its training courses; however, due to absenteeism and cancellations, the actual number of women who participated in the trainings was 387. The main explanation given for the absenteeism and cancellations were mostly related to family context, female household responsibility or lack of time off work, with many of the non-attendees responding "I could not find someone to look after my children ... I did not get permission from my husband ... I had to cook, I was already late I did not want to come"126.
- 3. Female entrepreneurs shy away from "risky businesses". The majority of the acceleration programmes in Senegal, especially in the energy and agricultural sectors, focus on techrelated ventures¹²⁷. However, according to Impact Hub Dakar the technology sector has a
 - reputation as being "risky", given challenges related to patient capital or seed and non-dilutive capital returns only realized down the road. In addition, the sector, being relatively new, has regulatory uncertainty and there are no mechanisms for cushioning the ventures in their early phases when ideas are maturing. Given their social-cultural orientation, the majority of female founders are hesitant to invest in "risky" ventures (see Testimony). This "higher risk and lower returns" scenario casts a shadow over the long-term financial viability of the

Testimony 14

"The premise of a start-up is to venture into something that is unsafe, risky and more difficult than usual. From a young age, culturally, women are groomed to believe that the kind of behaviour, work or endeavours that fit these descriptions are bad for them. Many times, women are not allowed to aspire 'too high.' As a result, they tend to participate in the least risky ventures ...financial institutions "weren't as quick to grant loans to female entrepreneurs as they were to male entrepreneurs, since men were seen as better risk takers and more likely to succeed."

Rosemary Egbo, Senegales writer and an entrepre-

female-led ventures, making them drop out or fail before take-off or over-rely on public or philanthropic funding.

- 4. Difficulties in attracting women into pre-acceleration and acceleration programmes: According to Impact Hub Dakar, one possible reason why fewer women than men apply stems from the non-gender responsive French words often used in the announcement of the opportunities. Confusion often arises on the use of plural words that denote mixed gender¹²⁸ but could be misunderstood to mean only men are targeted.
- 5. Difficulties in finding female trainers/coaches. The combination of climate change and technology means there is a smaller number of technical experts in the country and, when the gender aspect is layered on top of this, the numbers of qualified coaches reduces yet further. Female trainers have more empathy for other women and, by sharing own experiences during the training and coaching, they support women to confront their challenges.

¹²⁶ Samoshkina. M. (2018) Towards Gender Equality: Gender Aware IT. MA Dissertation at the Instituto Universitaro de Lis-boa. Accessed at https://repositorio.iscte-iul.pt/bitstream/10071/17326/1/master_maria_samoshkina.pdf.

¹²⁷ In line with the country's NDC, which additionally emphasises the importance of technology transfer in the area of mitigation (updated NDC Senegal) 128 Plural for mixed gender, which some development actors label as "the masculine takes it all" since they take the masculine

article 'les'.



Challenges faced by IPED in its acceleration programmes are similar to those in Côte d'Ivoire (see 4.1) and not repeated in this chapter.

MEXICO 4.3.

4.3.1. INSTITUTIONAL MECHANISMS GOVERNING MEXICAN **ENTREPRENEURIAL ECOSYSTEMS**

In recent decades, Mexico has made significant progress with regard to gender equality, but it is still far from attaining the goals of full gender equality and women's empowerment¹²⁹. Women hold only 37% of parliamentary seats in Mexico and women in the Executive and Judicial branches have little access to executive and decision-making positions.

In the Mexican workforce, women represent only 20% of employers, and almost 40% of the selfemployed, yet they represent more than half of the country's unpaid workers given that they shoulder nearly 77% of all unpaid housework in Mexico¹³⁰. The average Mexican woman spends six hours each day doing unpaid housework, compared with an average of two hours for men. A large household labour burden presents a serious challenge for women attempting to attend school or to work.

Employed women are concentrated in the lowest-paying jobs: while the proportion of men and women is roughly the same when looking at jobs that pay up to the minimum wage, the proportion of men in jobs that pay double the minimum wages is double that of women. Moreover, almost 30% of employees in Mexico work long hours (more than 40 hours in a usual week), far above the OECD average of 13%, which compounds the challenge of balancing multiple obligations and acts as a barrier to women's entry in the labour market¹³¹. In addition: i) women who do decide to participate in the labour market may not have access to a full-time job, because unemployment rates are higher for women than for men; ii) indigenous women are more likely to be unpaid or self-employed (at 59%); iii) gender differences regarding employment are also evident when examining the types of work and sectors where women work¹³².

The 4th Article of the Constitution of Mexico asserts that women and men are equal before the law, while Article 1 establishes that in Mexico all persons shall enjoy the human rights recognized in the Constitution and international treaties, and also guarantees their protection. Further, gender equality is stressed in the General Law for Equality between Women and Men, whose main objective is to regulate and guarantee equal opportunities and treatment between women and men and proposes guidelines as well as institutional mechanisms towards the fulfilment of substantive equality in the public and private spheres.

The 2020-2024 PROIGUALDAD¹³³ programme focuses on putting women and girls at the centre of government attention. Key among the objectives of the programme are: priority 1: enhancing the economic autonomy of women to close historical inequality gaps, and priority 2: generating the conditions to recognize, reduce and redistribute domestic and care work of people between families, the State, the community and the private sector.

In addition, Mexico has adopted a law for creating the National Institute of Women (INMUJERES), a Law on the Equality between Men and Women (2006), a general law on Women's access to a Violence-Free Life (2007) and a law on Human Trafficking (2012), as well as a Norm on Labour Equality and Non-Discrimination (2015). In addition, a National Network for Women's Attention and Development, made up of 24 houses for Indigenous Women and 200 Development Centres for Women, further promotes gender equality and women's protection in marginalized communities and areas.

¹²⁹ GIZ, 2018. Gender Desk Study for Änderungssangebot 2017: Mexikanische-Deutsch Klimaschutzallianz II (2018 04 06 Klimaaliianz_III_Genderanalyse_final) [Internally shared document]

¹³⁰ International Bank for Reconstruction and Development / The World Bank, 2019. Gender Assessment Mexico. Accessible at: https://documents1.worldbank.org/curated/en/377311556867098027/pdf/Mexico-Gender-Assessment.pdf ¹³¹ Ibid.

¹³² Ibid

¹³³ Spanish for National Programme for Equality between Women and Men.



With all the above legal frameworks, at the national level Mexico has made important progress in establishing a legal and institutional architecture toward mainstreaming gender equality. Gender is considered to be a cross-cutting issue within the different ministries in Mexico¹³⁴ ¹³⁵.

But many women do not yet feel the effects of these policies at home, at work or in public, given that many of the laws and policies remain on paper and there are few concrete actions taken to ensure advancement of women's rights and dignity. Major advances are needed in mainstreaming gender in policy design and effective implementation, enforcement and evaluation, with the involvement of all state actors. With strong mandates and resources, Mexico can ensure that policies' intended effects are fully realized.

4.3.2. STATUS OF CLIMATE INNOVATION IN EDUCATION, AGRICULTURE AND ENERGY SECTORS

4.3.2.1. GENDER AND CLIMATE INNOVATION IN EDUCATION

Although the gender gap in education at all levels of schooling is closing, as there are more girls and adolescents who complete basic and high school education, almost 8% of women 15 years of age or older are illiterate, compared to less than 5% of men in the same age group¹³⁶. Also, 13.6% of girls aged 13 to 15 do not attend school, a proportion that increases to 50.2% among adolescents from 16 to 19 years old and to 75.3% among young women from 20 to 24 years of age¹³⁷.

However, there are important differences across regions and population groups. For instance, in Chiapas the illiteracy rate is as high as 5.17% for women, compared with 3.85% for men. Indigenous women are much more likely than their non-indigenous counterparts to have less than a primary education, and only a small share have tertiary education. Although there are substantial differences across age cohorts, with younger cohorts having higher levels of education than older cohorts, the differences between indigenous and non-indigenous women remains¹³⁸.

According to the National Association of Universities and Institutions of Higher Education (ANUIES), in the 2017/18 academic year women represented 50.3% of college enrolment, 55.2%

of graduate enrolment at the master's level and 48.8% of graduate enrolment at the doctoral level. However, women are still underrepresented in physics and mathematics majors at the National Autonomous University of Mexico (UNAM), the largest public university in Latin America, On the other hand, women are over-represented in the lowest-paid occupations and under-represented in the highest-paid occupations¹³⁹.

Testimony 16

"I have participated in two acceleration processes focusing on women and what I have noticed is that non-STEM ones tend to be more insecure than those with STEM professions. Being used to thriving in areas where there are more women, they feel more insecure when entering fields where the majority are men".

Excerpt from Endeavor y Mastercard (2021)

Although it is not at the same level as for male students, the number of women choosing science, technology, engineering and mathematics (STEM) studies is increasing. Having STEM knowledge is not necessary or decisive for entrepreneurship in the climate mitigation sector; however, having someone on the team who has academic qualifications in these areas can make a positive difference. STEM subjects are often the basis for innovative start-ups and incubators; in addition, academic preparation in these areas could increase women's self-confidence and encourage them to pursue technology-oriented careers, as well as increase their participation in

¹³⁴ KII with gender Focal Point (GFP) GIZ Mexico. See also Annex 3 for notes of KII

¹³⁵ GIZ, 2018. Gender Desk Study for Änderungssangebot 2017: Mexikanische-Deutsch Klimaschutzallianz II (2018 04 06_Klimaaliianz_III_Genderanalyse_final). [Internally shared document]

¹³⁶ INMUJERES – Instituto Nacional de las Mujeres/National Institute of Women, 2017. In: GIZ, 2018. Gender Analysis for NAMA Project 'Energy Efficiency in SMEs as a contribution to a low carbon economy in Mexico". [Internally shared document] ¹³⁷ GIZ, 2018. Gender Desk Study for Änderungssangebot 2017: Mexikanische-Deutsch Klimaschutzallianz II (2018 04 06_Klimaalianz_III_Genderanalyse_final)). [Internally shared document]

¹³⁸ International Bank for Reconstruction and Development / The World Bank, 2019. Gender Assessment Mexico. Accessible at https://documents1.worldbank.org/curated/en/377311556867098027/pdf/Mexico-Gender-Assessment.pdf
¹³⁹ Ibid.



the workforce¹⁴⁰. See Testimony and Testimony from Colombian female entrepreneurs. In an analysis on the profiles of 160 women entrepreneurs in the STEM sector, it was found that only 27% have a STEM profile, while for men this percentage is equivalent to 53% (1,105 entrepreneurs)141.

Female leadership within Latin America's STEM sectors is on the rise and having a significant impact on the region. Fifteen percent of female founders in Latin America describe their business as EdTech, bringing technology to Latin America's educational system. However, EdTech ventures receive just 2% of capital across Latin America¹⁴². Over 35% of Latin America's FinTechs have female founders, the highest percentage in the world (5 times the global average). Financial inclusion is one of Latin America's most pressing problems and local female entrepreneurs are taking enormous steps to solve it¹⁴³.

On climate innovation, basic education programmes in Mexico do promote caring for the environment, but this is only a general approach to the problem, as the education programmes neither

create the necessary awareness of the effects of climate change nor promote changes in attitudes and behaviours while protecting natural resources144.

Among the higher institutions of learning, Tecnológico de Monterrey University, which is also one of the key accelerators in Mexico and an Executing Entity (EE) for the project, supports

Testimony 15

"In general, we women tend to question constantly our abilities... the environment can limit or empower you, and in my case, it empowered me, but I do know cases of women, the majority of whom their family has not let them study, for example, medicine, because they wouldn't have time to have chil-

Excerpt from Endeavor v Mastercard (2021)

entrepreneurs through three inter-related strategies: education, support and research. The support is provided through the university's campuses incubator, through which faculty and students develop businesses that have social impact and engage with the local communities; 14 accelerators work with the high-potential companies developed in the incubators, and technology parks support these efforts (see Section 5 for more details).

GENDER AND CLIMATE INNOVATION IN AGRICULTURE 4.3.2.2.

According to the UN145, the impacts of climate change in Mexico could lead to an increase in rain and tropical cyclones and intensify droughts across the nation - and could consequently aggravate inequalities in health, employment and access to food. Similarly, USAID¹⁴⁶ report that Mexico's unique geo-climatic context makes it especially vulnerable to climate change, which would increase the country's exposure to frosts, heat waves, tropical cyclones and floods. Moreover, Mexico's risk landscape is exacerbated by its ageing infrastructure and environment-dependent tourism industry. Despite being the birthplace of the wheat and maize innovations that led to the Green Revolution through the International Maize and Wheat Improvement Centre (CIMMYT), Mexico is the world's 13th-largest emitter of greenhouse gases according to the UN.

As stated by Tecnológico de Monterrey, the current government has neither the capacity in climate-related issues nor the ability to invest in ventures at the needed scale. The result has been under-funding of many of the major scientific and research initiatives, among others the National

¹⁴⁰ Endeavor y Mastercard, 2021. Whitepaper: La brecha de género en el sector de tecnología, una tarea pendiente en America Latina. Accessible at: https://www.endeavor.org.mx/women-in-tech/

¹⁴² LatamList (Website). 3 Sectors Where Female Founders Are Leading in Latin America. Accessible at https://latamlist.com/3ectors-where-female-founders-are-leading-in-latin-america/

¹⁴⁴ VOXLACEA (Website). In Mexico, fighting climate change could soon begin in the classroom, 2020. Accessible at https://vox.lacea.org/?q=blog/mexico_climate_change

¹⁴⁵ United Nations, (no date). Comments of Mexico on Climate Change and Security. Accessible at

https://www.un.org/esa/dsd/resources/res_pdfs/ga-64/cc-inputs/Mexico_CCIS.pdf 146 USAID, (no date). Mexico Climate Change Fact Sheet. Accessible at https://www.usaid.gov/sites/default/files/documents/USAID-Climate-Change-Fact-Sheet-Mexico.pdf



Council for Science and Technology (CONACYT), a federal programme in charge of the promotion of scientific and technological activities, setting government policies, and granting scholar-ships for postgraduate studies. Under the new government administration, the National Entrepreneur Institute (INADEM), a public federal programme which was the benchmark institution for venture promotion and initially set up (2013-2018) to promote innovation and competitiveness in SMEs through the provision of financial and technical support, was also wound up in order to align with the 2018-2024 strategy that allows for distribution of the resources for entrepreneurs through programmes directly promoted by the Ministry of Economy¹⁴⁷. This decision affected important pillars that supported the creation of ventures through incubators and accelerators, because many of them were receiving funds from INADEM to continue their ongoing operations¹⁴⁸.

The Mexican government is nevertheless making some efforts in the fight against climate change, including commitments to make climate change a top national priority and integrating climate change mitigation and adaptation priorities into development strategies, as Mexico's Secretary of Agriculture and Rural Development recently remarked (see Testimony).

At the federal level in Mexico, the Federal Expenditure Budget (PEF) has set aside resources for gender equality and climate change since 2012. Several national development programmes also provide resources and incorporate actions for promoting gender equity with respect to climate change, such as PROIGUALDAD, as well as different programmes from the Secretary of Environment and Natural Resources (SEMARNAT), etc. However, bureaucracy and inefficiency in the management of such initiatives hamper their implementation.

Unlike West African countries, women in the Mexican agricultural sector are under-presented. For example, according to Statista, by the end of 2020, nearly nine out of ten employees in the agricultural sector were men. The sector employed around 6.68 million people, of whom 5.88 million (88%) were men¹⁴⁹. Some of the reasons mentioned during the KIIs with female entrepreneurs is that agriculture in Mexico mainly focuses on large-scale production of corn, wheat and vegetables that attract mobile seasonal labourers. Given their work burden and the fact that they must travel for work, this discourages many female labourers. In addition, the female KIIs revealed that these kind of agricultural practices do not provide a conducive environment for women. Women are said to fear for their safety given growing alcoholism and drug abuse among male labourers.

Regarding land ownership, according to the World Bank a key challenge faced by women in agriculture in Mexico has been perpetuated by the 1992 land reform, which introduced a de facto asymmetry in land possession¹⁵⁰. For example, in 2015, of the 4.2 million Mexican community members, also known as *ejidatarios*, with land titles (private property rights), only 19.8 percent were women¹⁵¹. The World Bank observes

Testimony 17

"We remain committed to the idea that the future of agriculture should be based on scientific knowledge, provided that it assists in reducing and not widening existing productivity gaps among different types of producers, regions and even countries."

Mexico's Secretary of Agriculture and Rural Development

that 23% of the women are property owners but do not have rights over common resources, and

¹⁴⁷ Sanchez, Melissa & Karimi, Matin & Elmalawany, Omar, 2020. "Access to Green Financing: A Case Study of Mexico," MPRA Paper 102347, University Library of Munich, Germany, revised 10 Aug 2020. Accessible at https://mpra.ub.uni-muenchen.de/102472/
¹⁴⁸ Ibid

¹⁴⁹ Statista (2022), Number of people employed in the agricultural sector in Mexico from 1st quarter 2016 to 4th quarter 2020, by gender Mexico: number of agricultural employees 2016-2020, by gender. Access at https://www.statista.com/statis-tics/2014/94//maxico-employees-agricultura-gender/testatistic/Container-

tics/1014914/mexico-employees-agriculture-gender/#statisticContainer,

150 The 1971 land reform established that every community must have an "Agricultural and Industrial Unit for Women," known as "parcels of women" (parcelas de la mujer), exclusively for the productive use of women. However, in 1992, the new Agrarian Law eliminated this obligation. Currently only 19 % of community land corresponds to these land parcels and even then these land parcels are either far away from the households (thus impeding women from using them daily), are tilled by men, or are used for agricultural purposes (like cattle) that traditionally are not women's duties(see world bank report on reference 141)

¹⁵¹ World Bank, 2018. "Ensuring Gender Mainstreaming in the Design and Implementation of REDD+ Related Activities: A Behavioral Approach to Natural Resource Management." PowerPoint presentation, World Bank, Washington, DC. In: World Bank, 2019. Mexico gender Assessment. Accessible at: https://documents1.worldbank.org/curated/en/377311556867098027/pdf/Mexico-Gender-Assessment.pdf



42% are categorized as "settlers," meaning they are inhabitants without private property rights or common use and without voting rights. Furthermore, only 12.5% of the 350,000 representatives, incumbents and alternates in management positions in local assemblies and governing bodies are women. Given that land tenure is linked to a vote in assemblies and decision-making power¹⁵², the implementation of this policy locks out women from effective innovation and adaptation to climate change.

With regard to climate innovation and agriculture, Agricultural Research for Development (AR4D) has been instrumental in benchmarking agricultural innovations across the globe. According to Badstue Lone et al¹⁵³, overall progress has been achieved in AR4D, particularly in identifying and targeting women's needs and seeking to address the visible symptoms of inequality. However, inequalities are sometimes reinforced by AR4D because its traditional approaches overlook the ways in which social norms, attitudes and distributions of power and resources differentially frame women's and men's perceptions of, and capacities to seize, opportunities; those who are well positioned to take advantage of new opportunities do so, while others fall further behind (see Testimony 18).

In the AgTech start-up ecosystem, Argentina and Brazil account for 74% of the total AgTech ventures in the Latin America region. Reasons include large-scale markets, ecosystems favourable to technology-based ventures, and a critical mass of professionals working mainly with extensive agriculture, etc. The AgTech sector in Mexico generates around US\$ 49 billion (€46.457) every year, with the main exports being avocados, tomatoes and berries. In general, Mexico is considered to be one of the top 10 food producing and exporting countries. Mexico and Colombia

are considered to have a particularly strong presence in the vegetables sector, not only in terms of production but also in terms of sales and distribution.

This has provided a conducive environment for ventures such as *Tierra de Monte*, which practices sustainable agriculture while reducing the use of agrochemicals through microbiological technology that restores ecosystem health. The company won the Social Impact Award from the Banamex Founda-

Testimony18

"These AR4D approaches can offer no assurance that women will be able to take advantage of or benefit from new opportunities or technologies because society's understandings of what is acceptable for women and men to be, do, own and control may continue to impose barriers"

Badstue Lone et al. (2020)

tion¹⁵⁴ for being the company with the greatest social impact¹⁵⁵. *BICHO*, a Mexican venture led by women scientists, focuses on production of insect-based protein from crickets – this not only combats malnutrition and provides better economic opportunities to farmers in indigenous communities, but also reduces the high environmental footprint caused by alternative proteins, such as soya protein. The company is also addressing the current obesity challenges facing Latin America. Nevertheless, being a new venture, the company faces some longer-term challenges related to scalability and commercialization.

¹⁵² World Bank, 2018. "Ensuring Gender Mainstreaming in the Design and Implementation of REDD+ Related Activities: A Behavioral Approach to Natural Resource Management." PowerPoint presentation, World Bank, Washington, DC. In: World Bank, 2019. Mexico gender Assessment. Accessible at: https://documents1.worldbank.org/curated/en/377311556867098027/pdf/Mexico-Gender-Assessment.pdf

¹⁵³ Lone Badstue, Marlène Elias, Victor Kommerell, Patti Petesch, Gordon Prain, Rhiannon Pyburn & Anya Umantseva, 2020. Making room for manoeuvre: addressing gender norms to strengthen the enabling environment for agricultural innovation, Development in Practice, 30:4, 541-547, DOI: 10.1080/09614524.2020.1757624. Accessible at https://www.tandfonline.com/doi/full/10.1080/09614524.2020.1757624
154 The Banamex Foundation has a Social Engagement Programme, with which it supports social and environmental entrepreneur-

¹⁵⁴ The Banamex Foundation has a Social Engagement Programme, with which it supports social and environmental entrepreneurship projects that improve the quality of life in Mexico. Accessible at https://www.banamex.com/compromiso-social/desarrollo-social/index.html.

¹⁵⁵ IDB LAB, 2019. Agtech Innovation Map in Latin America and the Caribbean. Accessible at https://publications.iadb.org/publications.iadb.org/publications/english/document/AGTECH Agtech Innovation Map in Latin America and the Caribbean en.pdf. or Tierra de Monte, (no date). A proposal for regenerative agriculture. Accessible at https://www.tierrademonte.com/post/a-proposal-for-regenerative-agriculture



4.3.2.3. GENDER AND CLIMATE INNOVATION IN ENERGY

Mexico has signed both the United Nations Framework Convention on Climate Change (UNFCCC) as well as the Kyoto Protocol, and has submitted a detailed inventory of its green-house gas emissions (GHGs) in its Third and Fourth National Communication to the UNFCCC. The Government of Mexico (GOM) has made substantial efforts at the policy level to reduce GHG emissions by increasing the generation and use of renewable energy and by improving energy efficiency.

In 2007, the Government published the National Climate Change Strategy, followed by new legislation to remove barriers to advancing renewable energy and energy efficiency in 2008. The Special Programme for Climate Change (2009-2012) was adopted in 2009 and pledges to reduce Mexico's annual GHG emissions by 30% by 2020, and 50% by 2050 in relation to 2000 levels. However, on 30 December 2020 Mexico submitted its updated NDC: its targets, both conditional and unconditional, remained unchanged, while its emissions projections under business-asusual (BAU) continue to increase. This reduces the country's mitigation ambition in absolute levels and moves the rating of this target one category lower to "Highly insufficient." ¹⁵⁶

The Mexican Energy Transition Act, of the Secretariat of Energy (SENER), promotes generation of clean power to reach the levels set forth in the Climate Change Act for the electric power industry, including: a minimum share of clean energies in power generation of 25% by 2018, 30% by 2021 and 35% by 2024¹⁵⁷. To achieve environmental sustainability, Mexico has introduced a set of measures for promoting the production of clean energy and the protection of ecosystems.

The energy sector often has great impact in terms of gender equality, since society attributes differentiated roles to women and men, which condition their relationship to energy. Women are not only a group of interest in energy; they are the main consumers of, and often produce, energy. In addition, they have the power to influence the purchase decisions of their families. A market study conducted in 2014 by GIZ and Grupo Salinas¹⁵⁸ revealed that, among the members of the household, the mother is considered the figure that tries to save more domestic energy, followed by both (father and mother), then the father, daughters, and then "all" Women also have great influence on energy as entrepreneurs in the sector, promoters of new technologies and activists for clean energy resources. However, energy is often perceived as being gender-neutral and women are absent from the sectors where decisions are made about energy resources, as it is considered to be a technical and gender-neutral issue.

Since 2001, the Ministry of Environment, SEMARNAT¹⁶⁰, has had a Gender Equity Directorate, which supports the process of institutionalizing and mainstreaming the gender perspective in the environmental sector. SEMARNAT also led the National Programme for Equality and Opportunities and Non-Discrimination against Women (2013-2018). The institution also works with the Gender and Environment Network (Red de Género y Medio Ambiente, RGEM) in order to promote the joint development of environmental policies with a gender perspective.

The energy sector in Mexico is undergoing important changes in the context of energy reform. For example, SENER's strategies are anchored in addressing the need to align and coordinate programmes and induce inclusive green growth with an intercultural and gender approach. SENER has the following structure: i) a Regulatory Improvement and Transversal Programmes Unit that, among other functions, prepares, proposes and coordinates the implementation and monitoring of the Action Plan for Gender Equality in the energy sector; ii) a Gender Equality and Non-Discrimination Unit that drives and promotes the implementation of PROIGUALDAD in

¹⁵⁶ Climate Action Tracker (Website). Mexico's updated NDC lowers its climate ambition and transparency, contrary to the Paris Agreement rules. Accessible at https://climate.actiontracker.org/climate-target-update-tracker/mexico/

Agreement rules. Accessible at https://climateactiontracker.org/climate-target-update-tracker/mexico/
https://climate-laws.org/geographies/mexico/laws/energy-transition-law

¹⁵⁸ A large group of companies that spans across many sectors, including mass media and appliances retail. This gender-sensitive initiative included 19 fairs reaching 7.000 people, the development of a best practices guide (7.000 copies distributed), online-courses (passed by 48.000 people), and a mass-media campaign reaching 13.000.000 people. Accessible at https://gender-works.giz.de/competitions/mexico-energia-renovable-y-eficiencia-energetica-como-ruta-al-empoderamiento/

¹⁵⁹ GIZ, 2018, Gender Analysis for NAMA Project 'Energy Efficiency in SMEs as a contribution to a low carbon economy in Mexico". [Internally shared document].

¹⁶⁰ GIZ, 2021. Gender analysis for the project "Protection of the Mexican coastal regions and their marine ecosystems by reducing plastic waste"/ Mexico



SENER and coordinates the sector entities in this area; and iii) a Sub-Directorate of Institutional Culture and Gender Policies that implements actions for the implementation of PROIGUALDAD within SENER. SENER provides a good basis for gender mainstreaming in the sector, offering the opportunity to bring a gender perspective into the sector, and to ensure that the opening of new markets related to sustainable energy contributes to closing the gender gap instead of widening it.

The energy sector has the greatest opportunities and potential for accelerating climate innovation. In this spirit, a number of ventures are appearing in this sector - for example the start-up *Energryn*, which designs and develops solutions that use different renewable energies; its inventions span a range of renewable energy areas, including solar, wind, hydro, wave, tidal, geothermal and biofuels.

Testimony 19

"As a venture that is focused on improving global food security through sustainable sources of alternative protein, my four female co-founders and I were approached by an investment firm that liked the idea of our business and wanted to support us to scale our business. In exchange, the investment firm demanded a stake of 5% and that at least three out of the five co-founders dedicate full-time to the venture. While we were OK with the 5% equity, my co-founders could not commit 100% of their time to the venture since they are already juggling their time between family, full-time jobs and the venture"

4.3.3. KEY BARRIERS AND KII with Mexican female entrepreneur.

CHALLENGES FOR

CLIMATE VENTURES AND ENTREPRENEUR SUPPORT

ORGANIZATIONS (ESOS)

A. THE CLIMATE VENTURES

The following challenges have been identified through literature review, discussions with Tecnológico de Monterrey and some of the female ventures interviewed during the Gender Assessment.

Limited access to finance: According to Colombia University, nearly 75% of all women-led SMEs in Latin America lack access to adequate financing¹⁶¹. Colombia University reports that a high number of women entrepreneurs in Latin America feel that they have been discriminated against because of their gender (27%, versus 4% for men) and 51% of the women surveyed affirm that there is a general inequality in entrepreneurial opportunities, including access to resources, adequate training and business advice. In Mexico only 19% of entrepreneurs are female, and only 1% of women have access to monetary resources necessary to starting their business¹⁶². Based on interviews conducted with female entrepreneurs, the root causes of the gender barriers in financial access can be identified as follows:

- 1. Discrimination in access to credit: Female entrepreneurs interviewed mentioned how many unmarried female entrepreneurs are seen as a "risky investment" by financial institutions, since they do not have a husband to support them with the repayments. In addition, given the low access to collateral assets (such as land, covered under the agriculture section 4.3.2.2), women entrepreneurs frequently do not have sufficient collateral to raise large funds from the banks.
- 2. Bureaucratic processes in government financial support institutions: Government institutions such as CONACYT (covered in detail in 4.3.2.2) have long, formal processes-in which entrepreneurs are expected to attend meetings and training courses before accessing funds. Given the heavy work burden women face, it is challenging for them to fully exploit opportunities for accessing funds, particularly if the women live in rural areas far from government offices.

 ¹⁶¹ Colombia University/Pro Mujer, 2020. Bridging the Gap between Women Entrepreneurs and Investors in Mexico. A Columbia University Capstone Report Spring 2020. Accessible at https://promujer.org/content/uploads/2020/06/SIPA-Pro-Mujer-Capstone-Final-Report.pdf
 162 Davis Michael (2021) Breaking Down Barriers: Female Entrepreneurs in Mexico Fight for Gender Equity. Accessed at

¹⁰² Davis Michael (2021) Breaking Down Barriers: Female Entrepreneurs in Mexico Fight for Gender Equity. Accessed at https://latinarepublic.com/2021/11/16/breaking-down-barriers-female-entrepreneurs-in-mexico-fight-for-gender-equity/.



- 3. Apart from an equity stake, private investment funds ask for 100% commitment from venture founders. As demonstrated by Testimony, female entrepreneurs are discouraged and con
 - tinuously rely on their friends and family for financial support, Overall, as observed by the Colombia University¹⁶³, women-led ventures are often growing too slowly for venture capital, are too small for private equity and are too risky for banks¹⁶⁴.
- 4. Bankruptcy: According to the Inter-American Development Bank, Latin America is the region with the secondhighest rate of bankruptcies in companies run by women worldwide. While most male entrepreneurs indicate that they have closed their companies due to low profitability, women entrepre-

Testimony 20

"Previously, I have attempted to create start-ups many times but failed. I now know that one of the key reasons for the failure was as a result of the limited knowledge I had about starting a business. I used to come to start a venture without doing any market research. I used to first start the venture and then try to convince people about what I perceived to be the problem and what my venture is doing to solve the perceived problem. I therefore never used to ask myself what the actual needs of the people are and then design my solutions around their needs"

KII with Mexican female founder in Mexico.

- neurs point to the difficulty of obtaining financing as the main impediment to continue with their businesses¹⁶⁵. As a result, the Inter-American Development Bank claims the credit gap in Latin America is US\$ 5 billion (€ 4.74billion) for women-led micro businesses and US\$ 93 billion (€88.2) for women-led SMEs¹⁶⁶.
- 5. Lack of business understanding: As stated in the section below, female entrepreneurs interviewed in Mexico – even highly educated scientists who are pioneering ground- breaking research and business ideas in areas such as soil carbon sequestration - acknowledged during the KII discussions that there is general lack of business understanding among female entrepreneurs (see Testimony 20).
- 6. Difficulties in achieving work-life balance: According to Konfio¹⁶⁷, Mexican women spend 4 hours more per day on household chores and family care than men. The Mexican Ministry of Labour estimates that the economic value of women's unpaid work exceeds 4.4 billion pesos (€ 204 million) per year¹⁶⁸.
- 7. Lack of confidence: According to the Global Entrepreneurship Monitor¹⁶⁹, an important determinant of whether or not to start a business, and a significant influence on the success and longevity of the business, may be whether, and to what

Testimony 21

"As Mexican women, I would say the greatest challenge we have is the inability to believe in our capabilities. We live in a society that does not value women very much outside their traditional roles. When women's capacities are constantly questioned, it does not matter how educated or self-confident they are, at some point it will weigh them down, they will have doubts in their capacities and they will suffer from burn-out. I am lucky that my parents are well educated and are my greatest supporters, but many women are affected by these challenges and often give up"

KII with Mexican female founder

¹⁶³ Colombia University/Pro Mujer, 2020. Bridging the Gap between Women Entrepreneurs and Investors in Mexico. A Columbia University Capstone Report Spring 2020. Accessible at https://promujer.org/content/uploads/2020/06/SIPA-Pro-Mujer-Capstone-Final-Report.pdf

Colombia University/Pro Mujer, 2020. Bridging the Gap between Women Entrepreneurs and Investors in Mexico. A Columbia University Capstone Report Spring 2020. Accessible at https://promujer.org/content/uploads/2020/06/SIPA-Pro-Mujer-Capstone-

Final-Report.pdf

165 Inter-American Development Bank, 2021. Gender Assessment for FP173: The Amazon Bioeconomy Fund: Unlocking private capital by valuing bioeconomy products and services with climate mitigation and adaptation results in the Amazon. Accessible at https://www.greenclimate.fund/document/gender-assessment-fp173-amazon-bioeconomy-fund-unlocking-private-capital-valuingbioeconomy

¹⁶⁶ Inter-American Development Bank, 2021. Gender Assessment for FP173: The Amazon Bioeconomy Fund: Unlocking private capital by valuing bioeconomy products and services with climate mitigation and adaptation results in the Amazon. Accessible at https://www.greenclimate.fund/document/gender-assessment-fp173-amazon-bioeconomy-fund-unlocking-private-capital-valuing-

bioeconomy

167 Konfio: Mujeres emprendedoras en México: datos y retos. Access at https://konfio.mx/tips/creditos/mujeres-emprendedoras-en-

¹⁶⁸ Mujeres emprendedoras en México: datos y retos. Access at https://konfio.mx/tips/creditos/mujeres-emprendedoras-en-mexicodatos-y-retos/.

169 Global Entreprenureship Monitor 2020/2021. Global Report. Accesses at https://www.gemconsortium.org/file/open?fileId=50691



extent, individuals see themselves as potential entrepreneurs. Interviews with female venture funders in Mexico indicate that female entrepreneurs' biggest challenge is believing in themselves and their ability to undertake successful business ventures (see Testimony).

B. ENTREPRENEUR SUPPORT ORGANIZATIONS (ESOs): PRE-ACCELERATORS, **ACCELERATORS AND VCS**

Pre-accelerators and accelerators

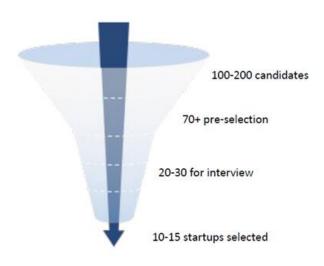
Testimony 22

"Women are careful and wait a bit more before going in fully into tech related entrepreneurship. They want to understand if the technology would work or if it would be financially viable and would rather follow the procedures step by step and go through the entire process before making any assumption and investing in a tech businesses. On the other hand, I have noticed among the men I mentor, that they are more excited about ideas, are quick to believe in their abilities and less careful of the consequences".

KII with Tecnológico de Monterrey

Tecnológico de Monterrey University has pre-acceleration programmes that largely target students from the University in all the stages (inspiration/exploration, boot-camp, incubation). At the acceleration stage, the University's alumni and external entrepreneurs are the key targets. The following are the key gender-related challenges that Tecnológico de Monterrey has faced while implementing its entrepreneurship programmes.

1. Difficulties in recruiting more female entrepreneurs at both the pre-acceleration and acceleration stages. As demonstrated by Table 4 below, which is a reflection of the experiences of participants in the 2021 Heineken Green Challenge (HGC)¹⁷⁰, the proportion of female entrepreneurs decreases along the funnel' (inspiration/exploration, boot-camp, incubation and acceleration) -See also Figure 5. For example, while female entrepreneurs formed about 40% of the selected ventures in HGC at the inspiration stage, only 28% of ventures selected into the acceleration programme were female-led. As mentioned by Tecnológico de Monterrey, while no in-depth research has been undertaken, these statistics could be a reflection of Figure 5: Demonstration of the start-up funnel (Tecnológico de the following:



Monterrey)

- Female entrepreneurs are initially enthusiastic about the inspiration events and think they can start a small business, but without proper business understanding and/or technological know-how, they feel they are not equipped to progress successfully to the next stages.
- The risk related with technology driven entrepreneurship, coupled with conservative ii. Mexican culture (see point 4 below), makes women shy away from serious technologyrelated incubation programmes. While men receive support and understanding from their family and friends if their business fails, women entrepreneurs cannot afford to "experiment in business" and put their family income on the line (see Testimony 22).

To address some of these challenges, Tecnológico de Monterrey plans to create a 'climate' community within its programme Zona Shero (see Chapter 5), as it has found that well-designed ideation and community-building activities do increase the 'funnel' of start-ups or initiatives that apply to be part of the HGC; additionally, it plans to open and organize a similar event specifically

¹⁷⁰ The Heineken Green Challenge focuses on reduction of carbon emission, water, environmental conservation and improved agriculture techniques.



targeting women in climate change, which would allow Tecnológico de Monterrey to identify and encourage 'women and climate' entrepreneurs to apply to its technology-driven programmes.

Table 3: Percentage of women in the Heineken Green Challenges in 2021 (Tecnológico de Monterrey)

STAGE	DECODIDATION		PARTICIPANTS %	
	DESCRIPTION	F	M	
Redux event 2021 (inspiration/ exploration stage)	Open and free events – where participants were registered and participated in the 3 days of ideation to construct a pitch and be selected. Winners received cash prizes and were encouraged to apply to the HGC.	40%	60%	
Heineken Bootcamp2021 (Incubation stage)	Jury selected the top initiatives/companies with the most potential to impact and scale. Entrepreneurs from the selected ventures were invited to participate in a week-long bootcamp that provided access to mentors and specialized content to further develop their business model. At the end of the week, ventures were selected for the acceleration stage, where the top 10 received cash prizes. The top 5 got to pitch in front of thousands at the INCMTY ¹⁷¹ event.	33%	67%	
2021 Heineken Acceleration Programme	The top ventures were invited to participate in an acceleration programme that is exclusively designed for HGC finalists. This programme is 3 months long and the objective is to start planning for scalability and access to investors.	28%	72%	

- 2. Difficulties in sourcing ventures with women in top positions: According to Tecnológico de Monterrey, among the ventures it supports, it is less likely to see women in Chief Executive Officer (CEO) or Chief Technology Officer (CTO) positions unless they are in a team of only women. Several reasons were given for this:
 - i. There is still a conservative culture in Mexico (especially in upper-class Monterrey), in which women are expected to be married and have children by a certain age. It is also expected for women to not work as a symbol of economic position.
- ii. In Tecnológico de Monterrey University, just as in many other learning institutions in Mexico, there are still more men than women studying STEM topics. Most of the high-tech or scientific ventures are made up of more men than women, coming from public universities where there are usually more male PhD students and full-time researchers. It is, therefore, less common for technology-driven start-ups to find women developers or CTOs. The few women who are part of these teams "usually have roles more related to the business side of the venture (accounting, marketing, communication, etc.)." (see Testimony 23)

Testimony 23

The entrepreneurial ecosystem is facing the reality that technology areas within companies are mostly represented by men and increasing female participation within this is a really complex task. Shortage in talent is one of the biggest challenges in the ecosystem of entrepreneurship in the technology areas, and by adding the gender issue, this barrier becomes even more pronounced.... one stereotype in the entrepreneurship sector, and as well an additional challenge to emphasize, is women will not be able to dedicate the same amount of time to the start-up or venture as men, because they have other obligations such as marriage, children, house tasks etc.

KII with Tecnológico de Monterrey

Lack of critical mass of female role models in climate entrepreneurship. Overall, it has been
difficult to find female role models for early-stage women entrepreneurs. Currently, Tecnológico de Monterrey is working with only one local female role model; the president and CEO
of Softtek and a member of the University's board.

¹⁷¹ INCMTY is the biggest platform of entrepreneurship in Latin America.



4. Difficulties in finding women mentors and judges: While Tecnológico de Monterrey has been actively seeking female mentors and judges, this has not been easy. For example, in the 2021 Heineken Bootcamp, of 57 mentors only 21 (37%) were female. In the same event, despite aiming and achieving a male-female ratio of 50/50

Testimony 24

"There has been increased interest by the donor and investment community in Mexico to invest in women. However, there any not very many women with great ideas that come to the pitching events. Those of us who go to such events and have good business ideas have an opportunity to shine, as the judges are sometimes excited to see a good female candidate. In the last pitching event I went to, I was the only woman among 10 finalists and I could see the judges' excitement as soon as I entered the room"

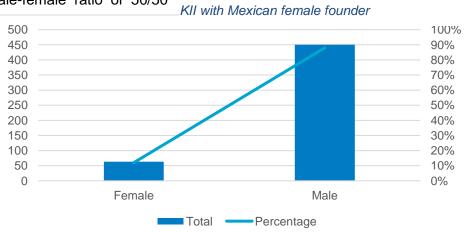


Figure 6: Enlace + Active Mentors and Board Members (Tecnológico de Monterrey)

judges in the semi-finals, female judges made up only 20% at the final event. In another of Tecnológico de Monterrey's pre-acceleration and acceleration programmes, Enlace+¹⁷², the number of active mentors and board members was much higher, but the percentage of female to male still remained low (see Figure 6).

Venture Capital (VC) firms

Many investors in Mexico are aware of the business case for gender diversity¹⁷³ (see **Error! Reference source not found.**). However, many obstacles have to be cleared before gender equality can take root in the VC world. Implicit biases exist within the venture capital and private equity (PE) industries in Latin America, as "gender is not perceived as a particular issue or a priority"¹⁷⁴. Overall, the majority of investors in Mexico have a misconception that gender lens investing¹⁷⁵ only refers to providing finance to women-led enterprises and are confused about how to incorporate gender into their processes and analyses. According to Value for Women¹⁷⁶, some investors are concerned that they would be labelled as a "women's fund", which could limit their future sources of funding.

Not all investors have an explicit strategy for ensuring gender lens investing, given that 71% of the funds do not have diversity and gender inclusion policies; however, 82% are willing to develop

¹⁷² Enlace + is one of Tecnológico de Monterrey's acceleration programme that is run jointly with other collaborators (INCmty, Santos Elizondo among others). Each year, Enlace+ launches its call to attract ventures with the greatest potential to generate a positive impact in Mexico, to which it awards a 100% scholarship in the professionalization programme through Advisory Boards.
¹⁷³ Colombia University/Pro Mujer, 2020. Bridging the Gap between Women Entrepreneurs and Investors in Mexico. A Columbia University Capstone Report Spring 2020. Accessible at https://promujer.org/content/uploads/2020/06/SIPA-Pro-Mujer-Capstone-Final-Report.pdf

¹⁷⁴ Orejas, R., & Buckland, H. (2016). Study of Social Entrepreneurship and Innovation Ecosystems in the Latin American Pacific Alliance Countries. Country Analysis: Mexico. https://publications.iadb.org/publications/english/document/Study-of-Social-Entrepreneurship-and-Innovation-Ecosystems-in-the-Latin-American-Pacific-Alliance-Countries-Country-Analysis-Mexico.pdf.

¹⁷⁵ Gender Lens Investing is a strategy or approach to investing that the latin American Pacific and Innovation Ecosystems in the Latin American Pacific Alliance Countries Pacific Alliance Pacific Pacific Alliance Pacific Pacific

¹⁷⁵ Gender Lens Investing is a strategy or approach to investing that takes into consideration gender-based factors across the investment process to advance gender equality and better inform investment decisions.

¹⁷⁶ Value for Women & Aspen Network of Development Entrepreneurs. (2019). A Landscape Report: Impact Investing with a GenderLens in Latin America. https://cdn.ymaws.com/www.andeglobal.org/resource/resmgr/research_library/landscape_report_gender_lens.pdf.



and implement such policies¹⁷⁷. A compelling reason for establishing gender diversity and inclusion policies and practices is linked to the need to respond to third-party requirements, specifically those of institutional investors.

Another key challenge is that investors are not collecting sex-disaggregated data on their investments, which limits gender-related impact analysis as well as the creation of gender-smart products and portfolios. This could explain why the total funds that flow to women is so limited. According to Value for Women, only 5% of total venture capital and private equity funding goes to women-led enterprises. A comparison of 2019 and 2020 overall venture performance is shown in Figure 7 In 2020, female-only ventures in Latin America attracted less than 1% of total investment, while mixed groups and male-only groups attracted 14% and 86%, respectively.

The following challenges have emerged from interviews and literature review:

i. The investment objectives used by most VCs are not gender-sensitive: The most common investment objective of VC firms in Mexico is realising an exceptional return for their investors. Funds therefore tend to look for active, motivated and dedicated founders and management teams and projects that have the potential for scaling-up due to their importance within a specified industry or sector and their ability to disrupt that industry or

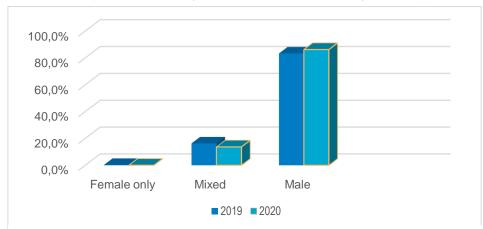


Figure 7: Total Investment in Latin American Ventures by gender (Crunchbase 2020)

sector. Some of these criteria often discourage women entrepreneurs, since women entrepreneurs have challenges of committing full-time to the business, as well as lack the business skills and know-how to quickly and effectively scale their business.

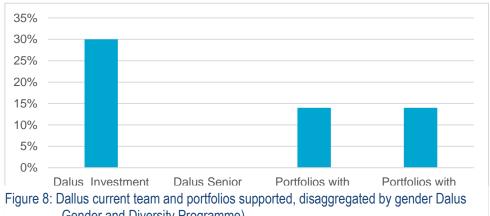
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¹⁷⁷ Colombia University/Pro Mujer, 2020. Bridging the Gap between Women Entrepreneurs and Investors in Mexico. A Columbia University Capstone Report Spring 2020. Accessible at https://promujer.org/content/uploads/2020/06/SIPA-Pro-Mujer-Capstone-Final-Report.pdf



ii. Limited number of women in investment teams and key decision-making positions: Gender bias in VC firms is not limited to their investment decisions and strategies, but also largely present in their own internal structures and administration.

According to one study¹⁷⁸, 76% of the funds surveyed do not have senior women in their investment teams and almost a quarter (22%) do not have any women at all in their investment team. It was found that 91% of the decision-makers in investment teams are



Gender and Diversity Programme)

men. In addition, the representation of women at the intermediate level and at the entry level was found to exceed that of the senior level. Women occupy 38% of the positions at the intermediate level and 42% of the positions at the entry level in the studied sample of the industry¹⁷⁹.

- Despite the disappointing numbers, the market is recognizing the opportunity to invest in iii. gender diversity and inclusion. Dalus, for example, uses its Gender & Diversity Strategy to help them track some key performance indicators (KPIs) - see Figure 8. Based on the KPIs, by 2023 Dalus plans to achieve the following outcomes: retain the women in their investment team at 30% and increase the women in senior management positions from 0% to 10%. For the portfolio companies that it works with, Dalus plans to increase the companies with female founders and companies with female representatives on their boards from 14% to 20%, respectively. Limited networking opportunities: according to IDB Lab / WX¹⁸⁰, women venture entrepreneurs in STEMtech are not benefiting from traditional financing options because they lack the appropriate networks to connect to investors. The report also suggests that there is discrimination in the investment process, since socio-cultural norms cause women-led businesses to be evaluated differently. Although the research was done for STEMtech, the challenges seem to cut across women in founder/venture categories:
- iv. Investors cite women's lack of confidence as the cause for low investment: The IDB Lab / WX Lab report states that investors claim women are more conservative and do not overstate their projections and that female entrepreneurs do not ask exactly for what they want, and they find hard to internalize their accomplishments. In addition, when female entrepreneurs pitch their ideas, "women invest more emotion in their pitches and generally take feedback very personally." While the projection of lack of confidence seems to be a recurring theme, it is also clear that women in Mexico, just like their counterparts in West Africa, face discrimination during pitching – especially when the investors focus on questioning the women's ability to lead rather than the venture itself. This was confirmed by a Mexican founder based in Colombia who noticed that her male co-founders received

¹⁷⁸ AMEXCAP, 2020. Estudio de diversidad e inclusión en el capital privado 'EDIC'. Accessible at https://amexcap.com/wp-content/uploads/2021/02/EDIC-AMEXCAP.pdf

¹⁸⁰ IDB Lab/ WX Insights 2020: The Rise of Women STEMpreneurs: A study on women entrepreneurs in STEM in Latin America and the Caribbean. Accessible at https://publications.iadb.org/en/wx-insights-2020-rise-women-stempreneurs-study-women-entrepreneurs-stem-latin-america-and-caribbean



more direct questions about long-term strategy, yet she attracted questions about her ability to lead¹⁸¹ (see Testimony 25).

These lines of questioning make female entrepreneurs feel that they must be on the defensive and constantly justify why they belong, rather than having the opportunity to expound on their strengths.

V. Lack of strong personal and professional networks: The IDB Lab / WX Insights report found this to be the second-greatest challenge. The report states that access to capital has

Testimony 3

"As the female founder, they (the investors) also raised many questions on how the decisions within the founders were made, and questioned if I was able to do enough push-back on my decisions. This behaviour was very weird to note, as they did not question the same 'assertive nature' from my co-founders"; she adds, "the path is long and lonesome, always being the only woman at the table"

Maite Muniz, the co-founder of Truora in Colombia: Excerpt from IDB Lab / WX Lab report

a strong link to whom the entrepreneurs know and that women entrepreneurs are "not being very pro-active at building their own networks". This excludes them from Latin American culture, which is driven by relationships and essential networks. As one of the investors said, "I pay more attention to the companies that come to me recommended by someone in my network". Networks are essential for obtaining access to information about investors. According to some investors interviewed by IDB Lab / WX Insights, women entrepreneurs approach them through other women in their network, particularly women within the investment team who often help other women. The report concludes that the more female-led funds, female mentors and role models there are, the better the ecosystem will be for future women entrepreneurs.

¹⁸¹ Forbes (Website). This Female-led VC Fund Believes Democratizing Access to Venture Capital will drive Top Returns. Accessible at https://www.forbes.com/sites/marijabutkovic/2021/10/26/this-female-led-vc-fund-believes-democratizing-access-to-venturecapital-will-drive-top-returns/



5. INSTITUTIONAL CAPACITY AND GAPS AMONG PROJECT EXECUTING ENTITIES FOR MAINSTREAMING GENDER IN THE CATALI.5°T INITIATIVE

This chapter summarizes the gender capacities within the four Executing Entities.

A. EXECUTING ENTITIES AT GLOBAL LEVEL

1. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GIZ will be responsible for the project's overall management as well as for capacity-building measures in both regions in the area of environmental and social safeguards, governance and gender, climate impact forecast tools and impact data measuring & monitoring. GIZ undoubtedly has considerable experience with gender sensitivity in entrepreneurship. GIZ has strong internal and external mechanisms for promoting gender equality and the elimination of gender-specific disadvantages and discrimination within the services it provides and as part of its equal opportunity polices within the institution itself.

GIZ aims to create and expand opportunities for participation, develop potential and overcome existing gender inequalities and ensure inclusive economic growth. Internally, the GIZ Gender Strategy is a binding framework for all managers, staff and other employees of GIZ. The strategy also shapes the design and implementation of GIZ projects and programmes around the world. GIZ also expects its sub-contractors to adhere to its gender strategy. Annually, GIZ tracks and reports on the implementation of the gender strategy. The main results are included in the GIZ Integrated Corporate Report.

In the gender and climate innovation area, GIZ is a key authority. GIZ incorporates women as stakeholders in all climate action as follows:

- GIZ has regional gender focal points who review funding proposals and other important documents to ensure regional gender dynamics are thoroughly considered in the documents.
- Development of own guidelines" e.g. the "Accelerating Women Entrepreneurs: Project design guidelines for GIZ Advisors" publication.
- Implementation of multiple projects on gender and climate innovation around the world.
- Leading and facilitating panel discussions on key platforms such as the Gender Assessment Method for Mitigation and Adaptation (GAMMA) and Gender into Urban Climate Change Initiative (GUCCI) initiatives.
- Holding Gender Week events within the institution, as well as around the world.
- Holding annual gender competitions among staff implementing projects around the world and rewarding those who demonstrate exceptional approaches to the promotion of gender equality.

GIZ's strong experience with gender sensitivity and in entrepreneurship in different countries and regions in which it is working is important and represents added-value for the implementation of the CATALI.5°T initiative. GIZ also has a number of other accountability frameworks, such as Do No Harm and prevention of sexual exploitation, abuse and harassment (PSEAH) policies, which guide both its operational and implementation activities.

Capacity GAP

GIZ does not have a gender-related gap that needs strengthening by the project.

2. Stichting Climate-KIC International Foundation

The Stichting Climate-KIC International Foundation, hereafter named "Climate-KIC", is a non-profit organization with the objective to contribute to the protection of nature and the environment,



including the enhancement of sustainability, in aid of the common good, both ecological and human, by way of innovation of climate change mitigation and adaptation, and by stimulation of education and research in the field of climate change mitigation and adaptation. Climate-KIC aims to provide equal opportunities for all genders throughout its programmes, with the eventual goal of triggering a systematic change in gender across the climate innovation sector. Stichting Climate-KIC International Foundation builds up on the technical expertise, track record, policies and systems of Climate-KIC Holding.

Climate-KIC's Equality and Diversity Policy describes its commitment towards the elimination of discrimination and promotion of equality and diversity within its stakeholder network, as well as in the areas in which it has influence. The following elements relate to Climate-KIC's internal and external gender mainstreaming efforts:

- Climate-KIC has overall male to female ratio of 1:1 on its boards.
- In 2020, its management team was 83% female.
- At employment level, in 2020, 67% of Climate-KIC's 168 staff were female.
- Through its Diversity and Inclusion Working Group, multiple groups are active in ensuring gender mainstreaming: e.g. the management team working group on culture is taking responsibility for integrating diversity and inclusion in leadership and ways of working; the Gender Group is leading gender integration and inclusivity work within Entrepreneurship and Education programmes; and the Ethics Group develops, reviews and makes recommendations on the way Climate-KIC engages with external partners.

For Climate-KIC's community of partners, innovators and entrepreneurs, Climate-KIC strives to enable them to better attract and support women-led innovations and initiatives through the full lifecycle of development and acceleration. To achieve this, Climate-KIC has been working closely with partners to provide actionable and practical guidance to actors in the climate entrepreneurship ecosystem (e.g. entrepreneurs, accelerators, coaches, trainers, investors) on how they can integrate gender equity in their interventions and become more gender-smart. Recent developments on this includes working together with the UN Women programme, *WeEmpowerAsia* (WEA), on the development of two '*WeRise* Toolkits', one Toolkit for Entrepreneurs¹⁸² and one Toolkit for Accelerators¹⁸³.

Many of the programmes implemented under Climate-KIC's climate entrepreneurship programme have been exploring the nexus between gender and climate innovation, with the Toolkit for Accelerators, in particular, serving as the guiding framework.

Both toolkits provide step-by-step guidance, ranging from organisational self-assessment on inclusive readiness, inclusive channels and criteria for selection of ventures and accelerators to action planning and network building. The tools provide essential building blocks for the GCF project's efforts in reducing gender biases and increasing gender mainstreaming among climate ventures, pre-accelerators, accelerators, and VCs.

Climate-KIC's current gender policy, practices and tools for mainstreaming gender within the organization and across the globe through its programmes and partners is substantive. Climate-KIC's envisaged role as Executing Entity for the project's Component 3 offers considerable scope for leveraging gender-related opportunities, notably in the context of the implementation of the Gender Action Plan and capacity building on gender climate entrepreneurship toolkits.

Capacity Gap

¹⁸² The Toolkit for Entrepreneurs has been created specifically for women entrepreneurs who own an SME in the so-called missing middle - too big to benefit from a microfinance institution but still too small or too risky for the average venture capitalist. This toolkit, co-created by women entrepreneurs for women entrepreneurs, is directly aimed at women entrepreneurs in this situation, providing them with guidance on how to improve their access to finance while becoming more gender-inclusive in their own business. Accessible at: https://asiapacific.unwomen.org/en/digital-library/publications/2021/10/werise-toolkit-for-entrepreneurs

¹⁸³ The Toolkit for Accelerators has been created specifically for and with accelerators that are focusing on becoming more gendersmart and providing better access to finance for the women-led SMEs they support. This toolkit was co-created in conjunction with entrepreneurs, accelerators and finance experts, and is accessible at: https://asiapacific.unwomen.org/en/digital-library/publications/2021/10/werise-toolkit-for-accelerators



Climate-KIC does not have gender related capacity challenges that need addressing by addressing.

B. EXECUTING ENTITIES AT REGIONAL LEVEL

I. LATIN AMERICA

Tecnológico de Monterrey

Tecnológico de Monterrey's "Entrepreneurship Institute Eugenio Garza Lagüera" is responsible for designing, implementing and promoting entrepreneurship within the University as well as through external programs. Tecnológico de Monterrey will be the Executing Entity for the preacceleration and acceleration programmes in the Latin American region.

Interviews with key management staff indicate that Tecnológico de Monterrey has been at the forefront of the creation of progressive internal diversity and inclusion policies. Additionally, within the University, the position of Vice Presidency of Inclusion, Impact Social and Sustainability¹⁸⁴ has been created, which, among others, has the objective to reinforce the recognition of human dignity, fostering an environment of inclusion, equal opportunities and unity in diversity. The University has special offices to deal with gender issues, such as the Human Dignity Recognition Centre, which also houses the Office of Gender and Safe Community¹⁸⁵. In addition, it has internal policies for ensuring that gender-related misconduct is prevented and addressed. Through the Office of Gender and Safe Community, different actions towards gender equality have been implemented, as described below:

- ✓ The Zona Shero programme¹⁸⁶, which is a collaborative effort between Eugenio Garza Lagüera Entrepreneurship Institute and Tecnológico de Monterrey University, is aimed at strengthening the progress and development of female students and entrepreneurs in the global entrepreneurship ecosystem.
- ✓ For climate change (though not exclusively for female entrepreneurs), the Heineken Green Challenge (HGC) is an initiative to bring together entrepreneurs who develop innovative projects, prototypes, business models and start-ups that identify opportunities and solve environmental problems in Mexico. Women entrepreneurs are strongly encouraged to participate.
- ✓ The University has a gender plan, laying out sets of measures for the equal treatment and opportunities for women and men in the institution's academic and administrative environment. To ensure the implementation of the gender plan, the Impulsa and Equalitec have been established. Impulsa is a committee that has the objective of assuring progress towards gender equality in the University's executive positions; Equalitec is a committee responsible for executing, following-up and enhancing the development of the gender equality plan.
- ✓ Tecnológico de Monterrey is also a member of UN Women's Global Movement HeforShe, with strategies for contributing to gender equality and prevention of gender violence.
- ✓ The University has also launched a research programme around entrepreneurship. In studying entrepreneurial success, Tecnológico de Monterrey employs traditional metrics, such as company creation rate, survival and longevity, and job creation, which could form an interesting basis for the collection of sex-disaggregated data and understanding gender patterns in climate innovation ventures. It would be interesting to cross-check the data from this research with IPED's ESG Impact metrics (see IPED section below).

¹⁸⁴ Tecnológico de Monterrey, 2020. Diversity and inclusion. 2020 Report. Accessible at https://tec.mx/sites/default/files/2020-10/re-porte-diversidad-e-inclusion-oct2020.pdf

¹⁸⁵ Human Dignity Centre/Gender and Safe Community Office (Website). Accessible at https://tec.mx/es/dignidad-humana/genero-y-comunidad-segura

¹⁸⁶ Zona Shero (Website). Accessible at https://tec.mx/es/emprendimiento/zona-shero



For Tecnológico de Monterrey's broader entrepreneurship programmes, such as the HGC and Enlace+, Tecnológico de Monterrey applies a "Conscious Entrepreneurship Strategy", which incorporates gender considerations. All Tecnológico de Monterrey employees are required to take gender-focused courses and are subjected to all the gender policies as an institutional requirement¹⁸⁷.

Gender capacity gap

Tecnológico de Monterrey's Conscious Entrepreneurship Strategy has been created to drive gender equality in its initiatives. There has been substantial work undertaken at the institutional level to develop and enforce gender-related policies for students, staff, external partners and external beneficiaries (such as supported ventures).

However, with the growth of climate-specific entrepreneur events and processes which have not been traditionally part of the University's inclusive environment, the University has been evolving its gender practices. The management team of the Entrepreneur arm of the University feels that there is sometimes lack of clarity on the gender requirements, stemming from the fact that the institution's gender initiatives have not always been coordinated or 'joined up' and they are evolving over time. They have also identified this as an area for improvement: they plan to redesign their pre-acceleration and acceleration entrepreneurship programmes around more structured gender guidelines. This fits well with the proposed role played by Climate-KIC who could provide such a structured gender ecosystem approach for all stages of the entrepreneurship programmes. The EE is committed to ensuring gender equality in their programme. The staff are eager to receive gender related technical support from the GIZ and Climate-KIC. The risk to the project is therefore minimal. Nevertheless, the implantation of the GCF program GAP and adequately training the EE staff during the inception phase of the GCF programme would avert any potential gender related risks.

II. WEST AFRICA

A. Investisseurs & Partenaires Entrepreneurs & Développement (IPED)

IPED will assume the role of Executing Entity for the acceleration programme in West Africa, and will also manage the disbursement of support grants under the pre-acceleration programme.

IPED is affiliated with the impact investment group Investisseurs & Partenaires (I&P) and builds up on their technical expertise, track record, policies and systems.

IPED has a gender policy¹⁸⁸, which mainly focuses on: i) promoting gender equality/equity; and ii) integrating a gender lens in funds, programmes and investments. The policy operates at both IPED/I&P staff and investment vehicle governance levels.

The gender policy is clear and precise, detailing the different steps that must be taken at the different levels and implemented both internally and externally, with priority areas identified at the portfolio level which are tracked on an annual basis. From an internal perspective, the policy is deployed via recruitment policy and by promoting gender diversity in corporate governance bodies, senior management and investment teams, as well as through team-based awareness-raising initiatives. The policy is also pursued at investment portfolio level by factoring gender-sensitive policies into the key investment pillars of IPED's partners, as well as at SME corporate officer, employee, client and sub-contractor level. All of these elements provide strong evidence of IPED's commitment to, and knowledge of, gender equality issues and gender mainstreaming. The policy is implemented at all levels of the organization:

• Management level: for leadership and overall governance: e.g. 30% of women at management level.

¹⁸⁷ Human Dignity Centre/Office of Gender and Safe Community (Website). Accessible at https://tec.mx/en/human-dignity/human-dignity-human-dignity-human-dignity-education

¹⁸⁸ IP&IPED, 2018 Gender strategy. Opportunities to address the gender gap in African SMEs. Accessible at: https://www.ietp.com/en/gender-policy



- Employment level: development of women's access to decent jobs and training, including insurance and credit
- Client level: support to SMEs within specific acceleration programmes:
 - ✓ Gender objectives linked to the gender policy. Depending on the programmes and requirements of the institutional investors involved, the targets change. For example:
 - A target of 30% of women-owned businesses set up for an equity investment programme (IPAE).
 - ✓ Raising awareness among entrepreneurs on gender diversity benefits for their businesses (entering new markets, reaching new customers, etc.).
 - ✓ In the company's communications (website, impact reports, videos, interviews), emphasis is paid to the gender-sensitivity of the wording used especially in the French language; the representation of men and women entrepreneurs is balanced in case-studies, videos, etc.

In addition, IPED organizes their investment metrics by gender to ascertain the proportion of female entrepreneurs, senior executives, employees and customers they reach. They also track 2X Challenge criteria¹⁸⁹. 2X Challenge is a development institution-sponsored initiative to define women-friendly investments. For IPED, gender is now a pillar in itself that must be analysed in any project, making it easier to factor in opportunities for improvement and reducing gender inequality in action plans.

Capacity Gap

IPED does not have a specific person responsible for gender equality among its staff. However, gender equality is comprehensively addressed under its broader Environmental Social and Governance (ESG) umbrella, and there is an ESG & Impact Committee composed of high-level experts from all recent impact funds under IPED's implementation.

IPED has also built ESG impact tools that are adapted to each fund's theory of change and impact objectives, and that explicitly address ESG issues (including gender) in the screening, investment and monitoring process.

Discussions with the ESG Impact Measurement team in IPED revealed that gender mainstreaming efforts are programme-driven and are not systematically integrated in all programmes. In some cases, the environment and governance aspects of the ESG have more prominence than the gender aspect. Nonetheless, IPED has recognised this potential weakness and is currently updating its gender policy, tools, key performance indicators (KPIs) and practices, with the aim of strengthening gender integration across its programming.

B. Impact Hub Abidjan

Impact Hub Abidjan is a small institution of 13 employees founded by four women, who all, independently of each other, had previous experience as entrepreneurs. The founders' explicit objective is to contribute to the elimination or reduction of gender gaps and to improve the access of female entrepreneurs to technical assistance and finance in the entrepreneurship ecosystem.

Impact Hub Abidjan has been striving to ensure women ventures are given greater emphasis in the West Africa region, as demonstrated by the following:

- 100% of its founders and 80% of its board members are women.
- 62% of its trainers and coaching experts are women.
- After attracting fewer-than-expected female-led ventures in its early support projects, Impact Hub Abidjan now makes explicit inclusion efforts for instance, by designing specific calls that target value chains that have large numbers of female entrepreneurs (e.g. agribusinesses oriented around local food staples).



A dedicated programme focused on women entrepreneurs: the Academy for Women Entrepreneurs, supported by the U.S. Government's Office of Cultural and Educational Affairs (ECA).

Impact Hub Abidjan has a detailed understanding of the entrepreneurship ecosystem and the challenges female entrepreneurs face in Cote d'Ivoire and the broader region. However, climate innovation and climate-related ventures are new areas for them. To address this, Impact Hub Abidjan (and local implementation partners involved in the West African pre-acceleration programme) will receive capacity building support from the CATALI.5°T project to address issues related to identifying and managing portfolios of climate ventures – including assessment of the ventures' climate impact (reduced greenhouse gas emissions and potential adaptation co-benefits), ventures' potential to achieve climate transformation at a systemic level, and gender-related aspects of climate ventures (including gender climate entrepreneurship toolkits).

Impact Hub Abidjan's policies are not gender-specific, but they are gender-inclusive. Its knowledge and perspectives on female entrepreneurship in the region will be key for gender mainstreaming in the West Africa region and represent genuine added-value for CATALI.5°T Afrique de l'Ouest.

Gender capacity Gaps

Impact Hub Abidjan does not currently have its own in-house gender expertise (e.g. gender experts)). The organisation has recently developed a gender policy and trained a number of its staff: these, combined with the founders' backgrounds and explicit objective of addressing gender inequalities, mean that gender mainstreaming is expected to be satisfactory. Nevertheless, given that Impact Hub Abidjan is new to climate innovation-related ventures, it could benefit from receiving support in; i) creating measures for demystifying climate innovation and the broader climate impact calculations for women entrepreneurs; ii) ensuring that gender in climate innovation is appropriately integrated into its general gender strategy, which is currently under development; and iii) related to this, Impact Hub Abidjan will also need support in attracting more women from the climate innovation sector, as well as building networks and enabling ecosystem support for climate innovation ventures.

Summary of the Capacity Gaps and Mitigation Measures

Capacity GAP	Mitigation			
The Regional EEs do not have a specific personnel who focus on gender mainstreaming	Gender expertise will be provided through the provision of 2 regional Gender mainstreaming experts (GIZ gender specialist for Latin America and another gender specialist provided under IPED for the West Africa region). Hands-on support and trainings on gender mainstreaming will be conducted for all top and middle management, including local implementation partners.			
The regional EEs do not have comprehensive experience with the gender and climate innovation nexus	The above trainings and hands-on support will be provided through the regional gender specialists. Climate-KIC will work with the specialist to ensure the trainings and hands-on support adequately cover the nexus.			
Lack of comprehensive understanding of SEAH. Based on the interviews with the regional EEs, the full range of SEAH and mechanisms of preventing and mitigating it are not well understood	Identified possible risk areas Lack of clear policies and procedures on SEAH prevention and management Lack of commitment /non- enforcement and compliance of SEAH policies and procedures Beneficiaries unaware of SEAH risks and their rights Lack of adequate investigation and documentation of SEAH issues In adequate mitigation measures that could lead to dissatisfaction and non-reporting on the part of the survivors.			
and/or integrated across the regional Ees. Though all Ees have code of conducts against sexual harass-	Prevention. The project will: -Integration of SEAH and SGBV prevention and mitigation in the standardized programme gender policy			



ment to guide their internal operations and management, this is not (always) cascaded to the ventures level.

At venture level, interviews revealed there is a limited understanding of SEAH, and most of the time ventures do not have any form of code of conduct in place. Those that have single gender founders and employees did not think SEAH issues could be of relevance for them even though some of the ventures interviewed had single gender founders and employees but different sexual orientation.

- -Ensure all programme EE staff and local implementation partner staff are trained on SEAH. Zero tolerance on SEAH is adequately communicated as well as punitive measures on violation of SEAH policy included in their contract.
- Conducting context based and effective SEAH risk management assessments and develop adequate mitigations measures.
- -Integrate SEAH in the climate ventures code of conduct and in the gender trainings
- -Include SEAH awareness in the PR materials (including in local languages) on SEAH zero tolerance, beneficiaries' rights to the project benefits and available mechanism of accessing justice for the survivors.
- -Development of context-specific (including in local language), safe, accessible complaints feed-back mechanisms e.g. free hotlines, complaint boxes, email and text messages, anonymous whistleblowing etc. to easily and conveniently report cases of SEAH and other SGBV.
- -In project events such as boot camps, ensure adequate security and, if needed, ensure presence of volunteers for policing the event etc. to avoid SGBV.
- Conduct trainings and project events at times and places where women and other vulnerable groups

Mitigation

- -Establish a sub-committee (under the management committee) who will deal with SEAH issues and establish direct reporting with GIZ and GCF. Female complaints should be handled by female committee members and male complaints by male committee members.
- -Train the committee on SEAH, effective investigation of SEAH cases (confidential and professional investigation of cases, survivor centred approaches), develop standardized Incident notification Forms, establish effective reporting procedures etc.
- -Develop SEAH management and response plan including survivor-centred approaches for those affected by the SEAH: e.g. safety and security provision, counselling services and working on other compensation mechanisms.
- -Integration of key SEAH risks in the monitoring plan that can be safely, easily and conveniently accessed

Monitoring of SEAH

- -Monitoring compliance downstream e.g. review adequacy of SEAH policy at EEs, local implementation partners and venture level (spot check on staff contracts, ventures' code of conducts etc.).
- -Monitoring the implementation of SEAH response and management plan e.g. number of cases received, number of cases adequately investigated, number of survivors supported etc.(all aggregated by gender and region).
- -Integrating beneficiaries feedback in progress/impact monitoring: e.g. beneficiaries' awareness level of SEAH and on existing project mitigation/ redress mechanism

C. GENDER EXPERTISE NECESSARY TO THE PLANNED GCF PROGRAMME

The planned CATALI.5°T Initiative should employ a Gender Manager with in-depth knowledge and implementation experience in gender equality and mainstreaming in entrepreneur support programmes. The vacancy should explicitly require such expertise.

To ensure sound integration into all activities, this position would ideally be with a technical advisor. This person would be most appropriate to also become the overall general Gender Manager of the programme to oversee all gender mainstreaming efforts, this includes primarily the implementation of the Gender Action Plan (GAP) and overall GAP monitoring at programme management level. At regional level, the programme requires Gender Specialists that have the necessary expertise for implementation and to assist the Gender Manager.



Equally important is to ensure that Executing Entities (EEs) and local implementation partners are able to mainstream and operationalize gender within the pre-acceleration and acceleration programmes in both regions. To achieve this, the programme should invest in technical gender training in climate innovation aiming to enable the EEs' and local implementation partners' project staff to effectively integrate gender into all workstreams.

All standard procedures of the programme should be streamlined to review gender aspects throughout the course of the programme. The GIZ Gender Strategy, the Practical Guide to Gender-Responsive Programme Management and the Guidelines on Gender in Reporting provide useful guidance for the programme team.

Additional technical expertise to integrate gender into entrepreneurship is provided for example by GIZ in the *Guidelines for accelerating women entrepreneurs* (2022) and WUSC-EUMC (2021) Design guidelines for Accelerating Women Entrepreneurs, Strategies for Incubators and Accelerators for strengthening ecosystems for women climate entrepreneurs.

6. POTENTIAL LEARNING PROJECTS

Climate innovation being relatively new, it has been difficult to find many projects that address the nexus of gender and climate innovation that could offer the CATALI.5°T project opportunities for learning and leveraging. The following projects could provide some form of learning around integration of gender in innovative investments:

Table 4: Potential Projects for Learning

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Project Name: The Rallying Cry initiative Country: Piloted in Kenya and Zambia https://therallyingcry.org/?mscl-kid=b74d347dcf8e11ecb262b8c101b0d40a.

Duration: 2022- 2027

The Rallying Cry initiative is led, supported and resourced by an international collaborative of women business leaders and climate, gender, and development finance professionals and institutions. It is a 5-year initiative seeking to surface the female leadership needed to catalyze and scale private sector action on climate change. The first phase of work is focused on climate- and gender- responsive agriculture enterprises in Africa, piloting in Kenya and Zambia. The objectives are: i) developing a model for collective climate leadership, to drive more equitable solutions: climate and gender; ii) elevating previously unacknowledged successes of the women and enterprises already leading climate- and gender-smart action on the front lines; iii) creating global climate forums for the previously unseen and uncounted to tell their stories and share new ways of leading and doing; and iv) engaging the international climate and investment communities to shift their perspectives on, and approaches to, investing in women and climate.

POTENTIAL AREAS FOR LEARNING

Although the project is not currently implemented in West Africa or Latin America, it is one of the few initiatives that are deliberately and aggressively addressing the nexus between climate and gender. It provides helpful analysis on the following areas which could provide the evidence base and data needed for CATALI.5°T project steering:

- Analysis of investor product mapping, including opportunities, risks and the product blueprints for intermediated debt and equity.
 Analysis and conclusions from ongoing research to map climate-and gender-smart agribusiness enterprises in Africa, including sharing key learnings from African women business leaders on the goals of mitigation, adaptation, finance and collaboration through a different lens, as well as recommendations to decision-makers in the international finance community who can contribute to achieving this vision.
- A directory of select climate-smart and gender-smart agribusinesses mapped in the project pilot countries of Kenya and Zambia.
 In consultation with leading 2XCollaborative members and other capital allocators, The Rallying Cry maps financial and non-financial products and services with the potential to incorporate both a climate and gender lens.

Project Name: Irish Aid Climate-gender smart acceleration project

Project Duration: April 2022-May 2023

The aim of the project is to roll-out the gender toolkit developed by Climate-KIC together with Bopinc that has been designed to help



Countries: Irish Aid directly supports Climate-KIC programming in Kenya, Mozambique, Nigeria, South Africa, Tanzania, Uganda, Vietnam and Colombia. The gender mainstreaming work will focus first on Climate-KIC's partners in these 8 countries, but with the intention of expanding to Climate-KIC partners across the globe.

The project builds on Climate-KIC's newly developed gender and climate tool for incubators and accelerators (previously funded by Irish Aid). Climate-KIC intends to go a step further on gender in 2022/3 by working with partners to:

- Strengthen local capacity-building structures related to gender mainstreaming in between 6-10 organisations from 6 African countries; Kenya, Mozambique, Nigeria, South Africa, Tanzania and Uganda.
- Incentivize partners to apply a gender lens to programme activities by either a) embedding new gender approaches into existing work or by b) designing programmes that specifically address gender needs.
- Showcase collective progress to crowd-in other Climate-KIC partners.

Project Name: World Bank: Latin American and Caribbean Gender Innovation Lab (LACGIL). There is also an Africa GIL.

Countries: Latin America and Caribbean Countries.

The LAC Gender Innovation Lab provides World Bank operational teams, policy-makers and development practitioners with knowledge to promote gender equality and drive change in Latin America and the Caribbean. To this end, the Lab generates evidence through impact evaluations and inferential studies to find out what works to close gender gaps in human capital, economic participation, social norms and women's agency.

partners attract and support women-led businesses, as well as encourage change at an organizational level. The toolkit will help the partners to establish and consolidate sustainable local capacitybuilding structures to help accelerators and incubators provide climate entrepreneurs with effective gender equality training and empowerment for women entrepreneurs. The structured capacity building support will help partners to roll-out the gender toolkit through Climate-KIC's partners who are delivering incubation, acceleration and education programmes.

The project focuses on providing training to the partner organisations on how to use the toolkit so that they can increase and sustain the number of women participants in their programmes. Climate-KIC will also set up a granting facility, making funds available to partners to launch gender-focused pilot programmes in their local contexts. Funding will be dispersed based on actions plans to either: i) Transform partners' own organisation to better support women (e.g. develop new or adapt existing training and/or marketing materials, create videos with success stories, etc.), or ii) Provide direct support to women-led start-up teams (e.g. create a women peer support network, alumni events and networking opportunities etc.).

The project is expected to support more women entrepreneurs to develop an impact innovation idea and become entrepreneurially active through innovative concept-building on existing gender-focused activity. E.g. ecosystem activities to raise awareness and improve access to finance for women-led start-ups. While the funding will only be available within the Irish Aid sponsored countries. Climate-KIC will host workshops with a wider audience of partners, climate experts and other relevant actors in order to share learnings. By the end of the project, Climate-KIC will have case studies from each of the participating partners, in order to incentivise others to run similar programmes in the future and encourage uptake of the gender toolkit.

The gender toolkit will be an integral component of the CATALI.5°T project gender mainstreaming efforts. Lessons learnt from the above roll-out efforts will be essential for enriching the toolkit and, ultimately, the CATALI.5°T initiative gender outcomes.

Since 2019, the GIL initiatives have been conducting evidencebased studies through impact evaluations and inferential studies and presenting the findings in working papers, reports, policy briefs and blogs through the GIL website.

The initiative provides the following:

- A Gender Data Portal for each country: e.g. Mexico https://genderdata.worldbank.org/countries/mexico.
- Gender Impact Evaluations, which offer:
 - Evidence-based impact data for LAC Governments, World Bank projects and other partners.
 - Dissemination of evidence and partnering across sectors and stakeholders to build knowledge on gender impact evaluations.
- Publications: e.g. Women Entrepreneurs in Mexico: Breaking Sectoral Segmentation and Increasing Profit. https://doc-



- <u>uments1.worldbank.org/cu-rated/en/337731602848034710/pdf/Women-Entrepreneurs-in-Mexico-Breaking-Sectoral-Segmentation-and-Increasing-Profits.pdf.</u>
- 4. The Women Entrepreneurs Finance Initiative (We-Fi) supports women entrepreneurs by scaling-up access to financial products and services, building capacity, expanding networks, offering mentors, and providing opportunities to link with domestic and global markets.

Given all the above, the project provides the CATALI.5°T initiative with an immense body of evidence-based data and information for informing the design of the project – and, specifically, on how to best integrate women's empowerment in the project.



7. GENERAL CONCLUSIONS

In summary, the gender assessment has brought to light the following:

- A strong business case for gender in entrepreneurialism and the SME sector exists and is cogently articulated by recognized institutions. Due to the nascent status of 'cleantech', engagement with gender issues in the 'climate venture' space specifically is less developed. However, a recognized global champion in this regard is Climate-KIC: its pool of expertise is expected to immeasurably benefit the project. IPED in West Africa also demonstrates a substantive track-record of engagement with the gender-entrepreneur nexus, though not specifically in a climate change context.
- The governments in Latin America and West Africa have ratified international and regional conventions and protocols on gender equality. They have also put in place numerous measures to improve gender equality. However, concrete actions backed, crucially, with the necessary resources have lagged behind, with the result that gender gaps in three key sectors that have direct links to climate entrepreneurialism (education, agriculture and energy) are prominent and persistent.
- Women entrepreneurs face numerous hurdles, stemming from a combination of structural and rigid social-cultural barriers and lack of broader enabling gender ecosystem.
 Although the lived experience of women entrepreneurs in West Africa is very different from that in Latin America, lack of status equality, lack of business understanding and role-models, and lack of access to finance are common challenges across the two regions.
- For the Executing Entities, difficulties in recruiting large numbers of women into their pre-acceleration and acceleration programmes, and the limited number of female role models and mentors, are common features across the two regions.
- The Gender Assessment also identifies some of the ways that the Executing Entities, local implementation partners and other ecosystem actors can tackle gender-related challenges and create innovative strategies for women's inclusion.



8. RECOMMENDATIONS

A. GENERAL RECOMMENDATIONS FOR PROJECT DESIGN

- 1. Ensure EEs and local implementation partners have the capacities and necessary tools for gender-climate mainstreaming: Based on the institutional capacity assessment (Section 5), it is clear that there is strong gender commitment from the different EEs. However, gender expertise and capacities for gender mainstreaming in climate innovation is not the same across all the individual EEs. In this regard, the following recommendations are seen to be crucial for the project:
 - Develop a unified gender-mainstreaming document for the project that provides essential tools for gender and climate innovation addressing the two regional contexts.
 - ii. Ensure EEs and local implementation partners are adequately trained on gender mainstreaming in climate innovation. The 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.
 - iii. Rather than appointing and training one focal point person from each EE, ensure the **staff of the two regional initiatives** CATALI.5°T^{América Latina} and CATALI.5°T^{Afrique de l'Ouest}, including top and middle management of the EEs and local implementation partners, **are trained.** It will also create more buy-in and momentum for gender mainstreaming in the planning, implementation and monitoring of the EEs' / local implementation partners' activities and, in the end, lead to effective realisation of the EEs' commitment towards the implementation of the GAP.
- 2. Encourage, support and document cross-learning on climate gender mainstreaming between EEs and regions. There is currently little documented evidence to inform what strategies work best in securing a healthy pipeline of female ventures, but anecdotal evidence gathered from interviews with the EEs reveals some promising strategies, such as focusing on ventures/value chains where women are predominant, establishing partnerships with women 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 the project and the best pathways identified for learning and scaling. There is an opportunity for more deliberate and systematic learning based on what gender and climate innovation strategies are working 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 EEs and local implementation partners through, for example, workshops and reporting of best practices.
- 3. Review and update the project's **gender indicators**. These indicators should be integrated in the project's learning framework.
- 4. Include **gender diversity in the project's governance** structure in both regions.

B. GENERAL RECOMMENDATIONS FOR THE EEs RUNNING THE PRE-ACCELERATION AND ACCELERATION PROGRAMMES

- Ensure calls for applications and scouting are inclusive and encourage applicants of all genders:
 - i. Use different channels and networks to reach all genders
 - ii. Hold information events and consider holding separate women-only events
 - iii. Create promotional material that is gender-inclusive, that integrates gender-sensitive language to avoid confusion in the French and Spanish interpretation of some gender-sensitive words



- iv. In marketing materials, include messages to counteract negative stereotypes to encourage and attract female entrepreneurs, e.g. by designing inspiring messages¹⁹⁰, featuring female role models, or highlighting success stories of female and minority entrepreneurs that could help disrupt, for example, the notion of what a stereotypical coder or climate entrepreneur or engineer (etc.) looks like.
- 2. Apply a **gender lens when selecting ventures** for the pre-acceleration and acceleration programmes: to ensure all genders have an equal opportunity to be selected, this can be achieved through:
 - i. Setting clear exclusion and selection criteria, including its weighting. The following criteria intended to provide overall guidance only; they will need to be reviewed, complemented and refined on an ongoing basis during project implementation.

Table 5 Ventures' exclusion and selection criteria

EXCLUSION CRITERIA

Ventures will be excluded if:

- Their products or services have obvious negative implications for women (e.g. exacerbating wage disparities or requiring long working hours without extra compensation).
- At the initial due diligence interviews, ventures found to have none of their founders and employees identifying as female and with no intentions of diversifying their team members to include more women.

SELECTION CRITERIA

Pre-acceleration

A preferential score should be given to ventures that have:

- a. At least 50% of their founders identifying themselves as female or marginalized groups. For Latin America, this could be differentiated with positions occupied by women: e.g. an additional preferential score for ventures with female CEOs or CTOs.
- Explicit plans for increasing the number of women in their top and middle level management teams, in line with their business growth plans.

Acceleration

A preferential score should be given to ventures that:

- c. Are 30%-owned by one or more women and/or have at least 40% of their top and middle management employees as women and or marginalized groups. For Latin America, this could be differentiated with positions occupied by women: e.g. an additional preferential score for ventures with female CEOs or CTOs.
- d. Have explicit key performance indicators for increasing the number of women and marginalized groups in their top and middle level management, in line with their business growth plan.
- Have products or services that address a gender-related socio-economic problem: for example, gender stereotyping; increase women's wages / reduce women unpaid work burden; unlock the potential of women-dominated sectors; or increase female participation in male-dominated sectors – e.g. climate-related technological innovation.
- f. Have basic policies or procedures for facilitating a safe and conducive working environment for all employees, including a code of conduct for prevention of sexual exploitation, abuse and harassment and equal recruitment and wage policies.
- g. Have capacity to mentor and network with women entrepreneurs and act as role models for successful women entrepreneurs at the pre-acceleration stage.

¹⁹⁰ A note stating female and minority applicants are strongly encouraged to apply could go a long way in reassuring applicants.



- ii. Establishing **gender-diverse selection panels**. A study by GALI found that "having more than 45% women on a selection committee is associated with significantly more women-led ventures in applicant pools"¹⁹¹.
- 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 women participants can relate to.
- 4. During programme delivery, identify and enhance the capacity of the ventures to maximize gender benefits:
 - i. Introduce gender mainstreaming issues early on to the ventures, integrate gender in the ventures' capacity assessments and make available mechanisms for strengthening identified capacity gaps. Specific training should focus on raising ventures' awareness of gender disparities and power dynamics that impact their own entrepreneurial journey and how to apply a gender lens to product/service development as well as how to reduce conscious and un-conscious gender bias arising from their own actions. Additionally, include training on mechanisms for identifying and eliminating SEAH.
 - ii. **Ideation process should also capture women 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. This is because research has shown that male dominance can be an issue in mixed groups during ideation, where "men are more likely to interrupt women, take more turns talking, and use disproportionate amounts of time when talking" 192. It is, therefore, important that potential male dominance in mixed groups is prevented so that female voices and ideas are heard during ideation processes.
 - iii. Ensure training, mentoring and coaching venues and timings are suitable for female entrepreneurs to avoid exacerbating their time constraints.
- Aim for gender diversity to deliver the programmes. This includes building a genderdiverse pool of mentors and coaches so that all participants, especially female entrepreneurs' perspective and experience is understood and accommodated.
- 6. Help to create and maintain network support communities by:
 - i. **Inviting successful women climate entrepreneurs** as keynote speakers and role models to community-building and promotional events.
 - ii. Ensure times for networking events are suitable for female entrepreneurs. Where events are undertaken online, video recordings, (data protection mechanisms allowing) should be availed to the female entrepreneurs who may not have time to attend these.
 - iii. Create a safe and supportive community of practice for women entrepreneurs. The strength of this community of practice lies in the collaboration and support that women give to each other, which often goes beyond the project lifespan. In addition, create exposure and link venture founders with networks of individuals or groups containing sector experts, funders and other like-minded individuals.
 - iv. **Consider inviting key institutions** responsible for gender and gender mainstreaming including public institutions supporting entrepreneurs in **the respective regions** to community building events.

¹⁹¹ GALI, 2020. Accelerating Women-led Start-ups. A knowledge Brief by the Global Accelerator Learning Initiative. Accessible at https://www.galidata.org/publications/accelerating-women-led-startups/

¹⁹² Cuellar, Mr & Trageser, Dominick & Cruz Lozano, Ricardo & Lutz, Benjamin, 2020. Exploring the Influence of Gender Composition and Activity Structure on Engineering Teams' Ideation Effectiveness Exploring the Relationship among Gender Composition, Activity Structure, and Brainstorming Novelty. 10.18260/1-2--34649. Accessible at https://www.researchgate.net/publication/343111303 Exploring the Influence of Gender Composition and Activity Structure on Engineering Teams%27 Ideation Effectiveness Exploring the Relationship among Gender Composition Activity Structure and Brainstormi



C. RECOMMENDATIONS FOR THE CLIMATE VENTURES

1. Pre-acceleration stage:

Ventures' leadership and management at this stage tends to be amorphous, which provides an opportunity for the project to have an early start on gender mainstreaming into the management and operations of the ventures. A tailored approach (product/services/venture needs/context and venture capacity) is essential. For the ventures to be gender-smart, the following topics for specific training are therefore recommended:

- i. Ventures should gain awareness of gender issues: e.g. disparities and power dynamics that impact their own entrepreneurial journey and how to apply a gender lens to product/service development as well as how to reduce conscious and unconscious gender bias arising from their own actions. Additionally, include training on mechanisms for identifying and eliminating SEAH.
- ii. Ventures should recognize the value of including sex-disaggregated data in their market research on their customers (different ways that men and women use a product or a service) 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.
- iii. 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 programme.

2. Acceleration stage:

For many ventures at this stage, especially those that have not gone through the project preacceleration programme, they 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, become sustainable or, in some cases, just keep
the lights on. If gender is not viewed as something that can impact the bottom line, it is less likely
to be prioritized by the founders at this stage. To avoid inclusion issues being seen as additional
burdens, the EEs should support the ventures to integrate gender thinking as early as possible
within their venture products and structures. Just like the ventures at pre-acceleration stage,
ventures should gain awareness of gender issues: e.g. disparities and power dynamics that
impact their own entrepreneurial journey and how to apply a gender lens to product/service development as well as how to reduce conscious and unconscious gender bias arising from their
own actions. During their participation in the programme, ventures in this stage:

- i. Should commit to ensuring equal opportunity and equal pay for the same jobs among their employees / labourers: e.g. they should create a salary scale that does not discriminate based on gender, age, race, colour and religion.
- ii. Should continually and deliberately analyze their team's composition by keeping an eye on gender ratios in the top and middle management teams and ensure venture growth plans reflect these. They should keep track of employee numbers and the gender composition of all part-time vs full-time employees.
- iii. Should 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. This is helpful in a number of ways:
 - It helps to design more tailor-made products and services: e.g. an AgTech business may want to ensure that the yield of its women users is equal to that of its men users and should, therefore, commit to ensuring its solution is designed with the digital gender gap in mind. This step will give the venture clarity on the product and market opportunities it can and will pursue.



- It helps to recognize the value of gender-disaggregated data understanding who the end-user of its product is could be very useful for the venture's business. Sometimes products can be purchased by a man but used by a woman: knowing this is helpful for changing marketing tactics, strategic messaging and sales efforts around sales and product upsell efforts. In some cases, if the sales representative's gender and customer's gender are matched it could also result better sales.
- It also helps to **attract investment** from global financiers, who are becoming more interested in responsible and gender-inclusive investments.
- iv. The ventures should make women visible in order to challenge stereotypes and create market opportunities for their products. The ventures should celebrate women senior managers in their teams and provide them 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 marginalized groups in a dignified way.



9. ANNEX

Annex 1: List of stakeholders consulted 193

Country	Stakeholder type	Name	Date of call	Tool / method applied
For LATAM			l	
Mexico	Executing Entity	TEC de Monterrey	06.09.2021 29.10.2021 10.04.2022	SCM + KII
Mexico	Project Partner/VC Fund	Dalus Capital	02.09.2021 28.10.2021	SCM + KII
Mexico	Gender Focal Point	GIZ Mexico	15.10.2021	KII
Colombia	Innovation centre	Cleantech HUB	01.11.2021	SCM
Ecuador	Innovation hub	Impaq'to	08.11.2021	SCM
Mexico	Innovation centre	Circular Influence	04.11.2021	SCM
Mexico	Female entrepreneur	Blcho	07.04,2022	KII
Mexico	Female entrepnures	Ambient	08.04.2022	KII
tbc	Climate start-up	To be informed		SCM /KII
tbc	Climate start-up	To be informed		SCM/KII
Global	EE	Climate KIC	18.03.2022	KII/SCM
For West Afr	ica			<u> </u>
Côte d'Ivoire and Senegal	Executing Entity	Investisseurs & Partenaires Entrepreneurs and Development (IPED)	02.09.2021 24.03.2022	SCM + KII
Côte d'Ivoire	Incubator / Innovation hub / Impact Hub	Impact Hub Abidjan and impact Hub Dakar	09.11.2021 21.03.2022	SCM + KII
Côte d'Ivoire	Female entrepreneur	Corail Immobilier	18.03.2022	KII
Côte d'Ivoire	Female entrepreneur	Green Skills Africa	21.03.2022	KII
Senegal	Female entrepreneur	Ecological village pro- ject- Idea incubation stage with Impact Hub Dakar	24.03.2022	KII
Senegal	Female entrepreneurs	Nowelli	22.10.2021	SCM/KII
Niger	Female entrepreneurs	Hygiène Solution Niger	21.10.2021	SCM /KII
Côte d'Ivoire	Gender Focal Point	GIZ Côte d'Ivoire	20.10.2021	KII
9 countries	Joint international initiative	WE4F project	01.11.2021	SCM
Côte d'Ivoire	International consultancy	Catalystas	n/a	(X)
Globally	I			l
Any country from LATAM + West Af-	AE	GIZ / S+G Desk	GIZ proposal development staff continuous	КІІ
rica	Executing Entity	Climate-KIC	12.10.2021 18.03.2022	KII
	Accelerator	Value for Women	n/a	(X)
	Accelerator	PFAN	n/a	(X)
	Global Investment	Gender Smart	n/a	(X)

¹⁹³ Stakeholders consultation meetings (SMC-mostly in coordination with the EES and/or RFS Consultants) and consulting website (X).