



 **BASE**
25 *years of*
climate finance



ANNUAL REPORT 2025

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INTRODUCTION



Picture credit: Victor Moriyama / Climate Visuals

A quarter century of climate finance, continuously innovating for a liveable world

2025, together with the two preceding years, continued a streak in which global temperatures have [exceeded 1.5°C on average during a three-year period for the first time](#), with 2024 reaching a peak of 1.60°C above pre-industrial levels, according to the ERA5 dataset of EU's Copernicus observation programme.

In parallel, and despite encouraging progress, climate finance growth is decelerating precisely when the moment calls for hastening. According to the [Climate Policy Initiative latest status update](#), Global climate finance surpassed USD 2 trillion for the first time in 2024, driven in large part by private investment and by households investing in electric vehicles, heat pumps and small-scale renewables. Yet, annual growth has slowed from 30 percent in 2021 to an estimated 2 to 3 percent in 2025, well short of the sustained double-digit pace needed to reach the trillions in annual investment required by the mid-2030s. For an organisation built to unlock finance in markets where it would not otherwise flow, that gap is where our work lives.

Overall, recent developments on the global stage reinforced both the relevance and the complexity of BASE's mission. Geopolitical shifts led to a noticeable refocusing of some donor priorities and development finance sources, creating a more uncertain and competitive landscape for organisations working to combat climate change. At the same time, these shifts made the need to draw in private and diversified sources of financing for

climate solutions more pressing than ever. Consequently, BASE's expertise in market transformation through innovative business models, financing and risk mitigation strategies becomes even more pertinent.

In this environment of evolving capital constraints, solutions designed to minimise upfront costs or mitigate investment risks are particularly drawing attention. As a testament to this, BASE was awarded the 2026 Zayed Sustainability Prize for its work on the Cooling-as-a-Service (CaaS) model, which enables access to modern and climate-friendlier cooling via a pay-per-use approach. This recognition will support BASE's efforts in deploying more sustainable solutions across sectors globally, mainly via our key initiatives bringing CaaS forward: the Servitisation for Energy Transition (SET) Alliance and Your Virtual Cold Chain Assistant (Your VCCA).

But no single model that can resolve all barriers for climate solutions exists: each financial obstacle and country context calls for a different instrument, and even proven models require further localisation and sector-specific adaptation.

BASE's work reflects this breadth, and its recent deepened involvement in investment de-risking strategies and climate risk management for financial institutions represents an increasingly critical area. The scale is considerable: the world's sixty largest banks carry more than USD 1.6 trillion in credit exposures to fossil fuel production



and power, according to [Finance Watch](#). Exposure of this kind leaves institutions vulnerable both to a potential devaluation of such assets on the road to net-zero and to the physical effects of a changing climate that can affect the entire economic ecosystem.

Against this backdrop, BASE reinforced its emphasis on supporting financial institutions to evaluate their specific exposures while identifying the market opportunities that the transition also presents. Although these risks are elevated, they can be meaningfully mitigated through targeted investment in robust adaptation and mitigation solutions. The tendency is reflected, from our standpoint, in the growing interest shown in this topic at leading sustainability forums, such as Geneva's Building Bridges, and through BASE's engagement with banks worldwide.

Such trends are shaping the future of climate finance, and with it, BASE's strategic priorities. 2025 marked the first year of the organisation's next strategic cycle, which aims to set key objectives to guide the team's efforts while allowing the flexibility required to adapt to a changing landscape. Running until 2030, this five-year plan will prioritise an expanded scope of work, notably to include sustainable finance as a focus work area; replicating and scaling proven models and solutions; and a sharpened focus on least served markets and segments.

In 2026, BASE celebrates its twenty-fifth anniversary, marking a quarter century of ideas and projects aiming to make climate-friendly solutions the norm rather than the exception. After years developing, piloting, and enhancing various solutions, the years ahead present a unique challenge: turning what works into the default, so that climate-smart technologies and services become the best option in agriculture, housing, transport, industry and finance.

Realising that ambition depends as much on sharing what we learn as on the technical work itself, we are expanding our communications and knowledge sharing in the conviction that innovative models can be mainstreamed only when shared as open-source knowledge. To mark BASE's 25th year, a refreshed homepage was launched, as a first step in a phased modernisation of the site that has served us for many years. The redesign reorganises BASE's public face around our strategic priorities and gives partners, funders and prospective collaborators clearer entry points into our work, bringing our landmark solutions and concepts into sharper view.

In this spirit, this document serves as a summary of BASE's actions in 2025 and as a vehicle to communicate the knowledge developed over this journey with other players in the field.



Picture credit: Nabin Baral / Climate Visuals



2025 Highlights

IN A NUTSHELL, THE YEAR WAS ONE OF CONSOLIDATION AND MOMENTUM, DEEPENING ESTABLISHED PARTNERSHIPS, ADVANCING KEY PORTFOLIO AREAS TOWARDS IMPLEMENTATION, AND STRENGTHENING BASE'S POSITION AS A TRUSTED, NEUTRAL PARTNER AT THE INTERSECTION OF CLIMATE FINANCE AND MARKET DEVELOPMENT.

HERE ARE SOME KEY MILESTONES:



The **Your Virtual Cold Chain Assistant (Your VCCA)** initiative marked a pivotal year in 2025, deepening both its technical foundations and geographical reach. A landmark milestone was the July **release of the Coldtivate application's source code and documentation**, ensuring the solution's long-term sustainability and enabling local adoption beyond the project's direct operations.

Building on this, the **Coldtivate Open-Source Incubator supported six organisations** across Nigeria, India, Uganda, Ghana and the United States in integrating the application's infrastructure into their own digital platforms. **In Guinea-Bissau, four solar-powered cold rooms were inaugurated** across Gabu, Bafata, Tite and Bolama, the last completed under particularly challenging conditions.

To foster a broader movement around sustainable agricultural cooling, the team hosted its **first Global E-Summit in October, drawing over 450 registrations from 48 countries.**



The **sustainable energy and energy efficiency** portfolio also saw broad progress in 2025. At the Ukraine Recovery Conference in Rome, BASE presented **bankable energy solutions for Kharkiv and Mykolaiv, and by year-end had completed feasibility studies for district heating and water infrastructure.** In parallel, efforts were put into fundraising strategies to finance such projects among governmental development agencies.

On Sustainable energy-as-a-Service models, in Switzerland, the Servetia initiative transitioned to its second phase, operating as a **catalytic platform to accelerate Energy-as-a-Service project development**, with key findings presented to the Swiss Federal Office for Energy and EnergieSuisse. Meanwhile, the Servitisation for Energy Transition (SET) Alliance **expanded its membership** with newcomers such as Greentec and Danfoss and **released specialised contract guidelines for circularity and Product-as-a-Service models.**

In general, BASE's work on the Cooling-as-a-Service model received high-level recognition with BASE **winning the Zayed Sustainability Prize in the Energy category**, an achievement that will support efforts towards mainstreaming this innovative sustainable cooling access solution globally.

In Indonesia, the Energy Saving Insurance project, supported by UK PACT, secured a significant institutional milestone with the **signing of Memoranda of Understanding with six entities**, comprising three banks and three insurance providers, to implement the ESI model.

Virtual Power Plant pilots in Colombia, Brazil and Mexico progressed on schedule, with the Brazilian national regulator positioning the project as a showcase for innovative energy infrastructure.





BASE's **climate and sustainable finance work** advanced across several fronts in 2025. The Lebanon Green Investment Facility (LGIF) project reached its conclusion in September, receiving broad endorsement at its final validation workshop in Beirut despite the challenging regional context, and **establishing a structured vehicle for mobilising climate finance in support of Lebanon's national climate commitments.**

In parallel, the 3DEN initiative gained significant momentum as the Italian Ministry of Environment substantially increased its funding commitment to approximately USD 20 million. Following an exhaustive due diligence process led by BASE, **14 pilot projects across Africa and Brazil were selected and formally announced at COP30 in Belém.**

In Suriname, meaningful progress was made in developing the **Inclusive Sustainable Finance Protocol with the Suriname Association of Private Banks**, a framework designed to standardise green banking practices across the country. The protocol received approval from the Central Bank of Suriname for official co-signatory status, marking a significant step towards embedding sustainable finance standards within the national banking system.



Through the EmPower initiative, developed in partnership with UNEP and UN Women, BASE supported **five banks across Indonesia, Vietnam and Bangladesh in designing financial incentives to expand clean energy lending to women-led small and medium enterprises.**

A concrete milestone was reached in November, when BRAC Bank in Bangladesh successfully **disbursed clean energy loans to 33 women-owned or women-serving SMEs.**

Alongside this direct financing work, BASE managed grant distribution to partner institutions, supporting them in defining targeted incentives, setting outreach objectives and establishing reporting frameworks.

To strengthen the broader evidence base for practitioners to implement more inclusive initiatives, BASE released **an updated Gender Toolkit for Climate Finance Projects**, developed in collaboration with researchers from the Geneva Graduate Institute.

Building on its 2021 edition, the updated toolkit **offers enhanced guidance and real-world case studies** illustrating what gender mainstreaming looks like in practice across climate finance initiatives, equipping project teams with tested, actionable insights. Conceived as a living document, it is designed to evolve alongside implementation experience and continue supporting more equitable and effective climate finance programming.



Finally, BASE's **circular economy financing work** advanced significantly across Latin America in 2025.

Circular Economy Categorisation Systems were developed in Chile, Costa Rica, Uruguay and the Dominican Republic, providing financial institutions with a standardised mean to identify and direct investment towards projects that contribute to the transition to a circular economy.

Capacity building efforts accompanied this work, with training programmes delivered to financial institutions across the region.



In Chile, the programme concluded with **ten organisations, including major banks, presenting applied circular economy projects ready for financing consideration**. Project outcomes were shared at high-level regional forums including the FinnLAC Forum in Miami and the CTCN Designated National Entities Forum in Panama.

BASE also supported the **USD 100 million LATAM Circularity Fund**, led by Mesoamerica and Evolve and supported by IDB Invest, by developing an **investment categorisation system and operational framework for identifying, classifying, monitoring and reporting circular economy investments** across Colombia, Mexico, Costa Rica and Panama.



OVERVIEW OF BASE'S PROJECTS IN 2025





FOREWORD

“

BASE was founded on a conviction that remains more urgent than ever. Addressing climate change requires not only the right policies and technologies, but the right financing strategies and business models to make clean solutions genuinely competitive, affordable, and scalable.

From a smallholder farmer in a developing country to a local financing institution, from an underserved segment of the market to an industrial corporation or a public entity in a developed market, the logic is the same. Lasting transformation requires market-based solutions that drive behavioral change, engage key stakeholders, and create the conditions for systemic market transformation. Over twenty-five years, we have been building movements. Each project, each financing strategy, each business model we have designed and tested has brought together governments, financiers, businesses and communities around a shared conviction that market-based solutions can drive the systemic market change our climate demands. Technologies have advanced, markets have matured, and the urgency has only grown,



Daniel Magallón

Managing Director of BASE

which makes this a genuinely exciting moment to be doing this work.

We are deeply grateful to every philanthropist, institution, partner, collaborator, and ally who has supported and been part of this journey. Together, we have been building the foundations for a more sustainable and equitable world, and with each project, each partnership, each solution scaled, we move a little closer to it.

Congratulations to BASE on 25 years of mission-driven innovation. The next chapter is the most important yet. ”



Eric Usher

*Head, UN Environment Programme
Finance Initiative (UNEP FI) &
member of BASE Foundation's Board*

“

Addressing climate change requires more than good intentions. It requires business models that work and financing strategies that can be implemented in the real world. BASE has spent twenty-five years doing exactly that, across sectors and geographies. Its work with financial institutions is one important example.

Sustainable finance is still seen by some as peripheral, or mainly as a reputational commitment. In reality, it is central to

competitiveness, resilience, and long-term relevance. But strategy alone is not enough. Sustainability has to be operationalised, embedded into the processes, systems, and decisions that shape how organisations work every day.

This is where BASE has made a distinctive contribution, helping design, operationalise, and test approaches that turn ambitions into practical models across different markets and institutional contexts. Work that requires technical depth, creativity, and strong local partnerships.

Business model and financing innovation is not always the most visible part of the transition, but it is one of the most necessary. The Zayed Sustainability Prize 2026 represents an important validation of that pathbreaking approach, and of the potential of Cooling-as-a-Service to make efficient cooling financially accessible across sectors and geographies.

As BASE celebrates its twenty-fifth anniversary, I warmly congratulate the team on behalf of UNEP FI and look forward to continuing our collaboration in the years ahead. ”



WHO WE ARE



Our Mission

Established in 2001, BASE is a Swiss not-for-profit and a Specialised Partner of the United Nations Environment Programme.

Our mission is to develop innovative, actionable financial strategies and market-driven solutions to unlock investment in sustainable energy and to tackle climate change.

Around the world, we work with all markets and segments

Our Vision

At BASE, we work towards building an environmentally conscious and resilient world, where sustainability becomes an inherent part of how businesses and markets operate. By facilitating the adoption of climate change solutions, we aspire to drive positive change and contribute to building a better future for our planet and future generations.

Our Values



Integrity and commitment

Our work at BASE is powered by our passion and commitment on climate action for the common good. We deliver long-lasting impact through iterative innovation and continuous learning from feedback, and by building trustworthy relationships within the team and with our partners.



People-centric and Diversity

At BASE, open hearts and minds come together. We embrace diversity, recognising that it is key to fostering an inclusive and fun working environment where every individual feels valued, resilient, and empowered to contribute their unique perspectives and talents for our collective growth.



Co-creation

Our solutions are born from collective creativity. We nurture connections, exchange, and collaborations between different segments of society to improve our solutions and pass the learnings forward.



Our team



Our board



GINA DOMANIG

Chairperson of the Foundation Board

Managing Partner, Emerald
Technology Ventures



MAXINE GHAVI

Member of the Foundation Board

Executive Vice President & Head of Europe
Chief DOI Officer of the Energy Sector



ERIC USHER

Member of the Foundation Board

Head, UN Environment Programme
Finance Initiative



OUSSEYNOU NAKOULIMA

Member of the Foundation Board

Director at IFC - International Finance
Corporation



VANINA FARBER

Member of the Foundation Board

elea Professor of Social Innovation, Co-
Director of IMD Center for Social Innovation

An aerial photograph of a city street scene. In the foreground, a large blue circular graphic with a grid pattern is overlaid. The background shows a city with various buildings, including a large yellow building with a flat roof and solar panels. A silver SUV is parked in a courtyard area. The sky is clear and blue.

OUR PROJECTS

An aerial photograph of a mangrove forest, showing a complex network of winding water channels (canals) that separate dense, green mangrove islands. The water is a light, silty brown color, contrasting with the vibrant green of the mangrove vegetation. The overall pattern is highly irregular and organic.

01

AREA OF WORK

Picture credit: Taiwo Aina

ADAPTATION AND RESILIENCE

YOUR VIRTUAL COLD CHAIN ASSISTANT





Setting The Context

Agriculture's contribution to food security extends well beyond what happens in the field. For decades, investments in pre-harvest practices, from improved seed varieties to irrigation management, have formed the backbone of agricultural development. These advances have been transformative and remain essential, yet their returns are only fully realised when harvested produce can travel safely from field to market. Globally, between 30 and 40 percent of fruits and vegetables never reach a consumer, spoiling in transit, in makeshift storage, or at market within days of leaving a farm. Among the wide range of post-harvest responses, energy and cooling infrastructure occupies a particularly critical space. Reliable electricity, solar-powered cold rooms, and temperature-controlled logistics remain out of reach for much of the smallholder farming population in low- and middle-income countries, and the gap between what is grown and what is sold will not close until agricultural development programmes treat energy access as a core enabler of food system resilience.

Post-harvest infrastructure sits at the heart of the agri-energy nexus. Without adequate storage, the value of even a high-quality harvest erodes quickly: farmers are forced to sell immediately, when supply is highest and prices are lowest. Cold storage can break this cycle, extending the shelf life of perishable crops from days to weeks and giving farmers the time to target better markets, reduce distress selling, and deliver produce at a quality that supports better nutrition and food safety outcomes. Yet cold storage remains a sector where most projects with real potential never move beyond a pilot. Financing decisions are rarely context-informed, proof of impact remains limited, and frameworks for transitioning from grant dependency toward commercial viability are scarce. Among the models that have shown promise, Cooling-as-a-Service (CaaS) addresses the affordability barrier directly by enabling access without ownership, with farmers paying a modest daily fee per crate stored.

Even where CaaS is in place, sustained use of cold rooms is far from guaranteed. Many smallholder farmers remain hesitant, uncertain about crop quality during storage and unconvinced that fees will translate into better market outcomes. As a result, cooling companies struggle with

PERIOD

2021-2026

COUNTRIES

India, Guinea-Bissau, Nigeria, Iraq

PARTNERS

Empa

FUNDERS

[data.org](#), Climate Ledger Initiative, German Development Cooperation (GIZ), ECOWAS, REPIC, Climateworks Foundation, Airwell

ACHIEVED IMPACT



NUMBER OF BENEFICIARIES

654 (27% women) who have done at least one check-in in Coldtivate, across 42 cold rooms managed by CaaS and Coldtivate by 11 different cooling companies.



CO2 EMISSIONS REDUCTION

278 tCO2e/year (from reduced crop spoilage and storage in solar-powered units for one year, based on LCA analysis).



ENERGY SAVINGS

82,919 kWh/year (from replacing fossil fuels with solar power for 42 rooms for one year).



FOOD LOSS EVOLUTION

-61.8% food loss (before / after using cold storage).



AVERAGE INCREASE IN EARNINGS FROM CROP SALES

+43.7% farmers revenue (before / after using cold storage).



REACH OF CAPACITY BUILDING ACTIVITIES

5537 people (42.5% women).





unpredictable occupancy rates that undermine cost recovery. The challenge is self-reinforcing: without steady use, the economics unravel for the cooling company, threatening the very access the model was designed to provide.

The Your Virtual Cold Chain Assistant ([Your VCCA](#)) initiative was designed to break this cycle. Launched by BASE Foundation and [Empa](#) in 2021, the initiative supports the deployment of decentralised cold rooms close to farms or market gates and addresses the trust and information deficits that drive inconsistent use by adding a digital layer to each facility. That digital layer is [Coldtivate](#), a free, open-source mobile application co-developed by BASE and Empa. For farmers, it provides real-time visibility over crop quality through physics-based shelf-life prediction models covering 26 crops, building the confidence needed to store rather than sell immediately. For operators, it simplifies the management of complex multi-user facilities through crate-level inventory tracking and remote monitoring of utilisation, temperature, and revenues. In case where market access is a barrier, it connects storage directly to sale through an in-app marketplace and machine-learning-based crop price forecast. Available in ten languages and deployed in Guinea-Bissau, India, Iraq, and Nigeria, Coldtivate equips both farmers and cooling companies to act on data rather than instinct. Behind every well-functioning cold room is a set of decisions made long before the first crate was checked in, which is why Your VCCA

structures its work across four pillars: feasibility assessment and technology matching; business and governance model design; digitalisation through Coldtivate; and capacity building. Together, these position the cold room as a strategic enabler of agricultural transformation. The sections that follow examine how this approach is being applied across the contexts in which Your VCCA operates.

Review of 2025

[TAILORING YOUR VIRTUAL COLD CHAIN ASSISTANT TO WEST AFRICA](#)

In Guinea-Bissau, smallholder farmers lose an estimated 40 per cent of their fruit and vegetable harvests to spoilage. Grid electricity is unreliable across most of the country, cold chain infrastructure is virtually absent, and fragmented markets force farmers to sell at harvest time – when supply peaks and prices are lowest.

The “[Tailoring Your Virtual Cold Chain Assistant to West Africa](#)” project was launched in February 2024 with support from [GIZ](#) and on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the [ECOWAS Commission](#). This project is a part of the Technical Component of their collective Fund for Regional Stabilisation and Development in fragile regions within ECOWAS Member States (FRSD). Implemented in partnership with Empa, the project aims to address post-harvest losses by deploying decentralised, solar-powered cold storage under the Cooling-as-a-Service model across four regions: Bafatá, Bolama, Gabú, and Quinara. Having completed a feasibility assessment and begun procurement in 2024, the project reached its defining milestone in 2025: the installation, commissioning, and handover of all four cold rooms to local operator teams.

The units were delivered in mid-2025 and commissioned between September and October. Three containerised cold rooms became operational in Bafatá, Gabú, and Quinara, while in Bolama a cooling chamber retrofitted into an existing building was commissioned. To secure the long-term use of these assets, each unit was formally handed over to its host organisation through donation agreements.

The cold rooms were designed from the outset to be community-owned and locally operated. A two-pronged governance model pairs local NGOs or farmer producer



Microentrepreneurs testing the Coldtivate app in Gabú, Guinea-Bissau.



groups - ADA in Bafatá, AMAE in Gabú, Para Ka Tem in Quinara, and OGD-KADUN in Bolama - as institutional anchors and infrastructure managers, with microentrepreneurs, who handle daily operations and market linkage, selected through another FRSD project, being led by [SWISSAID's](#). Under the Cooling-as-a-Service model, farmers pay only a modest per-crate daily fee. NGOs collect these fees to cover maintenance and build a reserve fund earmarked for end-of-life battery replacement, ensuring the infrastructure remains operational rather than becoming an abandoned asset. On the other end, microentrepreneurs earn income through produce transport, crop aggregation, and connecting farmers to buyers. To close the utilisation gap that so often undermines cold chain projects, each site was equipped with a motorbike for microentrepreneurs to use, enabling reliable produce collection and direct market linkage. Each party complements the other: NGOs rely on microentrepreneurs to mobilise farmers and drive utilisation, while microentrepreneurs rely on the infrastructure to aggregate produce and guarantee quality. A dedicated field mission in September 2025 validated these arrangements site by site.

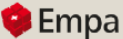
In parallel, the [Coldtivate](#) app was tailored to how the cold rooms would actually be used, with a redesigned interface, translation into Portuguese and French, and integration with the hygrothermal sensors in each unit. Capacity building ran throughout the year: two centralised, in-depth training sessions on cold storage operation, governance, and digital tools were held in Gabú in May 2025 and Bolama in July 2025, bringing together the local operator teams from all four cold room locations (Gabú, Bolama, Tite, and Bafatá). In addition, inauguration events at each site introduced surrounding communities to the benefits of cooling, drawing 257 participants.

A complementary "train-the-trainer" type of programme extended the cold chain to the farm gate, equipping 15 community supervisors with low-cost passive cooling techniques such as clay-pot coolers. They trained 95 farmer-club facilitators to cascade post-harvest knowledge to their communities. Together, training on active and passive cooling reached more than 800 beneficiaries, 72.8 per cent of them women.

The cold rooms had limited time to operate before the project's close in October 2025, but early signals are encouraging. In its first full month, Bafatá recorded 31

users storing tomatoes, carrots, and okra. In parallel, Empa conducted field experiments placing small-scale cooling devices with market vendors in Bissau and Bafatá to quantify cooling benefits under real-world conditions. Two vendors reported produce lasting up to three weeks compared to two to three days without cooling, with estimated additional weekly earnings of 22,000 and 60,000 XOF respectively – providing early qualitative evidence of the value cold storage can unlock for small-holder farmers and traders in Guinea-Bissau.

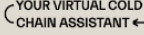
With infrastructure in place, governance tested on the ground, and first users actively storing produce, BASE has submitted a proposal for a second phase of the project in partnership with SWISSAID and other consortium members, focused on consolidating operations, strengthening market linkages with institutional buyers, and ensuring the gradual transfer of cold room management responsibilities to local teams, with the goal of building a self-sustaining farm-to-market ecosystem in Guinea-Bissau.





GLOBAL
YOUR VCCA
SUMMIT
22 OCT 2025



**YOUR VIRTUAL COLD CHAIN ASSISTANT**

SMART COOLING FOR AGRICULTURE

Global Your VCCA E-Summit, a 12 session series about feasibility, financing, technology design, gender inclusion, market linkage, and passive cooling.



YOUR VCCA ONBOARDING KIT AND OPEN-SOURCE CODE

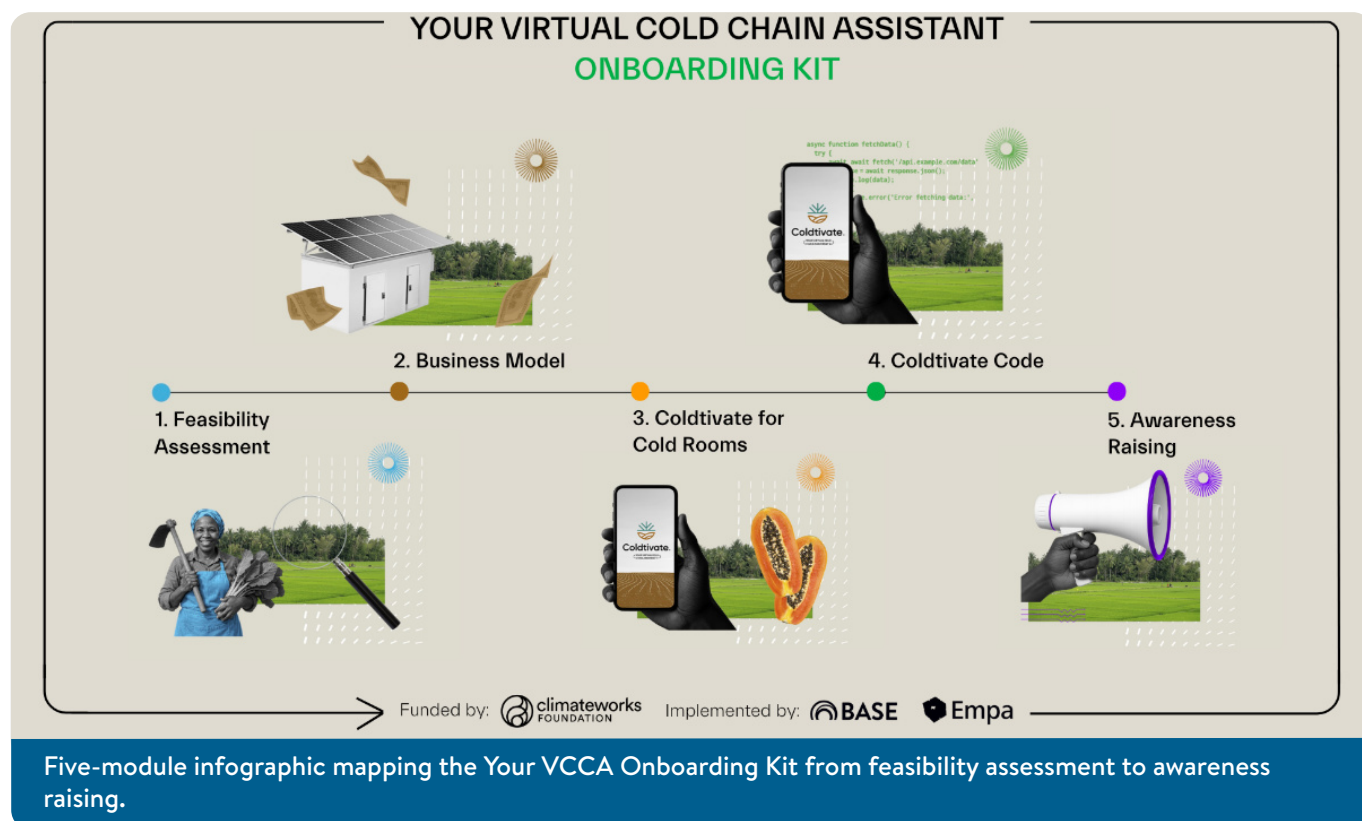
Scaling cold chain solutions depends as much on knowledge transfer as it does on technology deployment. Over years of field work across Guinea-Bissau, India, and Nigeria, Your VCCA accumulated a body of practical expertise spanning feasibility assessment, business model design, governance structuring, digitalisation, and capacity building. The “[Scaling up the efforts to digitalise the cold chain and reduce post-harvest losses](#)” project, funded by [ClimateWorks Foundation](#) and running from August 2024 to April 2026, created the space to make that expertise openly accessible to the broader cold chain community.

The centrepiece of this effort is the Your VCCA [Onboarding Kit](#), a free, self-paced learning resource. Structured around the initiative's end-to-end approach, it serves a range of audiences: farmers and traders access comics and animated videos in eight languages explaining the economic benefits of cooling; cold room operators find training videos and manuals covering day-to-day management and Coldtivate workflows; and cooling companies and ecosystem builders can work through feasibility tools, CaaS business model frameworks, and the new [Coldtivate's open-source code documentation](#). By the close of the project, the Kit had 111 registered users spanning cooling companies, imple-

menting organisations, and independent practitioners. Twenty-two trainers have been certified through its region-specific assessment, including 21 cold room site officials in India who are using the Kit's materials to train the self-help group and farmer producer organisation members managing day-to-day cold room operations.

Coldtivate's source code was also released as open-source on [GitLab](#) and listed on the WIPO Green Database, making it discoverable by governments, researchers, and climate-focused organisations worldwide. Its availability lowers the barrier for others to build cold room management tools tailored to their own contexts rather than starting from scratch. To support adoption, the [Coldtivate Open-Source Incubator](#) brought together six companies from Ghana, India, Nigeria, the United States of America, and Uganda, for a seven-week programme working with the codebase under BASE technical guidance. All training materials were made publicly available in December 2025 as part of the Onboarding Kit.

The project culminated in the first [Global Your VCCA E-Summit](#) on 22 October 2025, a virtual event attracting 450 registrants from 48 countries across 12 sessions spanning feasibility, financing, technology design, gender inclusion, market systems, and passive cooling. A deliberate feature was the Innovation Arena, which





placed emerging cooling ventures and an investor panel in direct conversation with practitioners and government representatives.

The Summit surfaced concrete leads for institutional offtake agreements for the Guinea-Bissau cold rooms, and revealed a strong and previously unmapped network of active actors across East Africa, including governments, cooling companies, and financing initiatives. [All sessions are freely available on BASE's YouTube channel.](#)

Since its release, the Coldtivate GitLab repository has been accessed and copied (or "forked") over ten times, and 17 support sessions were delivered between November 2025 and May 2026, reaching practitioners who had engaged with the Onboarding Kit and returned with follow-up questions on CaaS, Coldtivate integration, and feasibility assessment. Among the most notable was a two-part series delivered to the Montreal Protocol Unit of UNIDO, reaching 65 participants across both sessions, which has already informed one of their new agro-cooling projects in West Africa. A further session on the Coldtivate marketplace feature reached 40 participants from Emporia in Nigeria. These figures carry the hope at the heart of this project: that the work on CaaS and Coldtivate will take root beyond BASE and grow until it outgrows its origins entirely, carried forward by a community that makes it its own.

LEVERAGING DIGITALISATION TO MANAGE COLD ROOMS AT SCALE IN INDIA

Building on the first phase of Your VCCA in India (2021–2022), this new project scales digital cold room management across the state of Odisha, India, where smallholder farmers lose a substantial share of their fruit and vegetable harvests for lack of affordable, reliable cold storage. The project, started in November 2025 with support from [GIZ](#) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), is implemented in partnership with [Koel Fresh](#), the local ecosystem builder.

The project builds on a cold storage ecosystem already taking shape in Odisha. The cold rooms are decentralised, solar-powered facilities financed under Government of Odisha schemes and operated by women's self-help groups (SHGs) and farmer producer organisations (FPOs). More than 50 are supported through the Bloomberg Cities Idea Exchange (BCIE), through which [Bloomberg Philanthropies](#) engages Koel Fresh to build the operational ecosystem around them: operator selection, governance structures, standard

operating procedures, market linkages, and on-the-ground handholding for the SHGs and FPOs that run the cold rooms. The ecosystem, however, still lacks a digital layer: inventory management is currently conducted manually, an approach that is error-prone and limits oversight of operations across the cold rooms.

This is the gap the GIZ-funded project addresses, with BASE engaged to deploy the [Coldtivate](#) app to standardise and digitalise cold room management.

The first step focused on identifying the cold rooms best suited for digitalisation. Drawing on a feasibility assessment of more than 250 operational cold rooms across Odisha, the project selected 25 sites for Coldtivate onboarding, each scored against criteria covering technical readiness, mobile connectivity, governance stability, user base, operator digital literacy, and district-level institutional support.

In parallel, the Your VCCA team has been tailoring Coldtivate to the way Odisha's cold rooms are actually run. This work adapts the app to operators' current manual practices, including registering cooling users without a mobile phone number, adding locally relevant crops and the temperature sensors installed at each site, and supporting the more complex pricing of the CaaS model as



One of the cold rooms part of the digitalisation project, established by the Rourkela Municipal Corporation through Bloomberg Philanthropies, operated and managed by the Maa Tarini Self-Help Group, whose members were trained by Koel Fresh.



applied in Odisha. The aim is an app that fits existing routines rather than forcing operators to abandon them.

To prepare for live operations, BASE trained cold room management staff and visited sites across Odisha in February 2026, gaining a first-hand view of operating conditions and operator needs.

The team also developed capacity-building materials covering day-to-day inventory management, the CaaS model, and Coldtivate workflows. Operator training is currently in progress.

Looking ahead, digitalisation is planned to begin in July 2026, starting with the first phase of sites and extending to the full set of 25 as operators complete training and the tailored app features stabilise. By embedding real-time inventory tracking, automated shelf-life estimation, and standardised record-keeping into daily

operations, the project aims to shift Odisha's decentralised cold rooms away from manual, experience-based management towards a scalable, data-driven model that can be replicated across other Indian states.

Future of the project

In 2026, Your VCCA's focus turns to deepening the impact of what has been built: strengthening market linkages through digital tools, generating robust evidence on cold room impact, and ensuring the models developed are financially sustainable and locally owned. The Zayed Sustainability Prize complements ongoing funding and creates the space to go further than any single stream would allow.

Coldtivate will be used more systematically to aggregate produce and connect farmers to buyers, moving beyond storage management towards becoming an active market linkage tool. Alongside this, data collected across active sites will build a rigorous evidence base on post-harvest loss reduction and farmer livelihood outcomes, providing the sector with the proof of impact it needs to attract sustained investment. On the business model side, the refined CaaS modelling tool will be piloted with cooling companies to test how alternate income streams can reduce grant dependency and strengthen long-term financial viability. Underpinning all of this is a commitment to capacity building that goes beyond training: deliberately structured to bring women and marginalised groups in as operators, decision-makers, and governance actors, ensuring that those most affected by post-harvest loss have a genuine stake in the systems built to address it.

At a systems level, Your VCCA is working towards broader institutional adoption of Coldtivate, by governments integrating it into national cold chain programmes and companies building on its open-source code. The goal is a tool that is self-sustaining, locally owned, and no longer dependent on BASE to keep it moving.

Looking further ahead, Your VCCA is exploring potential expansion into new country contexts across Africa, Indonesia, and Brazil, where growing smallholder populations, rising temperatures, and nascent cooling ecosystems make the end-to-end approach both relevant and urgent. The ambition, ultimately, is a cold chain innovation ecosystem that outlasts any single project and is carried forward by the communities it was built to serve.



BASE delegation including Rebecca Botello, Simran Singh, and local consultant Mohamadú Saido Baldé, visiting local farmer producer groups on a mission trip to Bafatá, Guinea-Bissau.

SCALE PAY-PER-USE SOLAR IRRIGATION SERVICES FOR SMALLHOLDER FARMERS





Setting The Context

Access to reliable and affordable irrigation remains one of the most persistent barriers facing smallholder farmers in India. Many farmers continue to depend on diesel-powered pumps or unreliable electricity access, exposing them to high and volatile operating costs, under-irrigation, and reduced agricultural productivity. While solar irrigation offers a cleaner and lower-cost alternative, the upfront investment required to purchase solar pumping systems remains out of reach for many low-income farmers, particularly those cultivating small and fragmented plots.

This is where service-based models can play a transformative role. By separating access from ownership, solar irrigation can be delivered as a Pay-Per-Use service, allowing farmers to pay only for the water they use rather than purchasing and maintaining the equipment themselves. This reduces the affordability barrier, shifts technical and operational responsibility to the service provider, and enables farmers to access clean irrigation in a way that better reflects their cash flow and seasonal income patterns.

BASE is supporting Oorja Development Solutions to scale this model in Northern India through the REPIC-supported project “Scaling Pay-Per-Use Solar Irrigation Services for Smallholder Farmers”. The project builds on Oorja’s existing Irrigation-as-a-Service model, through which the company installs, owns, operates, and maintains decentralised solar-powered irrigation systems and sells metered irrigation water to smallholder farmers under an affordable tariff structure. BASE contributes its experience in service-based business models, sustainable finance, digitalisation, and financial structuring to strengthen the model’s scalability and investor readiness.

Review of 2025

Following the approval from REPIC, [the project](#) formally started in 2025. The programme is structured around three technical work packages: geographical expansion, strengthening unit economics, and piloting technological and financial innovations. Together, these work-



PERIOD

2025 - 2027

COUNTRIES

India

PARTNERS

Oorja Development Solutions

FUNDER

REPIC

EXPECTED IMPACT



NUMBER OF BENEFICIARIES

3,000 smallholder farmers directly served through 200 new solar irrigation pumps.



NUMBER OF INDIRECT BENEFICIARIES

approximately 22,200 people, based on average household size in the implementation areas.



CLEAN ENERGY GENERATION

approximately 1 MWp of installed solar PV capacity and 1,500 MWh of renewable electricity generated annually once all 200 pumps are deployed.



EMISSIONS REDUCTION

approximately 2,100 tCO₂e estimated annually through reduced diesel use.



ENERGY SAVINGS

Irrigation services expected to be 20–60% cheaper than diesel alternatives, with projected additional household earnings of CHF 700–850 per year for participating farmers.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH

around 100 local operators expected to be trained, with a target of 20% women.



FINANCE MOBILISED

CHF 500,000 REPIC contribution, alongside committed co-financing from Oorja’s existing funding partners.



streams aim to support the deployment of solar pumps following Oorja's Pay-Per-Use model, while improving the underlying business model so that it can attract further future investments and become more commercially scalable and sustainable.

The past year, the project first focused on accelerating Oorja's deployment and preparing for geographical expansion across existing and new operational districts in Northern India. By August 2027, the target is to reach 200 additional pumps, providing affordable irrigation services to approximately 3,000 smallholder farmers and indirectly benefiting an estimated 22,200 people. Early implementation progressed ahead of schedule: by 30 March 2026, Oorja had installed 66 new pumps under the project period, exceeding the first Milestone target of 48 pumps. The company also began its first expansion into Lakhimpur district in Uttar Pradesh and completed market research across eight candidate districts, laying the groundwork for further expansion.

A second area of work focused on strengthening the pumps' unit economics. Solar irrigation services are highly dependent on utilisation rates, payment collection, and the ability to reduce the payback period of decentralised assets. In 2025, BASE and Oorja worked on improving the data foundation needed to manage these drivers more effectively. A suite of digital dashboards was developed, covering sales, impact, financial performance, business development, and customer success. The dashboards are designed to give Oorja's

management team better visibility across site-level performance, revenues, payment collection, utilisation, expenses, and impact indicators. BASE contributed to the dashboard design and data logic, including how field-level transactions and pump condition data flow into management reporting.

A third workstream focused on technological and financial innovation. On the technology side, Oorja assessed several options for remote monitoring of solar pumps, including optimisation of existing systems, IoT gateways, sensor-based solutions, and next-generation drive units with integrated monitoring. The digital solution of Shakti RMS was selected for the pilot phase, allowing Oorja to test remote monitoring and improve the quality, timeliness, and reliability of pump performance data.

On the financing side, BASE began supporting the analysis of alternative financing mechanisms that could reduce Oorja's reliance on balance-sheet funding for new assets. This includes assessing the potential use of Special Purpose Vehicles (SPV) and lease-financing structures for solar irrigation assets. These structures could help improve the bankability of the model, align financing tenors with the revenue profile of Pay-Per-Use irrigation, and create a pathway for future concessional or commercial investment.

Future of the project

The next phase will focus on translating the foundations built in 2025 into deeper operational and financial readiness. Oorja will continue pump deployment at an accelerated pace, expand on-ground feasibility assessments in new districts, and refine market-entry strategies for additional geographies. The project will also continue improving the sales, financial, and impact dashboards so that they support real-time management decisions and investor-grade reporting.

BASE will continue its work on SPV usability and lease-financing options, helping Oorja assess which structures are most suitable for scaling solar irrigation assets while keeping tariffs affordable for smallholder farmers.

By the end of the project, the ambition is to deploy 200 new pumps and, in doing so, strengthen the business model behind them: improving utilisation, payment collection, payback periods, impact monitoring, and financing readiness. If successful, the project will provide a replicable model for scaling clean, affordable irrigation services in rural India and potentially in other agricultural markets facing similar barriers.



Visiting fields of crop farmers in Northern India.

02

AREA OF WORK

SUSTAINABLE ENERGY

AREA OF WORK:

SUSTAINABLE ENERGY

2.1 INNOVATIVE BUSINESS MODELS

PROJECTS:

A) *ENERGY SAVINGS INSURANCE (ESI)*

ESI INDONESIA

B) *SUSTAINABLE ENERGY-AS-A-SERVICE*

SERVITISATION FOR ENERGY TRANSITION (SET) ALLIANCE

SERVETIA

SUSTAINABLE ENERGY

INNOVATIVE BUSINESS MODELS

ESI INDONESIA





Setting the Context

Small and medium-sized enterprises (SMEs) are central to Indonesia's economy and to its decarbonisation pathway, yet they remain largely outside the reach of mainstream energy-efficiency finance. Indonesian SMEs face a familiar cluster of barriers: high upfront costs of efficient equipment, perceived performance risks linked to new technologies, and limited access to tailored financial products. According to the International Energy Agency (2025), constrained financial resources and less formalised approaches to energy management limit smaller firms' ability to identify and deliver energy-efficiency improvements, even when the business case is competitive.

In Indonesia, recent diagnostic work on energy-efficiency financing similarly points to a converging set of structural barriers that together hold back commercial lending for SME energy-efficiency investments: perceived high project risk, limited awareness of energy savings as a business case, small transaction sizes, and limited evaluation capacity within local financial institutions.

To effectively align the country's climate and sustainable-finance goals with the actual investment practices of SMEs, it is essential to implement de-risking instruments. These instruments serve a dual purpose: building trust between the transacting parties and, crucially, enabling SMEs to secure financing on more favourable terms.

The Energy Savings Insurance (ESI) Indonesia initiative addresses precisely this gap, by combining a standardised performance-based contract, independent validation and verification mechanisms, and performance-risk insurance which also reduce perceived investment risk and facilitate access to financing for energy-efficiency projects at improved terms and conditions.

The project is funded by [UK PACT](#) — the UK Government's flagship climate finance programme supporting partner countries on their low-carbon, climate-resilient transition. ESI Indonesia is led by BASE Foundation in strategic partnership with the [ASEAN Centre for Energy \(ACE\)](#).

PERIOD

2025-2027

COUNTRIES

Indonesia

PARTNER

ASEAN Centre for Energy (ACE)

FUNDER

UK Pact

ACHIEVED IMPACT



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH

356 individuals across 51 organisations engaged through bilateral meetings, workshops and technical sessions during 2025.



NUMBER OF ORGANISATIONS ENGAGED

8 partnerships formalised over the year, including the OECD-MEMR-OJK Task Force, 3 financial institutions (Bank BSI; Bank Mandiri and SMBC), 3 insurance companies (PT Asuransi Asei Indonesia, PT Jaminan Pembiayaan Askrindo Syariah and PT Asuransi Sinar Mas), and BBSP KEBTKE.



TOOLS OR RESOURCES CREATED

Market Assessment of Energy Efficiency Projects in Indonesia (ACE); ESI Standardised Contract finalised in English and Bahasa Indonesia.





Review of 2025

The year saw the ESI Indonesia model move from design to early operational readiness, with progress across each of its core components: standardised contract, validation and verification mechanisms, performance-risk insurance, financial-institution engagement, pilot pipeline development, and knowledge-sharing activities. The strategic foundation was set with the completion in August 2025 of a comprehensive scoping and market assessment, conducted by ACE, of energy-efficiency and electrification potential across Indonesian SMEs, identifying priority sectors and technologies for early ESI deployment. The project also mobilised specialised local expertise across the financial, insurance, legal and energy-efficiency sectors, to ensure that the ESI model could be credibly adapted to Indonesian market conditions and institutional practices.

The ESI standardised contract was adapted to the Indonesian regulatory framework, and a consolidated bilingual version (English and Bahasa Indonesia) incorporating insurer feedback was finalised by year-end. This contract forms the operational backbone of the ESI model: it establishes a standardised agreement between SMEs and technology providers in which energy savings are contractually guaranteed, defines the responsibilities of each party, and creates the basis upon which insurers and financial institutions can participate with greater confidence. The adaptation process involved multiple rounds of engagement with insurers and legal experts to align the structure with Indonesian contract-

ing and insurance practices, particularly around the use of multi-year surety instruments linked to guaranteed energy savings.

Work on the validation and verification mechanisms progressed through the structuring of a public-private validation pathway anchored on BBSP KEBTKE — the public technical institution under the Directorate of Energy Conservation and Energy Efficiency (EBTKE) specialising in inspection, testing and energy conservation. Under the ESI model, independent validation is essential to confirm that projected energy savings are technically sound before financing and insurance are issued, and to verify that installations are delivered as agreed. During the year, the project advanced discussions on how these functions could be implemented in Indonesia through a combination of public-sector technical oversight and private-sector support, while also adapting existing ESI methodologies and procedures to the Indonesian context.

On performance-risk insurance, sustained engagement with insurers translated into three signed Memoranda of Understanding with PT Asuransi Asei Indonesia, PT Jaminan Pembiayaan Askrindo Syariah and PT Asuransi Sinar Mas, marking a significant step towards market adoption of ESI-backed performance guarantees. These partnerships are central to the ESI approach, as the insurance product is designed to cover the risk that promised energy savings are not achieved. By reducing performance risk for both SMEs and lenders, the mechanism aims to increase trust in energy-efficiency



Representatives from BASE and insurance companies ASEI and Askrindo at a ceremony organised on the occasion of the signature of formal partnership agreements on the ESI model.



investments and support access to financing on more favourable terms.

Throughout the year, the project worked closely with insurers to adapt the structure of the ESI performance guarantee to Indonesian market practices, including the use of surety bond instruments that are typically issued on an annual basis. A formal notification was submitted to OJK on the use of the multi-year surety bond under the ESI scheme, reflecting close regulatory engagement.

Engagement with banks focused not only on introducing the ESI concept, but also on demonstrating how the combination of contractual guarantees, independent validation, and insurance coverage could reduce credit risk and improve the bankability of energy-efficiency projects. This is particularly important for SMEs, which often struggle to access financing for energy-efficiency investments due to limited collateral, small transaction sizes, and uncertainty around projected savings. By the end of 2025, participating financial institutions had moved from initial awareness-building discussions towards exploring concrete pilot opportunities and internal approval pathways. Eight banks were engaged across the year, with Bank BSI signing a Memorandum of Understanding and Bank Mandiri and SMBC issuing Letters of Intent, signalling readiness to proceed towards pilot participation by the close of 2025. Pilot pipeline development advanced through the identification of early-stage opportunities, including in bank-owned buildings, energy-efficiency upgrades in public buildings and in the commercial and industrial sector.

Knowledge-sharing and institutional alignment reinforced these foundations. Regular engagement was sustained with EBTKE and the Financial Services Authority (OJK) throughout the year, including a workshop with the multifinance sector co-hosted by BASE and EBTKE at OJK's request in September 2025 and attended by leading multifinance companies. The project joined the newly established OECD-MEMR-OJK Task Force on energy-efficiency financing and contributed as speaker at the OECD workshop "Guarantees in action: connecting finance to clean energy projects in Indonesia" and at IEECC 2025. The ESI Indonesia website is under development as a central knowledge hub.

Future of the project

Building on the confirmed milestones of 2025, the project will continue its trajectory towards pilot implementation and the full operationalisation of the ESI ecosystem in Indonesia. The next phase will focus on moving the ESI model from institutional preparation into real-world application by supporting the first energy-efficiency projects to be structured, financed, validated, and insured under the ESI framework.

Priorities for the next phase include finalising the validation and verification mechanisms and the Validation Services Agreement so that independent technical assessment procedures are fully operational and ready to support pilot projects. These mechanisms are essential to ensuring that projected energy savings are credible and measurable, thereby strengthening confidence among insurers, banks, and end clients. The project will also advance bank-led pilots in bank-owned buildings, industrial parks and other identified opportunities through energy audits carried out by other implementing partners under the UK PACT programme. These pilot projects are expected to demonstrate in practice how ESI reduces investment risk and facilitates access to finance for energy-efficiency upgrades.

The project will continue deepening institutional adoption through continued engagement with OJK on the regulatory treatment of multi-year surety instruments and with EBTKE on alignment with national energy-efficiency priorities. This engagement aims to ensure that the ESI mechanism is not treated as a stand-alone pilot initiative, but progressively embedded within Indonesia's broader sustainable-finance and energy-transition ecosystem. Additional partnerships with banks, end clients and technology providers will support implementation readiness and help expand the pipeline of potential ESI projects across commercial, industrial, and public-sector segments.

Continued collaboration with the OECD-MEMR-OJK Task Force and learning exchange with other ESI markets in the region are expected to amplify the project's contribution to knowledge sharing and to the wider transformation of Indonesia's sustainable-finance ecosystem. By combining risk mitigation, technical validation, and financial-sector engagement within a single operational framework, the project aims to demonstrate a scalable approach for accelerating energy-efficiency investment among Indonesian SMEs and other underserved market segments.

SUSTAINABLE ENERGY



INNOVATIVE BUSINESS MODELS

SERVITISATION FOR ENERGY TRANSITION (SET) ALLIANCE





Setting The Context

The Servitisation for the Energy Transition (SET) Alliance is a membership network founded by the BASE Foundation in 2022 to advance service-based business models as a pathway to deploying cleaner and more efficient technologies in the built environment. By bringing together solution providers, customers, financiers, and knowledge partners, the Alliance supports the scaling of energy solutions delivered as-a-service, for applications such as cooling, heating, lighting, solar, and energy storage.

Servitisation refers to an innovative business model where customers engage with solutions on a pay-per-use model (focused on OPEX) rather than purchasing the physical asset (traditional CAPEX model). When applied to energy-efficient and renewable energies, clients benefit from the advantages of high efficiency and state of the art solutions, while solely paying for the amount of service they consume, while the technology providers retain the ownership and maintenance responsibilities. Hence, this approach encourages the uptake of modern, efficient systems by sparing end-users the costs of acquiring and operating the equipment as well as any associated risks.

The Alliance operates across four core pillars: raising awareness, capacity building, tools and resources development, and strategic projects. Through these pillars, the Alliance works to grow the market for as-a-service energy solutions, helping solution providers design and refine their offerings, engaging customers and financiers in project development, and leveraging an international network of organisations to share expertise and build momentum for the transition.

Review of 2025

The Alliance delivered substantive progress across its workstreams and advanced several significant initiatives to be continued in 2026. A landmark moment was the submission of an application for the [Zayed Sustainability Prize](#), recognising BASE's work in advancing cooling-as-a-service as a scalable climate solution, which was awarded in early 2026. The Alliance also submitted an EU Horizon application in partnership with PACCT to develop product-as-a-service business models.



PERIOD

Since 2021

COUNTRIES

Global

PARTNERS

Advanced Services Group (ASG), Aston Business School, KAER, Energy Partners, ATMosphere, Oxford University

FUNDERS

SET Alliance members

ACHIEVED IMPACT

(SINCE START OF THE PROJECT, DATA AVAILABLE FROM MEMBERS OF THE ALLIANCE)



FINANCE MOBILISED

Over USD 160 million.



EMISSION REDUCTION

Over 81,000 tonnes of carbon emission per year from energy efficiency improvements.



ENERGY SAVINGS

Over 130 GWh.



AMPLIFICATION REACH

Around 20k impressions and 600+ engagements on social media (1.1k followers) over 2025.

180 attendees and 200 video views through 2 webinars.

155 users accessed the Cooling-as-a-Service and SET toolkits.



Although unsuccessful this time, the Alliance continues to be placed strategically in discussions on energy efficiency and Product-as-a-Service development in Europe. The Alliance assumed influential strategic roles during the year, including serving on the scientific board of PACCT and coordinating the UNEP District Cooling Working Group, positioning SET at the centre of key international conversations on energy efficiency and decarbonisation.

Member engagement remained active, with new members [GreenTec Energy](#) (Panama based) and [Asia Clean Capital](#) (Vietnam based) alongside continued work with established members such as [Positive Zero](#) in the Middle East and Danfoss (nordics). The Alliance also facilitated connections between members, linking GreenTec with [Danfoss](#), [Energy Partners](#), and [Kaer](#) to explore collaborative opportunities.



On the knowledge and market-building side, the Alliance hosted and participated in a range of events and webinars covering topics from unlocking [financing for efficiency-as-a-service](#) to [industrial decarbonisation and materials-as-a-service](#).



A flagship article was also published covering the [latest developments of CaaS in Africa](#), interviewing 6 leading providers active in the cold chain sector.

Additionally, the second edition of the Efficiency-as-a-Service (EaaS) Innovation Showcase awards was held to recognise and promote impactful initiatives from across the globe. Five leading innovators in the servitisation sector competed, with projects ranging from cold rooms to hotels. The award was granted to Water Horizon, for their Cooling and heating-as-a-Service project in Toulouse, France, using mobile thermal battery technology and use of waste heat from an incinerator. The full case study will be published in 2026.

Consultancy engagements continued with a large battery manufacturer and Honeywell in partnership with P2S Consulting, exploring battery-as-a-service and cooling-as-a-service, with a market assessment for selected European countries delivered to Honeywell. The Alliance also contributed case studies and curriculum content to the IMD course on Creating Value in the Circular Economy.

The Alliance website continues to promote the publicly available tools developed under the CaaS and EaaS initiatives, and plans to update these tools in consultation with its members and Steering Committee. Work began on updating the standardised EaaS and CaaS contracts in conjunction with the CBC project focused on exploring circular practices and contract development. Preparatory work including discussions with the Global



Innovation Lab for Climate Finance on updating the pricing model commenced. Several new funding proposals were also advanced, including a UNEP/GlobalABC/ Cool Coalition initiative on cooling-as-a-service with the Japanese Government, and a GHG accounting framework for cooling-as-a-service developed in collaboration with the Carbon Trust.

In parallel, a wide range of stakeholder conversations took place, from councils exploring heat-as-a-service to multinationals assessing cooling strategies in Abu Dhabi and Bangkok, reflecting growing but still nascent market interest in service-based energy models.

Future of the project

Building on the momentum of the Zayed Sustainability Prize win, the SET Alliance will focus in the coming year on scaling the impact and reach of cooling-as-a-service in strategically important countries, working with part-

ners and members to move from market development to tangible deployment.

Together with the Steering Committee, the Alliance remains firmly committed to supporting service-based solutions for energy-efficient technologies across all its application areas. This includes deepening engagement with existing members, welcoming new solution providers and financiers into the network, and continuing to facilitate connections that unlock real projects.

The Alliance will also pursue additional project funding with strategic partners, including ongoing proposals with UNEP, the Cool Coalition, and the Carbon Trust, to expand the evidence base and develop practical instruments for the market. Updating tools such as standardised contracts and the CaaS pricing model, and producing relevant materials for members and the broader market, will remain a priority throughout the year.

WATER HORIZON

EaaS
Innovation Showcase
Award

Winner

for delivering cooling-as-a-service using
mobile thermal batteries powered by
waste heat

Efficiency-as-a-Service (EaaS) Innovation Showcase Award was granted to Water Horizon, for their Cooling and heating-as-a-Service project.

SUSTAINABLE ENERGY

INNOVATIVE BUSINESS MODELS

SERVETIA INITIATIVE





Setting the Context

Switzerland's building stock remains one of the country's most significant sources of greenhouse gas emissions, yet decarbonisation of heating, cooling, and electricity is not moving at the pace required to meet Switzerland's net-zero commitments. This is not for lack of technology, but for lack of a trusted, practical pathway from intention to implementation. Building owners face a familiar tangle: technical complexity, unclear financing options, competing internal priorities, and no neutral party to guide them through it. The result is that viable decarbonisation projects sit idle, and providers of energy-efficient solutions struggle to build a pipeline of clients ready to commit.

Since 2023, the Servetia Initiative has worked to address this deadlock. With support from [Fondation Valéry](#) and in partnership with the [Enterprise for Society Centre \(E4S\)](#), BASE has tested and refined an approach that places a neutral, expert intermediary between building owners, technology providers, and financiers — reducing the upfront investment barrier, introducing cost predictability, and allocating technical risk to those best placed to manage it, helping all three parties move forward on terms they can actually accept.

Review of 2025

COMPLETING PHASE 1: PILOTS, LEARNING, AND MARKET VALIDATION

The first phase of the Servetia Initiative, which ran from 2023 to the end of 2025, concluded with a clearer picture of where Switzerland's servitisation market stands and what it takes to move projects forward. The year's work built directly on the pipeline of engagements established in 2024, pushing several of them further along the project development cycle while drawing practical lessons that now shape Servetia's next phase.

In 2025, this work advanced substantially, which can be best illustrated through a specific example from one of the Servetia Pilot Projects, at



PERIOD

2023 - 2025 (Phase 1)
2025 - 2027 (Servetia
Catalytic Platform)

COUNTRIES

Switzerland

PARTNERS

Enterprise for Society (E4S)

FUNDER

Foundation Valéry

ACHIEVED IMPACT



NUMBER OF BENEFICIARIES

6 institutions and companies received direct in-depth advisory support on service-based decarbonisation models.



NUMBER OF ORGANISATIONS ENGAGED

Broad ecosystem of Swiss and international actors across technology providers and ESCOs, financing partners, public-sector actors, and philanthropic foundations.



RESOURCES CREATED

MRV framework on energy consumption and efficiency; market analysis report on Switzerland's servitisation landscape; multiple articles and case studies published on the Servetia website; Servetia Catalytic Platform concept note.



AMPLIFICATION REACH

250+ views across 5 articles and case studies published on the Servetia website in EN/FR/DE; co-organiser of the SwissESCO Annual Practitioner Workshop (November 2025), gathering practitioners, utilities, and public sector representatives.



Exploring Decarbonisation with Nexans at Cortaillod, Switzerland

Nexans, in Cortaillod, Neuchâtel. Detailed energy and consumption data from Nexans' Cortaillod campus were shared with Energy Machines - the primary Heat / Energy as a Service (HaaS/EaaS) provider engaged in developing the offer - with Danfoss involved in a technical support role focused on specific aspects of the process heat system. Siemens Infrastructure was also initially approached to assess its interest in providing a solution. Multiple technical configurations were explored and refined. The support by Servetia led to a formal HaaS offer being presented to Nexans' senior leadership - including the CEO, CFO, and Head of Facilities - where the projected savings and the logic of shifting from capital expenditure to a performance-linked service model were well received. For the decision to advance, Nexans has commissioned a geological risk assessment related to drilling near Lake Neuchâtel, a standard precautionary step for ground-source systems in that area which was requested by the municipality. The Nexans case remains Servetia's strongest reference point for industrial HaaS in Switzerland - a well-documented, rigorously analysed pilot that demonstrates both what the model can deliver and what it takes to move a conservative, mid-sized industrial client to the point of decision.

Alongside the pilot work, the team completed and published a series of case studies and articles on the Servetia website, covering the initiative's engagements with Nexans, Spital Zollikerberg, Schulthess Klinik, and last year's Building Bridges panel discussion. These materials, available in multiple languages, serve as practical reference points for building owners, providers, and funders considering the servitisation approach. A dedicated MRV (Measurement, Reporting and Verification)

framework - which is new in its application to a Swiss EaaS context, was developed with input from EVO past chair Daniel Magnet and validated in the context of the Nexans pilot - was also finalised during the year. This framework, which provides the rigorous data foundation required by both the client and prospective service providers to structure a bankable, performance-linked contract, is now one of the core methodological assets available for future pilot projects.

The first phase also generated practical experience from engagements conducted in 2023-2024 with Spital Zollikerberg, Schulthess Klinik, and PFLEGI-Areal, each of which contributed distinct lessons in hospital and care-home stakeholder dynamics, PV contracting versus purchase comparisons, and the complexity of navigating procurement processes for public funding recipients.

EXPECTED IMPACT

(Servetia Catalytic Platform)



EMISSION REDUCTION

30,000 tonnes of CO₂e avoided annually across 70 clean-energy projects within five years.



FINANCE MOBILISED

CHF 60 million



These engagements — which had mostly concluded by the end of 2024 — provided valuable insights that were summarised in case studies and articles published on the Servetia website during 2025, adding to the publicly-available resources for the broader Swiss market.

ECOSYSTEM DEVELOPMENT AND KNOWLEDGE DISSEMINATION

A significant focus of 2025 was converting the initiative's accumulated experience into accessible market knowledge and deepening engagement with the ecosystem of providers, utilities, and financiers.

In November 2025, Servetia together with SwissESCO - the Swiss association of energy service companies - co-organised an in-person practitioner workshop at the Swiss Federal Office of Energy (SFOE)'s headquarters in Bern, specifically hosted by EnergieSuisse, the official federal program of the Swiss Confederation designed to promote renewable energy and increase energy efficiency. The event brought together representatives from across the public and private sector. Additionally, valuable exchanges were had with participants such as the head of EnergieSuisse, representatives from the energy utility Groupe E, the St. Gallen Innovation Lab, and energy savings contract specialists. The event also led to follow-up meetings with SFOE officials, as well as substantive exchanges with Groupe E around piloting a collaborative project — one in which Groupe E would act as the EaaS provider, with Servetia facilitating the financial structuring and blended finance alongside Servetia's financing partners, including LedLease Finance.

During the year, the team maintained active dialogue with a growing list of providers and utilities (e.g., Energie360, IWB, SIL, SIG, and Groupe E), as well as financing partners such as Solas Capital, UBS and local lending institutions. Additionally, cooperation agreements and expressions of interest were formalised with energy service and solution providers such as Groupe E. Discussions were held with the City of Geneva on potential decarbonisation projects for public buildings and infrastructure. Exploratory conversations also began with the Municipality of Laufen (Basel-Land) regarding the use of innovative financing structures - including philanthropic guarantees or patient loans - to unlock investment in municipal infrastructure such as the local ice rink.

At the same time, the aforementioned MRV framework developed with E4S and EVO was finalised and is to be published in 2026. Together with the website articles covering the initiative's pilot engagements, this framework adds to the suite of practical tools available to Swiss market actors considering servitisation for their decarbonisation programmes.

The initiative maintained its presence at key sector events, including Building Bridges in Geneva, E4S's Annual Summit and industry events such as IMMO25 (Real Estate). These appearances contributed to Servetia's visibility among the Swiss impact finance and clean energy communities.



Attendees of the practitioner workshop at the Swiss Federal Office of Energy (SFOE)'s headquarters in Bern.



TRANSITION TO THE SERVETIA CATALYTIC PLATFORM

A central strategic development of 2025 was the formal launch of the Servetia Catalytic Platform (SCP). Where Phase 1 set out to validate servitisation as a model for Swiss decarbonisation, the SCP is designed to take the validated model and turn it into a systematic, self-sustaining implementation engine.

The SCP's defining structural innovation is its Results-Based Financing (RBF) approach: technical assistance to building owners is provided either grant-funded (for non-profits) or on a deferred basis, with fees payable only once a project contract is signed and implementation is underway, structured as a share of the verified savings generated. This directly addresses the most persistent barrier identified during Phase 1: the reluctance of building owners to commit to preparatory work that carries upfront cost with uncertain outcomes. When the fee is tied to results, the interests of all parties align.

The model is also designed to become self-sustaining over time. As projects reach implementation and generate returns, a portion flows back into the platform to fund the next cycle of project origination and technical support – a revolving mechanism that reduces dependence on continuous philanthropic subsidy over the medium term.

Operationally, the SCP will work across four functions: project origination and pipeline generation; technical assistance and business case validation; blended finance

mobilisation and financial structuring; and implementation oversight with rigorous MRV. It targets commercial, industrial, and public-sector building owners with strong potential for solar PV, heat pumps, high-efficiency cooling, LED lighting, on-site storage, and digital energy management. This is also particularly relevant for existing Solar PPA clients, for whom expanding into broader EaaS packages may be a natural progression given their existing familiarity with service-based models. Non-profit organisations would benefit from cost-free energy assessments, supported by philanthropic contributions.

Fondation Valéry, which has backed the Servetia Initiative since 2023, continues as the platform's primary catalytic funder. The Belimo Climate Foundation confirmed its strategic interest in becoming a co-funding partner, with a focus on supporting the decarbonisation of non-profit organisations in Switzerland. This is a natural complement to the SCP's broader portfolio given Belimo's focus on modern building technologies and the additionality principle. E4S continues its involvement with a focus on dissemination and innovation pathways.

Future of the project

The Servetia Catalytic Platform moves into 2026 with initial funding from Fondation Valéry secured, an operational model defined, and a network of provider and financing partners in place. The near-term priority is to move from pipeline to practice: qualifying project opportunities, engaging building owners through the SCP's structured approach, and advancing the first cohort of projects toward signed contracts. Ongoing discussions with Groupe E, the City of Geneva, the Municipality of Laufen, represent early concrete pathways for the platform's first implementation cycle.

The medium-term ambition is to build the track record that allows the SCP to attract senior commercial debt and eventually operate at scale – with an initial seed phase targeting 10–15 pilot projects representing approximately CHF 10 million in capital value, and a five-year horizon targeting approximately 70 completed projects delivering around 30'000 tonnes of CO₂e avoided annually.

BASE continues to engage additional philanthropic partners with the strategic fit to expand the SCP's funding base, with discussions ongoing with multiple Swiss foundations.



Workshop on Energy Services Companies Market Opportunity Optimisation during the Bern event.

AREA OF WORK:

SUSTAINABLE ENERGY

2.2 PILOTING INNOVATIVE ENERGY SOLUTIONS

PROJECTS:

VIRTUAL POWER PLANTS: BUILDING COMMERCIAL PATHWAYS FOR DISTRIBUTED ENERGY

DIGITAL DEMAND-DRIVEN ENERGY NETWORK INITIATIVE

PILOTING INNOVATIVE ENERGY SOLUTIONS

VIRTUAL POWER PLANTS: BUILDING COMMERCIAL PATHWAYS FOR DISTRIBUTED ENERGY





Setting The Context

Electricity systems are becoming more distributed, digital and renewable. Distributed solar, batteries, electric vehicles and flexible loads are increasingly visible in distribution networks, creating new opportunities but also new operational challenges: midday renewable surpluses, evening demand ramps, network congestion, limited visibility of distributed assets, and growing pressure on utilities and system operators to manage flexibility closer to the customer. Yet a critical market gap remains: while demand-side flexibility is technically valuable, it often lacks clear business models, remuneration mechanisms and bankable pathways to scale.

Virtual Power Plants (VPPs) respond directly to this gap by aggregating distributed energy resources and customer behaviour into a coordinated portfolio that can support peak management, renewable integration and grid resilience. In 2025, BASE's VPP work in Brazil and Colombia focused on moving this concept from analysis to practical evidence, testing not only whether assets and consumers can respond to flexibility signals, but also how this flexibility can be measured, activated and eventually monetised. Through digital platforms, smart metering, customer engagement, baseline methodologies and flexibility-event design, the projects assessed how VPPs could create value through demand response, tariff arbitrage, energy trading, capacity-style payments and future market mechanisms. This is central to BASE's role: helping partners move beyond pilots and technology demonstrations toward replicable business models and investment-ready structures for emerging markets.

Review of 2025

During 2025, BASE supported VPP activities in Brazil and Colombia through technical assistance, international coordination, philanthropic funding mobilisation and business-model analysis. The work was supported by Integrate to Zero and implemented with utilities, retailers and technology partners including [Auren](#), [FloripaBit](#), [GreenAnt](#), [Celsia](#) and [enerBit](#). Across the two countries, the work combined platform devel-

PERIOD

2024

COUNTRIES

Brazil and Colombia

PARTNERS

Auren Energia, Celsia, Enerbit, Floripabit and GreenAnt

FUNDERS

Integrate to Zero (I2Z)

ACHIEVED IMPACT



NUMBER OF PILOTS

2, in Brazil (Phases 1-2) and Colombia (Phases 1-2).



NUMBER OF BENEFICIARIES

1,500+ participants reached, 200 directly benefited from the pilots through financial compensation.



FINANCE MOBILISED

USD 300,000+ mobilised during 2025 through philanthropic funding and co-financing from participating companies.



TOOLS OR RESOURCES CREATED

VPP orchestrator MVP, digital VPP platform, APIs, database, smart-meter integration, baseline and compensation methodologies, dashboard functions and 4 technical briefs.



FLEXIBILITY AND CLEAN-ENERGY EVIDENCE

Across the pilots, 190 kilowatt-peak (kWp) of solar PV and 132 kWh of batteries of total capacity were aggregated. Also, 5MW of flexible load was achieved on 83.8% of weekdays in Brazil, with a 61% participation rate in the demand-response simulation.





opment, regulatory analysis, customer engagement, baseline design, simulation, market assessment and financial modelling.

PILOT IN BRAZIL

In Brazil, Phase 1 produced analytical and simulation-based evidence on the potential for aggregated residential and commercial prosumers to participate in demand response, peer-to-peer trading and distributed-resource optimisation. The modelling tested the commercial logic of VPPs under current Brazilian rules, including participation in the ONS Demand Response Sandbox, tariff arbitrage using storage, and energy trading through the free-market segment. It showed that VPP aggregation is technically feasible, but that commercial viability depends strongly on the ability to stack revenues. Demand response alone provides an important entry point, but is not sufficient in all cases to justify capital-intensive distributed energy resource investments.

The Brazil analysis therefore moved beyond a technology pilot and quantified the financial gap between current market conditions and scalable deployment. For

corporate aggregation, the Southeast portfolio was already commercially promising, with the ability to meet the 5 MW participation threshold on 83.8% of weekdays and generate significant gross revenues under demand response conditions. However, when batteries and PV were added, the analysis showed that asset economics depend on regulatory changes such as revenue-stacking authorisation, access to hourly market prices, tariff treatment for battery charging, capacity-style availability payments and concessional finance. This provided a concrete pathway for designing future VPP business models and financial mechanisms.

Phase 2 in Brazil translated these insights into a real-world residential flexibility pilot. A digital recruitment campaign generated 1,033 valid registrations, from which 310 applicants were contacted and 130 active participants were selected: 30 metered households and 100 non-metered participants. The pilot tested customer engagement through WhatsApp, baseline methodologies, event design, direct incentive payments and performance verification. Importantly, it also evaluated incentive structures, moving toward a hybrid remuneration model that combines a fixed availability component with a variable performance payment. This

BASE & INTEGRATE TO ZERO WEBINAR

From concept to reality: Accelerating the development of Virtual Power Plants (VPPs)

#1: Demystifying Virtual Power Plants – Models, Enablers & Early Experiences



Francisco Ramirez Cartagena

Senior Sustainable Energy and Transport Finance Specialist at BASE

Moderator



Dan Hamza-Goodacre

Chief Energy Officer



Kit Fitton

Global Strategy Manager



Tania Nalborczyk Leites

R&D and Innovation Consultant & VPP Project Manager



Juan Esteban Bernate C.

Innovation Project Implementation Engineer



First webinar of the Virtual Power Plant series showcasing working frameworks and active pilots.



generated practical evidence on how residential consumers respond to financial signals and how a future retail VPP platform could operate at scale.

PILOT IN COLOMBIA

In Colombia, the project supported Celsia and enerBit in building the foundations for a VPP platform and future flexibility services. Phase 1 developed the minimum viable product of the VPP orchestrator, including operating instructions, Distributed Energy Resources (DER) selection logic, contract and availability modules, settlement functions and validation through simulated resources in the OPAL-RT software. Phase 2 advanced toward Advanced Metering Infrastructure (AMI)-enabled customer integration, telemetry, interoperability protocols and preparation for demand shifting and demand reduction services. The Colombian work created a digital and operational foundation for future business models in which distributed resources can respond to grid or commercial signals and, over time, participate in flexibility markets once regulatory and remuneration frameworks mature.



Project lead Francisco Ramírez Cartagena visiting pilot project partner Celsia in Colombia.



Smart metering setup in Colombia.

Future of the project

In 2026, the VPP portfolio is expected to move from demonstration toward commercial validation. In Brazil, the project will advance into Phase 3, focused on evaluating the application from a commercial perspective through real transactions and retail-based flexibility monetisation. This next phase will remain under the supervision of the regulator through Brazil's Research and Development mechanism, allowing the project to test business processes, payments, forecasting and market-facing optimisation in a controlled but more commercial environment.

At the same time, VPP interest is expanding internationally. The United Nations Environment Programme (UNEP) has expressed clear interest in flexibility applications in the cooling sector, while Integrate to Zero is expected to continue supporting VPP innovation for electric vehicles, with a focus on Asia. BASE expects to convene a webinar with relevant VPP implementers and launch a Request for Proposals to support approximately four new pilots in Asia, strengthening the pipeline of investable flexibility business models.

SUSTAINABLE ENERGY



PILOTING INNOVATIVE ENERGY SOLUTIONS

DIGITAL DEMAND-DRIVEN ENERGY NETWORK INITIATIVE (3DEN)





Setting The Context

Digitalisation is becoming an increasingly important enabler of the energy transition, helping countries improve energy efficiency, strengthen grid resilience, integrate renewable energy, and reduce emissions through smarter and more responsive energy systems. Technologies such as AI-driven analytics, smart monitoring systems, digital twins, and advanced energy management platforms are transforming how energy is produced, distributed, and consumed.

Against this backdrop, the [Digital Demand-Driven Electricity Networks \(3DEN\) Initiative](#) was launched by UNEP, the [International Energy Agency \(IEA\)](#), and [Italy's Ministry of Environment and Energy Security \(MASE\)](#) to support innovative digital solutions for urban energy and agri-food systems. Following a successful first phase implemented across Latin America and South Asia, Phase II expanded the initiative to seven African countries and Brazil, supporting pilot projects with strong potential for scalability, replication, and climate impact.

Review of 2025

In 2025, BASE played a central role in the implementation and operationalisation of the second phase of the Digital Demand-Driven Electricity Networks (3DEN) Initiative, supporting the consortium in accelerating the deployment of digital solutions for energy and agri-food systems across emerging markets.

Building on the success of Phase I, which supported pilot projects across Latin America and South Asia, 3DEN Phase II expanded its geographic scope to seven African countries and Brazil, focusing on the digitalisation of agri-food systems and urban energy systems.

BASE was selected as a key implementing partner for the initiative, providing end-to-end grant management and technical support throughout the programme lifecycle. Activities included the launch and management of the open call for proposals, technical and financial due diligence, project selection processes, grant agreement development, contracting support, communications, and impact reporting.



PERIOD

2025-2028

COUNTRIES

Brazil, South Africa, Tunisia, Kenya, Nigeria, Ethiopia, Tanzania, Morocco

PARTNERS

United Nations Environment Programme (UNEP), International Energy Agency (IEA), national governments, utilities, municipalities, research institutions, technology providers, and international project consortia

FUNDERS

Italian Ministry of Environment and Energy Security (MASE)

ACHIEVED IMPACT



NUMBER OF COUNTRIES

7



NUMBER OF PILOT PROJECTS

14



FINANCING MOBILISED

Over USD 20 million funding from the Italian government (total grant request). The co-financing requirement of 30% per project, has mobilised an additional USD 8 million by the project consortia.



The initiative generated significant international interest, receiving 93 applications from project consortia across participating countries. Following eligibility screening and detailed technical evaluation processes, 15 projects were shortlisted for in-depth due diligence assessments and site validation missions. BASE staff participated extensively in the evaluation process through technical reviews, consortium interviews, and field missions conducted across Tanzania, Kenya, Nigeria, South Africa, Ethiopia, and Brazil.

The selected projects demonstrated a wide range of innovative digital applications, including AI-enabled predictive maintenance systems, smart irrigation and agricultural management platforms, digital twins for urban energy systems, smart grid visualisation technologies, and advanced energy management systems for industrial and agro-processing applications. These projects aim to improve energy efficiency, strengthen system resilience, optimise resource management, and facilitate the integration of renewable energy technologies across diverse local contexts.

A major milestone was reached during the year with the completion of the negotiation and contracting phase for the first batch of projects. In total, 14 grant agreements were successfully finalised under the programme, enabling the transition from project selection to implementation preparation.

Alongside the grant management process, BASE also contributed to broader programme development activities, including the design of a dedicated 3DEN digital platform intended to support programme coordination, stakeholder engagement, reporting, matchmaking, and knowledge sharing. The platform will also serve as a public-facing knowledge hub consolidating case studies, lessons learned, and project results generated under the initiative.

The project further strengthened BASE's expertise in digital energy systems, climate technology evaluation, international grant management, and implementation support for complex multi-country programmes operating at the intersection of energy transition, digitalisation, and sustainable development.



3DEN Phase II projects announcement at COP 30, Belém, in November 2025.

EXPECTED IMPACT*



**EXPECTED GHG EMISSIONS AVOIDED
OR REDUCED BY PROJECT END**
77,459 (tCO₂e)s



**NUMBER OF EXPECTED DIRECT AND
INDIRECT BENEFICIARIES**
11,360,791



**INSTALLED RENEWABLE ENERGY
CAPACITY**
955 kWp, with an additional 875
kWh of energy storage capacity.



ENERGY SAVED
5,623,142 kWh or fuel-specific
units.

**Projects are expected to begin in 2026, impact numbers are assessed for the 24 month duration of the pilots.*



Future of the project

Following the successful completion of the contracting phase, implementation of the selected 3DEN pilot projects is expected to commence in 2026.

The next phase of the initiative will focus on supporting project rollout, monitoring implementation progress, facilitating knowledge exchange among participating countries and consortia, and documenting lessons learned to support future replication and scale-up.

BASE will continue playing a key implementation support role throughout the programme lifecycle, including through grant management, technical advisory services, monitoring and evaluation activities, communications,

and impact reporting. In parallel, the organisation will support the continued development of the 3DEN digital platform and knowledge hub to strengthen collaboration, transparency, and dissemination of best practices across the initiative.

As implementation advances, the initiative is expected to generate valuable evidence on the role of digitalisation in improving energy efficiency, enabling renewable energy integration, strengthening climate resilience, and supporting sustainable urban and agro-food systems in emerging economies. The programme also provides an important foundation for future climate finance and investment mobilisation by helping demonstrate the scalability and commercial potential of innovative digital energy solutions.



In New Delhi, a Phase 1 pilot developed a digital twin to allow utility companies to simulate grid performance, predict loads, and manage outages proactively rather than reacting to failures.

AREA OF WORK:

SUSTAINABLE ENERGY

2.3 BUILDING FINANCING FRAMEWORKS AND STRUCTURES FOR SUSTAINABLE

PROJECTS:

FINANCING STRATEGIES FOR SUSTAINABLE COOLING AND
MARKET DEVELOPMENT

SUPPORTING UKRAINE'S GREEN ENERGY RECOVERY

DESIGNING AN ENERGY TRANSITION FUND FOR EL SALVADOR

GCF PROPOSAL - LEBANON GREEN INVESTMENT FACILITY
(LGIF)

GCF CONCEPT NOTE - ENABLING ENERGY EFFICIENCY IN THE
GAMBIA

SUSTAINABLE ENERGY



PILOTING INNOVATIVE ENERGY SOLUTIONS

FINANCING STRATEGIES FOR SUSTAINABLE COOLING AND MARKET DEVELOPMENT





Setting The Context

Demand for cooling is growing rapidly across all segments of the economy, from households and commercial buildings to industry, public infrastructure, district cooling, and cold chains. In developing economies, this growth is fastest precisely where it is hardest to finance and where the consequences of inaction are most severe.

As part of this project, BASE collaborated with [International Finance Corporation \(IFC\)](#) and the [United Nations Environment Programme \(UNEP\)](#) in 2024 to produce [Cooler Finance: Mobilizing Investment for the Developing World's Sustainable Cooling Needs](#), a landmark report that quantified the investment gap and identified pathways to attract private capital into sustainable cooling. The report found that the sustainable cooling market in developing economies is set to more than double to at least \$600 billion in annual demand by 2050, and that closing existing access gaps will require between \$400 billion and \$800 billion in investment.

Building on this foundation, BASE has continued its engagement through the [Cool Coalition](#), a UNEP-led global network committed to accelerating the shift to efficient and climate-friendly cooling, working alongside UNEP and IFC to define financing strategies, categorise cooling markets, build institutional capacity, and advance innovative business models across the full spectrum of cooling segments, including in India.

Review of 2025

Building on the Cooler Finance report, in 2025 BASE deepened its contribution across market development, capacity building, and financing strategy. A central focus was supporting the categorisation of the sustainable cooling market across its full breadth, covering residential, commercial, industrial, public sector, district cooling, and cold chain applications, helping structure how different segments can be approached from a financing perspective and identifying appropriate instruments, risk profiles, and business models for each context.



PERIOD

2024-2026

COUNTRIES

Global, with a particular focus on India

PARTNERS

UNEP and Cool Coalition, International Finance Corporation (IFC)

FUNDER

United Nations Environment Programme (UNEP)

ACHIEVED IMPACT



TOOLS OR RESOURCES CREATED

Cooler Finance report (IFC/ UNEP, 2024); cooling market categorisation framework spanning residential, commercial, industrial, public, district cooling, and cold chain segments; financing strategy inputs; capacity building materials for public and institutional stakeholders in India.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH

Training and awareness raising with public entities in India; contributions to Cool Coalition dialogues on financing strategies and innovative business models across cooling segments.



BASE contributed to financing strategy development in collaboration with UNEP and IFC, exploring how concessional and commercial capital can be combined to catalyse investment across these segments. On capacity building, BASE supported awareness raising among public and private stakeholders in India, helping institutional actors understand and engage with innovative service-based models such as Cooling-as-a-Service. These efforts were complemented by broader Cool Coalition dialogues on how business models from other BASE programmes, including cold room solutions linked to the Your Virtual Cold Chain Assistant, could inform cooling finance and market development approaches.

BASE also supported fundraising efforts with the Green Climate Fund (GCF) and the Mitigation Action Facility (MAF) to mobilise additional resources, engaging with potential funders and partners to build the financial foundation for a more sustained programmatic effort.

Future of the project

The Cooler Finance report established BASE as a recognised contributor to the global cooling finance agenda, and the 2025 workstreams have deepened that positioning. The financing strategies, market categorisation frameworks, and capacity building activities developed are creating the conditions for deeper collaboration with IFC, UNEP, and the broader Cool Coalition network. In 2026, this will include a concrete capacity-building programme with Indian public entities, including [EESL](#), translating the analytical work into direct institutional engagement in one of the world's most critical cooling markets. Ongoing fundraising efforts are expected to further expand the programme's reach and ambition. The breadth of cooling segments covered also opens pathways to connect this work with BASE's broader portfolio across energy access, servitisation, and sustainable food systems, reinforcing the strategic coherence of BASE's climate finance offer.

SUSTAINABLE ENERGY



PILOTING INNOVATIVE ENERGY SOLUTIONS

SUPPORTING UKRAINE'S GREEN ENERGY RECOVERY





Setting The Context

Ukraine's energy infrastructure has sustained severe damage, creating an urgent need for reconstruction that goes beyond restoring what existed before. The recovery process presents a critical opportunity to rebuild energy systems that are more resilient, decentralised, and aligned with long-term sustainability goals, reducing dependence on centralised fossil fuel infrastructure and accelerating the transition to clean energy. For this to happen, municipalities need not only technical support but access to finance, structured investment pipelines, and long-term energy planning frameworks that can attract both public and private capital.

UNEP has positioned sustainable energy recovery as a cornerstone of its engagement in Ukraine, recognising that decisions made today will shape the country's energy landscape for decades. BASE was engaged to provide technical and financial expertise to support this effort at the municipal level, where reconstruction decisions are being made and where the interface between local needs and international finance is most critical.

Review of 2025

In 2025, BASE began working alongside UNEP and two partner Ukrainian municipalities to support the identification and development of sustainable energy recovery projects. The two cities present distinct priorities: one is contending with the rehabilitation and modernisation of an ageing district heating system, the other with significant damage and operational strain on its water and wastewater infrastructure. In both, the work focused on several interconnected activities designed to move municipalities from immediate reconstruction needs toward a more structured and investable long-term energy transition.

In one city, BASE supported the development of four pre-feasibility studies covering priority investment projects in the district heating system: substation rehabilitation and replacement of local heating and hot water supply networks; boiler house modernisation; the implementation of SCADA and telemetry systems for real-time monitoring and control; and an integrated concept for gas turbine cogeneration com-

PERIOD

2025-2026

COUNTRIES

Ukraine

PARTNERS

UNEP, key municipalities in Ukraine

FUNDER

United Nations Environment Programme (UNEP)

ACHIEVED IMPACT



BENEFICIARIES

2 Ukrainian cities and their municipal utilities.



ORGANISATIONS ENGAGED

2 Ukrainian municipalities and their utilities, local Ukrainian technical consultancies, UNECE, EURAC Research, the Italian Development Cooperation (AICS), and international financing institutions and bilateral donors.



TOOLS OR RESOURCES CREATED

8 pre-feasibility studies covering district heating and water/wastewater infrastructure and a structured investment evaluation framework.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH

Municipal authority teams supported in energy planning, project structuring, and investor engagement.



FINANCE MOBILISED

EUR 80+ million across a pipeline of district heating modernisation and water/wastewater infrastructure investments.





bined with network optimisation. The studies were carried out by a Kyiv-based technical consultancy, with BASE providing quality assurance, structured review, and investment framing. To ensure the studies serve as building blocks for a coherent city-level investment programme rather than isolated assessments, BASE developed a structured criteria and evaluation matrix assessing each project across dimensions including urgency, feasibility, innovation potential, long-term resilience, and replicability. By late 2025, the studies had reached an advanced stage, with the final iterations underway in preparation for formal completion and publication on Ukraine's DREAM platform.

In the other city, BASE engaged a separate technical consultancy to conduct pre-feasibility studies on priority water and wastewater infrastructure investments. Following a successful kick-off in September 2025, the team mobilised on the ground, meeting with municipal utilities and collecting the technical and operational data needed to begin the work. A local coordination consultant was contracted to support engagement between BASE, UNEP, and city-side stakeholders. By November 2025, first draft PFS reports had been completed, covering critical components of the city's water and

wastewater system. These drafts were reviewed by BASE and submitted for further iterations, with the finalisation process continuing into early 2026. During the year, BASE, UNEP, and the city also formally agreed to support the development of a Municipal Energy Plan in 2026 – a city-wide planning framework that will guide the prioritisation and sequencing of investments across all major infrastructure sectors.

Alongside this technical work, BASE engaged with international financing actors to raise awareness of the municipal project pipeline and explore pathways for mobilising grant funding, concessional finance, and commercial capital for reconstruction and transition projects.

Beyond the city-level workstreams, 2025 saw BASE deepen its engagement with the broader international community working on Ukraine's energy reconstruction. In June, Yannick Heinrich joined a high-level study visit to Bolzano, Italy, organised jointly by UNECE's UN4UkrainianCities initiative, UNEP's "Unlocking greener and more resilient energy in Ukrainian cities" programme funded by the Italian Development Cooperation (AICS), and the Autonomous Province of Bolzano with support from Eurac Research. The visit



Project member Yannick Heinrich at the high-level study visit to Bolzano, Italy, organised by UNECE, UNEP, and the Autonomous Province of Bolzano with support from EURAC Research.



brought together Ukrainian municipal and national delegates with international experts to examine decentralised energy generation, modern district heating, and integrated urban energy planning — directly relevant case studies for the workstreams BASE is supporting. In July, Yannick Heinrich and Dimitris Karamitsos attended the Ukraine Recovery Conference (URC 2025) in Rome, using the conference to attend project presentations from the partner municipalities — then still at an earlier stage of development — and to advance dialogue with bilateral donors, Ukrainian public authorities, and international financial institutions.

Future of the project

This project represents much more than a single engagement: it is BASE's entry point into Ukraine's reconstruction agenda and the foundation for a longer-term programmatic presence in the country. The work

initiated in 2025 is expected to deepen through 2026 as pre-feasibility assessments are completed and the most promising projects are advanced toward investment readiness. BASE will continue to support municipal authorities in refining their project pipelines, engaging with donors and financing institutions, and developing the planning frameworks needed to guide reconstruction in a sustainable direction.

Looking further ahead, the work begun in 2025 is intended to position BASE for a longer-term role in Ukraine's energy reconstruction. The relationships built with municipalities and UNEP, the project pipelines under development, and the planning frameworks being put in place have all been designed with this horizon in mind — so that when conditions allow for reconstruction to accelerate, BASE is in a position to support municipalities in connecting local needs with international climate and reconstruction finance



Ukrainian municipal and national delegates with international experts, including from BASE, at the Bolzano study visit on decentralised energy generation, district heating, and urban energy planning for Ukraine.

PILOTING INNOVATIVE ENERGY SOLUTIONS

DESIGNING AN ENERGY TRANSITION FUND FOR EL SALVADOR





Setting The Context

El Salvador is navigating a critical juncture in its energy transition. The country has developed an ambitious legislative agenda, including a proposed Energy Efficiency Bill, a draft Law on Energy Transition, and fiscal incentive frameworks for decarbonisation, all of which signal a clear policy direction toward a cleaner and more efficient energy sector. However, translating these policy commitments into bankable investments requires dedicated financial mechanisms capable of mobilising both public and private capital at scale.

Yet access to affordable financing for renewable energy and energy efficiency projects remains limited, particularly for SMEs and public entities. Without a dedicated vehicle to de-risk investments and channel international climate finance, the country risks falling short of its decarbonisation ambitions. An Energy Transition Fund (ETF), tailored to El Salvador's legal, regulatory, and market context, offers a practical pathway to bridge this gap.

Review of 2025

In 2025, BASE worked with the [World Bank](#) and [General Directorate of Energy, Hydrocarbons and Mines \(DGEHM\)](#) to design and conceptualise an Energy Transition Fund tailored to El Salvador's specific context. The work was structured across three phases covering diagnostic analysis, fund design, and stakeholder engagement, with all deliverables produced in close coordination with DGEHM and World Bank teams.

BASE began with a thorough diagnostic of El Salvador's energy market and regulatory framework, reviewing existing policies, identifying investment barriers, and analysing previous proposals for decarbonisation financing mechanisms. This included a detailed assessment of the draft Energy Efficiency Bill and its implications for the proposed fund, ensuring alignment between the ETF design and the emerging legislative framework.

Building on this foundation, BASE conducted a detailed needs assessment engaging a broad range of stakeholders from public entities, private sector companies, financial institutions, and international development

PERIOD

2025

COUNTRIES

El Salvador

PARTNERS

Government of El Salvador, via the General Directorate of Energy, Hydrocarbons and Mines (DGEHM)

FUNDER

World Bank

ACHIEVED IMPACT



BENEFICIARIES

Government of El Salvador, via DGEHM (General Directorate of Energy, Hydrocarbons and Mines) – supported in designing a dedicated financing vehicle to accelerate the country's energy transition.



ORGANISATIONS ENGAGED

10+ public-sector, financial, and academic stakeholders, including the Ministry of Finance BANDESAL (Development Bank of El Salvador); and ABANSA (Salvadoran Banking Association).



TOOLS OR RESOURCES CREATED

Comprehensive Energy Transition Fund design; Energy market and regulatory framework diagnostic report; Needs assessment covering public and private sector financing requirements; Implementation roadmap; MRV framework for impact tracking.





organisations. This process identified priority investment areas, defined the scale of financing required, and informed the eligibility criteria and operational framework for the fund.

BASE then developed the full design of the Energy Transition Fund, covering its governance structure, business model, legal framework, eligible technologies and sectors, financial instruments, and capitalisation strategy. The design incorporated a range of financing mechanisms suited to El Salvador's market, including partial credit guarantees, energy performance contracts, results-based concessional blended finance, and green leasing arrangements. An MRV framework was also developed to track environmental impact, capital mobilisation, and resource efficiency outcomes.

The design phase concluded with a stakeholder workshop held in San Salvador, where findings and recommendations were presented to government

officials, private sector representatives, financial institutions, and development partners. The feedback gathered fed into the final report delivered to DGEHM and the World Bank.

Future of the project

The completion of the ETF design provides El Salvador with a concrete and actionable framework for establishing a dedicated vehicle to accelerate its energy transition. The next steps will depend on DGEHM and the World Bank moving toward operationalisation, including identifying a fund manager, securing initial capitalisation, and engaging financial intermediaries. BASE remains available to support implementation as momentum builds, and the project complements existing BASE engagements in Central American energy transition fund design.



Stakeholder workshop held in San Salvador.

ACHIEVED IMPACT



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH

10+ high level officials, among them the Director General of the DGEHM and other representatives of BANDESAL.

EXPECTED Impact



FINANCE MOBILISED

USD 56–70 million in priority energy efficiency investment needs across El Salvador's public sector, with estimated annual savings potential of around USD 30 million.

PILOTING INNOVATIVE ENERGY SOLUTIONS

GCF PROPOSAL - LEBANON GREEN INVESTMENT FACILITY (LGIF)





Setting The Context

Lebanon continues to face one of the world's most severe overlapping economic, financial, and energy crises. Chronic electricity shortages, dependence on expensive diesel generation, and limited access to affordable finance have significantly constrained investment in clean energy and energy efficiency solutions. At the same time, Lebanon's updated Nationally Determined Contribution (NDC) sets ambitious targets for renewable energy deployment, energy efficiency, and greenhouse gas emissions reduction, creating an urgent need for financing mechanisms capable of mobilising private capital at scale.

Despite strong market potential for distributed renewable energy, energy efficiency upgrades, and sustainable infrastructure, investment remains hindered by high perceived risks, liquidity constraints in the banking sector, and limited access to long-term financing. Blended finance mechanisms and risk mitigation instruments are therefore essential to unlock climate investment and support Lebanon's transition towards a more resilient and sustainable energy system.

Against this backdrop, BASE continued supporting the development of the Lebanon Green Investment Facility (LGIF), a [Green Climate Fund \(GCF\)](#) proposal led by [Cedar Oxygen](#) under GCF's Project Specific Accreditation Window (PSAA). The initiative aims to catalyse private sector investment in climate mitigation projects through a blended finance approach combining concessional finance, guarantees, and technical assistance.

Review of 2025

In 2025, BASE supported the successful finalisation and submission of the LGIF proposal to the Green GCF, marking a major milestone in the development of one of Lebanon's most ambitious climate finance initiatives to date.

Building on the conceptual groundwork initiated in previous years under the NDC Partnership and the UNDP Climate Promise framework, the year focused on consolidating the facility structure, refining the blended finance architecture, and finalising the technical, financial, and opera-

PERIOD

2024-2026

COUNTRIES

Lebanon

PARTNERS

Government of Lebanon, Cedar Oxygen, NDC Partnership, national financial institutions and private sector stakeholders

FUNDER

United Nations Development Programme (UNDP)

ACHIEVED IMPACT



FINANCE MOBILISED

The funding proposal developed with support of BASE via the NDC partnership targets a total programme size of 107 m USD composed of the following:

- GCF Loan: USD 25 mn
- GCF TA: USD 7 mn
- Co-funding: USD 75 mn
- Parallel financing: USD 33 mn.



ORGANISATIONS ENGAGED

Ministry of Environment, GCF MENA representative, National Commission For Lebanese Women (NCLW).



EMISSION REDUCTION

1.9 million tCO₂eq over the LGIF lifetime.





tional documentation required for submission. BASE continued contributing its expertise in climate finance structuring and risk mitigation mechanisms, supporting the design of financing instruments intended to mobilise private sector investment into renewable energy, energy efficiency, and climate-resilient infrastructure projects in Lebanon.

Particular attention was given to the development of blended finance and guarantee approaches capable of addressing the severe investment barriers currently affecting the Lebanese market, including elevated political and macroeconomic risks, constrained liquidity, and limited access to long-term financing. The facility was designed to help de-risk climate investments while enabling concessional and private capital to work together more effectively in support of Lebanon's low-carbon transition.

A key milestone during the year was the organisation of a national validation workshop, during which BASE presented the proposed facility structure, financing mechanisms, investment rationale, and expected climate impact to key national stakeholders, development partners, and financial sector representatives. The workshop helped validate the strategic positioning of the LGIF within Lebanon's broader climate and recovery agenda and strengthened alignment around implementation priorities and investment needs.

The initiative also gained increased relevance within Lebanon's evolving climate policy framework. During 2025, Lebanon launched a broader climate policy package including its updated Nationally Determined Contribution (NDC 3.0), National Adaptation Plan (NAP), and Long-Term Low Emission Development Strategy (LT-LEDS), within which the LGIF is positioned as a key vehicle for mobilising climate finance and supporting implementation of national climate objectives.

The proposal package was successfully submitted and positively received during early engagement with the GCF process. However, due to the deteriorating national situation and ongoing conflict affecting Lebanon during the year, the approval process was temporarily halted. Progress on the review process is expected to continue once conditions stabilise and a more favourable operating environment is restored.

Despite these challenges, the LGIF initiative represents an important example of how innovative climate finance mechanisms can be developed even in fragile and crisis-affected contexts, laying the groundwork for future investment mobilisation and sustainable recovery efforts.

Future of the project

Following the successful submission of the LGIF proposal, future efforts will focus on maintaining stakeholder engagement, preserving institutional momentum, and preparing for the continuation of the GCF review and approval process once conditions allow.

The facility remains strategically positioned to support Lebanon's long-term climate and economic recovery objectives by mobilising blended finance for renewable energy, energy efficiency, and climate-resilient infrastructure investments. As Lebanon advances the implementation of its updated climate policy framework, the LGIF is expected to play an important role in translating national climate commitments into investable projects and private sector participation.

In parallel, BASE will continue leveraging the experience and lessons developed through the LGIF process to strengthen its expertise in structuring innovative financing facilities for fragile and high-risk markets. The project has reinforced the importance of tailored risk mitigation instruments, blended finance structures, and strong stakeholder coordination in enabling climate investment under complex operating conditions.

SUSTAINABLE ENERGY



PILOTING INNOVATIVE ENERGY SOLUTIONS

GCF CONCEPT NOTE - ENABLING ENERGY EFFICIENCY IN THE GAMBIA





Setting The Context

The Gambia faces growing climate and energy challenges driven by rising temperatures, increasing cooling demand, and a power sector heavily dependent on fossil fuels. At the same time, the country's market is dominated by inefficient cooling appliances, contributing to rising electricity consumption, greenhouse gas emissions, and pressure on the national grid.

To address these challenges, the Government of The Gambia has prioritised energy efficiency within its Nationally Determined Contribution (NDC) and National Energy Efficiency Strategy, including the introduction of Minimum Energy Performance Standards (MEPS), energy labelling systems, and financing mechanisms for efficient appliances.

Against this backdrop, [United Nations Environment Programme \(UNEP\)](#) developed the concept for the project “Enabling Energy Efficiency in The Gambia”, aimed at transforming the national cooling appliance market through regulatory reform, financing mechanisms, institutional strengthening, and regional knowledge sharing. BASE supported UNEP in strengthening and finalising the [Green Climate Fund \(GCF\)](#) Concept Note for submission under the revised GCF template.

Review of 2025

In 2025, BASE provided technical support to UNEP for the revision, strengthening, and finalisation of the Green Climate Fund Concept Note for the project “Enabling Energy Efficiency in The Gambia.” The work built on the results of a previous GCF Readiness project focused on energy-efficient and climate-friendly cooling appliances in the country.

BASE supported the restructuring of the Concept Note in line with the updated GCF Concept Note template and contributed to strengthening the project's overall strategic positioning, institutional arrangements, and climate rationale. This included the development of a comprehensive Theory of Change, refinement of the component structure, and stronger alignment with The Gambia's updated NDC and national energy efficiency strategies.



PERIOD

2025

COUNTRIES

The Gambia

PARTNERS

UNEP, Ministry of Petroleum and Energy (MOPE), Public Utilities Regulatory Authority (PURA), ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)

FUNDER

United Nations Environment Programme (UNEP)

ACHIEVED IMPACT



TOOLS OR RESOURCES CREATED

Concept Note finalised and prepared for submission, including Theory of Change, revised component structure, financing mechanism framework, institutional arrangements, and regional scaling approach.



FINANCE MOBILISED

USD 5.5 million total project volume targeted, including USD 2.92 million in requested GCF funding.



EMISSIONS REDUCTION

41,500 tCO₂eq emissions reductions over project lifetime.



Particular attention was given to expanding the project's financial architecture through the inclusion of a dedicated energy efficiency financing mechanism aimed at improving access to efficient cooling appliances for households and micro, small, and medium enterprises (MSMEs). BASE also supported the integration of co-financing opportunities, blended finance approaches, and incentive mechanisms intended to address affordability barriers and stimulate market transformation.

Additional contributions included strengthening the project's mitigation narrative and emissions reduction rationale, integrating gender and social inclusion considerations across project activities and indicators, and enhancing alignment with key GCF investment criteria such as paradigm shift potential, sustainable development co-benefits, and country ownership.

The revised Concept Note also introduced a regional scaling component designed to support replication and knowledge transfer across ECOWAS countries, positioning The Gambia as a potential regional leader in appliance energy efficiency and climate-friendly cooling solutions.

The final deliverables included the revised GCF Concept Note and a detailed Theory of Change framework supporting future funding proposal development and implementation planning.

Future of the project

Following the completion of the revised Concept Note, the next phase of the initiative is expected to focus on the preparation of a full GCF Funding Proposal, including additional feasibility studies, stakeholder consultations, and detailed technical assessments.

If approved, the project aims to support the implementation of MEPS, energy labelling systems, financing mechanisms for efficient appliances, monitoring and verification systems, and environmentally sound cooling appliance management practices across The Gambia.

The initiative also has strong regional replication potential through collaboration with ECREEE and UNEP's United for Efficiency (U4E) programme, helping promote energy-efficient cooling solutions and low-emission development pathways across West Africa.



03

AREA OF WORK

SUSTAINABLE FINANCE

AREA OF WORK:

SUSTAINABLE FINANCE

3.1 CIRCULAR ECONOMY FINANCING

PROJECTS:

FINANCING MSMEs TOWARDS A CIRCULAR AND
LOW-CARBON ECONOMY IN LATIN AMERICA

CIRCULAR ECONOMY FINANCING STRATEGY FOR THE
CIRCULARITY LATAM FUND

SUSTAINABLE FINANCE

CIRCULAR ECONOMY FINANCING

FINANCING MSMEs TOWARDS A CIRCULAR AND LOW-CARBON ECONOMY IN LATIN AMERICA





Setting the Context

Our prevailing "take-make-waste" economic model places immense pressure on the planet, driving climate change, biodiversity loss, and pollution. Transitioning to a circular economy (CE) - one that designs out waste, keeps materials in use, and regenerates natural systems - is both an environmental imperative and an economic opportunity. A circular economy transition in Latin America and the Caribbean (LAC) could generate millions of jobs and fundamentally reshape the region's development trajectory.

Yet the financial sector has largely remained on the sidelines of this transition. Without the right tools to identify, assess, and finance circular projects, banks and other financial institutions default to familiar, linear business models. Bridging this gap, equipping the financial sector with the language, frameworks, and confidence to back the circular transition, is precisely where this project intervened.

Review of 2025

In 2025, this multi-year project reached a decisive milestone: the completion of its full programme across all four target countries. Building on the ecosystem diagnostics and categorisation systems developed in previous years, the work focused on two final and interconnected objectives — rolling out capacity-building programmes for financial institutions in Chile and Uruguay, and finalising and socialising the Circular Economy Categorisation System in the Dominican Republic.

Capacity Building in Chile and Uruguay

In both Chile and Uruguay, structured eight-session training programmes were delivered to financial institutions, combining virtual and in-person workshops with site visits to companies already implementing circular practices. The programmes drew on country-specific data from the previously developed Categorisation Systems, ensuring the content was grounded in each country's circular economy landscape. Participating institutions were asked to develop their own CE project case studies, which were presented at the final session — a practical "learning by doing" approach that proved highly effective.



PERIOD

2023-2025

COUNTRIES

Chile, Costa Rica, Dominican Republic, Uruguay

PARTNERS

UNEP FI; Agencia de Sustentabilidad y Cambio Climático (ASCC), Chile; Ministerio de Ambiente y Energía, Costa Rica; Ministerio de Medio Ambiente y Recursos Naturales, Dominican Republic; Ministerio de Ambiente, Uruguay

FUNDER

Climate Technology Centre and Network (CTCN), Go4SDGs

ACHIEVED IMPACT



TOOLS OR RESOURCES CREATED:

4 Circular Economy Categorisation Systems + 3 Circular Economy Ecosystem Diagnostics



TRAINING AND CAPACITY-BUILDING

ACTIVITIES REACH:

124 participants from 68 institutions trained across the 4 countries with a satisfaction rates above 90%.



In Chile, 55 participants from 19 institutions completed the programme, with an average satisfaction score of 4.71 out of 5.0 and 93.2% reporting increased knowledge and capacity. In Uruguay, 30 active participants from 9 institutions completed the training, with 92% reporting satisfaction and 90% reporting increased capacity.

Across both countries, the training successfully engaged a diverse mix of institutions, including commercial banks, cooperatives, microfinance institutions, and government bodies, bringing together professionals from sustainability, risk management, commercial banking, and business development. This cross-functional reach is essential: embedding circular finance requires alignment across an institution, not just its sustainability team.

Dominican Republic: Categorisation System Socialisation

In the Dominican Republic, where the scope of work focused on developing a Categorisation System rather than a full training programme, the project concluded with a significant milestone: the official launch of the tool by the Ministry of Environment and Natural Resources. Following an initial stakeholder socialisation event on 2 July 2025, which brought together 27 representatives from government, the financial sector, academia, international cooperation bodies, and the private sector, the Ministry formally presented the system at FICIRCULAR 2025, the Dominican Republic's third International Circular Economy Forum, held in Novem-

ber 2025 in collaboration with UNDP and the Nordic embassies. The Ministry's ownership of the tool, presenting it as a national instrument to facilitate transparent, internationally-aligned CE financing, signals a level of institutional buy-in that sets the stage for the capacity-building programme still to come.

Completing the Set: Four Country-Level Tools

By the project's close, the team had produced Circular Economy Categorisation Systems for all four countries, each tailored to national contexts, policies, and sector-specific opportunities, alongside CE Ecosystem Diagnostics for Chile, Costa Rica, and Uruguay. These tools give financial institutions a shared language and clear criteria for identifying and evaluating circular investment opportunities, from construction waste recycling to biodigesters, textile entrepreneurship, and sustainable agriculture.

Across all three capacity-building programmes, participants consistently recognised CE financing as a key enabler for decarbonisation and drew direct links between circular practices and their institutions' climate commitments. Some institutions are already taking concrete next steps, with the Chamber of Banks and Financial Institutions of Costa Rica having joined the national Intersectoral Circular Economy Committee, a new stakeholder relationship that the project helped catalyse.



The project included a site visit to Comberplast, a company in Chile implementing multiple circular economy initiatives.



Future of the project

The project's close marks the end of a first and vital chapter, not the end of the journey. In Chile, the Agencia de Sustentabilidad y Cambio Climático (ASCC) is defining next steps with project partners, with an immediate focus on developing a simplified application tool, supported by Territorio Circular, to ease adoption by financial institutions.

In Uruguay, trained institutions are positioned to begin building CE finance portfolios, with the project EXPECTED to feed into the GCF-funded Climate Finance Readiness project; national working groups, temporarily paused following a change of government, are expected to resume shortly. In the Dominican Republic, a national multisectoral dialogue is planned to embed the Categorisation System in local finance and policy frameworks, with the financial sector association ABA already expressing interest in a capacity-building programme.

Across the region, the project has demonstrated a replicable model, diagnose, categorise, train, with potential for expansion to Mexico, Panama, and Ecuador. The foundations for meaningful circular finance in Latin America and the Caribbean are now firmly in place.

SUSTAINABLE FINANCE

CIRCULAR ECONOMY FINANCING

CIRCULAR ECONOMY FINANCING STRATEGY FOR THE CIRCULARITY LATAM FUND





Setting the Context

Latin America has a significant opportunity to move from waste management toward circular investment models. Across the region, plastics, biomass and agricultural residues are increasingly recognised not only as environmental challenges, but also as potential sources of economic value, new business models and climate impact. However, many circular economy opportunities still face a financing gap: companies may have proven technologies and scalable models, but investors often lack harmonised eligibility criteria, comparable impact metrics and practical tools to assess circularity, transition risks and bankability.

In 2025, BASE supported the LATAM Circularity Fund in addressing this gap. The fund, led by [Mesoamerica](#) and [Evolve](#) and supported by [IDB Invest](#), is designed as a USD 100 million regional equity vehicle to accelerate circular economy solutions in Colombia, Mexico, Costa Rica and Panama. BASE's role was to help translate circular economy potential into an investment-ready framework that can guide project identification, screening, classification, monitoring and reporting.

Review of 2025

BASE, together with [ECS Consultores](#), provided technical assistance to the managers of the Circularity Latam Fund to strengthen the fund's ability to identify, classify and monitor circular economy investments. The work focused on the value chains of plastics, biomass and agricultural residues in four countries: Colombia, Mexico, Costa Rica and Panama. The assignment combined market intelligence, investment analysis, taxonomy design and impact measurement, directly supporting BASE's wider focus on business models and financial mechanisms that unlock climate and circular economy investment.

The market assessment analysed the potential for circular investment in the plastics and biomass chains. The study reviewed enabling environments, market dynamics and enterprise cases in each country. It showed that Colombia and Mexico present the strongest combination of enabling policy frameworks, market size, innovation capacity and mature business cases. Colombia has a relatively advanced policy environment



PERIOD

January to April 2025

COUNTRIES

Colombia, Mexico, Costa Rica and Panama

PARTNERS

Mesoamerica Investments, Evolve Management and ECS Consultores

FUNDER

IDB Invest

ACHIEVED IMPACT



FINANCE MOBILISED

Structuring of tools for a USD 100 million regional equity fund focused on circular economy investments supported.



TOOLS OR RESOURCES CREATED

Market assessment, investment opportunity analysis, eligibility filters, positive lists, just transition filter, circularity graduality methodology, KPI framework and case studies.



NUMBER OF BENEFICIARIES

Between 15 to 20 companies will be able to access the equity fund (67 enterprise cases mapped: 25 in Colombia, 13 in Mexico, 18 in Costa Rica and 11 in Panama).



for circular economy and stronger regulation in plastics, while Mexico combines a large market, significant waste generation and a more diversified set of circular business models. Costa Rica presents a medium level of opportunity, supported by its National Circular Economy Strategy and innovative cases, although regulatory implementation is still evolving. Panama shows a more emerging market profile, with important future opportunities in waste infrastructure and plastics valorisation, but also more limited data, institutional coordination and mature business cases.

A core result was the identification and review of circular economy business cases with investment relevance. Across the four countries, the study mapped 67 enterprise cases, including 25 in Colombia, 13 in Mexico, 18 in Costa Rica and 11 in Panama. These cases covered value creation, value retention, value recovery, and enabling platforms and services. The analysis also provided important investment insights: many plastic-sector initiatives are smaller, with average investment tickets around USD 3 million, while biomass projects tend to require larger investments, averaging around USD 9 million. This distinction helped the fund understand where its target ticket size of approximately USD 5-15 million may fit best, and where aggregation, co-investment or pipeline development may be needed.

The final deliverable was a Categorisation System for circular economy projects. This tool provides a structured process to determine whether an investment is eligible, how it should be classified, its level of circularity or graduality, and which environmental and social KPIs

should be used. The system includes exclusion filters, inclusion filters, positive lists, questionnaires, a just transition filter, a circularity graduality methodology and non-exhaustive lists of environmental and social indicators. It also integrates safeguards to reduce circular-washing risks, including sensitive project categories, alignment with sustainable finance taxonomies and specific considerations for biomass, fossil-fuel-linked activities, agrochemicals and waste-to-energy.

Future of the project

The work completed in 2025 provides a practical foundation for the fund's investment pipeline and due diligence process. The next step is for the Fund to apply the Categorisation System to live pipeline opportunities, using it as a screening and structuring tool during early investment assessment. This will help the fund prioritise companies with scalable circular business models, credible transition pathways and measurable impact.

Future work may also support the refinement of the tool as real transactions are assessed, particularly by testing the eligibility filters, graduality scoring and KPI selection against specific companies. This would allow the fund to strengthen consistency across countries, improve reporting to investors, and identify where technical assistance, co-financing or pipeline development could help companies reach investment readiness. The framework can also serve as a reference for other financial institutions seeking to finance circular economy models in emerging markets.

AREA OF WORK:

SUSTAINABLE FINANCE

3.2 SUSTAINABLE BANKING

PROJECTS:

EMPOWER: WOMEN FOR CLIMATE-RESILIENT SOCIETIES
GREEN COALITION AMAZON FINANCIAL INNOVATION LAB
SUSTAINABLE FINANCE FOR MEXICO'S SOFOME SECTOR
SUSTAINABLE FINANCE PROTOCOL IN SURINAME
CATEGORISATION TOOL FOR BANCÓLDEX
ESMS AND SUSTAINABLE INVESTMENT PREPAREDNESS IN
THE CARIBBEAN

SUSTAINABLE FINANCE

SUSTAINABLE BANKING

EMPOWER: WOMEN FOR CLIMATE- RESILIENT SOCIETIES IN ASIA





Setting the Context

The **EmPower: Women for Climate-Resilient Societies Programme** is jointly implemented by **UN Women** and the **United Nations Environment Programme (UNEP)**, with the support of the Governments of Germany, New Zealand, Sweden, and Switzerland. The programme addresses the disproportionate impacts of climate change on women and marginalised communities across Asia and the Pacific, advancing gender equality and women's economic empowerment through improved access to finance, renewable energy technologies, and sustainable livelihoods. Central to this is EmPower's engagement with financial institutions to develop gender-responsive financial products that extend affordable credit to women-owned, women-led, and marginalised community-serving micro, small and medium enterprises (MSMEs), together referred to as W-MSMEs, to transition to renewable energy and low-carbon technologies.

Acting under UNEP's coordination, BASE serves as grant steward and technical assistance provider, channelling programme resources to partner financial institutions in Indonesia and Bangladesh and ensuring that the financial incentives developed are contextually grounded and responsive to the barriers women and other marginalised groups face in accessing energy-related formal financing in the region. Grants are strictly earmarked for the design and implementation of these financial incentives, with each institution determining the most appropriate structure for its context.

Eligible beneficiaries are defined in accordance with the global 2X Challenge criteria, and each grant includes a substantial leverage mandate, requiring partner institutions to mobilise several times the grant value in lending directed toward these enterprises.

Eligible lending is defined against a set of climate-aligned technology categories, including renewable energy infrastructure, energy efficiency improvements, fuel-switching, waste management, and technological carbon removal, ensuring that financial products developed under EmPower generate measurable climate impact alongside social and economic returns.

PERIOD

2024-2027

COUNTRIES

Bangladesh, Indonesia

PARTNERS

Bank CIMB Niaga Tbk PT, PT Permodalan Nasional Madani, BRAC Bank PLC

FUNDER

United Nations Environment Programme (UNEP)

ACHIEVED IMPACT



NUMBER OF ORGANISATIONS ENGAGED

3



CLIMATE-SMART TECHNOLOGY CATEGORIES

5

EXPECTED IMPACT



FINANCE MOBILISED

USD 10.5 million.



NUMBER OF BENEFICIARIES

7,870 women-led and marginalised community-serving MSMEs to be reached.





The grant is designed as a catalytic instrument rather than a direct financing mechanism, incentivising financial institutions to expand and deepen their outreach to underserved women entrepreneurs and marginalised communities. In doing so, BASE and its partners seek to contribute to a longer-term shift in how financial institutions perceive, design for, and serve women and marginalised communities within the clean energy transition.

Review of 2025

In 2025, BASE focused on establishing the operational foundations of the EmPower financial inclusion component across Indonesia and Bangladesh, supporting partner financial institutions in moving from programme design to early implementation. This involved close coordination with UNEP, UN Women, and each partner financial institution to finalise incentive structures, align eligibility criteria, and initiate outreach to target beneficiaries. Across the three partner financial institutions, the programme aims to mobilise USD 10.5 million in additional financing for women-led and marginalised community-serving enterprises, reaching 7,870 W-MSMEs across five climate-smart technology categories

In Indonesia, Bank CIMB Niaga Tbk PT (CIMB Niaga) advanced the design of a dedicated financing programme for women and marginalised groups, with BASE providing technical assistance throughout the structuring process.

CIMB Niaga conducted market prospecting to identify eligible client segments and carried out data analytics on its existing customer base to generate a pipeline of potential beneficiaries. By the close of 2025, the financing programme had been finalised and submitted for internal approval, with a broader marketing rollout and series of customer engagement events planned for 2026.

PT Permodalan Nasional Madani (PNM), meanwhile, developed a financial incentive programme targeting clients of its Mekaar scheme, a group-based micro-financing programme that provides small, collateral-free loans to women entrepreneurs in underserved communities across Indonesia. One component of this programme involved capacity-building activities combining clean energy education with group-based business mentoring.

A flagship training event held in November 2025 at Kampung Madani, Cimahi, reached over 2,000 participants through a hybrid format, covering the impacts of climate change on agricultural and household livelihoods and introducing participants to applicable renewable energy technologies. These included solar dryers, which can significantly increase drying capacity and product quality for food-based micro-enterprises by reducing dependence on weather conditions; rooftop solar PV systems to reduce electricity costs and support processing activities; and household biogas systems that convert organic waste into cooking fuel and organic fertiliser, reducing both expenditure and environmental waste.





PNM also conducted field surveys to identify suitable deployment sites, with Gunungkidul, Yogyakarta emerging as a priority location given its concentration of sun-drying-dependent micro-enterprises producing traditional cassava-based food products. Further activities in this area are planned for 2026, with the overall programme running through to 2027.

In Bangladesh, BRAC Bank is working to expand access to financing for women-led cottage, micro, small, and medium enterprises in climate-vulnerable communities. Through its collaboration with BRAC University as on-the-ground implementation partner, the programme is able to extend its reach to borrowers in rural and underserved settings that have, for structural and geographic reasons, remained largely outside the ambit of formal financial services in the region.

To identify and engage these communities, BRAC Bank conducted Focus Group Discussions in the Shyamnagar and Kaliganj sub-districts of Satkhira District, designated by BRAC University and UN Women as priority target areas, building awareness of available financing facilities and fostering direct dialogue with potential borrowers. In parallel, internal disbursement processes, risk mitigation frameworks, and stakeholder alignment were

established to ensure efficient and accountable loan management.

Looking ahead, BRAC Bank is advancing partnerships with community service organisations to strengthen last-mile disbursement and is planning a broader outreach campaign targeting renewable energy-using women-led enterprises across its business channels.

Future of the project

Building on its work in Indonesia and Bangladesh, the EmPower programme is exploring an expansion into Viet Nam, where one of the fastest electric vehicle (EV) transitions in Southeast Asia is currently underway, with EV sales surging and market penetration rapidly accelerating. This presents a timely opportunity to ensure that women are not left behind in the shift toward low-carbon mobility.

The proposed intervention centres on two-wheeler EV financing for women riders, a segment with significant potential given the centrality of two-wheelers to everyday mobility and livelihoods across the country. Under UNEP's oversight, BASE intends to work with partner financial institutions using a combination of demand-side financial incentives and risk-sharing mechanisms designed to broaden access to EV financing for women borrowers who may otherwise face affordability and collateral barriers.

A further dimension of the approach involves linking women borrowers to ride-hailing platforms, which serves a dual purpose: providing a reliable income stream that supports loan repayment, and integrating women into the formal digital economy.

This approach reflects the broader ambition of the EmPower programme: to ensure that the clean energy transition across Asia and the Pacific is environmentally transformative and socially inclusive, with women and marginalised communities positioned as equal participants in and beneficiaries of that change.



BASE Director Daniel Magallon signing formal collaboration agreement with CIMB.

SUSTAINABLE FINANCE

SUSTAINABLE BANKING

AMAZON FINANCIAL INNOVATION LAB IN LATIN AMERICA





Setting the Context

The Amazon rainforest, covering 6.7 million square kilometres and home to tens of millions of people, including hundreds of indigenous communities, is one of the planet's most critical ecosystems. Yet it faces relentless pressure: deforestation driven by agricultural expansion, illegal logging, and land grabbing continues at a scale that scientists warn may be pushing the biome toward an irreversible tipping point, where vast stretches of tropical forest could transform into savannah. The consequences for biodiversity, regional rainfall, and global climate stability would be catastrophic.

One of the most stubborn barriers to reversing this trend is financial. Sustainable and socially inclusive economic activities in the Amazon, from agroforestry to bioeconomy ventures, remain severely underfinanced. Public Development Banks (PDBs) are uniquely positioned to change this, yet most lack the tools, product designs, and internal capacity to direct capital effectively toward these opportunities.

In response, the [Green Coalition \(GC\)](#), an alliance of 20 PDBs and multilateral institutions launched in Belém in August 2023 and coordinated by the IDB, established the Green Coalition Amazon Financial Innovation Lab (GC Lab). Operating under Workstream 3 of the Coalition, the Lab's mission is to support PDBs in designing and piloting innovative financial products tailored to the Amazon region's social, environmental, and economic realities. BASE was selected to support the Lab's design and implementation.

Review of 2025

2025 was the Lab's first full operational year, spanning two phases: the design and validation of the Lab's methodology, followed by the co-creation of two pioneering financial instruments with selected PDBs.

The year opened with the revision of the Lab's operating methodology, a structured, five-stage process covering evaluation criteria, selection frameworks, and technical support protocols. A call for financial product ideas was launched in February 2025, open to all GC member PDBs, with proposals evaluated by independent third-party assessors against

PERIOD

2025 (Phases 1–2); Phase 3 ongoing into 2026

COUNTRIES

Amazon region

PARTNERS

Bancóldex (Colombia)

Banco da Amazônia – BASA (Brazil)

FUNDER

Inter-American Development Bank (IDB)

ACHIEVED IMPACT



TOOLS OR RESOURCES CREATED:

Support to 2 financial instruments with potential to mobilise finance upon deployment for sustainable economic activities.





criteria including impact potential, financial viability, replicability, and institutional capacity.

Two proposals were selected in March 2025: [Bancóldex](#) (Colombia) and [Banco da Amazônia](#) (BASA, Brazil), which each received tailored technical assistance until the end of the year, delivered through field visits, multi-departmental workshops, and co-creation sessions with fund managers and external partners.

- **Bancóldex – Amazonas Activo:** An impact-oriented equity and quasi-equity fund targeting at least 20 micro and small enterprises in the departments of Amazonas, Caquetá, and Putumayo. The blended finance structure combines reimbursable and non-reimbursable capital, with an average ticket of USD 100,000 and a five-to-eight-year investment horizon, focusing on sustainable tourism and agroindustry. The fund has USD 6 million in committed capital; a professional fund manager has been identified and contract negotiations are under way. The GC Lab supported the full operational model, including ESG integration, risk management, and impact KPIs.
- **BASA – Pronaf Pecuária Verde:** A credit product for Amazonian family livestock farmers, addressing the twin challenges of low-productivity extensive farming and land tenure constraints. Key innovations include mandatory technical assistance throughout the loan lifecycle, a performance-based environmental bonus rewarding farmers who meet environmental targets with a reduced interest rate, and a technology-enabled MRV system to track and verify socio-environmental compliance. The GC Lab provided support across technical design, ESG alignment, and stakeholder engagement, including in-person visits to BASA's Belém headquarters. Internal approval was achieved by the end of 2025, with regulatory validation by the relevant ministries expected in the first half of 2026 and product launch targeted for the Plano Safra 2026/2027.

Both instruments were presented at COP30 in Belém, positioning Bancóldex and BASA as pioneers in Amazon sustainable finance within the broader Green Coalition and international climate finance community. Work also began on a guide documenting the Lab's methodology and both case studies, "Guide for the Design and Imple-

mentation of Green Financial Products for the Amazon", with finalisation expected in early 2026.

Future of the project

With both financial instruments designed, roadmaps defined, and the GC Lab's methodology documented, the project moves into Phase 3 in 2026: targeted advisory support to accompany the transition from design to operational deployment.

For Bancóldex, this means supporting internal knowledge transfer across teams and providing guidance during the first pilot transactions. For BASA, the focus shifts to mapping funding sources, including payments for ecosystem services, carbon markets, and the Amazon Constitutional Fund (FNO), to finance the product's environmental bonus and MRV components, and supporting engagement with the relevant ministries for regulatory approval.

Across both cases, the goal is not only successful implementation but rigorous documentation of early lessons, to inform future iterations of the Lab and position the GC methodology as a model for mobilising development bank capital toward the Amazon at scale.

SUSTAINABLE FINANCE

SUSTAINABLE BANKING

SUSTAINABLE FINANCE FOR SOFOMES IN MEXICO





Setting the Context

Mexico's non-bank financial intermediaries, known as SOFOMes, play a critical role in extending credit to micro and small enterprises that remain outside the reach of traditional commercial banking. The agroindustrial sector, which employs over 21 percent of the Mexican workforce, is among the most underserved: despite its economic significance, it historically receives only around 2.5 percent of commercial lending in the country.

Closing this financing gap requires not only more capital, but capital that is tracked, categorised, and reported against environmental and social standards — conditions that most SOFOMes lacked the systems to meet. Against this backdrop, [IDB Invest](#) structured Mexico's first joint public securitisation of SOFOME portfolios, mobilising resources for four institutions (CRESCA, Proaktiva Financiera, SEFIA, and SFI) lending primarily to agroindustrial SMEs.

While the transaction was a landmark for Mexico's sustainable capital markets, the four originating institutions needed robust systems to categorise their eligible loan portfolios, trace the use of bond proceeds, monitor environmental and social impact, and report publicly in line with international standards such as the ICMA Green Bond Principles and Mexico's Sustainable Finance Taxonomy.

Review of 2025

In 2025, the work focused on strengthening the four SOFOMes' capacity to manage, classify, monitor, and report sustainable loan portfolios, with particular attention to agroindustrial SME lending.

BASE first reviewed each institution's Environmental and Social Management System (ESMS), identifying gaps and preparing tailored improvement plans aligned with IFC Performance Standards and IDB Invest sustainability policies. It then designed and helped implement a sustainable portfolio management system, including an automated tool tailored to each institution to support the identification, classification, and labelling of eligible green and social loans. The system covered eli-



PERIOD

2024-2025

COUNTRIES

Mexico

PARTNERS

IDB Invest

FUNDER

IDB Invest

ACHIEVED IMPACT



ORGANISATIONS ENGAGED:

4 SOFOMes (CRESCA, Proaktiva Financiera, SEFIA, SFI), IDB Invest, FIRA, Inteligencia Capital, CXC.



TOOLS OR RESOURCES CREATED:

Sustainable portfolio management system for each institution;

Environmental and social risk management review reports;

Standardised annual reporting template;

First public annual securitisation report;

Replicable case study on sustainable securitisation in the SOFOME segment.



FINANCE MOBILISED:

The first tranche of sustainable bond issued at MXN 339 million (approximately USD 17.3 million), with overall issuance approved for up to MXN 1.5 billion, financing agroindustrial SMEs across Mexico.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH:

Teams across commercial, risk, and sustainability functions of 4 institutions.



gibility criteria aligned with Mexico's Sustainable Finance Taxonomy, fund traceability procedures consistent with ICMA principles, and an MRV framework for environmental and social impact measurement.

A key contribution was the refinement of the eligibility and categorisation criteria. Applying sustainability requirements to real agroindustrial loan portfolios surfaced important practical nuances, resulting in a more operational and sector-relevant system. BASE also developed a standardised public reporting framework, supported the preparation of the first annual securitisation report, and documented the transaction as a replicable case study. Together, these outputs strengthened the foundations for sustainable portfolio management and created a credible model for future sustainable securitisations in Mexico.

Future of the project

The project has done more than strengthen four institutions. The automated categorisation tool, originally designed to help the SOFOMes apply the eligibility and classification system to their portfolios, has since proved useful well beyond its initial context. BASE is now deploying it with other financial institutions, and conversations are underway with IDB Invest on how to enhance it further using AI, potentially transforming what began as a project-specific instrument into a sector-wide resource for sustainable portfolio management.

The case study documentation is expected to inform future sustainable securitisations in Mexico and across Latin America and the Caribbean, while the methodology offers a replicable approach for other financial intermediaries seeking access to sustainable capital markets. Together, the tool, the methodology, and the reporting framework position BASE as a reference partner for the continued development of Mexico's sustainable finance ecosystem, and point toward a growing pipeline of work at the intersection of portfolio classification, impact reporting, and financial technology.

SUSTAINABLE FINANCE

SUSTAINABLE BANKING

SUSTAINABLE FINANCE PROTOCOL IN SURINAME





Setting the Context

Suriname's financial sector plays a pivotal role in the country's economic development, yet it has only recently begun to integrate sustainability into its operations. Despite being a carbon-negative country with vast forest cover, Suriname faces significant climate risks including rising sea levels, flooding, and extreme weather events, while simultaneously managing rapid economic growth driven by oil, gas, and mining investments. Translating national climate commitments into concrete financial sector action requires a shared framework that financial institutions can adopt, adapt, and own.

Prior to this project, Suriname's banking sector lacked a standardised approach to guide ESG integration, green finance, and financial inclusion, limiting the mobilisation of capital for climate and social initiatives. The development of an inclusive sustainable finance protocol offered an opportunity to change this, aligning the sector with international best practices while addressing Suriname's specific context, including the financial needs of women, youth entrepreneurs, SMEs, indigenous communities, and other underserved groups.

Review of 2025

In 2025, BASE supported the [Suriname Bankers' Association](#) (SBV) in developing and launching its Inclusive Sustainable Finance Protocol, working through a structured co-creation process designed to ensure genuine ownership and commitment from participating financial institutions.

The process began with the establishment of a Sustainability Working Group bringing together senior representatives from SBV member banks, [IDB Invest](#), and relevant public authorities. This group served as the primary forum for dialogue, feedback, and decision-making throughout the project, ensuring that the protocol reflected the operational realities and priorities of Suriname's financial institutions rather than being imposed from outside.



PERIOD

2024-2025

COUNTRIES

Suriname

PARTNERS

IDB Invest, Suriname Bankers' Association (SBV), Central Bank of Suriname

FUNDER

IDB Invest

ACHIEVED IMPACT



ORGANISATIONS ENGAGED:

11 SBV member banks engaged in this project, plus the Central Bank of Suriname. Ministry of Finance, community organisations representing women, WSMEs, youth, Afrodescendants, and indigenous communities.



TOOLS OR RESOURCES CREATED:

Inclusive Sustainable Finance Protocol, endorsed by SBV member banks and backed by the government;

International benchmarking report covering 5 countries;

ESG risk and opportunity assessment for Suriname's financial sector;

Market assessment on financial literacy and financing needs of underserved groups;

Capacity building materials across 6 thematic sessions.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH:

Senior teams across risk, sustainability, commercial, and corporate functions of SBV member banks; engagement with public authorities including the Central Bank of Suriname and relevant ministries.



BASE then conducted an international benchmarking exercise, assessing sustainable finance practices across five countries to identify lessons and best practices applicable to Suriname's context. This was complemented by a comprehensive ESG risk and opportunity assessment, combining desk research, interviews with banks and government bodies, and consultations with community organisations working with underserved populations. The assessment covered climate risks, biodiversity considerations, social inclusion gaps, and the specific financing needs of women, WSMs, youth, Afrodescendants, and indigenous communities.

Drawing on these foundations, BASE led the co-creation of the protocol itself, covering institutional commitment, ESG risk management, green finance instruments, sustainability metrics and reporting, stakeholder engagement, and financial inclusion. The protocol also incorporated elements specific to Suriname's context, including biodiversity conservation financing and climate adaptation for vulnerable communities and sectors. A series of capacity-building sessions was delivered throughout the process, covering ESG risk assessment tools, green finance product development, sustainability reporting frameworks, and best practices in inclusive finance.

The protocol was successfully finalised and endorsed by the management teams of SBV member banks and backed by the government, marking a significant milestone for Suriname's financial sector and demonstrating the value of a co-creation approach in building genuine institutional commitment.

Future of the project

The endorsement of the protocol by both the financial sector and the government creates a strong foundation for implementation. The next phase will focus on translating the protocol's principles into concrete action within SBV member institutions, including the integration of ESG criteria into lending and investment decisions, the development of green financial products, and the strengthening of sustainability reporting practices.

The capacity-building activities and the Sustainability Working Group structure put in place during the project provide the institutional infrastructure needed to sustain this momentum. BASE remains engaged with IDB Invest and SBV to support implementation and explore opportunities to connect Suriname's financial sector with international climate finance flows.

SUSTAINABLE FINANCE

SUSTAINABLE BANKING

CATEGORISATION TOOL FOR BANCÓLDEX IN COLOMBIA





Setting the Context

Bancóldex is Colombia's national development bank, operating as a second-floor institution that channels financing through a network of intermediary banks serving a wide range of borrowers, from microfinance clients and SMEs to corporate entities. As Colombia advances its sustainable finance agenda, a key challenge has been translating green, resilience, and circular economy concepts into practical tools that financial intermediaries and their clients can actually use, without requiring deep technical expertise in sustainability frameworks.

Most categorisation systems developed for financial institutions assume a level of specialist knowledge that intermediary banks and their borrowers often do not have. The result is that sustainability criteria remain confined to dedicated teams rather than becoming embedded in day-to-day lending decisions across the portfolio.

Review of 2025

From 2024 to 2025, BASE worked with Bancóldex and IDB to design and develop a categorisation tool covering green finance, climate resilience, and circular economy criteria, with a particular focus on making it accessible to users with no prior background in sustainability concepts. Rather than producing a technical framework for specialists, the work centred on the architecture of a user-friendly digital tool that intermediary banks and their borrowers could navigate independently, guiding them through the categorisation process in a structured and intuitive way.

A distinctive feature of the tool was the integration of the graduality and eligibility criteria for circular economy financing that BASE had developed progressively between 2023 and 2025 through its work across Latin America and the Caribbean. This body of work, which produced categorisation systems and ecosystem diagnostics across multiple countries, provided a tested and operationally grounded methodology that could be embedded directly into the tool's architecture, significantly strengthening the circular economy component and ensuring it reflected real market conditions rather than purely theoretical criteria.



PERIOD

2024-2025

COUNTRIES

Colombia

PARTNERS

Inter-American Development Bank (IDB), Bancóldex

FUNDER

Inter-American Development Bank (IDB)

ACHIEVED IMPACT



ORGANISATIONS ENGAGED:

Bancóldex, IDB, intermediary banks across Bancóldex's client network.



TOOLS OR RESOURCES CREATED:

Green, resilience, and circular economy categorisation tool for financial intermediaries and borrowers; categorisation architecture and eligibility criteria across three thematic areas; web-based implementation guided by BASE.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH:

6 trainers from internal Bancóldex teams and intermediary bank staff across SME, corporate, and microfinance segments; cross-institutional learning applied to SOFOME project in Mexico and financial institutions in Mongolia.



BASE led the conceptual design and architecture of the tool, defining the categorisation logic, eligibility criteria, and decision pathways across the three thematic areas. BASE also advised and guided the programming team responsible for building the tool on the web, ensuring that the technical implementation faithfully reflected the intended user experience and categorisation methodology. The objective is that all Bancóldex client institutions adopt the tool, embedding sustainable finance categorisation across the full breadth of the bank's intermediary network and ultimately reaching borrowers across multiple segments.

Beyond its immediate application, the development of this tool significantly strengthened BASE's internal expertise in categorisation system design, with lessons learned feeding directly into subsequent work, including the automated categorisation tool developed for the SOFOME project in Mexico and ongoing work with financial institutions in other markets including Mongolia.

Future of the project

The tool is now being rolled out across Bancóldex's intermediary network, with the ambition of making sustainable portfolio categorisation standard practice across all client institutions. BASE continues to refine and improve the categorisation methodology, applying accumulated learning to new contexts and markets.

The architecture developed for Bancóldex has become a foundation for BASE's growing offer in sustainable portfolio management tools, connecting work across Colombia, Mexico, and emerging markets further afield. Conversations are ongoing on how to further enhance the tool, including the potential application of AI to streamline the categorisation process.

SUSTAINABLE FINANCE

SUSTAINABLE BANKING

ESMS AND SUSTAINABLE INVESTMENT PREPAREDNESS IN THE CARIBBEAN





Setting the Context

A commercial bank operating across the Caribbean region is seeking to consolidate its role in sustainable finance. To support this objective, the bank is collaborating with IDB Invest in the implementation of an Environmental and Social Management Systems and Sustainable Finance Investment Preparedness Project.

The bank has demonstrated experience in utility-scale renewable energy, infrastructure-related lending, sustainability-linked financing, and structured transactions involving corporate, public, and quasi-public counterparties. Building on this foundation, the project aims to develop a framework that will enable the bank to institutionalize and scale its sustainable lending portfolio, while also strengthening its readiness for future issuance of its first sustainable or green bond.

Within this context, one of the key objectives of the consultancy is to support the bank in identifying existing loans within its portfolio that can be classified as green, while also identifying new opportunities for green lending across its markets. This assessment is based on the growing demand for green technologies, products, and services, as well as an analysis of the bank's existing portfolio, client segments, and the broader regional market landscape.

Review of 2025

From August 2025 to July 2026, BASE worked with the bank and [IDB Invest](#) to identify targeted enhancements to the bank's existing practices and frameworks, while developing practical tools to strengthen both Environmental and Social (E&S) risk management and the Sustainable Finance Management System.

As a result, the project is expected to contribute to a more robust and internationally aligned Environmental and Social Management System (ESMS), further integrating ESG considerations into credit decision-making processes and positioning the bank to meet the evolving expectations of regulators, investors, and development finance partners.



PERIOD

2025-2026

COUNTRIES

Barbados, Jamaica

PARTNERS

IDB Invest

FUNDER

IDB Invest, Commercial Bank active in the Caribbean

ACHIEVED IMPACT



TOOLS OR RESOURCES CREATED:

Green financial product with the potential to be replicated and scaled across The Bahamas, Trinidad and Tobago, and the Dominican Republic.

Environmental and Social Management System (ESMS) and Sustainable Finance Management System, including a Green and Resilience Taxonomy Classification Tool that translates eligible activities into clearer requirements, thresholds, metrics, and proposed means of verification.



TRAINING AND CAPACITY-BUILDING ACTIVITIES REACH:

Delivery of training sessions for senior management and bank staff to build internal awareness, institutional buy-in and technical capacity to operationalise the proposed systems and tools independently.



In parallel, the engagement provides the bank with the clarity, structure, and operational tools needed to establish a credible and scalable sustainable finance platform. Through rigorous market analysis, taxonomy development, and product design, the project seeks to translate strategic ambitions into bankable opportunities and practical implementation pathways across green, social, resilience, and transition finance.

The resulting Sustainable Finance Management System is intended to support the growth of taxonomy-aligned assets, unlock new commercial opportunities, and lay the foundations for the bank's first thematic bond issuance.

Future of the project

This project contributes to the continuous refinement and enhancement of BASE's sustainable finance categorisation methodology, incorporating valuable learnings from the Caribbean context and market dynamics.



AREA OF WORK

KNOWLEDGE SHARING



ACTIVITY 1: EVENTS

A) Building Bridges workshop and White Paper

BACKGROUND INFORMATION

The "Building Bridges" event is a high-profile, annual gathering aimed at fostering collaboration and dialogue between various stakeholders, with a focus on financial institutions and development actors, on pressing climate finance topics. It serves as a critical platform for knowledge sharing and creating meaningful collaborations.

Last year, BASE, along with Switzerland's State Secretariat for Economic Affairs (SECO), the Swedish Development Cooperation Agency (SIDA) and the Global Platform for Action on Sustainable Energy in Displacement Settings (GPA) hosted at Building Bridges 2024 a panel discussion titled [Innovative Investment Risk Mitigation: Harnessing Guarantees for Climate Solutions Across Sectors](#).

The event, featuring representatives from all four organisations, reviewed the significant achievements of SECO, SIDA, and BASE as leaders in guarantee implementation. Key outcomes highlighted the powerful finance mobilisation potential of guarantees, with Sida managing a USD 2 billion portfolio achieving a 1:70 leverage ratio, and SECO's credit guarantees mobilising up to 12 times initial funding. Furthermore, the discussion emphasised the potential for guarantees to act as revolving funds, multiplying their long-term impact on sustainable investments.

The event, organised in parallel to the conceptualisation for the development of BASE's innovative philanthropic guarantee project, aimed at creating new partnerships with relevant institutions whose expertise and networks can consolidate the project while raising awareness about the initiative and among potential donors.

As the event ended with nearly a full room, demonstrating a keen interest in guarantees and risk mitigation



PARTNERS

Cardano Development, IMD School of Business, UNDP Rome Centre

IMPACT



AMPLIFICATION REACH

100 people joined in-person, a mix of impact investors, development banks and agencies, UN agencies, academia, NGOs.



TOOL OR RESOURCES CREATED

1 White Paper published by the IMD summarising key takeaways from the discussions on financial risk mitigation strategies.

mechanisms as a whole, BASE applied and got selected to host another event on the topic at Building Bridges 2025.

ABOUT THE EVENT

Building on the previous experience and the growing global discourse on the need for effective and accessible de-risking strategies for climate mitigation and adaptation investments, it was decided to cover a broader spectrum of existing mechanisms.

Based on this vision that required covering multiple topics in a short time and encouragements from the Building Bridges team to move towards more interactive formats, the event was planned as a World Cafe, a kind



2025
30 SEPT - 2 OCT
GENEVA



Daniel Magallón
Managing Director at BASE Foundation



Vanina Farber
IMD elea Chair on Social Innovation, Dean of Executive MBA



Mpho Mataboge
Sustainable Finance and Investment Specialist at UNDP Rome Centre



Joost Zuidberg
CEO at Cardano Development



Sylvain Goupille
Founder and Managing Director at Octobre



Lena-Katharina Gerdes
Program Manager at SDG Impact Finance Initiative



Demba Tienda
Regional Vice-President for Sub-Saharan Africa at TCX



Casper Havinga
Investment Director at AGR13 Fund

Catalysing Sustainable Private Investments with De-risking Strategies

1 OCTOBER, 2025
10:30 - 12:00 CEST | ROOM F



of workshop where several tables cover different aspects of a matter following a similar structure before giving a plenary summary to all participants.

Therefore, it was decided to assign different risk mitigation strategies - selected by BASE and partners experts - to a set of roundtables where participants could discuss key challenges, real-world examples, and best practices regarding the deployment of the given solutions. Upon entering the room, attendees were able to choose to sit at one of the seven tables which covered:

1. Blended Finance for early stages, moderated by Lena-Katharina Gerdes, Programme Manager at the [SDG Impact Finance Initiative \(Sifi\)](#), which addressed: pre-seed and seed grants, first loss equity, and concessional debt.
2. Blended Finance for project preparation, covering technical assistance grants to bring projects to bankability, moderated by Mpho Mataboge, Sustainable Finance and Investment Specialist at [UNDP Rome Centre for Climate and Energy](#).
3. Credit Guarantees for Energy projects, moderated by Joost Zuidberg, CEO at [Cardano Development](#).
4. Credit Guarantees for nature and agriculture projects, moderated by Casper Havinga, Investment Director at the [AGRI3 Fund](#).

5. Liquidity risk Guarantees for private impact investments, moderated by Sylvain Goupille, Founder and Managing Director at [Octobre](#).

6. Derivatives and currency hedging, moderated by Demba Tienda, Regional Vice-President for Sub-Saharan Africa at the [TCX Fund](#).

7. Parametric and non-parametric insurance, moderated by Vanina Farber, elea Chair/Professor of Social Innovation at the [IMD Lausanne](#).

In the morning of October 1st, around 100 participants took part in fruitful discussions on the various risk mitigation strategies with the potential to unlock investments in developing countries, garnering good feedback from partners and moderators.

Beyond the pre-event organisation, from the workshop conceptualisation to the selection and engagement of the table moderators, the BASE team's role was one of coordination and logistical support during the course of the event.

OUTCOMES

The session drew an estimated in-person attendance of 60 people, with half of them engaging in the different Slido questions designed to gather insights.



Based on the amount of information collected across the seven tables, our partner the IMD Lausanne developed a full White Paper compiling this knowledge.

Titled *Risk Mitigation Strategies in Emerging & Frontier Markets*, the 36-page piece identifies key findings, cross-cutting challenges, instrument-specific hurdles, examples, and best practices, as well as provides key recommendations for different actors. The paper was published in early 2026 and is accessible [here](#).

Risk Mitigation Strategies in Emerging & Frontier Markets

Vanina Farber & Patrick Reichert

April 2026

White Paper summarising key takeaways from the event.



One of the roundtable discussions, hosted by the UNDP Rome Centre.





B) External Events

BACKGROUND INFORMATION

Active participation in external events is crucial for networking, thought leadership, and identifying new opportunities.

ABOUT THE EVENTS

BASE experts attended and spoke at a variety of key events:

a) Finnlac Forum 2025

BASE participated in the [FinnLAC Forum 2025](#) in Miami, where Deputy Director Carla Della Maggiora represented the organisation. During the forum, she shared BASE's work on financing the transition to a circular economy, with a particular focus on the development of categorisation systems that help private sector actors identify and direct investment toward projects that meaningfully contribute to circular economic models.

Convened by IDB Invest, the event also provided insights into emerging financial technology innovations aimed at expanding access to capital.



PARTNERS

IDB Group, Cool Coalition

Discussions covered alternative risk assessment models to improve SME financing, as well as tokenisation mechanisms designed to diversify investor participation. These exchanges contributed to ongoing reflections on how financial innovation can support investment mobilisation across value chains, where SMEs play a critical role, and accelerate the transition toward a more circular economy in the region.

b) AI + Environment Summit

BASE is exploring how digitalisation, IoT, and AI can enhance climate impact, from enabling remote monitoring to providing critical support in areas where expert presence is limited.

As part of this effort, Digitalisation Lead Roberta Evangelista attended the [AI + Environment Summit](#) in Zurich on October 1.

The event brought together around 200 participants, including 17 speakers, 3 workshops, and 61 poster presentations. Discussions covered a wide range of topics, including computer vision methods for global-scale environmental and biodiversity monitoring, using machine learning to turn satellite, drone, and ground-based sensor data into actionable environmental insights, data-centric analyses of large-scale Earth observation data, dataset curation, generative modelling, and restoration tasks for satellite imagery. Participants also critically examined the environmental costs of developing and deploying AI models, the trade-offs involved in scaling data-driven solutions, and strategies to



ensure that tools designed to address environmental challenges do not inadvertently worsen them.

Building on these insights, BASE began, with support from UNEP, the development of a report exploring how AI can help achieve energy efficiency and GHG measurement goals.

c) Cool Talks #3: Cooling-as-a-Service: Catalyzing Innovation and Efficiency

BASE actively engaged in the Cool Talks webinar series organised by the [UN Environment Programme \(UNEP\) Cool Coalition](#), a global multi-stakeholder platform bringing together governments, international organisations, private sector actors, and civil society to accelerate the transition to sustainable cooling.

On 2 April 2025, Dimitris Karamitsos, Project Lead at BASE, participated in [Cool Talks #3: Cooling-as-a-Service: Catalyzing Innovation and Efficiency](#). During this session, he shared insights from BASE's leadership of the Cooling-as-a-Service (CaaS) Initiative and its subsequent scaling through the Servitisation for Energy Transition (SET) Alliance. His intervention focused on the mechanics of the CaaS model, its financial structure, and its potential to accelerate access to energy-efficient and climate-friendly cooling across sectors, including agriculture, commercial and industrial buildings, healthcare, and education. Discussions also addressed the role of public institutions, financial actors, and partnerships in enabling the wider adoption of CaaS.

d) The Cool Coalition Cool Talks Webinars - Virtual, April and July 2025

Cool Talks

COLD CHAINS FOR A HOT PLANET
COOLING FOR RESILIENT FOOD AND HEALTH SYSTEMS

30 JULY 2025 17:00 - 18:00 CEST

SPEAKERS

 MARICEL CASTRO Technical Officer for Vaccine Supply Chain and Logistics, WHO	 ROBERTA EVANGELISTA Senior Digitalization Specialist, BASE Foundation	 GUNTRAM GLASBRENNER Programme Manager, Proklima International, GIZ GmbH	 ANATOLY MIKHAILOV Vice President, Industrial Refrigeration, Danfoss	 VISHNU SASIDHARAN Vice President & Business Head, Climate Technologies, Plusx Technologies	 IOANNIS VASKALIS Natural Resources Officer, FAO
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Later in the year, BASE also contributed to [Cool Talks #6: Cold Chains for a Hot Planet](#). The event explored how sustainable cold chains can support food security, public health, and climate resilience, drawing on case studies from North and West Africa and South Asia.

Roberta Evangelista, Senior Digitalisation Specialist at BASE, participated as a speaker, presenting insights from the Your Virtual Cold Chain Assistant (Your VCCA) project. Her intervention highlighted how digital tools and community-driven approaches can improve the deployment and operation of cold chains in emerging markets, making them more efficient, inclusive, and durable, while contributing to the reduction of agricultural post-harvest losses.

Cool Talks
The UNEP Cool Coalition webinar series

COOLING-AS-A-SERVICE
Catalyzing Innovation and Efficiency

2 APRIL 2025 17:00 CET / 11:00 ET / 08:00 PT

 BOB HINKLE President & CEO, Metrus Energy	 DIMITRIS KARAMITSOS Senior Energy Efficiency Business Developer, BASE	 SHIVALI MATHUR Associate, Energy Transition, Amberside Advisors	 AMR SELEEM Country Engagement and Policy Lead, UNEP Cool Coalition	 RHIANNON TURNER Senior Manager, Innovation, The Carbon Trust	 ANDREA VOIGT Head of Global Public Affairs & Communication, Danfoss Climate Solutions
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UNEP environment programme | Cool Coalition | Danfoss | metrus | CARBON TRUST



ACTIVITY 2: REPORTS AND PAPERS

A) AI and Digital tools for Climate Transparency

BACKGROUND INFORMATION

Robust greenhouse gas (GHG) Monitoring, Reporting and Verification (MRV) underpins the Paris Agreement's Enhanced Transparency Framework, yet many governments still struggle to produce timely, complete and comparable emissions data through manual, fragmented processes. Artificial intelligence (AI) and digital tools offer a way to close this gap, automating data collection and validation while reducing error and cost.

ABOUT THE PAPER

In 2025, BASE partnered with the [United Nations Environment Programme \(UNEP\)](#) United for Efficiency (U4E) initiative to map how these tools can strengthen GHG MRV and climate transparency for policymakers. The resulting report, *Enhancing Climate Transparency Through AI and Digital Tools for GHG MRV*, draws on desk research and stakeholder consultations to identify where digital and AI tools deliver concrete value across the MRV value chain.

The report organises the landscape into five clusters of tools: AI-driven monitoring, detection and estimation; inventory-adjacent digital infrastructure and data platforms; scenario modelling, planning and decision support; corporate and project MRV and accounting platforms; and AI-enabled operational optimisation. For each cluster, a representative tool is selected for the sectors energy, agriculture, forestry and other land use (AFOLU), and finance; the report thus illustrates 15 currently available tools, from satellite-based methane detection to portfolio-level emissions accounting.



Enhancing Climate Transparency through AI and Digital Tools for Greenhouse Gas MRV

Report

PARTNERS

UN Environment Programme

OUTCOMES

Designed as practical guidance rather than advocacy for any single approach, the report helps governments and public-sector partners assess technologies against their own capacity, data readiness and policy needs, while setting out the associated risks and recommendations for responsible adoption.

The work positions AI and digitalisation as enablers of transparency and trust, supporting more credible, data-driven climate policy and reporting. transparency and trust, supporting more credible, data-driven climate policy and reporting.



ACTIVITY 2: REPORTS AND PAPERS

B) Best Practices for Mainstreaming Gender in Climate Finance

BACKGROUND INFORMATION

The original toolkit titled ‘Best Practices for Mainstreaming Gender in Climate Finance’ was developed between 2021 and 2022, when BASE had the opportunity to participate in the [Geneva Graduate Institute's Applied Research Projects](#), which presents students with an opportunity to engage in pointed challenges, research questions, and the need for out-of-the-usual thinking facing international organisations in their drive to meet their mission statements.

ABOUT THE PAPER

One such question facing BASE, which, although a part of the mandate, required a more systemised and intentional approach, was how to integrate gender mainstreaming in climate projects. Three students, Duanxia Xu, Signe Skov Jensen, and Zheting Liu, took on this question and, through a combination of desk research and interviews, developed a practical, actionable toolkit for practitioners.

The toolkit follows a five-step methodology:

1. Diagnose the gender gap within the specific climate context of the project.
2. Set a target, based on the project's current position on the roadmap toward gender mainstreaming.
3. Apply the tools, ready-to-use frameworks, templates, and worksheets, to address the barriers identified, breaking the problem down part by part.
4. Develop a gender action plan, drawing on good practice recommendations from case studies.
5. Deepen the practice through further exercises tailored to the project's own context.

BEST PRACTICES FOR MAINSTREAMING GENDER IN CLIMATE FINANCE

AUTHORS
DUANXIA XU, SIGNE SKOV JENSEN, ZHETING LIU

REVIEWERS
SIMRAN SINGH, HUGO MANTICELLO



Photo Credit: UN Women/Gaganjit Singh

Building on this structure, BASE [updated the toolkit](#) between 2024 and 2025, complementing it with case studies that show these solutions in action, offering practitioners pathways to adapt rather than prescriptive steps to follow exactly, since application remains context-dependent. Every recommendation was paired with a case study, to give substance to guidance that can otherwise feel abstract.

OUTCOMES

The toolkit now helps practitioners diagnose gender gaps and assess their severity, set clear intentions around the level of gender mainstreaming to pursue, and identify best practices to emulate. Above all, it shows how gender can be integrated throughout the entire project cycle: never as an afterthought, but a defining factor in how a project is shaped, who shapes it, whose priorities are accounted for in that shaping, and who ultimately benefits from the outcome.





ACTIVITY 3: ARTICLES

A) COP30 Articles in the Energy Efficiency Magazine

BACKGROUND INFORMATION

The [Energy Efficiency Magazine](#), published by the AOB Group, is a recognised sectoral publication reaching a specialised audience of energy professionals, policymakers, solution providers, and development actors. In the context of major climate conferences, its special editions offer a targeted platform to disseminate applied insights on innovation, implementation, and emerging trends in the energy transition.

Following a first contribution by BASE to the COP28 special edition two years ago, the editorial team of Energy Efficiency magazine approached BASE again in 2025 to contribute to the COP30 edition. This renewed invitation reflects continued interest in BASE's analytical and practice-oriented perspectives on business model innovation and enabling conditions for energy efficiency.

In response, BASE proposed two complementary articles, aligned with its strategic priorities and ongoing partnerships: one focusing on the latest developments of Cooling-as-a-Service (CaaS) in Africa, and another exploring the role of digitalisation as a catalyst for energy efficiency, with a spotlight on the Digital Demand-Driven Electricity Networks (3DEN) Initiative.

ABOUT THE ARTICLES

The first article, *Cooling-as-a-Service in Africa: latest developments of business model innovation for cold chains*, builds on work conducted under the [Servitisation for Energy Transition \(SET\) Alliance](#).

It synthesises insights gathered through interviews with leading cooling innovators operating across



the African continent, originally published as a long-form article on the SET Alliance platform. The magazine version distils these findings for a broader readership, showcasing concrete examples of how CaaS models are being deployed to reduce post-harvest losses, strengthen food security, and improve livelihoods, while overcoming high upfront investment barriers through pay-per-use approaches.

The second article, *A factual ode to digitalisation, the highway to energy efficiency*, was developed specifically for the COP30 edition. It explores digitalisation as a key enabler of energy efficiency and system optimisation, drawing on evidence from international sources and concrete project experience. The article places particular emphasis on the 3DEN Initiative. The 3DEN is a joint programme led by the International Energy Agency (IEA) and the United Nations Environment Programme



(UNEP), with the support of the Italian Ministry of Environment and Energy Security, designed to pilot and scale digital solutions that improve the efficiency, resilience, and integration of energy and agri-food systems in emerging and developing economies. The article highlighted pilot projects from 3DEN's first phase that demonstrate how digital tools can unlock efficiency gains, improve system resilience, and lay the groundwork for scalable investment

Under the second phase of the project, around EUR 20 million will be channelled by BASE as grants to selected projects and companies.

The choice of topics was deliberate and strategic. At COP30, UNEP representatives were actively presenting the outcomes of the first phase of the 3DEN Initiative and announcing a new batch of 15 projects selected for funding under Phase II. BASE's contribution to the magazine, therefore, complemented on-the-ground outreach and event participation, reinforcing key messages around digitalisation, pilots, and scale-up.

The COP30 edition is available [here](#).

OUTCOMES

The publication of the two articles in the COP30 special edition of Energy Efficiency magazine enhanced the visibility of African CaaS market developments and digitalisation for energy efficiency among a specialised, international readership at a key moment in the global climate calendar. It contributed to sustained engagement with the magazine's editorial team and reinforced BASE's reputation as a recurring contributor on topics related to energy efficiency, servitisation, and innovation.

TECHNOLOGY

A FACTUAL ODE TO DIGITALIZATION, THE HIGHWAY TO ENERGY EFFICIENCY

Four years after its launch, it is with great pleasure that we see the Digital Demand-Driven Energy Network (3DEN) Initiative being completed for the first time. A group of companies that helped bring digital intelligence to power grids from Latin America to South Asia. The next phase begins with a similar global scale-out works in open countries of Africa and in Brazil, and will make the case for digital technologies in urban energy and agri-food systems.

Digitalization is a key to modernizing the world's energy systems, enabling grids to become more resilient to climate change, more efficient, and more secure. The 3DEN Initiative is a key to modernizing the world's energy systems, enabling grids to become more resilient to climate change, more efficient, and more secure. The 3DEN Initiative is a key to modernizing the world's energy systems, enabling grids to become more resilient to climate change, more efficient, and more secure.

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WITH UNEP - ENERGY EFFICIENCY

TECHNOLOGY



The other side of the coin, however, is the need for digitalization. The 3DEN Initiative is a key to modernizing the world's energy systems, enabling grids to become more resilient to climate change, more efficient, and more secure. The 3DEN Initiative is a key to modernizing the world's energy systems, enabling grids to become more resilient to climate change, more efficient, and more secure. The 3DEN Initiative is a key to modernizing the world's energy systems, enabling grids to become more resilient to climate change, more efficient, and more secure.

Stay informed about upcoming funding and new pilots by following the organizations behind 3DEN and join the 3DEN community.

WITH UNEP - ENERGY EFFICIENCY

COOLING

COOLING-AS-A-SERVICE IN AFRICA: LATEST NEWS ON BUSINESS MODEL INNOVATION FOR COLD CHAINS

Business model innovation represents a crucial topic in the global discourse on sustainable energy use. In the agricultural sector, the Cooling-as-a-Service model has emerged as a significant solution to address the challenges of cold chain infrastructure. This model offers a range of benefits, including improved energy efficiency, reduced operational costs, and enhanced resilience to climate change.

The Cooling-as-a-Service (CaaS) model is a business model innovation that allows farmers and agribusinesses to access cold chain infrastructure without the need for large upfront investments. This model is particularly relevant in Africa, where cold chain infrastructure is often lacking and the need for efficient cooling solutions is high.

A growing innovation of cooling business models is the Cooling-as-a-Service (CaaS) model. This model allows farmers and agribusinesses to access cold chain infrastructure without the need for large upfront investments. This model is particularly relevant in Africa, where cold chain infrastructure is often lacking and the need for efficient cooling solutions is high.

WITH UNEP - ENERGY EFFICIENCY



With great pleasure, we see the Cooling-as-a-Service model being implemented in Africa. This model offers a range of benefits, including improved energy efficiency, reduced operational costs, and enhanced resilience to climate change. The Cooling-as-a-Service (CaaS) model is a business model innovation that allows farmers and agribusinesses to access cold chain infrastructure without the need for large upfront investments.

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WITH UNEP - ENERGY EFFICIENCY





ACTIVITY 3: ARTICLES

B) Research Article on Biodiversity Credits

BACKGROUND INFORMATION

Mobilising finance for biodiversity and nature-based solutions remains a major challenge, despite growing recognition of their role in climate mitigation, adaptation, and resilience. While public and philanthropic funding continues to dominate this space, there is increasing interest in mechanisms capable of attracting private capital, such as biodiversity credits and habitat banks. However, these instruments are still emerging, often poorly understood, and characterised by fragmented regulatory frameworks and limited track records.

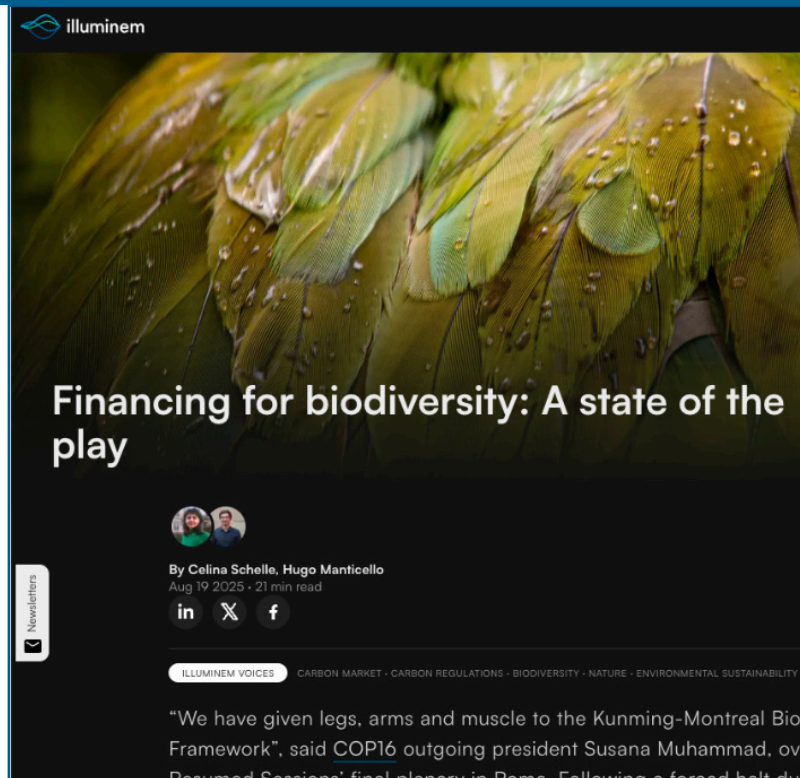
Against this backdrop, BASE initiated exploratory research to better understand how biodiversity credits and habitat banks function in practice, how they are currently used within climate and nature finance, and how they could be combined with risk-mitigation instruments such as blended finance to support scale-up.

ABOUT THE ARTICLE

As part of this research effort, BASE developed a research article titled “[Financing for Biodiversity: A State of the Play of Biodiversity Credits and Habitat Banks](#)”. The piece was conceived as an explanatory work, aimed at clarifying key concepts, market structures, and use cases, while identifying both the potential and the limitations of these mechanisms.

The publication was developed in parallel with BASE’s work on conceptualising innovative financing structures seeking to blend philanthropic and private capital to reduce risks associated with investing in and scaling habitat banks.

Drawing on international examples, the article outlines how biodiversity credits and habitat banks operate under both mandatory and voluntary frameworks, highlights integrity and governance challenges, and discusses the conditions under



which these tools could meaningfully contribute to closing the biodiversity finance gap. Beyond knowledge dissemination, the article also served a strategic purpose: positioning BASE as an organisation capable of engaging with biodiversity finance, and applying its financial structuring and de-risking mechanisms, building on its longstanding expertise in guarantees, blended finance, and performance-based models.

The insights gathered through this research directly informed the conceptualisation of financing mechanisms combining blended finance with habitat banks, demonstrating coherence between knowledge production and project development.

OUTCOMES

The article was distributed through BASE’s communication channels and republished by [Illuminem](#), a leading climate and sustainability media platform. It was also reposted by the [Global Resilience Partnership \(GRP\)](#), further extending its reach among practitioners and organisations working in the area.



ACTIVITY 4: WEBSITE REVISION

BACKGROUND INFORMATION

The BASE Foundation's previous website was last updated in 2019. While still functional and generally professional, the digital landscape, stakeholder expectations, and BASE's institutional priorities have evolved significantly since then. In particular, the launch of BASE's 2025-2030 Strategy called for a reassessment of how the organisation presents its mandate, value proposition, and role to partners, donors, and the wider audience.

The website revamp is therefore being undertaken not merely as a technical and aesthetic update, but as a strategic exercise to ensure that BASE's digital presence accurately reflects its current role, ambitions, and areas of focus.

ABOUT THE REVAMP

The website revision aims to presents BASE's mandate and activities more clearly, with a stronger emphasis on how the organisation mobilises climate finance through ecosystem building, innovation support, and partnership development.

To achieve this, the website now includes clearer narratives around:

- BASE's role in bridging gaps between innovators, financiers, policymakers, and end-users
- The lifecycle of BASE-supported innovations, from concept development to piloting and scale
- The types of financial and business model innovations that BASE specialises in supporting

The revamp also introduces a more deliberate and structured presentation of BASE's services and sectoral engagement.



Rather than dispersing information across multiple pages, the new structure groups content to enable visitors to quickly understand:

- Services BASE offers,
- Sectors in which BASE is active, along with the climate finance models applied in each,
- Concrete examples of projects within each sector

In parallel with these strategic and content-related updates, the website revamp also modernised the overall look and feel of the platform.



ACTIVITY 5: BOARD MEMBER INTERVIEW

A) Interview Video of Ousseynou Nakoulima

BACKGROUND INFORMATION

Ousseynou Nakoulima, a new board member of the BASE Foundation, Director at the [International Financial Corporation \(IFC\)](#) is a recognised leader in development finance, and capturing his insights on strategic partnerships and regional impact is valuable for knowledge transfer and engagement. His previous tenure includes senior roles at the African Development Bank and the Green Climate Fund.

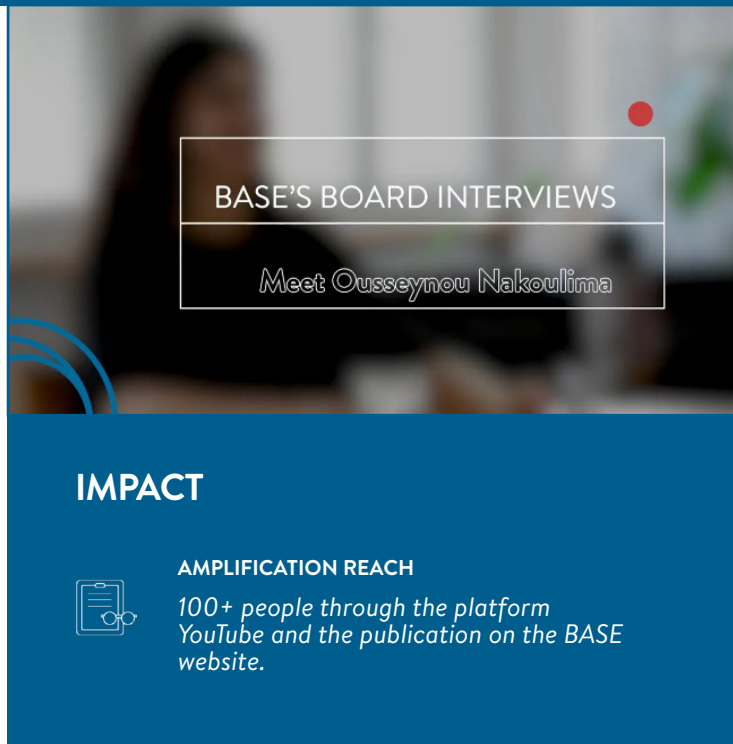
The video was an occasion for Ousseynou to touch on a variety of topics, from personal motivations to work in the climate finance sector to project best practices he identified over his long-standing career.

ABOUT THE ACTIVITY

BASE produced a short interview during Mr Nakoulima's recent visit to Basel, focussing on his reflections regarding the future of development finance. He identified innovation and creativity as essential requirements for the sector. Specifically, he noted that demand for energy in Africa often fails to meet the available supply. The discussion explored how to bridge this gap through strategic partnerships. Such dialogues are necessary to unlock private sector investment.

Ousseynou believes the true measure of a person is their utility to the community and though is driven by a deep commitment to the public good. This philosophy guides his efforts to address the global climate crisis. His expertise is a vital asset for regional impact and knowledge transfer.

Overall, the video provides a highly digestible and engaging piece of content for social media and presentations, enhancing our communication strategy. It highlights the importance of blended finance to reduce investment risks and gives an explanation on how pay-as-you-go models can assist regions with limited capital.



He also advocates for the inclusion of non-traditional actors such as municipalities and emphasises the importance of involving youth in governance, who often provide essential long-term perspectives.

The video can be accessed [here](#).





ACTIVITY 6: SOCIAL MEDIA CAMPAIGNS

A) Zero Waste Day

BACKGROUND INFORMATION

Communicating BASE's work requires balancing technical expertise with engaging storytelling. Some initiatives, like the Zero Waste Day campaign, translate complex concepts, such as circular economy taxonomies and financial investment opportunities, into accessible and visually engaging formats.

ABOUT THE CAMPAIGN

As part of efforts to translate technical expertise into accessible knowledge, BASE developed a [LinkedIn post for Zero Waste Day](#) highlighting its work on Circular Economy projects in Latin America.

The post presented a step-by-step visual illustrating the different components of circularity and their relationship to the stages of a product's lifecycle, from design and purchase to use, end-of-use, and post-use.

It further demonstrated how categorisation systems can support investors in identifying financial opportunities and guide interventions, while collating best practices for each stage. This campaign made complex technical concepts more relatable to a broad audience and underscored their contribution to reducing waste.

OUTCOMES

The Zero Waste Day campaign achieved strong engagement, indicating that the topic and visual format resonated well with the audience.

The post generated 758 impressions and 568 engagements, resulting in a very high engagement rate of 74.93%, which is significantly above typical benchmarks for organic LinkedIn content.


#ZeroWasteDay

IN A CIRCULAR
ECONOMY,
THERE IS NO
WASTE



*But to shift to the Circular Economy, we need
finance, and finance needs to be enabled*

IMPACT



AMPLIFICATION REACH
1300+ impressions, resulting in 1100+ engagement.

In addition, the campaign recorded 540 clicks, corresponding to a click-through rate of 71.24%, suggesting that viewers were not only engaging with the post but were also motivated to explore the content in greater depth.



B) Pale Blue Dot

ABOUT THE CAMPAIGN

At the start of 2026, BASE launched the “[Pale Blue Dot](#)” campaign, drawing inspiration from Astronomer Carl Sagan’s reflections on Earth as humanity’s only known home. The campaign sought to evoke the urgency of acting to protect the planet by referencing the Pale Blue Dot image captured by Voyager, which portrays Earth as a tiny sphere hosting diverse life.

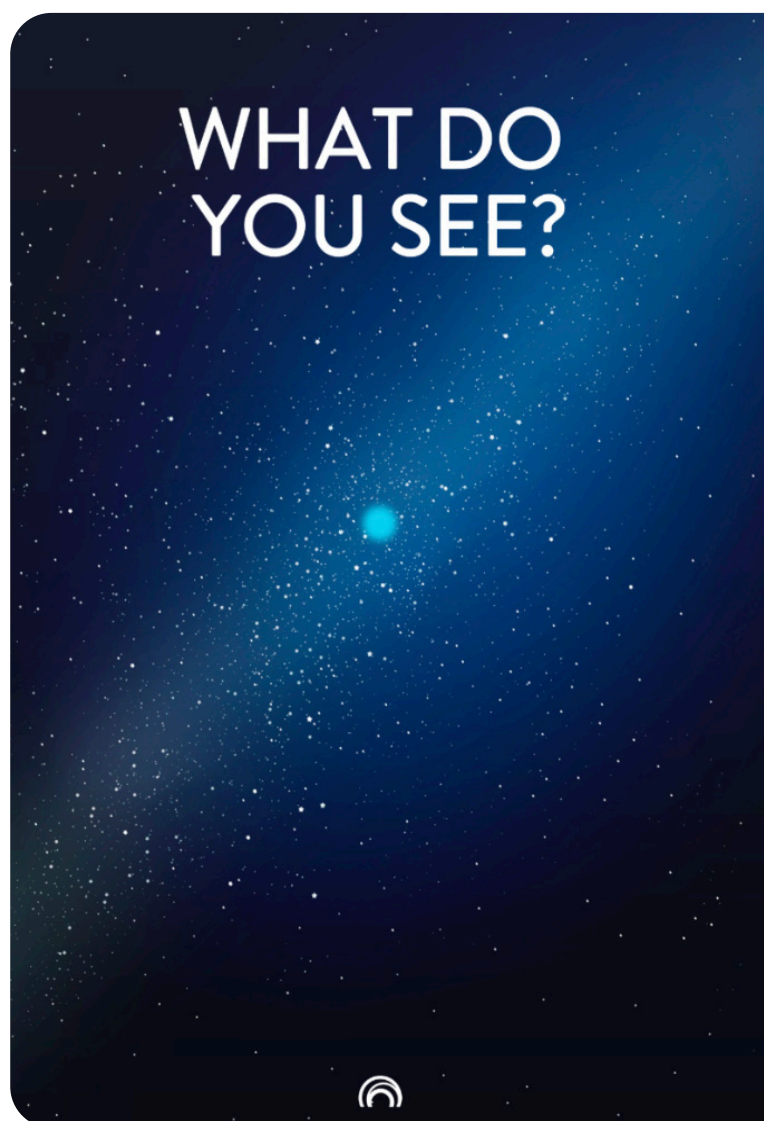
Beyond the image itself, the fact that it was taken by Voyager carries significant emotional value, as the spacecraft also carried artifacts representing humanity’s diversity, including greetings in multiple languages, music, photos, and brainwaves. By building on the meaning evoked by both the image and the Voyager mission, the campaign sought to highlight the collective responsibility to safeguard our shared home and positioned BASE’s work within this broader imperative.

The campaign further explained how BASE contributes to this goal through its 2025–2030 strategy, clearly outlining the services offered—particularly those related to mobilising funds for climate action—and demystifying what “mobilising climate finance” means in practice. Serving both as a reintroduction to existing audiences and as an entry point for new ones, the campaign connected BASE’s mission to the universal idea of protecting the planet we all inhabit.

OUTCOMES

The Pale Blue Dot post, only posted once as of end of January, collected an average number of views but generated a strong engagement. As of January 29th, 604 people had seen the carousel and for a total of 558 engagements, among which 540 clicks, which represent an 92.38% click-through rate.

The publication, made early January to kick-off the new year by sharing a renewal of BASE’s vision and the work it does, will be re-used and re-published in other times of the year to ensure higher visibility.





ACTIVITY 7: PODCASTS

A) The Big Shift: Episode 6 on Cooling-as-a-Service

BACKGROUND INFORMATION

The Big Shift: The Climate Finance Revolution is BASE's podcast series designed to demystify climate finance concepts and highlight concrete business models, technologies, and financial mechanisms driving the transition. The Youth Voice sub-series gives space to young professionals and students to lead conversations with experts, fostering accessible dialogue and fresh perspectives on complex topics.

The sixth episode, **Data for Climate Action: Unlocking Financing for Nature & Communities**, focuses on the growing role of data, artificial intelligence, and digital technologies in enabling climate finance, particularly for nature-based solutions and climate-resilient agriculture

The episode is moderated by Jina Yazdanpanah, Sustainability Data and Research Specialist at **Ethic** and Consulting Product Manager for the Coldtivate app at BASE. Jina holds a degree in Industrial Engineering from the University of Toronto, with specialisations in artificial intelligence and humanitarian engineering.

She is joined by Niña Cerilla, Founder's Associate at **Gain-Forest**, who holds a degree in International Studies from De La Salle University. Together, they explore how data can become a foundation of trust between communities, investors, and climate finance actors.

ABOUT THE EPISODE

The episode frames data not only as a technical tool, but as a "currency of trust"—a way to reduce risk, demonstrate impact, and unlock financing for small businesses and community-led climate solutions.

A PODCAST BY **BASE**



IMPACT



AMPLIFICATION REACH

106 plays on Spotify platform, by users located in various countries across the globe. Social media snippet gathered over 2000 views.

Two concrete projects anchor the discussion:

- **Your Virtual Cold Chain Assistant (Your VCCA)**, developed by BASE and Empa, addresses post-harvest losses in fruit and vegetable supply chains. The Coldtivate app supports Cooling-as-a-Service business models by digitally managing cold room operations, predicting crop degradation through digital twin models, and enabling better decisions on storage and sale timing. The app also integrates inventory tracking, remote temperature monitoring, and a digital marketplace linking farmers, traders, and buyers. Aggregated impact data - such as income gains, loss reduction, and emissions avoided - can serve as evidence for future credit or loan applications by micro-entrepreneurs.





ACTIVITY 7: PODCAST

- **GainForest** uses blockchain, AI, and satellite data to monitor biodiversity and enable transparent, community-driven conservation finance. Through its EcoCert platform, conservation outcomes are transformed into trackable transactions, allowing donors and funders to support communities directly while ensuring data ownership remains with local nature stewards. The model reduces bureaucratic layers and strengthens trust through verifiable, decentralised data.

Across both cases, the episode highlights how data analytics and data science differ in practice—one being descriptive and backward-looking, the other predictive and forward-looking—and how both are essential to building bankable, inclusive climate finance solutions.

Episode available [here](#).

OUTCOMES

This podcast episode directly connects with BASE's strategic work on digitalisation, an area where the organisation aims to be increasingly active.

By covering tools such as digital twins, marketplaces, impact dashboards, satellite imagery, blockchain, cryptocurrencies, and biodiversity credits, this episode marked an important step in positioning BASE within the global conversation on the climate finance–digitalisation nexus.





A LEGACY OF IMPACT



Evolution of BASE's past projects:

Accelerating the Deployment of Electric Buses in Accra

From 2023–2024, under a project led by UNEP-CCC BASE's provided technical assistance for scaling up e-buses in Accra. Overall, the project laid the preparatory work for the electrification of Accra's bus fleet, as partners completed the feasibility and pre-feasibility analysis, examined the introduction of electric buses and their charging infrastructure and supported Ghana's Ministry of Transport in convening a working group to guide the National EV policy.

BASE's contribution centred on the economic and financial analysis and on preparing the Green Climate Fund concept note, the appraisal and structuring that determine whether such a transition can attract financing and be sustained. The technical elements included the business model, remuneration scheme, charging scenarios, and bankability structure needed to make deployment financeable. Together, these efforts helped lay the foundations for what followed: In November 2024, the Government of Ghana commissioned its first fleet of one hundred electric buses in Accra, launched by Vice President Mahamudu Bawumia and operated in collaboration with Metro Mass Transit Limited and the Greater Accra Passenger Transport Executive.

According to media and government reporting, the [pilot began with routes such as Adenta–Accra and Ashaiman–Accra](#), with charging facilities and operational preparations already in place. Authorities projected passenger fare reductions of forty to fifty percent, an early step in a longer shift towards a decarbonised transport system.

[Visit project page](#)

Integrated On-grid, On-site, On-road Business Model

KENYA: SOLAR-POWERED BATTERY-AS-A-SERVICE MODEL FOR ELECTRIC MOTORCYCLES IN NAIROBI

In Nairobi, from 2023 to mid-2024, BASE helped to enhance the affordability of Ampersand's e-motorcycles, BASE thanks to a Battery-as-a-Service model: the rider purchases or leases the motorbike, but does not acquire the battery - the most expensive part of an electric motorbike - rather paying a small amount for each swap (including electricity and access costs), much as they once paid for fuel.

This lowers the barrier to going electric by substantially reducing the upfront investment, while Ampersand retains and maintains the batteries it knows best. BASE also explored franchising arrangements, so that local businesses could host solar panels on their roofs and swap stations, extending the network into peri-urban and rural areas without Ampersand having to build everything itself.



Street view of the pilot (Panels top left). Source: Ampersand



In the wake of this pilot and following a similar logic, [Ampersand and CrossBoundary Energy](#) launched in September 2024 a solar-powered charging pilot in Nairobi in which CrossBoundary finances and owns the charging infrastructure and batteries while Ampersand operates them and pays for the renewable electricity, an off-balance-sheet arrangement that reduces operating costs. The wider network has kept growing, with solar-charged swapping now running at scale across Kenya and Rwanda, where riders exchange a depleted battery for a charged one in under two minutes, and Ampersand itself tripling its Nairobi production capacity with a larger manufacturing facility.

Since then, Ampersand signed an MoU with [BYD](#) to access advanced, durable, and affordable battery cells, supporting its target to produce more than 40,000 electric motorcycles by the end of 2026. More recently, Ampersand opened its battery and swap network to third-party manufacturers through a partnership with [Wylex Mobility](#), positioning the company not only as a motorcycle producer but as an energy technology and battery-swapping platform.

With more than 20,000 swaps per day across Rwanda and Kenya and over 400 million kilometres powered to date, Ampersand's growth shows how the pilot's early work on solar-powered, bankable charging infrastructure helped prepare the company for larger-scale commercial deployment and interoperability across Africa's electric motorcycle market.



Current Ampersand Swapping battery station.
Source: Ampersand



Original Unergy pilot station in Medellin.

COLOMBIA: BATTERY SWAPPING SYSTEM FOR ELECTRIC MOTORCYCLES IN MEDELLIN

In Colombia, BASE supported Unergy, a Colombian renewable-energy startup, to integrate solar PV into its existing swapping model. BASE provided technical assistance on the development of the station's management firmware, and connected Unergy with major Colombian institutions such as Celsia, Bancolombia, SURA and Muverang to align the pilot with scalable as-a-service models.

The battery-swapping pilot, launched in 2024 as the first of its kind in Colombia, cut charging time for electric two-wheelers from up to eight hours to under five minutes, and over six weeks recorded 98 battery swaps among five active users at an average swap time of 86 seconds.

Building on these results, the battery-swapping solution was installed in three additional areas. As Colombia's last-mile electric mobility market advanced, the decision was made to transition this business line to [Runni](#), a new company focused on last-mile operations.



Improved Rooney swapping system for last-mile mobility.

The Runni station represents the improved swapping system and the move from pilot validation toward a more operational and scalable business model.

MEXICO: DEMONSTRATING AN INTEGRATED ESCO MODEL FOR SOLAR-POWERED EV CHARGING WITH BATTERY STORAGE

In Hermosillo, BASE demonstrated the viability of a municipality functioning as its own energy service company (ESCO). Typically private, an ESCO installs equipment like solar panels and is reimbursed through the client's energy savings. Assuming this role for itself, the city installed solar infrastructure to charge electric patrol cars, reducing fuel expenditures, and reinvesting these savings to repay equipment costs as well as to fund future clean-energy initiatives.

Between 2023 and 2024, BASE and Integrate to Zero respectively provided technical and financial support to the city of Hermosillo that allowed the installation of an integrated solar-to-EV charging system. Working with the Iniciativa Climática de México, BASE ran the process to select the most viable projects, and its team trained the people who would have to carry the model forward,

including senior leadership on the business and financing side, and the staff of the city's Municipal Energy and Climate Change Agency on the technical side. That groundwork is visible in what followed. The Agency now operates the solar charging infrastructure, and the patrol fleet has grown into one of the largest of its kind: by September 2025 the city announced [370 solar-charged electric patrol vehicles](#), which it describes as the largest electric patrol fleet in the world. The savings have been substantial too: between 2021 and October 2024, the electric patrol cars alone saved more than 68 million pesos, around US\$3.6 million, in fuel. The fossil fuel savings that the pilot was designed to recycle into further clean technology are now real and measurable.

PAVING THE WAY FOR VPPS

Beyond their individual progress, the three pilots were testing a common idea: that distributed solar-plus-storage assets could be instrumented with digital monitoring and control and supported by innovative financing, whether as-a-service or ESCO-type arrangements. Once such assets are integrated and actively managed in this way, the precondition for a Virtual Power Plant is in place.

Their combined output can be turned up or down to help keep the grid balanced, and that flexibility is worth money.

These efforts laid the groundwork for BASE's Virtual Power Plant pilots in Colombia and Brazil, covered in this report.

[Visit project page](#)

Green Credit Guarantee Fund for SMEs and Peru:

In Peru, BASE helped design a way for small businesses to borrow for green investments that banks would otherwise consider too risky.

Working with the Swiss State Secretariat for Economic Affairs (SECO), BASE provided technical advice to FOGAPI, the Peruvian non-profit that issues credit guarantees, on the structure of a partial credit guarantee for micro and small enterprises.



A guarantee of this kind covers part of a lender's risk if a borrower defaults, which makes banks willing to lend to firms that lack the collateral or track record they normally require. BASE's advisory work spanned the financial structuring of the guarantee, an operational manual, a green taxonomy setting out which investments qualify and how their impact is measured, the monitoring and verification mechanisms, and guidance on governance, pricing and risk so the scheme could sustain itself over time. A central result was leveraging SECO's allocated funds roughly fivefold, into a guarantee facility of around USD 35 million.

The scheme has since become an established programme that FOGAPI runs as its own, and it continues to draw new lending partners. In February 2025, Financiera Confianza, the Peruvian arm of the BBVA Microfinance Foundation, joined the Environmental Guarantee Programme to help finance assets that contribute to cleaner production in Peru. The programme works through these banking partners to reach small firms that would otherwise struggle to borrow, on concrete terms: it guarantees credit operations of up to USD 80,000, for terms of up to five years, for micro and small enterprises that meet its turnover, experience and credit-record criteria.

The guarantee BASE helped design is now a working part of Peru's green-finance landscape, still bringing new financial institutions into the business of lending for clean technology.

[Visit project page](#)

ON-WAGE AND ON-BILL FINANCING IN AFRICA:

In Ghana and Senegal, BASE helped design a way for households to afford efficient, climate-friendly cooling. Working with UNEP's United for Efficiency initiative and the two governments between 2020 and 2023, BASE developed the financing schemes at the centre of the ECOFRIDGES programme: on-wage financing in Ghana, where salaried workers repay through payroll deductions, and on-bill financing in Senegal, where repayments are added to utility bills.

In both cases the loans are designed so that the energy savings from the new appliance offset the repayments, letting families upgrade without the upfront cost that usually puts efficient equipment out of reach.

In Ghana, the programme has since financed around 33.77 million cedis, about US\$3.3 million, of appliances, more than 2,055 air conditioners and 3,136 refrigerators, saving 41,783 MWh of energy and avoiding 34,603 tonnes of CO₂ equivalent.

Since then, the model has been taken up beyond the original programme. In Senegal, the national energy management agency launched a second phase, "Benen ECOFRIDGES," in February 2025 to reinvigorate the scheme, keeping the same on-bill financing approach while making a stock of more than 330,000 efficient appliances available to households across the country. The relaunch placed particular emphasis on low-income and rural households, for whom cooling can account for a large share of electricity use and for whom efficient appliances can cut that consumption substantially.

From Ghana, the programme has attracted the attention of the neighboring government: in 2024 a delegation from the Gambia's utilities regulator and other state bodies travelled to Ghana on a study tour to learn from its financing mechanism and energy performance standards, as one of the outputs of a Green Climate Fund Readiness Project intended to build a similar legislative and financial framework at home.

Additionally, the mechanism has now crossed a border into the region's largest economy: Nigeria has partnered with Ghana on the AGORA programme, backed by the UN Development Programme and UNEP and seed-funded by the French Global Environment Facility with 2.4 million euros, which runs from 2024 to 2027. AGORA adopts the ECOFRIDGES GO financing model, with ECOFRIDGES GO itself becoming the programme's primary financing mechanism, while focusing on replacing inefficient equipment with low-GWP, locally manufactured air conditioners.

[Visit project page](#)



TESTIMONIALS

TESTIMONIALS

FROM OUR DONORS

“Our collaboration with BASE as the implementing partner for the Energy Savings Insurance (ESI) Indonesia initiative under UK PACT Phase 2 has been a genuinely positive experience.

- [Andi Poetri, Manager, UK PACT Indonesia Fund](#)

The BASE team has consistently brought strong technical expertise, openness, and a collaborative spirit throughout implementation.

Related project: Energy Savings Insurance (ESI) Indonesia

Together with relevant stakeholders in Indonesia, the project has made meaningful progress in piloting ESI in the local context and strengthening the enabling ecosystem for energy efficiency investment.”



- [Dan Hamza-Goodacre, Fellow on Grids, Innovation, Electrification, Pooled Fund on International Energy \(PIE\)](#)

Related project: Virtual Power Plants: Building Commercial Pathways for Distributed Flexibility



“BASE are one of the best civil society organizations in the world working on clean energy.

They are innovative, they bridge industry and government and they take forward practical solutions which can scale.

I hugely appreciate their dedication to getting the job done.

And always with professionalism and kindness.”

“As a UNEP Collaborating Centre, BASE has been an exceptional partner across both 3DEN and EPIC, turning ambitious ideas into real, measurable impact on the ground.

Their ability to manage complex, multi-country consortiums while keeping projects on track and stakeholders aligned has been a cornerstone of our success.

We're proud to call them a partner and grateful for everything they've brought to these initiatives.”

- [Myriem Touhami, Head of the Finance Unit, Climate Change Division of the UN Environment Programme](#)

Related project: Digital Demand-Driven Networks Initiative (3DEN) & EPIC Deploy



TESTIMONIALS

FROM OUR BENEFICIARIES

“Working on the VPP pilot project with BASE has been a highly valuable experience. The initiative highlights the importance of external investment in accelerating innovative solutions, especially in emerging markets. In Brazil, regulated R&D programs play a critical role in fostering innovation, enabling pilot projects like this to generate practical insights.”

What makes this collaboration particularly impactful is that the results can be replicated and adapted by different companies, amplifying their value. BASE’s structured approach and expertise make them a key partner in advancing scalable, climate-focused solutions.”

- Guilherme Maia Martins, R&D and Innovation Analyst, Auren Energia

Related project: Virtual Power Plants: Building Commercial Pathways for Distributed Flexibility



- Jean-Jacques CHARRO, Export Manager, Afrique & Moyen-Orient, Airwell

Related project: Pay-as-a-you-store and Your Virtual Cold Chain Assistant in Iraq



“At Airwell, we developed SolarFrost with a clear purpose: to bring autonomous, solar-powered cold storage to the places that need it most - regardless of grid access or infrastructure constraints. Deploying SolarFrost in Nineveh, Iraq, in partnership with BASE and Triangle Génération Humanitaire, has been a defining moment for us.”

Seeing our technology operate in the field, helping smallholder farmers preserve their crops and reduce post-harvest losses through a Pay-as-You-Store model, is exactly the impact we envisioned.

This collaboration with BASE has been instrumental in adapting our solution to a new context, and we are confident that this pilot lays the groundwork for a wider cold chain transformation across the region.”

“We participated in the Coldtivate Open-Source Code incubator because it helps us to develop a shelf life prediction model for indian conditions which allows us to fully enable indian farmers.”

The most useful part of the programme was when they walked us through the code and explained it to us, as well as the documents on local deployment they shared with us.”

- Ninad Shah, CEO, Niyantras

Related project: Your Virtual Cold Chain Assistant Onboarding Kit





OUTLOOK 2026



STRATEGIC ORIENTATIONS

In 2025, BASE entered the first year of its next five-year strategic cycle. This phase focuses on: an expanded mandate across climate and sustainable finance, a commitment to replicating and scaling proven models, and a sharpened focus on the underserved markets and segments where BASE's contribution is most needed.

The year was one of consolidation and momentum — deepening established partnerships, advancing key portfolio areas towards implementation, and strengthening BASE's position as a trusted, neutral partner at the intersection of climate finance and market development.

On the partnership front, 2025 marked both continuity and new alliances. BASE deepened its collaboration with longstanding institutional partners, including CCC, IDB, GIZ, UNEP, and UNIDO, advancing shared agendas across green finance, market development, and climate-aligned investment. These relationships moved from dialogue to delivery, with joint workstreams progressing towards concrete implementation. The partnership with Caritas Switzerland was further consolidated, with both organisations actively developing joint project proposals and exploring new areas where their complementary expertise can generate shared impact.

BASE also strengthened its collaboration with Swisscontact, which will culminate in a joint presence at Building Bridges 2026, where Swisscontact leads the organisation of a session bringing together actors at the intersection of sustainable finance and development.

BASE's orientation for 2026 is shaped by three complementary priorities:

- First, consolidation: embedding and strengthening the systems, partnerships, and models, building on years of experience.
- Second, piloting and proving: advancing key innovations, from virtual power plants to irrigation-as-a-service to battery storage integration, to the point where evidence of viability and replicability is in hand.
- Third, geographic expansion: carrying proven models and flagship programmes into new markets, from South-east Asia to West Africa to Central Europe, including markets with high need such as the Ukraine.

This ongoing work will continue to build a broad portfolio base that underpins long-term organisational resilience. Across its portfolio, BASE will continue to integrate digital tools and artificial intelligence as operational enablers, improving the speed, rigour, and scalability of its technical work.

WHAT WE WILL BUILD ON IN 2026

INNOVATIVE BUSINESS MODELS

Sustainable energy solutions as-a-service: scaling a proven model across markets and sectors

The award of the Zayed Sustainability Prize in the Energy category in January 2026, one of the world's most prestigious sustainability recognitions, marks a pivotal moment for BASE's servitisation work. Selected from more than 7,000 applicants, BASE was recognised for the global scalability and market-transforming impact of the Cooling-as-a-Service (CaaS) model. The prize provides both the resources and the platform to accelerate expansion across Africa, Asia, Europe, the Middle East, and Latin America, and strengthens the visibility and credibility of all interconnected servitisation initiatives. Each applies the same underlying logic: removing the upfront cost barrier through service-based models to a different market, sector, and geography.

Across energy technologies

The SET Alliance mainstreams as-a-service business models across the energy transition globally. The Zayed prize further positions it as a recognised reference point in the CaaS space. In 2026, key activities include a workshop with the Cool Coalition in Delhi, engagement with the European Bank for Reconstruction and Development (EBRD), new opportunities in Morocco, Egypt, and the Netherlands, and a research initiative with Lucerne University of Applied Sciences and Arts (HSLU) on Scope 3 emissions and ecosystem mapping for the cooling sector.

Cooling-as-a-Service in the agricultural sector

Your Virtual Cold Chain Assistant (Your VCCA) scales CaaS principles to solar-powered cold storage for small-



holder farmers through the Coldtivate digital platform. Active in India, Nigeria, and Guinea-Bissau, the programme is planning to expand to new geographies, including Brazil, The Gambia, and Indonesia. In 2026, the focus shifts to depth over breadth: consolidating impact data, advancing the adoption of the open-source software of the Coldtivate app, and building a self-sustaining ecosystem of CaaS operators through the support of cooling implementers worldwide, in order to enable replication beyond BASE's direct involvement.

Irrigation-as-a-Service

BASE is advancing Irrigation-as-a-Service (IaaS) as a further application of the servitisation model, expanding affordable, reliable, and clean irrigation access for small-holder farmers. The 2026 priority is improving the model's scalability, bankability, and investor readiness, with the objective of developing the financial structuring and business case evidence needed to attract the concessional and commercial capital required for replication.

Battery storage

Battery storage is an emerging frontier in BASE's servitisation portfolio. As costs fall and the role of storage in distributed energy systems becomes more central, BASE is exploring how battery assets can be integrated into CaaS and Energy-as-a-Service models, to improve reliability and strengthen the financial case for service providers and end-users. This work connects directly to BASE's Virtual Power Plants (VPP) programme, where battery aggregation is a key component of distributed energy flexibility.

The Energy Savings Insurance

The official launch of the ESI product in Indonesia in May 2026, supported by UK Pact, marks a significant milestone in BASE's effort to replicate this model across new markets.

Building on experience across Latin America, Europe, Morocco, and Mongolia, BASE is now working with local partners to advance the first ESI pilot projects with Indonesian SMEs to effectiveness, generating the market evidence needed to demonstrate replication

potential and attract additional financial institution partners.

PILOTING INNOVATIVE ENERGY SOLUTIONS

Virtual Power Plants (VPPs)

BASE's VPP programme is building a replicable evidence base for how distributed energy assets, such as solar, batteries, and flexible loads, can be aggregated and monetised to support grid stability in emerging markets. Following pilots in Colombia and Brazil, a third phase in Brazil will advance commercial VPP operation and short-term market access in 2026. BASE's invitation to London Climate Action Week to present results reflects growing recognition of this work in global grid flexibility practice.

In 2026, BASE will develop new VPP initiatives in South-east Asia, and explore applications combining electric vehicle charging infrastructure and battery storage and other distributed assets such as cooling technologies. A couple of webinars will provide capacity building, and a new request for proposals will generate expectations to support a minimum of 3 additional project pilots while gathering market intelligence to shape the next generation of pilots.

Renewable energy for reconstruction in Ukraine

Ukraine represents an emerging area of work for BASE, applying its financial structuring expertise to one of the most pressing energy transition challenges of the current period. BASE is developing business models and financial instruments to make renewable energy projects bankable in a post-conflict reconstruction context by structuring transactions to attract private and institutional investment despite a challenging operating environment.

This work will develop as the situation evolves and opportunities for meaningful contribution become clearer.

CLIMATE FINANCE

Sustainable banking

BASE's sustainable banking work supports financial institutions to design, deploy, and report on green finance products aligned with international standards — address-



ing a critical enabling condition for climate finance at scale. Active mandates in 2025–2026 span climate risk management, environmental and social governance frameworks, taxonomy development, and thematic bond preparation across Central America, the Caribbean, and Mongolia.

In 2026, BASE will support the Mongolia Sustainable Finance Association (MSFA) in updating Mongolia's sustainable development goals (SDGs) finance taxonomy, as part of a broader multi-stakeholder initiative supported by the United Nations Development Programme (UNDP), among others. BASE's contribution consists of independent review and complementary guidance, including feedback on third-party contributions such as circular economy integration, ensuring alignment with how comparable taxonomies internationally have approached this topic, as well as additional advisory input on taxonomy interoperability and operationalisation for financial institutions. Beyond this, there is potential for BASE's involvement to deepen into more active participation in the revision process, which would represent a significant step in BASE's engagement in national-level sustainable finance taxonomy development.

Climate risk is an increasingly central dimension of this work. As physical and transition risks become more material for financial institutions in emerging markets, BASE's ability to support banks in quantifying, disclosing, and managing these risks represents a growing area of strategic opportunity. BASE is also exploring how artificial intelligence and digital tools can support sustainable banking practice, from accelerating taxonomy screening and portfolio classification to improving the quality and consistency of climate risk modelling. In 2026, BASE will focus on new opportunities anticipated in the Amazon region through the Green Coalition Lab of the Inter-American Development Bank (IDB).

Inclusive Finance

The EmPower programme, implemented with UNEP across Indonesia, Bangladesh, and Viet Nam, has demonstrated that catalytic grant finance - deployed through local financial institutions to strengthen the incentive and subsidy structures of their green lending programmes - can unlock credit for women-led and marginalised community-serving enterprises investing in clean energy and climate-resilient solutions.

In 2026, BASE and UNEP aim to build on this foundation, expanding its geographic reach across Asia and into Africa and broadening its focus to clean technology micro, small and medium enterprises (MSMEs) more widely. A potential next phase would deepen the programme's blended finance architecture by linking technical assistance for financial institutions and investment-readiness support for MSMEs with concessional capital to unlock domestic bank financing at scale. A strong inclusivity and equity dimension will remain central to the design, ensuring that women, indigenous communities, and other marginalised groups are reached as a matter of programme architecture.

Financial Risk Mitigation

BASE is also continuing to develop the Philanthropic Climate Credit Guarantee, a mechanism designed to leverage philanthropic commitments as a financial safety net, absorbing specific risks associated with climate and sustainable energy investments and enabling impact investors to deploy capital with greater confidence in developing country contexts. By pooling





guarantee pledges rather than actual funds, the mechanism offers philanthropists a high-leverage vehicle for mobilising private capital beyond the reach of traditional grant funding. BASE will continue to explore applications of this mechanism across its portfolio, particularly where high-risk perception remains the primary barrier to investment.

Strengthening BASE's role in the climate finance ecosystem

Partnering with the GCF

BASE's approval to join the Green Climate Fund (GCF) roster of Project Preparation Facility (PPF) service providers in 2025 marks an important step in growing and formalising BASE's role in the climate finance architecture. The GCF Project Preparation Facility funding window addresses this critical gap by providing targeted support for project and programme design, including feasibility studies, environmental and social assessments, gender analysis, financial modelling, and stakeholder consultations.

By covering these upfront costs, the PPF helps level the playing field for countries with limited resources, enabling them to develop ambitious, well-structured climate projects aligned with national priorities. It also enhances the quality and effectiveness of proposals submitted to the GCF, increasing the likelihood of funding approval and long-term impact. In this way, the PPF acts as a catalytic tool to unlock larger-scale climate finance and accelerate the transition toward low-emission, climate-resilient development pathways. BASE looks forward to leveraging its expertise to support Accredited Entities in developing robust funding proposals that meet GCF standards and enable transformative climate action.

Partnering with UNIDO

In addition, BASE also enters into a Long-Term Agreement with the United Nations Industrial Development Organization (UNIDO) for the provision of project design and development services. Under this agreement, BASE will support UNIDO's Climate Technology Innovation Unit in designing and developing climate project proposals and full project document packages for major climate finance institutions, including the GCF, the Global Environment Facility, and the Adaptation Fund, as well as

bilateral and multilateral donors. Our scope of work spans the full project development cycle, from climate risk and vulnerability assessments, value chain analyses, and gender and social inclusion studies, to stakeholder consultations, environmental and social management frameworks, and national climate policy alignment reviews.

Supporting and administering donor funding

In parallel, BASE designs and manages grant-based financing mechanisms that de-risk investment and channel capital towards climate solutions in underserved contexts, most significantly through the 3DEN (Digital Demand-Driven Electricity Networks Initiative) programme, implemented with UNEP, supported by the Italian Ministry of the Environment and Energy Security (MASE).

In 2026, BASE will advance 3DEN Phase II grantees through early implementation, convene grantees and partners at a programme event in Rome, and develop the ground for a Phase III call for proposals in the second half of the year. Ongoing discussions with UNEP on a dedicated cooling-focused grant window under the EPIC initiative, and an emerging nature-based solutions finance proposal with connections to blue carbon facilities and international research partners, signal BASE's continued ambition to expand the scope and scale of its climate finance work.

NATURE-BASED SOLUTIONS

Nature-based Solutions (NbS) represent a longer-term strategic opportunity for BASE at the intersection of financial innovation, biodiversity, adaptation, and mitigation. In 2026, BASE will pursue NbS project development where the right combination of partners, de-risking mechanisms, and implementation conditions allows it to contribute meaningfully.



LEVERAGING SYNERGIES WITH OTHER BASE INNOVATIONS

Several cross-portfolio connections are actively shaping BASE's work in 2026. In nature-based solutions finance, BASE's experience in de-risking through the Energy Savings Insurance model and the Philanthropic Climate Credit Guarantee, currently in development, provides a directly applicable framework. The logic of pooling risk and layering concessional and commercial finance translates across contexts. The servitisation model, proven across cooling, energy efficiency, and irrigation, also offers a relevant business model framework for nature-positive projects where service-based revenue streams can improve financial viability for smallholder participants.

Digital tools and artificial intelligence are becoming a cross-cutting enabler across BASE's work, from physics-based crop shelf life modelling in Your VCCA to AI-assisted taxonomy screening and climate risk modelling in sustainable banking. As BASE builds this capability, the potential to apply it across new areas of the portfolio, including nature-based solutions finance, blended finance structuring, and climate data analysis, will grow

In Ukraine, BASE's financial structuring and business model expertise, applied across many projects including VPP, ESI, and sustainable banking portfolios, provides a direct foundation for developing bankable renewable energy projects in reconstruction contexts. The VPP programme's expanding work in electric vehicle integration and battery storage connects BASE's renewable energy and sustainable transport work areas in ways that are becoming operational rather than theoretical. Battery storage sits at the intersection of both: central to VPP aggregation and an increasingly important component of CaaS and EaaS models across the servitisation portfolio.

BASE will continue to identify and act on these cross-portfolio connections in 2026, ensuring that expertise developed in one area informs the design and development of work in others.





ABOUT BASE

Established in 2001, BASE is a Swiss foundation and Specialized Partner of United Nations Environment.

We develop innovative, actionable financial strategies and market-driven solutions to unlock investment in climate change solutions. Around the world, we work with all markets and segments including those that are challenging and underserved.

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