PFAN

HOSTING PARTNERS:

UNIDO REEEP

PFAN Annual Report 2023 Special Edition

CONTENTS

01. The private financing advisory network 4

02. PFAN's impact in 2016-2023 7

GENDER MAINSTREAMING 14
ADAPTATION 15
COOLING 16
E-MOBILITY 17
CIRCULAR ECONOMY 18

03. Regional results 19

Sub-Saharan Africa 20
SOKOFRESH 29

South Asia 32
HUSK POWER NEPAL 41

Southeast Asia 45
SEATECH ENERGY 55

Latin America & the Caribbean 58
SEARTHSPARK INTERNATIONAL 63

Pacific Islands 71
CLAY ENERGY 75

Eastern Europe & Central Asia 82
R.COM 87

04. The PFAN journey 94

05. Gender mainstreaming 97

06. ADEME cooperation 103

07. Pakistan private sector energy project 105

08. PFAN going forward 106

09. Meet the donors 107

PFAN 2006–2023

3.36

Total investment leveraged (USD billions)

1961

Clear energy capacity added (MW)

1408

Total projects supported by PFAN

269

Total projects which mobilised finance

19

Projects which mobilised finance (%)

5.2

Potential CO2 emission mitigation (Megatons/year)

41

Countries where finance was mobilised

680

Projects in the PFAN pipeline

01

THE PRIVATE FINANCING ADVISORY NETWORK

PFAN was founded in 2006 to support clean energy and climate entrepreneurs with great ideas who lacked the capacity or funding to realise them and successfully scaled up in the period 2016-2023 during the UNIDO/REEEP hosting period. For 17 years, our international network of local advisors has worked with hundreds of entrepreneurs in low and middle-income countries, helping them become investment-ready and mobilise over USD 3.3 billion in financing, creating transformational impact in the regions where they work and for the populations they serve. In this report, we take the opportunity to look back at PFAN's work under UNIDO/REEEP hosting, zooming in on some of our notable successes, looking behind the scenes at what makes PFAN tick, meeting the advisors and the projects making it all possible, examining the learnings and assessing our enduring impact and contribution to the climate agenda.

PFAN's work has been made possible by the generosity of our donors, which over the years have included Australia, Austria, Canada, Japan, Norway, Sweden and the United States. However, as the world changes, so does the outlook of our donors, and their priorities have shifted; likewise, the markets in which we operate have also evolved. Accordingly, in agreement with our donors we are bringing the current chapter of PFAN to a close and reassessing the role and positioning of PFAN for the future.

Despite these programmatic funding challenges and global geo-political market volatility, PFAN has once again produced remarkable achievements and milestones throughout 2023, underscoring our continuing commitment to advancing climate and clean energy projects and businesses.

← To Content

In 2023, 54 PFAN-supported projects mobilised financing of over USD 332.6 million. Given the reduced availability of programme funding, emphasis was placed on bringing projects from the existing PFAN pipeline to investment readiness and mobilising finance. To facilitate that, we successfully rolled out enhanced transaction management support, provided through specialised Transaction Advisors working closely with both entrepreneurs and existing PFAN Advisors to structure and execute deals, thereby expediting investment, especially in sub-Saharan Africa, where we saw six financial mobilisations. The results of our work in 2023 at a regional level can be found in the respective regional sections of this report. Of special mention here we would highlight the first financial closures in Sri Lanka, Fiji and Pakistan, the strong results in the Eastern Europe and Central Asia (EECA) region, the successful cooperation with the Cold Chain Innovation Hub in the Philippines, the cooperation with Convergence, UNDP and FREF (Fiji Rural Electrification Fund) on the design of an innovative financing mechanism for the electrification of remote maritime islands in Fiji, the initiation of a Private Equity Fund in Pakistan and the emergence of PFAN-LAC as a distinct programme entity, operating in Latin America and the Caribbean. Further details of these and many other initiatives are provided throughout the report.

Looking towards 2024 and beyond, there is no doubt that project preparation, investment facilitation, and private sector engagement remain of utmost importance in achieving global climate goals. The SMEs we have supported since 2006 have tangibly contributed to advancing low-carbon renewable energy markets and mitigating and adapting to the effects of climate change. However, countless entrepreneurs still need the business know-how and investor introductions that PFAN provides as we collectively work towards reaching the targets of the Paris Agreement and the Sustainable Development Goals.

← To Content

Accordingly, UNIDO and REEEP are actively exploring new opportunities to harness the legacies of PFAN – the global network of advisors, the robust and deep pipeline, methodologies and systems and not least, the market experience and institutional memory – to continue to work with climate projects and investors, where project preparation and investment facilitation support is most needed.

Marko van Waveren Hogervorst, Eva Kelly and Peter Storey

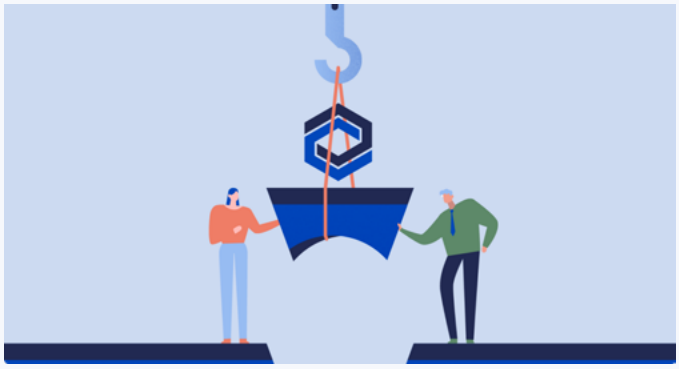
PFAN Programme Management Unit (PMU)

02

PFAN'S IMPACT IN 2016-2023

How it all started

It was in Bonn in 2006, during a UNFCCC workshop, that PFAN was first mapped out. Peter Storey, PFAN's Global Coordinator, illustrated the need for a service that would bridge the gap between entrepreneurs with great ideas for climate and clean energy projects and investors. This would take shape through a network of consultants providing targeted advice for entrepreneurs to prepare their projects to attract investment and then introduce them to investors.



Two years later, CTI PFAN was established as a full programme of the CTI (Climate Technology Initiative), supported by a secretariat at ICETT (International Center for Environmental Technology Transfer in Japan). The programme grew significantly in 2009, organising its first Investment Forums in Asia and Africa and gaining support to scale up its activities. Demand for PFAN's services was so high that by 2016, it was clear that scaling up the programme to its full potential would require a different hosting arrangement and a new organisational structure. Following a competitive bidding process, the United Nations Industrial Development Organization (UNIDO) and the Renewable Energy and Energy Efficiency Partnership (REEEP) were selected as PFAN's new hosts.

Scaling up

At the first PFAN Steering Committee meeting in December 2016, two resolutions were endorsed to guide PFAN's future growth plan: first, a resolution on PFAN's scale-up strategy and second, a resolution on gender mainstreaming.

The essence of the resolution on PFAN's scale-up was the focus on strengthening project origination through wider and deeper networks and increased number of coaching opportunities, increased interfaces and cooperation with strategic partners and access to wholesale capital markets through bundling and securitisation approaches. The overall objective was to increase the investment leveraged by PFAN-supported projects three-fold, thereby creating the relevant climate impacts in terms of reducing GHG emissions and establishing new clean energy capacity.

← To Content

Due to changing market circumstances, the strategy for accessing wholesale capital markets needed to be refined and adapted; institutional investors were not ready yet to invest in climate SMEs in developing countries, and the conditions to bundle PFAN projects were not in place both on demand and supply side. Instead, the strategy refocused on co-designing innovative financing instruments with key market players, especially through blended finance techniques, to fill critical gaps in the financing spectrum and create linkages to funds and fund managers.

PFAN has delivered on its growth expectations. The ambitious scale-up target on investment leveraged by PFAN-supported projects has been achieved. In fact, while the COVID-19 pandemic impacted project origination, targets on PFAN-supported projects reaching financial closure have been achieved with a lower budget than initially planned. Thus, PFAN became more efficient during the scale-up phase.

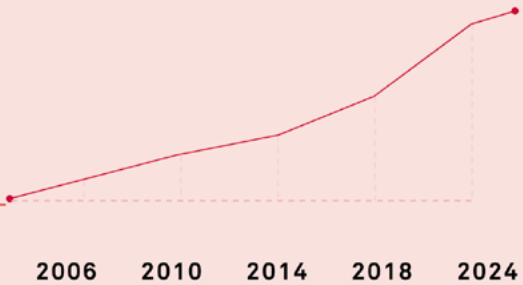
Achievements and impacts

Since inception, PFAN has supported more than 1400 projects and businesses, facilitating the mobilisation of over USD 3.3 billion in investment into more than 260 of them. Most of these results were achieved during the scale-up phase, wherein 869 projects and businesses were supported, 168 of which attracted a total USD 2.16 billion. This significant result has been achieved by outstanding entrepreneurs furthering climate and clean energy solutions, many of whose success stories you can explore throughout this report.

This exponential growth happened on the back of the geographical expansion and deeper networks, including more than 100 local and regional PFAN partners, implemented in the period 2016-2023 under the new hosting structure.

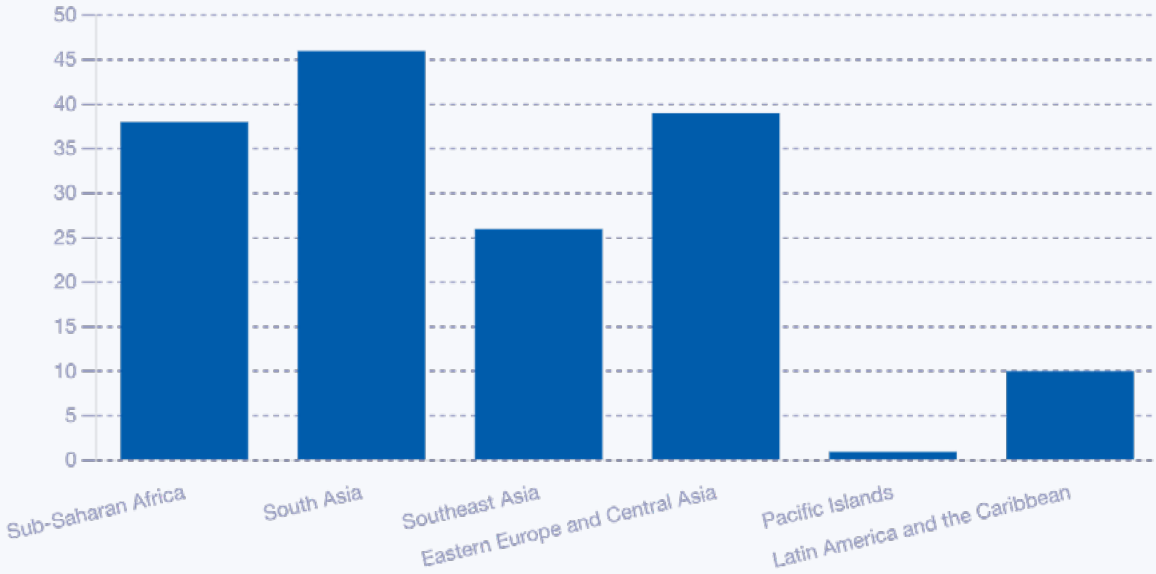
IN INVESTMENT LEVERAGED

3.3 BILLION

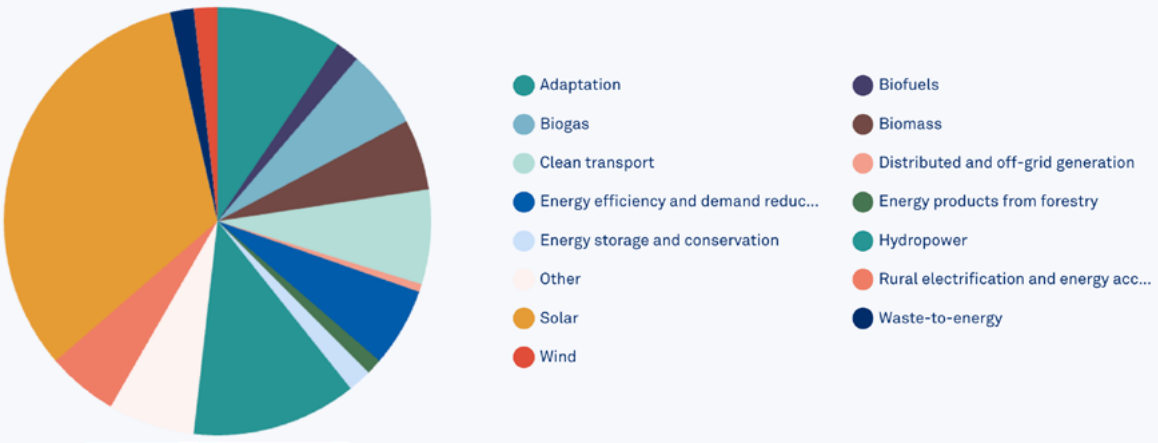


17 years later, PFAN has supported more than 1400 projects and is proud to report on its impact of over USD 3.3 billion raised for more than 280 projects.

Total number of projects which mobilised finance 2016-2023



Technology area of projects which mobilised finance 2016-2023



← To Content

Impact 1: Local climate finance advisory market developer and catalyst

The financial mobilisations have been driven by PFAN's global network of advisors, consisting of technical and financial experts and transaction advisors, the majority of whom (>95%) are based locally in the countries of PFAN operation. We carefully vet each advisor for their expertise and track record and continually enhance their skills to capacitate and nurture the local financing and advisory ecosystems. Since 2017, the network has grown from some 70 advisors to over 250 today, expanding into new regions (including Eastern Europe and Central Asia, the Pacific Islands, Latin America and the Caribbean), consolidating in existing regions (South Asia, Southeast Asia, West Africa, East Africa and Southern Africa), entering into new countries and going deeper into existing markets.

Regular trainings and capacity building over this time have focussed on gender lens investment, financial modelling, blended finance, carbon finance, transaction management, investment structuring and deal closing. PFAN's financing advisory footprint is unmatched for its depth and breadth. PFAN not only significantly contributed to building local climate finance advisory ecosystems by capacitating the advisors on the benefits of gender-smart businesses, we also helped to build up local ecosystems that promote gender equality.

Moreover, PFAN served as a facilitator between different market players. By facilitating connections between entrepreneurs and advisors, PFAN bridged a crucial gap, enabling developers to access advisory services that might have otherwise been financially out of reach. As a result, projects were able to access high-quality guidance at a reasonable cost, while PFAN Advisors gained valuable opportunities and revenue streams they might have otherwise overlooked.

PFAN has acted as a market catalyst in other ways, such as partnering with PFAN Advisors to support implementing projects and thereby increasing the sustainability of their advisory businesses. For example, the AgriPitch competition is an excellent example of PFAN's role in creating self-reliant local financial advisory capacity. Subsequently, more and more PFAN Advisors are becoming independent market players. As a result, the local climate finance advisory industry is developing, resulting in more businesses supporting and entrepreneurs raising funds.

PFAN Advisors in 2023

Get to know some of our advisors here on our 'Meet the Network' playlist on YouTube.

← To Content

Impact 2: Creating financial sustainability of climate businesses

Numerous PFAN projects that mobilised finance kept growing after PFAN services ceased to be provided. Typically, PFAN's support is catalytic for the entrepreneurs to advance from an early business development stage to investment readiness. The capacity building and mentoring on business and financial modelling development, as well as interactions with investors during the PFAN Journey, aims to enable entrepreneurs to successfully face and negotiate with investors on their own. After receiving PFAN support, many of these projects and businesses raised several rounds of additional financing with no further PFAN involvement – Fourth Partner Energy is an excellent illustration of the long-term impact of creating financial sustainability.

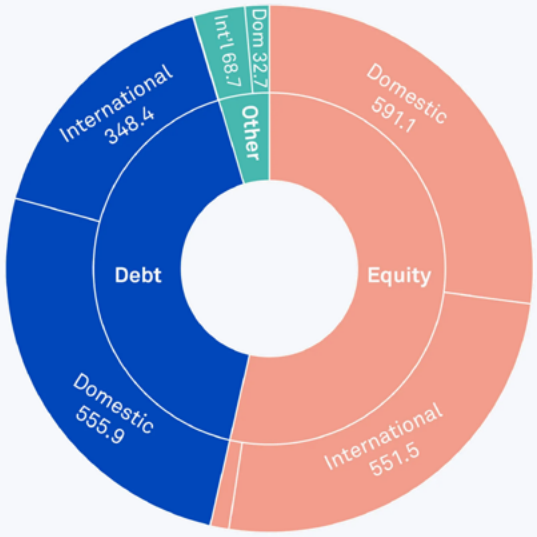
Impact 3: Increased investor confidence

Thanks to PFAN, investors learned about investment opportunities they might otherwise not have considered. Additionally, PFAN supported prospective investors in enhancing their comprehension of low-carbon, climate-resilient investments and assessing and mitigating associated risks. This has been achieved through regular interactions with the investors by the PFAN advisors as well as through specific capacity building activities and investor roundtables and investor events referred to in the regional sections of this report.

The increasing annual number of financial mobilisations achieved during the period 2016-2023, and the fact that this has predominantly been involving domestic investors, underscores the heightened confidence among investors in general and domestic investors in particular.

Co-designing financial instruments with financial partners in Southern Africa, Fiji and Pakistan will further increase investor confidence in investing in climate businesses directly or indirectly.

Financing raised by investor type (domestic vs. international) and financial instrument



Aggregate 2017-2023
values in USD millions

← To Content

Milestones during the UNIDO/ REEEP hosting partnership

2016

PFAN under new hosting structure in Vienna, the first milestone of USD 1 billion in investment leveraged by PFAN-supported projects
Learn More →

2017

Gender-focused call for proposals in West Africa and Asia
Learn More →

2018

First Global Investment Forum in Vienna
Learn More →

2019

Collaboration with the Clean Cooling Collaborative (CCC)
Learn More →

2020

Covid-19 response in collaboration with GET.Invest
Learn More →
Modernisation of the PFAN coaching structure/the ''PFAN Journey" to better adapt to entrepreneurs' needs
Learn More →

2021

USD 2 billion in investment leveraged by PFAN-supported projects
Learn More →
Launch of the Pakistan Private Sector Energy (PPSE) Project
Learn More →
Design fund grant awarded by Convergence Finance
Learn More →

2022

Implementation of Project Development Facility in Pakistan
Learn More →
USD 3 billion in investment leveraged, representing a three-fold upscale within six years
Learn More →

2023

Design of a Private Equity Fund for Pakistan initiated
Learn More →
Launch of enhanced investment facilitation services
Learn More →
Launch of a new PFAN Gender Strategy for 2023 – 2027
Learn More →

← To Content

PFAN’s adaptability to evolving market needs

PFAN’s holistic approach provides solutions to market challenges in both supply and demand. On the one hand, small and medium-sized businesses in frontier markets lack the capacity and know-how to get their projects off the ground or raise them to the next level. On the other hand, investors are unaware of these promising ventures or are too hesitant to take the plunge.

There are gaps at the ecosystem level and limitations in the capacity and expertise of traditional financing advisory services within those markets, making it tough for financing to flow to where it is most needed. This is where PFAN steps in: deploying targeted and highly specialised technical assistance and creating a more conducive environment where climate and clean energy businesses can thrive. Our work accelerated the deployment of climate solutions, increased investment in climate mitigation and adaptation and successfully unlocked frontier markets. This ultimately leads to a reduction of greenhouse gases, increased climate resilience and enhanced socio-economic development, paving the way for a greener and more resilient future.

Over the years, PFAN has adeptly responded to several developments and trends in the climate finance space by introducing initiatives and programmatic foci, which have not only underscored the programme’s flexibility and adaptability but have also contributed to the programme’s enduring success.

← To Content

GENDER MAINSTREAMING

As noted above, the importance of contributing to gender equality and the empowerment of women was recognised by the PFAN Steering Committee at its first meeting under the new hosting structure in December 2016 with the adoption of a dedicated gender resolution. A timeline of the main PFAN gender activities since 2016 can be found in the gender mainstreaming section of this report and more detailed information on PFAN's gender indicators and achievements since 2020 can be found in the updated PFAN Gender Strategy for 2023 – 2027 launched in 2023.

PFAN has prioritised efforts to include gender equality and the empowerment of women at all levels and in all aspects of operations. Applying a gender lens has been deeply entrenched in all of PFAN's project development activities: information on a project's gender focus is requested at the application stage, and it is considered in the evaluation, project development and investment facilitation support services.

The most recent gender mainstreaming activities have included Masterclasses on Gender Lens Investing for our network and the launch of a Gender Action Plan Toolkit. Through these actions, PFAN has not only successfully implemented the gender resolution but also responded to the increasing interest by investors in gender lens investing and contributed to tackling gender inequality, especially in the clean energy space.

PFAN supported women-led or gender-focused projects and businesses which have raised financing between 2016-2023 include:

GSR Energy Holdings

Location: Belize
Technology: Biorefinery

Learn More →

ATEC Biodigesters International

Location: Cambodia
Technology: Biogas

Learn More →

Techno-Hill Engineering, Ltd

Location: Myanmar
Technology: Solar

Learn More →

← To Content

ADAPTATION

While investment in clean energy has continued to grow and remains critical, the last few years have seen a relative increase in focus on climate adaptation, with the need for increased resilience dominating the development discourse and focusing the attention of fund managers alike, especially in sub-Saharan Africa. Southeast Asia has also seen increased investment in climate resilience and adaptation, which has been prompted by the severe impacts of climate change, particularly in countries like the Philippines.

While adaptation has gained increased importance, global efforts are still falling behind on financing and implementation. In response, PFAN began actively soliciting applications from projects and businesses that aimed to deliver adaptation-related benefits to their communities in 2019. In 2022, we further intensified efforts to raise awareness of the need for adaptation solutions and organised several events to originate projects with a focus on climate adaptation. For instance, PFAN's event on the sidelines of COP27 highlighted the actions needed to mobilise the necessary capital to finance climate adaptation projects and businesses and emphasised how the roles of both the public and private sectors are critical in catalysing investment, and showcased three PFAN-supported adaptation projects to present their solutions.

PFAN-supported adaptation projects and businesses which have raised financing between 2016-2023 include:

Farm Hand

Location	Technology
India	Solar irrigation

Learn More →

ACI Agrolink

Location	Technology
Bangladesh	Solar

Learn More →

Sokofresh

Location	Technology
Kenya	Solar

Learn More →

COOLING

While the demand for cooling has been constantly growing over the years, it is a significant contributor to global greenhouse gas emissions (on current growth trends, representing 20% of total electricity consumption today1). Therefore, there has been an increasing need for more efficient cooling technologies that are less harmful to the environment. To address this challenge, in 2019 PFAN partnered with the Clean Cooling Collaborative (CCC) to promote energy-efficient cooling in developing countries.

In March 2021, PFAN and CCC held the Cooling Investment Forum, which was attended by more than 300 investors, entrepreneurs and cooling stakeholders. The Forum provided a platform to discuss current cooling investment issues and gave an opportunity for five PFAN-supported cooling projects to pitch in front of potential investors. The joint knowledge accumulated by PFAN and CCC throughout our partnership was condensed in the report "Investing in a Cooler Future for All".

PFAN-supported cooling projects and businesses which have raised financing between 2016- 2023 include:

New Leaf Dynamic Technologies

Location	Technology
India	Biomass

Learn More →

Inficold

Location	Technology
Bangladesh	Energy storage

Learn More →

PT Sumber Mina Investama

Location	Technology
Indonesia	Quick freezing

Learn More →

← To Content

E-MOBILITY

The global shift toward electric vehicles (EVs) is necessary for more energy-efficient and climate-resilient mobility. Asian markets are leading the way, especially in 2- and 3-wheeler solutions, and the industry has been enhancing the development of EVs to improve inclusive mobility and support decarbonisation efforts. However, the high capital costs of EVs, mainly due cooling-sector to battery and charging infrastructure, have led to limited opportunities for their growth in low-income countries.

PFAN has supported e-mobility initiatives for over a decade – in 2014, PFAN assisted Ather Energy in preparing its initial business plan, financial projection and investor presentation. Today, Ather has grown to India's fifth-largest EV two-wheeler manufacturer, raising over USD 300 million in investment. In the ensuing decade, we have helped 45 further clean transport projects find innovative ways of facilitating their growth.

PFAN-supported E-mobility projects and businesses which have raised financing between 2016-2023 include:

Leaf Capital

Location: Fiji
Technology: Clean transport

Learn More →

QIQ Vietnam

Location: Vietnam
Technology: Clean transport

Learn More →

Selex Motors

Location: Indonesia
Technology: Clean transport

Learn More →

← To Content

CIRCULAR ECONOMY

In a circular economy, the value of products and materials is maintained for as long as possible. Waste and resource use are minimised, and when a product reaches the end of its life, it is used again to create further value. This can bring significant climate and economic benefits, contributing to innovation, growth and job creation. In 2022, PFAN provided capacity building to our network through a series of webinars where participants learned about and discussed the circular economy, its relevance to PFAN and the type of circular business models PFAN supports.

We also launched a dedicated learning corner, which provides access to recorded webinars and additional learning materials. Moreover, PFAN has put together tips for circular project entrepreneurs on assessing whether their project is circular or how they can better communicate the circularity of their project or business. PFAN-supported projects and businesses in the circular economy space which have raised financing between 2016-2023 include:

Erda Illumine

Location: Fiji
Technology: Solar

Learn More →

Green Energy Biofuels

Location: Nigeria
Technology: Biofuels

Learn More →

Radix Lifespaces

Location: India
Technology: Solar

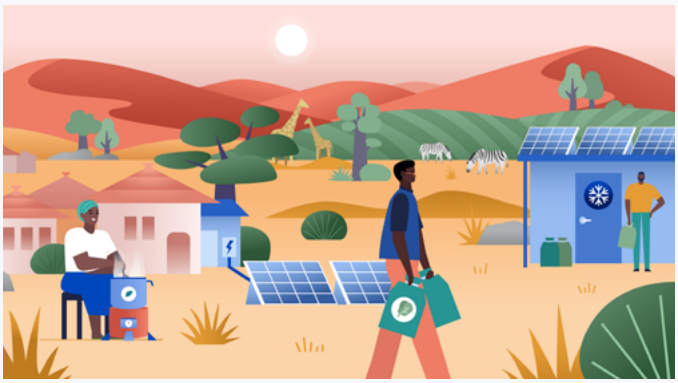
Learn More →

← To Content

03

REGIONAL RESULTS

PFAN works in low- and middle-income countries all over the world. To ensure locally-based delivery, we have divided our operations into six regions, each with a Regional Coordinator overseeing Country Coordinators and Advisors. Click through each of the sections to find detailed information on the impact we've made around the world.



Sub-Saharan Africa →

South Asia →

Southeast Asia →

Latin America & the Caribbean →

Pacific Islands →

Eastern Europe & Central Asia →

← To Content

Sub-Saharan Africa

01

PFAN IN SUB-SAHARAN AFRICA 2016-2023

150

Total investment leveraged **(USD million)**

38

Total projects which mobilised finance

23.3

Clear energy capacity added **(MW)**

331

Projects provided PFAN support

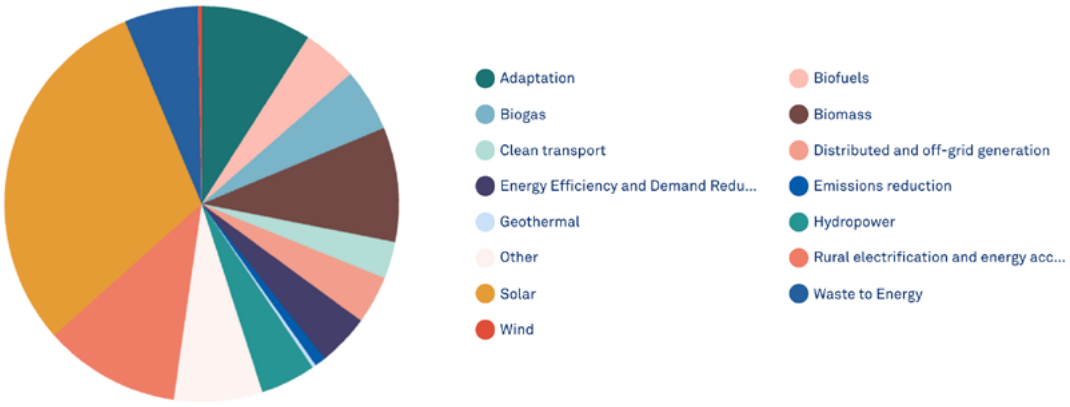
26 000

CO2eq reduced per annum **(tonnes)**

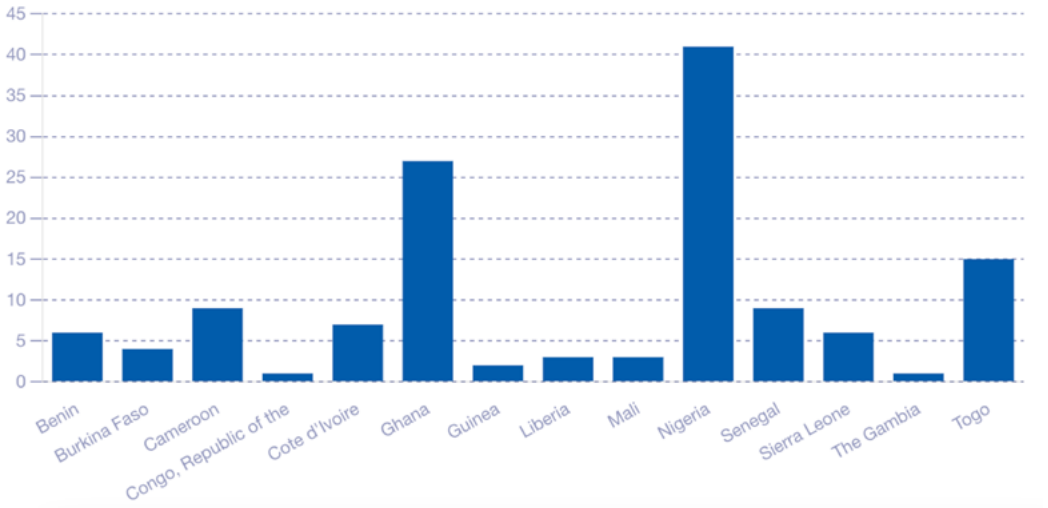
← To Content

To Regional Results →

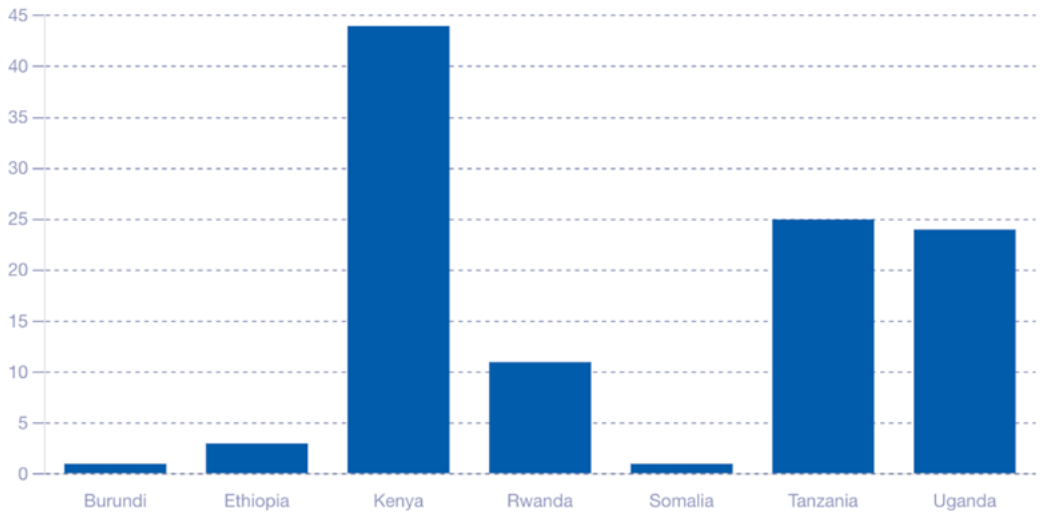
Total projects supported by technology 2016-2023



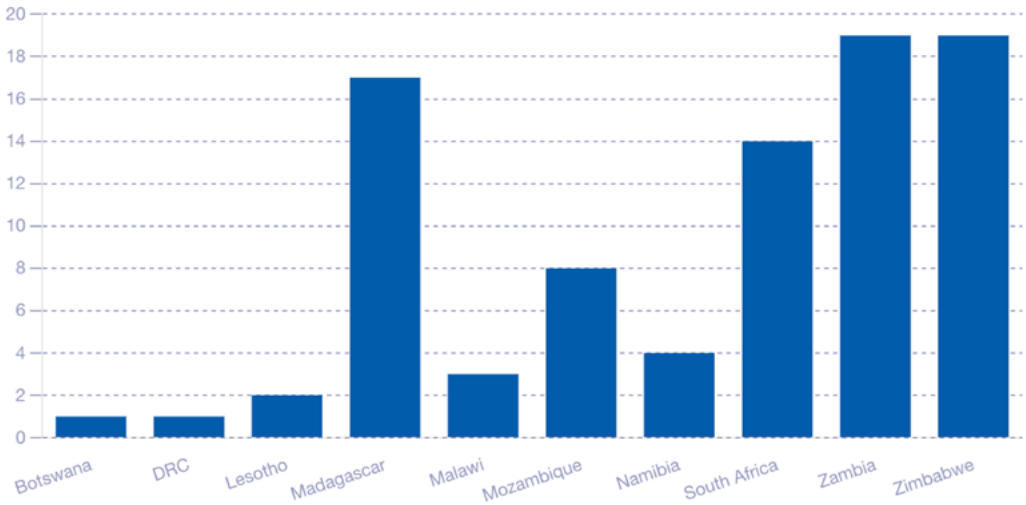
Total number of projects supported by country (Western Africa)



Total number of projects supported by country (Eastern Africa)



Total number of projects supported by country (Southern Africa)



Market developments 2016-2023

Climate finance flows to Africa still fall far short of the continent's needs, reaching only about 12% of what is necessary.[1] The need for finance in climate-related sectors such as transport, energy, industry, agriculture, forestry, and adaptation continues to be essential as the region responds to the effects of climate change. The difference between finance flows into mitigation and adaptation remains evident, whereby mitigation is supported through private sources of debt and adaptation from public sources. Hence, calls for innovative approaches to climate finance in the region are necessary to make changes. This has been seen through the increasing growth of carbon finance over the past years. However, setbacks with differing standards and credibility call the progression into question.

Though the last two to three years have seen a decline in the establishment of additional renewable energy capacity (especially in East Africa) and investors' continued reticence for clean cooking, energy access and solar home systems (especially post-pandemic), a greater focus has transpired on climate adaptation, dominating the discourse throughout sub-Saharan Africa. The economic impact of climate change is driving up investment risks, bankable projects are hard to come by due to a scarcity of development funding and the fragmentation of policy and regulation leads the region to require the support of advisory services.

PFAN's activities and highlights

Drastic changes in domestic political and economic conditions have shown the region's fluctuating market; nonetheless, if the incentive is there, finance can be mobilised, as seen through the 37 projects raising investment through the help of PFAN in sub-Saharan Africa since 2016. As sub-Saharan Africa builds back after a wave of difficulties, recent geopolitical developments in Eastern Europe and the Middle East show another curve ball cannot be ruled out.

In the past year, the region's major economies have been characterised by high inflation, public debt distress and currency devaluation. Ghana, Ethiopia and Zambia have already defaulted on some obligations. Furthermore, increasing adverse climate events increase investment risk in Africa on the one hand and, on the other, push up public debt to finance a response.

In the region, declining official development assistance, shrinking fiscal and monetary space for governments, shifting attention away from traditional donors and funders, over-indebtedness of domestic public sources and the lack of climate finance data are leading to an increasing need for private sector involvement in the climate and clean energy development sector. Furthermore, the continuously evolving market in the region shows a need to support adaptation projects and help them attract the private sector, as well as respond to individual country needs with a tailored approach. PFAN has reacted to these needs through our locally-based advisors by scoping individual country developments, originating projects in the sector, continuously updating the scope of advisory services through the development of individualised services dependent on project needs in 2020 and creating a deal book in 2022 to bring projects closer to investors. These achievements underscore PFAN's commitment to overcoming challenges, driving successful project outcomes and fostering sustainable practices in the climate and clean energy landscape.

Capacity building and market development activities

PFAN has not only supported entrepreneurs in the region through business coaching and investment facilitation services but also provided additional support to selected projects through project development workshops and investment fora. A highlight from the sub-Saharan Africa Region is the West Africa Forum for Clean Energy Financing (WAFCEF), which was held four times in Abidjan, Ivory Coast, between 2013-2019 (WAFCEF 1-4) in collaboration with the African Development Bank (AfDB). Southern and Eastern Africa also saw investor events such as the Sida PFAN Initiative on Clean Energy Financing (SPICEF) taking place in Nairobi, Kenya, in 2016 and 2018, as well as the Africa Investment Forum (AIF) that took place in Johannesburg, South Africa in 2018 in cooperation with AfDB.

In preparation for the investor fora, projects selected to participate received hands-on advice from the PFAN team on presenting their business ideas to investors. These in-person events also helped strengthen the relationship between PFAN Advisors and the projects and businesses we support, fostering cohesion amongst the network. To ensure high service delivery standards and continuous improvement of the networks' skills, regular capacity-building events with PFAN Advisors and Country Coordinators were also held, with the most recent one in 2023 in Kenya.

As part of our Gender Mainstreaming activities, PFAN launched a Call for Proposals in West Africa in 2017 targeting women-led businesses in the clean energy market. The targeted call was part of the regional project on 'Mainstreaming gender for a climate resilient energy system in ECOWAS' to develop and harness the capacity of the region's population to adopt and implement a gender-responsive approach to improved energy access, supported by the Climate Technology Centre & Network (CTCN) through technical assistance. Four of the supported projects through this initiative had the opportunity to present their projects at the PFAN Global Investment Forum that took place in Vienna in May 2018. To date, three of these four projects have successfully mobilised finance.

Collaboration highlights

PFAN has had several successful collaborations in the sub-Saharan Africa with a range of partners. Highlights include:

- AgriPitch competition 2022: PFAN partnered with Private Equity Support (PES), a company led by a PFAN Advisor based in Kenya to support young African entrepreneurs in the agriculture sector. Twenty-five finalists received training to build business skill capacity to bolster their investor readiness, financial management and help them pitch bankable business proposals.

- Umoja Incubator 2022: In collaboration with Serengeti Energy, the Umoja Incubator paired Serengeti Energy's early-stage development finance capabilities and experience with PFAN's expertise in project origination and preparation to provide 13 shortlisted projects from across the continent with the commercial and technical knowledge to help them mobilise investment and positively impact their communities, culminating in a week-long workshop of expert training, networking sessions and capacity building. After pitching to the jury and investors present, a 20 MW solar project from Benin was selected as the winner, going on to receive development support from Serengeti.

- ADEME (2021 – 2023): PFAN partnered with ADEME (the French Agency for Ecological Transition) to support entrepreneurs who are developing and implementing innovative solutions to improve off-grid energy access in sub-Saharan Africa. The main priorities were to build the capacity of local players to ensure sustainable benefits for local populations and to enable the creation of income-generating activities for agricultural producers and micro-entrepreneurs.

Wilfred Mworia

Regional Coordinator, Sub-Saharan Africa

Wilfred has 20 years working experience spanning the fields of ICT, media, venture capital and climate finance, with a passion and skill for driving innovation and entrepreneurship in Africa. He currently leads the angel network and partnerships at ViKtoria Ventures, a platform that connects early-stage ventures to investors and mentors in Kenya and beyond. He has facilitated multiple deals and collaborations between startups, angel investors and corporate partners, leveraging his extensive network and domain expertise in ICT and venture capital.

Wilfred specialises in financing innovation and entrepreneurship and new venture creation and development, especially in difficult or under-served market contexts.

Wilfred Mworia shares insights into PFAN's impact in Sub-Saharan Africa

02

PFAN IN SUB-SAHARAN AFRICA 2023

Regional developments

In 2023, the region witnessed a diverse landscape in terms of climate and clean energy developments. One prominent trend was a decline in the appetite for additional renewable energy generation in countries facing an oversupply of energy. Concurrently, several nations encountered challenges driven by financial constraints faced by national off-takers, impacting their creditworthiness and the bankability of Power Purchase Agreements (PPAs), leading to difficulties in meeting individual countries' power supply needs.[2]

The economic ramifications of climate change gained heightened recognition, spurred by the discussions at COP28, leading to a renewed emphasis on loss and prevention. However, this has also elevated investment risks, particularly in the infrastructure sector. This is evident throughout several countries on the African continent, which are particularly affected by climate change, such as Malawi, Mozambique and Zimbabwe, where cyclones Idai and Kenneth displaced 2.2 million in 2019, leading to a slowdown in GDP growth,[3] which is still impacting the countries till date.

A notable challenge persists in the form of a low level of mature and bankable project pipelines. Many projects struggle to progress beyond the feasibility stage due to the scarcity of development funding at higher-risk stages. This highlights a critical need for financial support mechanisms to propel projects toward implementation. The diversity and fragmentation of policy, regulation and preparedness levels across countries also present hurdles in achieving a cohesive and streamlined approach to clean energy initiatives.

PFAN's achievements

In the face of challenges, PFAN has showcased remarkable achievements and milestones throughout 2023, underscoring our commitment to advancing climate and clean energy projects and businesses to become investor-ready.

A significant highlight of PFAN's accomplishments is the successful rollout of enhanced transaction management support through 16 specialised Transaction Advisors in the region working to expedite investment. Twenty-two projects have benefitted from this service, with notable successes and several financial closures expected in 2024. The implementation of transaction management has not only streamlined project processes, but also introduced a new data room, enhancing the collation of project information for investor consumption, resulting in more specialised support and an increased ability to engage with project developers and entrepreneurs.

In 2023, PFAN accomplished 8 financial closures across Kenya, Uganda and Zambia. A standout success is SokoFresh, where PFAN's comprehensive support was pivotal. In addition to the support throughout the PFAN Journey, the project received Tipping Point Technical Assistance (TPTA), a supporting grant which is designed to overcome late-stage development obstacles and help projects and businesses attract investment. Leveraging the TPTA exemplifies the effectiveness of PFAN's tailored services in overcoming challenges and driving tangible outcomes in the clean energy sector.

SokoFresh is revolutionising agriculture with off-grid, mobile cold storage units strategically placed at farms, thereby optimising aggregation through connecting farmers with exporters and processors. By reducing food loss during harvest and cutting transport costs, SokoFresh ensures farmers earn up to 50% more while buyers receive higher-quality produce. The smart use of cold stores benefits both ends of the supply chain and promotes sustainability and efficiency in the agricultural sector.[4] This success story underscores PFAN's holistic approach, demonstrating our ability to navigate the entire project lifecycle and leverage tailored financial mechanisms to drive tangible outcomes in the clean energy sector.

SOKOFRESH

SUCCESS STORY

Location
Kenya

Technology
Cold Storage / Adaptation

"PFAN has supported us by providing advisors who have helped develop the necessary materials and preparations for SokoFresh to secure debt investment"

Denis Karema, CEO, SokoFresh

Another of the year's highlights was a capacity building and networking event for the PFAN Network in Nairobi, bringing together advisors from the whole of sub-Saharan Africa to foster collaboration and knowledge-sharing to strengthen expertise in key domains.

The week was fortified through valuable collaborations with prominent training partners including Cross Boundary, Investhia Africa and Convergence Finance, who provided valuable training in carbon finance, financial modelling and deal closing and blended finance. Their expertise and contributions significantly enriched the learning experiences, ensuring participants gained insights from industry leaders and experts. Together, these partnerships have strengthened the impact of PFAN's training initiatives, facilitating the development of skills and knowledge, crucial for driving sustainable practices in the industry.

[1] https://www.climatepolicyinitiative.org/wp-content/uploads/2022/09/Landscape-of-Climate-Finance-in-Africa.pdf
[2] https://medium.com/@CrossBoundary/ppa-bankability-in-africa-934355d30012
[3] https://documents1.worldbank.org/curated/en/786721633587328307/pdf/Africa-s-Pulse-No-24-October-2021-An-Analysis-of-Issues-Shaping-Africa-s-Economic-Future.pdf from USAID 2019 and GFDRR 2019
[4] https://sokofresh.co.ke

SOKOFRESH

Addressing post harvest loss through cooling as a service, coupled with a market linkage service to small holder farmers and aggregators

Key Highlights

Technology **Adaptation**

Technology **Cooling**

Country **Kenya**

Business type **Scale-up**

15.3%

Project IRR **(upside)**

0.129

Installed capacity **(MW)**

Regional Coordinator

Wilfred Mworia

Regional Coordinator, Sub-Saharan Africa

Learn More →

Find out more

SokoFresh

Visit their website

→

Kenya alone represents 5 million potential customers for the sub-Saharan African market for off-grid solar cold storage solutions, with smallholder farmers and cooperatives in off-grid areas as the primary target population. However, despite the country's heavy dependence on agriculture, adoption of cold storage in Kenya remains low. Nearly half of Kenya's horticultural produce fails to reach the market, with 56% of these losses attributed to post-harvest and storage issues. Despite the highly distributed nature of food production in Kenya, where approximately 5 million smallholder farmers account for 90% of production, many lack the financial means to invest in professional equipment.

To address these challenges, SokoFresh offers affordable cold storage services to Kenyan farmers and agribusinesses, integrating them with market linkage services. Providing first-mile off-grid pay-as-you-go cold storage, coupled with market linkage services, SokoFresh has successfully onboarded over 800 farmers and deployed three cold storage systems. These solutions are strategically located near production points to ensure accessibility and affordability for smallholder farmers, who often face financial constraints.

"We started SokoFresh to address the challenge of post-harvest loss, mainly in horticultural value chains, where we saw that about 30% to 40% of the produce that smallholder farmers were harvesting was not getting to the market"

Denis Karema, CEO, SokoFresh

SokoFresh employees sort an avocado harvest at one of their hubs near Nairobi, Kenya

With over 50 years of experience in agribusiness, SokoFresh operates across Kenya, serving various clients, including wholesale market vendors, exporters, supermarket chains and social enterprises. Michael Kariuki, Hub Operator at SokoFresh, explains their operations, “We work with agents who serve as our representatives on the ground, engaging directly with farmers. They scout for available fruits from various farms and collaborate with us to schedule harvest dates.”

To scale their business, SokoFresh sought support from PFAN. We paired them with Nairobi-based PFAN Advisor Gideon Laux, who targeted their business development needs and prepared them to pitch to investors. “We initially assisted the company by reviewing their investor documents, business plan, financial model and pitch deck, as well as providing guidance to ensure they were prepared for investor expectations.” According to Laux, companies like SokoFresh offer significant value to the Eastern African market by providing cold storage solutions to smallholder farmers, helping them extend the shelf life of their produce and fetching higher prices in the market as a result.

“PFAN has supported us byproviding advisors who have helped develop the necessary materials and preparations for Soko-Fresh to secure debt investment”

Denis Karema, CEO, SokoFresh

SokoFresh has made a significant impact by linking 23 cold storage hubs, benefiting 11,366 farmers, of whom 36.7% are women. Gloria Nkatha, Hub Operator at SokoFresh, underscores the positive change, “When we intervened, we helped them in terms of the volumes they receive. Now that we purchase by kilos, farmers earn more compared to dealing with brokers.” SokoFresh not only improves the livelihoods of rural agricultural communities but also provides women farmers with access to cold storage, thus boosting their incomes.

A satisfied customer shares their positive experience, “On average, within about two weeks, you will likely find another fruit ready for picking. Using SokoFresh has helped me increase my earnings”.

South Asia

01

PFAN IN SOUTH ASIA 2016-2023

1.4
Total investment leveraged **(USD billion)**

46
Total projects which mobilised finance

413.27
Clear energy capacity added **(MW)**

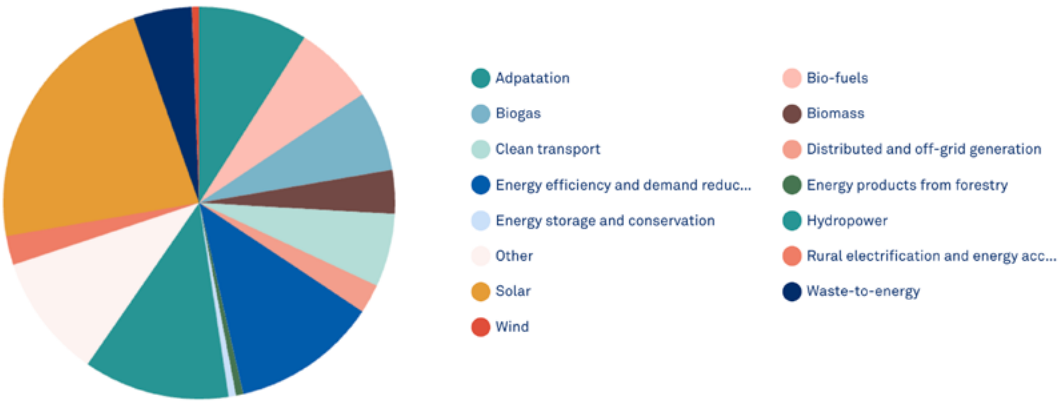
166
Projects provided PFAN support

820 000
Protential CO2eq reduced per annum **(tonnes)**

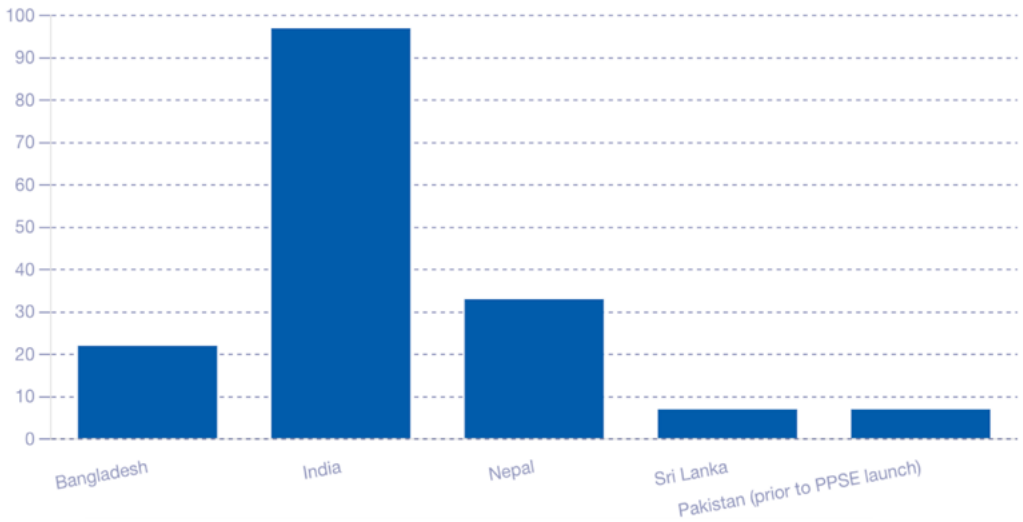
← To Content

To Regional Results →

Total projects supported by technology 2016-2023



Total number of projects supported by country 2016-2023



Market developments and PFAN's response 2016-2023

The South Asia region of Bangladesh, India, Nepal and Sri Lanka has seen different market trends throughout each of the countries, relating to four key areas – access to electricity, access to finance, presence of partnerships and networks, and policy evolution.

With a significant increase in hydropower projects in Nepal in the last decade, the country aims to become self-reliant by 2026, no longer dependent on India for electricity imports. Although changing political discourse has led to challenges in attracting investments, a recently signed Memorandum of Understanding between the Asian Development Bank and the World Bank to support hydro expansion will pave the way for investment.[1] The country's hydropower trends are reflected in PFAN's pipeline, with 19 projects supported in Nepal since 2019.

Sri Lanka is fully grid-connected; however, having suffered political and economic upheaval in 2020/21, the country has faced a severe power crisis with regular power outages and a lack of financing to solve the issue. As the capacity of thermal power plants decreases, there is a growing need for renewable energy, which has sparked interest in the rooftop solar space and the possibility of foreign exports. However, political risks have led to a lack of investment. This has not deterred PFAN from the market, as we have continued to support projects in the country, helping companies develop their business models and navigate the changing economic and financial circumstances throughout the past decade.

Bangladesh is also steering for an increase in clean energy sources – aiming for the clean energy sector to be at 40% by 2041, which requires an annual investment of 1.7 billion.[2] Over the past years, new avenues have been explored, with novel financial structures for small-scale investments, larger projects and the growth of rooftop solar players. With a new finance guarantee scheme under discussion, there is likely to be a resurgence of requirements for project preparation and investment facilitation support services, especially for debt transactions, as well as an overall increased funding requirement.

The landscape in India has changed drastically over the last decade, with almost 100% of the population now having access to electricity,[3] leading to a changing discourse of “quality of electricity” rather than “connectivity”. India is transitioning from a pure coal-based to a renewable energy-powered economy, setting targets to install 500 gigawatts of renewable energy by 2030 to ensure that 50% of the country’s energy supply is renewable.[4] PFAN has supported this transition since 2017 with a portfolio of almost 100 projects in the country in various sectors, from biomass to solar.

Overall, the region exemplifies the global trend of electrifying vehicle fleets, with several E-mobility projects receiving PFAN support over the past decade. Furthermore, the transport sector and clean-cooking initiatives have been looking towards carbon finance as an additional funding source to typical revenue streams in recent years.

The region has seen an increasing focus on renewable energy, climate mitigation and adaptation over the past years, which is opening new fields of opportunity for PFAN. As South Asia calls for trillions of US dollars to transition to renewable energy, it creates a space for PFAN to leverage domestic and foreign investments into vastly growing renewable energy projects.

More recently, the South Asia market, especially but not limited to India, has proved an important testing ground for PFAN to explore new approaches and develop new financial structures, going beyond conventional renewable energy projects and business models (e.g. wind and solar generation). We have seen the pioneering of solar C&I and utility (OPEX) model distributed generation approaches, development of commercial scale bio-energy models, mesh grids and flash grids, cooling, water treatment and supply, waste treatment and recycling. Moreover, with countries such as Bangladesh, Nepal and Sri Lanka lacking mature equity markets to support climate tech development, PFAN has had a role in supporting financial institutions with the co-creation of clean energy funds, green bond issues and credit lines for SME end-users and micro-finance institutions to improve access to clean energy solutions and help meet the Nationally Determined Contributions.

PFAN's activities and highlights

In the initial years, the PFAN portfolio focused on generating energy and electricity from renewable energy sources. However, the changing policy and funding ecosystem has helped to expand our portfolio to include adaptation, electric mobility and circular economy projects in South Asia under the UNIDO/REEEP hosting structure.

Building resilience is key to ensuring development and attracting investments across Nepal, Sri Lanka and Bangladesh.

The harsh terrains and the stretches of coastal areas have made it imperative for these countries to focus on adaptation efforts while trying to mitigate the damage already caused. Funding for adaptation has been challenging, creating the need for alternate funding mechanisms for climate change SMEs.

Given these challenges in developing a clean energy ecosystem, our focus has moved towards offering support to adaptation projects – since 2017, PFAN has supported 20 climate adaptation projects in the region and has mobilised approximately USD 54 million.

As seen through PFAN's support to companies such as New Leaf Dynamics, which is enhancing cold chain markets in India, Radix Lifespaces, generating bio-compressed natural gas from organic waste, and Swajal Water, whose innovative solar-powered water purification and distribution machines are found all across India, we have accelerated investment in a variety of innovative ideas tackling the challenges of climate change.

As a result, PFAN has been focusing on building partnerships with the local private and public lending institutions to drive regional investments in these various sectors, which has led to a dynamic diversification of our development pipeline and the need to constantly expand and enhance the skill sets and experience base of our advisor network.

Since hosting PFAN's first investor forum in Asia in 2009, the region has been a key player in both attending and organising events to support project developers in meeting their investment needs. For example, India, one of PFAN's most active countries, was a crucial player in leveraging the finance raised over the years. A strong network in the country helped PFAN partner with the Confederation of Indian Industries to develop a series of webinars to reach out to climate mitigation and adaptation businesses.

Despite the challenges encountered as a result of Covid-19, the Asia region continued to grow with the inception of the Pakistan Private Sector Energy Project (PPSE), a PFAN sub-programme, and an increasing number of projects interested in PFAN – leading Southeast Asia and South Asia to split into two regions. In 2021, Pamli Deka became PFAN's first female Regional Coordinator and has since strengthened the network of clean energy and adaptation projects while reaching out to new stakeholders to develop partnerships in South Asia.

With our advisors, who bring strong technical experience from the industry and experience in sector-specific fundraising, PFAN ensures that entrepreneurs receive support based on their projects' specific requirements and are guided throughout their business development process. For example, PFAN Advisor Abhay Nalawade has been working with Indian company Atomberg Technologies, which develops energy and cost-efficient ceiling fans and other home appliances since its early days and assisted them in closing multiple funding rounds. Abhay continues to add value by providing advice on new market segments and products for continuing their business growth, along with scouting for fresh investors. To date, Atomberg Technologies has raised USD 127 million in eight funding rounds, the most recent in 2023.

Pamli Deka

Regional Coordinator, South Asia

With more than 17 years in the energy and development space, Pamli Deka has worked with global organisations, leading diverse multicultural teams, developing funding proposals, co-authoring reports, liaising with investors and donors, managing experts and supporting entrepreneurs with the final objective of creating sustainable long-term impact which leads to development through innovation.

She has been working with a team of Country Coordinators and PFAN Advisors in South Asia as the Regional Coordinator for PFAN South Asia since 2021.

Pamli Deka shares insights into PFAN's impact in South Asia

02

PFAN IN SOUTH ASIA IN 2023

Regional developments

In 2023, new policy announcements were made across the region, including the decision of the Nepal Electricity Authority to restart the process of purchase price allocation (PPA) for run of the river projects and a Memorandum of Understanding being signed between Bangladesh, India and Nepal for power export, which has created an opportunity for hydropower players to meet the 10,000 MW power trade agreement. [5] In Sri Lanka, the International Monetary Fund (IMF) approved a USD 3 billion package to improve the liquidity situation, which has allowed interest rates to come down since then. [6] The power tariff rates were hiked, and the Government's target to generate 70% of energy from renewable energy sources by 2030 in Sri Lanka resulted in renewed interest in the sector.[7]

The 2023 state budget in India allocated USD 1.22 billion for the renewable energy sector. With an outlay of USD 2.8 billion (INR 24,000 crore) for manufacturing solar equipment – the associated Production Linked Incentive scheme supports existing solar players. The ministry plans to invest USD 2.3 billion in a seven-year green hydrogen mission, and the government continues to promote electric vehicles.[8] This was seen in 2023 with many deals in the electric vehicle space in India and fund flows of USD 600 million.[9] In Bangladesh, the EV market is also set to expand, with new policies taking effect in the coming years.

PFAN's achievements

Though capital is flowing in the renewable energy sector throughout the region, 2023 has shown that raising investments for markets in Bangladesh and Sri Lanka will require international support and catalytic funding that can trigger initial capital flows into the sector. PFAN continued to play a crucial role in offering investment facilitation services to identify and facilitate such deals, particularly due to our strong local presence. PFAN did just that by supporting a rooftop solar PV project in Colombo, which has now successfully raised financing of USD 135,000 debt – PFAN's first financial closure in Sri Lanka. To further enhance this process, PFAN rolled out intensified investment facilitation through a specialised transaction advisor in Nepal; this led to two projects in the country, one in hydropower and the other in clean transport, being introduced to international and domestic investors with an expectation to reach financial closure in the coming year.

During 2023, PFAN focused on actively engaging with investors, creating new partnerships, supporting mature projects to reach financial closure and discussing market changes and prospects with external entities. South Asia saw 12 PFAN-supported projects leveraging USD 185 million, including Wickedride Adventure Services Private Limited. The project secured USD 20 million in equity through private funding to introduce shared electric two-wheel scooters for rental services, operating on a pay-per-kilometre and pay-per-minute basis. The anticipated annual reduction of 155,093 metric tons of CO2 emissions underscores the project's commitment to environmental sustainability.

Also, in 2023, PFAN worked with Finovista, the India partner of the UK Modern Energy Cooking Services programme, to provide mentorship to clean cooking start-ups to connect with investors and pitch their projects under the "Investor Pitch and Connect" initiative. This collaboration resulted in extended engagement between PFAN Advisors and clean energy cooking companies and expanded PFAN's operations in the sector within South Asia. The mentoring support was specifically tailored to developing and presenting pitch decks to investors, demonstrating PFAN's ability to provide intensified support in various elements of transaction management, not just limited to business plans, financial plan development and fundraising.

In Nepal, PFAN supported Husk Power Nepal Pvt. Ltd., which offers clean cookstoves to alleviate indoor pollution in impoverished and marginalised households across the country, to raise over USD 340,000 in investment.

[1] https://asian-power.com/environment/news/world-bank-and-adb-strike-deal-expansion-nepalese-hydropower-sector

[2] https://www.enerdata.net/publications/daily-energy-news/bangladesh-targets-40-clean-power-generationted,2.3%20GW%20of%20solar%20capacit2041.html#:~:text=The%20renewable%20capacity%20is%20estimated,2.3%20GW%20of%20solar%20capacity

[3] https://www.macrotrends.net/countries/IND/india/electricity-access-statistics

[4] https://powermin.gov.in/en/content/500gw-nonfossil-fuel-target

[5] https://kathmandupost.com/national/2023/10/05/nea-invites-11-hydel-projects-to-sign-power-purchase-agreements

[6] https://www.imf.org/en/News/Articles/2023/03/20/pr2379-imf-executive-board-approves-under-the-new-eff-arrangement-for-sri-lanka

[7] https://www.trade.gov/country-commercial-guides/sri-lanka-energy

[8] https://pib.gov.in/PressReleasePage.aspx?PRID=1907698, https://www.mercomindia.com/renewable-industry-says-budget-proposals-will-expedite-indias-energy-transition, , https://pib.gov.in/PressReleasePage.aspx?PRID=1986755#:~:text=The%20Union%20Minister%20of%20State,indigenous%20production%20of%20Solar%20Panels, https://www.forbesindia.com/article/isbinsight/green-horizon-indias-journey-to-leadership-in-the-hydrogen-revolution/90711/1#:~:text=The%20government%20has%20approved%20%242.3,renewable%20energy%20capacity%20by%202030

[9] https://inc42.com/features/indias-ev-startup-funding-landscape-decoding-the-shift-from-oems-to-newer-sub-segment/

HUSK POWER NEPAL

SUCCESS STORY

Location
Nepal

Technology
Biomass / Clean cooking

"When we first started this project, there were many challenges. Initially, the banks were not ready to invest in this sector. PFAN has helped us to improve our documentation and provided us with the knowledge to help us succeed."

Manoj Kumar Gupta, Managing Director, Husk Power Nepal

In India, PFAN also partnered with Surge Impact Foundation, which has launched its Climate Action Entrepreneurship Incubation Program to support start-ups. PFAN helped identify the first cohort of companies for Surge Impact Foundation and continues to engage with the selected companies as they design their strategies. Furthermore, the Indian School of Business in Mohali engaged PFAN advisors to provide mentorship support to entrepreneurs participating in their Social Impact Program. This six-month programme supports impact-driven start-ups working in sustainability to solve social and environmental challenges, showcasing PFAN's nurturing of locally-based renewable energy markets and financial advisory eco-systems, which, in turn, increases the PFAN footprint by expanding and enhancing our Advisors' interaction with impactful businesses.

PFAN's dynamic engagement throughout 2023 in South Asia reflects our unwavering commitment to driving positive change in the climate and clean energy sectors. From navigating evolving policy landscapes to facilitating international support for key markets in Bangladesh and Sri Lanka, PFAN has showcased its agility and motivation to address diverse challenges. Successfully helping projects and businesses to mobilise investment with their groundbreaking initiatives exemplifies PFAN's ability to support and catalyse transformative ventures.

Furthermore, the expansion into clean cooking start-ups, collaborations with impactful programmes and mentorship initiatives with educational institutions highlight PFAN's comprehensive approach to fostering sustainability and innovation across entire eco-systems.

HUSK POWER NEPAL

Key Highlights

Technology **Biomass**

Technology **Clean cooking**

Country **Nepal**

Business type **Scale-up**

340

Investment amount raised with PFAN support **(USD thousands)**

200

Investment ask **(USD thousands)**

30%

Project IRR **(upside)**

20

Peak power demand reduction **(MW)**

20 950

GHG mitigation impact **(tonnes of CO2e/year)**

Regional Coordinator

Pamli Deka
Regional Coordinator, South Asia

← To Content

To Regional Results →

Over 50% of Nepal's population depends on biomass fuels and open fires for cooking, adversely affecting public health, contributing to environmental degradation and climate change and disproportionately burdening women and girls with fuel collection and meal preparation. In response to these challenges, the Government of Nepal has set the goal of achieving universal access to clean cooking by 2030.[1]

The traditional stoves commonly used in Nepal are basic structures constructed from clay, stone or metal tripods, which often lack efficient airflow and insulation. Consequently, they consume large amounts of biomass and waste a significant amount of heat, leading to high levels of indoor air pollution. To enhance the socio-economic development of rural communities, the Government of Nepal is promoting the Improved Cook Stove (ICS) programmes with the aim of providing access to clean cooking technology and fostering a thriving market for clean cookstoves.

"A maximum of 20% firewood is sufficient for cooking with this stove. You can also use twigs, husks, leaves or any other biomass"

Manoj Kumar Gupta, Managing Director, Husk Power Nepal

Founded 2013 in Birjung, Nepal, Husk Power Nepal Pvt. Ltd. offers clean cookstoves to alleviate indoor pollution in impoverished and marginalised households across Nepal. They manufacture metallic improved cook stoves (MICS), which offer better fuel efficiency, reduced smoke emissions and improved indoor air quality, unlike traditional open-fire cooking methods.[2] “A maximum of 20% firewood is sufficient for cooking with this stove. You can also use twigs, husks, leaves or any other biomass”, says Manoj Kumar Gupta, Managing Director of Husk Power Nepal.

The rural population in Nepal faces limited access to electricity, liquid petroleum gas (LPG) and kerosene due to low purchasing capacity and inadequate infrastructure. Consequently, they rely on firewood, agricultural residues, animal dung and traditional fuels like petroleum and coal for energy. Husk Power Nepal offers a clean and sustainable alternative through the development and production of their MICS. According to customer Sharmila Tamang, “With the help of this [clean cooking] stove, it has become very easy for us since it uses less firewood, which we have to bring from the jungle”.

“When we first started this project, there were many challenges. Initially, the banks were not ready to invest in this sector. PFAN has helped us to improve our documentation and provided us with the knowledge to help us succeed. Before it was just a stove factory, now we have developed a fuel factory as well”

Manoj Kumar Gupta, Managing Director, Husk Power Nepal

Husk Power Nepal's stoves offer significant benefits, having an efficiency of over 41%, saving up to 80% of firewood and reducing smoke by 95%, all while consuming minimal electricity. However, these improved cookstoves (ICS) still require firewood. To address this, Husk Power produces husk pellets, serving as a cleaner and effective substitute for firewood and replacing diesel and LPG. It is also estimated that the GHG emissions will decrease by approximately 2.5 tonnes per stove annually.[3]

PFAN support was instrumental in the company obtaining funding from various domestic investors. "When we first started this project, there were many challenges. Initially, the banks were not ready to invest in this sector. PFAN has helped us to improve our documentation and provided us with the knowledge to help us succeed. Before it was just a stove factory, now we have developed a fuel factory as well", says Manoj.

Their PFAN Advisor, Sujan Paudel, "Nepal is fortunately very rich in resources: renewable energy and clean energy. But then the problem is in developing the investable bankable projects, and that's where PFAN comes in. The investor will get an attractive return or reasonable return".

Going through the steps of the PFAN Journey, improving their business plans and refining their proposals increases a project's bankability and decreases risk. Dinesh Dulal, Head of Sustainable Banking at NMB Bank, emphasises that project developers and entrepreneurs who have received support add value and increase the likelihood of securing funding from the bank and other development parties.

Since PFAN support, Husk Power Nepal has sold over 29,000 of their clean cookstoves. "Eventually, every household needs to have an improved and more energy-efficient cook stove," says Manoj.

The impact is tangible – student, Sabina Paudel, has more time available for studying. "Before, it used to take a lot of time to cook. Now, with this stove, it's much quicker. It ignites instantly, maintains a steady heat without producing smoke and is much more convenient for cooking."

[1] https://www.ccacoalition.org/news/measurement-tools-accelerate-clean-cooking-potential-nepal#:~:text=In%20Nepal%20%E2%80%93%20where%20over%2050,to%20clean%20cooking%20by%202030
[2] https://trello.com/c/azoVmpH4/60-husk-power-nepal-tier-3-plus-improved-cook-stoves
[3] https://trello.com/c/azoVmpH4/60-husk-power-nepal-tier-3-plus-improved-cook-stoves

Southeast Asia

01

PFAN IN SOUTHEAST ASIA 2016-2023

280
Total investment leveraged **(USD million)**

26
Total projects which mobilised finance

64
Clear energy capacity added **(MW)**

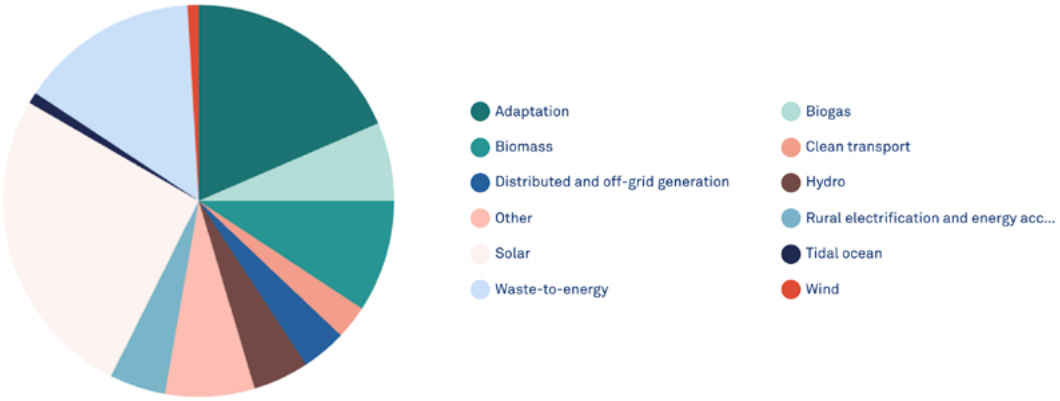
119
Projects provided PFAN support

100 000
Protential CO2eq reduced per annum **(tonnes)**

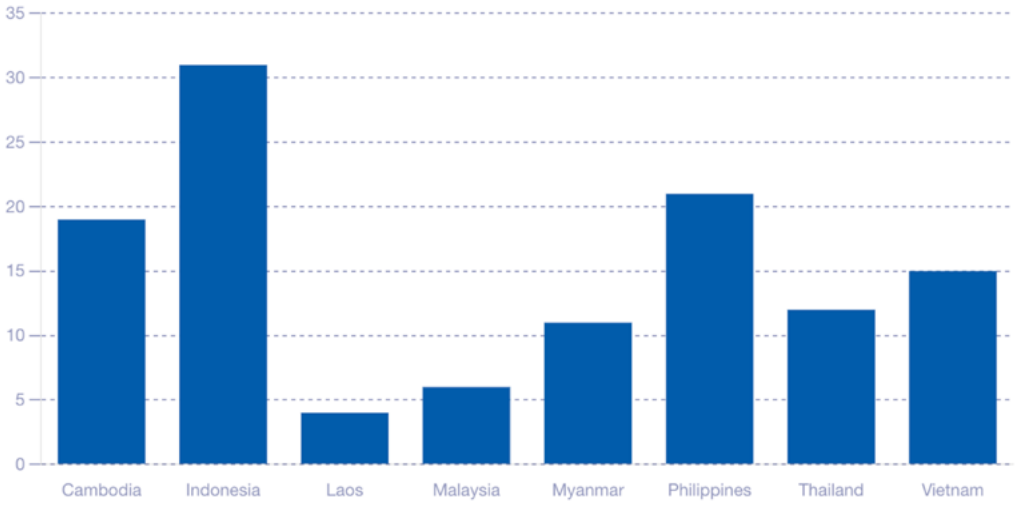
← To Content

To Regional Results →

Total projects supported by technology 2016-2023



Total number of projects supported by country 2016-2023



Market developments 2016-2023

In Southeast Asia, there is a pressing need to ramp up investment in the energy sector while prioritising cleaner technologies, especially as the subregion is often referred to as one of the most vulnerable to climate change in Asia.[1]

Southeast Asia's economic development has traditionally relied heavily on fossil fuels, particularly coal-fired power plants, which currently contribute to over 40% of the region's power generation. Despite the region's abundant renewable energy resources, investment in renewable power has been inconsistent, and its deployment has yet to fully utilise the region's potential.[2]

From 2016 to 2020, the region saw an average yearly investment of approximately USD 70 billion in energy, with about 40% directed towards cleaner options like solar PV, wind and grids.[3] Over the past five years, annual capital expenditures in solar PV and wind power have averaged around USD 10 billion, which is relatively low compared to global standards and even falls short of investment levels seen in sub-Saharan Africa. Notably, most of these investments have been concentrated in Vietnam alone.[4] Furthermore, private sector participation in the region's renewable energy sector remains limited and even more so for climate adaptation.

To drive down costs and make clean energy more accessible, the International Energy Agency suggests the region must improve its regulatory and financing frameworks.[5] Achieving this requires bolstering clean energy policies and regulations and tackling various financial barriers head-on – this is where PFAN has been playing a pivotal role over the past decade, supporting over 100 clean energy and climate projects, increasingly focussing also on those companies and projects which build resilience in response to climate adaptation, including for example in sectors such as circular economy, recycling, alternative proteins, agricultural value chains, cooling and green buildings.

PFAN's activities

To tackle the challenges of climate change, the region has seen a rise in electric mobility, with electric vehicle sales growing by 35% year over year in 2022, led by countries such as Thailand, Indonesia and Singapore.[6] This trend has also been strong in Vietnam, exemplified through several PFAN-supported clean transport projects in the country mobilising investment, including QIQ Vietnam, Selex Motors, and most recently, Wiibike Vietnam, based in Hanoi, which raised financing at the start of 2023. This finance, raised to support production expansion in response to increasing demand, exemplifies the continued drive for electric vehicles in the region against the expectation that electric 2-wheelers will serve over 2 million customer users by 2030.

Investments in solar and wind energy are also increasing, particularly in Vietnam and Thailand, driving down the cost of renewable energy and creating numerous opportunities for businesses in the sector. Green hydrogen projects are gaining momentum, with significant investments from companies like Indonesia's Pertamina, indicating a substantial shift towards cleaner energy sources. [7]

Additionally, alternative protein sources, including the black soldier fly and other insects, are gaining traction for animal feed and human consumption, supported by investments in start-up businesses throughout the region. For example, PFAN supported KBP Incorporation in Thailand, which promotes organic farming and plant-based protein food processing, and similar projects such as Sustainable Planet in Cambodia and Entobel in Vietnam, which aims to have the largest factory of insect proteins worldwide. This shows the drive of the region to tackle climate change and contribute to economic growth through clean energy initiatives.

As the potential and interest in renewable energy and climate adaptation projects in Southeast Asia grows, there is an increased need for PFAN to significantly contribute to its energy transition, e.g. implementing new strategies through tailored business coaching, facilitating early-stage equity investment, matchmaking services and technical assistance for investment funds, supporting green hydrogen projects and networking for decarbonisation initiatives.

Collaboration and event highlights

Creating strong partnerships and organising events are a key part of PFAN activities in Southeast Asia. Some highlights include:

- Since 2017, PFAN has been involved with the Asia Clean Energy Forum (ACEF) and the Asia Clean Energy Summit (ACES). In 2018, we partnered with the Sustainable Energy Association of Singapore (SEAS)'s Sustainable Energy Start-Up Network (SESUN) to launch the PowerACE Start-up Competition Initiative, which has taken place at both ACEF and ACES every year since, even during Covid as a virtual event. The competition provides a platform for early-stage entrepreneurs to pitch their ideas and innovations with advisory support from PFAN experts.

- PFAN also held a Gender Workshop at ACEF to highlight the experiences of women clean energy entrepreneurs in South and Southeast Asia. This led to the organisation of a more extensive session with the Asian Development Bank, including discussions around the macro environment and gender lens investment, enhancing capacity building within the space.

- In 2022, PFAN supported the Malaysian regional bank CIMB to host a pitch competition for SMEs in clean tech, clean energy and sustainability. The ESG-SME Pitch Challenge supported promising SMEs to pitch their projects to a panel of CIMB bankers and outside experts. PFAN helped CIMB identify SMEs with sustainability-focused business models or operations across the Association of Southeast Asian Nations (ASEAN) to compete in the event and helped SMEs prepare their investor pitch.

Capacity building and network creation

Since 2016, PFAN has also significantly invested in capacity building and training to help the network members and advisors better adapt to changing project, market and investor needs. In this connection, the combined PFAN Asian networks organised regular investor roundtables, each convening 20 investors from Southeast Asia and South Asia to share their experiences, lessons learned and views on market direction and opportunities. More than 30 PFAN advisors and network partners joined each roundtable. Furthermore, we have conducted several virtual Advisor workshops to transfer knowledge and learnings from experiences of working with project developers and entrepreneurs within the network.

As funding related to the energy transition increases in the region to help foster engagement with the private sector and accelerate the pace of implementation and scale-up of clean energy and climate-friendly technologies and business models, there continues to be a strong requirement for project origination and preparation and investment facilitation services in the region, particularly for small and medium enterprises/projects. PFAN has created a unique set of Southeast Asia-based resources that are well-positioned to take on this role in the future.

These include strong, active networks across seven Southeast Asian countries (Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand and Vietnam), 39 network and investment partners active in the region, and a total of 29 active advisors working together to help increase the number of successful businesses in clean energy and climate adaptation.

Peter DuPont

Regional Coordinator, Southeast Asia

Peter du Pont is Co-Founder and Co-CEO of an Asia-based international consultancy, Asia Clean Energy Partners, which provides services and solutions for clients in the development and business sectors. He is based in Bangkok and has more than 30 years' experience developing sustainable energy and climate programs in the U.S. and Asia. Peter specialises in technical, policy, and market assessments, knowledge-sharing and development and stakeholder engagement. He and his firm contribute to the clean energy ecosystem in the region through their assignments for development clients such as the US Agency for International Development (USAID), the Asian Development Bank (ADB), United Nations agencies, the World Bank, the German development agency GIZ and philanthropies. Peter helped to initiate PFAN in Asia in 2009, and he has worked with the Asian Development Bank since 2007 to organize its annual flagship event, the Asia Clean Energy Forum.

Peter DuPont shares insights into PFAN's impact in Southeast Asia

02

PFAN IN SOUTHEAST ASIA IN2023

Regional developments

Today, the climate tech sector has emerged as a standout performer despite an overall decrease in equity deals in 2023. During the third quarter of last year, the region witnessed a remarkable surge in climate tech investments, with 16 deals recorded, marking the highest volume in at least five years. The total deal value reached USD 140 million, reaching a four-quarter high, primarily fuelled by investments in renewable energy solutions and waste management.[8] This positive trend aligns with a growing acknowledgement of Southeast Asia's potential to become a global hub for renewable energy manufacturing. The region's strong foundation in manufacturing could translate into revenue potentials ranging from USD 160 billion to USD 200 billion by 2030, driven significantly by low-carbon mobility and clean power.[9]

The impact of climate change, particularly in countries like the Philippines, has also prompted increased investments in climate resilience and adaptation. The Asian Development Bank (ADB) has conducted a comprehensive study on the economics of climate change in Southeast Asia, emphasising the need for a holistic approach to address impacts and vulnerabilities – stating that if no action is taken in Indonesia, Philippines, Thailand and Vietnam, there could be a loss equivalent to 6.7% of GDP annually by 2100.[10] Furthermore, a surge in demand for renewable energy is evident, supported by falling prices and more favourable economics of renewable energy technologies. ASEAN's target of achieving 23% renewable energy by 2025 has led to the establishment of regulations and incentives to encourage the use of renewable energy in the region.[11]

PFAN's achievements

In 2023, PFAN's special focus in Southeast Asia was on the Philippines, where we cooperated with the Cold Chain Innovation Hub under the UNIDO-GEF project "Global partnership for improving the food cold chain in the Philippines", which aims to identify, develop and stimulate the application of low-carbon, energy-efficient refrigeration innovation technologies and business practices for use throughout the food cold chain while increasing food safety and security. PFAN's role in this project has been to support several businesses in the cold chain sector in building their capacity and understanding of the funding mechanisms available and helping them develop their business plans and strategic outreach to investors.

Through the project, PFAN partnered with local banks to conduct capacity-building initiatives which involved educating companies on the different available financing instruments. The capacity-building events also helped PFAN to identify local small and medium enterprises requiring PFAN support, two of which are looking to close a deal in early 2024.

PFAN also conducted hands-on activities with a business plan writing assistance workshop, demonstrating tailored country-specific assistance which was seen through outstanding feedback from the attendees. Feedback was highly positive, with one participant stating, "This session helped me understand business planning in a more practical and organised way. Even though I graduated in Business Administration, these (skills) were not taught to us".

Another major highlight was the 6th iPitch event at the Asia Clean Energy Summit (ACES) on 25 October. PFAN collaborated with the Sustainable Energy Association of Singapore (SEAS) and Enterprise Singapore for the event, where twelve selected start-ups engaged in a 'speed dating' pitching format with PFAN mentoring to ensure their best presentations. These start-ups then presented their innovative solutions to a distinguished jury, solidifying PFAN's commitment to advancing sustainable energy initiatives in the region. Furthermore, these strategic partnerships exemplify PFAN's commitment to fostering a collaborative ecosystem and providing comprehensive support for sustainable energy projects across the diverse landscape of Southeast Asia.

The region also saw a notable finance mobilisation in Indonesia with PT Qomunitas Petani Satu, a climate adaptation business based in Solo, Central Java, Indonesia, raising USD 392,068 USD debt; the company focuses on rice cultivation through a partnership programme with farmers to enhance productivity and empower agricultural communities. The project has significantly contributed to gender equality as the company creates job opportunities for women throughout various stages, including planting, harvesting and trading, and incorporates women employees in all aspects of the business – including in the management team, where they have a central role as decision-makers in developing the business – and commits to continuing these efforts.

Furthermore, as women represent about 24% of farmers in Indonesia, the project implementor supports women's activities in rice production by providing technical assistance, facilitation, and agricultural tools. Additionally, the project extends indirect benefits, such as improving women's health and the environment through the consumption of organic rice, reduced use of chemical fertilisers and contributions to greenhouse gas reduction. This success exemplifies PFAN's commitment to supporting impactful climate adaptation projects, fostering sustainable agricultural practices, and contributing to gender equity.

Indonesia also remains a core focus for the upcoming year, when PFAN will support several projects in the country with intensified investment facilitation support and the development of Gender Action Plans. Entrepreneurs and Advisors will be invited to an Investor Forum in Jakarta in May 2024 to gain in-person training on delivering an investor pitch to selected investors. Among the featured projects is a seaweed cultivation farm by Seatech Energy, which PFAN is currently advising to attract investment for their innovative business idea.

SEATECH ENERGY

CASE STUDY

Location
Indonesia

Technology
Cold Storage / Adaptation

“There are a lot of new applications in various stages of commercial development that will lead to new demand for seaweed”

Jeroen Langelaan, Director, Seateach Energy

[1] https://www.adb.org/sites/default/files/publication/901611/climate-finance-landscape-asia-pacific.pdf
[2] https://iea.blob.core.windows.net/assets/057bafda-0c09-40fe-934c-4f2fe5e080f4/ASEANRenewables_InvestmentOpportunitiesandChallenges.pdf
[3] https://www.iea.org/reports/southeast-asia-energy-outlook-2022/key-findings
[4] https://iea.blob.core.windows.net/assets/057bafda-0c09-40fe-934c-4f2fe5e080f4/ASEANRenewables_InvestmentOpportunitiesandChallenges.pdf
[5] https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2022-112-mapping-the-surge-in-ev-production-in-southeast-asia-by-tham-siew-yean
[6] https://www.iea.org/reports/southeast-asia-energy-outlook-2022
[7] https://www.iea.org/reports/southeast-asia-energy-outlook-2022/key-findings
[8] https://www.linkedin.com/pulse/climate-tech-shines-through-southeast-asia-2023-hyphen-partners-yrfyc/
[9] https://www.aseanbriefing.com/news/renewable-energy-manufacturing-potential-in-south-east-asia/
[10] https://www.adb.org/publications/economics-climate-change-southeast-asia-regional-review
[11] https://www.mdpi.com/2071-1050/15/8/6961

SEATECH ENERGY

Key Highlights

Technology **Adaptation**

Country **Indonesia**

Business type **Scale-up**

5

Investment Ask **(USD million)**

33%

Project IRR

Regional Coordinator

Peter DuPont
Regional Coordinator, Southeast Asia

Find out more

Seatech Energy
Visit their website

→

Seaweed is fast-growing and nutrient-dense and does not need fresh water or fertilisers to thrive. These features have seen it rocket in demand in a world crying out for more sustainable commodities – its estimated value in 2020 was USD 16.7 billion, a figure projected to reach 30.2 billion by 2025. Growing demand from agricultural, industrial and feed-related applications and as a snack product are boosting its popularity.

The majority of seaweed farming is done in shallow water, close to the shore. But Seatech Energy has developed technology that will allow crop production to expand significantly – its submerged platform ORCA-SP™ enables seaweed cultivation on an industrial scale. Its pod structure is designed to protect the young seaweed spores and control operating conditions such as weather conditions, depth, irradiation, pH, and nutrient values for each location.

The Dutch company was founded in 2015 by Ad de Raaij with the support of his Inrada Group, which specialised in designing and manufacturing systems and controls for offshore marine oil and gas systems operating in extreme environmental conditions.

“here are a lot of new applications in various stages of commercial development that will lead to new demand for seaweed, so business-wise, it makes a lot more sense to focus on seaweed production”.

Jeroen Langelaan, Director, Seateach Energy

Its original idea was to farm the seaweed to produce biogas, but Director Jeroen Langelaan explains: “What we did not realise at the time is that fuel is probably one of the lowest values you can get from seaweed – it contains components that are a lot more valuable. There are a lot of new applications in various stages of commercial development that will lead to new demand for seaweed, so business-wise, it makes a lot more sense to focus on seaweed production,” he says.

The seaweed cultivation technology they employ was developed in South Africa and is now commercially ready. The plan is to showcase it on a farm in South Sulawesi, Indonesia, the world's second-largest seaweed producer after China.

He estimates the project could employ up to 150 people from local villages, including many women, who typically perform around half the work on seaweed farms, such as planting and tending the seedlings and drying the harvested seaweed. Once commercial operations begin in Indonesia, the company intends to establish a gender-equal team to run the business, he says.

Pilots of the technology in Indonesia, South Africa and India have confirmed its potential for the production of, amongst other seaweed species, Cotonnii, a crop that can be used in food processing, cosmetics, knitted fabrics and fertiliser. It will sell this to a seaweed processor based on a ten-year offtake agreement, which has already been signed. It estimates its annual revenues at USD 2.6 million, with EBITDA of 46%. The seaweed farm will have multiple environmental benefits, including acting as a habitat for ocean wildlife. Another benefit is the deacidification of the ocean as seaweed sequesters carbon. Once fully operational, the Sulawesi farm is projected to absorb 1,500 tonnes of CO2 per annum.

SeatechEnergy also plans to obtain sustainability and traceability certification for its product in response to market demands. Meanwhile, it is awaiting final approval of a programme with Deakin University, which will enable it to develop its seaweed anaerobic digester on a commercial scale to facilitate energy production.

Seatech Energy spent several years on business planning and modelling based on its in-house expertise, and PFAN has stepped in to help the company find investors through its network of funds and banks.

According to Hari Yuwono, PFAN Advisor for Seatech Energy, the company's main benefit lies in its technology. "With the platform they are using they can cultivate away from the seashore, where the various conditions (temperature, salinity, nutrients etc.) are more favourable and thus produce more seaweed. Pilots so far have shown productivity improvement."

It also has strong potential for contribution to gender equality due to the high proportion of roles for women in seaweed farming, he says. PFAN has helped them with the standards needed to present the project to investors. The project is still at an early stage and, so far, has no income, so it requires an investor who is willing to take on some risk.

Yuwono is optimistic that Seatech Energy will find the right investor due to its strong team. "This has taken a long time to develop, but they have persistence and the right character," he says.

Latin America & the Caribbean

01

PFAN IN LATIN AMERICA & THE CARIBBEAN 2016-2023

41
Total investment leveraged **(USD million)**

10
Total projects which mobilised finance

51.8
Clear energy capacity added **(MW)**

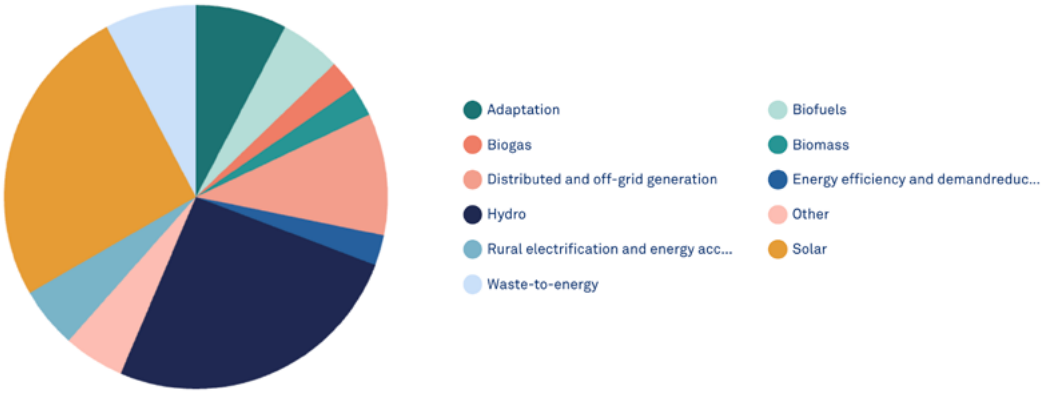
39
Projects provided PFAN support

1 640
Protential CO2eq reduced per annum **(tonnes)**

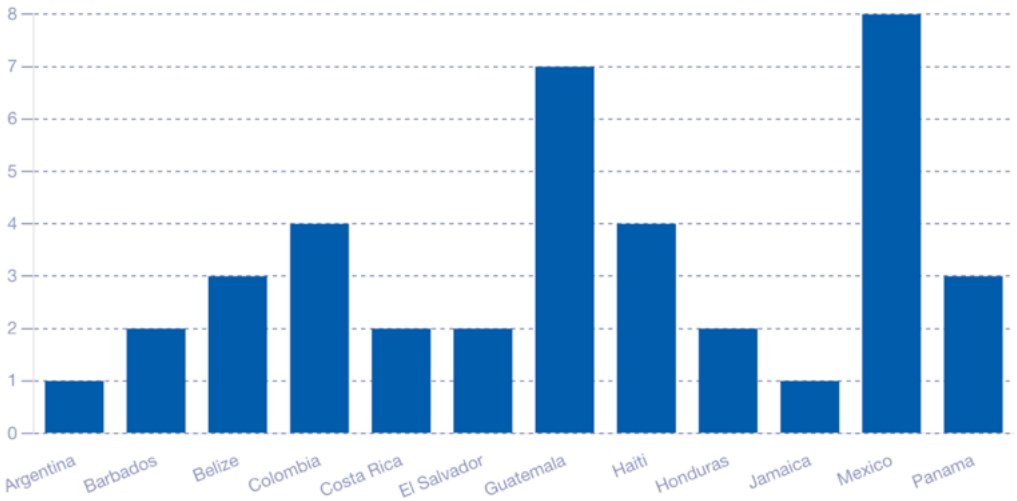
← To Content

To Regional Results →

Total projects supported by technology 2016-2023



Total number of projects supported by country 2016-2023



Market developments 2016-2023

After a four-year hiatus, PFAN restarted operations in Latin America and the Caribbean in 2019. This launch under the UNIDO / REEEP hosting structure marked the return of PFAN and coincided with a resurgence of renewable energy and energy transition projects in the region, specifically in Central America, Mexico, Colombia and the Caribbean.

Pre-Covid-19, the supply and interest in climate change and clean energy projects was robust and growing, with PFAN LAC starting strong with high levels of participation and regional representation. This was stymied by the onset of the Covid-19 pandemic and the follow-on impacts, which significantly affected the pipeline of projects and the direct engagement of investor networks in the area. Many projects went on standby and struggled to get back on track, suffering lingering impacts of the supply chain, procurement complexities, due diligence and financing constraints. The industry active in the region shifted to asset management and securing financing through corporate instruments and away from the traditional future flow project finance. These impacts, in addition to policy changes in key countries such as Mexico, slowed activities throughout the entire region.

As of 2023, however, the movement towards energy transition and net zero policies in public and economic policy, as part of national objectives, driven by the net zero and carbon neutral commitments embedded in NDCs regionally, added to the industry's return. In addition, the review and integration of green hydrogen initiatives, the intersection with green mobility infrastructure, the return of carbon markets and the explosion of special purpose funds focused on SDGs, climate and biodiversity became strong drivers impacting the industry. [1] [2] [3]

PFAN's activities

PFAN has continued to work with a group of projects and businesses despite many being delayed or not surviving the complex series of conditions in the market between 2020-2022. Our expert advisor network in the region has flexibly adapted to the evolving challenges and continues to provide support to new and existing projects in our pipeline and host investor roundtables, ensuring upcoming trends and existing difficulties are captured and shared. As the recovery took shape, the number of projects applying for PFAN support increased, and the pipeline began to reflect the trends highlighted above, following the regional trends towards energy transition.

PFAN's service is highly valued by individual projects, businesses and the investor network. Until PFAN-LAC's establishment, a dedicated project preparation facility (PPF) for this segment of projects was not a permanent presence in the region. The virtual advisory services and mentoring services, therefore, became of unique importance, as did our investor roundtables, designed to ensure stronger linkages between the parties – both the supply and demand sides of financing.

The market challenges have evolved in that the resources and technological availability are no longer significant issues in the region; rather, there is often a mismatch between the expectations of investors/financiers and the project developers/entrepreneurs. To that end, PFAN's work focused significantly on strengthening commercial cases, governance, financial models, expectations and assumptions – dedicating much time to strengthening business cases while coaching and preparing entrepreneurs for their first meetings with potential partners/investors. The strength of the underlying project, as well as the matching ability PFAN has displayed in pairing potential investors with strengthened projects has been and will continue to be a key differentiator in the space.

For example, PFAN's support of EarthSpark International has helped them to develop 22 town-sized, solar-hybrid, prepaid, 24-hour smart microgrids in Haiti's southern departments, which will, once completed, add 5.84MW of generated capacity. In Haiti, where only 47% of the population has access to electricity, EarthSpark's minigrids are now the most reliable electricity source and will serve more than 80,000 people and nearly 500 medium and large businesses.

[1] https://www.power-technology.com/analyst-comment/lac-ev-climate-emissions/?cf-view
[2] https://globalclimateactionpartnership.org/2019/12/latin-america-and-the-caribbeans-historic-commitment-towards-renewable-energy/
[3] https://www.energypolicy.columbia.edu/eu-and-lac-climate-collaboration-renewable-energy/

EARTHSPARK INTERNATIONAL

SUCCESS STORY – 2022 FINANCIAL CLOSURE

Location	Technology	Technology
Haiti	Solar	Rural electrification & energy access

"Jorge from the PFAN team has taken the time to understand our project and our needs, his specialized knowledge of the sector and his visibility into upcoming opportunities – combined with his authentic care for seeing these projects succeed – has been a wonderful support as we work to reach financial close on our solar microgrid scale-up project in Haiti".

Allison Archambault, President, EarthSpark International

SEARTHSPARK INTERNATIONAL

Key Highlights

Technology **Solar**

Technology **Rural electrification & energy access**

Country **Haiti**

Business type **Scale-up**

1.5
Investment amount (grant) **(USD millions)**

8.5
Investment ask (debt) **(USD millions)**

12%
Project IRR **(upside)**

5.8
Installed capacity **(MW)**

1 640
GHG mitigation impact **(tonnes of CO2e/year)**

Regional Coordinator

Patrick D'Addario
Regional Coordinator, Latin America and the Caribbean

Find out more

EarthSpark International
Visit their website

← To Content

To Regional Results →

Haiti is one of the most impoverished countries on the planet, where only 47% of the population has access to electricity. Ongoing security and governance crises which have made the country inhospitable to infrastructure development, alongside logistic and climate-related challenges, pose a major challenge to setting up off-grid solar installations.

But one company is on track to overcome these challenges – EarthSpark International, with their plan to connect over 120,000 Haitians to reliable renewable-powered grid electricity. Currently, around 5,000 people are benefitting from an affordable supply of clean energy in the rural areas of Les Anglais and Tiburon, over half of whom are lowest-income customers.

”Access to electricity is life-changing’’ says Allison Archambault, President of EarthSpark.

“People have more opportunities when electricity is available. This is grid electricity, so it’s not only for homes, it’s also for businesses – so it’s food businesses, it’s service businesses, it’s telecommunications, it’s pharmacies, it’s all sorts of little town businesses that are happening in rural towns in Haiti”.

Allison Archambault, President, EarthSpark International

EarthSpark’s mission is to build resilient energy systems to truly serve the needs of diverse local populations which will help tilt the scales in favour of climate stabilization and broader peace and prosperity. In places where large-scale grids can’t service the whole population or the infrastructure just doesn’t exist, locally based renewable solar and effective energy storage are critical to meet this goal. Allison sees their clean energy microgrids as a microcosm of how electricity and energy systems around the world are evolving to meet people’s needs with local and sustainable solutions.

For EarthSpark, this is an exciting opportunity to prove what is possible and to build best practices that are relevant not only to rural Haiti but also to other parts of the world. In addition to their microgrids, their spin-off technology company, SparkMeter, is now providing smart metering, billing, and grid analytics hardware and software services in over 30 countries.

"Jorge from the PFAN team has taken the time to understand our project and our needs, his specialized knowledge of the sector and his visibility into upcoming opportunities – combined with his authentic care for seeing these projects succeed – has been a wonderful support as we work to reach financial close on our solar microgrid scale-up project in Haiti".

Allison Archambault, President, EarthSpark International

PFAN Advisor Jorge Barrigh has been championing EarthSpark since 2019 when Allison looked for help in securing financing for the project. She discovered PFAN, which appealed to her as a service that could potentially serve as a connector and an advisor to help them reach financial close.

''We've matched her cadence and resilience along the way – Allison has a deep understanding of the entrepreneurial spirit,'' says Jorge. ''EarthSpark is a model project in the Caribbean and their microgrids are the most reliable in the country.''

"It's very helpful to have someone so knowledgeable and engaged scanning the horizon for opportunities,'' says Allison. ''Jorge from the PFAN team has taken the time to understand our project and our needs, his specialized knowledge of the sector and his visibility into upcoming opportunities – combined with his authentic care for seeing these projects succeed – has been a wonderful support as we work to reach financial close on our solar microgrid scale-up project in Haiti. It's a challenging funding environment, so I most appreciate the continued engagement of the PFAN team members because they do truly care about project success.''

EarthSpark is not only 67% women-led, they integrate their own award-winning Feminist Electrification Methodology into their practices to include women meaningfully in all aspects of what they do. This lighthouse activity won the United Nations Momentum for Change award in 2018 as a real-world example of what climate action looks like. The theory comprises five pillars of feminist electrification with an attention to the gender, inclusiveness around workforce development, governance, planning, actual community services and SME support.

''The exciting thing is that when electricity arrives for the first time, there are many things that change in that community, and so when gender outcomes are part of the electricity planning process, there are big opportunities to have big gender impacts in the community,'' says Allison.

EarthSpark is living up to its international name – they have just helped launch the first solar microgrid in South Sudan and are currently exploring partnerships in other geographies. They are currently seeking funding to further their mission, and interested investors are highly encouraged to contact Allison directly.

As per PFAN's commitment to providing expertise based on a deep understanding of local conditions, our advisors are based in countries throughout the region, including Trinidad and Tobago, Mexico, Columbia and Barbados. They are highly skilled in a diverse range of topics, including development impact, hydropower, solar, energy efficiency and demand reduction, wind power, rural electrification and energy access. Through their dedication to providing PFAN services to projects and businesses in the PFAN-LAC pipeline, they have successfully helped 11 projects to mobilise USD 41 million in investment between 2020-2022.

Patrick D'Addario

Regional Coordinator, Latin America and the Caribbean

Patrick D'Addario is the Coordinator of PFAN-LAC and is President and a founding Director of the Fiorello H. LaGuardia Foundation (LGF) and an original member of the PFAN network with more than 40 years of experience in energy efficiency and renewable energy project identification and preparation, finance, and commercialisation.

In addition to having served PFAN as Strategic Advisor for the Americas, as a project evaluator and coach, he serves as an expert for The EU Department of International Partnerships (INTPA), advising on clean energy project development and finance, primarily in Africa. He has worked on clean energy projects for philanthropic, private, and multilateral development clients in Brazil, China, India, Indonesia, and Nigeria, as well as in an additional 25 countries in Africa, Asia, and Latin America.

Patrick D'Addario shares insights into PFAN's impact in Latin America and the Caribbean

02

PFAN IN LATIN AMERICA & THE CARIBBEAN IN 2023

Regional developments

The primary trends in Latin America and the Caribbean include an update of Nationally Determined Contributions (NDCs) in the region, corporate and public policy commitments to carbon neutrality and a push towards net zero, as well as an emphasis on addressing extreme heat in the tropical areas. PFAN is aware and active on the infrastructure front (transmission and distribution), improved reliability of systems, microgrids and the behind the meter use of energy storage and data analysis, which is helpful to corporate clients. In addition to these trends within the power generation and distribution space, PFAN has also engaged in the green hydrogen and electric mobility trends – which are driving energy storage discussions – as part of our expertise in the region.

Additional trends which can be attributed to changing weather patterns, especially in the Caribbean basin, are helping address the sargasso seaweed blooms that have dramatically impacted tourism-dependent areas. As part of this work, PFAN has engaged with entrepreneurs who are also looking for solutions either through a biomass solution (energy) or biogas solution tied to other agricultural applications for these blooms once they reach coasts. As has been our strength, the knowledge and capacity diversity/scope of PFAN's advisor network has made these transitions and trends relatively seamless.

PFAN's achievements

In 2023, PFAN-LAC continued actively providing our services to projects in the pipeline and supporting them through the PFAN Journey. The region's most significant achievement and milestone in 2023 was the successful organisation of the in-person LAC Pipeline Building and Roadshow Event in Guatemala, which took place from 20-24 February.

The event was joined by 15 advisors from across the region for capacity building, knowledge exchange, and stakeholder meetings with approximately 60 in-person stakeholders, and a large group joined virtually. This event had very positive effects on our outreach activities in the region – during the week of the event, there was a significant increase in the number of registrations from projects interested in applying to PFAN.

As in the other PFAN regions, we continued to promote gender-related capacity-building activities for our network. PFAN, together with Value for Women, held several Gender Masterclass trainings for the advisors, focusing on providing tools and resources for PFAN advisors to use in their support to the projects.

Although there were no financial closures in PFAN-LAC in 2023, our network members continued to build new relationships with partners in the region and to maintain contact with over 20 partners in the region, including Fundacion Solar, Interamerican Development Bank (IDB), Creating Economic Opportunities/USAID and S3IDF.

Starting from February 2024, PFAN-LAC is operating the Caribbean Clean Investment Program (CCIP)'s project preparation facility (PPF) under the United States Agency for International Development (USAID)'s Climate Finance for Development Accelerator (CFDA). Through this programme, PFAN-LAC is developing a pipeline of projects at different stages of development to usher them through the pre-investment cycle. Selected projects will be taken through the established PFAN Journey, and new to the PPF, PFAN-LAC is adding an extra step of assistance – pipeline development for pre-application support to projects. During this stage, our network of locally-based Advisors will assist eligible projects in preparing their application for PFAN-LAC's services.

Selected projects will be taken through the established PFAN Journey, and new to the PPF, PFAN-LAC is adding an extra step of assistance – pipeline development for pre-application support to projects. During this stage, our network of locally-based Advisors will assist eligible projects in preparing their application for PFAN-LAC's services.

Pacific Islands

01

PFAN IN THE PACIFIC ISLANDS 2016-2023

.36

Total investment leveraged **(USD million)**

1

Total projects which mobilised finance

6

Projects provided PFAN support

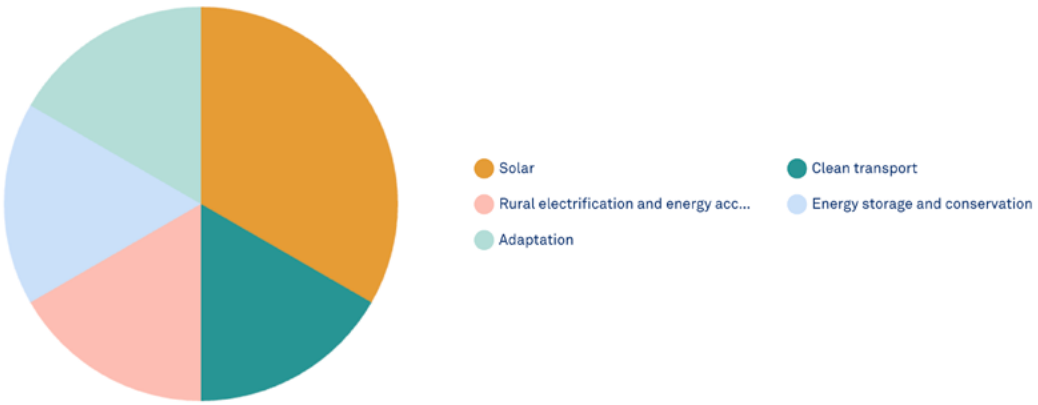
99

CO2eq reduced per annum **(tonnes)**

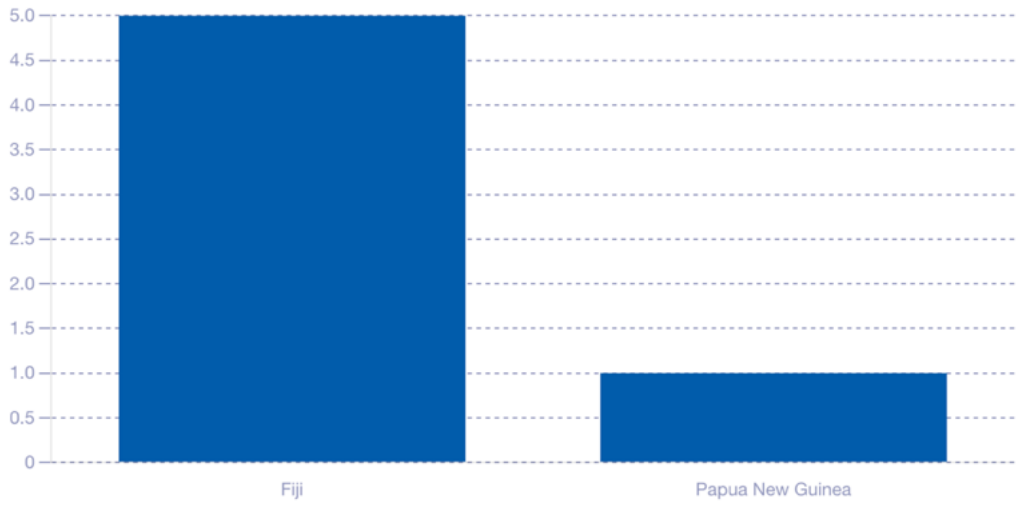
← To Content

To Regional Results →

Total number of projects supported by country



Total number of projects supported by country



Market developments in 2016-2023

The Pacific faces unique challenges of geography and demography (small markets, remote maritime locations, challenging logistics) which tend to amplify climate risks and impacts and which have demanded adaptation of PFAN's standard business model, which has accordingly increasingly focussed on more programmatic project approaches as well as much more focussed/personalised origination channels as opposed to the open calls which run in other markets. For the most part, energy access in the region is relatively high, with nearly all households in countries like Niue, Nauru, Palau, Tonga and Tuvalu having access to electricity. However, it is expensive and often reliant on diesel generation (especially in more remote locations), leading to high household tariffs. This means the focus is on energy transition activities as countries look to decouple from the unpredictable costs and challenging logistics of fuel supply.

However, in countries like Vanuatu and the Solomon Islands, electrification rates remain low at about 20% or less and around only 13% in PNG; here, the focus is more on access. [1] Other challenges in the Pacific region include rising sea levels, salinisation and decreasing availability of fresh water, increased intensity and frequency of tropical storms, floods and drought, all of which have been attracting more awareness over recent years, leading to increased attention on adaptation from governments, donors and project developers. The other overarching trend in the region has been a drive to increase the involvement and capacity of the local private sector to play a more meaningful/enduring role in providing energy and climate solutions, and this has been the rationale for PFAN's deepening engagement.

PFAN's activities and highlights

As the newest addition to the PFAN network, PFAN Pacific began operations in 2021 with a focus on supporting climate and clean energy initiatives tailored to the unique challenges and opportunities faced by the Small Island Developing States (SIDS) in the Pacific region. The first two projects to receive PFAN support were based in Fiji, the principal country of PFAN Pacific's operations. Fiji-based played a pivotal role in facilitating Noda Solar Initiative's project readiness, providing assistance in developing vital project documents such as their financial model and business plan. Noda Solar aims to mitigate the market challenge of high electricity tariffs by enabling rural energy customers to acquire efficient solar home energy systems from which they can afford, own, operate and reap financial advantages, diverging from the prevalent reliance on government subsidies and marking a shift towards sustainable energy independence.

Further addressing the region's needs, two projects from Sunergise Fiji Pte Limited have received PFAN support – Clay Energy Taveuni Solar Farm and Tokoriki Resort. The first is the only large-scale solar and battery energy storage system (solar + BESS) to be built in Fiji and will boast a 1MW + BESS solar farm on Taveuni Island, the third largest island in Fiji.

Their second project targets increased use of renewable energy in one of the main drivers of Fiji's economy – tourism. It aims to upgrade the system installed at the Tokoriki Resort in 2014 with a new battery energy storage system and replace original PV modules with new higher efficiency modules, as well as the installation of a new ground mount array. With PFAN support this project successfully completed the first due diligence stage of the PFAN coaching process.

CLAY ENERGY

CASE STUDY

Location
Fiji

Technology
Solar / Energy storage

"PFAN aims to bring more private sector involvement in the Pacific in energy access and in climate, more generally, to open and create new markets for these companies and build their capacity to serve these markets".

Peter Storey, PFAN Global Coordinator

CLAY ENERGY

Key Highlights

Technology **Solar**

Technology **Energy storage**

Country **Fiji**

Business type **Scale-up**

Regional Coordinator

David Eyre
Regional Coordinator, Pacific Islands

Learn More →

Find out more

Clay Energy
Providing positive energy to the people of Fiji and the Pacific

→

← To Content

To Regional Results →

In a pioneering effort for the Pacific region, Sunergise International subsidiary Clay Energy, in collaboration with the Fiji Government and funded by the Korea International Cooperation Agency (KOICA), spearheaded the establishment of a groundbreaking 1MW grid-connected solar photovoltaic farm coupled with a battery energy storage system (BESS) on Taveuni, the third-largest island in Fiji.

It is the first large-scale grid export solar and battery solution to be deployed in the country, providing the benefit that the battery system can stabilise the grid when sun days are low. It also saves on diesel generation that has been used to deliver electricity to the Taveuni grid in the past – cutting emissions in the process.

By harnessing the abundant solar resources of the region, this project aligns with Fiji's national target of achieving 100% renewable electricity and its international commitments to reduce greenhouse gas emissions by 30% by 2030, thus improving living standards, health outcomes, job creation, climate resilience and food security. The installation of this solar farm further ensures grid stability and reliability, providing a sustainable solution to the challenges of energy access for the island's residents.

"PFAN aims to bring more private sector involvement in the Pacific in energy access and in climate, more generally, to open and create new markets for these companies and build their capacity to serve these markets".

Peter Storey, PFAN Global Coordinator

PFAN provided vital support to Clay Energy, assisting with financial model refinement and business plan development and drafting their pitch deck for investors. "Your credibility and ability to deliver on a project within a certain timeframe are key. PFAN's main involvement in this project is with the private sector entity, where they can access financing or utilise our advisory services to help structure their ask for finance", says David Eyre, PFAN Regional Coordinator for the Pacific Islands.

Construction of the 1MW grid-connected solar photovoltaic farm coupled with a battery energy storage system (BESS) on Taveuni

Headquartered in Fiji, Clay Energy has been at the forefront of delivering renewable energy solutions across the Pacific since 1998. This new solar plant is situated at the Mua Research Centre in the north of Taveuni, an international centre for palm and coconut research owned by the Fijian Government and is poised to bolster the island's existing generation capacity. According to Shaneel Prakash, Clay Energy's Project Manager, "Taveuni is employing two 350-watt hydro turbines, and the addition of our 1 megawatt of solar energy will allow the expansion of the grid into areas that are currently without electricity access".

The battery storage system augments grid stability and reliability by storing surplus solar energy for use during periods of low generation or high demand while also providing backup power during outages. "The current system powers the main population centres, and considering how the communities are spread out across Taveuni, it will allow for most, if not all, of the people of Taveuni to be connected to the grid. This will enable Taveuni to run entirely on renewable energy", added Shaneel.

The nature of grid connectivity on the small island states of the South Pacific differs significantly from larger countries with expansive national grids – this project benefits a highly rural, off-grid setting. "Because it's in an off-grid space within an off-grid scenario, it will be a project that everybody will be looking towards. The opportunity lies in its potential for easy replication if it proves successful – entities involved will likely seek to replicate it elsewhere", explains David.

Another crucial factor in the economy is that sugar cane production counts for upwards of 87% of Fiji's agricultural output. [1] The pilot project ''Rejuvenating Fiji's cane farming industry'' received PFAN support in the initial action plan/due diligence coaching stage. It aims to encourage Fiji to actively reduce farm carbon emissions and offset carbon into soil as part of Fiji's climate change initiatives. Moreover, the project improves Fijian farming conditions, helps farmers earn additional streams of income through crop diversity and creates high-integrity carbon credits, and strengthens the community by building regional capabilities.

Since the start of PFAN Pacific, the regional network has grown to 15 highly skilled advisors located in Vanuatu, Solomon Islands, Fiji and Papua New Guinea. In 2022, PFAN welcomed a new Country Coordinator for Papua New Guinea. As a result of his outreach efforts, Village Women's Financial Services Ltd became the first organisation to receive PFAN support in the country. The key role of this climate adaptation project is the provision of savings and credit facilities for women-owned and led micro and small businesses, as well as offering financial and business planning and management advisory services to individuals and businesses that are transitioning from the informal economic sector to the formal sector.

PFAN has several key partnerships in the region, among them the FREF (Fiji Rural Electrification Fund) Support Programme. This is a joint initiative with UNDP and the Fijian Government, as well as other stakeholders, to help FREF fulfil its mandate of electrifying the last 6% of the Fijian population which don't currently have access to electricity, consisting of some 26.000 households across 399 communities on remote maritime islands. PFAN's role is to develop a partly subsidised results-based private sector financing model/fund (RBF) for establishing and operating solar-powered mini-grids, which will be owned/operated by private sector energy service providers under concessions from FREF.

PFAN is also working with the private sector service providers to help prepare them for this opportunity. Design and implementation of the fund also entails working closely with other government ministries like the Climate Change Division, the Department of Energy and the Fiji Commerce and Competition Commission (the energy regulator in Fiji) as well as GGGI, USTDA, DFAT, MFAT and other development partners in the region.

David Eyre

Regional Coordinator, Pacific Islands

David has accumulated over 25 years of experience in the business sector, with a consistent focus on utilising technology for commercial growth within the Pacific region. His background encompasses various industries, including telecommunications (e-payment, isp, and online web services), broadcast tv, and more recently, energy access, rural electrification, and green finance sectors.

Throughout his career, David has held roles in leadership, business development, technology operations management and project coordination. He believes his diverse experience equips him to support Pacific businesses in adopting green technologies and sustainable practices to address climate change challenges effectively.

David shares insights into PFAN's impact in the Pacific

02

PFAN IN THE PACIFIC ISLANDS 2023

Regional developments

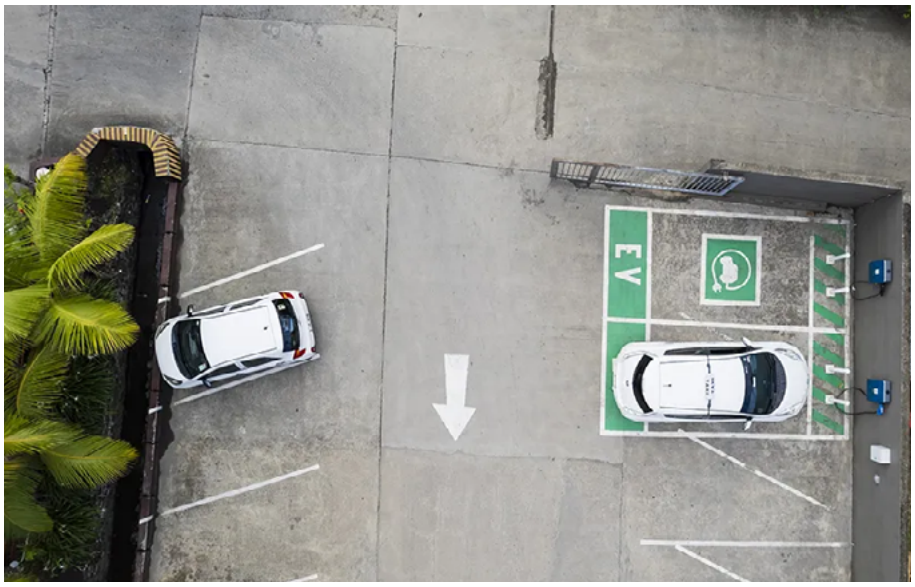
In addition to directly supporting projects and businesses, the main focus of PFAN's work in 2023 was the continuation of the development work on the FREF Support Programme, which is funded by a Design Funding Grant from Convergence, funded by the Australian Department of Foreign Affairs and Trade (DFAT). In 2023, the PFAN Pacific team made good progress on this project, including the negotiation and signature of the Project Document with UNDP, FREF and the Fijian Government and the geospatial analysis of the requirements and technical parameters of the island communities.

Work will continue into 2024 with the development of the financial model for the fund and the detailed design of the funding mechanism, subsidy scheme and the procurement itself. It is also important to note that – partly as a result of teaming up with UNDP – the technical focus is not solely on rural electrification but also on auxiliary services such as desalination plants, solar fridges, mobile networks, digital payment solutions, telehealth services and parametric disaster risk insurance.

PFAN's achievements

Despite the budgetary constraints that led to a decline in new projects and businesses receiving PFAN support, the PFAN Pacific network remained active, especially in Fiji. Focus was allocated towards supporting six projects and businesses to attract investment – five based in Fiji and one of the most recent additions in Papua New Guinea.

Accelerating the adoption of e-mobility in the region, PFAN has supported several projects and businesses including Leaf Capital, trading as Charge Pacific, and the first financial closure in the region. This clean transport company is installing electric vehicle charging services, paired with solar energy generation, to connect the four principal cities of Fiji's main island. The target customers are the two largest segments in the Pacific – the taxi industry and intercity minibuses. PFAN supported Leaf Capital in due diligence and preparing the financial model, the business plan and the identification of land and land acquisition negotiation, which helped them to attract USD 200,000 in seed financing. They were among the first in Fiji to deploy smart direct current charging and have already set up several electric vehicle charging stations.



Read Leaf Capital's success story in our 2022 Annual Report or watch it on YouTube.

The PFAN Pacific network continued to engage with regional partners, including the Fiji Development Bank, Fiji Rural Electrification Fund, Fiji Commerce and Employers Federation, Development Bank of Solomon Islands and the Secretariat of the Pacific Regional Environmental Programme (SPREP).

For the Fiji Development Bank, PFAN Pacific attended a few workshops organised by them and provided an overview of the PFAN service as well as contributing to workshop discussions on increasing private sector engagement in energy service delivery and building private sector capacity for the energy transition, especially related to understanding and dealing with the financial implications around the introduction of solar as a primary source of electricity in operations.

[1] https://www.undp.org/pacific/news/launch-solarization-head-state-residences-pacific-islands-development-forum-member-countries#:~:text=Nearly%20all%20households%20in%20Niue,percent%20of%20households%20or%20less.pdf

[2] https://www.researchgate.net/publication/227581274_Economic_importance_of_the_sugar_industry_for_Fiji#:~:text=socially%20detrimental%20implications.-,...,%3B%20Trend%20Economy%2C%202022

Eastern Europe & Central Asia

01

PFAN IN EASTERN EUROPE & CENTRAL ASIA 2016-2023

280
Total investment leveraged **(USD million)**

39
Total projects which mobilised finance

260.9
Clear energy capacity added **(MW)**

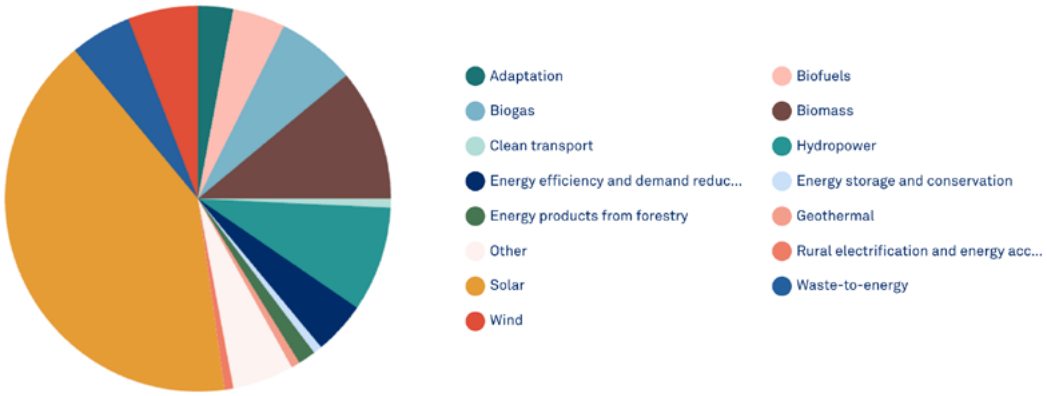
136
Projects provided PFAN support

340 000
Protential CO2eq reduced per annum **(tonnes)**

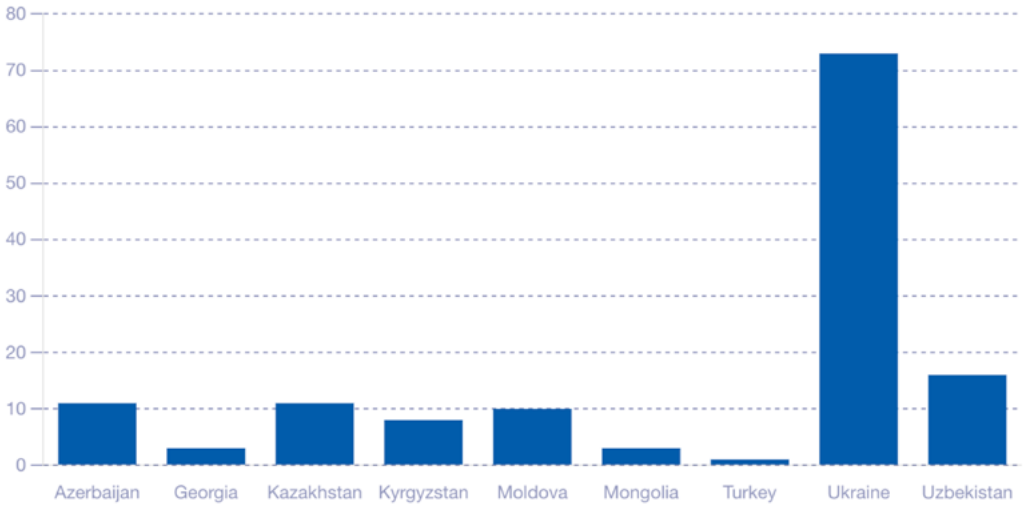
← To Content

To Regional Results →

Total projects supported by technology 2016-2023



Total number of projects supported by country 2016-2023



Market developments 2016-2023

Between 2016 and 2023, countries in the Eastern Europe and Central Asia (EECA) region have been steadily creating policy, market and regulatory environments to accelerate investment and innovation in energy independence through reliable and environmentally friendly technologies and projects. [1]

Since 2020, the region has experienced changing political and market trends, including the rising price of energy resources and the altered behaviour of investors as a result of the climate agenda among the world's central banks[2]. Russia's ongoing invasion of Ukraine, with attacks on Ukraine's fuel and energy infrastructure, has added another layer of complexity to the energy transition in the region. This instability has intensified the focus on energy security and the urgency to reduce dependency on traditional energy sources, particularly fossil fuels, underscoring the need for a swift and comprehensive shift to renewable energy sources and more sustainable, resilient energy systems.

← To Content To Regional Results →

In response to the emerging climate agenda of the regions' governments and central banks, investors are increasingly focussing on sustainable and environmentally friendly projects and more actively looking for projects with measurable environmental impact, which contribute to the climate and SDG agendas. This shift is reflected in the growing number of green bonds and sustainable investment funds and increasing emphasis on ESG criteria.[3][4][5]

Projects addressing climate adaptation, circular economy, green hydrogen and energy storage have increasingly begun to displace traditional renewable energy projects. Global companies operating in the region have made their own commitments to reduce CO2 emissions and reduce their impact on the climate.[6][7][8][9] They have initiated investments in environmental projects and technologies and become off-takers of climate services and green/clean products, stimulating and accelerating political and market transformation.

In the EECA region, small and medium-sized enterprises often lack the knowledge and resources to develop environmental projects independently and attract the necessary investment. One of the main challenges is finding the right balance between the financial viability and environmental impacts of projects. In addition, navigating the regulatory environment and achieving gender balance remain challenges in all countries in the region.

PFAN's activities and highlights

The growing demand for the provision of project development and investment facilitation services has led to an increased footprint of PFAN in the region, expanding its network to 9 countries. PFAN EECA has made significant progress in the markets in the region, facilitating 23 projects to mobilise investment in 2022 and 2023 and diversifying its activities throughout the region. The demand for PFAN's services is especially prevalent in the areas of clean innovative technologies, clean transport, sustainable agriculture and energy efficiency, which align with the needs of small and medium-sized enterprises. In addition, over the UNIDO / REEEP hosting period, PFAN EECA regularly carried out promotional and investment activities at the regional and country levels, resulting in increased cooperation and partnerships. For example, over the years, a close partnership with the State Agency for Energy Efficiency in Ukraine (SAEE) has

been built, which has produced a rich vein of project referrals and financial closures through close cooperation in the implementation of the country's renewable energy and energy efficiency strategy and policies. Regular investment forums have served to connect high-potential PFAN projects with investors and other key stakeholders.

A notable example of PFAN's impact in the region is the Garadagh 37.8 MW wind power project in Azerbaijan, implemented by the Caspian Hydrogen Development Group. The project is situated in the Garadagh district, an industrial zone of the capital, Baku, with approximately 100,000 MWh generated annually, which will be sold to industrial customers and nearby residents. The project was started in 2019, however, the business model was not economically feasible due to low electricity tariffs in Azerbaijan so the developers turned to PFAN for support. Advisor Nikolay Ilyin assisted them with restructuring the investment and preparing project documentation and ensuring their investment readiness, which led to the project successfully raising USD 7 million of equity from a private investor and going on to reach a financial close in July 2022.

Between 2016-2023 the EECA network has grown to 33 PFAN Advisors and Country Coordinators who have supported more than 130 climate and clean energy projects and businesses in the region, of which 34 projects have successfully mobilised a total investment of USD 266 million. Our Advisors have proven to be highly resilient and demonstrated versatility in adapting their services to the changing needs of the market and the political situation.

For example, since the start of the Russia-Ukraine conflict in February 2022, Ukrainian advisors have redirected their resources and experience to support the establishment and growth of the network in other countries of the region, working in tandem with and building the capacity of the advisors in the new network countries (Kyrgyzstan, Turkmenistan, Uzbekistan). This approach has helped increase project capacity, transfer valuable knowledge and expertise and directly led to successful financial closures in 2023 (see below).

[1] https://unece.org/sites/default/files/2022-09/ece.nicosia.conf_.2022.inf_.8.pdf
[2] https://www.adb.org/sites/default/files/publication/894961/global-climate-challenges-innovative-finance-and-green-central-banking.pdf
[3] https://www.cdif.kz/en/direct-investment-fund
[4] https://www.oecd-ilibrary.org/sites/7259dde4-en/index.html?itemId=/content/component/7259dde4-en
[5] https://www.eu4environment.org/ru/areas-of-work/green-investment-and-finance/
[6] https://www.chevron.com/sustainability/environment/lowering-carbon-intensity
[7] https://www.cdif.kz/en/direct-investment-fund
[8] https://www.bp.com/en/global/corporate/sustainability/getting-to-net-zero.html
[9] https://www.shell.com/energy-and-innovation/the-energy-future/our-climate-target.html#:~:text=By%202025%2C%20eliminate%20routine%20flaring,zero%20methane%20emissions%20by%202030.

R.COM

SUCCESS STORY – 2022 FINANCIAL CLOSURE

Location
Moldova

Technology
Waste Utilisation

"We don't see any limitations for this business. We can generate the demand we need, and reach any production level for packaging each year because we're making a product that is highly needed".

Dmitry Rovner, CEO, R.com

R.COM

Key Highlights

Technology **Waste Utilisation**

Technology **Solar**

Country **Moldova**

Business type **Greenfield**

867
Investment amount (grant) **(USD millions)**

0.47
Installed capacity **(MW)**

21
Project IRR **(%)**

Regional Coordinator

Rostyslav Maraikin
Regional Coordinator, Eastern Europe & Central Asia

Learn More →

In the small Eastern European country of Moldova, a double waste mountain has been piling up. Clothing represents 12% of Moldovan exports [1] but cotton waste from textile factories is not recycled. Meanwhile, the use of plastic is rising by 4% a year and just 7% is recycled, according to a report [2] for the United Nations Development Programme (UNDP).

But entrepreneur Dmitry Rovner has an idea that can solve both these problems and lower costs for retails, while making 20% return on investment. His factory will transform the waste from cotton production into packaging for fruit and vegetables, it can be moulded into any shape, and degrades naturally.

"Usually we import plastic for packaging from Romania and the Ukraine. But this will be made in Moldova, and will eliminate clothing waste and at the same time decrease the amount of plastic used for product packaging," says Piotr Comarov, PFAN advisor.

"Usually we import plastic for packaging from Romania and the Ukraine. But this will be made in Moldova, and will eliminate clothing waste and at the same time decrease the amount of plastic used for product packaging".

Piotr Comarov, PFAN Advisor

PFAN was attracted to the project due to its multi-faceted benefits for the environment, and the local economy, Comarov says. In addition to its potential to reduce plastic and cotton waste, the packaging – known as Co-Pack – will be manufactured in a factory powered by solar energy, and the jobs will support 30 families in the local town.

In addition, production of the packaging will save up to 70% of electricity, up to 90% of water and up to 75% of CO2 emissions, compared with the production and disposal of plastic packaging.

"It is a very interesting project covering a lot of fields – we have renewable energy, and use of waste, and very good gender and social situation," he says.

Around 20% of the packaging will be bought by the domestic market, and R.Com already has agreements in place with several customers. As well as having environmental benefits over plastic, R.Com's packaging is also cheaper for retailers, at USD 50 per 1,000 units compared with USD 52 for the same amount of polystyrene packaging.

Savings come from the cost of the cotton waste used to make it being 50% cheaper than plastic, and the efficient production method, which uses less water and energy. "We have talked with managers from food market chains, and producers of fruit and vegetables and they are interested in our packaging because our price is better," says Rovner.

"We don't see any limitations for this business. We can generate the demand we need, and reach any production level for packaging each year because we're making a product that is highly needed".

Dmitry Rovner, PFAN CEO, R.com

The other 80% of R.Com's output will be sold to German retailer Aspro Group, with whom it has a deal to supply 30 million units of Co-Pack packaging a year. R.Com has also reached a preliminary agreement with a cotton waste supplier, who will provide 470 tonnes a year. The waste cotton is substantially cheaper than waste paper that can also be used to make packaging, at USD 100/tonne compared with USD 182/tonne respectively.

R.Com has a strong gender focus, with more than 75% of its employees being female, both in production roles and also three out of four of the management team. This is a strong achievement in Moldova, where only 35% of women are employed, compared with 46% for men, and where women are disproportionately employed in rural and informal economies, according to the UN Development Programme [3].

In its business plan, R.Com will provide 30% of the USD 1,652,489 project cost itself. It is looking for an investor for the remainder. PFAN has supported R.Com in developing a strong business plan and making it understandable for international investors.

It then helped it to pitch the idea to an investors' platform, after which the company signed an agreement with an investor from the US. However, the investment climate in Eastern Europe has recently become challenging, and R.Com is waiting for clarification as to whether the loan it provisionally agreed last year will go ahead.

Nevertheless, it is pushing ahead with construction of the factory, which is expected to begin operations in 2024, with packaging ready for sale in 2026. By 2026, Rovner is anticipating revenue from sales of USD 1,261,485 and EBITDA USD 463,111.

"We don't see any limitations for this business. We can generate the demand we need, and reach any production level for packaging each year because we're making a product that is highly needed," says Rovner.

"The PFAN project has helped me formulate and systematise my commercial idea. With the assistance of PFAN Advisor, Vasily Vovchak, the project documents were professionally prepared. Vasily helped me correctly emphasize the aspects that investment funds evaluate. I am very grateful to PFAN, especially to Vasily Vovchak, for their support in my project activities. I would also like to express my gratitude to PFAN, specifically to Petro Komarov [PFAN Regional Coordinator], for supporting my project by providing opportunities to present it at various venues in Moldova, such as exhibitions, conferences and other events", Rovner expressed.

[1] https://globaljournals.org/GJRE_Volume21/1-Environmental-and-Waste-Management.pdf
[2] https://www.undp.org/moldova/publications/study-plastic-waste-republic-moldova
[3] the UN Development Programme

Rostyslav Maraikin

Regional Coordinator, Eastern Europe & Central Asia

Rostyslav Maraikin holds a university education in technical engineering, finance, and economics. With over 25 years of experience in project management, Rostyslav has primarily focused on industrial construction and the energy sector, with a special emphasis on green energy and climate projects for the past 12 years. His career highlights include roles as CEO of EPC(M) and holding and leadership positions in notable projects such as the national government's "Biomass of Energy" in Ukraine, along with projects initiated by NATO and the European Commission.

Since joining PFAN in 2013, Rostyslav has been instrumental in advising project developers on preparing investment-ready clean projects. He facilitates negotiations for securing investments and credit finance, manages regional project portfolios, oversees country coordinators, and plays an active role in attracting and supporting consultants, network members, and investment partners.

Rostyslav Maraikin shares insights into PFAN's impact in Eastern Europe & Central Asia

02

PFAN IN EASTERN EUROPE & CENTRAL ASIA IN 2023

Regional developments

In line with the introduction of the new PFAN transaction advisory services package in 2023, we focused our efforts on supporting high-potential projects and businesses with investment facilitation services. Through the strategic allocation of advisors to project requirements and matching Transaction Advisors with Project Advisors to optimise skillsets, we were able to considerably shorten execution and delivery timelines, often working on development stages in parallel (rather than in sequence), thereby accelerating the time to investment maturity.

PFAN's achievements

In a first for any PFAN region, all selected projects inducted into the pipeline during 2023, successfully completed their envisaged PFAN support within the year, again testament to the new working methodologies and the flexibility/responsiveness of the network. With our support, 15 projects mobilised a total investment of USD 105.2 million, and a further seven projects are lined up to raise USD 64 million in 2024.

With project origination in Ukraine on hold due to the ongoing conflict, the local network pivoted to supporting projects in other Eastern European and Central Asian countries, thereby also expanding the network footprint and reinforcing advisor capacity. For example, in Kyrgyzstan, Advisor Volodymyr Petrenko, advised eight hydro projects, seven of which successfully raised finance in 2023. By forging relationships with potential partners, investors and project developers in Kyrgyzstan, Volodymyr not only helped establish PFAN's presence in the country, but also positioned PFAN as a valuable service for entrepreneurs, investors and other stakeholders in the climate and clean energy sphere.

At the international level, Perfect Pak, a PFAN-supported biofuels business from Ukraine, participated in the Cleantech Days, held in the context of the International Vienna Energy and Climate Forum (IVECF) Solutions Week from 30 October to 3 November 2023. Jointly organised by PFAN and the Global Cleantech Innovation Programme (GCIP), the event brought together cleantech start-ups and SMEs to share their experiences and connect with potential investors and partners from the cleantech innovation and entrepreneurship ecosystem. On the concluding day, Perfekt Pak was awarded the PFAN Inspiring Climate Solution Award for Eastern Europe and Central Asia at the UNIDO Climate Awards Ceremony.

The EECA network made significant inroads in implementing PFAN's gender lens investment strategy in the region through identifying the challenges and opportunities rooted in cultural diversity and the varying understanding of gender roles in the EECA countries. Efforts to map gender lens activities included reviewing institutions, conducting surveys among advisors and organising discussions to better understand and mainstream gender perspectives.

In line with global trends, PFAN's support in critical sectors and technologies has helped position SMEs in the region to play key roles in their respective countries' transition to green economies.

04

THE PFAN JOURNEY

The PFAN Journey is a three-stage process which makes business development more navigable for advisors and entrepreneurs. By responding to individual business needs, the process not only provides PFAN with the flexibility to fast-track projects dependent on their maturity but also enables entrepreneurs to develop their companies based on their specific requirements. Through this process, PFAN has helped over 80 companies (and still counting) successfully attract finance. As an example, we've highlighted the Journey of Sun Culture – PFAN's first company in Sri Lanka to raise finance.

← To Content

STAGE 1

Action plan

Through one-to-one discussions with a locally based PFAN Advisor, opportunities and gaps are identified and entrepreneurs are guided on the necessary steps to success. Together, an Action Plan will be established to make the project or company ready for investor introductions.

Sun Culture's experience

In the summer of 2022, the entrepreneur Damian Fernando of Sun Culture, a company with four solar PV projects aiming to install PV panels on factory rooftops of apparel companies based in rural areas in Sri Lanka, was introduced to one of PFAN's Advisors –Piyal Hennayake.

After due diligence on the company, business idea and documents, Piyal helped Damian develop an action plan to improve to sets out the work required under over the following months to ensure the project is ready to meet investors.

STAGE 2

Project development

During the second stage of the PFAN Journey, our Advisors take a hands-on approach to provide support in different areas explicitly tailored for the entrepreneur and their project. The services range from assistance in securing licenses/permits, developing financial models and refining business plans, creating gender action plans, guidance, and coordination of feasibility studies, among others.

Sun Culture's experience

Sun Culture for instance had a rather technical business plan, so Piyal helped Damian and his team refine it to attract investors better and draft a pitch deck. Their financial model was also re-assessed, with multiple rounds of iteration, Piyal was able to help Damian finalise the model, giving Sun Culture the confidence to start their first project with their own funds and approach investor for their second project.After due diligence on the company, business idea and documents, Piyal helped Damian develop an action plan to improve to sets out the work required under over the following months to ensure the project is ready to meet investors.

← To Content

STAGE 3

Investment facilitation

Once the business documents are finalised, PFAN Advisors help entrepreneurs tailor their pitch presentations and teasers, ensuring they are ready for investor introductions. A data room – an online platform with detailed project documents for investors is generated for projects ready for investor introductions. In this final part of the PFAN Journey, our advisors help identify investors, provide introductions and support in negotiations.

Sun Culture's experience

By the summer of 2023, Sun Culture decided they were ready to start meeting domestic investors. After finalising all the necessary documents, including an investor teaser and the pitch deck, Piyal and Damian set out to meet several private banks to negotiate funding to acquire PV panels, inverters and other necessary equipment, which would enable the generation of 600,000 KWh annually. One domestic bank was particularly interested in what Damien and his team had to offer.

Despite the odds, with Sri Lanka proving to be a challenging economy, having suffered an economic, political and foreign exchange crisis in which gaining funding for renewable energy projects is difficult, this year, Sun Culture raised the funds necessary to kick-start and complete their second project with the help of Piyal and the PFAN team. Having developed a strong relationship with Damian, Piyal aims to continue supporting Sun Culture to ensure they can get their other two projects up and running within the upcoming year.

"Despite the significant advantages of micro-renewable systems for the Sri Lankan environment and economy and their potential for steady income generation, the banks seemed either unaware or hesitant to acknowledge these benefits positively. Our PFAN Advisor's efforts were instrumental in addressing these concerns, convincing the bank of Sun Culture's benefits, and helping expedite and secure the loan. He played an active role in the documentation, calculations and reports related to the project, further demonstrating his dedication to its success".

Damian Fernando, Director, Sun Culture Private Limited

← To Content

05

GENDER MAINSTREAMING

PFAN's focus in 2023 was to develop practical action points and tools to apply a gender lens to PFAN's advisory services. For this purpose, PFAN, in collaboration with Value for Women, has developed a Gender Action Plan toolkit accompanied by self-paced training modules. The main objectives of the tool kit are:

- to equip the PFAN network with practical tools to guide entrepreneurs on embedding gender intentionality in their business through the development of a Gender Action Plan and help them to increase the investment readiness of projects.
- to support entrepreneurs to establish their baseline gender-responsiveness status and create a roadmap of their intended gender journey. Additional videos that support this process have been developed to support this process.
- to guide the Regional Coordinators in the assessment of the Gender Action Plans in alignment with PFAN requirements and the PFAN Gender Marker, a gender self-assessment for the businesses and advisors.

The development of the toolkit is based on capacity building for the network throughout the years, in which PFAN has provided gender awareness trainings as well as Masterclasses on Gender Lens Investing to our network of advisors – ensuring that gender is integrated throughout the coaching process. This has also been reflected in PFAN's evaluation tools, application and reporting forms.

← To Content

Gender Action Plans

As Gender Lens Investing is increasingly important, our initiatives on gender mainstreaming should not only contribute to making more businesses gender-responsive but also to help more of them reach financial closure. The development and implementation of Gender Action Plans is increasingly a requirement of investors, as illustrated by an example from sub-Saharan Africa:

Bio-Innovations, a biomass waste-to-energy company in Uganda, which raised debt of USD 40,000 was requested by their investor to develop a gender action plan as a condition precedent to receive the requested financing. The PFAN Advisor not only helped the entrepreneur and his company to understand which steps he'd already taken towards a gender inclusive business, but also helped him to set new goals and actions for implementation. They developed steps to increase diversity in the workforce, raise awareness of gender equality within the company, design marketing and sales strategies to appeal to and increase female customers and a method to collect and analyse sex-disaggregated data.

Watch how Bio-Innovations is working to turn agricultural and forestry waste into clean burning briquettes.

In 2024, there will be an increasing focus on developing Gender Action Plans for the projects PFAN is supporting in the regions where we remain active. In Southeast Asia it is envisaged that five projects will be supported to develop their plans. In Pakistan, PFAN Advisors have received additional trainings on how to develop a Gender Action Plan, and four businesses will receive support in setting up a concrete plan to improve gender responsiveness in the coming year.

← To Content

Highlights in 2023

The Pakistan Private Sector Energy (PPSE) project has been particularly active, with two events focusing on gender mainstreaming in 2023:

- a 1-day intensive training covering the gender lens within banking products that facilitate more equitable investment, particularly in clean energy. PPSE partnered with the National Institute of Banking and Finance (NIBAF) for this capacity-building initiative, which resulted in 59 finance professionals from 44 institutions trained in Gender Lens Investing.

- an online demo session on "Developing the Business Case for Gender Lens Investment in Banking Product Design". The session was led by Fauziah Ali Banuri, Divisional Head of Marketing at Bank of Khyber who took 28 participants from financial institutions and investment hubs through a gender assessment toolkit formulated by the Financial Alliance for Women.

While we have made significant advances and we can see investors increasingly emphasising the importance of gender impact in the projects they finance, PFAN's continued work on gender mainstreaming is crucial. As the chart below shows, there have been improvements over the years, particularly in the numbers of women-led projects that have raised finance, but there is still much work to be done:

Indicator	2021	2022	2023
Women-led projects supported	24,5%	24,9%	16,1%
Women-led projects which raised finance	4,9%	19,2%	18,4%

We would like to highlight the following seven women-led businesses which have raised finance in 2023 (under the PFAN definition, a business is considered women-led if 50% shares, or more, are held by women or at least 50% of the management team are women):

Company	Country	Sector	Description
Simusolar	Tanzania	Solar	Simusolar is a provider of solar productive use solutions, including solar water pumps, solar fishing lights, solar security lights and solar refrigerators. Solar irrigation will ease women's work in the agriculture sector and limit the need to carry heavy water at long distances to irrigate the land. Aware of the need for gender equality, the business has achieved a respectable representation of women in the management team and in the overall workforce.

← To Content

Company	Country	Sector	Description
Solar Nation SMC LTD	Uganda	Solar	Solar Nation delivers its clients a fully installed PV system with items that include a charge controller, power inverters and storage batteries supporting energy generation, storage and dispensing to the selected loads. In order to increase their gender responsiveness, the company aims to increase its number of women to at least 50% of the workforce. They have worked with training associations such as SENDEA Uganda to help achieve this goal.
Little Sun Zambia Limited	Zambia	Rural electrification and energy access	Little Sun is a social business providing solar energy and technology services to households, small businesses and small holder farmers. The project benefits women by aiming to have a workforce of 50% women and decreasing their daily risks through the use of solar equipment instead of firewood collection. Furthermore, by acquiring Little Sun's affordable equipment, women-led businesses have seen a boost with easier access to energy.
Wiibike Vietnam Technology Joint Stock Company	Vietnam	Clean transport	Wiibike develop sand distributes electric bicycles. With gender ownership and executive management of women at 60%, the company aims to help those with busy schedules get around quicker, faster and cleaner with their e-bikes, which are increasingly promoted to women in urban areas.
SRL "SunGa"	Moldova	Solar	SunGa is building a photovoltaic power plant to generate electricity. With the company's owner being a woman, she aims to provide equal opportunities to women in the workforce, aiming for at least 50% of the jobs created for women.
Vanrik Agro Group	Kazakhstan	Agriculture	Vanrik Agro is involved in the industrial cultivation of blueberries and the creation of a plant cloning centre. The company sees gender equality as one of its key daily activities. It consists of a team that sees no gender differences, which they have reflected upon through training to increase awareness of gender mainstreaming and develop a Gender Impact Assessment.

← To Content

Company	Country	Sector	Description
Husk Power Nepal Pvt. Ltd	Nepal	Biomass	Husk Power makes energy efficient clean cook stoves, particularly for farmers and rural populations. The company has included women at multiple levels of the value chain and sees them to be a critical part of the project. Women are the primary direct beneficiaries of the improved cookstoves, which has led to reduced time spent on collecting firewood, cleaner cooking environments and less exposure to indoor air pollution, irritable eyes and respiratory diseases from burning firewood.

← To Content

PFAN's gender activities since 2016

2016
Adoption of PFAN Gender Resolution
Establishment of the PFAN Gender Ambassador

2017
Collaboration and knowledge exchange with local partners
Targeted calls for proposal in West Africa and Asia

2018
Development of a Women-led Clean Energy Business Toolkit
Deep dive workshops in Asia
Global Forum in Vienna

2019
Development of a Gender Strategy and action plan
Gender disaggregation of data in application form

2020
Gender disaggregation of the log frame
Gender awareness webinars to the network

2021
Work with VfW on Masterclasses
Gender-targeted campaigns on social media
Participation in events and panel discussions
Data analysis of the PFAN pipeline

2022
Refinements with regards to gender in application form, reporting and evaluation
Established Gender Focal Points
Continued work with VfW

2023
Launch of Gender Action Plan Toolkit
Self-paced training modules
New PFAN Gender Strategy
Gender Strategy 2023-2027 →

06

ADEME COOPERATION

Over the last two years, PFAN partnered with ADEME (the French Agency for Ecological Transition) on a special collaboration to support entrepreneurs who are developing and implementing innovative solutions to improve off-grid energy access in sub-Saharan Africa. The main priorities were to build the capacity of local players to ensure sustainable benefits for local populations and to enable the creation of income-generating activities for agricultural producers and micro-entrepreneurs.

ADEME launched the call for projects inthe region's French-speaking countries, and PFAN provided technical assistance and an impact evaluation to 9 selected companies in Benin, Burkina Faso, Cote d'Ivoire, Madagascar, Senegal and Togo. These companies were working with a variety of technological solutions to deliver reliable off-grid energy to their customers – powered by solar or the processing of agricultural waste – as well as experimenting with new payment and governance systems adapted to local needs and providing training activities for their agents.

While ADEME supported the companies initially through grants, PFAN provided business advice and helped them in the evaluation of their impacts. PFAN gave guidance on economic feasibility, project structure and business plan preparation as well as facilitated introductions to investors. We selected Impact Amplifier, a specialised advisory firm from South Africa, to conduct the impact assessment in parallel to the financial advisory services provided by PFAN. They supplied a detailed assessment of the companies' specific needs as well as capacity building on the use of methodologies for identifying, monitoring and evaluating those impacts.

← To Content

The selected companies were further supported with professional videos for use in their fundraising efforts. PFAN worked with the local project teams and videographers in the respective countries to create inspiring stories that illustrate the direct impact these businesses have on the local population. We are particularly proud that MOON, a solar company based and operating in Senegal and Togo won the “Solar Video of the Year” at the AFSIA Awards 2023 for the video we produced. The video, which is also available in French, illustrates how MOON’s energy access solutions are providing everything from increased learning opportunities to productive use of energy for agriculture to improved night time security in off-grid communities in Senegal.

Watch the AFSIA winner for ”Solar Video of the Year” on MOON, an energy access company in Senegal and Togo. Credit: Audy Valera.

One of the main learnings during the collaboration was that, with increasing expectations from financiers – such as impact investors – to deliver on impact data as well as having a business plan and financial details ready, PFAN type of support is needed in the market. At the same time, it has become increasingly challenging for small enterprises to raise funds, which is why public contributions and grants to help the projects get off the ground and keep their operations going are ever more relevant. The combination of PFAN’s technical assistance and early-stage grant support, as provided by ADEME, can therefore be seen as a potent instrument for project preparation and pipeline development. PFAN would like to extend its thanks to ADEME for the opportunity to cooperate on this initiative.

← To Content

07

PAKISTAN PRIVATE SECTOR ENERGY PROJECT

PFAN launched the Pakistan Private Sector Energy Project (PPSE) in 2021 with the goal of expanding the portfolio of commercially-viable clean energy projects in Pakistan and providing support to enable them to build their capacity and access financing.

Supported by USAID, the project targets small and medium-sized enterprises (SMEs) in Pakistan, including those located in industrial zones, while also addressing the needs of isolated communities through off-grid solutions.

Pakistan Private Sector Energy Project Annual Report 2023

Visit the PPSE section of this Annual Report for detailed information on its activities in 2023.

See PPSE Annual Report →

← To Content

08

PFAN GOING FORWARD

As the UNIDO/REEEP hosting structure comes to an end in 2024, PFAN will primarily focus our activities on two programmes funded by the United States Agency for International Development (USAID) – PFAN-LAC in the Caribbean and the Pakistan Private Sector Energy Project (PPSE).

- Starting from February 2024, REEEP and its partner Innovación Social y Ambiental (ISA) will operate PFAN-LAC as the Project Preparation Facility (PPF) for the Caribbean Climate Investment Program (CCIP) under the United States Agency for International Development (USAID)'s Climate Finance for Development Accelerator (CFDA). Under the scope of the PPF, the regional activities will involve developing a pipeline of renewable energy, energy efficiency and climate adaptation projects at different stages of the pre-investment cycle, and to continue to provide advisory and investment facilitation services to the projects in the pipeline through the existing highly skilled network members in the region. Over the coming three years, PFAN-LAC aims to mobilise finance for climate change mitigation and adaptation by providing advisory services to at least 40 promising projects in the region.

- PPSE will focus its activities in the coming year on investment facilitation for high-potential projects as well as setting up a Private Equity Fund. Overall, 20 projects are expected to be supported via transaction advisory services. Moreover, capacity building and market awareness boosting activities will involve 5-8 events organised in collaboration with the National Institute of Banking & Finance (NIBAF) on environmental, social and governance (ESG) issues and Gender Lens Investment trainings for financial institutions. There will also be four investor roadshows (three of which will be organised outside Pakistan) and one advisor meeting event. Finally, research activities will be conducted to investigate Pakistan's current status and future potential in the EV market, as well as capacity building and training events with public sector institutions.

- PFAN's success over the years has been built on the excellence and depth of our global network of advisors, the proximity to markets that this brings, the tried and tested but constantly evolving methodologies and supporting systems, and the strong and diverse project pipeline. These key assets will remain at the core of PFAN as we explore new avenues with new and existing donors and funding partners in the future, particularly focussing on responding to differing market scenarios and requirements, building project portfolios closely attuned to investor appetites and providing value-added analysis and knowledge products in the most challenging markets. Looking ahead, our ability to provide strategic project development and investment support in the face of shifting investment appetites, address financial structuring and risk mitigation challenges and navigate diverse policy landscapes will ensure that PFAN remains a relevant player in project preparation and investment support for climate projects (with an increasing focus on adaptation), helping thereby to increase resilience and sustainability and drive transformational impact.

← To Content

09

MEET THE DONORS

During the 2016-2023 scale-up phase, PFAN has been generously supported by the Norwegian Ministry of Foreign Affairs (NORAD), the Swedish International Development Cooperation Agency (SIDA), the United States Agency for International Development (USAID), the Department of Foreign Affairs and Trade of Australia (DFAT), the Clean Cooling Collaborative (formerly K-CEP), Convergence Finance, the French Agency for Ecological Transition (ADEME) and the Ministry of Economy, Trade and Industry of Japan (METI) and BMDW – Austrian Federal Ministry for Digital and Economic Affairs.

Each of these donors brought unique perspectives, resources, expertise and direction to PFAN, thereby contributing to our success in mobilising private financing for clean energy and climate adaptation projects and creating sustainable impacts in the countries where PFAN operates. PFAN would hereby like to extend its thanks to all the donors for their support and high levels of engagement during the 2016-2023 scale-up phase.

Donors' perspectives on PFAN

As members of the PFAN Steering Committee, our donors offer a distinctive viewpoint on the programme's impact and effectiveness in implementing entrepreneurial support and accelerating innovative climate solutions towards financial closure. Their perspectives encompass an understanding of the challenges encountered and the lessons learnt throughout the implementation phase. We invited several of our main donors to provide reflections and insights into their experience with PFAN.

Interview

1. **What has been your experience during the years you have been involved in PFAN's implementation? Is there anything specific that stood out for you?**

NORAD: Norway has provided financial support to PFAN since 2016, coinciding with the beginning of UNIDO's hosting period of the programme. My experience with PFAN's implementation over the years has been highly positive. One standout aspect has been the exemplary management of the programme, characterised by efficiency, cost-effectiveness, and the attainment of significant results. What was noteworthy is PFAN's emphasis on working with local advisors and obtaining local funding from local investors and financiers. Moreover, PFAN's robust reporting structure has made it easy to identify changes and monitor progress effectively.

SIDA: SIDA has supported PFAN since 2016, when the Swedish Power Africa team made a pivotal decision to extend support to PFAN, marking the inaugural contribution in what has now become a diverse array of investments. PFAN was a first-of-its-kind initiative in providing business advisory services to SMEs in development and climate-focused sectors. PFAN thereby demonstrated a new model of how this marked need could be addressed and can also be considered to have inspired subsequent initiatives addressing this market gap.

2. What are the main changes and challenges you have observed in the market, and how has PFAN addressed these challenges and opportunities?

NORAD: One prominent change is the diversification of markets, ranging from large-volume, mature markets to still-nascent ones, necessitating tailored business development support aligned with national and regional development contexts. PFAN has adeptly addressed this by relying on a locally based advisory pool with excellent contextual understanding. Additionally, banks and other financial institutions are imposing stricter requirements for considering investments in developing countries. PFAN has responded by collaborating closely with investors to understand their needs and has taken the proactive step to adapt these insights into its project advisory services. This approach ensures that PFAN's services remain aligned with the evolving expectations and criteria set by financial stakeholders, enabling smoother facilitation of investments in developing country markets. Finally, PFAN has enhanced its role in climate adaptation efforts by integrating climate adaptation metrics. In doing so, PFAN ensures its interventions contribute significantly to building resilience in vulnerable communities.

SIDA: The market has undergone significant changes and presented notable challenges, particularly in supporting SMEs, which play a crucial role in development within SIDA's target markets. SMEs encounter obstacles such as insufficient financing, perceived risk, limited access to fundraising platforms, networks, and business development skills, and challenging business climates. The project and business development phases are lengthy, risky, and expensive, exacerbating these challenges. In response, PFAN has adapted by offering a wide range of services tailored to different businesses and growth stages, addressing the complexities and dynamism of the environments in which they operate. PFAN's success in supporting SMEs is attributed to its emphasis on local and contextual relevance, which was achieved through the establishment of local networks and consultants. This approach aligns closely with SIDA's priorities for local integration and ownership, enhancing the effectiveness and impact of PFAN's initiatives in fostering sustainable development.

3. What have been the main learnings/reflections during your involvement with PFAN?

NORAD: Throughout my involvement with PFAN, sitting on its Steering Committee has been great fun and a rewarding experience characterised by interactive and engaging management. The donor group's active engagement in the programme's development has also been noteworthy.

One significant learning has been the importance of implementing a reward system for business advisory services. Such a system is critical for attracting diversified expertise and enhancing the overall effectiveness of the programme. However, there's a need to strike a balance between individually based rewards and incentives for collaborative advisory efforts, particularly when addressing complex business needs.

Another key reflection stems from the realisation that many small businesses face challenges in meeting donors' rigorous accountability criteria. These criteria, which include applying for funds from international financiers and reporting on development impacts over several years, often pose significant transaction costs. Finding ways to streamline these processes is essential to support small businesses effectively.

SIDA: Our partnership with the PFAN team, UNIDO and REEEP has been invaluable to SIDA, fostering long-term commitments and adding significant value to our portfolio companies. The exchange of knowledge has been particularly enriching, benefiting both our companies and SIDA alike. Throughout the development of our portfolio of contributions, the PFAN team has served as a trusted discussion partner, offering insights into the challenges faced by project developers. These dialogues have not only inspired and informed us but have also guided the development and launch of complementary financing instruments, such as challenge funds and procurement approaches utilising results-based financing. Furthermore, they have facilitated our engagement with debt providers, to whom SIDA has extended its guarantee instrument. Being part of PFAN since its inception has been a source of pleasure and pride for SIDA. We have witnessed its growth into a recognised market player in the field, further affirming the significance of our collaboration.

4. How has PFAN contributed to your development agency's overall objectives and priorities? Has PFAN directly or indirectly influenced the development cooperation work of your development agency? If so, how?

NORAD: PFAN's contributions have been instrumental in advancing NORAD's objectives and enhancing its development cooperation efforts in the realm of climate finance and sustainable development. By working closely with small and medium enterprises, PFAN has played a crucial role in mobilising commercial climate finance, filling a vital niche in this area and contributing to achieving NORAD's CO2 emission reduction and climate investment targets. Moreover, PFAN has influenced NORAD's development cooperation work by strengthening the agency's understanding of the importance of project preparation. This has led NORAD to develop its private sector approach, drawing on positive learnings from PFAN's experiences. Initiatives such as supporting incubators for nascent companies and gaining a better understanding of the project development lifecycle have been initiated, informed by discussions with PFAN management and other donors.

SIDA: PFAN has significantly contributed to advancing SIDA's strategic objectives, particularly in increasing production and access to renewable energy, improving conditions for decent and productive jobs, and enhancing resilience to some extent. PFAN's catalytic approach is exemplary in mobilising private sector resources for development in other sectors, serving as a valuable complement to our agency's contributions and instruments. Positioned between challenge funds and guarantees, PFAN effectively bridges the gap, providing essential support to businesses and initiatives that align with our agency's overarching goals. As such, PFAN has both directly and indirectly influenced our development cooperation work by enhancing our understanding of catalytic approaches and demonstrating effective strategies for leveraging private sector resources to drive sustainable deve

5. **How has PFAN contributed to your development agency's overall objectives and priorities? Has PFAN directly or indirectly influenced the development cooperation work of your development agency? If so, how?**

USAID: In my opinion, the PFAN country programme in Pakistan has resulted in notable success. This outcome is largely attributed to the high demand within the Pakistani market for a structured support system tailored to the needs of the cleantech sector, SMEs, and particularly the nascent electric vehicle (EV) and electric mobility sector. The introduction of the PFAN model addressed this demand effectively, providing support and guidance to stakeholders in these emerging sectors. Despite the challenging environment (fluctuation of the national currency, government transition, ongoing development of policy frameworks), we managed to establish an Accelerator for SMEs, which builds the entrepreneurs' capacities and prepares them to engage effectively with investors and a Project Preparation Facility, which provides tailored transaction advisory services. These two activities created traction in the Pakistani market and supported the development of the ecosystem. Additionally, we have gathered numerous insights through the implementation of country-specific capacity building activities, a community of practice and market studies. These insights have not only enriched our understanding but have also been instrumental in informing and enhancing the global program across various levels. One notable instance is the integration of gender action planning and gender considerations into transaction advisory services, a practice that was previously lacking specificity. This strategic shift underscores our commitment to promoting gender equality and women's economic empowerment within our programmes.

The PFAN model's success in Pakistan can be replicated in other countries, provided adaptations are made to suit local market needs. The model's efficacy lies in addressing both upstream and downstream demands in the cleantech and SME sectors, alongside capacity building and collaboration with relevant stakeholders. With dedicated funding, similar programmes can be implemented elsewhere, following thorough market assessments to tailor approaches accordingly. While challenges may vary, the core principles of the PFAN model offer a solid framework for driving sustainable development and investment globally.

From 2016-2023, PFAN has been generously supported by our donors:

USAID FROM THE AMERICAN PEOPLE

Norad

Sida
SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY

Australian Government
Department of Foreign Affairs and Trade

CONVERGENCE
BLENDING GLOBAL FINANCE

Clean Cooling COLLABORATIVE

ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

METI
Ministry of Economy, Trade and Industry