



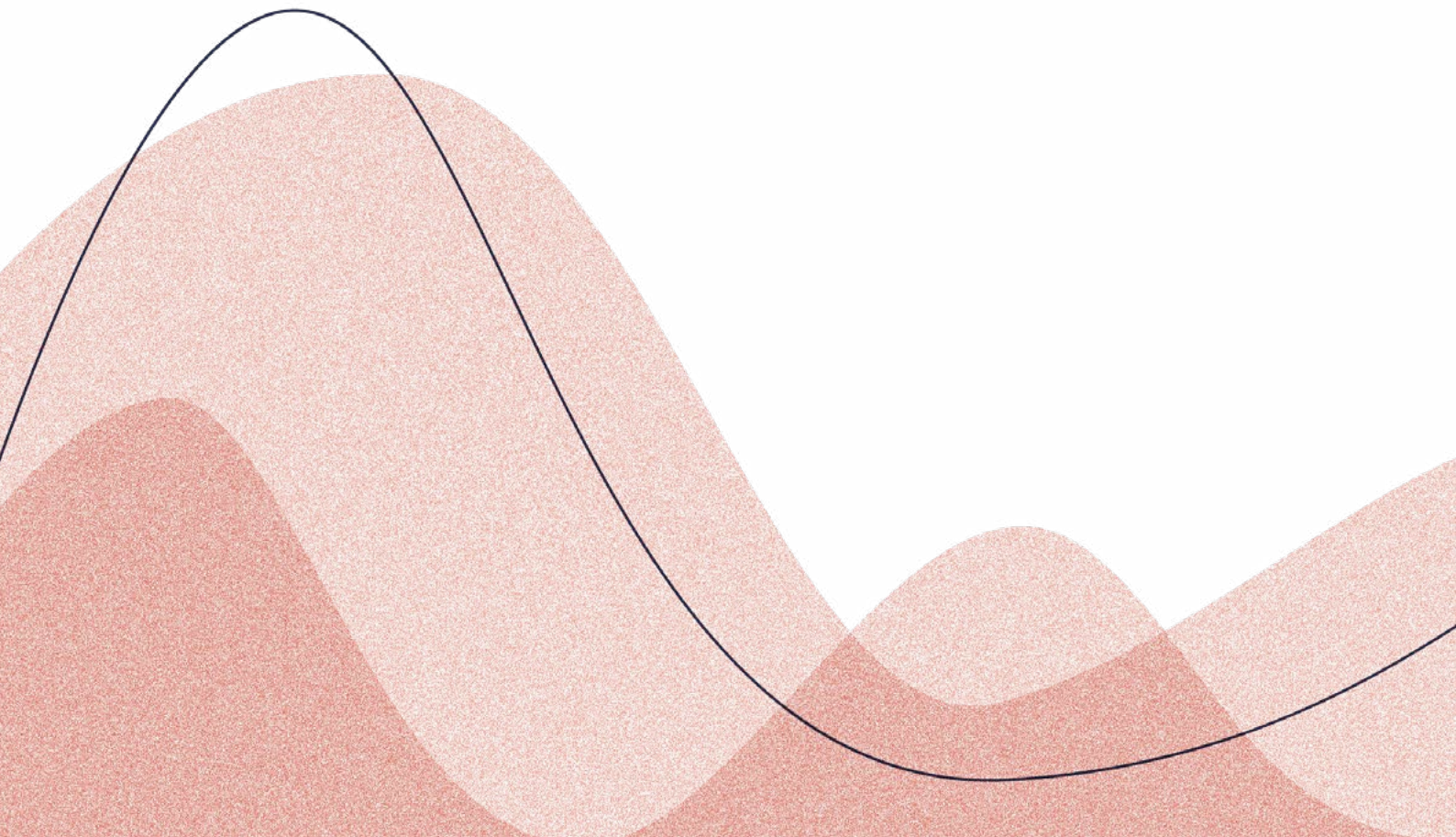
**PFAN**

Accelerating Investment  
for Climate and Clean Energy

# ANNUAL REPORT 2021

# CONTENTS

Statistics from PFAN since inception	3	<b>Success Stories</b>	
PFAN in 2021	4	Erda Illumine	33
<b>Regional Focus</b>		GSR Energy Holdings (GSR)	35
Eastern Africa	5	Impacc Stoves	37
Western Africa	7	Perfekt Pak	38
Southern Africa	9	Selex Motors	39
South Asia	12	SOLShare	41
South East Asia	14	Ubuntu Towers	43
The Pacific Islands	17	<b>Gender Mainstreaming</b>	45
EECA	19	<b>Gender Responsive Case Study:</b>	
Latin America & the Carribean	21	<b>Techno-Hill Engineering, Ltd</b>	47
<b>The PFAN Journey</b>	23	<b>Cooling in Focus</b>	48
<b>Pakistan Private Sector</b>	26	<b>Meet our Donors</b>	49
		<b>Get Involved</b>	50
<b>Spotlight: PPSE Projects in the Pipeline</b>			
Ouroboros	31		
TransAtlantic Energy Private Limited	32		



# PFAN ANNUAL REPORT

## PFAN 2006-2021

Total investment leveraged (USD billions)

**2.14**

Total projects supported by PFAN

**1143**

Total projects that reached financial closure

**196**

Projects that reached financial closure (%)

**17**

Number of countries in which financial closure was reached

**39**

Pipeline Size (Projects)

**504**

Clean energy capacity added (MW)

**1275**

Potential CO2 emission mitigation in megatonnes/year

**4.26**

# PFAN IN 2021

**2021 was a year of significant milestones for PFAN: we celebrated the remarkable achievement of USD 2 billion leveraged by PFAN-supported climate projects and our 15<sup>th</sup> anniversary since our inception. We are proud of the PFAN global network and the climate entrepreneurs it has supported, and are thankful to our donors for making this successful journey possible.**

<p>Clean energy capacity added (MW)</p> <p><b>116</b></p>	<p>Total investment leveraged (USD millions)</p> <p><b>302.5</b></p>	<p>Projects that reached financial closure</p> <p><b>41</b></p>	<p>New PFAN Advisors added</p> <p><b>47</b></p>
<p>Projects provided PFAN support</p> <p><b>216</b></p>	<p>New partnerships established</p> <p><b>29</b></p>	<p>PFAN Advisors around the world</p> <p><b>182</b></p>	<p>CO2eq reduced per annum (tonnes)</p> <p><b>129000</b></p>

Despite being another challenging year with ongoing uncertainties posed by the Covid-19 pandemic, 41 PFAN-supported projects reached financial closure and leveraged over USD 300 million. We are continuously working to improve our support for climate entrepreneurs, including looking at new ways of creating impact and introducing new service modules to get them better equipped to interact with investors. We also intensified our focus on gender, introducing and embedding a gender lens approach to our origination, evaluation, project development and investment facilitation activities. In 2021, we started capacitating PFAN Advisors to transform them into effective agents of gender-equitable change in their support to entrepreneurs.

Besides being our 15<sup>th</sup> anniversary, 2021 also marked PFAN's 5<sup>th</sup> year of hosting by UNIDO and execution in partnership with REEEP. In these five years, we have broadly met our targets and delivered the scale-up strategy we embarked on in 2017, increasing PFAN's capacity by circa 2.5 times and transforming our operating procedures and systems. In moving forward, we are working towards broadening the focus of PFAN to support projects with not only climate mitigation but also adaptation impact and setting ourselves new goals and different ways to measure our impact in new and even more challenging markets. There is still much work to be done.

Our work in the Pacific and in the SIDS (Small Island Development States in the Caribbean and Africa)

bears this out, but we are now seeing traction in these challenging markets and are working on an innovative results-based financing vehicle for island electrification in Fiji together with the Fiji Rural Electrification Fund and using our team in Madagascar as a bridgehead into the African Indian Ocean SIDS.

In 2022, we look forward to continuing our support to impactful SMEs towards mobilizing private investment and building climate markets one business at a time and will continue contributing to the Paris Agreement and the Sustainable Development Goals.



# EASTERN AFRICA

**With more than USD 26.7 M raised by 8 projects in 2021, the Eastern Africa region was the most successful region in sub-Saharan Africa in raising investment.**

Uganda and Kenya were particularly successful, with three financial closures in each country from businesses in the areas of solar, clean transport and waste-to-energy.

The region's Country Coordinators engaged in a number of outreach events and placed a particular focus on clean cooking, resulting in an increase of applications from clean cooking projects. Most of these events, including Financing Clean Cooking Ventures in Africa and Carbon Financing for Clean Cooking Ventures, were organized in collaboration with the Clean Cooking Association for Kenya (CCAK). These events not only attracted entrepreneurs to apply for PFAN support, they resulted in a strengthened partnership with CCAK to jointly build clean cooking markets, promote the adoption of clean cooking technologies and teach entrepreneurs in the sector to overcome barriers.

This focus on bioenergy and clean cooking comes as a result of their critical importance in the energy mix for East African households and the historic difficulty in raising commercial investment for them. Through these regional initiatives, PFAN aims to familiarise investors with new business models and increase the flow of investment into these key sectors. In 2021, projects focusing on biomass, solar, clean transport, cooling and waste-to-energy reached financial closure in Ethiopia, Kenya, Tanzania and Uganda.

The Eastern Africa regional network also held two webinars focusing on climate adaptation, the first organized in collaboration with Kenya Climate Ventures (KCV) and the second with the Tanzania Horticultural Association (TAHA). With a total of 80 attendees, both webinars helped to increase interest in climate adaptation projects originated in the region.

## Eastern Africa in 2021

Clean energy capacity added (MW)

**0.606**

Total Advisors

**31**

New partnerships established

**3**

Projects that reached financial closure

**8**

Female Advisors

**4**

Locally-based Advisos (%)

**97**

Total number of projects supported

**26**

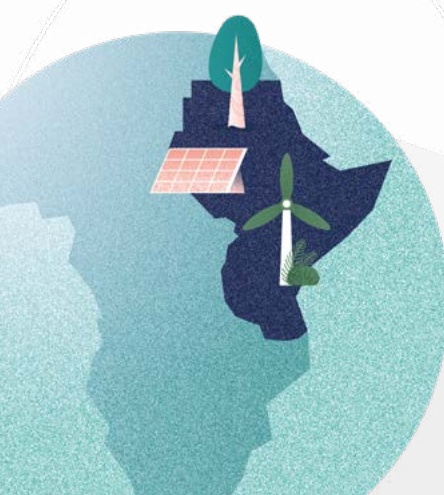
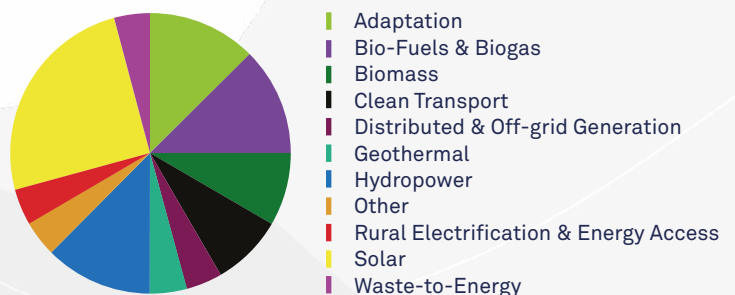
Total investment leveraged (USD)

**\$26,773,466**

Total number of projects supported by country



Technology area of new projects in the pipeline



# Meet our Network in Eastern Africa



**PFAN ADVISOR**  
**Arnold Byarugaba**

Arnold Byarugaba is a Private Financing Advisory Network (PFAN) Advisor and Country Coordinator based in Kampala, Uganda.

He has built and developed an exemplary professional career over the last 14 years with experience that spans across institutional and private fund management, investment banking and development finance working with various global organisations.

Over this period, he has successfully supported several companies and entrepreneurs in East Africa with advisory support around business development for investment readiness coupled with investor matchmaking/fundraising. Further to this, he is passionate about the development of the Entrepreneurial ecosystem to catalyse business growth, particularly in Uganda.



**REGIONAL COORDINATOR**  
**Wilfred Mworia**

Wilfred started his career in enterprise software, working for several local and international software houses. With a keen interest in the transformative potential of entrepreneurship, he ventured out into tech enterprise for a number of years, after which he found he could have greater impact by enabling other entrepreneurs to thrive. He has since worked in various capacities providing business strategy and investment support to entrepreneurs.

Wilfred is PFAN's Regional Coordinator in the Eastern Africa Region, where he works to grow investment towards clean energy ventures.



## New Partners in 2021



**Africa MiniGrid Developers Association (AMDA)**  
Industry association

AMDA represents private utilities developing small, renewable, localized power grids across 17 African countries.



**Tanzania Horticultural Association (TAHA), Tanzania**  
Industry association

TAHA provides developmental services on Policy and Advocacy, Technical support (Agronomy, nutrition, Standards & Food safety and environmental compliance and protection), linkage & access to markets and linkage to financial services for horticultural practitioners across the value chain.



**UNEP DTU Partnership (Tamarin project), Kenya & Uganda**  
Research and advisory institution

UNEP DTU Partnership was established by the Danish Ministry of Foreign Affairs, the UN Environment Programme and the Technical University of Denmark (DTU) in 1990 and currently provides research-based advisory services to assist developing countries deliver on the Paris Agreement and SDGs. folio companies.

# WESTERN AFRICA

**Western Africa has the highest number of PFAN-supported projects in the sub-Saharan region, with the pipeline growing by about 25% in 2021.**

Solar energy businesses led the way in financial closures, including the women-led CREEDS Energy in Nigeria.

Moreover, the region has seen an increase in outreach activities, such as various online webinars as well as in-person events organized by the region's Country Coordinators, which have translated into an increase in applications and an uptick in activities in the region. The outreach activities mainly focused on informing developers in the renewable energy and climate adaptation sectors about PFAN services, as well as building their capacity at developing good financial models and business plans.

Notable figures in the energy sphere have attended our virtual roadshows such as president of the Renewable Energy Association of Nigeria (REAN), indicating that there is the potential for PFAN to

support REAN members and their projects. In addition to outreach webinars, Western Africa country coordinators have represented PFAN at various conferences and workshops, including a side event organized during a two-day capacity building workshop organized by the Digital Global Biogas Cooperation (DiBiCoo).

PFAN continues to build and foster strong relationships with key actors in the sub-region including development banks such as EBID and BOAD and incubators such as ABREC, with which strategic partnerships are being engaged to help develop a dedicated early-stage funding vehicle for the regions' climate and clean energy projects. Building a stronger network will ultimately contribute to filling the investment gaps in the climate and clean energy value chain and help facilitate the flow of financing into the region.

## Western Africa in 2021

Clean energy capacity added (MW)

**6.2**

Total Advisors

**28**

New partnerships established

**2**

Projects that reached financial closure

**3**

Female Advisors

**7**

Locally-based Advisos (%)

**96**

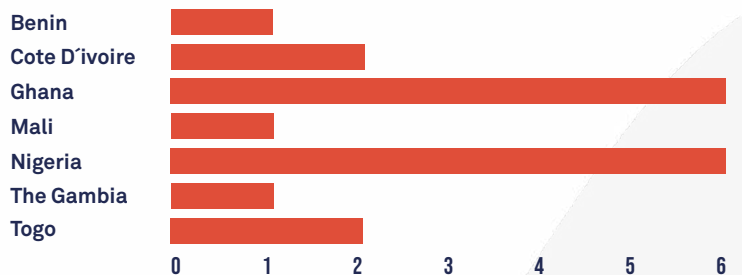
Total number of projects supported

**19**

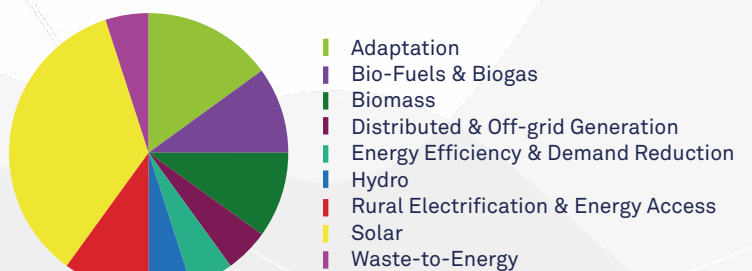
Total investment leveraged (USD)

**\$7,952,000**

Total number of projects supported by country



Technology area of new projects in the pipeline



## Meet our Network in Western Africa



**PFAN ADVISOR**  
**Babi Subair**

Babi Subair is the Founder/CEO of FHG Consulting Limited, a strategy, business & financial advisory firm that provides an accelerator service to start-ups and early stage businesses. She recently established a Women Funding Women Angel Network, a pool of female angel investors, to raise substantial capital for start-up and early stage investment in women-owned businesses. In addition, she has developed innovative products for commercial banks that create access to affordable credit facilities for women owned SGBs.

Her most recent role was as a Special Adviser with the Ogun State Government, heading the Investment Promotion Agency (IPA), OgunInvest, where she had the sole responsibility for establishing the IPA and having the agency passed into law.

Babi has about two decades of financial services experience commencing her career with Schrodgers Salomon Smith Barney in London before relocating to Nigeria to work with Citibank Nigeria. Her expertise spans across corporate finance, treasury management, fund management and risk management.

Babi has a MBA from Cranfield School of Management, Cranfield University (UK) and a Bachelor's degree in Economics and Management from Durham University (UK). She is a Non-Executive Director of Sterling Assurance Nigeria Limited and Board Member on the World Bank Program Nigeria Improving Business Environment for Prosperity (NIBEP).



**REGIONAL COORDINATOR**  
**Albert Boateng**

Albert is an experienced renewable energy finance expert and transactions advisor. He joined PFAN as a coach in 2013 and became the Regional Coordinator the following year. As regional coordinator, he supports project development and finance facilitation across West Africa. The region covers 15 countries, and more than 200 projects have been coached.

Albert's role includes connecting projects to coaches, providing guidance to the coaches, building relationships with network partners and growing the network in the region. Prior to this role, he was the Regional Director of Persistent Energy Partners, a clean energy investment company. He oversaw the investment and portfolio development of PEP's West Africa operations including pipeline development, investment appraisal, transactions structuring, asset management and implementation of exit/liquidation strategies.

Albert holds an MBA from Boston College, Massachusetts, USA and is a Certified Expert in Climate and Renewable Energy Finance (CECREF).



## New Partners in 2021



**GrEEn - Boosting Green  
Employment and Enterprise Opportunities, Ghana**  
Non-profit

GrEEn is a joint project from the EU, the Embassy of the Kingdom of the Netherlands in Ghana, UNCDF and SNV to support sustainable and climate-resilient local economies, green jobs and development.



**Société Générale, West Africa**  
Investment bank

An investment bank in West Africa with the aim to build a better and sustainable future through responsible and innovative financial solutions.



# SOUTHERN AFRICA

Through increased outreach activity by the PFAN network and intensified engagement with existing and potential network partners in the region, Southern Africa was the region with the highest intake of projects in sub-Saharan Africa in 2021 inducting 31 projects into the PFAN pipeline.

Many of these projects were attracted through a dedicated region-wide campaign to identify and originate climate adaptation projects with a focus on agriculture. Joint events, consisting of online webinars and workshops, were co-organised with partners such as African Agri Council (AAC), the African Development Bank (AFDB), the Economic Development Board of Madagascar, the Renewable Energy Industries Association of Malawi and the Zimbabwe Energy Regulatory Authority (ZERA), helped to expand PFAN's regional footprint by leveraging cooperation synergies for project origination, project development and local capacity building.

In addition to many smaller outreach events, PFAN organised two workshops reaching over 340 registered participants over two days on "Supporting and Financing Climate & Clean Energy Projects in the Francophone and Lusophone SIDS" in the context of the 2021 Virtual Island Summit, an online forum dedicated to sharing knowledge for resilient, sustainable and prosperous islands worldwide. PFAN Advisors from the Pacific Islands were also involved in this event, helping to further PFAN's penetration of these challenging markets, which are a new focus of project origination and development activity for both regions going forward.

## Southern Africa in 2021

Total Advisors

20

New partnerships established

9

Total number of projects supported

31

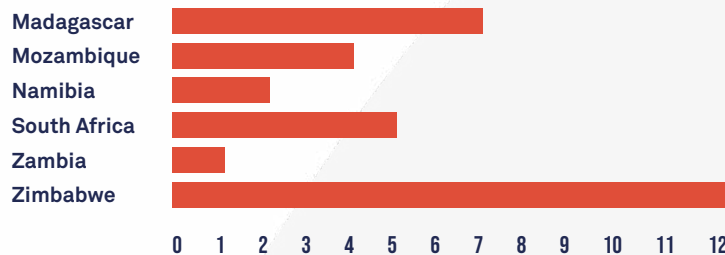
Female Advisors

5

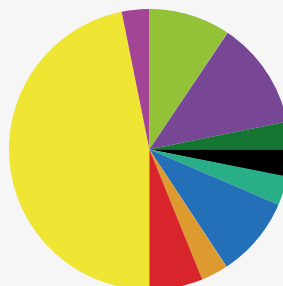
Locally-based Advisors (%)

89

Total number of projects supported by country



Technology area of new projects in the pipeline



- Adaptation
- Bio-Fuels & Biogas
- Biomass
- Clean Transport
- Energy Efficiency & Demand Reduction
- Hydropower
- Other
- Rural Electrification & Energy Access
- Solar
- Waste-to-Energy



## Meet our Network in Southern Africa



### PFAN ADVISOR Lina Mushanguri

Born and raised in Zimbabwe, Lina Mushanguri is a specialist in clean energy financing, sustainability, corporate finance, market development, inclusion, policy lobbying, regulation and mentoring.

Lina served her articles with Pricewaterhouse Coopers (“PwC”) Harare since 2003 and worked in PwC’s US and Bermuda offices before joining Bermuda’s Financial Services Regulator in 2008. She worked for the Zimbabwe Stock Exchange (ZSE) from 2012-2019, initially as Listings Executive and led its Business Development arm after promotion. At the ZSE, Lina developed relationships with Independent Power Producers and project developers and was instrumental in ZSE joining the UN’s Sustainable Stock Exchange Initiative in 2015. She also co-founded ZETTA Capital Partners, a consultancy supporting African capital markets.

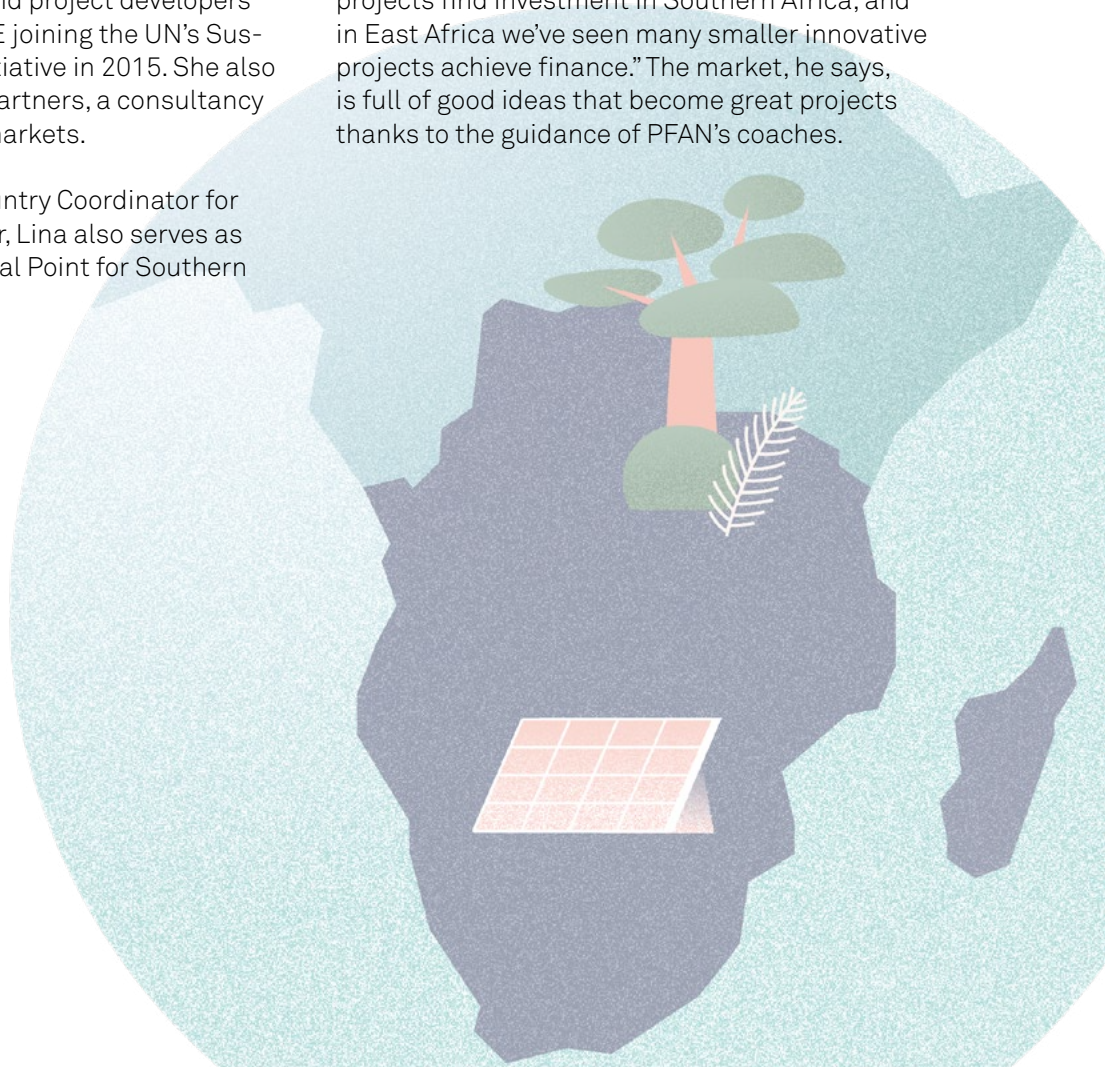
In addition to her role as Country Coordinator for Zimbabwe and PFAN Advisor, Lina also serves as PFAN’s Regional Gender Focal Point for Southern Africa.



### REGIONAL COORDINATOR Thaven Naidoo

Thaven has experience in various sectors, ranging from agriculture and mining to media and technology, as well as adaptation and development. He first became involved in PFAN through the development of the adaptation work stream, before becoming regional coordinator. Adaptation has since been mainstreamed into PFAN’s work, a move he believes has been very positive.

Passionate about innovation and with a deep understanding of the challenges facing entrepreneurs, Thaven enjoys seeing projects grow from concept to financial close. “We’ve seen world-class, large scale projects find investment in Southern Africa, and in East Africa we’ve seen many smaller innovative projects achieve finance.” The market, he says, is full of good ideas that become great projects thanks to the guidance of PFAN’s coaches.



## New Partners in 2021



### African Women in Energy Development Initiative (AWEDI), Africa

Women network/organisation

AWEDI's mission is to encourage and unite women in the energy sector by offering a guiding platform for their progress in the industry through career accelerators, mentorship, professional development and networking opportunities.



### Energise Africa, United Kingdom

Crowdfunding platform

Energise Africa is a UK crowdfunding platform enabling everyday people to invest to support renewable energy projects (home solar) in Sub-Saharan Africa.



### Eos Capital, Namibia

Private Equity Fund

Eos Capital is a Namibian private equity fund player that manages funds across the region. Their mission is to contribute to the growth of the Namibian and regional economy while delivering attractive returns to investors.



### Impact Tank, Namibia

Corporate Venture Capital

Impact Tank is a Namibian/Swiss venture builder that uses social entrepreneurship as a means to create sustainable impact, seeking to reach sustainable change in the Namibian market using the most well-designed business models.



### I&P Madagascar, Madagascar

Impact fund manager

Investisseurs & Partenaires (I&P) is dedicated to contributing to sustainable development and social stability in Africa by financing and advising entrepreneurs, project initiators, and African SMEs to help them thrive and achieve economic, social and environmental success.



### Malawi Agricultural and Industrial Investment Corporation (MAIIC), Malawi

DFI

Malawi Agricultural and Industrial Investment Corporation (MAIIC)'s mission is to drive the private sector-led economic development through the mobilisation of finance, skills and technology for sustainable wealth creation in Malawi.



### NBM Development Bank, Malawi

DFI

NBM Development Bank's mission is to provide the best financial services in Malawi and internationally, distinguished by outstanding service, product innovation and sustained earning.



### Solar Industry Association of Zambia (SIAZ), Zambia

Industry association

Solar Industry Association of Zambia (SIAZ) work with the Zambian government to develop policy and regulations that will promote the solar industry in the country.



### Zambia Renewable Energy Association (ZARENA), Zambia

Industry association

Zambia Renewable Energy Association (ZARENA) is an industry association with the aim to foster and promote the large-scale adoption of renewable energy in Zambia.

# SOUTH ASIA

In order to meet the demands of growth and strengthen our Asian operations, PFAN's South & Southeast Asia region was split into South Asia and Southeast Asia in 2021.

India native Pamli Deka was chosen to manage the South Asia region, becoming PFAN's first female Regional Coordinator.

Despite the severity of the Covid-19 pandemic in the region, the project origination numbers saw an increase in 2021 (78 applications) compared to 2020 (46 applications). 88 applications were evaluated during the year, and 40 were selected for PFAN support. 2021 ended with a pipeline of 94 projects actively coached by the network of 37 Advisors. Despite the conditions, record levels of investments were reported in the region, with a total of \$111 million leveraged across 15 projects in 2021 as compared to \$107 million leveraged across 13 projects in the previous year.

The successfully financed projects in South Asia focused primarily on solar, biogas, hydro and clean transport technologies, with the majority of financial closures occurring in India (8) and Nepal (3).

Existing partnerships were deepened, while the team engaged with potential new partners like Green Funder and Invest India: Accelerating Growth of New India's Innovations. In addition to network partners, the South Asia team continued to build relationships with institutional investors that support projects through debt, equity, grant and other financing structures. The regional network continued to grow adding new Advisors, and Sri Lanka got its first Country Coordinator.

## South Asia in 2021

Clean energy capacity added (MW)

**71.92**

Total Advisors

**33**

New partnerships established

**3**

Projects that reached financial closure

**13**

Female Advisors

**8**

Locally-based Advisos (%)

**100**

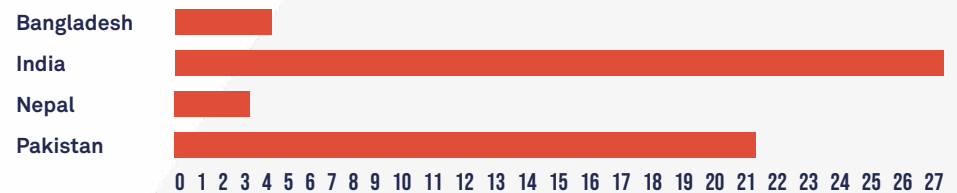
Total number of projects supported

**55**

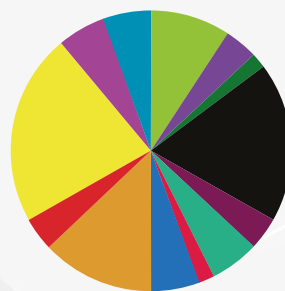
Total investment leveraged (USD)

**\$192,615,085**

Total number of projects supported by country



Technology area of new projects in the pipeline



- Adaptation
- Biogas
- Biomass
- Clean Transport
- Distributed & Off-grid Generation
- Energy Efficiency & Demand Reduction
- Energy Storage & Conservation
- Hydropower
- Other
- Rural Electrification & Energy Access
- Solar
- Waste to Energy
- Wind



## Meet our Network in South Asia



### PFAN ADVISOR Dr. Chitra Rajan

Dr. Chitra Rajan is a serial Entrepreneur with experience ranging from Software Services to Agriculture, Construction and Renewable Energy – Currently spearheading functions as Managing Director with Radix Group, headquartered in Bangalore. Radix is in the business of generating energy from Organic Waste and has established the world's first commercial food-grade Bio CO2 plant.

Chitra is currently associated with UNIDO through PFAN as an Advisor for clean energy / energy efficiency and sustainable development projects in Latin America, Africa and Asia. She mentors entrepreneurs to ensure that their projects become investor-ready and helps them to raise funds. She normally handles ticket sizes of US\$5M to 50M.

One of the companies that she is mentoring – Heritage Milk Foods won the prestigious award from National Productivity Council, Govt of India for reducing the energy footprint of the factory based on Renewable energy generated from waste for the year 2020, the inputs for this initiative was provided by Chitra. As a part of her R&D focus, Chitra along with IIT, Madras is researching on developing next-generation Renewable hydrocarbon fuels. During the height of the Covid-19 crisis, responding to the calls of the Government of India, Chitra led a team to quickly manufacture PSA based O2 plants for the supply of OXYGEN in hospitals.

Chitra has a PhD with a specialisation in Organizational Leadership. She also has a double Masters in Regional Planning and Business management. She has been associated with IIT Madras in the field of Renewable Energy. She has over 23 years of cross-functional experience across a wide spectrum of functions with proficiency in Business Development, Marketing, Operation management; a proven ability of successful business development while consistently achieving significant growth.

Chitra is a recipient of many awards for her work in the field of renewable energy.



### REGIONAL COORDINATOR Pamli Deka

Pamli brings 15 years of experience in the energy sector across operational, consulting and financing roles. Her passion is to bring a positive change in the society by reducing the impact of climate change while contributing towards poverty reduction. Pamli has helped in building the energy access body of work at the World Resources Institute, India (WRI India) where she with her team supported end users to integrate sustainable energy solutions into their strategy. Prior to that as a part of the New Ventures team, she facilitated investments in social enterprises in India, Nepal and Bangladesh.

Having closely followed and covered renewable energy and oil & gas companies as an equity analyst, she also brings in hands on experience in solving some of the business model related challenges for clean tech companies. A chemical engineer from IIT Roorkee and MBA graduate from INSEAD, Pamli has co-authored research papers and many widely read articles on the role of energy in development.

At PFAN, Pamli will work with the team in South Asia to strengthen the network of clean energy and adaptation projects, while reaching out to new stakeholders who can support projects in the region.



▶ **MEET THE NETWORK**  
WATCH THE VIDEO



**SUCCESS STORY**  
▶ ERDA ILLUMINE



**SUCCESS STORY**  
▶ SOLShare

# SOUTHEAST ASIA

In 2021, PFAN's Southeast Asia region was split off from South Asia, which helped to strengthen and consolidate efforts in Southeast Asia. By the end of the year, the region had a pipeline of 62 projects, representing a total investment ask of \$917 million.

In the wake of November 2021's COP26, and with an intensifying focus by donors and investors in supporting Southeast Asia's energy transition, PFAN identified significant opportunities to achieve success in our core niche of clean energy and climate projects in the region. In 2021, we accepted 48 applications from the region and selected 23 projects for PFAN support.

PFAN provided a \$50,000 USD "Tipping Point Technical Assistance" grant to Thien Phu Energy to support the cost of feasibility assessment for 2 x 30 MW wind energy projects in Ben Tre, Vietnam. It is expected that the project will proceed and will close an investment of \$130 million during 2022, which will be by far the largest single project for PFAN in Asia during the past several years. Further projects in Cambodia, Myanmar and Vietnam working in the

areas of rural electrification and energy access, clean transport and climate adaptation successfully received investment in 2021.

PFAN continues to strengthen our partnership with the Sustainable Energy Association of Singapore (SEAS) through co-hosting capacity-building events such as PowerACE competition and i-Pitch events with Southeast Asian entrepreneurs and investors. Through the partnership with SEAS, we provide our expertise in business coaching and investment facilitation services for start-ups to scale up innovative technologies in clean energy and clean technology. PFAN is also partnering with the Southeast Asia Energy Transition Partnership's (ETP's) Energy Efficiency Innovation Window, a \$1.5 million grant fund to catalyze innovative energy-efficiency technologies and financing mechanisms.

## Southeast Asia in 2021

Clean energy capacity added (MW)

71.92

Total Advisors

22

New partnerships established

5

Projects that reached financial closure

4

Female Advisors

7

Locally-based Advisos (%)

87

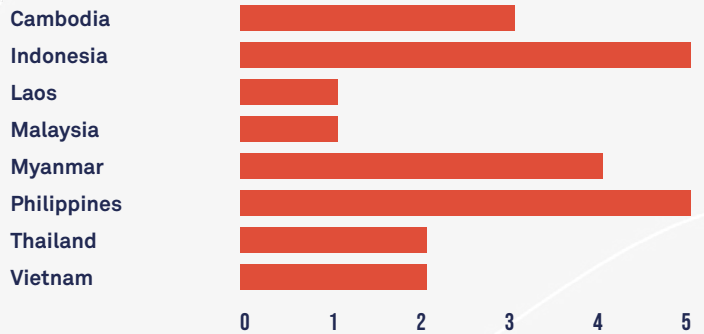
Total number of projects supported

23

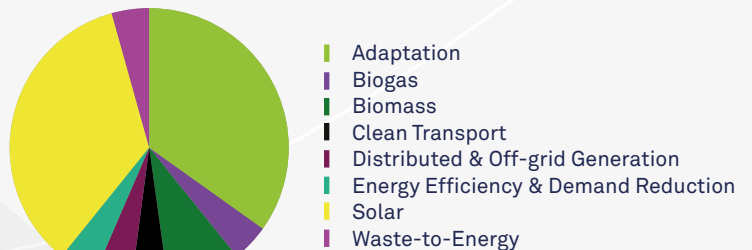
Total investment leveraged (USD)

\$3,008,448

Total number of projects supported by country



Technology area of new projects in the pipeline



## Meet our Network in Southeast Asia



### PFAN ADVISOR Laurie Navarro

Laurie Navarro is a PFAN Advisor and Country Coordinator for the Philippines, with over 30 years of experience in securing financing for clean technology projects.

In addition to her role at PFAN, Laurie is the Energy Efficiency Component National Coordinator for the Philippines for Low Carbon Energy Programme, and the President of CSi Energy Solutions International where she performs consulting work for projects in the fields of clean technology project development, implementation, conducts feasibility studies, monitoring and evaluation.

She was previously a Market Development Expert at London-based Carbon Trust, where she led a team of local and international experts responsible for identifying potential sites for implementation of the Productive Uses of Renewable Energy (PURE) project. PURE aimed to introduce renewable energy powered post-harvest processing of agricultural and fisheries products to increase their market value, thereby giving additional income to the farmers and fishermen.



### REGIONAL COORDINATOR Peter DuPont

Peter has more than 30 years' experience developing sustainable energy and climate programs in the U.S. and Asia. He has extensive expertise in the design, implementation, and evaluation of clean energy policy and plans, energy and climate finance, and climate change programs. He has worked in a variety of roles consulting and managing for non-profit and private consultancies and development agencies, with a focus on energy efficiency, renewable energy, finance and market incentives, and climate change.

Peter is based in Bangkok and is Managing Partner of Asia Clean Energy Partners Limited, an international consultancy that initiates partnerships and initiatives that accelerate the pace of clean energy investment and deployment. Since 2007, he has been the Co-Chair of the Asia Clean Energy Forum, a flagship clean energy event organised annually by the Asian Development Bank, the US Agency for International Development, and the Korea Energy Agency.

Peter has a Master's degree in Public Health from the University of California, Berkeley, and a Ph.D. in Energy and Environmental Policy from the University of Delaware.



▶ **MEET THE NETWORK**  
WATCH THE VIDEO



**SUCCESS STORY**  
▶ SELEX MOTORS

## New Partners in 2021



### PLATFORM - Invest In Impact, Cambodia Platform

PLATFORM – Invest In Impact’s purpose is to increase economic, environmental and social impacts in Cambodia and South-east Asia by empowering impact-driven entrepreneurs to scale up.



### OBOR Capital, Cambodia Venture Capital Manager

OBOR Capital is a Venture Capital and Project Management firm based in Phnom Penh, Cambodia. The objective of OBOR Capital is to build and invest in local SMEs and start-ups which have the potential of becoming future market leaders.



### Asian Institute of Technology, Thailand Institution

The Asian Institute of Technology (AIT) is an international English-speaking postgraduate institution in Thailand, focusing on engineering, environment, and management studies.



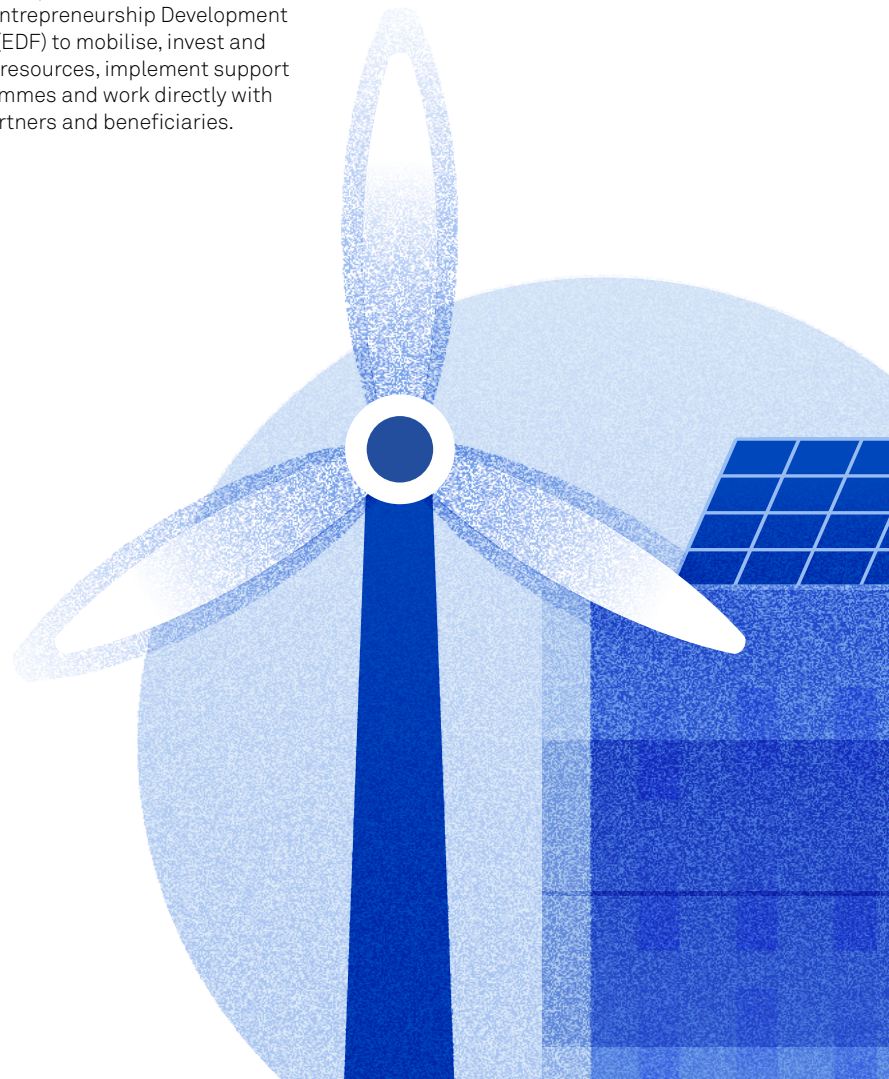
### UNEP EmPower International organization

UNEP EmPower, jointly created by UN Women and UN Environment Programme, the project aims to build and support women’s resilience in facing climate change in Bangladesh, Cambodia and Vietnam.



### Khmer Enterprise, Cambodia Platform

Khmer Enterprise was established as a unit of Entrepreneurship Development Fund (EDF) to mobilise, invest and manage resources, implement support programmes and work directly with partners and beneficiaries.





# THE PACIFIC ISLANDS

**As PFAN’s newest region, the Pacific Islands PFAN network continued to grow in 2021, and its first two projects have begun the PFAN Journey.**

PFAN ramped up project origination activities in conjunction with the Fiji Development Bank (FDB) and the Fiji Rural Electrification Fund (FREF) towards the end of 2021, as Fiji emerged from its Covid-19 lockdown. We continued to build up our network of investment and network partners in the region, establishing a new partnership with the Fiji Commerce and Employers Federation (FCEF).

PFAN has recruited a Country Coordinator to oversee the Solomon Islands and Tonga, however, outbreaks towards the end of 2021 have contributed to slowed progress with government-led energy programs that PFAN is initially targeting to assist in these countries.

In the second half of the year, PFAN was awarded a Design Funding grant by Convergence and funded by DFAT to design a results-based financing (RBF)

vehicle. The Fiji Outer Island Project is intended to increase energy access for communities in the Fiji Outer Islands, starting with Koro, Gau, Kadavu and extending to other islands to advance to 100% electrification in due course.

The rationale is to establish new solar powered mini- and micro-grids and to deploy renewable energy technologies into existing village systems (where they already exist), replacing diesel gensets with solar, extending the grids and using solar home system (SHS) solutions where mini-grid connections are unviable to extend coverage to 100%. The activities which will be executed together with FREF are expected to start at the beginning of the second quarter of 2022 and will mark a new stage in the partnership.

## Pacific Islands in 2021

Total Advisors

1

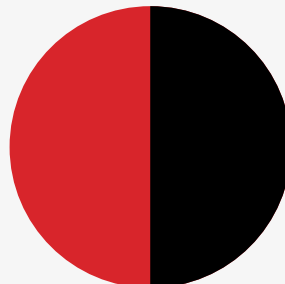
New partnerships established

4

Total number of projects supported by country



Technology area of new projects in the pipeline



■ Clean Transport  
■ Rural Electrification & Energy Access



## Meet our Network in the Pacific Islands



**PFAN ADVISOR**  
Savenaca Seniloli

Savenaca Seniloli has more than 28 years of experience in managing and providing advice in agricultural production, expansion and improvement; food processing; timber milling; commercial technical cleaning and waste & water treatment; beverage production; manufacturing industries which include primary & secondary packaging, hazardous chemicals and garment. He is well-versed with business obligations in terms of statutory requirements, compliance and stakeholder management in all the industries he has been involved in.

Currently, he is involved as a PFAN Advisor in the Pacific region, covering Fiji. The primary role is to come alongside the project entrepreneur and comb through their project case before presenting it to financial institutions and potential investors. Fiji's geographical location gives us unique challenges. He is very appreciative of this role as projects are addressing climate change impacts and clean energy.



**REGIONAL COORDINATOR**  
David Eyre

David has worked for over 25 years in business that has had an underlying theme in deployment and operation of technology for commercial growth in a Pacific context. He has experience in Telecommunications (E-Payment, ISP and Online Web Services), Broadcast TV and recently Energy Access (Rural Electrification) and Green Finance sectors.

With specific roles in leadership, business development, technology operations management and project coordination, he sees this experience as a key in understanding how to help Pacific businesses accelerate their adoption of green technologies and practices in the fight against climate change.

Peter has a Master's degree in Public Health from the University of California, Berkeley, and a Ph.D. in Energy and Environmental Policy from the University of Delaware.



## New Partners in 2021



**Fiji Commerce and Employers Federation, Fiji**  
Industry association

The Fiji Employers Consultative Association (FECA)'s mission is to provide the employers of Fiji with the knowledge, understanding and capability to maintain the best possible labour relations while seeking to grow their businesses and the economy by encouraging the government to provide the environment for the private sector to prosper.

# Eastern Europe & Central Asia

In 2021, five projects in the areas of solar, clean transport, waste-to-energy and energy products from forestry raised investment amounting to a total of \$46 million USD including PFAN's first financial closure in Moldova.

Despite the Covid-19 pandemic, the PFAN EECA region has nevertheless shown to be a successful, developing region. Since its foundation in 2019, the EECA region has continued to grow in the difficult conditions of the Covid-19 pandemic, military conflicts and revolutionary upheavals. Despite these challenges, PFAN has been gaining outreach and a solid reputation in increasingly more countries in the EECA region.

In 2021, the region reached several notable milestones and achievements, with a total of 45 eligible projects inducted into the pipeline. Although Ukraine still led the way in new pipeline inductions, the share of clean energy projects from other countries in the region increased in comparison to the previous year.

Through the joint efforts of the PFAN EECA network and partners including the Invest In Network at the Energy Week Black Sea 2021, 30 events were held to expand PFAN's reach in the EECA region and inform entrepreneurs about PFAN's services.

PFAN expanded into two new countries, Mongolia and Tajikistan, with the addition of new Country Coordinators and a Gender Focal Point for the region. Zula Luvsandorj, Country Coordinator for Mongolia, took on this role and kicked off activities with a workshop for female developers with a focus on clean energy projects.

## EECA in 2021

Clean energy capacity added (MW)

**26.1**

Total Advisors

**23**

New partnerships established

**5**

Projects that reached financial closure

**5**

Female Advisors

**5**

Locally-based Advisos (%)

**100**

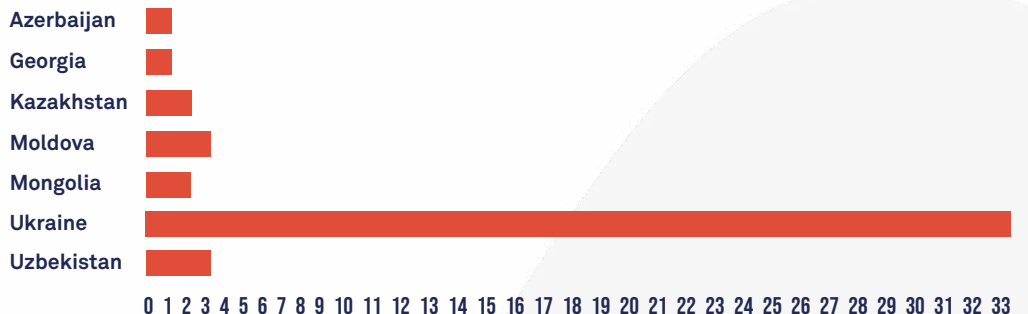
Total number of projects supported

**45**

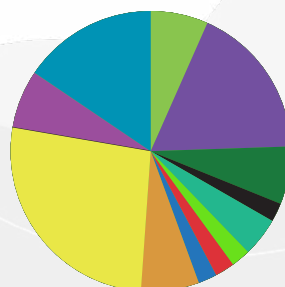
Total investment leveraged (USD)

**\$46,378,387**

Total number of projects supported by country



Technology area of new projects in the pipeline



- Adaptation
- Bio-fuels and Biogas
- Biomass
- Clean Transport
- Energy Efficiency & Demand Reduction
- Energy Products from Forestry
- Energy Storage & Conservation
- Hydropower
- Other
- Solar
- Waste to Energy
- Wind



# Meet our Network in EECA



**PFAN ADVISOR**  
**Zula Lusvadorj**

Zula Luvsandorj is a project finance expert specialising in green energy, with more than 15 years of experience capital raising and project financing in emerging markets of EMEA, CIS and Mongolia.

She is passionate about clean energy and supporting both the public and private sector in financing green projects to achieve the Netzero by 2050 globally.

Zula has been recently appointed as PFAN Gender Focal Point for Eastern Europe and Central Asia, while also serving as a Country Coordinator and Advisor for PFAN in Mongolia.



**REGIONAL COORDINATOR**  
**Rostyslav Maraikin**

Rostyslav joined PFAN after more than 15 years working in the power sector. He coordinates operations in Eastern Europe and Central Asia – a relatively young market for PFAN and the development of clean energy projects.

This region faces a number of challenges, which highlights the need for PFAN. It lacks professional support for start-ups and has a small private investor pool; banks tend to be the major financiers of renewable energy projects, and they focus specifically on solar and wind projects.

Rostyslav is tasked with growing the network through his team of coaches, sourcing new projects, identifying new opportunities to support climate and clean energy projects and connecting new investors to innovative projects.



**MEET THE NETWORK**  
WATCH THE VIDEO



**SUCCESS STORY**  
PERFEKT PAK

## New Partners in 2021



**Bank Vostok, Ukraine**  
Commercial Bank

RJSC BANK VOSTOK is a universal bank in Ukraine providing a full range of banking services for private and corporate customers.



**European-Ukrainian Energy Agency (EUEA), Ukraine**  
Government and policy makers

The EUEA brings together key energy efficiency and renewable energy sector participants within an independent networking and lobbying organisation that promotes the development of a modern and sustainable economic, political and technological environment in Ukraine.



**Ministry of Energy, Ukraine**  
Government and policy makers



**UkraineInvest, Ukraine**  
Government and policy makers

A Ukrainian government's investment promotion office created to attract foreign direct investment and assist investors to expand their businesses in the country.



**QazTech Ventures JSC, Kazakhstan**  
Government and policy makers

A venture capital firm whose aim is to assist in the development of technological and implementation of technological innovations in Kazakhstan.

# LATIN AMERICA & THE CARRIBEAN

In 2021, the Latin America & the Caribbean region saw the highest proportion of PFAN supported projects reaching financial closure worldwide, with total investment more than doubling since 2020.

Stepping up the number of webinars and outreach efforts by the LAC regional network has resulted in an increase both in the number of eligible projects originated and in the dollar value of financial closures. Fourteen eligible projects were inducted into the pipeline, a 55% increase from 2020.

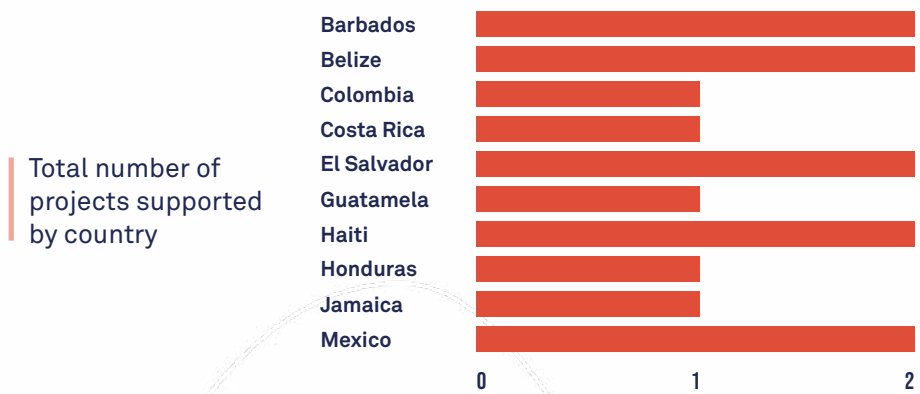
Financial closures have taken place in Guatemala, Honduras, Trinidad and Tobago, Mexico, Belize, Panama and Haiti from projects operating mainly in the hydro and waste to energy sectors. The largest amount (15mil USD in the form of equity)

was raised by GSR Energy Holdings Ltd., a company from Belize focused on the production of biofuels.

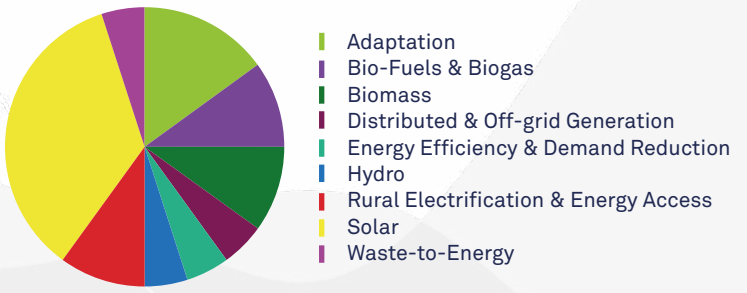
The region also stands out for its high level of gender inclusiveness. A PFAN study conducted in November 2021 concluded that, on average, 61% of LAC project companies' management teams are women, with 40% of the companies' ownership held by women – the highest share among all the regions. Through the regional team's efforts, the number of investors participating in PFAN LAC activities has nearly tripled.

## Latin America & The Caribbean in 2021

Clean energy capacity added (MW)	10.8	Total Advisors	21	Projects that reached financial closure	8
Total investment leveraged (USD)	\$25,778,463	Female Advisors	3	Locally-based Advisos (%)	78
				Total number of projects supported	15



Technology area of new projects in the pipeline



## Meet our Network in Latin America & the Caribbean



### PFAN ADVISOR Hugo Romeo Arriaza Morales

Hugo Romeo Arriaza Morales is a PFAN Advisor based in Guatemala and an Agricultural Engineer with a Master’s degree in Project Evaluation and Financial Administration. He has been working in Central America, The Caribbean and Africa for nearly 35 years, gathering extensive experience working in the rural energy sector and project investments linked to electricity in rural areas.

For 16 years he was the CEO for the trust fund “Electricity for Progress”, which was set up to grant loans to stimulate rural electrification initiatives based on renewable energy and electricity generation initiatives.

As a PFAN Advisor, he appreciates that his work combines disciplines to assess project opportunities and at the same time, pay attention to the environment, people, legal framework and linked institutions as part of the project risk and the country risk assessments.



### REGIONAL COORDINATOR Federico Fische

Federico Fische is an economist with more than 20 years of experience in international development cooperation and private sector development. He specialises in renewable energy solutions, clean tech innovations and energy efficiency, private sector projects and public sector programme funding in the Caribbean, Latin America and Africa.

During the last three years, he has led the implementation of USAID’s US\$ 10 million Clean Energy Finance Facility for the Caribbean and Central America. This grant programme has funded over 20 projects and leveraged over \$800 million in potential investments. Later, Federico became the Key Expert for Latin America, Caribbean and Pacific region for the EU Technical Assistance Facility for Sustainable Energy for Neighbourhood (East and South), Asia, Latin America, Caribbean and Pacific.

In this role, he supports policy analysis, development and implementation for the clean energy sector, with the aim to accelerate and implement countries’ sector reform policies related to access to clean energy, and to foster and facilitate project funding.



▶ **MEET THE NETWORK**  
WATCH THE VIDEO



**SUCCESS STORY**  
GSR ENERGY HOLDINGS

# THE PFAN JOURNEY

Climate mitigation and adaptation projects inducted into PFAN's development pipeline receive support in a three-stage process known as The PFAN Journey.



After each stage, a review is conducted by PFAN's Regional Coordinators to ensure the business is ready to proceed to the next stage, if not, we provide guidance on the next steps to pursue. This has enabled closer handholding and guidance for the entrepreneur, by not just their PFAN Advisor, but also by our most senior project development specialists and investment facilitators.

This structure has provided PFAN with the flexibility to fast track advanced projects that would benefit from advancing from Stage 1 directly to Stage 3, or even repeat stages, for less mature projects,

thereby better providing a more customer-oriented tailored service to entrepreneurs.

Since the launch of the revamped PFAN Journey, over 365 entrepreneurs across the globe have received PFAN support, of whom 226 and 66 of reached Stage 2 and Stage 3 respectively. Despite the effects of the pandemic, over 55 projects within the development pipeline have reached the end of the Journey and successfully achieved investment, thanks to PFAN's intervention.



# Thien Phu Energy Investment, JSC

<b>Technology Area</b>  <b>WIND ENERGY</b>	<b>Investment Amount (USD)</b> <b>\$129,381,240</b>	<b>Business type</b> <b>GREENFIELD</b>	<b>Project IRR (%)</b> <b>13</b>
	<b>Country</b> <b>VIETNAM</b>		

## Thien Phu Energy's PFAN Journey

### JULY 2017: STAGE 1 – ACTION PLAN DEVELOPMENT

Once the project was selected for PFAN support, Hao Vu, PFAN Advisor and Vietnam Country Coordinator, developed a plan with the entrepreneur to further refine the business plan and the financial model of the initial 30 MW onshore wind farm in the Ben Tre province in Vietnam.



### ACCEPTANCE INTO THE PFAN DEVELOPMENT PIPELINE

PFAN's regional evaluation panel and technical committee reviewed the entrepreneur's application and, considering its potential impact and maturity, decided to induct the Ben Tre Wind Farm project into the PFAN Journey.



### JULY 2018 STAGE 2 – PROJECT DEVELOPMENT

The coaching provided by Hao strongly focused on guiding the entrepreneur to draw from their strong experience in developing wind power projects in building a bankable business plan that meet international standards. She also supported Thien Phu Energy (TPE) in perfecting their investor pitch and enhancing essential business negotiation skills.



### 2019-2021: STAGE 3 - INVESTMENT FACILITATION

In 2019 before approaching potential investors, Hao also supported TPE in preparing the due diligence package. In addition, TPE was invited to participate in training sessions on wind power project financing to actively engage potential investors and gain a deeper understanding about their expectations.





In August 2021, PFAN's technical committee approved TPE's proposal for Tipping Point Technical Assistance (TPTA) to co-fund the cost of the consulting services for third-party appraisal of the feasibility study for the two wind farms, which enabled the PPA to be signed in mid-March 2021.

The TPTA advisory support helped fulfil the conditions precedent in the EPC turn-key contract with Queen Capital Finance ensuring successful investment of USD 129.4 million for construction of the two wind energy plants.

## What PFAN has done?

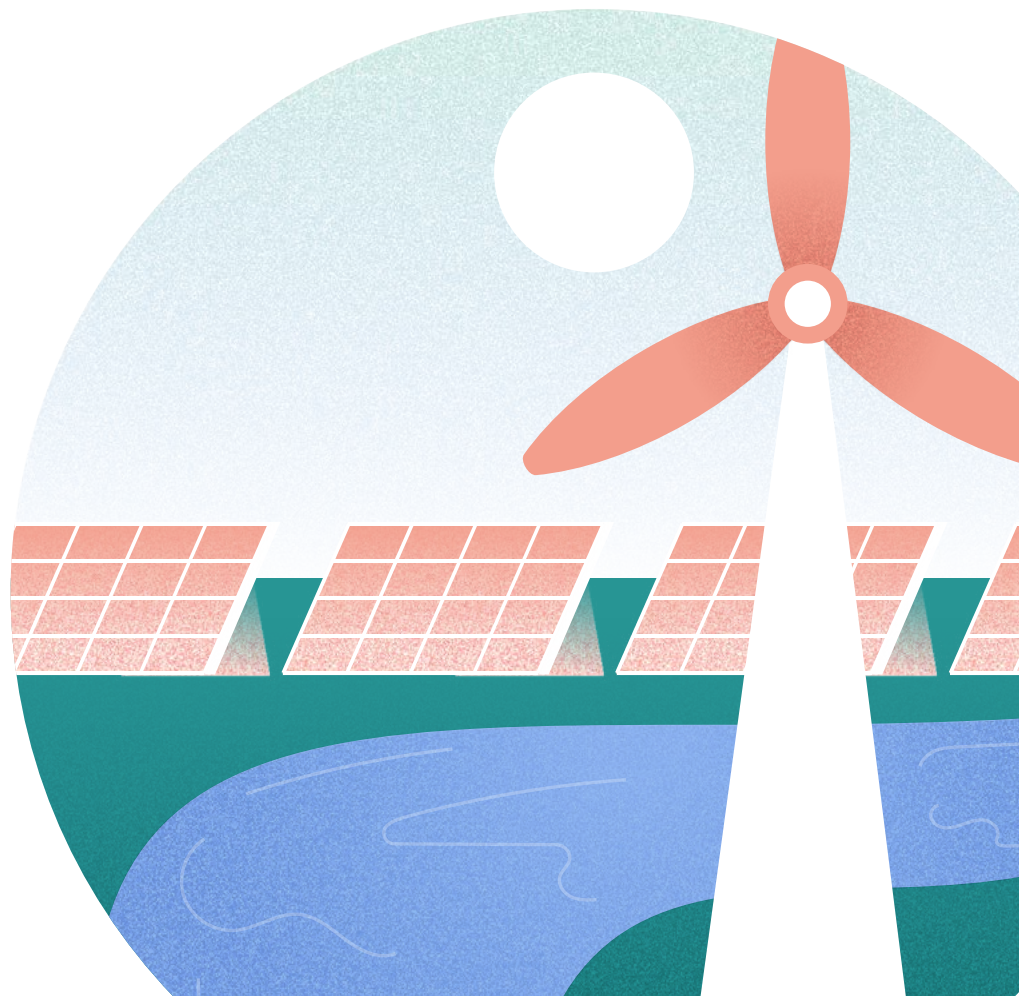
In 2017 and 2018, the company's wind farm project in the Ben Tre province benefitted from PFAN's advisory services, helping it to fine-tune the business plan, to review and finalise the selection of wind energy technology, and to connect with different potential investors.

With this support from PFAN, and through resulting discussions, the project evolved and grew from an initial plan for a 30 MW onshore wind farm (Thien Phu 1) to include another 30 MW nearshore wind farm (Thien Phu 2), and with an exciting larger vision of more than 1,000 MW of both onshore and offshore wind farms in the Ben Tre Province.

In addition to customised support from seasoned advisors, PFAN introduced TPE to a strategic

financing partner, Queen Capital Finance, who will together with TPE undertake the largest wind energy farm in the Mekong Delta.

PFAN has also supported TPE through a TPTA grant that has been used to provide partial support for the cost of the consulting services for third-party appraisal of the feasibility study for the two wind farms. This support is essential for the current phase of the project (60 MW) and will help trigger the investment in the larger second phase of 500 MW wind project development through 2025, and targeting a total of 1,000 MW in installed capacity by 2030.



# PAKISTAN PRIVATE SECTOR ENERGY PROJECT

In 2021, PFAN achieved a major milestone with the launch of the Pakistan Private Sector Energy Project (PPSE). The project focuses on expanding the portfolio of commercially-viable clean energy projects in Pakistan and providing support to enable them to access financing and reach financial close.

Despite launching in the midst of the Covid-19 pandemic, the project has steadily been gaining traction and has already developed a pipeline of 19 projects with a total aggregate investment ask of

USD 220 million.

With dedicated team members and advisors from across Pakistan and the world, PPSE is bringing diverse perspectives and experiences to transaction and financial advisory services in Pakistan.

Since PPSE's launch in February 2021, PPSE not only hired its dynamic team but also managed to make steady strides in its project origination and bridge the gap between clean energy companies and investors.



The Pakistan Private Sector Energy Project is proudly funded and supported by USAID, a premier international development agency and a catalytic actor driving development results



## PPSE since inception

Total Advisors

14

Female Advisors

3

Gender-focus events attended by advisors

7

Specialist events organised

4

Partnership agreements signed

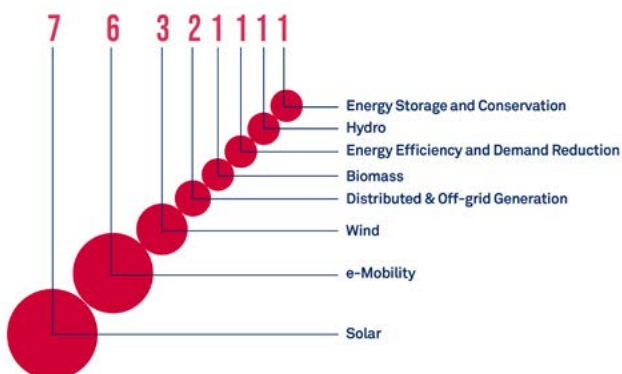
3

International events attended

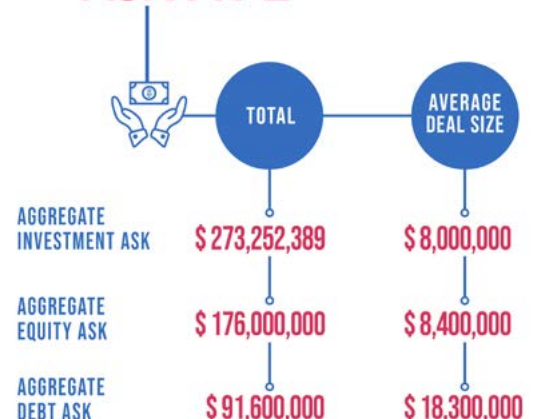
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## 22 PPSE PIPELINE PROJECTS TECHNOLOGY AREAS SEGMENTATION

NUMBER OF PROJECTS



## CURRENT INVESTMENT ASK TYPE



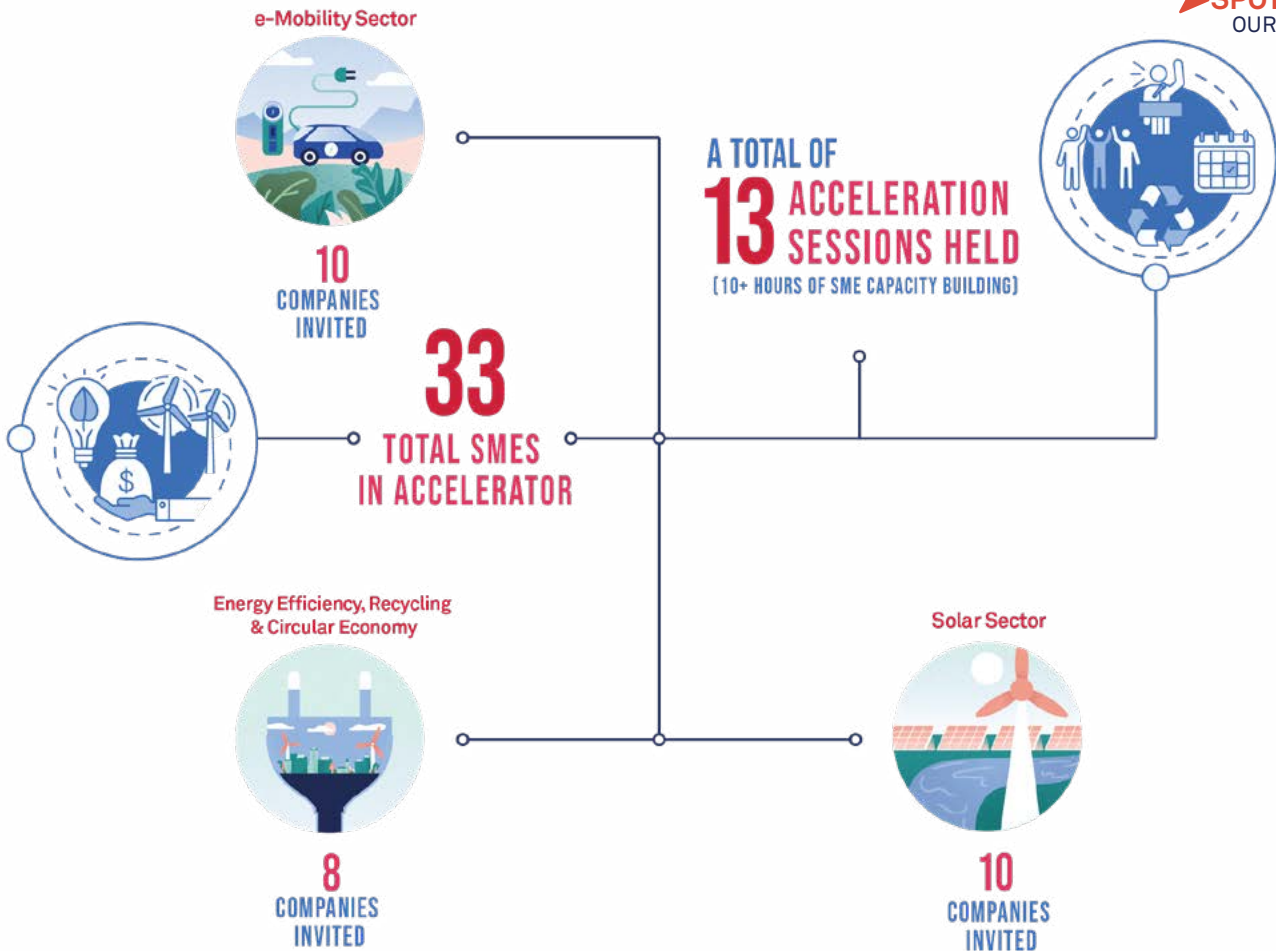


**SPOTLIGHT**  
TRANSATLANTIC  
ENERGY PRIVATE LIMITED



**SPOTLIGHT**  
OUROBOROS

# PFAN's Pilot SME Accelerator - Launched the first time in Pakistan



## Strategic Partnerships signed in 2021



### JS Bank

JS Bank Limited is a leading Pakistani commercial bank and a prominent majority-owned subsidiary of JS Group. PPSE project has partnered with JS Bank to bolster its outreach to financial institutions in the country, garner investment knowledge and opportunities for clean energy companies in its pipeline.



### Sindh Enterprise Development Fund

Government of Sindh launched the Sindh Enterprise Development Fund (SEDF) to facilitate efficient production, processing, and market linkages in agriculture to build efficiency. Part of that mandate is promoting clean energy in the agri-sector and PPSE has joined hands with SEDF to support SMEs working towards greening agriculture in the province.



### Sindh Energy Department

The department is responsible for prospective planning, policy formulation, and conservation strategies for the province's energy and is looking to increase its clean energy mix. In order to help the department with these goals, PPSE has signed an agreement with SED.

## Meet our Network in Pakistan

A key pillar of project origination and induction to the pipeline is having a robust base of local advisors trained on PFAN methodology. In 2021, PPSE brought 14 advisors on board with diverse financial and banking backgrounds in energy, three of whom are women, despite the lack of women in business and finance in the country due to systemic barriers in a male-dominated field.



HASAN AHMAD



SHEZAD ABDULLAH



MUHAMMAD OMAR QASMI



OSMAN HASHMI



SAAD LATIF



UMER HABIB



ALI SHEIKH



FIZA FARHAN



HIRA MUMTAZ



MOHAMMAD SAJJAD MOGHAL



HIRA WAJAHAT



SARA WAJLI



OMAR NAEEM



SAAD REAZ



MOHAMMAD MAJID MUNIR



IMRAN JATTALA

## Meet the PPSE team



PETER STOREY  
Chief of Party (Acting)



GHAZIL JABBAR  
Deputy Chief of Party



AMMAR QURESHI  
Investment Expert



M HAMMAD BASHIR  
Project Expert



MAVRA BARI  
Communications and M&E Expert  
Gender Focal Person, PPSE



SANTIAGO NOCELLI PAC  
Programme Associate



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## Advisor Spotlight



### PFAN ADVISOR Omar Qasmi

Omar Qasmi has 15 years of experience in the energy sector across operational, consulting and project management roles. He has helped in building and managing eight renewable energy power projects with a combined value of USD 500 million in Pakistan, where he with his team also supported end-users to integrate sustainable energy solutions into their livelihood. His portfolio includes power, manufacturing, insurance, renewables and steel sectors.

Omar is an electrical engineer with a degree from the University of Bradford, UK and has worked on renewable energies at a micro-level and is well-versed in electricity projects and national regulations. He is an energy auditor and was part of the Training of Trainers programme carried out by the National Energy Efficiency and Conservation Authority.

Omar is currently advising TransAtlantic Energy Private Limited.



### PFAN SME ACCELERATOR ADVISOR Hira Wajahat Malik

Hira leads the projects and programs at Stimulus with a focus clean-tech and innovation. She serves as a facilitator to create social and climate impact and is involved in the implementation of various impact focused entrepreneurial programs in Pakistan and internationally. Hira is also involved as a consultant with different organizations / industries with a focus on sustainability.

#### What's your role with PFAN PPSE?

Hira: PFAN PPSE is implementing an SME Accelerator, which is being delivered by the Network for Global Innovation (NGIN). My role is to support NGIN as Pakistan National Expert, by sharing critical insights into the local innovation ecosystem and support the delivery of the program through coaching / mentoring of teams.

#### How does the PPSE Accelerator differ from others and what unique selling points does it have?

The PPSE Accelerator is unique in its focus on clean technology, particularly energy and associated themes of mobility, circular economy and energy efficiency. There is no other accelerator of this nature running in Pakistan.

#### How is the PPSE Accelerator helping early stage companies?

A lot of early stage companies struggle as they do not get focused support and insights relevant to their start-up in terms of guidance and knowledge that will help them to scale and grow. The PPSE took a converse approach by spending time in understanding the challenges of the companies specifically and then delivering the relevant coaching / Masterclasses as opposed to pushing a pre-defined program. The flexibility of the program and adapting to the circumstances of the companies is really adding value. Further, a lot of companies were doing well at the local level but they are also getting insights and preparation on how to benchmark themselves on international arena.



# PPSE Events and Updates



## Launch of the Pakistan Private Sector Energy Project

In partnership with the United States Government, the United Nations Industrial Development Organization (UNIDO) the Pakistan Private Sector Energy Project was officially launched on 3 February during a virtual event which brought together key stakeholders from the private and public sector. The Private Financing Advisory Network is playing an integral part in this project by expanding the portfolio of commercially-viable small and medium-scale clean energy projects and providing support to enable them to access financing and reach financial close.

## Pakistan E-Mobility Forum Discusses Opportunities and Challenges for Electric Vehicles

E-mobility is a focus area for the PPSE project and aims to support EV scale up in the country. To this effect, an e-mobility forum took place on 26th August 2021. The webinar brought together several stakeholders and discussed how electric vehicles can be captured as an economic and environmental opportunity. This webinar also discussed the potential provided by the government's updated EV policy as well as the bottlenecks due to the reality on-ground.



## PFAN Launches its Flagship Accelerator in Pakistan

To amplify and support early-stage green-companies at the Small Medium Enterprise (SME), PPSE launched PFAN's first ever accelerator program in Pakistan. The accelerator program is delivered by the Network for Global Innovation (NGIN), an international organization with experience and demonstrated success supporting thousands of clean energy entrepreneurs in over 22 countries, including Pakistan.

## Spotlight on Sindh: Opportunities for Clean Energy SMEs

PPSE organized a webinar with the Sindh Enterprise Development Fund on 30th September 2021 to discuss investment and financial opportunities to boost private sector investment in clean energy in Sindh. The session covered opportunities and challenges for clean energy deployment and financing solutions, particularly targeting agricultural value chains in biomass, biogas, solar and wind energy, with key private & public stakeholders in the southern province.



## Multistakeholder Workshop on Biogas

PPSE's roundtable discussion on 16th December 2021 brought together diverse perspectives from the biogas sector: from academia, industry, small-scale farmers, government, development sector and financial institutions. While Pakistan has immense potential to scale up biogas owing to its vast agricultural sector and under-utilised capacity in rural lands, biogas is yet to proliferate like other renewable resources such as solar and wind on a mass scale. To address the technical and practical lacunas in the biogas sector, a whitepaper will be formulated from the learnings of this discussion and be widely disseminated to multiple stakeholders.

## PFAN PPSE at Dubai Expo 2021

Peter Storey, Global Coordinator at PFAN, delivered a presentation at the Dubai Expo sharing about the PFAN and PPSE project's clean energy projects globally, intervention in Pakistan and demonstrated success being applied to help the country's clean energy transition.



In that vein, the Government of Sindh's Energy Department signed an agreement with PPSE to crystalize private-public commitment to a greener future. The signatories were Peter Storey, Acting Chief of Party PPSE and Imtiaz Shah, Director of Alternate Energy, Sindh.

# SPOTLIGHT: PPSE PROJECTS IN THE PIPELINE

## Ouroboros

Province

**PUNJAB**

Business type

**SCALE-UP**

GHG mitigation impact so far (tonnes of CO2e)

**42000**

Technology Area



**WASTE-TO-ENERGY**

Female Advisors

**3**

Locally-based Advisos (%)

**78**

Total number of projects supported

**15**

Investment Ask (USD)

**\$425,000**



**GO TO WEBSITE**  
OUROBOROS

Registered in 2017, Ouroboros Waste Management Private Limited aims to bring an energy efficient solution to Pakistan's used PET bottle market which is a cottage industry that relies heavily on informal scavenging.

Ouroboros is an impact driven venture committed to change the lives of people working in the informal waste sector and improving the country's waste management by introducing circular economy and hybrid business models. They are working to re-structure supply chains to have 'equitable distribution of gains', i.e. material circularity and 'sustainable livelihood' for a zero waste on waste collection/plastic recycling that works as a scalable and transferrable model in emerging markets.

They provide end-to-end waste management services helping partners and clients develop responsible and sustainable solutions addressing present day solid waste disposal and recycling challenges. As a significant reduction in GHG emissions as the majority of MSW is openly dumped and burned, by increasing collection of MSW and disposing of in designated zones, Ouroboros has also reduced the opportunity of it being burned and polluting water with heavy metals and poisonous gases, mitigating 42000 tonnes of CO2 emissions thus far.



**Ali Syed Raza**  
Founder of  
Ouroboros

“What stands out with PFAN PPSE is the quality of the advisors who really understand the market and sector I am in and can tangibly provide guidance beyond a feasibility study for a bank. My advisor and the program has been able to help me align Ouroboros much more effectively.”

# TransAtlantic Energy Private Limited

Province

**JHUMPIR**

Investment Ask (USD)

**\$10,000,000**

Business type

**SCALE-UP**

Technology Area



**WIND ENERGY**

Expected IRR (%)

**13**

Expected GHG mitigation impact (tonnes of CO2e)

**88000**

Investment Ask (USD)

**\$425,000**



TransAtlantic Energy Private Limited is a 50MW wind power project being developed in the province of Sindh in the wind corridor called Jhumpir, which is known for its superior wind regime. This Independent Power Provider (IPP) aims to provide power to the national grid for 25 years under an EPA with the Government of Pakistan on a Build Own Operate (BOO) basis. The project aims to electrify 600 households in the country's rural and urban areas, while creating 2,500 on-site jobs, in addition to improving health and educational facilities for the locals. It is estimated that 88,000 tons of CO2 emissions will be mitigated.

This project also made it to the Alternative Energy Development Board (AEDB)'s approval for issuance of letters of support (LOS) for 11 wind power projects in Pakistan and offers an expected USD IRR of 13%.

Electricity generated will be supplied to the national grid to be consumed by domestic, commercial and industrial customers, adding to the country's energy security and the government's goal of obtaining 30% of its energy from renewable resources by 2030.



**Waqas Anwer Qureshi**  
CEO

“PFAN has a strong local and international network who understand finance well. As we are a more mature company, our reason to join PFAN was access to finance and as we are coming close to stage 3 of our PFAN journey, we look forward to meeting more investors and reaching financial close.”





# SUCCESS STORIES

erdillumine  
[▶ GO TO WEBSITE](#)

**Erda  
 Illumine**



Technology Area

**BIOMASS**

Country

**INDIA**

In India, the founders of Erda Illumine found themselves seeking new ways to fight climate change. Burning agricultural waste has long been a major cause of air pollution in the country, with efforts to stop it failing every single year. Fumes contribute to amassing greenhouse gases, while endangering the health of hundreds of millions of people.

It was this thinking that led co-founders Etti Khanna and Gagandeep Arya to their vision — “To provide a sustainable and economical solution to decarbonise our ecosystem” — soon settling on biomass palletisation. Erda Illumine Alternative Fuel Pvt Ltd was born and soon implemented a pilot plant in the city of Nagpur located in the central Indian state of Maharashtra.

“We looked at different projects closely and settled for biomass palletisation since it was eradicating both local air pollution and global warming,” says Etti Khanna. “The opportunity gap is very large.

There is space for many players.” Erda Illumine’s is double-dividend solution, taking agricultural waste as their raw material, converting it into biomass pellets that can act as fossil fuel replacements for industry.

The potential impact of Erda Illumine’s innovative biomass fuel on the Sustainable Development Goals are copious, with benefits ranging from new sources of income for farmers increasingly facing poverty, the provision of alternative energy sources that are both green and affordable, and the creation of a resilient energy source for sustainable industrialization yet to come.



**Etti Khanna**  
 Co-founder of  
 Erda Illumine

“We all know ‘the mind is like an umbrella, it only works when it is opened’. The PFAN team opened our minds and brought us clarity of vision, which is an essential ingredient to defining action plans.”



“The rigorous training and guidance we received from PFAN mentors framed our thought process,” says Etti. “We all know ‘the mind is like an umbrella, it only works when it is opened’. The PFAN team opened our minds and brought us clarity of vision, which is an essential ingredient to defining action plans.”

“Post training, we have been diligently working towards our expansion plans. With high levels of awareness towards climate change and Save the Soil, the market is now geared to use our clean fuel biomass pellets instead of the polluting fuels like coal, diesel and petroleum gas. We are ready to go ahead and involve investors and increase our horizon. We are forever indebted to the PFAN team, they helped us create a clear vision aligned to the investors’ expectations. We would take this opportunity to humbly thank them.”

In operation since 2015, it’s taken several years for Erda Illumine to stabilize operations, troubleshooting a variety of technological barriers along the way. Different types of agricultural waste are available from season to season, each coming with varying properties.

“Initially the agricultural wastes did not bind, and we had lot of mechanical breakdowns,” explains Khanna. Overtime, the team devised combinations that could bind, and how to deal with and financial-

ly prepare for inevitable mechanical breakdowns. “6 years into this stream, we have mastered our operations!” Nonetheless, R&D remains a key part of Erda Illumine’s activities.

Currently operating at a plant capacity of 140MT/day, the firm is seeking funds to expand its exciting operations. PFAN’s advisors have played a key role in expansion thus far, offering vital advice and inviting Erda Illumine to key events.

The startup was even a runner up for Best Business Plan at the 2018 PFAN Asia Clean Energy Financing Awards in Singapore. Considering the replication potential and growing demand for green energy throughout India, Erda Illumine is expanding at just the right time, very much able to expect large positive impacts on the back of India’s government beginning to roll out mandates for the use of biomass pellets in 2021.

“It’s inspiration that drove us,” explains Khanna. “We have been climate change consultants by heart and have been providing Climate Change and Sustainability advisory services to Indian industries since 2000. We all understood we need to change the way of doing things before we reach a point of irreversible climate change situation.”



# GSR Energy Holdings

**GSREHL**  
 ► GO TO WEBSITE

Technology Area



**BIO-REFINERY**

Country

**BELIZE**

Investment Amount (USD)

**\$19,000,000**

Business type

**GREENFIELD**

IRR (%)

**30**

GHG mitigation impact (tonnes of CO2e/year)

**200,000**

In India, the founders of Erda Illumine found themselves seeking new ways to fight climate change. Burning agricultural waste has long been a major cause of air pollution in the country, with efforts to stop it failing every single year. Fumes contribute to amassing greenhouse gases, while endangering the health of hundreds of millions of people.

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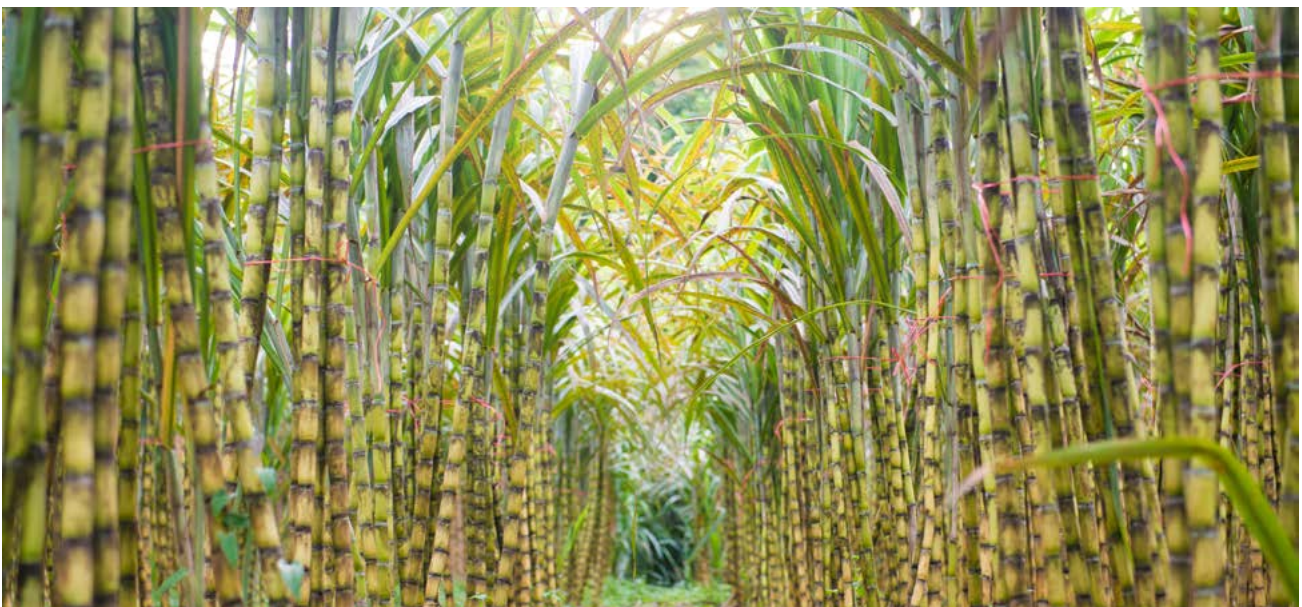
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**Sharon Hughes**  
 Co-Founder & CEO of  
 GSR Energy Holdings

“PFAN has helped us focus our approach and attract foreign direct investment. We have a very small amount of time to catch the investors’ attention. PFAN has helped us improve how we do that.”



The GSR Biorefinery in Belize project constitutes a breakthrough for the economic production of low-carbon liquid fuels. This breakthrough has been sorely needed, as the anticipated contribution of renewable liquid fuels to global warming goals has been woefully lacking, with a 22-billion-gallon shortfall in government-mandated ethanol supply predicted for 2022, while at the same time providing 5MW of firm electricity capacity to the Belize electric utility.

For PFAN Advisor Patrick D’Addario, the difference between GSR and other climate smart businesses is the expertise behind the brand, and the dedication the company has brought to the PFAN process. GSR is made up of highly trained technical people, who often know nothing about money or speaking to people who only ‘know money’. “These are two different languages. The PFAN approach is to help bridge the gap between these two groups and to align the language being spoken.” “It’s more than guidance. PFAN creates the opportunity for transactions to happen,” says D’Addario. “PFAN has to be relevant enough to get people to participate.”

“Sharon has rearranged pieces so that the project could be attractive to other players. This is what the PFAN process is all about.”

“We can lead by example: not only can we save oil companies money, provide a great return on investment, and ensure energy resilience, but we will also be able to quantify that gender equality is more profitable and better for the environment,” said Hughes.

Each of the team has a different reason for this gender-focus; some are going it for their daughters and nieces, while Hughes herself is doing it because her father and husband said she could. In fact, while research shows that women in the US will not earn equal pay in this generation’s lifetime, GSR shows that it can happen 34 years earlier simply through the way the company has been structured. ‘It doesn’t need to be hard to reach SDGs in business. We are starting from the beginning and want to show others how to do the same.’

As the world’s first women-owned, lowest-cost, highest-profit biorefinery awaits its final 3% foreign direct investment, the company is preparing the groundworks – literally. Utilizing land unneeded for food cultivation, GSR’s sugarcane will require no additional irrigation and use organic ethanol production by-products for fertilization, producing 22 million gallons of ethanol yearly. One percent of Belize’s work force will be engaged in the production chain, with women receiving equal pay and holding at least half of positions at all levels.

The GSR Team has won a total of US\$225,000 in grants from the Inter-American Development Bank and USAID for its GSR Biorefinery in Belize project. Subsequently, PFAN advisory support helped the GSR team to focus its approach to investors and to revise its business model to attract a range of public and private investors.



# Impacc Stoves



Technology Area



**CLEAN COOKING**

Country

**ETHIOPIA**

Investment Ask (USD)

**\$200,000**

Business type

**GREENFIELD**

GHG mitigation impact (tonnes of CO2e/year)

**810**

Perhaps not the futuristic solution you were expecting, the Noah stove is a groundbreaking piece of low-tech innovation built from clay and metal. This little gasifier stove has huge potential to reduce carbon footprints, create jobs, and best of all address an under-discussed issue of gender inequality: exposure to household air pollution (HAP). According to the WHO, smoke-producing cooking practices are causing acute respiratory diseases, cancers, and more, with women and young children affected most.

Near-smokeless, the Noah stove solves this problem while utilising locally-sourced and locally-repairable components, with one early estimate (by the Forschungszentrum Jülich, Germany, due for reconfirmation in collaboration with Addis Ababa University) also estimating every Noah stove replacing an open fire to save 1.8 tonnes of CO2 annually. What's more, rather than simply producing ash, the stoves gasifies wood into biochar that can be sold for use as an effective fertiliser. The stoves even reduce the high risk of burns while cooking, with a surface temperature of some 30°C.

"Imagine a woman who uses a stove and gets paid \$5 a year to use it!", states the venture's co-founder, Jochen Moninger. "We are convinced it can change the world." This cooperation between Moninger's social change non-profit Impacc GmbH and clay-building experts, Pro Lehm has been working on setting up its operations in Southern Ethiopia, based around the city of Hawassa. The target: to establish 45 decentralized stove factories and some 150 direct jobs by 2025, providing energy-and life-saving, not to mention potentially money-earning stoves to thousands of households along the way.

According to Moninger, the population's enthusiasm for the product is already palpable too. Following one demonstration of the Noah stove at the launch of a new workshop in the town of Awash in Central Ethiopia, almost a hundred locals began queuing up outside the craftsman's house wanting to purchase their own, giving the stoves their own local nickname: gelegile, which translates roughly as "complete existing problem solver".

With PFAN's expertise and insight, the venture has been able to evolve to its next stage, proving its concept and building a micro-franchising model for its next half-decade of development and growth. Branching out comes with its own issues too however –when tested at the higher altitudes of Addis Ababa, stoves were found to start producing smoke again, a problem soon solved via remote collaboration between Pro Lehm in Germany and the local craftsman in Ethiopia. Regional market dynamics continue to evolve the product too, leading to experiments with differing colours and shapes in the stoves.

"The buying habits of village people differ from city people," says Moninger. Happy customers have even already suggested Impacc and Pro Lehm get to work on a larger model specially designed for cooking injera flatbread. Within a few short years, the Noah stove itself could be just as much an East African staple as injera, turning life-saving carbon reductions into actual earnings for countless families.



“Imagine a woman who uses a stove and gets paid \$5 a year to use it! We are convinced it can change the world.”

**Jochen Moninger**  
Co-founder of Impacc Stoves



# Perfekt Pak

Technology Area



**ENERGY PRODUCTS FROM FORESTRY**

Country

**UKRAINE**

Investment Amount (USD)

**\$30,000,000**

Installed capacity (MW)

**5**

GHG mitigation impact (tonnes of CO2e/year)

**43460**

Project IRR (%)

**16**

Business type

**MERGER, ACQUISITION OR JOINT VENTURE**



**▶ GO TO WEBSITE**



**▶ VIDEO SUCCESS STORY**

Ukraine consumes about 30 billion cubic meters of natural gas a year, mostly for heating and industrial purposes. With 42 million hectares of agricultural land, the country’s agricultural sector can harness biomass from a large variety of materials, including wood, as a promising alternative energy source.

At present, biomass accounts for 9 percent of Ukraine’s total heat production. Contributing to this growing share of energy production, Perfekt Pak produces wooden pallets and uses the production waste to help power not only the company itself but also Stryi, a town in the region of Lviv in Ukraine, by converting it into electricity and heat and selling the energy to the grid at a profitable green tariff.

To produce electricity and heat, Perfekt Pak uses the classic steam-power cycle. The biomass (wood waste) is burned in the steam boiler to produce heat energy, converting feed water into high temperature and high-pressure steam, which then goes through steam turbines where it performs mechanical energy. This energy rotates the turbine blades to produce electrical energy in the generator rotor.

The steam extracted from the turbines can be used for various process needs and hot water heating for hot water supply, district heating, timber heating and drying agricultural products and chambers.



Perfekt Pak benefitted from PFAN’s advisory services, in particular in the areas of preparation of their business plan, project structure, economic feasibility and introductions to investors.

“Thanks to PFAN, we met Yuriy Vaskevich [an investor], who supported my strategy to develop the business and increase production by 300%” says Sergii Telishevskiy, owner of Perfekt Pak.

“PFAN helped me make the right financial model, checked my calculations and adjusted them. They drew my attention to the mistakes I made – I managed it thanks to PFAN Advisors”.

The social, economic and environmental benefits are multifold. As a source of renewable energy, biomass helps reduce significant carbon dioxide and greenhouse gas emissions, slowing down the impact of global warming and climate change.

In addition to providing the town with a fuel source to keep households and social institutions warm, it also increases job opportunities and accelerates the country’s transition to a green economy.



“Thanks to PFAN, we met an investor who supported my strategy to develop the business and increase production by 300%.”

**Sergii Telishevskiy**  
Owner of Perfekt Pak



# Selex Motors

Technology Area



**CLEAN TRANSPORT**

Country

**VIETNAM**

Investment Amount (USD)

**\$2,100,000**

GHG mitigation impact (tonnes of CO2e/year)

**5400**

Project IRR (%)

**50**

Business Type

**SCALE-UP**

In Vietnam, scooters and motorbikes have long been an essential part of city life. Even as a native Hanoian himself, Nguyen Nguyen – co-founder of Selex Motors – remembers the shock of getting re-acquainted with Vietnam’s busy streets after years studying abroad. “I was struck by how bad the air pollution is ... it was like a sea of two-wheelers!”

It wasn’t long until Nguyen, along with fellow engineers Hai Nguyen and Quang Nguyen founded Selex Motors, with the goal of driving sustainability and cleaning city air by popularising electric vehicles (EVs) and putting green energy into everyday transportation.

“In order for EVs to take off, it has to be convenient in terms of charging the battery,” explains Nguyen, fully aware of how off-putting a 3 or 4-hour wait to charge a scooter can be. Selex’s solution, however, solves this problem in elegant fashion, enabling EV drivers to drive off with enough power to drive up to 150km after only 1 minute at a battery station. The trick? Batteries aren’t charged at Selex’s battery stations, they’re swapped! Selex’s battery exchange stations can be found at

convenient spots, such as grocery stores and cafés, easily located via the Selex app or via Google Maps integration. Drivers can typically expect to save 25% on fuel costs, and 50% on maintenance, while optional cargo boxes can be installed on the rear of the bike, able to carry 50% more weight than other comparable EVs.

This makes emissions-free EV the cheapest and smartest choice for personal and business use alike. While the concept behind Selex is certainly an ingenious one, applicable to almost any city in the world, even the smartest new firm has to raise startup capital and make vital connections from the get go.



**Nguyen Nguyen**  
Co-founder of Selex Motors

“The biggest value I got from PFAN was definitely the connections they have with other corporations, and potential investors... I’m thankful for the people there, they put a lot of effort and resources into what they believe is good for us.”



“When we first started, I read a news piece on LinkedIn about PFAN calling for making an impact on sustainability,” recalls Nguyen. “I saw the potential of connecting with investors.” Selex connected with PFAN’s advisors, and within a year was rubbing elbows with a significant number of potential investors at the 2019 Asia Forum for Climate and Clean Energy Financing in Singapore, a regional investor forum organised annually by PFAN.

“We formed connections there that have lasted until today,” says Nguyen. “The biggest value I got from PFAN was definitely the connections they have with other corporations, and potential investors... I’m thankful for the people there, they put a lot of effort and resources into what they believe is good for us.”

While there’s undoubtedly a tricky road ahead – especially in the context of COVID and the global chip shortage – Selex’s growth is well buoyed by the firm’s incredible potential to benefit city dwellers.

As of early 2022, the startup was able to raise US\$2.1 million in a seed funding round led by Touchstone Partners, and it’s not hard to see why. Selex offers both cleaner air on those crowded streets, and convenient, not to mention fun, new tools for the fast-growing logistics sector, increasing earnings potential for busy urbanites.

Currently in the process of deploying their solution for two big logistics players on the Vietnamese market, Selex is running pilot deployments in both Hanoi and Ho Chi Minh City. The plan is to hit the 100-station mark in 2022, then around 3,000 by 2025.





# SOLshare



Technology Area



**SOLAR ENERGY**

Country

**BANGLADESH**

Business Type

**GREENFIELD**

GHG mitigation impact (tonnes of CO2e/year)

**1585**

Installed capacity (MW)

**0.576**

Investment Amount (USD)

**\$15,950,000**

In 2014, SOLshare co-founder Dr. Sebastian Groh was pleasantly surprised to discover that Bangladesh had close to 5 million solar home systems across the country – double that of his native Germany. Groh visited to see the phenomenon for himself, finding the solar potential of the country all the more impressive.

Today, SOLshare is an award-winning enterprise, working to maximise and develop the potential of an incredible under-tapped resource.

Speaking from Dhaka, Head of Projects, Fundraising and Communications, Salma Islam, explains from where SOLshare’s ‘spark’ came. “We realised that 30% of the energy in these systems is typically lost – that’s something like a \$1 billion dollar market!” What if this gap could be filled, and that potential solar energy efficiently put to use? Better yet, what if homes could turn that excess solar energy into an additional source of income?

“We did our first trial back in 2015, which is still up and running,” says Islam, describing the firm’s first peer-to-peer microgrid of homes putting their excess solar energy to use via SOLshare’s low-cost devices. “They got to share their electricity, and it was our first proof of concept”.

Funding rounds followed, and with the help of their PFAN Advisor, SOLshare was able to complete a full on assessment of its SDG impact, make key connections, and secure all-important startup funds.



**Salma Isla**  
Head of Projects, Fundraising and Communications

“With the help of our PFAN Advisor, SOLshare was able to complete a full on assessment of its SDG impact, make key connections, and secure all-important startup funds.”



Today, it's an award-winning firm with some 114 grids on the ground, and over 15,000 people benefiting from its energy access services. Furthermore, while SOLshare's first systems initially made use of inadequately small 12V DC devices – “around 1pm the batteries are actually full!” Islam exclaims – the newer ‘SOLbox’ meter made by the firm is already evolving beyond of this issue, preserving far more energy and boasting AC compatibility too.

Besides the environmental benefits, additional income brings a range of benefits directly to households making use of SOLshare devices. “I heard an interesting story about one user who wasn't sure how we would be able to pay for his wife's exams before suddenly realising he could cash out his SOLbox,” tells Islam. “During COVID, one of our pharmacists had forgotten about his SOLshare box, which all of a sudden helped to supplement his income.”

The big picture goes even further though, in line with Bangladesh's own aims to firstly provide electricity to 100% of the developing country's pop-

ulation, and by 2041 to ultimately source 40% of all its electricity from renewable sources. “According to the government, we've hit 100% electrification”, says Islam, “...but that's not completely true.”

While the Bangladeshi national grid has quickly expanded, the country's chars (densely populated river islands) have been left behind. “It's not easy for the national grid to access those islands, and it becomes extremely expensive and unreliable. We have over 10 million people living on these chars.”

On top of that, Bangladesh is crying out for improved EV vehicle charging infrastructure, with well over 2 million vehicles charging via unreliable sources. SOLshare is already turning their expertise to building improved batteries and charging possibilities though, hoping to empower more drivers to turn electric. The reliability of SOLshare's low emission solutions, not to mention the possibilities to provide income to poor and remote communities, holds even more untapped potential than Bangladesh's solar networks.



# Ubuntu Towers



Technology Area



**SOLAR ENERGY**

Country

**UGANDA**

GHG mitigation impact (tonnes of CO2e/year)

**1585**

Business Type

**GREENFIELD**

Installed capacity (MW)

**0.576**

Investment Amount (USD)

**\$15,950,000**

Telecommunications is still a developing resource across Uganda. So when an acquisition monopolised the marketplace, Geoffrey Donnels Oketayot like dozens of other Ugandans in the sector, found himself facing redundancy despite years of experience. “So we thought it was wise to grow something indigineous,” explains Oketayot.

Working with two colleagues, Ubuntu Towers was born, not only to bring a local competitor to the industry, but also to serve as an example of fairness to Ugandans and represent the “other side” of employers.

Rolling out and getting started during a global pandemic certainly hasn't been simple. “It was a very trying time,” says Oketayot, “first of all financially but also on the bigger side of it – close to 40 to 50% of our investment normally goes into batches of equipment that are imported, and as you're well aware, there's still a logistical problem across the world.” However, despite all issues Ubuntu were able to deliver on all of the 101 sights proposed in their initial rollout by the end of 2021.

The telecommunications tower industry is a cash-intensive one, so no amount of technical know-how can grow a business without the right financial muscle behind it. After making some 270 pitches to different investors and organisations, it initially seemed like a lost cause.

So against all the odds, how did Ubuntu Towers manage to do it?



**Geoffrey Donnels Oketayot**  
Co-founder and CEO of Ubuntu Towers

“PFAN helped us to get honed, to prepare materials investors would be interested in. They pushed us a lot in terms of being able to engage at a variety of levels in the market, and being able to understand where the opportunity lies.”



“PFAN helped us to get honed, to prepare materials investors would be interested in,” explains Oketayot. “They pushed us a lot in terms of being able to engage at a variety of levels in the market, and being able to understand where the opportunity lies.” With this help, Ubuntu secured equity investment from a big name in African telecommunications, ensuring that initial period of successful implementation.

Perhaps the most direct benefit to Ugandans provided by Ubuntu is employment. In addition to dozens of direct employees, the business indirectly employs over 2,000 people, providing them with secure and fair employment. More broadly however, come the region-wide benefits of improving telecommunications infrastructure. Uganda is a primarily agricultural country with 70% of people engaged in the sector, so enabling smoother communication and payment to empower farmers has a myriad of positive impacts.

Additionally, better connectivity also goes a long way to strengthening both education and health-care in remote areas. People outside of urban centres gain their first access to soft skills education in IT for example. What’s more, some 450 Ugandan landowners already leasing sites to Ubuntu are getting something they never would have expected before: assured and direct income for 15 years from a Ugandan firm.

In any case, it’s only the beginning for the ambitious Ubuntu, and scaling could take a variety of future forms. “We want to implement solar on all our sites as our primary source of power, and then connect all our sites to the grid as a secondary source of power,” says Oketayot. “We’ve already ordered parts for solar for the first sites, which we will be setting up this year.”



# GENDER MAINSTREAMING

**PFAN recognizes not only our responsibility but also the opportunity to contribute towards the overarching goal of gender equality and the empowerment of women within both our internal operations and regional activities.**

## Capacity Building

This year, PFAN’s focus was put on capacity building of the network, better understanding the needs and developing trainings. For this purpose, an organizational gender assessment was conducted to identify current practices, understandings, challenges and priorities. Based on the findings, PFAN, together with Value for Women, developed a pilot training with a group of six PFAN Advisors, which resulted in a series of masterclasses on Gender Lens Advisory Services for the whole network.

Through the masterclasses, the advisors gained an understanding of definitions around Gender Lens Advisory Services, the business case for gender diversity, and the application of the Gender Lenses to climate change mitigation and clean energy projects and businesses. Moreover, the trainings include practical lessons on how to apply a Gender Lens to the PFAN Journey and the advisory services aimed at entrepreneurs. The roll out of the trainings across all PFAN regions was completed in Q1 2022. Initial findings from trainings showed that the understanding of how gender-inclusive business practices and gender lenses can help entrepreneurs with their business challenges and improve their business. Furthermore, the trainings increased confidence amongst advisors in the ability to encourage projects to become more gender-inclusive.

## Gender Focal Points

To ensure that the learnings of the trainings are integrated in the coaching process and the gender mainstreaming efforts are disseminated across the network, PFAN has established Regional Gender Focal points. The Regional Gender Focal Points will be driving gender inclusion initiatives in the regions and ensure long term and sustainable impacts to PFAN projects.



**Agnes Ansah Osei**  
PFAN Regional Gender Focal Point, West Africa

“The role of women in renewable energy and climate finance can never be overlooked considering their significant contribution to the implementation of climate strategies.”

Agnes Ansah Osei is the Regional Gender Focal Point for West Africa. She holds a Master’s degree in Environmental Law and has previously worked with Goldfields Ghana Limited as an Environmental Officer and is currently an independent ESG Consultant based in Ghana.

“The role of women in renewable energy and climate finance can never be overlooked considering their significant contribution to the implementation of climate strategies. Being deliberate about gender mainstreaming has therefore become critical in climate finance. Having worked with PFAN for almost six years, I have seen how deliberate we are about gender mainstreaming. The strategy to increase our gender efforts will impact positively on our pipeline of projects and finance facilitation for investor-ready projects.”



**Cécile Dahome**  
PFAN Regional Gender Focal Point, South East Asia

“The role of women in renewable energy and climate finance can never be overlooked considering their significant contribution to the implementation of climate strategies.”

Cécile Dahome was appointed as the Regional Gender Focal Point for Southeast Asia. She is the Co-Founder and Executive Director of Sevea in Cambodia and has been working and consulting in the field of business and project development, start-up acceleration and access to financing in the sectors of clean energy, adaptation and mitigation, WASH and agriculture for more than 12 years.

“It is widely demonstrated that businesses which are gender sensitive are more successful and resilient in the long run, as women can bring another point of view and perspective. They can have access to targeted sources of finance as well. Yet, the number of these projects is still limited. Supporting them, but supporting also other businesses in Southeast Asia to become more gender sensitive, is one of my key objectives and challenges as part of my role as Gender Focal Point.”

## Collaborations

PFAN has also intensified outreach and connections to other initiatives such as the Accelerating Women Climate Entrepreneurs (AWCE) Initiative and is featured in their report on “Strengthening Ecosystems for Women Climate Entrepreneurs in sub-Saharan Africa”. Moreover, we have contributed to the Gender and Energy Compact led by UNIDO, ENERGIA and GW-NET and joined the Coalition.

In partnership with the EmPower project, a joint initiative by UN Women and the UN Environment Programme active in Bangladesh, Cambodia and Vietnam, PFAN held a virtual event to promote awareness of gender integration in climate resilience and clean energy, and to link women entrepreneurs in the EmPower and PFAN networks with financial institutions and investors, with the aim to scale up investments for women in the renewable energy sector.

The collaboration with AWEDI, the African Women in Energy Development Initiative, has been further increased through a panel discussion with PFAN Advisors on financial literacy and wealth management for resilience among women in the energy sector. The event saw about 40 participants ranging from students to female professionals in the energy sector.

## Further activities

Furthermore, in September 2021 PFAN organised a workshop titled “Embedding gender-smart practices in climate entrepreneurship”. The objective of the workshop was to raise awareness, influence, and inspire entrepreneur support organisations (ESOs) to embed gender-smart practices in their work. 29 participants spread over ESOs, investors and donors discussed the question how to practically incorporate a gender lens in their programmes and investments.

This workshop was a practical step to move further UNIDO and PFAN’s commitment made at the GenderSmart Investing Summit 2021 to call upon organisations to step up capacity building efforts for organisations involved in gender lens investing and entrepreneurial support for clean energy and climate change adaptation businesses.

Finally, PFAN launched a gender campaign on Social Media: This entailed regular posts about success stories of PFAN-supported women-led businesses, articles about PFAN’s gender activities and events, educational posts about the four gender lenses and gender mainstreaming as well as an e-mail marketing campaign #PFANforEqualitycampaign.

Moreover, we launched the Gender Responsiveness video outlining how PFAN contributes towards gender equality and the empowerment of women through the network of expert advisors and how PFAN addresses gender disparities in our work.



▶ GO WATCH  
THE VIDEO

GENDER RESPONSIVENESS AT PFAN


# CASE STUDY

▶ GO TO WEBSITE

## Techno-Hill Engineering, Ltd



▶ REGIONAL COORDINATOR

<b>Technology Area</b>  <b>SOLAR ENERGY</b>	<b>Country</b> <b>MYANMAR</b>	<b>Investment Amount (USD)</b> <b>\$50,000</b>	<b>Business type</b> <b>BROWNFIELD</b>
	<b>Project IRR (%)</b> <b>22</b>	<b>GHG mitigation impact (tonnes of CO2e/year)</b> <b>24</b>	<b>Installed capacity (MW)</b> <b>0.06</b>

Back when Techno-Hill Engineering, Ltd. was founded in 2016, the power needs of some 70% of Myanmar’s rural areas were still not being covered reliably by the country’s national grid. Such massive blind spots leave hundreds of villages on islands and remote areas, not to mention thousands upon thousands of Myanmar with intermittent and over-priced power – or even no power at all. Perhaps nobody is more affected by these rural energy deficits than Myanmar’s female population.

“When we look at the village women, their daily lives are quite hard,” explains Barani Aung, the female founder who leads the team at Techno-Hill Engineering, Ltd. “They have to wake up early, they have to use firewood to cook, they have to do all the house chores”.

Today however, Techno-Hill’s mini grids are providing power to over 6,600 such households, not to mention, all previously out of reach from the national grid in Myanmar. For many of these women, it’s life-changing.

Not only as a Myanmar entrepreneur with a background in engineering, but also as a housewife that Aung herself can understand the impact Techno-Hill is having. “Now that we provide 24-hour electricity, they can use electric cookers... they can save their time! Some households use a washing machine now, or an iron. One lady even started a bakery at her house. Some women [have] opened up shops now.”

Originally setup as a telecommunications concern, Techno-Hill’s raison d’être only came fully into view when the firm found itself seeking power sources for 70 telecommunications tower sites it wanted to install up and down the country. They solved the issue for some off-grid sites by installing new solar power solutions, while others required entirely new mini grids to be put in place.



**Barani Aung**  
Managing Director Techno Hill Engineering Co., Ltd

“Our vision is to provide affordable clean energy to improve lives in rural Myanmar.”

With guidance from PFAN, Techno-Hill has been able to leverage what were initially unforeseen benefits, and attracted support from a variety of sources. In addition to connecting previously off-grid sites, Techno-Hill is making greener energy more affordable and reliable for thousands of homes and SMEs. Their centralised and hybrid mini grid systems sell more reliable power for less than previously paid for utterly unreliable and more carbon-costly services.

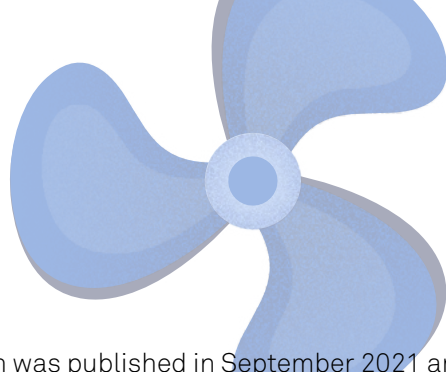
With a growth model built upon first targeting the villages with the highest potential revenue, Techno-Hill is shooting for the moon, and is aiming to provide electricity to 50,000 households by 2025. The project goes far beyond growing a customer base though. Well aware of the benefits her company’s mini grids provide to Myanmar women, Aung sets aside several kilowatt hours of energy free for public services, providing light to thousands in the form of street lamps, or free lighting for schools and hospitals.

All of these developments disproportionately benefit the region’s women, improving access to health and education, providing the opportunity to walk home safely at night on lit streets and literally providing power to fuel those enterprising new ideas. In five short years, the Techno-Hill has already energized a variety of small businesses run by women entrepreneurs just like Aung. “They have better ideas than us!”, says Aung. “It’s worth it to invest when you see these results ... they know how to use electricity.”



▶ **IMPACT REPORT**

# COOLING IN FOCUS



Cooling is estimated to account for around 7% of global greenhouse emissions, more than aviation and shipping emissions combined. The demand for cooling has been constantly growing, and rising temperatures across the world caused by climate change is a major contributor.

To address the pressing need for cooling technologies that are efficient, less harmful, and commercially viable, PFAN partnered in 2019 with the Clean Cooling Collaborative (CCC), formerly the Kigali Cooling Efficiency Program (K-CEP), to promote energy-efficient cooling in developing countries. Since then, more than 20 projects have been supported with business coaching and investment facilitation services.

In March 2021, PFAN and CCC held the Cooling Investment Forum, which was attended by more than 300 investors, project developers 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 the potential investors.

The joint knowledge accumulated by PFAN and CCC throughout their partnership has been reflected in the report “Investing in a Cooler Future for All”,

which was published in September 2021 and can be useful for aspiring entrepreneurs, investors, or anyone who wants to take forward sustainable cooling investments. The report provides an overview of the cooling sector: the key features, challenges and increasing demand, and explains how PFAN and CCC have partnered to offer entrepreneurs operating in the sector better access to PFAN’s proven model of business development support and investment facilitation. This partnership has also contributed to addressing the issues facing the sector such as weak policies, lack of an engagement platform for investors and entrepreneurs, investor bias for localized solutions, and affordability for consumers.

The “Investing in a Cooler Future for All” report shares selected energy-efficient cooling solutions supported by PFAN, such as cold chain products for milk cooling and fruits/vegetable modular solar cold storage developed by Inficold (India), and off-grid Pay-as-you-Go cold storage offered to Kenyan farmers by SokoFresh. Other success stories include ACI Agrolink (Bangladesh), ENdep (Tanzania) and PT Sumber Mina Investama (Indonesia).

PFAN continues to catalyse cooling solutions in developing countries to contribute to a cooler future.



ACI Agrolink shrimp processing plant, Satkhira, Bangladesh



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# GET INVOLVED



## Get advice for your project or scale up your business

The experts in our network can offer you free, personalised one-on-one coaching and targeted introductions to investors, providing a fast-track to investment. If you're an entrepreneur developing a project or scaling up an existing business in clean energy or climate adaptation please contact us or visit [www.pfan.net](http://www.pfan.net) for information on eligibility criteria and the application process

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## Find projects for your investment portfolio

We have a pipeline of investment-ready climate and clean energy projects, coached and carefully vetted by experts and selected for economic visibility, environmental sustainability and social impact. We also actively involve investors from our network in the vetting of our projects, for instance by being involved as judge in our business plan competitions. Contact us to receive information on projects specially selected to match your interests and investor profile or to get actively involved in our PFAN activities.

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## Join our global network of advisors

Are you a financial expert with a track record in raising finance for clean energy and climate change projects? Become part of our global community as an advisor or country coordinator! We offer the chance to work with exciting, high potential projects, reliable, timely payments and international visibility. Please contact us for more information.

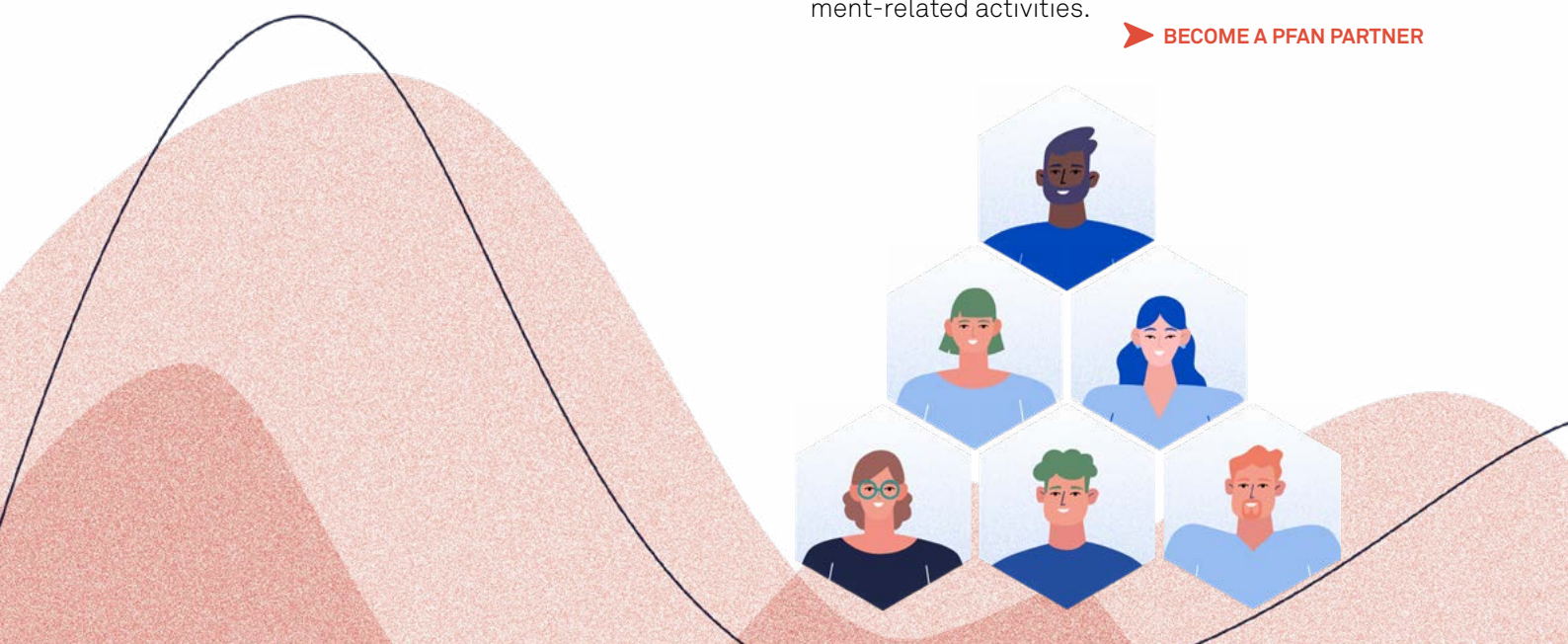
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## Become a PFAN Partner

PFAN works with partners to support our activities in a mutually beneficially partnership. Our partners help us organise targeted calls for proposals, cross publicise activities and events, align with local policy and regulations and the business climate, and expand our local footprint. In turn, we help to build their capacity, organise joint events and outreach and engage in cross-referrals. Contact us to collaborate in investment as well as non-investment-related activities.

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