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MOBILISING PRIVATE FINANCE

EXPERIENCE FROM A DECADE
OF DECARBONISATION



SEED
CAPITAL
ASSISTANCE
FACILITY

SCAF

MOBILISING PRIVATE FINANCE

EXPERIENCE FROM A DECADE OF DECARBONISATION

UN ENVIRONMENT PROGRAMME 2021

Seed Capital Assistance Facility (SCAF) – Mobilising Private Finance. Experience from a Decade of Decarbonisation 2021.

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Executive Summary

To reach the goals of the Paris Agreement, the 2030 Agenda for Sustainable Development and reach Net Zero emissions by 2050, a rapid decarbonisation of global energy systems, the unlocking of private sector capital flows and the building up of climate finance and renewable energy development capacity worldwide is needed.

Reaching net zero emissions by 2050 will require annual additions of 630 gigawatts (GW) of solar photovoltaics (PV) and 390 GW of wind by 2030, four-times the record set in 2020 (IEA 2021, Net Zero by 2050 – A Roadmap for the Global Energy Sector). This will mean that annual energy investments should rise to USD 5 trillion by 2030, and investments in clean energy and energy infrastructure to at least triple by 2030 (ibid.).

At the end of 2020, global renewable generation capacity amounted to 2799 GW after an exceptional 10.3% growth (IRENA, Renewable Capacity Statistics 2021). In 2021, annual global energy investment is set to rise to USD 1.9 trillion, with renewables accounting for 70% of the total of USD 530 billion spent on new generation capacity globally (IEA 2021, World Energy Investment 2021). Despite these positive trends, the total global spend on energy infrastructure and renewables is still short of the amount needed to reach the goals of the Paris Agreement.

One of the primary challenges slowing the deployment of renewable energy assets in developing countries is the “early stage financing gap.” While the costs of early stage development are comparatively low, the risks and barriers for investors and developers are extremely high, dynamic and constantly changing—especially in frontier markets.

The **Seed Capital Assistance Facility (SCAF)** is a public sector donor-funded Project Preparation Facility (PPF) designed to address this challenge by supporting private sector investment entity managers and development companies working in high-risk frontier markets in Africa and Asia. Through three support lines (SLs) the facility offers pure and repayable enterprise and seed capital grants to help its partners bridge the early stage financing gap, develop bankable pipelines, crowd-in private sector capital and accelerate the deployment of renewable energy projects and clean technologies at scale.

While other facilities and institutions target individual project-level support, SCAF is unique in that it focuses on supporting its partners on a broader level. SCAF is the only publicly funded facility using grants as its only financial support instrument to both fund managers and development companies. Additionally, one essential advantage of SCAF is the alignment of interests it creates between the public finance mechanism and private partners in selecting and supporting projects.

SCAF¹ has delivered support to 23 partners with an aggregate pipeline of over 176 projects (Support Line 1 or SL1) across 31 countries, and provided direct, project-specific seed capital to 43 projects (Support Line 2 or SL2)². The total projected installed capacity of the SL2 seed-funded projects could reach over 1.78 GW and is estimated to generate approximately 8.13 TWh of clean energy. Once commissioned, these SCAF projects are expected to avoid over 4.68 MtCO₂e emissions per annum having the potential to create over 17,000 local jobs.

To achieve these outcomes, SCAF is disbursing and has committed approximately USD 21 million in support through its three support lines reaching a projected total mobilisation of USD 3.47 billion. Due to its performance, the facility has most recently received additional donor contributions worth approximately USD 16.8 million, allowing for a project scale-up both in terms of impact and duration. As the application window for SCAF II is still open and the programme is continuing to bring on new partners, it is expected that the above outputs and outcomes will increase.

SCAF focuses on building the capacity of the investment entity managers and development companies that deliver pipelines of bankable assets as well as individual projects. As a result, it plays an important role in the mobilisation of private sector capital and the provision of pipelines of investment opportunities that crowd-in later-stage facilities, investors and commercial institutions. Furthermore, SCAF contributes to the development of local and regional ecosystems of expertise with the potential to deploy energy and climate solutions at scale.



¹ SCAF phases I and II as of 31.12.2020

² For a detailed definition see chapter “Support Lines” (page 10) or “Annex A: Impact Report Methodology and Supplementary Information

Climate, Energy, and Economic Context

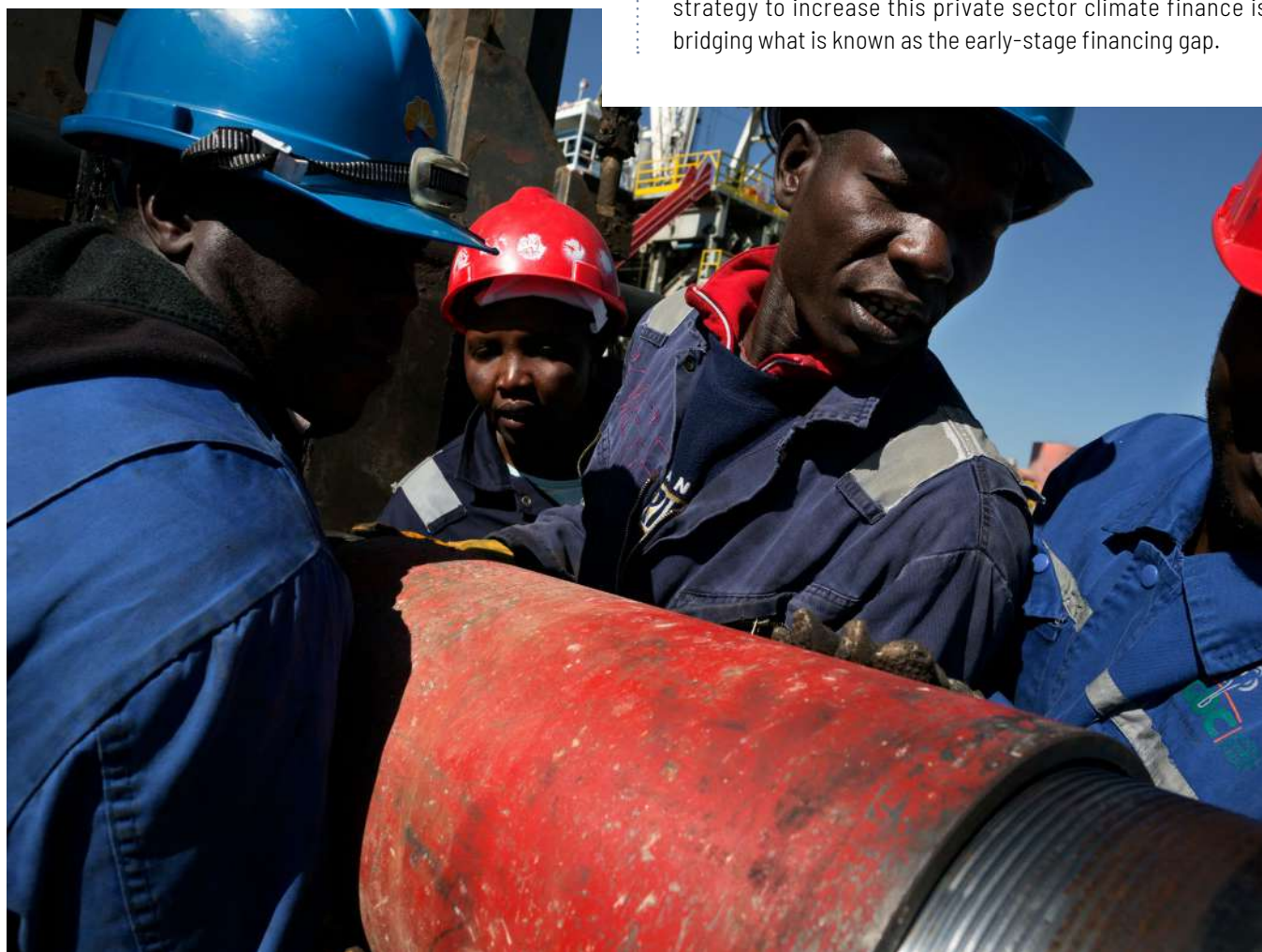
The Paris Agreement and the IPCC highlight the need to limit global warming to well below 2°C, ideally to no more than 1.5°C above pre-industrial levels. For this, emissions must be reduced by 45% by 2030 (compared to 2010 levels) and reach net zero by 2050 (UN 2021, Theme Report on Energy Transition), which requires a rapid decarbonisation of global energy systems, the unlocking of private sector capital and the building up of climate finance and renewable energy development capacity worldwide.

To get on a pathway to 1.5°C, IRENA estimates that over 80% of the USD 131 trillion total energy investments needed between 2021 and 2050 must be invested in energy-transition technologies, including efficiency, renewables, end-use electrification, power grids, flexibility, hydrogen (IRENA 2021, World Energy Transitions Outlook: 1.5°C Pathway). However, the total amount of investment in renewables over the last decade was just over USD 2.7 trillion, averaging approximately USD 270 billion per year (FS-UNEP Center/BNEF, 2020). Renewables accounted for 13.4% of globally generated electricity (up from 12.4% in 2018) and represented 77.6% of all newly installed capacity in 2019 (FS-UNEP Center/BNEF 2020).

Decarbonisation can also bring numerous social, environmental and economic development co-benefits. The IEA estimates that, in a Net-Zero Emissions by 2050 Scenario clean energy will lead to a net increase of 9 million jobs by 2030, with jobs in solar and wind more than quadrupling. Additionally, aligning energy and infrastructure investments with the UN Sustainable Development Goals (SDG) will strengthen our adaptive capacity to future shocks, save lives, reduce poverty, and lower future adaptation costs.

According to the Bloomberg New Energy Finance (BNEF) and FS-UNEP Collaborating Center (2020), 79% of total global renewable energy investments in 2019 (private and public) went to developed OECD countries (46%) and China-India (33%), leaving only 21% for developing (non-OECD) countries, where financing and investment support is needed most.

Given the limitations on developing countries' national budgets and their public, bilateral, and multilateral funding sources, it is imperative to develop innovative, low-cost, high-impact, cross-sector strategies to build local capacity and develop bankable investment opportunities that attract and mobilise increased volumes of private sector climate finance. A key strategy to increase this private sector climate finance is bridging what is known as the early-stage financing gap.



Early Stage Project Financing Gap

The **Early Stage Financing Gap** is the result of a combination of risk-based decision-making preventing mainstream private sector lenders and investors from mobilising capital for early-stage renewable energy projects, and the risks, barriers and milestones that developers and fund managers must overcome

to de-risk and develop bankable investment opportunities. The below table summarises some of the most common risks and barriers impacting renewable energy projects in developing countries.

TABLE 1 COMMON RISKS AND BARRIERS IMPACTING DEVELOPERS AND INVESTORS

Lack of Access to Capital	Real and perceived risk, deal size, creditworthiness, new market entry, limited track records, lack of collateral, high transaction costs to deal size, unfavourable terms, and other factors impact availability and cost of capital and credit.
Lack of Bankable Projects or Pipelines	A clear barrier for investors, financiers, fund managers, and development companies that have or are committed to entering a new market, especially in developing countries.
Lack of Knowledge and Awareness	This is related to both individual and institutional knowledge and data about target markets and sectors, and how to properly identify, quantify, and evaluate the risks and opportunities of renewable energy projects in frontier markets.
Lack of Skills and Expertise	There is a shortage of experienced development companies and fund managers with the full range of necessary technical, financial, and managerial skills to develop bankable projects to financial close, as well as a lack of essential skills and technical experience among the local workforce.
Policy and Regulatory Risks	Impacts all stakeholders, is heightened in frontier markets, and includes future and retroactive changes in government policy and regulatory environments, especially energy-related tariffs and subsidies.
Political Risks	Impacts all stakeholders, is heightened in frontier markets, and includes exposure to corruption, political changes such as war, terrorism, social unrest, coups d'état, expropriation of assets, breach of sovereign contracts, etc.
Frontier Cash-flow Risk	Investors are concerned about the ability of developers and fund managers to clearly anticipate need and maintain enough working capital to cover increased costs of operating in frontier markets. Several stakeholders have identified this as a heightened frontier barrier to overcome before capital can be invested, especially at the earliest set-up and establishment phases of development.
Administrative and Institutional Risks	Primarily a risk for the developer but impacts all stakeholders due to increased project costs resulting from potential delays in permitting, access to relevant records and data, lack of clarity on local rules and requirements, and other bureaucratic issues that can increase development costs.

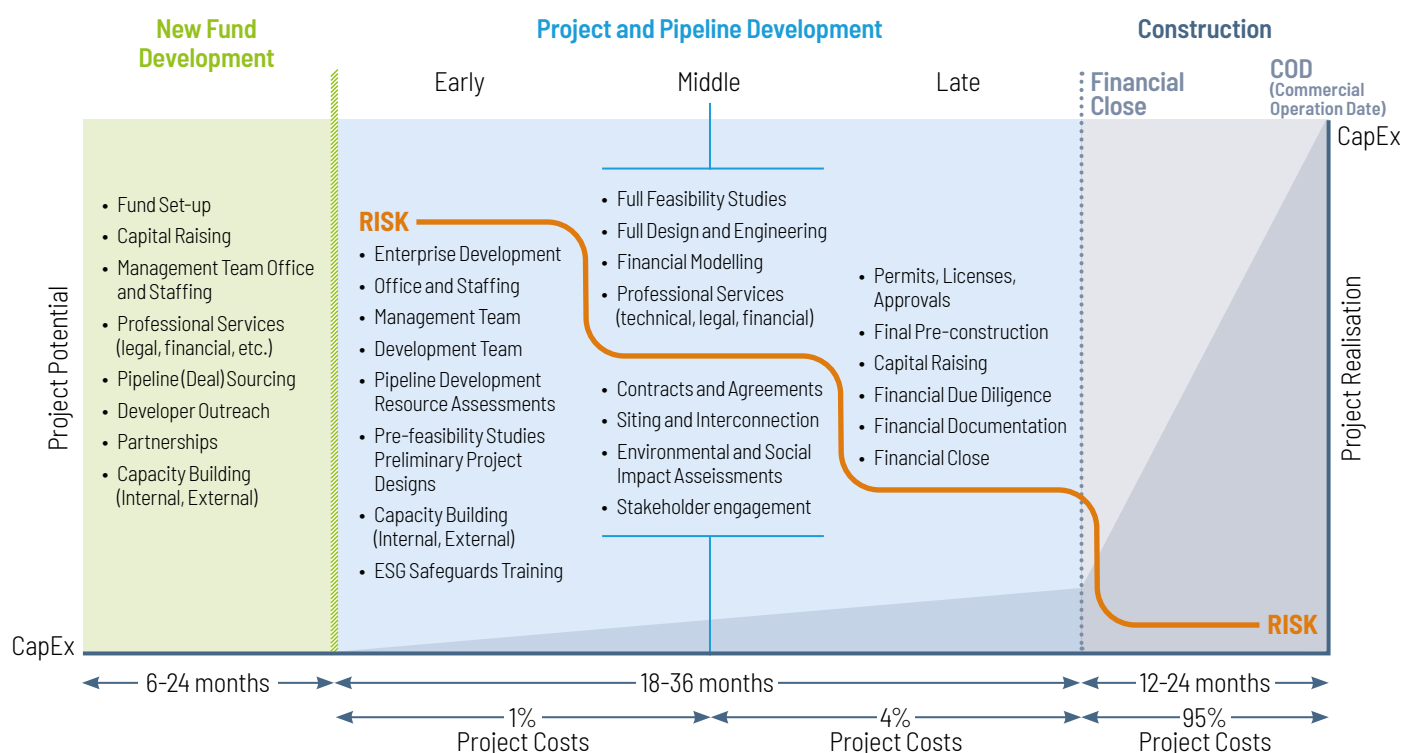
Although the impacts of renewable energy project risks and barriers in developed and emerging economies have been reduced over the last decade, they remain a significant challenge in frontier markets. This is especially true for small- and medium-size renewable energy infrastructure projects, which are **impacted by disproportionately high transaction costs**. While these systems are well-suited to providing clean distributed and grid-connected energy access, their smaller deal size and decentralised nature, combined with high uncertainty in frontier markets, distorts these costs to prohibitive levels.

This disproportionality adds to the early stage financing gap and can slow—or even prevent—many developers and fund managers from installing clean capacity, reducing emissions, enabling access, realising returns, and supporting economic development.

Figure 1 summarises the phases and activities of a renewable energy project development cycle, as well as cost and risk-level representations, through financial close and construction.

FIGURE 1

TYPICAL RENEWABLE ENERGY FUND AND PROJECT DEVELOPMENT LIFE-CYCLE (PHASES, ACTIVITIES AND RISK)³



As developers achieve key milestones and overcome critical barriers, the future asset is de-risked and becomes a tangible investment opportunity. Risks (real and perceived) are highest during the earliest phase when development costs are lowest. They decline as viable opportunities are identified and critical assessments as well as feasibility, modelling, design and development activities have been completed, and are at their lowest in the development process after contracting is completed, permits approved, financing secured, and the project is ready to move into construction. At the same time, expenses gradually increase but remain at a comparatively low level during the project and pipeline development phase, as 95% of project costs incur only after financial close during the construction phase.

Due to the high risks associated with project development, early stage costs are often covered through the direct private investment of project developers, with some help from

venture capital, angel investors and other actors. Facilitating multi-million-dollar project financing is very cost-intensive, time-consuming and requires significant financial, legal and advisory services to complete due diligence, negotiations, documentation, contracting, etc. These transaction costs do not necessarily scale proportionally with the size of the project, its phase of development, or its investment needs and can have negative impacts on the bankability of small- and medium-scale projects.

As a result, commercial developers, investors and lenders typically prefer later-stage, larger projects and deal sizes for scale, efficiency, and return. This creates a significant gap in financial support for early and middle stage project and fund development and can prevent the full project and investment potential being realised. The Seed Capital Assistance Facility (SCAF) works to fill this gap.

³ Source: UNEP, Aequero

Seed Capital Assistance Facility (SCAF)

The Seed Capital Assistance Facility (SCAF) is a donor-funded Project Preparation Facility (PPF) designed to help renewable energy fund managers and development companies mitigate the risks associated with early stage project development, accelerate and scale up deployment, and increase both the volume of early stage private sector investment and the number of renewable energy actors in Low and Lower-Middle Income Countries in Africa and Asia.

SCAF uses a combination of pure and repayable grants delivered through a Support Line mechanism. This intervention enables private sector fund managers and development companies to set-up climate investment vehicles, build enterprise and local expertise, create strong project pipelines, and fully develop the most promising projects into high-quality, bankable investment

opportunities that attract additional financing, achieve financial close, and move on to construction and operation. The resulting outcomes include emissions reductions, clean energy production, energy access, job creation, and revenue generation.

In addition to the immediate sector-specific objective of fostering the deployment of renewable energy, the intervention also achieves market-level impacts that help reduce future barriers and increase risk-tolerance while providing lasting social and environmental co-benefits, including emissions reductions and increased energy access, job creation, and local economic development.

SCAF is working towards the UN's sustainable development goals (SDGs) 1, 7, 8 and 13.



HISTORY

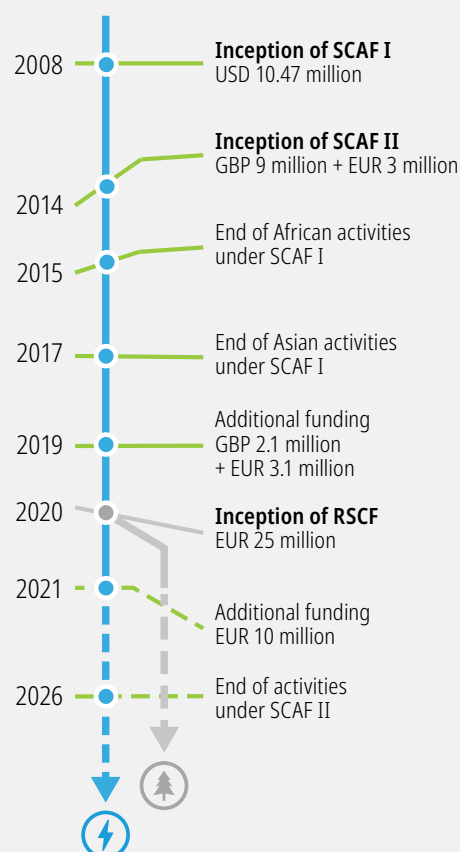
SCAF I was launched in 2008 with a USD 8.4 million grant from the Global Environment Facility (GEF), another USD 700,000 in supplemental funding from the UN Foundation, an additional USD 1.37 million of in-kind contributions from the UN Environment Fund, the Asian Development Bank (ADB), and the African Development Bank (AfDB) for a total budget of USD 10.47 million. SCAF I terminated in December 2015 for its African activities and in December 2017 for its Asian activities.

Lessons learned from SCAF I – SCAF is committed to an organisational capacity to learn and provide flexibility in adapting to the changing needs of its private sector partners and evolving market conditions. As a result, the following strategic changes were made to SCAF phase II as a reaction to the experiences made under SCAF I:

- The inclusion of development company partners in SL1 and 2.
- The expansion of eligible legal structures (i.e. HoldCos) and the removal of the anchor investor requirement.
- The creation of SL0 to solely support the setup of new equity investment vehicles for first time managers.
- The increase of SL2 support per project, while designing it reimbursable for projects that achieve financial close to allow for an “evergreen” approach that allows deployed SCAF resources to re-flow and to be used for other projects.
- Removal of maximum project size of 30 MW and USD 1 million seed capital budget limits, pursuant to market evolution.

These changes highlight the programme's commitment as a public-private partnership to listening to the private sector, leaning into lessons learnt and turning problems into opportunities. In addition to helping expand its pool of eligible participants and increasing its outcomes and impact potential, this high level of engagement and responsiveness appears unique to SCAF and helps ensure its relevance in an ever-changing and dynamic market.

SCAF's history



SCAF II was launched in January 2014 with GBP 9 million in planned funding from the UK's Department for International Development (DFID, today FCDO) and an additional EUR 3 million from Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). Following the latest replenishments of the facility's budget with additional contributions from DFID and BMU worth additional GBP 2 million and EUR 13.1 million, SCAF is now scheduled to operate until December 2026.

COVID-19 Impact – The facility adapted its governance as a result of the global pandemic. To continue with partner selection during times of travel restrictions, the on-site due diligence mission was replaced by video conferences. Furthermore, the initial funding agreement was reduced with the intention to be upscaled and extended at a later stage given satisfactory partner performance and an on-site meeting having been concluded.

Replicability of SCAF in other sectors: Following the achievements of SCAF phases I and II, the Restoration Seed Capital Facility (RSCF), an independent sister-facility to SCAF, was launched in 2020. RSCF supports early-stage development of forest and landscape restoration projects in developing countries, contributing to climate adaptation and mitigation, biodiversity, and sustainable livelihoods. The RSCF is following the same operational guidelines that has made SCAF a success. RSCF's mandate runs until October 2027. RSCF is funded with EUR 20 million by Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and EUR 5 million by the Ministry of Environment, Climate and Sustainable development of Luxembourg (MECDD). The inception of RSCF demonstrates the replicability of SCAF within other sectors and the attractiveness of the facility to donors as well as the private sector.



COOPERATING PARTNERS AND PARTNER ENGAGEMENT

Cooperating Partners are the focus of the programme and the vehicle through which the facility's objectives are achieved. They are the **private sector renewable energy fund managers and development companies** that have applied, been approved and contracted, negotiated budgets and workplans, and **receive enterprise support and seed funding to develop a pipeline of renewable energy projects and build local development capacity**. (A list of SCAF partners can be found in Annex B, Table I.)

Partner selection follows a three-step process: **preliminary engagement, due diligence and contracting**. Interested parties submit a proposal to the SCAF Agent, who reviews the proposal, conducts a preliminary eligibility check and confers with the Recommendation Committees and SCAF Project Management Unit (PMU). If the preliminary proposal is "Approved in Principle" it will move into the due diligence phase. Post a thorough due diligence, a final approval is granted, post which the SCAF Agent will begin contract negotiations. Once completed, the partner will sign a **one (SL0) to three (SL1+2)-year Cooperating Partner Agreement (CPA)**. SCAF support is then delivered to the partners through the SCAF Agent and Trustee via the SCAF Support Line structure.

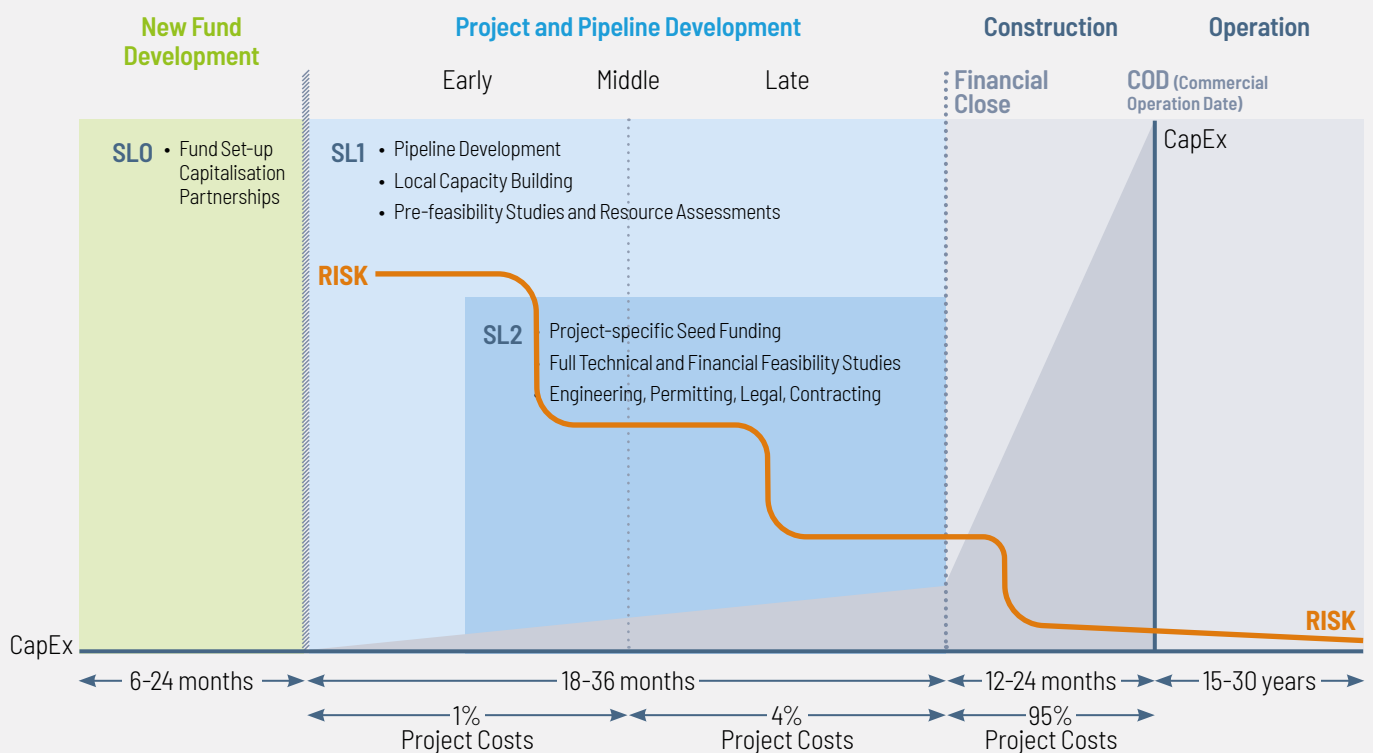


SUPPORT LINES

The Support Lines are designed to meet the financing, timing, and support needs of the partner at each phase and risk level (see Figure 2). There is a minimum 50% cost-sharing and co-financing requirement for all partners and projects. Support Line 0 is for first time fund managers only, while Support Lines 1 and 2 are for both fund managers and development company partners. Support Lines 1 and 2 are mutually contingent and share a

combined budget of typically USD 0.5-2.5 million (maximum). The structure and grant support of SL1 and SL2 is adapted to each partner-type's specific needs and relevant activities. Successful fund managers who "graduate" from SL0 and launch a new renewable energy fund or investment vehicle are eligible to apply for SL1/SL2.

FIGURE 2 SUPPORT LINES AND DEVELOPMENT PHASES



Support Line 0 – new fund or investment vehicle development – is designed to provide a liquidity bridge to help first time fund managers/ equity investment entity managers establish new clean technology and renewable energy funds (or investment windows) and bring them to first fund close (approximately 6 to 9 months with anchor investor secured, or 18-24 months from earliest phases of fund-raising process). While the risk levels at this phase are very high, the capital requirements are the lowest in the development process. The typical fund establishment costs are around USD 800 thousand to USD 1 million (only recouped if the fund reaches fund close) and primarily consists of legal, professional, human resource and operating expenditures. SL0 provides a non-interest-bearing repayable grant with a cost sharing mechanism. This cost-sharing supports business and fund development activities including legal fees for structuring, transaction and fundraising costs, investor documentation, due diligence, offering and placement preparation, early-stage pipeline and partnership development, local staff support, coaching and training, and other relevant activities. It also helps slow burn rates by bolstering the partner's operating budget and strengthening their ability to weather the final six- to nine-month period prior to financial close.

Support Line 1 – pipeline development – can run the entire span of the early-stage development timeline (up to 36 months) and is designed to help fund manager and development company partners with enterprise development and capacity building at the portfolio level while working with local developers and renewable energy entrepreneurs to build pipelines of potential investment opportunities. SL1 is a cost-sharing grant designed to share the risk-burden and encourage early-stage engagement. Typical activities and uses of SL1 co-financing support include enterprise development, local capacity building, fund raising, legal and business support costs, deal sourcing, pre-investment feasibility studies, and pipeline development, which also requires identifying local developer partners, training and coaching, knowledge transfer, and helping them to assess and identify opportunities, prepare business plans and investment proposals, and undertake the preparatory work required to develop bankable projects.

Support Line 2 – project development – builds off SL1 activities and is designed to bring projects, that have progressed through pre-feasibility and received approval by the partners' investment committee for direct seed investment, to financial close (approximately 6 to 18 months prior). SL2 is a non-interest-bearing project-specific grant that is repayable upon financial close. Typical SL2 activities and uses of funds include full feasibility studies and technical assessments, environmental and social impact assessments, regulatory compliance and framework reviews, off-taker contract negotiations, legal review of intellectual property and patent rights, operational and maintenance cost review and analysis, permitting, engineering, and other relevant project development costs required to bring the projects to bankability and financial close.

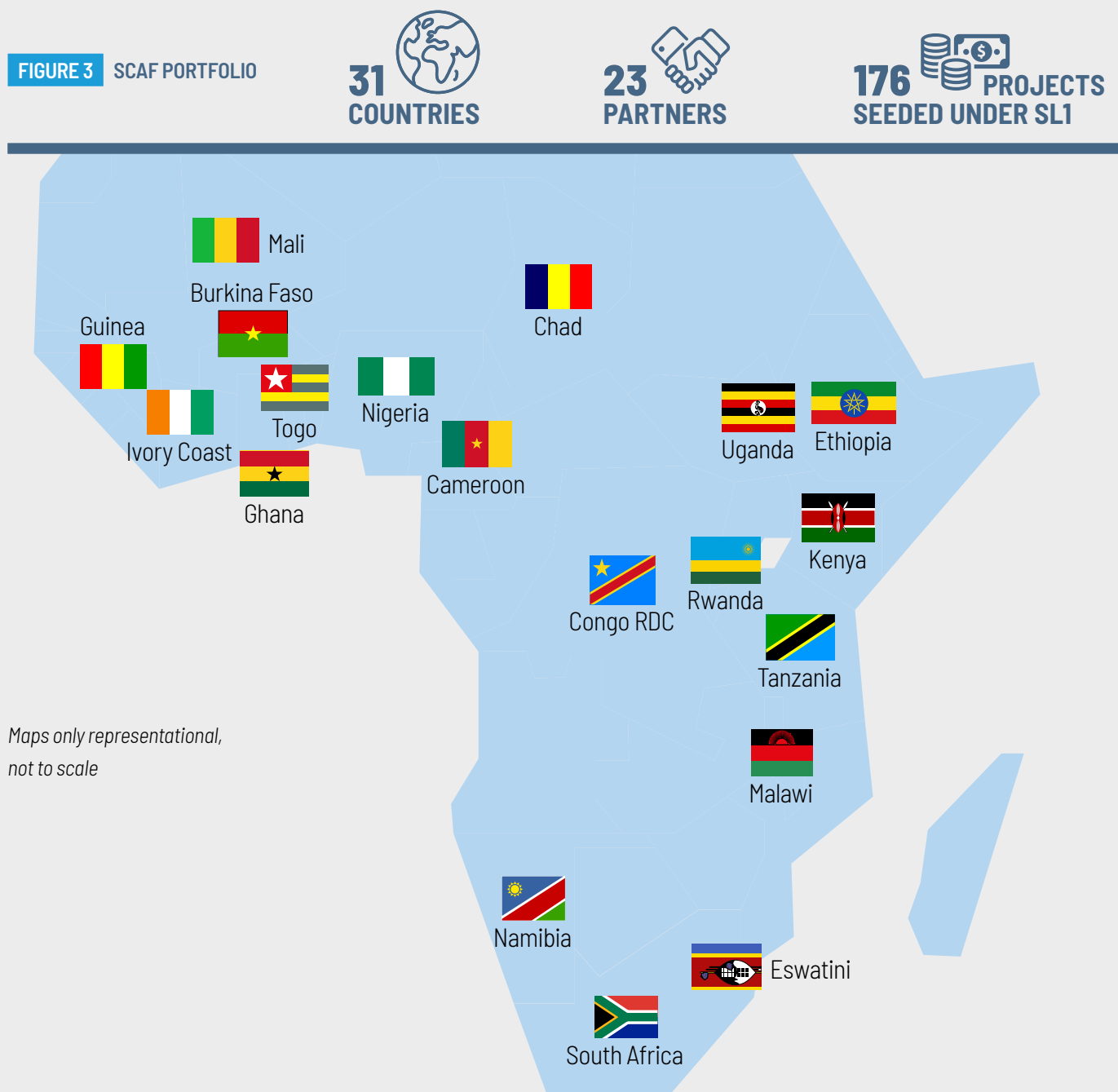


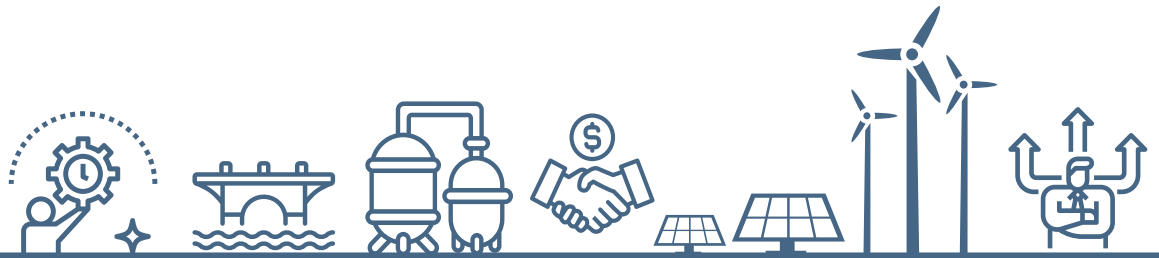
SCAF Portfolio Impacts and Outcomes

The facility has exceeded many of its original targets and been successful in delivering support to its partners and channelling financing to the development of renewable energy projects in its core geographies. Figure 3 highlights some of the cumulative outcomes and impacts of the SCAF programme over both phases (I and II).

From the list of 142 OECD defined least developed, low- and middle-income countries, SCAF has delivered support in 31 countries—21 in Africa and 10 in Asia. Of the 23 Cooperating Partners from SCAF I and II, nine are active in Asia, twelve are active in Africa, and two are active in both Africa and Asia.

15 are fund managers while the remaining eight are development companies. This is due to SCAF I's focus on fund managers and its expansion to include development companies during SCAF II.





Through SL1, the facility has helped fund managers and development companies with pre-feasibility, preliminary resource assessments, and other early-stage project development activities for at least 176 projects. 43 projects have been approved for SL2 co-funding and are in either full project development, construction or have been commissioned and are

in operation. The conversion rate for projects being identified with the help of SL1 support and consecutively being passed on to SL2 support has slightly increased from 15% in SCAF I to 20% in SCAF II⁴. The share of directly supported projects that have received SL1 support prior to being approved under SL2 is 39%.

⁴ Out of 45 projects identified with SL1 support during SCAF phase II, nine projects were approved to receive further SL2 support. The 14 remaining SL2 supported projects (again only phase II) were pre-identified by the partners at the time of signing the agreement.

43  **PROJECTS**
DIRECTLY SUPPORTED UNDER SL2

SCAF I+II
 **416 MW IN**
CONSTRUCTION
& OPERATION

 **1.368 MW**
IN PIPELINE



At the time of this report, the application process for SCAF support is ongoing, candidates are being vetted regularly, and each new partner will bring with them a pipeline of potential projects. Hence, it is expected that the facility’s impacts and outcomes will increase.

It was also observed that the average installed capacity for supported projects doubled from 26.4 MW in phase I to 54.6 MW in phase II. This can be explained with decreasing capital expenditures per MW installed capacity and economies of scale.

SCAF partners are deploying a variety of renewable energy and clean technology integrations and applications, ranging from grid-connected geothermal, hydro (small-scale and run-of-the-river), solar PV, onshore wind, battery storage to wind-diesel hybrid microgrids. Other sectors such as waste-to-energy, renewable energy and energy efficiency supply chains and energy and resource efficiency projects are also eligible for SCAF support.

Figures 4 and 5 give an overview on the sector and regional distribution of the SCAF portfolio of supported projects.

FIGURE 4 PROJECT CAPACITY (MW)

By Technology

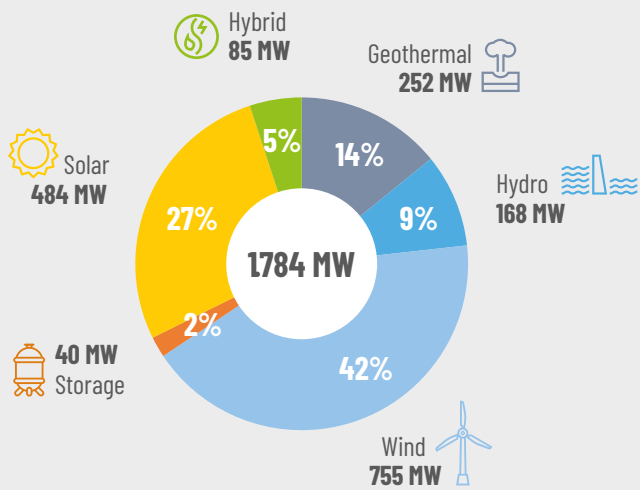
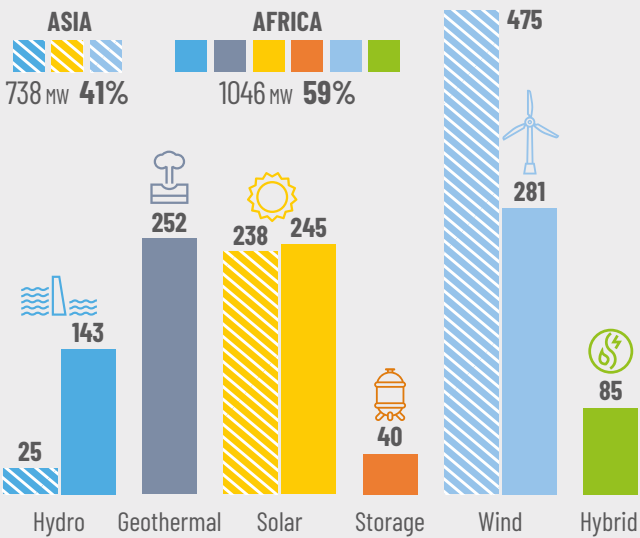


FIGURE 5 PROJECT CAPACITY (MW)

By Technology and Region



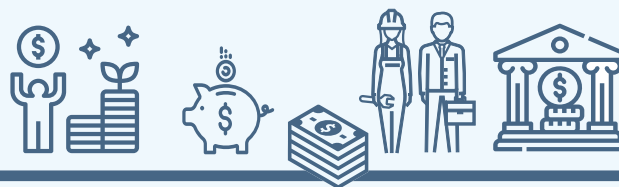
The result of this projected capacity would be nearly 8.13 TWh of renewable energy production and will be potentially avoiding over 4.68 MtCO₂e emissions per year. Assuming a conservative minimum twenty-year lifespan (typical wind 20-25 years, solar 25-30 years, hydro 30-50 years, geothermal 30 years), this will total over 162,600 GWh generated and 93.6 MtCO₂e emissions avoided.

FIGURE 6 SCAF PORTFOLIO SOCIAL-ECONOMIC AND ENVIRONMENTAL OUTCOMES (PROJECTED)

	Clean Electricity Generation	CO ₂ emissions avoided	Jobs created	Construction	Operation & Maintenance
SCAF phase I	2.47 GWh per annum	1.47 MM tCO ₂ e per annum	6,929	6,277	652
SCAF phase II	5.66 GWh per annum	3.21 MM tCO ₂ e per annum	9,968	9,340	628

Further examples of local social, economic and environmental benefits SCAF support has helped catalyse can be found in the case studies (see page 28).

Mobilisation Ratios



One of the challenges of calculating mobilisation ratios is attribution—being able to demonstrate a link between the investment and the resulting finance raised. This report does not claim absolute causality, but is, rather, looking to identify the potential catalytic effect of early-stage public finance interventions. The numbers shown are based on the available figures as of 31.12.2020 and are based on the assumption that all of the SL2 supported projects reach commissioning.

The SCAF and partner case study analyses consider three primary categories of mobilisation:

- **Development Co-financing:** the volume of capital raised by the partner for overall enterprise and pipeline development activities
- **Project Finance:** the amount of capital raised for project-specific development activities
- **Fund Capitalisation:** the volume of capital raised for funds or funding windows

For the purposes of this analysis, the standard leverage formula (amount mobilised divided by funds distributed or allocated) is used and non-financial support services provided by the facility (which qualify as indirect mobilisation) have not been monetised or included.

SCAF I RATIOS

The partner support line budget was just over USD 6 million, with a maximum per partner allocation of USD 1 million split evenly between SL1 and SL2. By its close in December 2017, over USD 5.1 million was disbursed, giving the first phase of the programme an 85% utilisation rate (see Table 2).

TABLE 2 SCAF I BUDGET AND DISBURSEMENTS

LINE	BUDGETED (in USD)	%	DISBURSED (in USD)	%
SCAF I Total	6,053,707	100%	4,698,647	78%
thereof SL1	3,026,854	50%	2,352,433	78%
thereof SL2	3,026,854	50%	2,346,214	78%
SCAF I Budget Remaining			1,355,060	22%
thereof SLO ⁵			425,708	7%
total disbursed			5,124,355	85%

⁵ Under SCAF phase I SLO was not yet introduced and therefore referred to as Fund Development Support



Excluding the funding allocated to Fund Development Support (a precursor to SCAF II SLO), the mobilization basis is USD 4,968,647. As shown below, SCAF I funding generated a 3.4x ratio on development co-financing from the partners and 220x project financing (see Figure 7).

FIGURE 7 SCAF I SUPPORT MOBILIZATION RATIOS



As a basis for comparison, in Catalysing Early Stage Investment (2011), Eric Usher and Duncan Ritchie researched several facilities with early stage finance mobilisation strategies ranging from grants, direct investment and subsidised loans to risk mitigation and guarantees to technical assistance, advisory services and matching funds (Ritchie/Usher, 2011). SCAF I (which had just reached its mid-point) was forecast to disburse USD 9 million in grant support and achieve 7x Development Co-financing and

99x Project Financing. As it can be seen from the above actual mobilisation ratios, the facility's final results were much better. While SCAF I disbursed less grant funding and mobilised a lower volume of Development Co-financing than forecast, it achieved significantly higher Project Financing ratios. Ultimately, SCAF I was able to leverage a much smaller pool of capital to crowd in much higher aggregate funding than was projected.

SCAF II RATIOS

As of the time of drafting this report, SCAF II was about half-way through its term with 56% of its budgeted partner support line budget disbursed. Because of the challenges of analysing a programme mid-way, the report errs on the side of conservatism and runs the analyses based on the total planned budget and current outcomes. Since SCAF II will continue to take on additional partners, increase its outputs, impacts, receive "reflows" (repayments) from SLO and SL2 and crowd-in more donor funding, the overall programme's ratios is expected to be higher.

There were some refinements made to SCAF II based on experiences and lessons learnt during the first phase. The budget dedicated to partners was increased to a total of USD 15.8 million, Support Line 0 has been introduced for new fund managers, and the SL1 and SL2 grant levels were increased up to a maximum of USD 2.5 million per partner with a 33/67 split between SL1 and SL2, respectively. The additional available funding out of the EUR 10 million increase in 2020 is not yet accounted for since it was being finalized at the time this report was created (see Table 3).

TABLE 3 SCAF II BUDGET AND DISBURSEMENTS

SUPPORT LINE	BUDGETED (IN USD)	DISBURSED (IN USD)	%
0	2,079,000	879,000	42%
1	4,655,932	3,006,838	65%
2	9,071,183	5,034,072	55%
Total SCAF II	15,806,115	8,919,910	56%

Beginning of 2021, based on the committed funds by SCAF and its partners under SL1 and 2 (USD 13,727,115), the facility potentially will help mobilise over USD 53.7 million (x3.91) in development co-financing and USD 1.97 billion (144x) in project finance. The

committed funding under SL0 (USD 2,079,000) is targeted to raise USD 396 million (190x) in fund capitalisation commitments. These figures would amount to a total mobilisation of over USD 2.42 billion (153x)(see Figure 8).

FIGURE 8 SCAF II MOBILISATION RATIOS (BASED ON BUDGETED FUNDING)

Although still with a limited sample size, due to improved data collection, the split between private and public equity and debt for project financing and sources of fund capitalisation can be seen. Based on the estimated figures of the total amount mobilised,

about 60% (USD 1,232 million) is coming from the private sector and roughly 40% (USD 820 million) from public sources; giving SCAF II ratios of 77x for private and 52x for public capital mobilisation (compare Figure 9).

FIGURE 9 SCAF II PROJECT FINANCE, FUND CAPITALISATION, AND TOTAL MOBILISATION BY TYPE AND SECTOR

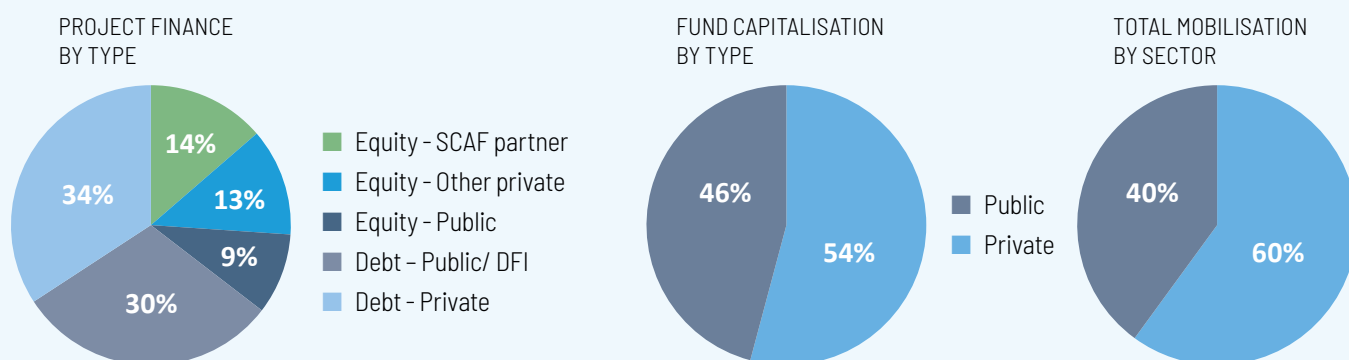
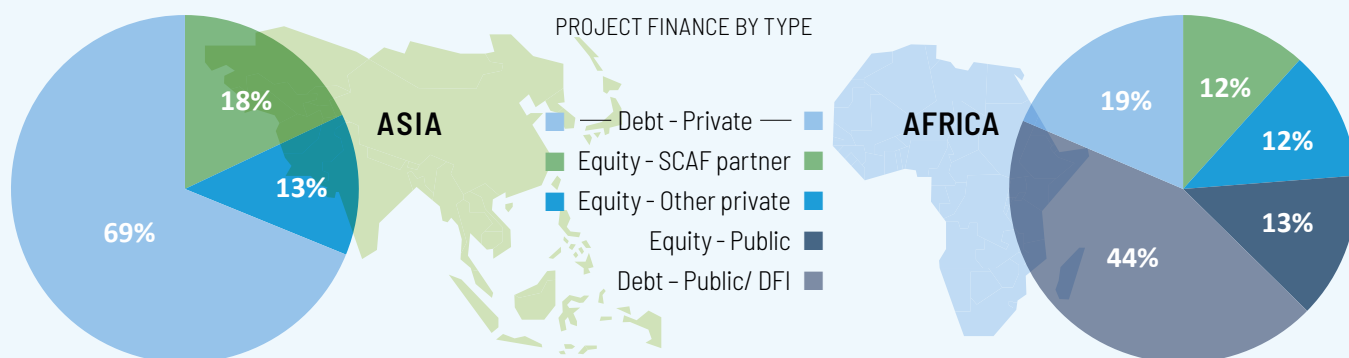


FIGURE 10 SCAF II PROJECT FINANCE BY REGION AND TYPE



What is also interesting to note is that 44% of project finance debt in Africa came from Development Finance Institutions (DFIs). This data supports the observation that commercial finance (equity and debt) is more accessible in Asia, while Africa is still more reliant on public financing, especially debt from DFIs.

Africa, with 68.5% of the committed amounts leveraged 68.9% of the mobilised capital for a regional ratio of 136x, while Asia, with 31.5% of the committed amounts leveraged 31.1% of total mobilised capital for a regional ratio of 134x (see Table 4).



TABLE 4 SCAF II REGIONAL DISTRIBUTION

ITEM	AFRICA			ASIA		
	Amount (in USD)	%	Ratio	Amount (in USD)	%	Ratio
SCAF Funding committed	9,934,635	69%	-	4,549,166	31%	-
Development Co-financing	40,435,888	75%	4	13,229,402	25%	2.9
Project Finance	1,358,458,000	69%	136	612,655,563	31%	134
Fund Capitalisation	181,300,000	46%	195	214,700,000	54%	328
Total Mobilisation	1,580,193,888	65%	159	840,584,965	35%	185

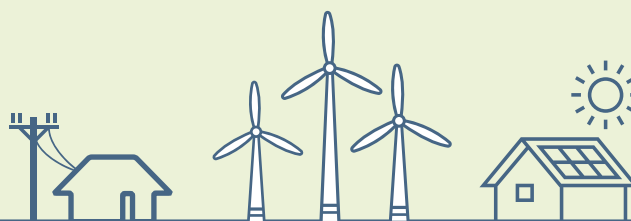
COMBINED MOBILISATION RATIOS

Looking at mobilisation for SCAF I and SCAF II (end of 2020), SCAF projected to achieve a total aggregate mobilisation of 165x disbursements (see Figure 11).

FIGURE 11 SCAF TOTAL COMBINED MOBILISATION RATIOS



Relevance and Uniqueness



There is a wide range of donor facilities active in the renewable energy sector today. Some facilities focus on specific technologies, such as off-grid, solar home or mini-grid solutions, while other facilities work together with governments targeting single countries. The following section focusses on private-public programmes that, among other sectors, **focus on (grid-connected) utility-scale renewable energy projects in multiple countries of Africa and Asia.**

While many facilities and institutions target individual project-level support, SCAF is **unique** in that it focuses on supporting investment entity managers and development companies on a broader level. SCAF is designed to help build the capacity, initiative, and expertise of its partners that build pipelines of bankable investment opportunities—making SCAF a Pipeline Preparation Facility, rather than a Project Preparation Facility. As a result, SCAF plays an important role not only in the mobilisation of private sector capital and the provision of pipelines of investment opportunities, but in the development of local and regional ecosystems of expertise with the potential to deploy energy and climate solutions at scale.

Additionally, one essential advantage of SCAF is the **alignment of interests** it creates between the public finance mechanism and private partners in selecting and supporting projects. The public finance mechanism is therefore not in a situation where it ‘picks the winners’ (whilst retaining the right to veto business as usual support which would represent a sub-optimal use of public funding). This increases the probability of success, while mitigating the risk of moral hazard as commercial investors are **still bound to the 50% co-financing requirement**. In the majority of the cases, the SCAF partners contribute more than 50% given

the larger observed project sizes and increased development budgets. For the same reason, SCAF is also quite cost-effective as the task of identifying and vetting projects is transferred to cooperating partners. The underlying assumption is the private sector has a strong experience how to develop bankable projects.

With its inception of phase I in 2008, SCAF was among the first set of donor facilities active in the sector [InfraCoAfrica (2004), InfraCoAsia (2009), CEFPP (2007), EEP Africa (2010), SEFA (2011)].

At that time, SCAF was one of a few facilities that targeted **early stage pipeline and project development**, while other facilities focussed on late stage development or projects that have already reached financial close. In order to foster a continuous flow of bankable projects, the donor’s willingness to support early stage development has increased in recent years. SCAF has continuously been able to adapt its eligibility criteria, partner base and support in order to keep adding value to the private sector in a quickly changing regulatory environment. A change to virtual Due Diligence allowed SCAF to continue its operations during the COVID-19 pandemic.



Figure 12 shows a sample of nine other mostly publicly funded facilities supporting renewable energy funds, development companies and/or projects of a similar type, capacity, and geography as SCAF. Since SCAF is the only publicly-funded facility using grants as its only financial support instrument to both fund managers and development companies, it was necessary to expand the criteria to include programmes that offer debt, equity, and other instruments to support single-type partners and individual projects as well. (For more details on comparable facilities, see Annex B, Table III.)

FIGURE 12 SCAF II POSITIONING WITH COMPARABLE FACILITIES

	Region	Fund Setup Support	Project Development Support	Support for construction phase	Support for operational projects	Grants	Debt	Equity	TA	Guarantees
										
										
										
										
										
										
										
										
										
										

Most of the sample facilities either directly or indirectly support development companies, but only SCAF and ICFA partner directly with fund managers/investment entity managers in order to promote new vehicles. All facilities except SCAF and ICFA offer access to debt and/or equity instruments, while five (excluding SCAF) offer grants. Of the facilities that do offer grants, a minimum co-financing component is required (SCAF's is 50%), but the grant amounts are often lower and the repayable portion (when offered) is typically attached to a conditional debt or equity conversion.

SCAF is one of three programmes offering support in both Asia and Africa, while four of the remaining seven facilities focus only on Africa, and the other three in Asia.

Nearly every facility offers technical assistance (TA) of some sort, but to varying degrees and often limited, conditional, or attached to some sort of later-stage debt instrument commitment. All facilities require environmental and social governance safeguards (standard practices) as a condition to receive support.

Of this sample, SCAF is the only publicly funded grant-only facility: operating in Asia and Africa, providing a dedicated new fund development/investment entity Support Line (SLO), and offering proportionately designed full early-stage coverage for both development companies and fund managers. It is also the only facility requiring a portion of funds to be committed to capacity building for both the company (internal) and the local renewable energy development community (external), and to offer a defined pure and repayable grant structure.

Additionality

Identifying additionality is complex and frequently relies on qualitative phenomena that are difficult to quantify or validate. A common approach to determining additionality is that an intervention should, as a minimum, represent a net positive deviation from a business-as-usual (BAU) scenario. In addition to SCAF's extensive due diligence, engagement, and active screening of its portfolio, **some of the guidelines** used to avoid over-subsidising and ensure additionality include:

- Funds can only be used for early-stage development and seed capital support;
- Funds can only be used within frontier markets in middle-income or least developed countries;
- Projects and technologies must be considered mature within the proposed market of deployment;
- Partners must provide a minimum 50% co-financing (cannot be provided by third-party donors).

Below are some examples of additionality identified by stakeholders (internal and external).

PARTNERS AND PROJECTS

While many partners would engage in project development regardless, both fund managers and development company partners have confirmed that SCAF has incentivised them:

- **to be more entrepreneurial, increase risk-taking, and look at earlier-stage opportunities**
- to include exploring **new markets** they hadn't considered financially viable
- to include **different technologies, applications and integrations** they hadn't previously deployed, and
- to create **new funds or investment windows within existing funds**.

This results in stronger, higher quality, bankable pipelines.

Development costs in frontier markets are higher than partners typically anticipate, exposing them to shocks and inefficiencies that can slow or even threaten their projects. SCAF attempts to provide just enough additionality in the right amounts and timing to help **offset increased costs, slow burn-rates, extend resources, and better absorb some of the frontier market shocks** partners experience.

Capacity building is another area of additionality partners have noted where the facility's support has enabled them to provide training for local developers, increase local staffing, contract expert consultants, designers, engineers, and lawyers, update specialised equipment and software required for assessments, studies, and modelling, improve their environmental, social, and governance standards, and achieve a higher overall level of quality and completeness of activities and outputs beyond what they might have been able to do without the facility's support.

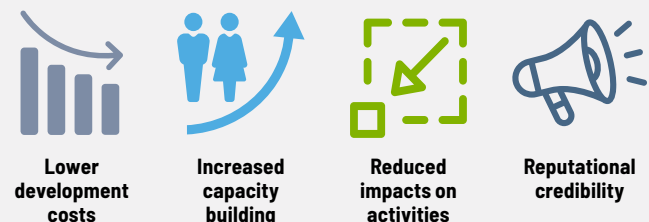
Many of the territories in which SCAF partners operate also face challenges with underdeveloped contracting, permitting, and administrative processes essential for developing bankable projects. These issues can result in extensive delays, increased costs, higher risk, and in some cases project failure. Partners have indicated that SCAF support has helped them to manage these challenges while reducing their impacts on costs and development timelines.

Participation in the programme has also provided partners with additional **credibility**—principally from a mix of UN brand-association, respected due diligence, and the assumption of support indicating quality. This has helped some partners gain access to support from local developers, governments, and institutions, as well as later-stage finance they might not have been able to access on their own.

The cumulative effect of these examples of additionality is that partners are able to deliver projects quicker, with higher quality, and greater economic efficiency.

FIGURE 13

REPORTED KEY BENEFITS OF WORKING WITH SCAF





MARKET AND SECTOR

One of the core concepts underlying the programme's approach is the strategic use of small amounts of public funding to build partner and local capacity, deliver project development outcomes, and crowd-in new sources of private sector investment.

The Venture Capital & Private Equity (VCPE) Country Attractiveness Index⁶ rates the attractiveness of the overall investment environment in 125 countries based on a weighted set of social, political, economic, financial, business, and institutional criteria. The higher a country scores on the index's 0-100 ranking, the more developed its investment environment. The lower a country scores, the greater the additionality investment is to that market. Climate Policy Initiative assessed that investment in countries scoring below 45 are considered completely additional, 46-74 as partially additional, and those scoring over 75 as not additional⁷.

As of January 2021, the SCAF programme (Phases I and II) had disbursed nearly USD 13.62 million in donor support to help catalyse development financing, project finance, and fund capitalisation in 31 developing countries, of which **77% would be considered completely additional** (41.7% officially ranked

as completely additional, 35.3% not yet rated but based on similarity characteristics would most likely be ranked completely additional). The remaining **23% were partially additional**.

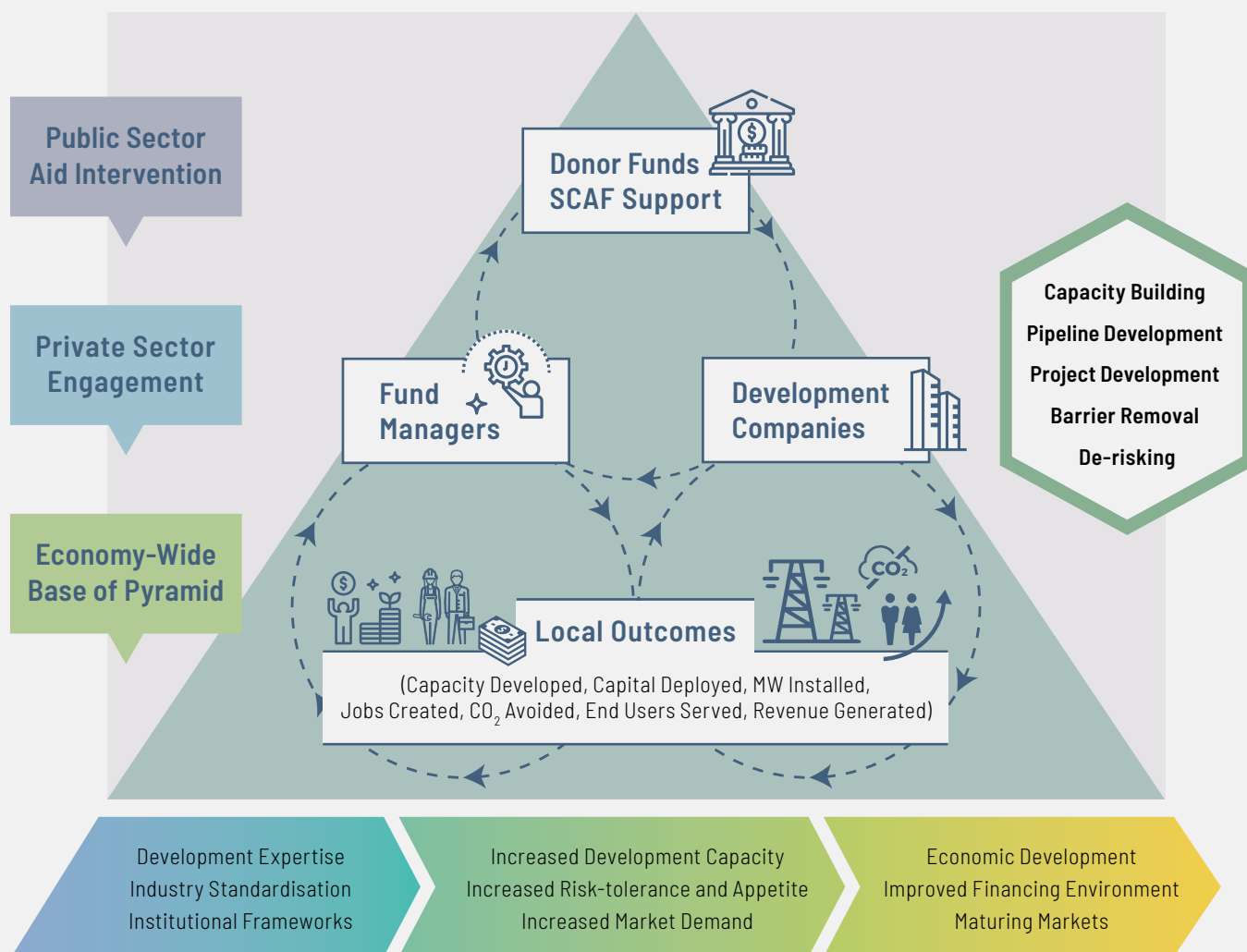
SCAF's Frontier Market and Sector requirement limits partners to no more than two of the same technology applications within the same country, thereby **incentivising diversification and supporting additionality**. Some partners develop expertise in one technology deployed across multiple markets, and some develop expertise in multiple technologies deployed within a single region. Once a market or renewable energy technology matures, the programme's support is no longer considered additional and will not be provided for projects in those markets or technology types. Over the course of SCAF I and II, the programme's partners have **deployed over 1.784 GW of capacity across six technology types in 31 frontier markets**.

These capital and capacity outcomes are achieved with donor funding distributed through the SCAF support lines (strategic grants combined with non-financial advisory and capacity building support) to fund manager and development company partners who, together with local developers, acquire experience, open new markets and build capacity through on-the-job training in pipeline and project development (see Figure 14).

⁶ <https://blog.iese.edu/vcpeindex/>

⁷ Brown, J., Escalante, D., Abramskiehn, D. and Hallmeyer, K. (2018). *Approaches to Assess the Additionality of Climate Investments*.

FIGURE 14 ECOSYSTEM INPUTS, OUTCOMES, IMPACT AND ADDITIONALITY



This private sector **ecosystem of expertise** developed between the fund managers, development companies, and professional community creates a **cycle of additionality**, delivering growth and value to the domestic renewable energy market. Not only is the local workforce better trained, but development companies and fund managers can source opportunities for each other while generating jobs for the upskilled workforce. Some of these opportunities (which may have previously been overlooked due to lack of resources, expertise or bandwidth) could be eligible as SCAF-supported projects, and some of the local workforce, having improved their skills and expertise, could become eligible developers. Additionally, should a developer or contractor discover they are no longer able to deliver a project, **a mature ecosystem supports continuity** in the development process by ensuring there are skilled stakeholders available to pick up those opportunities and bring them through financial close, construction and operation—increasing the resilience of the entire sector.

Due to the complex nature of project development, cooperating partners engage with stakeholders across all sectors. These engagements, over time, result in **industry standardisation and improvements to institutional frameworks** that help lower development costs, streamline processes, accelerate deployment, and prime markets for existing and future developers.

This process also helps **reduce development barriers, de-risk investment opportunities, establish benchmarks, and help improve the overall financing environment** by providing iterative opportunities for private sector financial stakeholders to better understand, value, and manage the risks and opportunities of renewable energy asset development in their region, thereby increasing risk-appetite and incentivising investors further upstream where early-stage financing can have the greatest impact.

Areas of SCAF's engagement

SCAF has many original features and areas of engagement that have evolved over time in response to private sector needs and changing market dynamics. These include **cost-sharing and co-financing, multiple support lines, frontier markets requirements, repayable grants and local capacity building.**

1. ENVIRONMENTAL, SOCIAL AND CORPORATE GOVERNANCE (ESG) - PROMOTING SAFEGUARDS

As a prerequisite to benefitting from the SCAF programme, partners are required to commit to implementing an Environmental and Social Management System (ESMS) and follow ESG safeguards at minima according to IFC Performance Standards on Environmental and Social Sustainability. While most companies adhere to some form of guidelines and procedures on project-level, a formalised approach on a company-level is often missing. This is even more the case in emerging economies. Raising awareness on ESG related matters and incentivising partners to setting up formalised processes is one main components of the SCAF mandate.

2. COST-SHARING AND CO-FINANCING

While cost-sharing and co-financing are not uncommon, SCAF's approach deserves highlighting as an example of effective best practice. Rather than providing purely passive grants, the minimum 50/50 cost-sharing and co-financing requirements help lower the partners' early stage development costs while ensuring an active commitment and consistent engagement.

This "skin-in-the-game" risk-sharing incentivises partners to accept and manage higher levels of risk, engage at earlier stages and expand their prospecting activities into more countries or technologies than they could have if they were investing directly on their own or into a single project. It enables partners to build local capacity and engage in the deeper level of preparatory work required to increase the quality of their projects and develop bankable pipelines that are more attractive to later-stage mainstream investors and financiers.

Additionally, while some development companies are able to raise capital on the prospect of future projects, many are not allowed to deploy those funds during the higher risk early stages of project development—which is when they are often most needed and most effective. In these cases, the SCAF contribution acts as a liquidity bridge until the other funds can be unlocked, typically at later stage project-specific development, when SCAF's SL2 seed co-financing comes into effect.

3. BUILDING CAPACITY WITHIN THE LOCAL DEVELOPMENT AND FINANCE COMMUNITIES

One of the many challenges fund managers and development companies face in frontier markets is the limited experience and skill sets of local project developers. For investors, this translates to another risk-hurdle that needs to be overcome. SCAF is designed to address this challenge through its support line strategy and the required local engagement of cooperating partners.

By working directly with local developers and renewable energy entrepreneurs, partners provide on-the-job training through SCAF-supported project development that results in the transfer of the technical, analytical, and financial expertise required to move projects through the development cycle and deliver bankable assets to investors.

4. FRONTIER MARKETS AND SECTORS

To ensure SCAF is delivering additionality to its target countries, sectors and markets, SCAF support comes with a "Frontier Markets" requirement. The term refers to extremely high-risk sectors in low-and middle-income countries with immature financial markets, limited banking capacity, poor liquidity, substandard reporting, limited transparency, uncertain political, policy and regulatory environments, a lack of infrastructure and limited local expertise.

The requirement limits Cooperating Partners to developing no more than two of the same renewable technology applications within the same country. It is intended to ensure impact and encourage increased entrepreneurial behaviour by providing economic incentives for strategic risk-taking, capacity building, and the diversification of portfolios across multiple markets and sectors.

Once a country or renewable energy technology is considered mature—private sector investors and lenders no longer perceive them as high-risk, institutional frameworks and industry standards have been established, and the early-stage financing gap is no longer as significant a barrier to deployment—SCAF support is no longer considered additional and is discontinued.

Case Study I – DI Frontier – Support Line 1



Frontier Investment Management

DI Frontier Market Energy & Carbon Fund I & II

- **Type:** Renewable Energy Power Infrastructure
- **Fund size:** Frontier Energy I EUR 60 million, Frontier Energy II USD 227 million
- **SCAF partner since 2011**
- **Support under SL1 and 2**
- **Regional focus:** Southern / East Africa

Frontier Investment Management ("Frontier") is a private equity firm investing in the development, construction and operation of renewable energy projects in Sub-Saharan Africa. They have offices in Nairobi, Kampala, Kigali, Dar Es Salaam, and Copenhagen, and a mixed investor base of pension funds, insurance companies, private investors, family offices, and DFIs.

Frontier is unique for SCAF in that they have participated as a Cooperating Partner in both **SCAF I and II**, through which they have raised funding for **two renewable energy funds**—DI Frontier Market Energy & Carbon Fund (Frontier Energy I), and Frontier Energy II—and built a pipeline of over 200 project opportunities, of which some have received SCAF seed funding for full development to financial close.

Frontier Project Developer Programme (PDP)

Frontier created a Project Developer Programme (PDP) to help build local expertise while developing bankable pipelines in which the Fund can invest. The PDP consists of seminars and classroom and field training, is based on actual project development, and is divided into two phases. The first phase (1-3 months) improves participants' overall competencies in early-stage pre-feasibility, including legal and regulatory issues, resource assessments,

financial analysis, procurement and contracting, risk, and Environmental, Social, and Governance (ESG) safeguards. The second phase (4-9 months) builds up the skills required for full technical, legal, and financial feasibility, due diligence, negotiations, structuring (financial, legal, tax, incentives), and other mid- and late-stage project development activities.

From Frontier's perspective, phase one allows them to coach and assess the developers and project potential while building collaborative working relationships, and phase two provides a structured framework in which to assess strong candidates, make direct seed investments into the most promising projects, and help bring them to financial close.

From a local developers' perspective, one of the many challenges they face are soft costs and learning curves associated with start-up, feasibility, and due diligence. In developing nations, these cost burdens and knowledge gaps can often slow their ability to develop projects, stop the process entirely, and even force them out of business.

According to Frontier's managers, without SCAF's support many of these impact opportunities might have simply been overlooked or prematurely written off as too early or risky. This makes it a strong example of how small amounts of donor funding strategically applied at a very early stage through SCAF partners (intermediaries) at the hyper-local level can mean the difference between a missed opportunity or the development of local expertise and the successful close and construction of a project.

From a SCAF perspective, by supporting and developing the capacity and expertise of its partners and local professionals, pipelines will follow and the markets will scale. Therefore, Frontier's engagement of the PDP is a great example of best practice capacity building and knowledge transfer, efficient prospecting and pipeline development, resource maximisation and the effective use of donor funds.

Case Study II – The Blue Circle – Support Line 2



The Blue Circle

Renewable Energy Developer

- **Type: Developer for Renewable Energy Projects**
- **SCAF partner since 2015**
- **Support under SL1 and 2**
- **Regional focus: Southeast Asia**

The Blue Circle is a renewable energy development company pioneering wind projects in frontier markets throughout Southeast Asia. Based in Singapore, with subsidiaries in Vietnam, Thailand, Cambodia, Myanmar and Indonesia, they have extensive experience in the development, financing and operating of wind and solar projects.

SCAF is providing co-financing under Support Line 1 for pipeline development window and Support Line 2 for project-specific seed funding in the region.

Support Line 2 – Dam Nai wind farm Vietnam

SCAF support was used by The Blue Circle to help close the **first privately signed wind Power Purchase Agreement (PPA)** in Vietnam for the Dam Nai project.

The Dam Nai wind farm, located in Ninh Thuan Province, was divided into two phases. The first phase of 6 MW has been in operation since October 2017. The remaining 34 MW were completed in November 2018. Fifteen 2.625 MW turbines, the largest in the country at the time, have been installed and will generate approximately 100 GWh per year, avoid over 68,000 tCO₂e per year, and create an estimated 302 temporary construction and 13 permanent Operation & Maintenance jobs for the local community.

Dam Nai is the first foreign-controlled wind farm project in Vietnam, the first commercial wind project in Ninh Thuan Province. The first phase was approved and constructed in a

record time (14 months). The province considered the process, a model for international cooperation in the investment and development of renewable energy projects in Vietnam. It is also the “first-ever long-term project finance package arranged for a non-hydro renewable project in Vietnam with no direct recourse against the sponsors and no credit enhancement solution” (Blue Circle).

The project also generated significant socio-economic benefits for the region. Dam Nai is a rural agricultural area connected by small, undeveloped roads between acres of rice fields. Residents can only transport their products via motorcycles and rough plows. In addition to generating approximately 38 million VND (USD 1.6 million) per year in utility taxes for the province, the project required the construction of several well-engineered eight-meter-wide roads to transport the equipment. Once completed, the ownership and management of these roads was to be turned over to the provincial government to help improve access and increase commerce.

Another local challenge that has slowed local productivity and economic development is that farmers do not have adequate rice drying yards. The project’s installation cranes required wide concrete platforms that are ideally suited for this purpose. At the end of the project, farmers were expected to have nearly 40 new rice drying platforms connected by a new road system. These are significant infrastructure savings for the local government and benefits for the local community that positively impact local economic development.

Finally, the province claims some of the best wind and solar resources in Vietnam but has been restricted in developing this potential because the local grid requires upgrades before adding new capacity to the national grid. The Dam Nai project has given the Provincial Committee the successful demonstration project they needed to make the business case to Electricity Vietnam (EVN), the national utility, for upgrading the transmission and distribution networks to allow them to invest in and develop these resources, and capitalise on the greater economic, environmental, and social opportunities.

Case Study III — Zoscales Partners – Support Line 0



Zoscales

East Africa Growth Equity Fund

- **Type:** SME fund with focus on resource efficiency
- **SCAF partner from 2016 – 2018**
- **Support under SLO**
- **Regional focus:** Ethiopia / East Africa

Zoscales Partners (“Zoscales”) is the **first Ethiopian-based private equity management firm investing in Small- and Medium-sized Enterprises (SMEs) in Ethiopia**, as well as satellite opportunities in East Africa. Founded by Ethiopians, the Zoscales’ management team is comprised of international investment professionals and local entrepreneurs with strong expertise and broad local networks that investees view as long-term strategic partners. Their main focus was initially on consumer goods, healthcare and materials but, **with support from SCAF, they have added a clean technology and renewable energy window to their portfolio** for “affordable mass-market off-grid products, small wind projects and solar power”.

Zoscales was also the first Cooperating Partner for SCAF’s Support Line 0 (SLO), designed specifically for new and first-time fund managers developing renewable energy- or clean tech-focused funds and windows. Zoscales received a USD 400,000 contingent grant (repayable upon fund first close) to help support fund development (legal, set-up, administrative, etc.) and fund-raising activities, opportunity sourcing, market assessments, feasibility studies and other relevant needs required to reach financial close of their first fund.

This liquidity bridge proved critical to the managing company’s survival during a period of social and political unrest in Ethiopia that began in August 2016, four months after Zoscales partnered with SCAF. Not only does this underline some of the risks and challenges fund managers face in developing nations, but it also

highlights the material relevance of SCAF in managing such risks. Ultimately, SCAF was able to provide Zoscales with a consistency of timely support, active and direct engagement, and a sense of security to help them survive and pursue their enterprise.

In August of 2017, Zoscales closed their first round of funding with USD 31.5 million (63% Public Debt, 37% Private Equity), for which they noted the SCAF’s due diligence, credibility and reputational value as instrumental in securing critical commitments from DFIs, family offices and other private investors. This allowed them to accelerate their process, lower their burn rate, begin sourcing projects and raise additional investment to reach USD 75 million out of a targeted aggregate capitalisation of USD 75 million (50% Public Debt, 50% Private Equity).

Like SL2, SCAF’s SLO is also a **non-interest-bearing conditional grant that is repayable upon fund close**. Having reached full financial close on their first fund, Zoscales has repaid its USD 400,000 grant in full. These resources are now immediately available for reallocation to new partners—expanding the capital’s entrepreneurial value, social impact and financial leverage beyond the shown figures.

The additionality of the SCAF support to the partner is clear. While Zoscales Partners have significant experience, strong networks and pipelines opportunities, **they found themselves under-resourced in a high-risk geography, sector, and early stage of development**. Despite their expressed interest or mandates in frontier markets, many investors (private and institutional) were risk-averse and waiting for Zoscales to reach a first close before further commitment. Hence, securing commitments in that investment environment proved challenging, drawing out the timelines and risking both the investment and impact opportunity.

As a result of the SCAF partnership, however, **Zoscales has successfully overcome these barriers**, access to financing was no longer as much of a challenge, and they consider themselves as having “graduated” from the programme. Zoscales is currently working on launching the Zoscales Partners Fund II.

Annex A: Impact Report Methodology and Supplementary Information

METHODOLOGICAL APPROACH OF THIS REPORT

This report has been prepared with the purpose to identify and share best practices from SCAF's project experience, following the facility's mid-term evaluation. Unless otherwise stated, it accounts for data and results of SCAF as of January 2021, with the underlying assumption that the supported projects would not have been financed without SCAF support. It is further to be noted that figures relating to SCAF II are sensitive to the evolution of ongoing projects and thus likely to be adjusted at a later stage.

DEFINITIONS Terms in this report are defined as follows:

TERMS	DEFINITION
Additionality	An intervention should, as a minimum, represent a net positive deviation from a business-as-usual (BAU) scenario. Additionality thus refers to capital expenditures and investment returns that would not have occurred in absence of such an intervention.
Bankability	The ability of a project to yield optimal returns and being appropriately structured to access debt financing by a bank.
Capacity factor	The result of the actual power output divided by the nameplate capacity, times a 100. Power stations whose output is consistently near their nameplate capacity thus have a high capacity factor.
Equity, equity financing	A method of raising capital by selling the company's stocks to investors. In return, investors receive ownership interest.
Debt financing	Opposed to equity financing, this method involves the use of borrowed funding which needs to be repaid to the lender often including interest payments.
Financial close	Occurs when all project and financing contracts have been signed and all conditions contained therein have been met. It allows funds (e.g. loans, equity, grants) to flow so that project implementation can begin.
Frontier Market	A low-and-middle-income country that faces immature financial markets and uncertain political, policy and regulatory environments. It is considered too small, illiquid, risky to be considered an emerging market.
Installed Capacity	Indicates the maximum energy generating capacity ("nominal" or "nameplate" capacity) of electric facilities and is expressed in watts or multiples (i.e. MW, GW)
Private Equity	Ownership of assets that are not publicly listed or traded.
Seed Capital	The initial funding needed to begin a new business or product. Typically, an investor invests capital in a new business (i.e. start-up) in exchange for ownership.
Support Line	The financial support instruments SCAF makes available to their partners subject to the pre-defined conditions.
Venture Capital	The financing of early stage established companies that deem high growth potential and high-risk component.

IMPACT METRICS

CATEGORY	IMPACT METRICS	DEFINITION
Finance	Projects supported	Projects provided with Support Line 2 – financial support on a cost-sharing and co-financing basis via SCAF partners for mid- late stage development activities.
	Projects seeded	Projects provided with Support Line 1 – financial support on a cost-sharing and co-financing through SCAF partners for very early stage development activities.
	Leverage	A standard leverage formula – amount mobilised divided by funds distributed or allocated – was used. Non-financial support services provided by the facility (which qualify as indirect mobilisation) have not been monetised or included.
	Development co-financing	The volume of capital dedicated by the partner to SL2 project specific development activities including the SCAF SL2 funding.
	Project finance	The expected volume of capital raised by the partner for SL2 projects at Financial Close.
	Fund capitalisation	The expected volume of total fund capitalisation or funding windows capitalisation at final close of SLO supported partners
Environment	Emissions avoided	The annual amount of GHG emission reductions, measured as megatons of CO ₂ equivalents (Mt CO ₂ e).
Sustainable development	Jobs created	The amount of jobs created in both construction & operation expressed in FTE per annum.
	End-user beneficiaries	The number of households receiving new, or improved, clean energy access.

Annex B: Tables and Supplementary Information

TABLE I SCAF PORTFOLIO IMPACTS AND OUTCOMES

	SCAF I	SCAF II	TOTAL	
Partners	9	15	23 ⁸	Fund Managers (13), Project Developers (11)
Countries	15	25	31	SCAF I: Kenya, Uganda, South Africa, Tanzania, Namibia, Burkina Faso, Philippines, India, Cambodia, Indonesia, Malaysia, Thailand, Lao PDR, Viet Nam, Ghana SCAF II: Cameroon, Chad, Congo, Guinea, Ivory Coast, Kenya, Malawi, Mali, Nigeria, Rwanda, Tanzania, Togo, Uganda, Cambodia, India, Indonesia, Laos, Myanmar, Philippines, Sri Lanka, Vietnam, Eswatini, Zambia, Zimbabwe, Ethiopia
Projects (SL1)	131	45	176	
Project (SL2)	20	23	43	
Technologies	5	7	8	SCAF I: Biogas, Geothermal, Hydro, Solar, Wind SCAF II: Geothermal, Hydro, Solar, Wind, Energy Efficiency, Hybrid, Battery Storage
Capacity (MW)	528	1,256	1,784	
Production (GWh/y)	2,476	5,661	8,137	
GHG Avoided (tCO₂e/y)	1,471,534	3,214,226	4,685,760	
Jobs (Construction)	6,277	8,970	15,247	
Jobs (O&M)	652	1,225	1,877	

⁸ DI Frontier was Partner under both under SCAF I and II

TABLE II SCAF PARTNERS

NAME	TYPE	SCAF	SL	TECHNOLOGY					REGION		
Africa Renewable Energy Fund (AREF) www.berkeley-energy.com	Fund Manager	I	1/2	Renewable Energy					Africa		
Aloe Private Equity www.aloe-group.com	Fund Manager	I	1/2	Renewable Energy					Asia		
Armstrong Asset Management www.armstrongam.com	Fund Manager	I	1/2	Solar					Asia		
Asia Climate Partners www.asiaclimatepartners.com.hk	Fund Manager	I	1/2	Renewable Energy					Asia		
Evolution One www.inspiredevolution.co.za	Fund Manager	I	1/2	Wind		Hydro		Geothermal		Africa	
Frontier Investment Management www.frontierinvest.com	Fund Manager	I & II	1/2	Geothermal		Hydro		Solar		Wind	Africa
Renewable Energy Asia Fund (REAF) www.berkeley-energy.com	Fund Manager	I	1/2	Wind			Hydro			Asia	
Infuse Venture Fund www.infuseventures.in	Fund Manager	I	1	Clean Technology					Asia		
Lereko Metier www.metier.co.za	Fund Manager	I	1/2	Hydro			Solar			Africa	
GreenWish Capital www.greenwishpartners.com	Fund Manager	II	1/2	Solar					Africa		
JCM Capital www.jcmpower.ca	Fund Manager	II	1/2	Solar					Africa		
Sindicatum www.sindicatum.com	Development Company	II	1/2	Solar					Asia		
Sola Future Energy www.solafuture.co.za	Development Company	II	1/2	Solar					Africa		
The Blue Circle www.thebluecircle.sg	Development Company	II	1/2	Wind			Solar			Asia	
Zoscales Partners www.zoscales.com	Fund Manager	II	0	Clean Technology					Africa		
Windlab www.windlab.com	Development Company	II	1/2	Wind					Africa		
Candi Solar www.candi.solar	Financier	II	0	Rooftop solar					Africa and Asia		
VS Hydro N/A	Development Company	II	1/2	Hydro					Africa		
Africa REN www.africa-ren.com	Development Company	II	1/2	Solar			Battery storage			Africa	
AIIM Hydroneo N/A	Development Company	II	1/2	Hydro					Africa		
NewAfrica Impact www.newafricaimpact.com	Fund Manager	II	0	CHP/biogas					Africa		
Kairos Renewables kairos-renewables.com	Fund Manager	II	0	Wind		Solar		Hydro		Asia	
Levanta Renewables N/A	Development Company	II	1/2	Wind			Hydro			Asia	

TABLE III PROJECTS DIRECTLY SUPPORTED WITH SCAF'S SUPPORT LINE 2

	SCAF PHASE	COOPERATING PARTNER	PROJECT NAME	COUNTRY	REGION	TECHNOLOGY	INSTALLED/ STORAGE CAPACITY (MW)/(MWH)	ESTIMATED PRODUCTION (GWH/ YR)
1	I	Berkeley Energy	Lake Mainit Small Hydro	Philippines	Asia	Hydro	25	
2	I	Berkeley Energy	Pasuquin Wind Farm	Philippines	Asia	Wind	48	
3	I	Berkeley Energy	Mirkala Wind Farm	India	Asia	Wind	80	
4	I	Berkeley Energy	PHESI Wind Farm	Philippines	Asia	Wind	16	
5	I	Armstrong	nv Vogt (Developer)	Philippines	Asia	Solar	6.3	
6	I	Armstrong	"Rangers" Celtic (Developer)	Thailand	Asia	Solar	15	
7	I	DI Frontier	Akiira Geothermal	Kenya	Africa	Geothermal	77	
8	I	DI Frontier	Kakaka	Uganda	Africa	Hydro	5.0	
9	I	DI Frontier	Lubilia	Uganda	Africa	Hydro	5.4	
10	I	DI Frontier	Nithi Hydro Project	Kenya	Africa	Wind	5.6	
11	I	DI Frontier	Wind for Prosperity	Kenya	Africa	Hybrid	5	
12	I	DI Frontier	Eldosol	Kenya	Africa	Solar	40	
13	I	Evolution One	RedCap (Kouga)	South Africa	Africa	Wind	80.0	
14	I	Evolution One	Mapembasi Hydro Power	Tanzania	Africa	Hydro	10.0	
15	I	Evolution One	Diaz (Quantum Power)	Namibia	Africa	Wind	44.0	
16	I	Evolution One	Menegai (Quantum Power)	Kenya	Africa	Geothermal	35.0	
17	I	Lereko Metier	Sindila	Uganda	Africa	Hydro	5.5	
18	I	Lereko Metier	Ndugutu	Uganda	Africa	Hydro	5.0	
19	I	Lereko Metier	Nyamaghasani	Uganda	Africa	Hydro	18.0	
20	I	Lereko Metier	Karma	Burkina Faso	Africa	Solar	2.5	
21	II	GreenWish	K-1 Solar	Nigeria	Africa	Solar	50.0	89
22	II	JCM Capital	Katsina	Nigeria	Africa	Solar	75.0	207

	SCAF PHASE	COOPERATING PARTNER	PROJECT NAME	COUNTRY	REGION	TECHNOLOGY	INSTALLED/ STORAGE CAPACITY (MW)/(MWH)	ESTIMATED PRODUCTION (GWH/ YR)
23	II	DI Frontier	BVC Geothermal	Kenya	Africa	Geothermal	140.0	1,200
24	II	DI Frontier	DC Frontier Hydro	Rwanda	Africa	Hydro	12.0	70
25	II	The Blue Circle	Dam Nai Wind	Vietnam	Asia	Wind	39.4	123
26	II	The Blue Circle	Bokor	Cambodia	Asia	Wind	80.0	225
27	II	The Blue Circle	S2 Wind	Indonesia	Asia	Wind	47.6	136
28	II	The Blue Circle	S11 Wind	Indonesia	Asia	Wind	23.8	64
29	II	The Blue Circle	Dai Phong	Vietnam	Asia	Wind	40.0	170
30	II	DI Frontier	Kiwira	Tanzania	Africa	Hydro	40.0	227
31	II	DI Frontier	Chania Wind	Kenya	Africa	Wind	51.0	209
32	II	Sola Group	GETFIT ZAMBIA	Zambia	Africa	Solar	40.0	54
33	II	Sindicatum	Tarlac	Philippines	Asia	Solar	60.1	79
34	II	Sindicatum	Indosolar	Indonesia	Asia	Solar	32.0	46
35	II	DI Frontier	Zambia Portfolio	Zambia	Africa	Hydro	37.0	176
36	II	Windlab Africa	Miombo	Tanzania	Africa	Wind	100.0	500
37	II	Windlab Africa	Meru	Kenya	Africa	Hybrid	80.0	295
38	II	SCAF partner	SCAF partner	Myanmar	Asia	Solar	125.0	1,248
39	II	Africa REN	Kodeni	Burkina Faso	Africa	Solar	38.0	66
40	II	SCAF partner	SCAF project	Kenya	Africa	Storage	20.0	54
41	II	Africa REN	Walo	Senegal	Africa	Storage	20.0	N/A
42	II	SCAF partner	SCAF project	Zimbabwe	Africa	Hydro	5.0	19
43	II	SCAF partner	SCAF project	Vietnam	Asia	Wind	100.0	403

TABLE IV COMPARABLE FACILITY DESCRIPTIONS**ICFA Luxembourg (International Climate Finance Accelerator)**

is a public-private partnership by 10 private entities of the Luxembourg financial sector as well as the Luxembourg Ministry of Finance and the Ministry of the Environment, Climate and Sustainable Development. ICFA provides support for first- and second-time climate finance fund managers only (no development companies or project-specific seed funding) that are investing in climate mitigation, climate adaptation and reduction of emissions from deforestation and forest degradation (REDD+) globally (no geographic restrictions). The facility provides partial financing support for operating capital as well as training, coaching and mentoring, fund management and investment structuring, fundraising support, venture capital expertise, risk management, impact measurement and assessment, legal and tax assistance, and other post-launch support services. ICFA was established in 2018.

SEFA (Sustainable Energy Fund for Africa) is a multi-donor trust fund managed by the African Development Bank providing catalytic finance to unlock private sector investments in renewable energy and energy efficiency. It offers early stage Project Preparation Grants for cost-sharing and technical assistance for early stage activities, and equity to help bridge the early-stage financial gap from feasibility through financial close. They also provide Enabling Environment Grants to support public sector activities that improve the policy and regulatory environment for private sector clean energy development and investment. In November 2019, the Bank's Board of Governors approved SEFA's conversion from a multi-donor trust fund into a "special fund" (SEFA 2.0), effectively upgrading SEFA to provide a wider range of financial instruments, so as to catalyse larger amounts of private investments and support energy transition at scale across the continent. SEFA is active since 2011.

EEP Africa (Energy and Environment Partnership Southern and East Africa) is a multi-donor fund providing early stage grants and catalytic financing to innovative clean energy projects, technologies and business models in 15 countries across Southern and East Africa. It offers co-funding innovation grants and follow-on catalyst financing in the form of loans, guarantees, or other risk sharing instruments for projects having participated in the grants phase. EEP Africa was established in 2010.

CEFPF (Clean Energy Financing Partnership Facility) is a four-facility partnership created to help developing country members of the Asian Development Bank improve energy security and transition to low-carbon development pathway through investments in clean energy technologies and projects (including CCS). The CEFPF offers grants and technical assistance for early-stage project development activities, and public and private debt and equity financing for mid-to-late-stage infrastructure-scale renewable energy projects.

The Private Infrastructure Development Group (PIDG)

is a donor-funded infrastructure development and finance organisation providing advisory services, development expertise, and access to grant, equity, and subordinated debt financing for renewable energy and energy efficiency projects in Sub-Saharan Africa and Asia. Active through its catalyst development companies InfraCo Africa and InfraCo Asia, PIDG can act as a developer or co-investor and take on many of the upfront costs and risks of early-stage project development through financial close, construction, and into operation.

SEACEF (Southeast Asia Clean Energy Facility) is a collaboration between leading international foundations to accelerate the low carbon transition in Southeast Asia. In partnership with clean energy pioneers, governments, global philanthropic organizations, development financial institutions, NGOs and other local stakeholders, SEACEF aims to direct early-stage development capital investment into innovative, high-impact clean energy projects and businesses in critical Southeast Asian markets. SEACEF provides convertible loans up to USD 2 million until financial close for projects in Vietnam, the Philippines and Indonesia. SEACEF announced its first investment in September 2020.

REPP (Renewable Energy Performance Platform) is a publicly funded project preparation facility focused on Sub-Saharan Africa. They offer early-stage technical and project development assistance and access to debt financing for third-party cost such as feasibility and grid studies, environmental and social impact assessments, and legal expenses. They also have access to long-term lending and risk mitigation instruments, as well as a range of blended debt and equity instruments, including bridge financing, construction loans, equity and equity conversion options, results-based financing, subordinated debt, trade finance, and working capital loans to help bring projects through financial close and construction.

CIO (Climate Investor One) is a donor-supported public-private facility offering financing for all three phases of the project lifecycle (development, construction, operation). The Development Fund offers publicly funded loans up to 50% of development costs on commercial terms up to \$2.5M (12--24 months) and technical, environmental, and social due diligence. Loans to successful projects can be converted into equity and purchased by the Construction Equity Fund, which then offers public-private funded capital for up to 75% of investment costs on commercial terms with first loss, mezzanine, and senior debt position, and guarantees (24-48 months). Once the project reaches commercial operation, the Refinancing Facility offers private sector subordinated debt up to 50% with right of first refusal (15 years).



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