

# Concept Note

Project Title:	Sarona Climate Action Incubator
Country(ies):	Fiji,Indonesia,Malaysia,Papua New Guinea,Thailand,Viet Nam,Philippines (the)
Accredited Entity(ies) (AE):	Sarona Asset Management Inc.
Date of submission	June 30, 2025



GREEN  
CLIMATE  
FUND

## Notes

- The GCF's revised concept note template (*Concept note template V.3.1*) is being made available in Word format for reference.
- The latest template in the system prevails over the Word format document.
- Starting 1 April 2025, all new concept note submissions should be made through the GCF Partner Portal using the new digital template.

A. Basic Proposal Data			
<b>A.1. Confidentiality<sup>1</sup></b>	Confidential	<b>A.1.2. Project or programme</b>	Project
<b>A.2. Sector</b>	Private		
<b>A.3. Funding modality</b>	Proposal Approval Process		
<b>A.4. Executing Entity(ies) (EE)</b>	• Sarona Asset Management Inc., Sarona Asset Management Singapore Pte Ltd, Local Fund Manager Partners		
<b>A.5. Indicate the result areas for the project and estimated percent of total project cost (GCF + co-finance) by theme (mitigation &amp; adaptation)</b>	<b>Mitigation: 50%</b> Reduced emissions from: <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Energy access &amp; generation</li> <li><input checked="" type="checkbox"/> Low emission transport</li> <li><input checked="" type="checkbox"/> Buildings, cities, industries &amp; appliances</li> <li><input type="checkbox"/> Forestry &amp; land use</li> </ul>	<b>Adaptation: 50%</b> Increased resilience of: <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Livelihoods of people &amp; communities</li> <li><input checked="" type="checkbox"/> Health, food &amp; water security</li> <li><input type="checkbox"/> Infrastructure &amp; built environment</li> <li><input type="checkbox"/> Ecosystems &amp; ecosystem services</li> </ul>	
<b>A.6. Estimated mitigation outcome (tCO<sub>2</sub>eq over lifespan)</b>	4,700,000	<b>A.7. Estimated adaptation outcome (number of beneficiaries and % of population)</b>	Direct: 300,000 (24%)
			Indirect: 939,000 (75%)
<b>A.8. Indicate targeted results in the <a href="#">GCF strategic plan 2024-2027</a> (check all that apply)</b>	<input type="checkbox"/> T1. Countries: More than 100 developing countries directly supported by GCF to advance the implementation of their NDCs, NAPs or LTS through integrated climate investment planning and/or developing high quality-climate project pipelines for GCF funding <input type="checkbox"/> T2. DAEs: Doubling the number of DAEs with approved GCF funding proposals through strengthened climate capacity and increasing the allocation of GCF resources through DAEs <input type="checkbox"/> T3. CIEWS: Countries particularly vulnerable to the adverse effects of climate change protected by new or improved early warning systems <input type="checkbox"/> T4. Food: Beneficiaries adopting low-emission climate-resilient agricultural and fisheries practices, securing livelihoods while reconfiguring food systems <input type="checkbox"/> T5. Ecosystems: Hectares of terrestrial and marine areas conserved, restored or brought under sustainable management <input checked="" type="checkbox"/> T6. Infrastructure: Countries supported by GCF to develop or secure low-emission climate resilient infrastructure, through systemic and/or country-driven resilience planning, funding and/or de-risking of investments, including those that draw on nature-based solutions or ecosystem based approaches <input checked="" type="checkbox"/> T7. Clean Energy: Countries supported to expand access to sustainable, affordable, resilient, reliable renewable energy, particularly for hardest to reach, and/or to increase renewable energy sources in the energy mix <input checked="" type="checkbox"/> T8. Transport, buildings, industry: Countries supported to shift toward clean and efficient energy end-use for transport, building and industry sectors, including through electrification, decreasing energy consumption and novel solutions and emerging technologies for hard-to-abate sectors <input type="checkbox"/> T9. Locally-led climate action: Does the project have potential to support locally-led climate action by enabling local actors to decide over the use of GCF finance at project activity level or maintain a strong involvement across the project cycle? (If yes, please expound in sections C.2 and C.3.)		

<sup>1</sup> Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy ([Decision B.12/35](#)) and the Review of the Initial Proposal Approval Process ([Decision B.17/18](#)).

	<input type="checkbox"/> T10. MSMEs: Local private sector early-stage ventures and MSMEs provided with broad-based seed and early-stage capital for innovative climate solutions, business models and technologies, with a focus on adaptation, energy access and transport sectors, and removing barriers for home-grown innovation <input type="checkbox"/> T11. LFI: National and regional financial institutions supported to access GCF resources, and other green finance, particularly for MSMEs.		
<b>A.9. Indicative total project cost (GCF + co-finance)</b>	Amount: 300,000,000 USD	<b>A.10. Indicative GCF funding requested</b>	Amount: 100,000,000 USD
<b>A.11. Financial instrument requested from GCF</b>	<input checked="" type="checkbox"/> Equity		
<b>A.12.1. Estimated project implementation period</b>	13 years	<b>A.12.2. Estimated duration of investment</b>	9 years
<b>A.12.3. Estimated project lifespan</b>	18 years	<b>A.13. Will support from Project Preparation Facility be requested?<sup>2</sup></b>	Yes
<b>A.14. ESS category<sup>3</sup></b>	Intermediation 2  (link to <a href="#">SAP ESS screening checklist</a> )	<b>A.15. Has the CN been shared with the NDA(s)?</b>	Yes
<b>A.16. Alignment with country NDCs &amp; NAPs</b>	Country	Date of NDC/ NAP submission (with link to NDC/ NAP)	Brief description (Project's alignment with NDC/ NAP and percentage of target met with the proposed project)
	Indonesia	<a href="https://unfccc.int/sites/default/files/NDC/2022-09/ENDC_Indonesia.pdf">NDC: 23/09/2022 (https://unfccc.int/sites/default/files/NDC/2022-09/ENDC_Indonesia.pdf)</a>	Supports Indonesia's goal of achieving carbon neutrality by 2060 through investments in renewable energy, sustainable agriculture, and waste management. The General Partner of General Partners (GP of GPs) model helps de-risk local climate investment, attracting more private capital into low carbon solutions. SCAI-backed funds' focus will include distributed renewables, green transport start-ups, climate-smart agriculture & efficient irrigation, and

<sup>2</sup> See [here](#) for access to project preparation support request template and guidelines.

<sup>3</sup> Refer to the Fund's environmental and social safeguards ([Decision B.07/02](#)).

			<p>water- saving technologies, aligned to the Enhanced Nationally Determined Contribution (ENDC) priority sectors of energy, agriculture, water and health resilience. Indonesia's ENDC pledges an unconditional 31.89% cut (c.915 Mt CO<sub>2</sub> e) and a conditional 43.2% cut (c.1 244 Mt CO<sub>2</sub> e) from a 2030 BAU of 2 869 Mt CO<sub>2</sub> e . With 30% of SCAI's avoided emissions allocated here (c.1.5 Mt CO<sub>2</sub> e), the incubator would meet c.0.16% of the unconditional economy- wide target while unlocking private capital in sectors the ENDC has prioritised.</p>
	Viet Nam	<p><b>NDC:</b> <a href="https://unfccc.int/sites/default/files/NDC/2022-11/Viet_Nam_NDC_2022_Update.pdf">08/11/2022 (https://unfccc.int/sites/default/files/NDC/2022-11/Viet_Nam_NDC_2022_Update.pdf)</a></p>	<p>Contributes to Viet Nam's 43.5% conditional GHG reduction by 2030 by financing renewable energy, waste-to-energy projects, and low-carbon agriculture. Helps scale climate-smart SMEs, reinforcing green growth policies SCAI will scale distributed solar, energy efficiency in industry &amp; buildings, e- mobility, and climate- smart agriculture solutions, in line with Viet Nam's 2022 NDC. The NDC aims for an unconditional 15.8% (146 Mt CO<sub>2</sub> e) or conditional 43.5% (404 Mt CO<sub>2</sub> e) cut from a 2030 BAU of 928 Mt CO<sub>2</sub> e. With 20% of SCAI impact (c.1 Mt CO<sub>2</sub> e), SCAI would deliver c.0.7% of the unconditional target (c.0.25% of the conditional one) and mobilise private finance into the NDC's key target sectors.</p>
	Philippines (the)	<p><b>NDC:</b> <a href="https://unfccc.int/sites/default/files/NDC/2022-06/Philippines_NDC.pdf">15/04/2021 (https://unfccc.int/sites/default/files/NDC/2022-06/Philippines_NDC.pdf)</a>; <b>NAP:</b> <a href="https://unfccc.int/sites/default/files/resource/NAP_Philippines_2024.pdf">30/05/2024 - https://unfccc.int/sites/default/files/resource/NAP_Philippines_2024.pdf)</a></p>	<p>Strengthens private sector engagement in mitigation and adaptation efforts, complementing the Philippines' goal to reduce GHG emissions by 75% by 2030. Targets agriculture, water security, and disaster resilience, supporting the country's climate-vulnerable sectors SCAI will back e- mobility, water- saving irrigation, climate- resilient agri- SMEs and distributed renewables, thereby aligning with the Philippines' NDC sectors (energy, transport, agriculture, water, health). The NDC pledges 75% (72.29% conditional, 2.71% unconditional) reduction/avoidance against a cumulative 2020- 30 BAU of 3,340 Mt CO<sub>2</sub> e. With 15% of SCAI mitigation (c.0.75 Mt CO<sub>2</sub> e), SCAI would achieve c.0.03% of the national mitigation target, demonstrating private- sector pathways identified as necessary in the NDC.</p>
	Fiji	<p><b>NDC:</b> <a href="https://unfccc.int/sites/default/files/NDC/2022-06/Republic_of_Fiji%27s_Updated_NDC_20201.pdf">31/12/2020 (https://unfccc.int/sites/default/files/NDC/2022-06/Republic_of_Fiji%27s_Updated_NDC_20201.pdf)</a>   <b>NAP:</b> <a href="https://unfccc.int/sites/default/files/resource/NAP_Fiji_2018.pdf">12/12/2018 - https://unfccc.int/sites/default/files/resource/NAP_Fiji_2018.pdf)</a></p>	<p>Aligns with Fiji's NDC and NAP by mobilising investments into renewable energy, climate-resilient infrastructure, and sustainable agriculture, directly supporting Fiji's goals to reduce emissions by 30% by 2030 and achieve net-zero emissions by 2050. SCAI will channel catalytic equity into renewable- energy, energy- efficiency and sustainable transport SMEs. Fiji's updated NDC sets two complementary energy-sector goals: (i) a 30% cut below the 2030 BAU baseline of 2.34 Mt CO<sub>2</sub> e (c.0.70 Mt CO<sub>2</sub> e), and (ii) achieving 100% renewable-electricity generation by 2030, a shift expected to deliver around 20% of that 30% CO<sub>2</sub> -reduction target. Assuming SCAI deploys c.5% of its lifetime mitigation impact to Fiji, the programme would deliver c.36% of Fiji's energy- sector mitigation target while directly supporting the NDC's health adaptation goal.</p>

	Malaysia	<p><u><a href="https://unfccc.int/sites/default/files/NDC/2022-06/Malaysia_NDC_Updated_Submission_to_UNFCCC_July_2021_final.pdf">NDC: 30/07/2021 (https://unfccc.int/sites/default/files/NDC/2022-06/Malaysia_NDC_Updated_Submission_to_UNFCCC_July_2021_final.pdf)</a></u></p>	<p>Aligns with Malaysia's 45% carbon intensity reduction by 2030 by financing clean energy, industrial decarbonisation, and circular economy initiatives. Supports SMEs in climate tech to accelerate the country's low carbon transition. Target investments include rooftop solar, industrial energy efficiency, low- carbon logistics, climate- smart farming and circular- economy waste solutions. These sectors are highlighted in Malaysia's 2021 updated NDC and National Circular Economy Roadmap. Malaysia's NDC aims for an economy- wide 45% reduction in GHG- intensity versus 2005. Allocating 10% of SCAI's mitigation impact (c.0.50 Mt CO<sub>2</sub> e) would translate to c.0.7% of the absolute emission reduction implied by the intensity goal (Source: IEA).</p>
	Papua New Guinea	<p><u><a href="https://unfccc.int/sites/default/files/NDC/2022-06/PNG_Second_NDC.pdf">NDC: 16/12/2020 (https://unfccc.int/sites/default/files/NDC/2022-06/PNG_Second_NDC.pdf)</a></u>  <u><a href="https://unfccc.int/sites/default/files/resource/NA_P-PNG-Finale-2023.pdf">NAP: 11/04/2023 (https://unfccc.int/sites/default/files/resource/NA_P-PNG-Finale-2023.pdf)</a></u></p>	<p>Aligns with PNG's commitment to carbon neutrality in energy by investing in renewable energy, sustainable land management, and nature-based solutions. Helps mobilise private capital into PNG's green economy. SCAI will finance renewable- energy SMEs, energy efficiency projects and sustainable transport services, directly supporting PNG's headline "carbon- neutral energy industries by 2030" target and its transport- sector measures. Energy- sector emissions were 11.8 Mt CO<sub>2</sub> e in 2015; full neutrality therefore implies c.12 Mt CO<sub>2</sub> e reduction. A 5% SCAI share (c.0.25 Mt) would meet c.2% of the energy- sector target and complement the NDC's health- resilience objectives. PNG's 2023 NAP quantifies adaptation goals, for example, "Target 1: increase the resilience of 10% of the population (0.8 million people) in agriculture &amp; food security by 2030" and "Target 3: ensure climate-resilient health services for 100% of the population". SCAI can potentially invest in clean-energy mini-grids for clinics, energy efficiency cold-chains for vaccines, e-mobility river transport and off-grid solar for rural SMEs, thereby aligning with the NAP's renewable energy, EE, transport and health themes. With c.5% of beneficiaries (c.50 000 people), SCAI would deliver c.6% of the agriculture-and-food-security beneficiary target and provide an initial 0.6% toward the universal health-resilience goal, while demonstrating private-sector pathways the NAP calls for.</p>
	Thailand	<p><u><a href="https://unfccc.int/sites/default/files/NDC/2022-11/Thailand_2nd_Updated_NDC.pdf">NDC: 02/11/2022 (https://unfccc.int/sites/default/files/NDC/2022-11/Thailand_2nd_Updated_NDC.pdf)</a></u>  <u><a href="https://unfccc.int/sites/default/files/resource/NA_P_THAILAND_2024.pdf">NAP: 18/04/2024 (https://unfccc.int/sites/default/files/resource/NA_P_THAILAND_2024.pdf)</a></u></p>	<p>Supports Thailand's carbon neutrality by 2050 and net-zero by 2065 by investing in renewable energy, energy efficiency, and sustainable transport. Encourages SMEs to drive climate innovation and industrial decarbonisation. SCAI targets electric buses, modal- shift platforms, agri- tech, rooftop PV and EE retrofits – exactly the five sectors flagged in Thailand's 2nd updated NDC. Thailand commits to a 30% unconditional (c.166 Mt CO<sub>2</sub> e) or 40% conditional (c.222 Mt CO<sub>2</sub> e) cut from a 2030 BAU of 555 Mt CO<sub>2</sub> e. A 15% SCAI allocation (c.0.75 Mt CO<sub>2</sub> e) equates to c.0.45% of the unconditional target while leveraging blended capital in the priority transport and energy sectors. Thailand's 2023 NAP sets specific sectoral goals for water-resources management, agriculture &amp; food security, public-health resilience, natural-resource management, human settlements and flags the need</p>

			<p>for sustainable transport and efficient energy use as enabling measures. SCAI will support sustainable transport services, climate-smart farming platforms, rooftop-solar/energy efficiency retrofits and water management SMEs, addressing three of the six priority sectors plus the cross-cutting transport/energy agenda. Allocating c.15% of beneficiaries (c.150 000 people) to Thailand covers c.50% of the NAP's sectoral pillars and provides pilot-scale resilience benefits to c.0.2% of the national population on a path toward full-scale implementation.</p>
--	--	--	--

<p><b>A.17. Has this CN been developed with GCF Readiness support?</b></p>	<p><input checked="" type="checkbox"/> No</p>
--	---

**B. Proposal Executive Summary (max. 500 words)**

Southeast Asia and the Pacific face a dual climate challenge. On the mitigation side, Indonesia, Viet Nam and Thailand are among the largest CO<sub>2</sub> emitters globally (ranking 7th, 19th, and 23rd, respectively), with energy and transport accounting for over 70% of their energy- sector CO<sub>2</sub> output; Thailand's emissions have risen 63% since 2000 as gas- fired power and road transport expand. On the adaptation side, climate hazards are intensifying. Indonesia has seen a six- fold increase in disasters over 50 years; Fiji loses roughly 5% of GDP annually to cyclones; and densely populated deltas in Viet Nam make it one of the five countries most exposed to sea- level rise. Yet private finance remains concentrated in large- scale renewables, leaving climate- smart SMEs, and the communities they serve, critically underfunded.

The Sarona Climate Action Incubator (SCAI) will bridge this gap as a General Partner of General Partners (GP of GPs) platform. USD 100 million catalytic "starter capital" from the GCF will seed up to 10 locally managed climate funds in Fiji, Indonesia, Malaysia, Papua New Guinea, the Philippines, Thailand and Viet Nam, alongside USD 200 million of equity and debt from DFIs, pension funds, strategic investors and Sarona. Sarona Asset Management (Executing Entity) will provide shared services and technical assistance, while partner GPs deploy capital to SMEs in energy access, low- emission transport, climate- smart agriculture, resilient water and health solutions, sectors expressly prioritised in each country's NDC. Over its 13- year life, SCAI targets 5 million tCO<sub>2</sub> e avoided and ~939,000 beneficiaries. By crowding in ~9 dollars of additional finance for every GCF dollar, SCAI will demonstrate a replicable pathway for private capital to flow into high- impact, SME- scale climate solutions. Sarona has a decade-plus history of private investments in SMEs across Southeast Asia, providing deep local networks, knowledge, and proven execution capacity, with permanent staff in Viet Nam, Indonesia, Philippines and Singapore and plans to add staff in Thailand and Malaysia, pending funding.

Concessional capital is indispensable: high perceived risk, thin fund- manager track records and fragmented policy environments currently keep institutional investors on the sidelines. GCF participation lowers the weighted cost of capital, absorbs early losses and lengthens fund tenor, enabling deals that would otherwise be commercially unviable. This aligns with GCF's 2024- 27 Strategic Plan and the Board's principles for demonstrating impact potential by combining measurable GHG abatement with climate- resilience benefits and gender inclusion. Sarona aims to submit the full Funding Proposal by Q2 2026, targeting a first financial close within 18 months of Board approval; due- diligence on initial partner funds and NDA consultations are already under way, with NOLs in process across all seven countries. A sufficient pipeline of bankable projects, funds, and enterprises exist across these geographies to support the SCAI strategy. By leveraging Sarona's networks and incubation model, capital can be rapidly deployed into investable solutions, scaling climate impact while ensuring commercial viability. With GCF's catalytic support, SCAI will shift the regional climate- finance paradigm from isolated, large- scale projects to a scalable ecosystem of locally led funds, channelling capital and climate impact deep into the real economy.

**C. Proposal Information**

**C.1. Climate change context (max. 500 words)**

*Please refer to Annex 1 for country- by- country detail, baselines and the full risk- to- investment- pathway linkages.*

**Impact Potential –SCAI**

**1. Context & baseline**

The seven countries emit c.1.6 Gt CO<sub>2</sub> e yr<sup>-1</sup> (c.4.6% of the global total, this figure only includes CO<sub>2</sub> from fuel combustion; Additional sources, such as methane leaks from O&G operations, are not included as they are hard to measure), driven chiefly by coal-based power, diesel mini-grids, road transport and inefficient industry. Climate hazards

are escalating: Indonesian climate-related disasters are six-times higher than in 1970; typhoons cost the Philippines USD 3.8 bn (2006-13); Fiji loses c.5% GDP to cyclones each year. Rising heat, drought and sea-level intrusion threaten food, water and health, with women, rural and coastal groups most exposed. Rapid urbanisation, poor waste management and limited energy access further amplify vulnerability. The attached *Table Section C.1* also provides primary baselines of total and sectoral GHG emissions to ground the mitigation case, e.g., totals of Indonesia ~1,642 MtCO<sub>2</sub> e; Viet Nam ~354 MtCO<sub>2</sub> e; Thailand ~385 MtCO<sub>2</sub> e; Malaysia ~330 MtCO<sub>2</sub> e; Philippines ~276 MtCO<sub>2</sub> e; Papua New Guinea ~10.8 MtCO<sub>2</sub> e; Fiji ~3.1 MtCO<sub>2</sub> e, with disaggregation across industry, transport and AFOLU in the annexed table.

## 2. Mitigation contribution

Using host-country grid factors and IPCC defaults, the pipeline is modelled to avoid c.5 Mt CO<sub>2</sub> e over 13 years, equal to 0.3% of the cohort's 2022 transport-sector emissions. GCF first-loss capital is catalytic, unlocking c.9x co-finance that commercial lenders withhold because of technology, currency and ticket-size risks. The attached *Table Section C.1* lays out how SCAI's country- specific pipelines (e.g., distributed renewables and storage, rooftop/floating solar, energy- efficiency upgrades, clean mobility/charging infrastructure, and waste- to- energy/circularity) will reduce emissions in the highest- contributing sectors (power/industry and transport). Mitigation will be measured through a project- versus- baseline approach using host- country grid factors or sectoral defaults, aggregated to an ex- ante facility target of c.5 MtCO<sub>2</sub> e avoided over 13 years, and reported via SCAI's harmonised MRV system.

## 3. Adaptation contribution

Investments will increase the climate resilience of ≥ 1 million people (≥ 25% women) by 2038 The *Table Section C.1* annex links each hazard–impact to concrete measures that reduce exposure and vulnerability and increase adaptive capacity, for example, cyclone- resistant island micro- grids and storage (ensuring continuity of power for homes, clinics and critical services), drought- resilient irrigation and inputs in agriculture, flood- resilient water and transport infrastructure, and health resilience solutions (e.g., efficient cold- chain and clinic power). These pathways contribute to the programme- level outcome of c.1 million direct beneficiaries, with gender- responsive targeting and reporting aligned to the SCAI results framework.

## 4. Alignment with national priorities

Energy access, clean transport, resilient agriculture and circular waste solutions are explicit priorities in the latest NDCs across all seven countries; Fiji, PNG and Indonesia additionally prioritise off-grid electrification and coastal resilience. SCAI channels private capital into these gaps, complementing rather than duplicating sovereign programmes.

## 5. Measurement, reporting & verification

All investees must use the Sarona Climate Impact Maximiser to calculate ex-ante and realised GHG reductions and resilience beneficiaries, report quarterly, and undergo annual third-party assurance, fully consistent with GCF Decision.

## C.2. Proposed project / programme (max. 1000 words)

If GCF provides a USD 100 million junior- equity tranche that seeds Sarona's GP of GPs platform, then up to ten locally managed climate funds will secure accelerated first closes, channel capital to 60- 100 climate- smart SMEs and, over the fund life, avoid about 4.7 to 5 million tCO<sub>2</sub> e\* while directly improving the resilience of one million people, because the catalytic capital layer lowers perceived risk, finances warehousing and supplies technical assistance that commercial investors alone will not underwrite.

SCAI integrates a comprehensive set of components and activities designed to address identified barriers and drive progress toward expected outcomes. The main climate issue and barrier is a lack of private investment funds being launched supporting climate adaptation and climate mitigation opportunities being pursued by SMEs in the target countries. This lack of funding and expertise weakens the ability of SMEs to contribute to innovative approaches, bringing in climate tech solutions in Southeast Asia and the Pacific.

Beyond direct outputs, SCAI is designed to catalyse systemic change. Publishing audited impact data will give subsequent funds the confidence to enter without concessional support; Sarona forecasts that demonstration effects plus strengthened local GP capacity will trigger a second wave of fully commercial vehicles in the same markets. No existing initiative combines a regional GP of GPs structure, warehousing finance and gender- responsive TA; comparable single- country green- SME facilities lack SCAI's multi- jurisdiction replication engine and the private capital mobilisation potential, making the proposal uniquely positioned to shift the private- capital paradigm in Southeast Asia and the Pacific.

*Please refer to the Annex 2 for the country and activity level barrier mapping, detailed outputs/outcomes, and the social, economic and environmental co-benefits associated with each activity.*

\*Calculation basis for estimated mitigation outcome:

### I. Total mitigation allocation:

- Total mitigation allocation: \$150m (50%)
- Result- area splits: Energy access & generation USD 60 m (20%)

- Low- emission transport USD 45 m (15%)
- Buildings/cities/industry USD 45 m (15%)

II. Method used:

- We applied conservative tCO<sub>2</sub> avoided per USD 1m factors consistent with IPCC/grid- factor logic and typical program outcomes were used. At FP stage, we will provide the elaborate impact model (Annex 22) and also refine the factors and use project- vs- baseline (host- country grid EFs / sector defaults).

III. Assumptions:

- Project lifetime of 15 years
- Grid Emissions Factor of 0.6 tCO<sub>2</sub> per MWh

IV. Calculations:

	Allocation (USD)	Factor (tCO <sub>2</sub> per USD 1m)	Estimated Lifetime MtCO <sub>2</sub> Avoided
Energy access & generation	\$60M	33,000	2.0
Low- emission transport	\$45M	30,000	1.35
Buildings, cities, industry & appliances	\$45M	30,000	1.35
Total (lifetime, conservative)	\$150M	N/A	4.7 - 5.0 MtCO <sub>2</sub>

*Please note the figures are tentative and will be revised once the detailed impact model has been completed (i.e. before the FP stage).*

**C.3. Country ownership and engagement with stakeholders (max. 250 words)**

Sarona maintains active dialogue with National Designated Authorities (NDAs) across the target region. Since January 2025 we have held nine engagements: Indonesia (virtual 16 Jan; in person Jakarta 2 Jun), Philippines (in person Manila 3 Feb), Papua New Guinea (virtual 11 Feb; in person Port Moresby 28 Mar), Thailand (virtual 3 Mar; in person Bangkok 5 Jun), Fiji (virtual 30 Apr), Malaysia (in person Kuala Lumpur 26 May), and we are arranging a call with Viet Nam's new NDA for late-summer 2025. Each meeting introduced the Sarona Climate Action Incubator (SCAI), aligned it with national climate priorities, and clarified pathways to letters of no-objection. As the concept matures, Sarona will circulate proposal drafts for written feedback, convene country workshops, and formalise collaboration through memoranda of understanding by Q1 2026.

Sarona is also coordinating with six regional fund managers—Clime Capital (PNG & Fiji), GEF Capital (regional), East Ventures (Indonesia), Asia Business Builders (Viet Nam), Navegar (Philippines) and Bintang Capital (Malaysia)—to co-develop dedicated climate funds that could channel GCF co-investment. Engagement will deepen through joint market analyses, gender-smart investment frameworks and co-sourcing of SME opportunities.

Finally, Sarona is partnering with LR Group, whose solar mini-grid pipeline in rural PNG and Fiji exemplifies the adaptation-mitigation solutions the Facility will scale. A tripartite term sheet with Clime Capital and LR Group is targeted for negotiation in 2026 subject to GCF support to SCAI.

**C.4. Indicative safeguards profile (max. 500 words)**

**Environmental & Social (E&S) risk profile and category**

The Sarona Climate Action Incubator (SCAI) channels capital through locally managed climate funds that invest in small and mid-sized enterprises across renewable energy, climate-smart agriculture, waste, mobility and nature-based solutions. Typical sub-projects involve limited construction or operational upgrades rather than green-field, large-scale infrastructure. Potential E&S risks therefore centre on: (i) occupational health and safety, waste and emissions from light-industrial processes; (ii) community health, land or water use conflicts in agricultural processing; and (iii) supply-chain labour risks. Sarona screens all investments against the IFC Exclusion List, rejects Category A activities, and obliges each fund to adopt a Social & Environmental Management System aligned with IFC Performance Standards and to report incidents and corrective action plans through legally binding clauses and a grievance mechanism. Given the diversified, medium-scale nature of underlying projects and the robust SEMS oversight, the programme is classified as Intermediation (I-2) under the GCF Revised Environmental and Social Policy: sub-projects are expected to present moderate, site-specific risks that are readily managed.

**Gender responsiveness and mainstreaming**

Gender-lens investing is embedded in Sarona's mandate. Under frameworks already applied in the Sarona

programmes, every fund is assessed for gender leadership, workforce equity, products that benefit women, and collects sex-disaggregated metrics against 2X Criteria and SDG 5 targets. Technical assistance and performance fees are tied to gender action plans, ensuring the concept is not only gender-responsive but demonstrably gender-transformative.

**Sexual Exploitation, Abuse and Harassment (SEAH) risk**

Portfolio companies are largely SMEs with limited direct interface with vulnerable populations; inherent SEAH risk is low-moderate. Nevertheless, Sarona operates a zero-tolerance approach consistent with the Australian government Preventing SEAH Policy: mandatory code of conduct, partner due-diligence, staff training, anonymous reporting channels, and contractual remedies for non-compliance. These measures will be extended to all incubated funds, keeping residual SEAH risk low.

**Indigenous Peoples impacts**

Several target countries host Indigenous or tribal communities. Because SCAI finances distributed, primarily service-oriented climate solutions, physical impacts (e.g., land acquisition) are expected to be minimal. Positive impacts include job creation, improved energy access and climate resilience that explicitly value Indigenous knowledge in project design. Sarona follows the Australian government Indigenous Peoples safeguard: early engagement, culturally appropriate consultation of men and women, and avoidance or mitigation of any adverse effects through Indigenous Peoples Plans where required. The policy framework therefore ensures the programme delivers net benefits while respecting Indigenous rights.

**Conclusion**

With a proven SEMS, categorical exclusions, gender-lens systems, comprehensive SEAH safeguards and Indigenous Peoples protocols, Sarona is well equipped to manage the moderate E&S risks associated with an I-2 programme and to turn them into inclusive, gender-smart and climate-positive outcomes within the GCF framework.

**C.5. Exit strategy and sustainability of impacts (max. 250 words)**

**Paradigm shift & duration** – Over a 13- year window, SCAI seeds the first generation of locally managed climate funds in Southeast Asia and the Pacific and equips them to deliver bankable, verifiable exits. On the investor side, SCAI converts early pipeline into diligenced, revenue- generating assets (through warehousing and shared services), establishes auditable impact and performance track records, and executes exits (primarily trade sales and secondaries) that demonstrate realisable value. Each successful exit recycles capital into successor vehicles and crowds in domestic pension, insurance and development- bank investors, normalising climate- smart criteria in mainstream mandates; the 13- year term provides sufficient runway for value creation and orderly exits so that the shift endures well beyond 2040. In parallel, SCAI institutionalises knowledge, expertise and experience in markets where specialist climate private- equity capability is thin: new GPs receive fund- formation support, back- and middle- office infrastructure, and a harmonised MRV system for climate and gender metrics, building a repeatable local skill base and reducing future reliance on concessional support. Finally, the paradigm shift is anchored in climate outcomes: funds are mandated, ex- ante, to invest in country- specific priority sectors (energy access, sustainable transport, climate- smart agriculture, water and resilient infrastructure, health resilience). This combination, bankable exits, durable local capability, and measurable mitigation/adaptation results, creates a self- reinforcing market for climate- aligned capital in the region.

**Ownership & stewardship** – SCAI does not own nature- based or physical assets. Assets are held and operated by investee companies (through the underlying funds) that are required to meet the fund managers’ Environmental and Social Management Systems aligned with applicable standards. Responsibilities for operations, maintenance and end- of- life management are embedded in investee business plans and covenants. Sarona’s programme- wide MRV framework requires quarterly reporting through to exit and continued monitoring thereafter, providing assurance that climate services are sustained beyond the investment period. This stewardship model, comprising clear asset ownership at the company level, robust E&S requirements, and independently assured, standardised impact reporting, helps ensure the climate benefits persist and scale with replication.

**System- level O&M & financial durability** – SCAI shifts markets from ad- hoc, project- by- project O&M to a standardised, investable operating model. Through shared services and targeted TA, each incubated fund embeds portfolio- wide O&M covenants (maintenance reserves, life- cycle and end- of- life plans), model contractual templates and performance- linked KPIs into investee agreements, and reports them via a harmonised MRV platform. The resulting, verified operating data can be underwritten by lenders, regulators and strategic buyers, lowering risk and enabling replication without concessional capital. By concurrently building local operator and back- office capability, this approach ensures climate services persist post- exit and are adopted as sector practice, anchoring a country- and technology- level transformation rather than a series of isolated assets.

**Post-implementation sustainability & monitoring** – Sarona’s Climate Impact Measurement (SCIM) framework, aligned with the GCF Integrated Results Management System, collects quarterly data on GHG, resilience and gender to exit, then annually for at least five years. Third-party-assured results appear in Sarona’s Impact Report, giving the GCF and other stakeholders a transparent mechanism to confirm that the paradigm shift is sustained and scaled.

**D. Indicative Financing Information**

### D.1. Total financing (max. 500 words)

SCAI will deploy USD 300 million in blended capital, structured so that one- third (USD 100 million) is catalytic "starter" capital from the GCF. The balance is expected from Sarona's own GP commitment (USD 3 million), like- minded institutional and Development Finance Institutions (DFIs) limited partners (approximately USD 97 million) and concessional debt of roughly USD 100 million. Post-final close, SCAI's capital stack will be as follows:

#### Capitalisation table (indicative)

Investor	Capital Allocation (USD million)	Share (%)
Green Climate Fund (GCF)	100.0	33.3%
Sarona Asset Management (GP)	3.0	1.0%
Other Equity Investors	97.0	32.3%
Concessional Debt Investor	100.0	33.3%
Total Capitalization	300.0	100.0%

The 2:1 debt-to-equity ratio reflects both the concessional debt provider's baseline requirement (mobilizing \$2 of equity for every \$1 of debt) and blended finance best practice. This structure enhances:

- Risk Cushioning: A stronger equity base improves portfolio resilience and reduces default risk for lenders.
- Incentive Alignment: Higher equity signals sponsor commitment and aligns interests across investors and fund managers.

Moreover, the equal split between junior and senior equity supports balanced co-financing:

- Risk/Return Calibration: Junior equity absorbs first losses and captures upside; senior equity offers stability. The balance protects both debt and senior equity while keeping returns attractive for junior investors.
- Catalytic Efficiency: A 1:1 ratio ensures concessional capital is used only as needed to mobilize commercial equity, preventing over-subsidization.
- Investor Confidence: A meaningful junior tranche builds credibility and attracts senior equity participation.

The fundraising and deployment timeline is sequenced as follows:

- GCF Board approval: Targeted for Q2 2026;
- Legal structuring and marketing to regional LPs: To be done over the rest of 2026;
- First close: Target of at least USD 75 million, including USD 25m from GCF; takes place in 2027;
- Final close: Envisaged in early 2028;
- GCF's capital would be paid back by 2036;
- The fund winds up in 2040

#### Engagement with investors

Sarona has already begun discussions with potential investors interested in the SCAI concept including:

- FinDev Canada (public): This is Canada's development financial institution. They have a keen interest in supporting climate funds in Asia as part of their investment strategy.
- Debt provider (public): Although the current environment makes it difficult to determine a future investment strategy for the group, prior to the change in US administration, Sarona received positive signals on the strategy from DFC, and it's fit within the overall portfolio of public debt provider.
- Pawanbawan Super and NAS Super (private): These are two pension funds in PNG interested in supporting climate investments as part of their investment strategy.
- Allied Climate Partners (private): This climate investor has shown interest in the strategy and is asking for additional information to put it in their pipeline.

*Please refer to Annex 3 for further information on junior equity providers and potential senior commercial equity providers.*

### D.2. Indicative terms – non-grants only (max. 500 words)

	Summary of Terms
Capitalisation	US\$300,000,000
Fund domicile	Singapore
Legal form	Limited Partnership

Regulatory status	Sarona Asset Management Singapore Pte Ltd holds a provisional Capital Markets License (CML) from the Monetary Authority of Singapore (MAS)
Fund Type	Fund of funds
Fund term	13 years from final closing
Instruments	LP interests
Management Fees	Very low management fees in the first three years and then no management fees thereafter (as management fees will be shared with the underlying fund investments)
Fund expenses and org expenses	As is customary in limited partnership funds (according to market convention)
GCF in the waterfall	These will be detailed in Annex 3 (Budget) and 14 (Term Sheet) in the full funding proposal

With regards to the investment instruments by downstream funds, they will be primarily equity although some will use convertible debt that will be converted to equity once certain conditions are met.

With regards to additional leverage in the form of debt at the investee company level, we have conservatively assumed for every \$1 of equity invested, that \$0.67 of debt would be crowded in at the investee company level. According to a few studies on the average Debt to Equity Ratio in the target countries, the average D/E in Viet Nam for example is 2.1x meaning that for every \$1 of debt, \$2.10 is crowded in through access to debt.

### D.3. Financial structure (max. 500 words)

#### Financial & contractual structure

SCAI is a blended GP-of-GPs platform that supplies catalytic junior equity and limited concessional debt to a network of first-time or emerging climate fund managers in Southeast Asia and the Pacific. Sarona warehouses their first deals, then syndicates senior equity to commercial LPs once the pipeline is visible. This tackles the “blind-pool” and track-record barriers that keep local GPs, and the SMEs they back, outside mainstream capital markets. Governance follows market norms (LPA, 10-year term, step-down extensions) but adds: (i) an LP Advisory Committee with veto on ESG breaches; (ii) key-person claw-back; and (iii) zero Sarona management fees (subject to a minimum management fee in the early years of SCAI to Sarona), ensuring every dollar flows to investments, an unusual but catalytic deviation from standard FoF practice.

#### Why this structure fits the gap

Climate-smart SMEs in the region face high perceived technology risk, thin collateral and currency volatility. A junior first-loss layer absorbs early under-performance and lengthens tenor to the 7-10 years needed for distributed energy, regenerative agriculture and circular-economy assets to mature. Once a GP proves out one fund, follow-on vehicles can raise purely commercial capital, achieving the systemic “lift-off” the GCF seeks.

#### Comparison with other instruments

- Grant / reimbursable grant – Builds capacity but no market discipline; no recycling of capital.
- Guarantee – Low cost but indirect: does not provide warehousing equity or strengthen GP governance.
- Pure equity – Without a concessional tranche, risk-adjusted returns are unattractive to local pensions and insurers.
- Subordinated or senior loans – Mis-matched tenor and cash-flow timing; do not remedy blind-pool risk. Each was explored in design workshops with DFIs and anchor investors; none achieved the dual goal of GP capacity-building and rapid private-capital mobilisation as effectively as the chosen blend.

#### Repayment & exit mechanics

SCAI anticipates three exit routes:

- Trade sales: Target buyers include strategic corporates and platforms in energy, transport, agri- food, water/waste and healthcare that value (a) contracted or highly visible revenues (e.g., PPAs, offtake and tipping- fee agreements), (b) established licenses/permits, and (c) a documented ESG/impact track record.
- Secondary sales (later- stage funds / strategics): For high- growth companies that outgrow SCAI’s mandate, the GP will run competitive processes with regional PE/infrastructure funds and strategic investors.
- IPOs: Where sustained growth, profitability and free float are achievable, the GP will pursue domestic or regional listings, typically via a dual- track alongside an M&A process to preserve optionality. Preparatory steps include board independence, and disclosure of climate and gender metrics aligned with the fund’s MRV framework.

GCF's junior equity and concessional debt are repaid from the above exit routes. The waterfall repays 100% of called capital to all classes, then delivers a 10% preferred return to senior investors; thereafter distributions are shared pari passu. Based on historical exits in comparable Sarona programmes, principal is expected back in years 7-9, with remaining upside by year 13.

**Appropriateness for GCF support**

The structure squarely addresses the "missing middle" in regional climate finance and demonstrates a replicable pathway for domestic institutional capital to adopt climate-smart mandates.

**D.4. Justification of GCF funding request (max. 500 words)**

SCAI specifically requires GCF funding to overcome critical market barriers that currently impede private-sector investment in climate-smart SMEs within Southeast Asia and the Pacific. Despite substantial climate-financing needs, private and public sector investors have largely refrained from supporting early-stage climate fund managers due to perceptions of high risk, limited track records, and regulatory complexity in target markets. At the FP stage, we will provide quantitative evidence of the market gap and the catalytic effect of the concession, including mobilisation ratios. The current private-sector finance landscape lacks appropriate financing instruments capable of absorbing initial risks and catalysing large-scale co-investments.

Without GCF's participation, SCAI would struggle to raise the scale of capital necessary to meaningfully address climate-related SME financing gaps. Commercial investors and DFIs have expressed significant concerns around first-loss exposure and initial blind-pool risks associated with supporting early-stage climate funds in these regions. Notwithstanding typical blind-pool constraints, SCAI's initial managers will be mandated to invest in pre-specified climate themes, mapped country-by-country to the climate issues set out in Section B.2. GCF's catalytic equity tranche mitigates precisely these risks by providing concessionality, thereby significantly lowering the overall risk profile for other investors and unlocking substantial co-financing.

Moreover, GCF support directly contributes to systemic transformation in the region's climate finance ecosystem. By providing catalytic capital, GCF not only enables substantial resource efficiency and leveraging of private and institutional capital at a 9:1 ratio but also establishes a replicable investment model that fosters long-term market confidence. SCAI's GP of GPs structure ensures the financial sustainability and scale-up of financing in the climate sector, creating a lasting legacy beyond the immediate project timeline.

Concessionality provided through GCF's equity participation has been carefully structured to be the minimum necessary to make SCAI viable. The concessional position absorbed by GCF significantly reduces capital costs and perceived risks for subsequent investors. The concessional GCF tranche is primarily a catalytic, first-loss layer that mobilises senior investors. The benefit to local climate-focused SMEs materialises indirectly through (i) the availability and earlier access to capital (including warehousing that diligences initial assets), (ii) fit-for-purpose tenors and instruments that match early cash-flows, and (iii) targeted technical assistance that removes non-recurring costs. At the FP stage, we will provide a quantitative justification of the concession.

In the absence of GCF support, the catalytic nature of this initiative would be fundamentally compromised. Purely commercial terms or conventional debt and equity instruments alone would neither address the initial barrier of perceived risk nor mobilise the required scale of private-sector co-investment. The resulting scenario would perpetuate the severe underinvestment in climate solutions within the targeted countries, thus prolonging vulnerability and delaying critical climate actions.

Therefore, GCF's catalytic role is essential and justified as it directly tackles market failures, reduces cost-of-capital constraints, mobilises substantial private capital, and establishes a sustainable financing solution capable of systematically scaling climate investments across the region.

**E. Accredited Entity / Executing Entity Information (max. 500 words)**

Sarona Asset Management, founded in 2009, is a specialized asset manager focused on impact investments in emerging markets. With over 15 years of experience, Sarona currently manages approximately USD 362 million across various private equity and blended finance vehicles, specifically targeting Asia, Africa, Latin America, and Emerging Europe. Sarona's approach emphasizes deep local partnerships, disciplined fund selection, and robust impact management systems, aiming for strong financial returns coupled with significant environmental, social, and governance (ESG) outcomes. The firm has successfully raised and managed two flagship fund-of-funds vehicles, Sarona Global Growth Markets Funds I and II (SGGM1 and SGGM2), and currently manages a separately managed account of AUD 250 million on behalf of the Australian Government through Australian Development Investments (ADI).

Sarona's investment model combines public and private capital to catalyse inclusive growth, addressing critical development needs in emerging economies. Sarona is a signatory to prominent global sustainability standards, including the UN Principles for Responsible Investment (PRI), Operating Principles for Impact Management (OPIM), and the 2X Challenge for gender lens investing, reflecting its deep commitment to sustainability and impact.

Sarona's regional presence is well-established, with dedicated staff and/or offices in Singapore, Indonesia, Viet Nam, the Philippines, Canada, Australia, Luxembourg, UK and the Netherlands. This extensive presence ensures strong local market insights and operational capabilities essential for executing the SCAI effectively.

Sarona's senior management team comprises seasoned professionals with extensive experience in private equity and impact investing:

- Serge LeVert-Chiasson (Managing Partner), CFA
- Rali Rizvanolli (Partner, Investments and Impact)
- Patrick Hergt (Partner, Business Development), CFA
- Mat LeRoux (Partner, Finance & Operations), CPA

#### Performance (as of December 2024)

Sarona's historical performance in managing similar projects demonstrates its robust investment and impact capabilities. For instance, SGM2 (2019 vintage, USD 85 million) is delivering top-quartile returns with a 20% net IRR, 2.15x TVPI, and 0.08x DPI as of March 31, 2024 (DPI has reached 0.40x as of August 2025). Notably, successful underlying investments such as Premier Energies (through GEF Capital Partners) in India yielded significant returns with a partial exit at 19.3x MOIC, reflecting the firm's capability to execute high-impact, high-return investments in climate sectors. Sarona's proven track record with DFIs and global private and public investors (e.g., US DFC, Australian and Canadian government) further solidifies its credibility and execution capacity.

*For further details of the performance track record for SGM1, SGM2 and ADI, please refer to Annex 4. For further details of the challenges and learnings through our experience in the programme countries, please refer to Annex 5. For further details on the country and sectoral private fund landscape, please refer to Annex 6.*

#### Executing Entities

The Executing Entities under SCAI will be carefully selected local fund managers with proven track records and regional market expertise. These executing entities will utilize SCAI's strategic platform, technical assistance, and shared services provided by Sarona, enabling them to efficiently structure, launch, and scale climate-focused funds across their respective markets.

*SCAI's structure chart is provided as Annex 7.*

#### F. Key Risks / Mitigation measures (max. 500 words)

RISK	Mitigant
High Perceived Investment Risks	GCF junior, first- loss equity and Sarona's warehousing of first deals convert "blind- pool" and track- record concerns into a visible, pipeline that was due diligence before senior LPs commit; shared services and a unified MRV system standardise underwriting and reporting; and fund governance adds an LP Advisory Committee with key- person claw- back. Together, these measures can lower perceived technology/credit risk, absorb early under- performance and crowd- in co- financing.
Exit and Liquidity Risks	SCAI plans multiple exit routes, including trade sales, secondary sales to later- stage funds or strategic investors; focusing on sectors with contracted revenues (PPAs, offtake contracts, tipping- fee leases) makes assets attractive to strategic buyers; diversification across seven countries and several sectors broadens the buyer universe, and the fund term provides sufficient runway to manage exit windows.
Real Investment Risks	SCAI seeks to mitigate underwriting risk in individual local funds through a GP of GPs platform, using GCF capital to take catalysing capital off the sidelines.
Currency Risk	Investments will be primarily USD-denominated, with active monitoring of currency exposure and potential hedging.
Capital Mobilisation Challenges	Sarona leverages strong networks and DFI/private sector partnerships to mobilise capital.

Regional Political/Economic Instability	Scenario-based financial modelling ensures adaptability to changing conditions.
Taxation Policy Changes	Continuous monitoring and adjustments to financial strategies minimise impact.
Fund Manager Capacity Gaps	Capacity-building and technical assistance programs will equip fund managers with required expertise.
Regulatory Delays	Early and proactive engagement with NDAs ensure timely approvals.
Lack of Public Sector Engagement	SCAI maintains active dialogue with key stakeholders to align fund structure with UN priorities.
Natural Disaster Risks	Integration of climate adaptation/mitigation strategies enhances community and portfolio resilience.
Implementation Delays	A phased rollout approach with clear milestones ensures progress and adaptability.
Fund Mismanagement Risks	Active co-creation and oversight of fund strategies ensure strong governance and performance.

### G. Supporting documents to be uploaded

- G.1. Map indicating the location of the project, if available
- G.2. Pre-feasibility study, if available
- G.3. Results of environmental and social risk screening
- G.4. Theory of change diagram (public sector only)
- G.5. Project documents
- G.6. Evidence of NDA support, if available
- G.7. PSAA documentation (mandatory for PSAA)

**Annex 1: Tables For Section C1**

Climate issues areas that SCAI will target to address							
Country	Energy access	Sustainable transport	Agriculture & food security	Water security	Health & climate resilience	Resilient infrastructure	Waste management
Indonesia	✓		✓	✓	✓		
Viet Nam	✓	✓	✓			✓	
Thailand	✓	✓	✓	✓			
Malaysia	✓	✓	✓			✓	✓
Philippines	✓	✓	✓	✓	✓		
Papua New Guinea	✓	✓			✓		
Fiji	✓	✓			✓		

**For Adaptation:**

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
Fiji	Temperature Rainfall Droughts Sea level rise Heatwaves	<p><b>Energy Access:</b></p> <p>Fiji meets 86% of its energy needs through oil imports, with the remainder supplied by domestic renewables (<a href="#">EIA</a>). Remote and outer islands remain oil-dependent, while &gt;4% of the population lacks electricity access (<a href="#">ITA</a>). The 2023-2030 National Energy Policy introduces a ban on heavy fuel imports to reduce reliance and drive transition (<a href="#">ITA</a>).</p> <p><b>Agriculture and Food Security:</b></p> <p>Drought and declining rainfall threaten Fiji's agricultural sector, reducing agricultural production, increasing mortality of livestock, and contributing to health risks, wildfires, and soil degradation (<a href="#">World Bank</a>).</p> <p><b>Sustainable Transport:</b></p> <p>Road transportation infrastructure is vital to Fiji's farming, forestry and tourism industries yet regularly disrupted by tropical cyclones. These cyclones pass through the Melanesia region every year, costing Fiji ~5% of its annual GDP. A category 5 cyclone in 2016 caused damage estimated to F\$105.5M to the road sector (<a href="#">UNDP</a>).</p>	<p><b>Energy Access:</b></p> <p>Cyclone-resistant, energy-efficient wind and solar installations with storm-resistant designs. Development of island microgrids and energy storage systems to maintain power during extreme weather events.</p> <p><b>Agriculture and Food Security:</b></p> <p>Food storage and processing facilities designed to withstand cyclones. Climate-resilient agriculture initiatives, such as salt-tolerant crops, aquaculture systems designed to adapt to sea-level rise, seaweed farming and native nitrogen-fixing trees.</p> <p><b>Sustainable Transport:</b></p> <p>Roads and bridges with built-in features to absorb or divert water, making them more resilient to storms. SMEs developing modular floating and amphibious road systems, such as prefabricated pontoon road sections, that can be rapidly deployed after a cyclone.</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
Indonesia	<p>Temperature</p> <p>Droughts</p> <p>Sea-level rise</p> <p>Cyclones</p> <p>Floods</p> <p>Landslides</p> <p>Wildfires</p> <p>Heatwaves</p>	<p><b>Energy Access:</b></p> <p>From 2000 to 2023, Indonesia’s per capita electricity consumption grew 279%, with fossil fuels supplying 35% of the energy mix (<a href="#">IEA</a>). Over 1,000 islands require around 900 isolated grids, many powered by diesel (<a href="#">ASEAN Briefing</a>).</p> <p><b>Agriculture:</b></p> <p>Extreme weather driven by climate change is becoming more frequent and severe, with heatwaves and droughts threatening agriculture, lives, and increasing wildfire risk. Indonesia’s island geography and long coastlines place 1,500 islands and millions at ongoing risk of flooding and submersion (<a href="#">WRI</a>). Between 1990 and 2021, the country experienced over 300 natural disasters, including 200 floods that affected more than 11 million people (<a href="#">ADB</a>).</p> <p><b>Water Security:</b></p> <p>Indonesia faces a severe water resilience crisis, with only 12% of water safely managed and Java, home to 57% of the population, most affected. Climate events have increased sixfold over the past 50 years, and recurring hazards continue to disrupt the country’s sanitation systems (<a href="#">UNICEF</a>).</p>	<p><b>Energy Access:</b></p> <p>Battery storage systems and renewable energy systems, such as solar mini-grids and rooftop solar installations to replace diesel-powered grids, reducing vulnerability to disruptions during extreme weather events and supply chain disruptions.</p> <p><b>Agriculture:</b></p> <p>Financing climate-smart agriculture SMEs developing drought-resistant and salt-resistant crop varieties to combat the sea-level rising. Supporting precision irrigation systems and water-saving technology will address increasing drought frequencies. Investing in climate-resilient cold-chain infrastructure powered by renewable energy to maintain food security during temperature extremes and power outages.</p> <p><b>Water Security:</b></p> <p>Circular economy solutions for solid waste and wastewater management that remain operational during extreme weather.</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
		<p><b>Health &amp; Climate Resilience:</b></p> <p>Climate change is projected to increase infectious and vector-borne diseases in Indonesia. By the 2070s, 308 million people (out of a projected population of 340 million) could be at risk of malaria, up from 160 million in 1961–2000. Dengue fever’s vector capacity is also expected to rise, with ENSO events creating favourable outbreak conditions. Under RCP8.5, climate-related deaths linked to food insecurity could reach 35.1 per million population by mid-century (<a href="#">ADB</a>).</p>	<p><b>Health &amp; Climate Resilience:</b></p> <p>Telemedicine platforms and mobile health solutions that can function during infrastructure disruptions. Solar-powered mini-grids for rural clinics and health facilities to ensure continuous operation during extreme weather. Emergency response technology.</p>
Viet Nam	<p>Temperature</p> <p>Heatwaves</p> <p>Drought</p> <p>Floods</p> <p>Tropical Cyclones &amp; Storm Surge</p>	<p><b>Energy Access:</b></p> <p>73% of Viet Nam's CO2 emissions from fuel combustion come from coal (<a href="#">EIA</a>). But rising import dependence raises concerns, in the first 11-months of 2024, Viet Nam imported 24.5 million tons of coal from Indonesia, marking a 42% increase year-on-year (<a href="#">ASEAN Briefing</a>).</p> <p><b>Agriculture and Food Security:</b></p> <p>The Agriculture industry’s estimated net revenue is projected to decrease by 17.7% by 2050 without adaptation actions in place (compared to 0.37% with adaptation) and paired with flood risks (<a href="#">Science Direct</a>). Research estimates 125 climate related deaths per million population linked to lack of food availability in Viet Nam in the year 2050 (<a href="#">World Bank</a>).</p>	<p><b>Energy Access:</b></p> <p>Scale distributed solar, energy efficiency in industry &amp; buildings, and waste-to-energy projects.</p> <p><b>Agriculture and Food Security:</b></p> <p>Aquaculture systems designed to withstand temperature fluctuations and extreme weather. Saline-resistant crops, such as CRISPR-edited salt-tolerant rice varieties which thrive with higher saline levels or halophyte cultivation platform to focus on alternative crops that need saline conditions.</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
		<p><b>Resilient Infrastructure &amp; Sustainable Transport:</b>            Damage to urban infrastructure from flooding from 40cm sea-level rise would create a loss of 1-5% of Ho Chi Minh City's GDP and 0.5-20% of Hai Phong's GDP (<a href="#">World Bank</a>).</p>	<p><b>Resilient Infrastructure &amp; Sustainable Transport:</b>            E-mobility improvements via electric motorbike sharing programs with battery swapping stations.</p>
Thailand	Temperature Floods Drought Tropical Cyclones & Storm Surge	<p><b>Energy Access:</b>            ~60% of Thailand's electric power is generated from natural gas but domestic gas reserves are projected to dry up in the next 10-20 years (<a href="#">ITA</a>).</p> <p><b>Agriculture and Food Security:</b>            In the 2024 Global Hunger Index, Thailand ranks 52nd out of 127 countries with a score of 10.1, indicating moderate hunger. Key figures include 5.6% undernourishment, 12.4% child stunting, 7.2% wasting, and 0.8% under-five mortality (<a href="#">Global Hunger Index</a>).</p> <p><b>Sustainable Transport:</b>            Urban flooding, already causing average annual losses of \$2.6 billion nationally, disrupts public transit operations, damages roadways, and increases</p>	<p><b>Energy Access &amp; Sustainable Transport:</b>            Electric bus fleets and charging infrastructure designed to operate efficiently in high temperatures. Modal-shift platforms that provide alternative transport during flooding. Climate-adaptive logistics solutions for urban areas prone to heat stress and flooding.</p> <p><b>Agriculture and Food Security:</b>            Agri-tech solutions including drought-resistant crops, water management SMEs, and precision farming systems to address water scarcity. Support climate-controlled storage and processing facilities. Invest in sustainable aquaculture systems resilient to temperature variations and flooding.</p> <p><b>Water Security:</b></p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
		<p>maintenance costs (<a href="#">UNISDR</a>), as Thailand is one of the ten most flood-affected in the world (<a href="#">Science Direct</a>).</p> <p><b>Water Security:</b></p> <p>Water security faces key risks including landslides, limited wastewater treatment (26% coverage), groundwater contamination, saltwater intrusion, overextraction, and illegal waste disposal. By 2037, industrial and household water demand is projected to rise by 80% and 25%, respectively, potentially increasing competition for limited water resources without effective management (<a href="#">Springer</a>).</p>	<p>Rainwater harvesting and water storage systems designed for both drought and flood conditions. Development of desalination and water treatment technologies powered by renewable energy for coastal communities affected by sea-level rise.</p>
Malaysia	<p>Temperature</p> <p>Heatwaves</p> <p>Droughts</p> <p>Floods</p> <p>Tropical Cyclones &amp; Storm Surge</p>	<p><b>Energy Access:</b></p> <p>Rising temperatures are projected to increase cooling demand by 11.7% by 2080, placing pressure on electricity systems and reducing generation efficiency. (<a href="#">Science Direct</a>)</p> <p><b>Resilient Infrastructure</b></p> <p>Urban heat island effect makes Kuala Lumpur 4-6°C warmer than surrounding rural areas, typically peaking at night. This compounds infrastructure strain, haze damage, and displacement risks. Haze alone caused an estimated \$321 million loss in 1997 (<a href="#">ADB</a>).</p>	<p><b>Energy Access:</b></p> <p>Rooftop solar with heat-resistant technologies and battery storage systems. Industrial energy efficiency upgrades.</p> <p><b>Sustainable Urban Development:</b></p> <p>Self-cleaning concrete and facades embedded with titanium dioxide that break down NOx, VOCs, and particulate matter. Phase change material for buildings that absorb excess heat during the day and release it at night.</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
		<p><b>Waste Management:</b></p> <p>Malaysians generate 39,000 tons of solid waste daily, or 1.2 kg per person. Food waste makes up the largest share at 44.5%, followed by plastic (13.2%), disposable diapers (12.1%), and paper (8.5%) (<a href="#">ITA</a>).</p> <p><b>Sustainable Transport:</b></p> <p>The transportation sector is Malaysia’s second-largest source of CO<sub>2</sub> emissions, accounting for approximately 22% of the national total (<a href="#">IEA</a>).</p> <p><b>Agriculture &amp; Food Security:</b></p> <p>The agriculture, fisheries, and forestry sectors collectively employ approximately 10% of Malaysia’s labor force and contribute around 8% to the national GDP (<a href="#">Statista</a>). However, Malaysia’s agricultural output falls short of demand, meeting only 15% of beef, 9% of mutton, and 60% of milk needs. Rice remains underperforming despite being the most subsidized crop, with RM1.6 billion (US\$0.35 billion) allocated in 2023 for inputs, mechanization, and price support (<a href="#">FTTC-AP</a>).</p>	<p><b>Waste Management:</b></p> <p>Circular-economy waste solutions, such as waste-to-energy facilities and recycling infrastructure designed to operate during floods and storms. Resilient waste management systems for coastal communities.</p> <p><b>Sustainable Transport:</b></p> <p>Build on existing EV and charging infrastructure, paired with modal shifts.</p> <p><b>Agriculture &amp; Food Security:</b></p> <p>Agri-tech startups that help farmers increase crop yields with less waste by using tools like IoT sensors, drones, and AI to monitor farm conditions in real-time.</p>
Philippines	Temperature	<b>Energy Access:</b>	<b>Energy Access:</b>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
	<p>Extreme Weather</p> <p>Tropical Cyclones</p> <p>Floods</p> <p>Landslides</p> <p>Drought</p>	<p>Only 10% of energy generation is from renewable sources, yet this share has been declining as growing energy demand has been met with coal (<a href="#">EIA</a>). Between 2000 and 2022, total energy supply per unit of economic output has declined 43% (<a href="#">IEA</a>).</p> <p><b>Agriculture and Food Security:</b></p> <p>Between 2006 and 2013, climate change caused \$3.8 billion in accumulated damage and losses to the agriculture sector (<a href="#">IFPRI</a>).</p> <p><b>Water Security:</b></p> <p>Out of its population of 115 million people, 60 million people (52% of the population) lack access to safe water and 43 million people (37%) lack access to a safe toilet (<a href="#">Water</a>).</p> <p><b>Sustainable Transport:</b></p> <p>Transport is the largest energy consumption sector in the Philippines, representing 35% of energy, 96% of which is from oil products (<a href="#">IEA</a>). Road transport dominates despite the country's 7,641 islands, carrying 98% of passenger traffic and 58% of cargo (<a href="#">NDF</a>).</p>	<p>Distributed renewables, such as floating solar installations.</p> <p><b>Agriculture and Food Security &amp; Water Security:</b></p> <p>Water-saving irrigation systems. Agri-SMEs creating typhoon-resistant crops. Soil health innovations given heavy prevalence of rice monocrops, such as investing in microbial inoculants / bacteria and perennial rice varieties (still in development) that allow for intercropping.</p> <p><b>Sustainable Transport:</b></p> <p>Electric jeepneys to keep cultural heritage alive and other e-mobility solutions designed for flood-prone urban areas.</p> <p><b>Health &amp; Climate Resilience:</b></p> <p>Telemedicine platforms and mobile health solutions that can function during infrastructure disruptions caused by typhoons and flooding. Solar-powered health facilities and medical equipment to ensure continuous operation during</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
		<p>Between 2016 and 2022, road transport contributed 88.3% of transport emissions (<a href="#">ATO</a>).</p> <p>Climate change intensifies risks to transport infrastructure. Flooding, landslides, and slope failures weaken soil cohesion and damage roads. High temperatures soften pavement, while storm surges and sea level rise inundate low-lying areas and erode coasts. From 2006 to 2015, natural disasters caused an estimated USD 1.64 billion in infrastructure damages, straining already limited national budgets (<a href="#">NDF</a>).</p> <p><b>Health &amp; Climate Resilience:</b></p> <p>After Super Typhoon Rai in 2021, 141 health facilities were damaged, disrupting essential services, and left millions without access to hospitals, health facilities, and clean drinking water (<a href="#">IFRC</a>). These natural disasters exacerbate the spread of deadly waterborne diseases (<a href="#">WHO</a>).</p>	<p>power outages. Climate-resilient health infrastructure designed to withstand extreme weather events and maintain essential services during natural disasters.</p>
Papua New Guinea	<p>Temperature</p> <p>Sea-level rise</p> <p>Extreme weather (Tsunamis, cyclones)</p>	<p><b>Energy Access:</b></p> <p>With abundant wind, water, geothermal, and solar resources, Papua New Guinea is well positioned to lead in renewable energy. A recent IFC study underscores the country's significant wind power potential (<a href="#">ITA</a>). Yet,</p>	<p><b>Energy Access:</b></p> <p>Renewable-energy SMEs tapping into abundant wind, water, geothermal, and solar resources for energy efficiency projects and sustainable transport services, directly supporting PNG's</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
	<p>Coastal flooding</p> <p>Landslides</p> <p>Droughts</p>	<p>in 2022, fossil fuels generated 74.8% of Papua New Guinea's electricity, while hydropower contributed 36% (<a href="#">EBSCO</a>). Geothermal and biomass resources remain largely untapped due to remote locations and limited public awareness. As of 2024, only 19% of Papua New Guinea's population has access to electricity. The country aims to achieve universal electricity access by 2050 (<a href="#">IRENA</a>).</p> <p><b>Health &amp; Climate Resilience:</b></p> <p>Papua New Guinea is highly exposed to climate-related disasters, including tsunamis, cyclones, flooding, landslides, and droughts (<a href="#">World Bank</a>). Under RCP8.5, climate-related deaths linked to food insecurity could reach 28.3 per million annually by 2050. Rising temperatures and extreme rainfall increase the incidence of vector- and water-borne diseases. Diarrheal disease remains a major health risk, causing three deaths per 1,000 children under five and 5% of hospital admissions, driven by poor water and sanitation access and exacerbated by flood and drought (<a href="#">World Bank</a>).</p> <p><b>Sustainable Transportation:</b></p>	<p>headline "carbon-neutral energy industries by 2030" target and its transport-sector measures.</p> <p><b>Health &amp; Climate Resilience:</b></p> <p>Clean-energy mini-grids for clinics, energy efficiency cold-chains for vaccines, and off-grid solar-powered health clinics / communication systems for remote areas.</p> <p><b>Sustainable Transportation:</b></p> <p>Electric boats and vehicles suitable for diverse terrain and weather conditions, with a focus on connecting remote communities.</p>

Country/Region	Identify the main hazards based on the sector/industry of intervention	How the hazard affects the proposed sectors	How the proposed activities/measures will address the identified impacts
		In 2017, Papua New Guinea's energy sector accounted for 80.5% of net emissions, with transport contributing 23% (GGGI). While road transport is fully dependent on oil products (ATO), and vehicle numbers are projected to increase nearly 4-fold from 2005 levels by 2030, potentially doubling transport emissions under a business-as-usual scenario (GGGI). Transport infrastructure is highly vulnerable to hazards, with potential annual losses estimated at USD 3.83 million, or 0.01% of GDP (ATO).	

Please also include data and graphs from the [IPCC Interactive Atlas, Home - Climate Information Portal](#), [Home | Climate Change Knowledge Portal \(worldbank.org\)](#) (or other relevant sources) to supplement this analysis. Infographics from [ND-Gain Index](#) are also a valuable source to include here. Please include these to strengthen the climate narrative.

#### For Mitigation:

Please refer to the attached excel file 'SCAI\_GCF\_ConceptNote\_SecC1\_CountryEmissionsCalculations' for the calculations of the below mentioned country-wise emissions across the 3 industries.

Country	Total GHG emissions (Million tCO2e)	Contribution to GHG emissions (Million tCO2e)			How the proposed activities/measures will contribute to emissions reduction
		Industry	Transport	Agriculture/AFOLU *excluding sinks	
<a href="#">Fiji</a>	3.10 Mt	0.46 Mt	1.44 Mt	0.54 Mt	<b>Industry:</b> Cyclone-resistant renewable energy installations (wind and solar) will replace fossil fuel-based power generation.

Country	Total GHG emissions (Million tCO2e)	Contribution to GHG emissions (Million tCO2e)			How the proposed activities/asures will contribute to emissions reduction
		Industry	Transport	Agriculture/AFOLU *excluding sinks	
					<p>Island microgrids with battery storage will optimize renewable energy use and reduce diesel dependency, building on the <a href="#">UNDP's existing efforts</a>.</p> <p><b>Transport:</b> Climate-resilient transport systems will maintain efficiency and reduce emissions from disrupted operations.</p> <p><b>Agriculture/AFOLU:</b> Improved food storage facilities will reduce post-harvest losses and associated emissions. Seaweed &amp; trees (among multiple other environmental benefits) absorbs &amp; sequesters vast amounts of CO2. Seaweed farming has recently become a common source of income for women in Fiji.</p>
<a href="#">Indonesia</a>	1,642.21 Mt	440.68 Mt	158.47 Mt	447.88 Mt	<p><b>Industry:</b> Battery storage systems and solar mini-grids can replace 900+ diesel-powered isolated grids and reduce reliance on fossil fuels.</p> <p><b>Transport:</b> N/A</p> <p><b>Agriculture/AFOLU:</b> Climate-smart agriculture practices will enhance soil carbon sequestration. Indonesia-based startups like <a href="#">BIOPS Agrotekno</a> are developing precision irrigation systems to help reduce water consumption.</p>

Country	Total GHG emissions (Million tCO2e)	Contribution to GHG emissions (Million tCO2e)			How the proposed activities/asures will contribute to emissions reduction
		Industry	Transport	Agriculture/AFOLU *excluding sinks	
<a href="#">Viet Nam</a>	354.22 Mt	111.74 Mt	35.85 Mt	44.10 Mt	<p><b>Industry:</b> Energy efficiency measures in buildings and industry will lower overall energy demand. Waste-to-energy projects will reduce methane emissions from landfills while generating clean power.</p> <p><b>Transport:</b> E-motorbike sharing could replace gasoline-powered transport and battery swapping stations will support adoption. Furthermore, e-bikes reduce emissions from traffic congestion.</p> <p><b>Agriculture/AFOLU:</b> Aquaculture systems will provide protein with lower emissions than livestock. Utilizing saline-affected lands increases carbon sequestration.</p>
<a href="#">Thailand</a>	385.4 Mt	97.421 Mt	72.92 Mt	192.50 Mt	<p><b>Industry:</b> Rooftop solar installations and energy efficiency upgrades in industrial facilities will reduce fossil fuel consumption for electricity generation.</p> <p><b>Transport:</b> Electric buses will directly replace diesel public transport, reducing transport emissions</p> <p><b>Agriculture/AFOLU:</b> Drought-resistant crops &amp; farming methods will maintain yields on existing farmland, reducing deforestation pressure.</p>

Country	Total GHG emissions (Million tCO2e)	Contribution to GHG emissions (Million tCO2e)			How the proposed activities/measures will contribute to emissions reduction
		Industry	Transport	Agriculture/AFOLU *excluding sinks	
					Rainwater harvesting and water storage systems reduce
<a href="#">Malaysia</a>	330.36 Mt	160.00 Mt	64.97 Mt	9.92 Mt	<p><b>Industry:</b> Rooftop solar with heat-resistant technologies will reduce grid electricity demand. Battery storage systems will optimize renewable energy use and reduce fossil fuel backup power.</p> <p><b>Transport:</b> Electric vehicle adoption and charging infrastructure expansion will replace gasoline and diesel vehicles</p> <p><b>Agriculture/AFOLU:</b> Agri-tech solutions using IoT sensors and AI will optimize resource use and reduce waste.</p>
<a href="#">Philippines</a>	275.68 Mt	53.43 Mt	29.43 Mt	99.50Mt	<p><b>Industry:</b> Floating solar installations could reduce coal dependency.</p> <p><b>Transport:</b> Electric jeepneys will replace diesel public transport vehicles.</p> <p><b>Agriculture/AFOLU:</b> Soil health innovations will enhance carbon sequestration in rice paddies.</p> <p>Microbial inoculants will reduce synthetic fertilizer needs and its associated CO2, CH4, and N2O emissions.</p>

Country	Total GHG emissions (Million tCO2e)	Contribution to GHG emissions (Million tCO2e)			How the proposed activities/asures will contribute to emissions reduction
		Industry	Transport	Agriculture/AFOLU *excluding sinks	
<a href="#">Papua New Guinea</a>	10.77 Mt	2.23 Mt	1.92 Mt	1.23 Mt	<p><b>Industry:</b> Electric boats and vehicles will replace oil-dependent transport (fully dependent on oil products). Efficient transport for remote communities will reduce vehicle miles travelled.</p> <p><b>Transport:</b> Energy efficiency projects will reduce the fossil fuel dependency for electricity.</p> <p><b>Agriculture/AFOLU:</b> N/A</p>

**Annex 2: Table for Section C2**

Activities / Sub-activities that address the identified barrier	Barriers	Linked Outcomes and Outputs	Brief Description / Logic
<p><b>Fund Formation and Risk Mitigation</b></p> <p>Activity 1.1 Provide startup capital, warehousing, and technical assistance to local climate fund managers</p> <p>Activity 1.2 Reduce perceived risks to catalyse fund formation in underserved markets</p>	<p>Barrier 1: High perceived technology/credit risk</p> <p>Barrier 2: Blind-pool concerns</p> <p>Barrier 3: Prohibitive start-up costs (institutional / financial)</p>	<p>Output 1: Strengthened capacity to launch up to 10 climate-focused funds</p> <p>Output 2: Mobilisation of up to 9x additional private and public capital</p> <p>Output 3: Robust pipeline of bankable, locally managed vehicles; demonstration of blended-finance viability</p> <p>Output 4: Crowd-in of domestic pension funds and regional DFIs otherwise absent from SME climate finance</p>	<p>Provides catalytic first-loss capital and warehousing services to overcome commercial investors' reluctance to fund unproven climate fund managers. By absorbing early risks and demonstrating viable deal pipelines, these activities directly address the high perceived technology/credit risks and blind-pool concerns that prevent private capital from flowing to climate-smart SMEs in Southeast Asia and the Pacific.</p>
<p><b>Capacity Building for Local Fund Managers</b></p> <p>Activity 2.1 Offer shared services, including fund structuring, policy development, and back-office support</p> <p>Activity 2.2 Conduct training on ESG integration, impact measurement, and fund management best practices</p>	<p>Barrier 1: Limited climate-finance skills</p> <p>Barrier 2: Fragmented reporting standards (technical / institutional)</p>	<p>Output 1: Increased local expertise and operational capacity</p> <p>Output 2: Improved fund management and scaling of climate solutions</p> <p>Output 3: Higher deal-execution speed and lower operating costs</p>	<p>Builds local capacity through shared services and specialized training to address the shortage of climate finance expertise in target markets. Providing fund structuring support, ESG training, and standardized impact measurement systems help overcome the technical and institutional barriers that prevent local fund managers from successfully launching and operating climate-focused investment vehicles.</p>

Activities / Sub-activities that address the identified barrier	Barriers	Linked Outcomes and Outputs	Brief Description / Logic
		Output 4: Strengthened local talent pool and replication capacity	
<p><b>Promoting Innovative and Inclusive Climate Solutions</b></p> <p>Activity 3.1 Direct investments into SMEs advancing low-carbon technologies, sustainable agriculture, and distributed energy systems</p> <p>Activity 3.2 Embed gender-responsive investment practices across fund and portfolio management</p>	<p>Barrier 1: Competition from cheaper, established fossil fuel technologies</p> <p>Barrier 2: Limited access to capital for SMEs, particularly early-stage cleantech companies that banks often view as high-risk</p> <p>Barrier 3: Shortage of investment managers with expertise in both gender-lens investing and climate technologies</p> <p>Barrier 4: Cultural resistance to gender-inclusive business practices in certain regions</p>	<p>Output 1: Over 50% of the funds within SCAI will be aimed to be 2X aligned within three years of their launch.</p> <p>Output 2: Inclusive job creation, gender empowerment and local-currency economic activity</p> <p>Output 3: Nature-based solutions deliver biodiversity and soil-health gains alongside carbon abatement</p>	<p>Channels capital directly to climate-smart SMEs through gender-responsive investment practices, addressing the financing gap for distributed energy, sustainable agriculture, and low-carbon transport solutions to reduce exposure to documented hazards (e.g., six-fold rise in Indonesian disasters; cyclone damage in Fiji). These investments tackle both mitigation needs (reducing 5Mt CO<sub>2</sub>e over 13 years) and adaptation requirements (building resilience for 1M+ beneficiaries) while ensuring inclusive economic benefits reach women and marginalized communities.</p>
<p><b>Policy and Institutional Support</b></p> <p>Activity 4.1 Align fund activities with national policies and Nationally Determined Contributions (NDCs).</p> <p>Activity 4.2 Secure letters of non-objection from local governments and engage NDAs</p>	<p>Barrier 1: Regulatory uncertainty</p> <p>Barrier 2: Lack of precedent for multi-country climate funds (legal / policy)</p> <p>Barrier 3: Language and communication barriers for cross-border operations</p>	<p>Output 1: Strengthened regulatory and institutional frameworks through dialogue by Sarona and its TA partner (e.g. OnePointFive) with NDAs</p> <p>Output 2: Improved enabling environment for long-term climate finance by demonstrating through the funds SCAI supports that climate funds can launch and</p>	<p>Gain official backing to enable cross-border climate finance operations and address regulatory uncertainty by actively engaging with NDAs across all seven target countries.</p>

Activities / Sub-activities that address the identified barrier	Barriers	Linked Outcomes and Outputs	Brief Description / Logic
		deploy capital to Climate SMEs that focus on climate adaptation and climate mitigation	
<p><b>Impact Monitoring and Demonstration Effect</b></p> <p>Activity 5.1 Implement standardised impact measurement frameworks in line with GCF expectations</p> <p>Activity 5.2 Track key metrics such as GHG emissions avoided, jobs created, number of beneficiaries, and gender equity improvements</p>	<p>Barrier 1: Inconsistent data, as well as challenges with data accuracy and reliability of self-reported metrics</p> <p>Barrier 2: Investor confidence gap (technical / market)</p>	<p>Output 1: Greater transparency attracts additional private capital, reducing future need for concessional support</p> <p>Output 2: Validates SME-centred climate finance as a scalable, commercially viable strategy across Southeast Asia and the Pacific</p>	<p>Creates transparent, standardized impact reporting to build investor confidence and demonstrate commercial viability of climate SME investments. By addressing inconsistent data collection and measurement gaps, it would help attract follow-on commercial funding and would validate the scalability.</p>

### Annex 3: For Section D1 – Information on Junior and Senior Equity Providers

The GCF is proposed to be the only anchor junior equity provider, playing the catalytic role needed to de-risk the structure and mobilize senior equity and debt. This is consistent with GCF's mandate to provide concessional capital that unlocks significantly larger volumes of commercial investment.

Given the kind of investors Sarona has raised funds from in the past, this strategy may be different from their expectations as previously presented to those investors, and we will do our very best to seek out interest amongst them. However, we do not have any specific investors in mind that have committed to this strategy yet, as we cannot present it to them until we have an anchor investor. However, potential senior commercial equity investors include:

1. **Development Finance Institutions (DFIs)** – e.g., IFC, FMO, Proparco, BIO, DEG, FinDev Canada.
2. **Pension Funds and Insurance Companies** – particularly those with climate, ESG, or emerging market allocations.
3. **Sovereign Wealth Funds and Strategic Climate Platforms** – e.g., Temasek-linked vehicles, regional climate investment initiatives.
4. **Family Offices and Foundations** – those with a strong climate or gender-lens mandate.
5. **Commercial Banks with Impact/Climate Windows** – regional and international banks seeking blended structures to reduce entry risk.

#### **Current Discussions**

Yes, Sarona has begun discussions with some of these institutions and identified those that would likely be interested in having these discussions including:

- **DFIs** (several of whom are long-standing co-investors alongside Sarona). This includes Norfund, BII, Findev Canada, FMO, Swedfund, IFC, Asian Development Bank, US DFC, Proparco,
- **Corporate investors** exploring allocations to Asia-Pacific climate strategies. This includes the REI Blue Sky LLC, Global Energy Alliance for People and Planet (GEAPP) LLC,
- **Specialized climate/impact funds and fund-of-funds managers** exploring allocations to Asia-Pacific climate strategies. This includes the Allied Climate Partners Catalytic Core Fund LP, Bayshore Non-Discretionary Portfolio LP, AJB Hybrid holdings LP, Emerging Market Climate Action Fund, SCSp SICAVRAIF
- **Pension funds interested in climate**
- **Select HNWI, family offices and foundations** exploring allocations to Asia-Pacific climate strategies. This includes the Laura and John Arnold Foundation, Cisco Systems Foundation, Sall Family Foundation, Inc., Cogen Family Investments LLC, Skavish Rubenstein LLC, The Woodcock Foundation, Deline82 Pte. Ltd. Calvert Foundation, Ceniarth, Packard Foundation, MarArthur Foundation, Ford Foundation, Rockefeller Foundation, Margaret A. Cargill Philanthropies, Minduroo Foundation, RS Group. Sarona has over 200 HNWI in its funds and would approach them to share this opportunity with them.

- **Donor Advised Fund managers** exploring allocations to Asia-Pacific climate strategies. This includes ImpactAsset LLC (USA), Everence Foundation (USA), Abundance Canada (Canada), Impact Foundation (USA), Sovereign Capital (USA), National Christian Foundation (USA), Toronto Foundation (Canada), MakeWay Foundation, RSF Social Finance, Victoria Foundation, The Signatry, The Catholic Community Foundation, the Amalgamated Foundation, Tides Foundation, TrustBridge Global Foundation, Presbyterian Foundation, Christian Community Foundation, Friends Fiduciary, and Fondation Quebec Philanthrope.

These discussions are at varying stages (many have not yet been approached as we need this process to be more mature to manage expectations and timelines), but the early feedback has been positive—especially given the proposed GCF anchor role and the blended finance structure that provides clear risk protection for senior equity.

#### **Annex 4: For Section E – Track Record**

##### **SGGM Funds**

<i>Data as of 31 March 2025</i>	<b>SGGM1</b>	<b>SGGM2</b>
Vintage Year	2013	2019
Term	12 years with two additional one year terms	10 years with two additional one year terms
Committed Capital	\$150m	\$85m
TVPI	0.92	2.15
DPI	0.55	0.08
Net IRR	-1.20%	21.70%
Private Equity Funds Invested In	15	9
Total Active Companies in Portfolio	56	71

SGGM2 is significantly outperforming and ranks among the top decile globally for emerging market funds. SGGM2 is also outperforming SGGM1 as a result of application of lessons learned from SGGM1:

- Higher allocation to direct co-investments
- Faster deployment of capital with robust sourcing process
- Reduced J-curve by investing in primary fund opportunities with high-quality team and more visible portfolio at time of commitment
- Increased sourcing capabilities for co-investments
- More selective in regional focus (decreased Sub-Saharan Africa exposure)
- Faster pace of investment capital, leading to earlier distributions to LPs

## Australian Development Investments (ADI)

Sarona is also the investment partner for the Australian Development Investments program (<https://adi.fund/>), which is an AUD 250 million fund-of-funds program, supported by the Department of Foreign Affairs and Trade (DFAT). The program is currently in its early stages (with only AUD 15m deployed so far), but sharing the track record (as of 31 March 2025) below:

<i>Data as of 31 March 2025</i>	<b>ADI</b>
Vintage Year	2021
Committed Capital	\$21.5m
TVPI	1.07
Total Fund Investments	6
Total Active Companies in Portfolio	41

### Annex 5: For Section E – Challenges and Learnings

#### 1. Implementing ESG and Impact Improvements aligning with global standards and best practices

- **Challenge:** Ensuring that ESG and impact enhancements are applied according to global standards and best practices, while remaining relevant and practical in the local context.
- **Approach:** Sarona integrates ESG and impact enhancements into the legal documents, ensuring these commitments are formally recognized and actionable within the agreements.
  - **Carrot:** We publish annual benchmarking reports for all partners (e.g., gender, climate, and impact reports). These enable managers to understand their strengths and identify areas for improvement compared to peers.
  - **Stick:** Particularly under the ADI mandate, we require critical ESG and impact improvements prior to the first drawdown. These are embedded into side letters so that the manager cannot access committed capital until changes and/or training are complete.
    - *Example:* In a Vietnam mainstreamed climate fund currently in final legal negotiations, we required:
      - Climate training from a reputable third party,
      - Appointment of an independent IC member with climate finance expertise, and
      - Policy changes to align ESG and impact programs with our expectations.
  - Under the Australian Development Investments (ADI) mandate, we also provide Technical Assistance (TA) to support the managers and their portfolio companies in achieving the ESG and impact improvements. Whenever possible, in implementing the TA, we prioritize working with local service providers and/or those who have a local presence with deep contextual knowledge. This ensures that ESG and impact support provided to managers and portfolio companies are actionable, tailored to emerging market realities, and positioned to deliver tangible, long-term value for both the fund and its portfolio companies.

## 2. Assessing Fund Manager's Commitment and Capability to Deliver Impact

- **Challenge:** Determining whether fund manager partners are genuinely committed to improving ESG and impacts (e.g., gender and climate causes).
- **Approach:**
  - **Ex-Ante (Due Diligence):** We hold private conversations with prior investee companies to assess whether the fund manager has actively encouraged or enforced ESG and impact improvements, and whether these align with our expectations.
  - **Ex-Post (Ongoing Engagement):** We engage in regular discussions with partners to review the ESG and impact changes they implement within portfolio companies, and how they assess related risks and opportunities. We also provide guidance on how they can better measure, communicate, and report their impact to investors and stakeholders.

## 3. Impact Data Collection and Management:

- **Challenge:** Ensuring that portfolio fund managers provide consistent, reliable, and comparable annual ESG and impact data for impact management.
- **Approach:** Clearly define metrics and expectations early (during legal negotiations and onboarding). Vague requirements lead to inconsistent data later.
  - Data requests must be ambitious enough to capture material impact but realistic enough for fund managers to report reliably without excessive burden.
  - Sarona has in place a well-structured relational database that allows collecting and tracking data points consistently across time, linking companies, funds, and indicators. This ensures we can monitor not only a snapshot but also how ESG and impact outcomes evolve over years.

Annually, we publish an impact report as well as a values report which is accessible to the public at [www.saronafund.com/impact](http://www.saronafund.com/impact). We also publish private annual reports to our managers to assist them in improving different aspects of their impact program such as gender, climate and more generally impact.

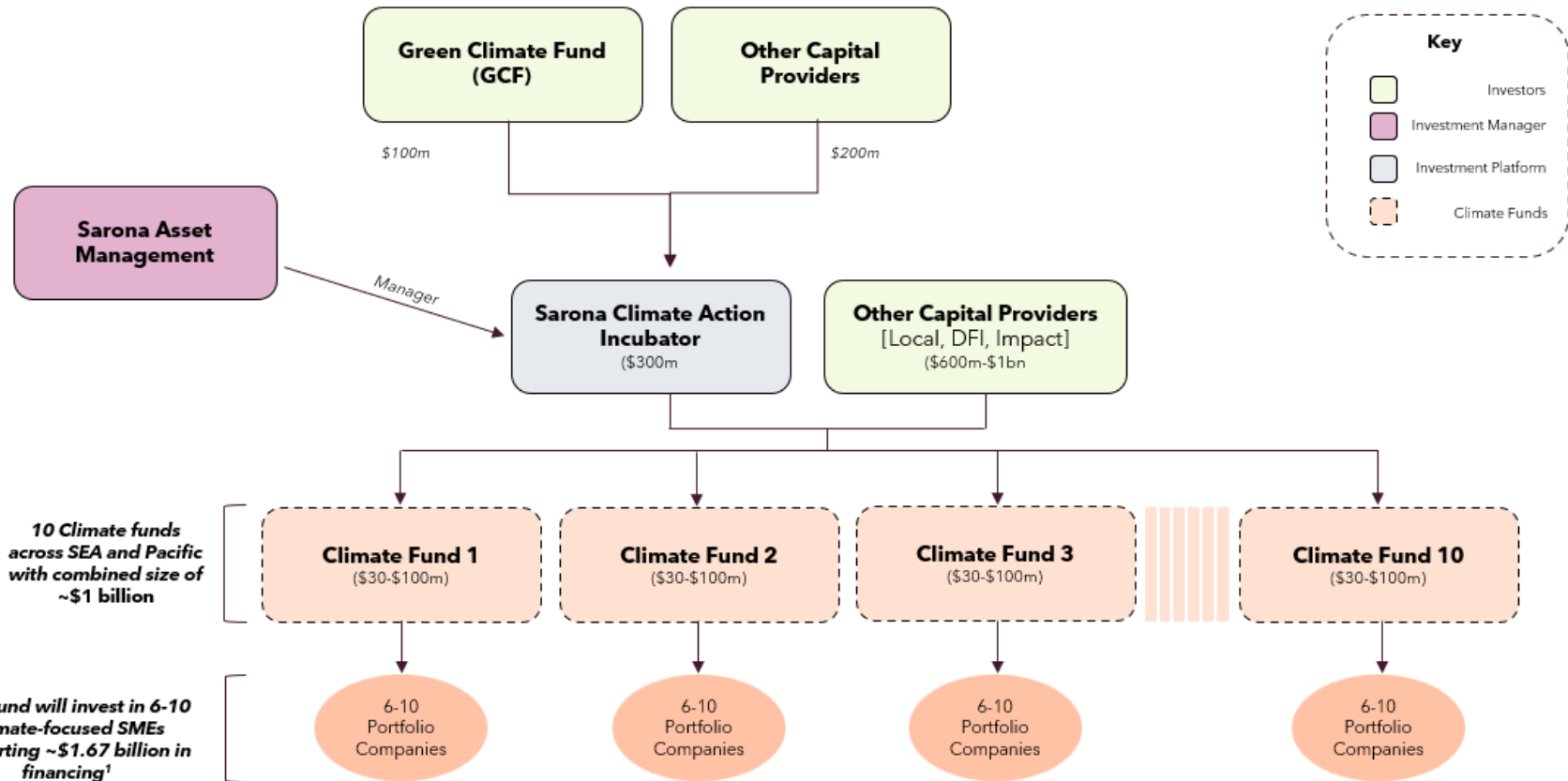
## Annex 6: For Section E – Private Fund Landscape

Private climate-finance landscape: Across Indonesia, Viet Nam, Thailand, Malaysia, the Philippines, Papua New Guinea and Fiji, private capital in climate sectors is nascent and uneven. Most vehicles (often DFI-anchored, managed by international teams) concentrate on large, utility-scale renewables, while SME-scale solutions in energy access, low-emission transport, climate-smart agriculture, resilient water/waste systems and health resilience are underfunded. Funds dedicated to adaptation are especially scarce; early-stage climate tech and distributed models face high perceived risk, blind-pool concerns, and currency/regulatory uncertainty. Local climate-specialist managers remain few, blended-finance instruments and embedded technical assistance are not common, and domestic institutions (pension funds, banks) are generally absent from SME climate finance. Smaller markets (e.g., PNG, Fiji) further suffer from tiny deal sizes and higher transaction costs, reinforcing the gap.

SCAI's positioning: SCAI addresses these gaps by operating as a GP of GPs platform that incubates 6–10 locally managed climate funds across the seven countries, it complements capital with shared services and TA (fund structuring, back/middle office, ESG/climate MRV, gender), and channels investment to

SME scale mitigation and adaptation in the priority sectors. SCAI is positioned as a catalytic market builder where few climate dedicated private funds currently operate.

**Annex 7: For Section E – SCAI Structure Chart**



<sup>1</sup> Didier, T. & Cusolito, A. P., *Unleashing Productivity through Firm Financing*, International Bank for Reconstruction and Development / The World Bank, 2024, p. 7. The authors discuss that SMEs in emerging markets typically have debt-to-asset ratios of approximately 40%, indicating that for every \$1 of equity, an additional \$0.67 of debt can be raised from local banks.