

# AAA FUND

Restoring Indonesia's Greenbelt, one mangrove shrimp pond at a time.



## Investment Thesis

The AAA Fund is a blended finance credit facility that converts degraded coastal ponds into bankable assets through shrimp-led cash flows and blue carbon upside, enabled by community cooperatives and Muhammadiyah's trusted network to drive farmer adoption at scale. The fund targets 14.3% IRR while structurally reducing reliance on grants as yields stabilize and carbon markets mature.

	The Urgent Challenge	Opportunities	Innovative Solution
<b>Indonesia</b>	0.700M ha restoration target; only 0.015M ha restored in 2024. USD 42B in natural assets at risk across 108,000 km of coastline.	Mangroves yield >USD 10K/ha/year in coastal protection value, largely unmonetized. Target backed by UU No. 16/2016 and Presidential Regulation No. 120/2020 (BRGM).	Blended finance structure converting blue carbon and coastal protection into bankable cash flows via cooperative, aligning farmer income with carbon permanence
<b>Shrimp Industry</b>	60–80% smallholder-operated; EMS & WSS virus cause >USD 10B in annual losses; rising ESG traceability mandates eroding market access	+7.41% CAGR (2026–2034); ESG-compliant, traceable supply commands export price premiums. Shrimp as key focus of Indonesia Ministry of Cooperatives and SMEs.	Mangrove-integrated silvofisheries improving 3x income uplift, survival rates, disease resilience, and ESG compliance.
<b>Farmers</b>	Smallholders (2-10 ha) trapped in patron-debt cycles; <30% cooperative participation; 80% of pond area yields only 10% of potential output.	Just 15% of farmers currently integrate mangroves, with large low-capex upside in a highly communal society with cooperatives in every village.	Cooperatives creation managed by the fund, delivering localized training, stewardship and carbon payments, price floors, and formal credit access for previously unbankable farmers.

## Indonesia's Market Potential

**TAM: USD 10.73 billion**

**SAM: USD 1.1 Billion**

**SOM: USD 120 million**

- > Market for restoring global mangrove forest
- > Indonesia's restoration mandate
- > Low-effort, high-value national restoration areas

**Potential scaling plan:**

**Pilot Project**

*Fund's focus*

Java

11% of SOM

**National scale**

Indonesia

100% of SOM

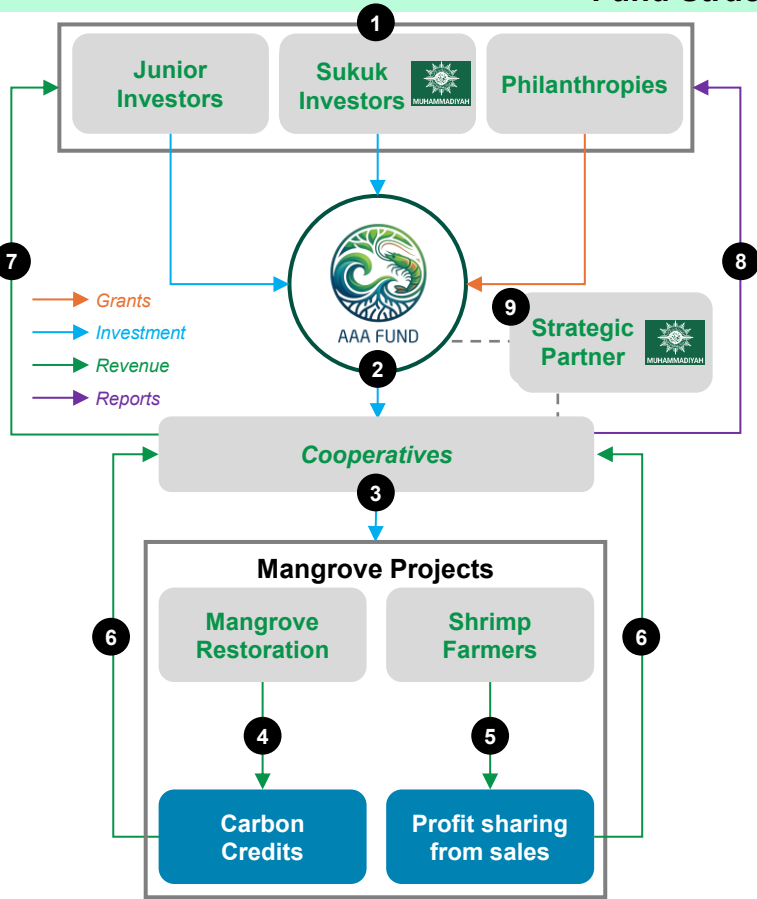
**Expansion**

Global market

TAM

Phase 1's 7,581 ha (11% of SOM) require USD 23M, which this fund fully finances.

## Fund Structure & Details



### Fund's scheme

- Junior and sukuk investors provide capital to the Fund, while philanthropies provide non-repayable grants.
- The Fund deploys this blended capital into fund-managed cooperatives, with support from Ministry of Cooperatives, to implement projects.
- Cooperatives deploy investment and activities to restore mangroves and support shrimp farmers' transition.
- Mangrove restoration generates verified carbon credits.
- Shrimp production is aggregated and sold, with profit-sharing to farmers.
- The cooperative aggregates carbon revenues and shrimp revenues, pays farmers their share, and sends remaining cash.
- Net cash flows after farmer sharing and costs are used to service sukuk and junior coupons and principal.
- Regular financial and impact reporting to all capital providers
- Muhammadiyah supports and supervises all of the operations

### Supports from the Government of Indonesia through

**Indonesia Environment Fund**  
(De-risking fund facility)

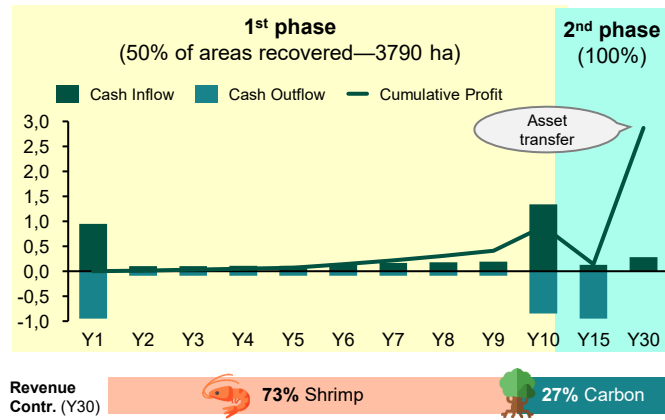
**Mangrove Restoration Agency**  
(Implementation & policy support)

**Ministry of Cooperatives**  
(Finding shrimp off-takers)

# Key Financial Figures

<b>Fund Size</b>	<b>\$23M</b>		
<b>Project IRR</b>	<b>14.3%</b>		
<b>Area</b>	<b>Grants (20%)</b>	<b>Sukuk (50%)</b>	<b>Junior (30%)</b>
<b>Term</b>	One-time Payment	10 Year (Renewable)	10 Year (Renewable)
<b>Ticket Size</b>		\$1.0M	\$0.25M
<b>Scheme</b>	One-time Grants	<b>Loan</b> (Lease-to-Own)	<b>Loan</b>
<b>IRR</b>	-	9%	16%
<b>Benchmark</b>	Avg Sukuk Indonesia (ID): 6-9%, ID Central Bank Rate: 4.75%		
<b>Raising Structure</b>	<b>Grants</b> 1 Round; <b>Sukuk (2 Rounds)</b> : Y1 USD 4.74M, Y10 USD 6.82M; <b>Junior (2 Rounds)</b> Y1 USD 2.84M, Y10 USD 4.55		
<b>DSCR</b>	Average: 2.15x, Peak: 4.69x, Ramp-up: ~1.08x		
<b>Sensitivity Analysis</b>	<ul style="list-style-type: none"> <li><b>Carbon Price -20%</b>: DSCR 1.91x, IRR 13.7%</li> <li><b>Shrimp Yield -20%</b>: DSCR 2.08, IRR 14.0%</li> <li><b>Farmer Adoption -50%</b>: DSCR 1.97X, IRR 13.4%</li> </ul>		
<b>Exit</b>	Capital providers fully repaid in 10 year. Asset ownership transferred to cooperatives at no cost in Y30. Further operation financed by cooperatives surplus.		

## Fund's Cash Position | USD mn, 30 Years



- Total restored area:** 7,581 ha (Phase 1); 30% shrimp (2,274 ha), 70% mangrove (5,307 ha).
- Shrimp:** USD 11.5/ton farm-gate price; 225 kg/ha yield; 80% profit share to farmers.
- Carbon:** Price USD 25/tCO<sub>2</sub>e, sequestration 38.5 tCO<sub>2</sub>e/ha (World Bank Indonesia, 2021) on 5,307 ha of mangroves, verified through Verra VCS (VM0033: Blue Carbon)
- CAPEX:** USD 2,500/ha for restoration and infrastructure.
- Financials:** 10% depreciation (fully depreciated Year 10); 22% Indonesian corporate tax; 8% WACC.
- Path to market rate return:** Phase 1 grants de-risk onboarding; Phase 2 targets fully commercial sukuk and junior issuance as carbon prices rise and yields are proven.

## Potential investors

**Grants**  
Coastal-focused philanthropies and multilateral agency

**Sukuk**  
Muhammadiyah as main target, Indonesia-based Muslim fund (world's 4th largest religious fund)

**Junior**  
Danantara, Indonesia SWF, as main target given mandate alignment

## Impact Theses

By financing climate-smart shrimp farming embedded in healthy mangroves, the fund converts stranded coastal assets into resilient income streams and long-term carbon sinks.

SDGs	What	Who	Our Contributions
2 ZERO HUNGER	<p><b>2.3:</b> Increase of average income by up to 3x of small-scale food producers</p> <p><b>2.4:</b> Increase 2,274 Ha of agricultural area under sustainable agriculture</p>	Local shrimp farmers	Bundle climate-smart technical assistance so farmers achieve higher, more stable yields and survival than traditional ponds.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	<b>9.3:</b> Increase ~220 of small-scale farmers with a loan or line of credit	Local shrimp farmers	Provide structured, risk-sharing finance and aggregation so smallholders who are currently unbankable can access affordable working capital.
13 CLIMATE ACTION	<p><b>13.1:</b> Absorb total GHG emissions by up to 0.2 MtCO<sub>2</sub>e annually</p> <p><b>13.3:</b> Educate ~5,000 – 7,500 residents with silvofisheries practice and benefit</p>	Local coastal ecosystem	Restore degraded ponds to mangroves, generating additional, verifiable long-term carbon storage. Provide understanding on silvofisheries, improvement of productivity yield, and climate impact of the practice
14 LIFE BELOW WATER	<b>14.2:</b> Restore 5,307 Ha marine and coastal ecosystems	Local coastal ecosystem	Improve water quality and habitat condition versus conventional ponds, strengthening coastal resilience to storms and erosion.

## Risk & Mitigation Plan

Risk / SDG	Description	Mitigation Strategy	Severity																		
<b>Revenue Shortfall</b> 2.3, 2.4	Silvofishery systems may underperform in early years, limiting farmer income gains	<ul style="list-style-type: none"> <li>Pond's productivity focus and hands-on guidance in early years</li> <li>Negotiate volume-based price premiums via cooperative offtake agreements.</li> </ul>	<b>High</b>																		
<b>Farmer Lock-In</b> 13.1, 13.3, 9.3, 14.2	Farmers embedded in patron-debt cycles and unfamiliar with silvofishery practices may resist cooperative enrollment, delaying revenue generation.	<ul style="list-style-type: none"> <li>Pre-deployment community engagement via village leaders and koperasi networks; structured 5-stage steps:</li> </ul> <table border="1"> <thead> <tr> <th>Stage</th> <th>Diligence and Education</th> <th>Key Action</th> </tr> </thead> <tbody> <tr> <td>Educate</td> <td>Engage key leaders/elderly support, practical training</td> <td></td> </tr> <tr> <td>Screen</td> <td>Land tenure check, governance, baseline yield survey</td> <td></td> </tr> <tr> <td>Structure</td> <td>Profit-sharing agreement, offtake contract</td> <td></td> </tr> <tr> <td>Monitor</td> <td>Quarterly field visits, third-party carbon audits</td> <td></td> </tr> <tr> <td>Remediate</td> <td>Trigger-based intervention, capital redeployment protocol</td> <td></td> </tr> </tbody> </table>	Stage	Diligence and Education	Key Action	Educate	Engage key leaders/elderly support, practical training		Screen	Land tenure check, governance, baseline yield survey		Structure	Profit-sharing agreement, offtake contract		Monitor	Quarterly field visits, third-party carbon audits		Remediate	Trigger-based intervention, capital redeployment protocol		<b>High</b>
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<b>Operation</b> 2.4, 14.2	Disease and extreme weather	<ul style="list-style-type: none"> <li>Diversify species, integrate mangrove buffers, and invest in monitoring and resilient design.</li> </ul>	<b>Medium</b>																		
<b>Carbon Reversal Liability</b>	Carbon stock reversal from non-compliance or climate shocks can invalidate credits and expose the fund to long-term liability risk	<ul style="list-style-type: none"> <li>15% Buffer pool allocation at the start of the project (Verra VCS)</li> <li>Performance-linked payouts</li> <li>Quarterly field checks via cooperatives</li> </ul>	<b>Medium</b>																		