



# AAA Fund: Restoring World's Greenbelt, One Mangrove Shrimp Pond at a Time

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April 2026

# AAA Fund team with you today



**Afgan  
Gradiyanto**

MPP, University of Chicago

- 
- 6+ years of strategy experience in public and private sectors
  - 2025-2026 Obama Foundation Scholars
  - **Sector:** Sustainability, Tourism, Education, Technology
  - **Interest:** Full-time video gamer and part-time tennis player



**Audrey Surya  
Prameswari Kharisma**

MBA, Duke University

- 
- 7+ years of strategic supply chain, demand-supply forecasting, and distribution
  - Ex-McKinsey, Forte Scholar
  - **Sector:** Supply Chain, Consulting, Entrepreneurship
  - **Interest:** Horse riding and Diving



**Aulia Natasya  
Irfani Ampri**

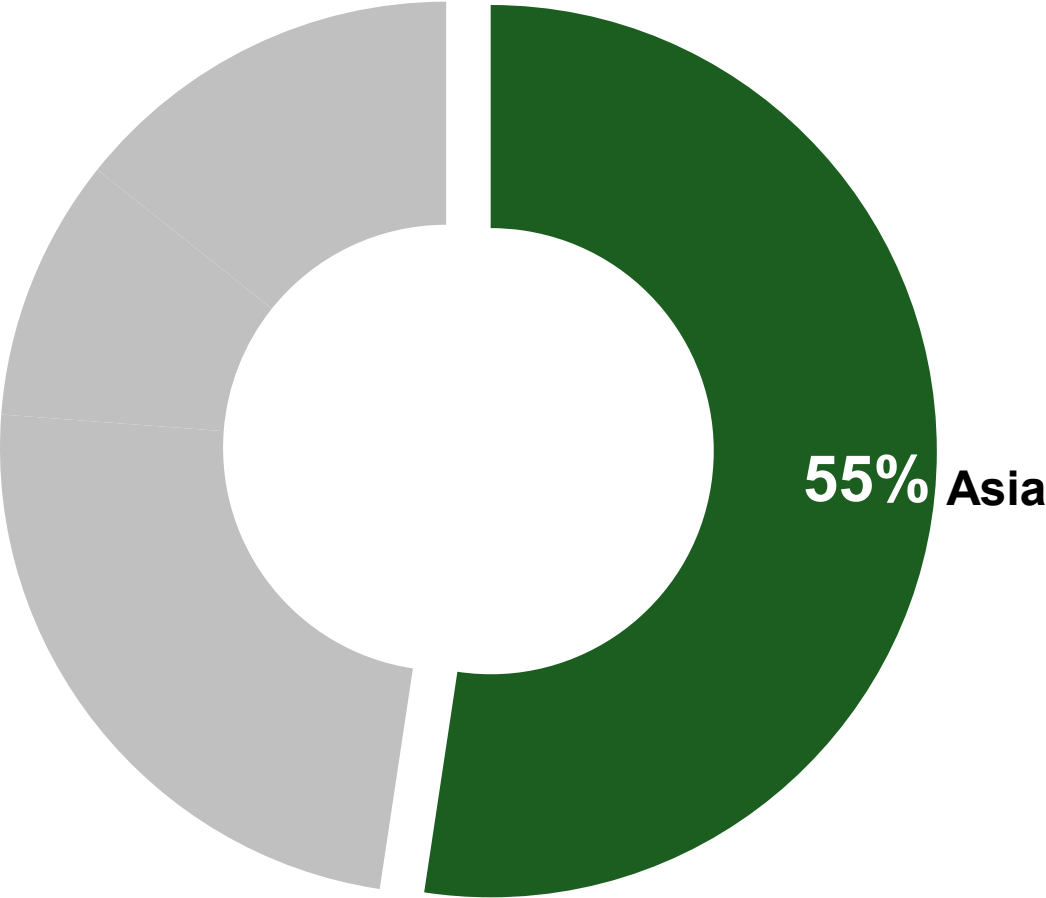
MBA, Duke University

- 
- 6+ years of experience in finance, P&L management, and project implementation
  - Ex-Unilever, Forte Scholar
  - **Sector:** Consumer Goods, Consulting, Education
  - **Interest:** Avid lover of books, travel, and nature



# Global shrimp demand runs through Indonesian farmers

World's shrimp consumption  
in %, 2025



Prawns you eat...



... come from these farmers

Indonesia as 4<sup>th</sup> largest shrimp producers in the world



# Disease and price are what keep shrimp farmers awake at night. Mangrove Restoration is the solution

## Shrimp farmer's key challenges

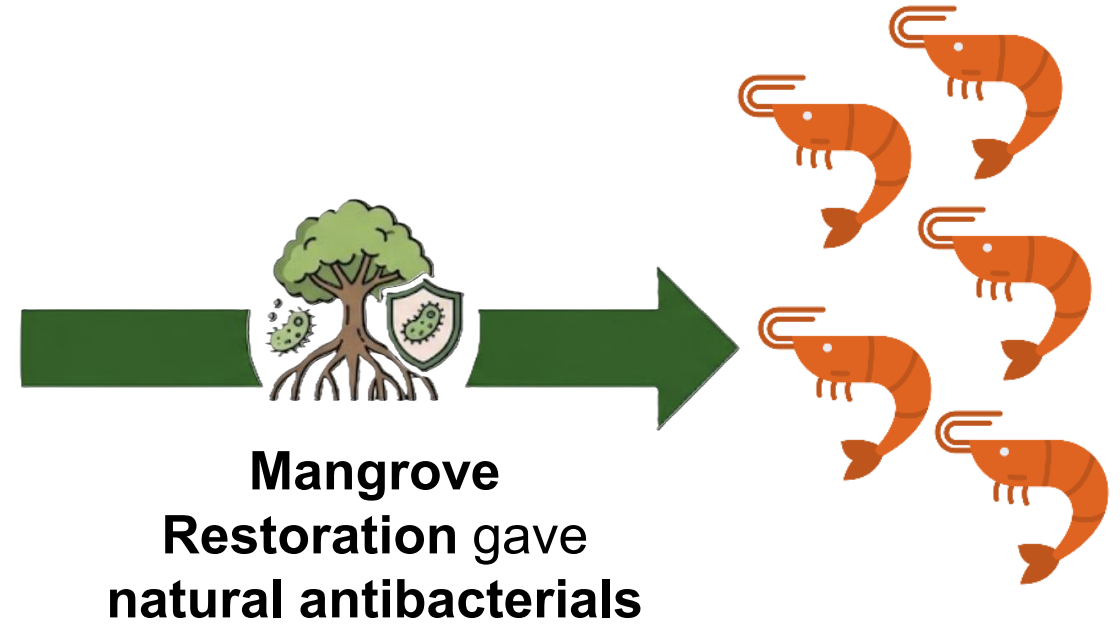
% of farmers, 2025



**Shrimp price  
volatility**



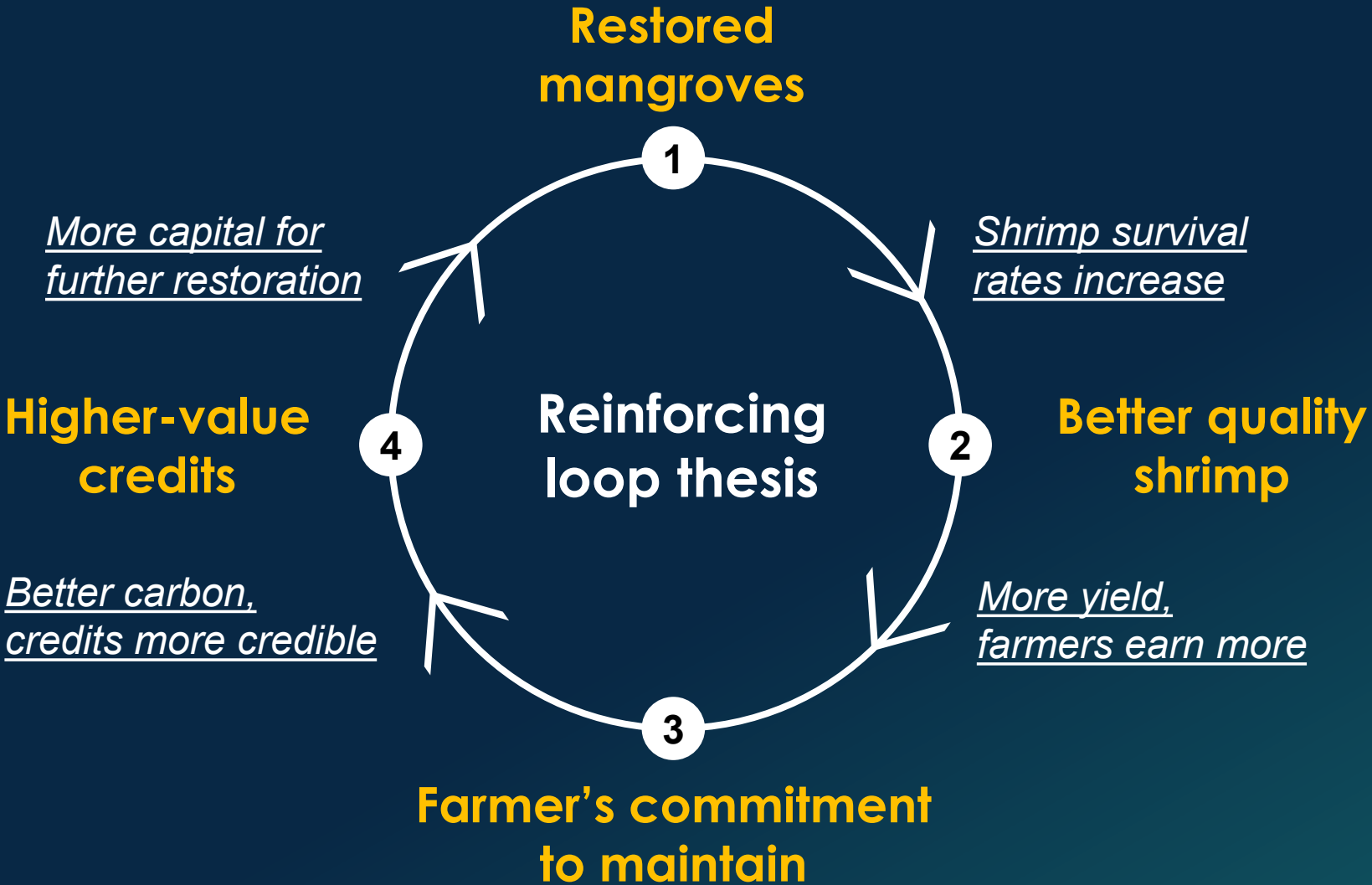
**Shrimp disease risk**



**Mangrove  
Restoration gave  
natural antibacterials**

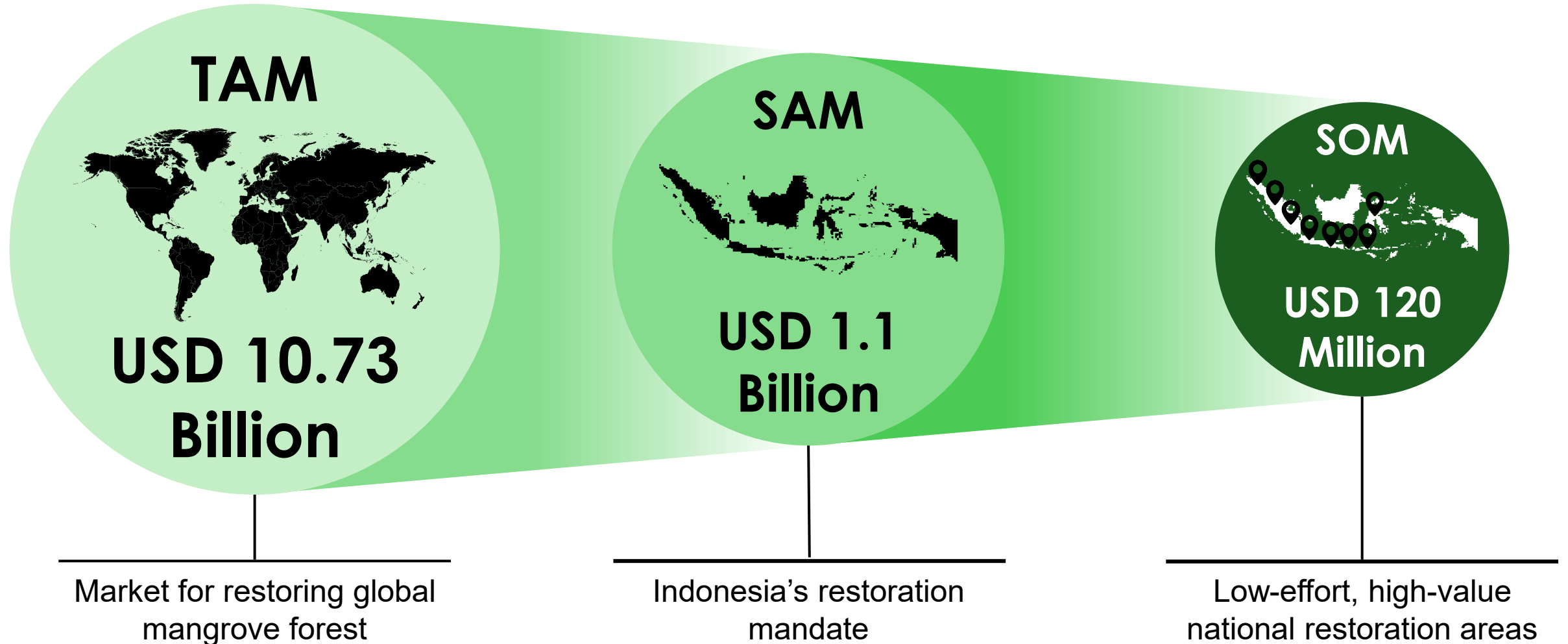
**Disease Resistant  
Ecology**

# Mangrove-led circular economy answers farmers' top pain points



# A \$120M entry point in Indonesia opens a \$11B global market

Mangrove restoration potential market size



# A pilot project de-risks three critical assumptions before scaling


## Project phase

*Fund's focus*  
**Pilot project**



Java  
11% of SOM

**National scale**



Sumatera, Bali, Nusa Tenggara, & Sulawesi  
89% of SOM

Pilot project aims to validate three unproven assumptions at scale:

- ① How does silvofishery yield perform in practice?
- ② What are the farmer enrollment conversion rates?
- ③ How to monetize blue carbon into price premium?

### Project overview:

Restoration target	Total fund size	Verra VCS methodology	Investment exit	Cooperative buy-out
<b>7,581 ha</b>	<b>\$23 mn</b>	<b>VM0033</b>	<b>10 years</b>	<b>30 years</b>
<i>Consists of 30% shrimp ponds and 70% mangrove restoration areas</i>	<i>For restoration &amp; infrastructure, cooperative establishment, and technical assistance</i>	<i>15% buffer pool dedicated contribution for reversal risk coverage</i>	<i>Investors have the option to exit every 10 years through scheduled liquidity windows</i>	<i>All project assets transfer to the cooperative at the end of Year 30</i>

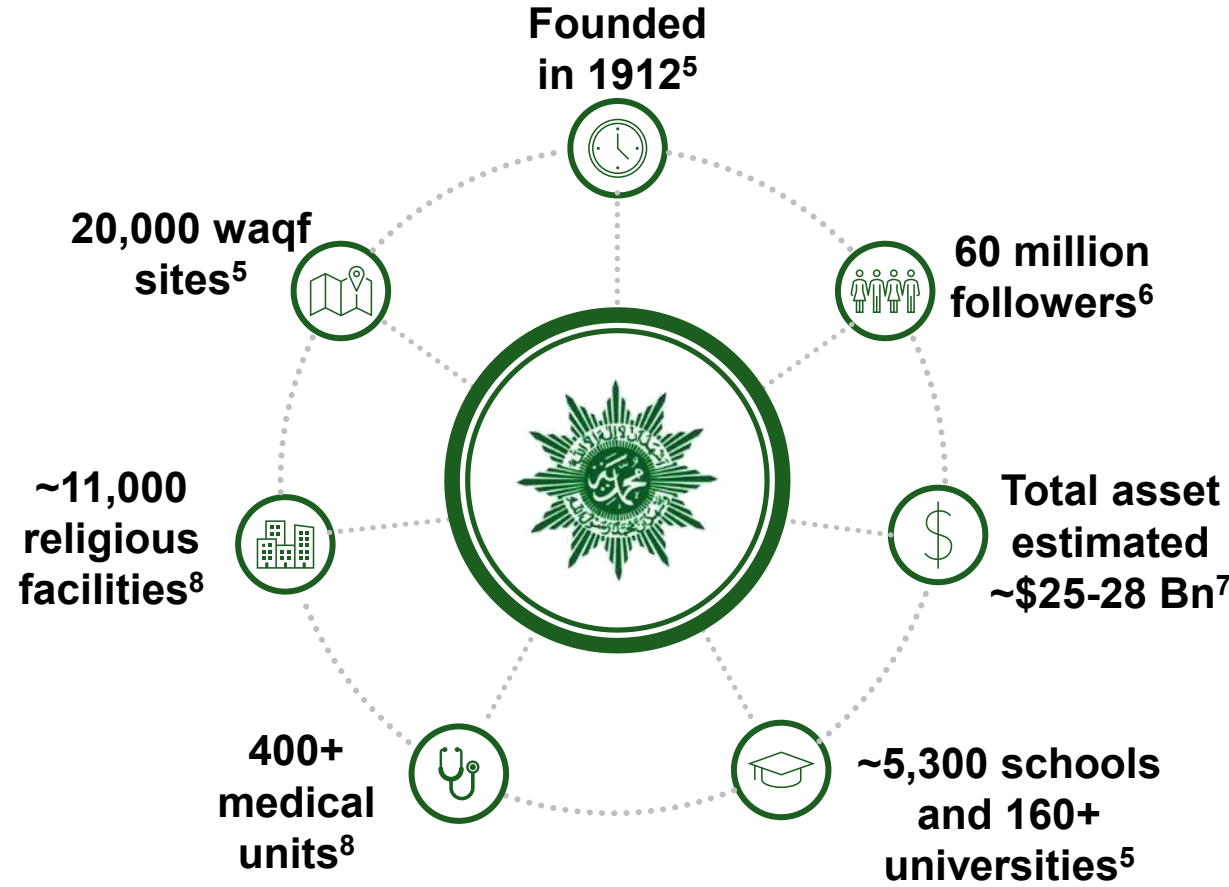


# Java offers the highest impact opportunity, but its complexity demands a trusted local partner like Muhammadiyah

**Java island overview:**

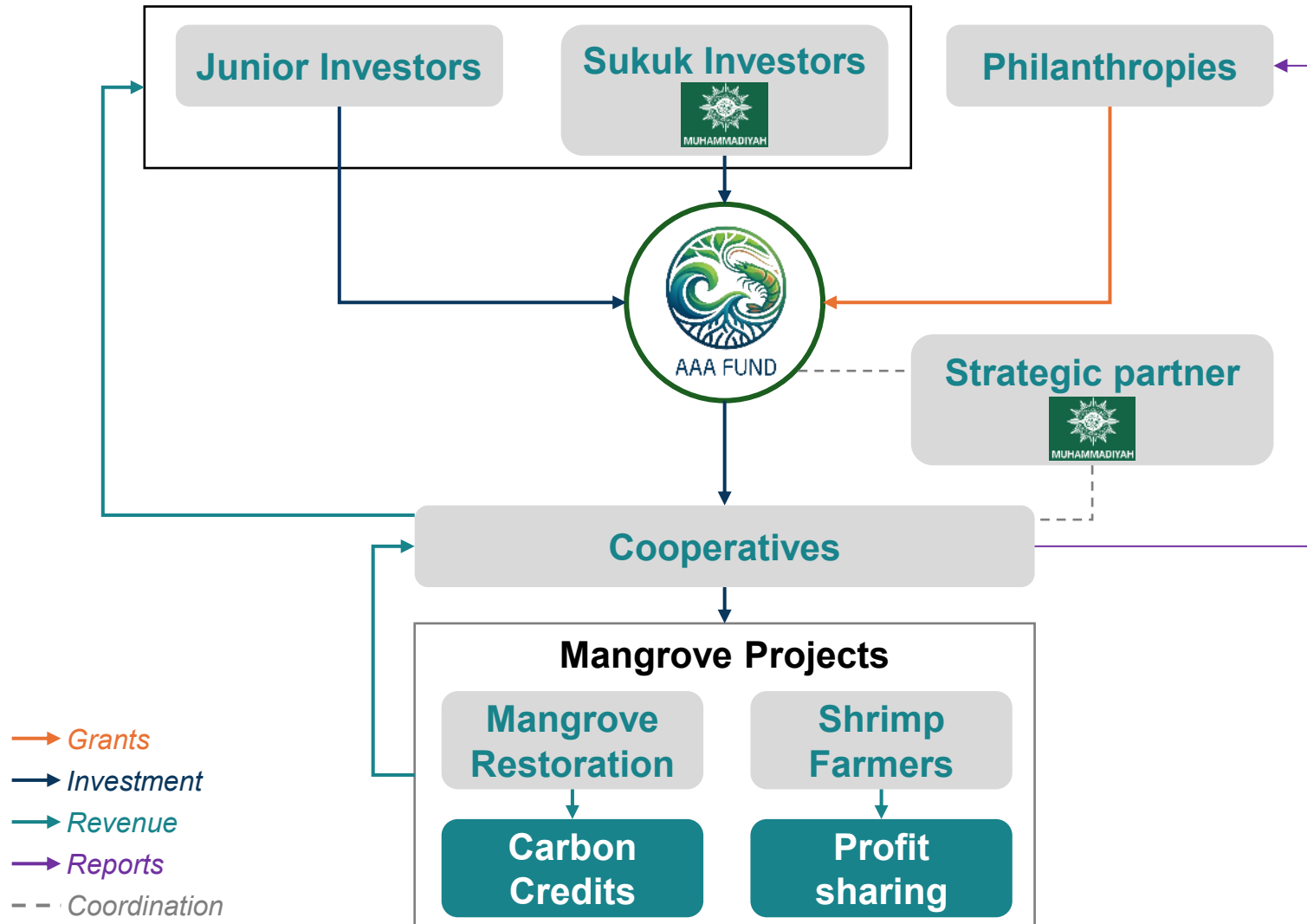
- 56%<sup>1</sup>**  
of Indonesia's population on 7% of land
- ~58%<sup>1</sup>**  
of national GDP — economic epicenter
- 36.6M people<sup>2</sup>**  
at flood risk — urgent need for coastal mangrove restoration
- ~54% Muslim<sup>3</sup>**  
151M of Java Island's population are Muslim
- > 80M People<sup>4</sup>**  
native Javanese speakers — deep trust networks reduce enrollment friction

Muhammadiyah, a century-old religious institution established in Java, can help tackle these local challenges



Source: 1. Statistics Indonesia; 2. Flood Management in North Java Project, Asian Development Bank (2023); 3. Ministry of Religious Affairs (2024); 4. Can a Language with Millions of Speakers Be Endangered?, Ravindranath, M., & Cohn, A. (2014); 5. Muhammadiyah website; 6. Mongabay News (2024); 7. Seasia Stats Report (2025); 8. Islamic-based Organization in Indonesia: Role of Muhammadiyah in Health Improvement, Rachmawati (2019)

# Community-owned cooperatives and blended capital align all parties' incentives



## 1. Community-owned

Farmers collectively own the cooperative—decisions, assets, and profits stay within the community

## 2. 80% profit sharing

Net surplus flows directly to members based on participation, not to external shareholders

## 3. Common practice in Indonesia

Indonesia's 222k+ cooperatives<sup>1</sup> are a trusted, familiar structure across farming communities

## 4. Muhammadiyah network

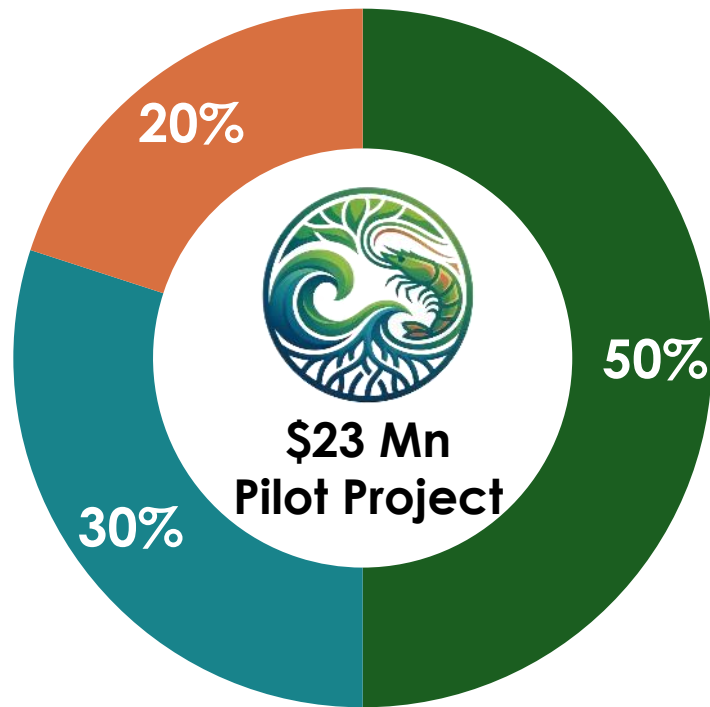
60M-member<sup>2</sup> Islamic organization provides built-in trust, infrastructure, and farmer mobilization across Java



Source: 1. Statistics Indonesia (2025); 2. Mongabay News (2024)

# Philanthropic first-loss anchors a \$23M pilot, catalyzing Muhammadiyah's distribution and Danantara's sovereign capital

Project's capital stack  
(in %)



Category	IRR	Potential investors
<b>Sukuk</b> 	9%	MUHAMMADIYAH IsDB البنك الإسلامي للتنمية Islamic Development Bank
<b>Junior</b> 	16%	Danantara Indonesia ADB AIIB
<b>Grants</b> 	-	BEZOS EARTH FUND THE DAVID & LUCILLE Packard Foundation

2 rounds of fundraising: Y1 & Y10

Benchmark:

- Avg Sukuk Indonesia (ID): 6-9%
- ID Central Bank Rate: 4.75%<sup>1</sup>

**Partnering with the Government of Indonesia**

bpdih  
 badan pengelola dana lingkungan hidup  
 Indonesia Environment Fund

Mangrove Restoration Agency

Kemenkop  
 Kementerian Koperasi dan Usaha Kecil dan Menengah  
 Ministry of Cooperatives



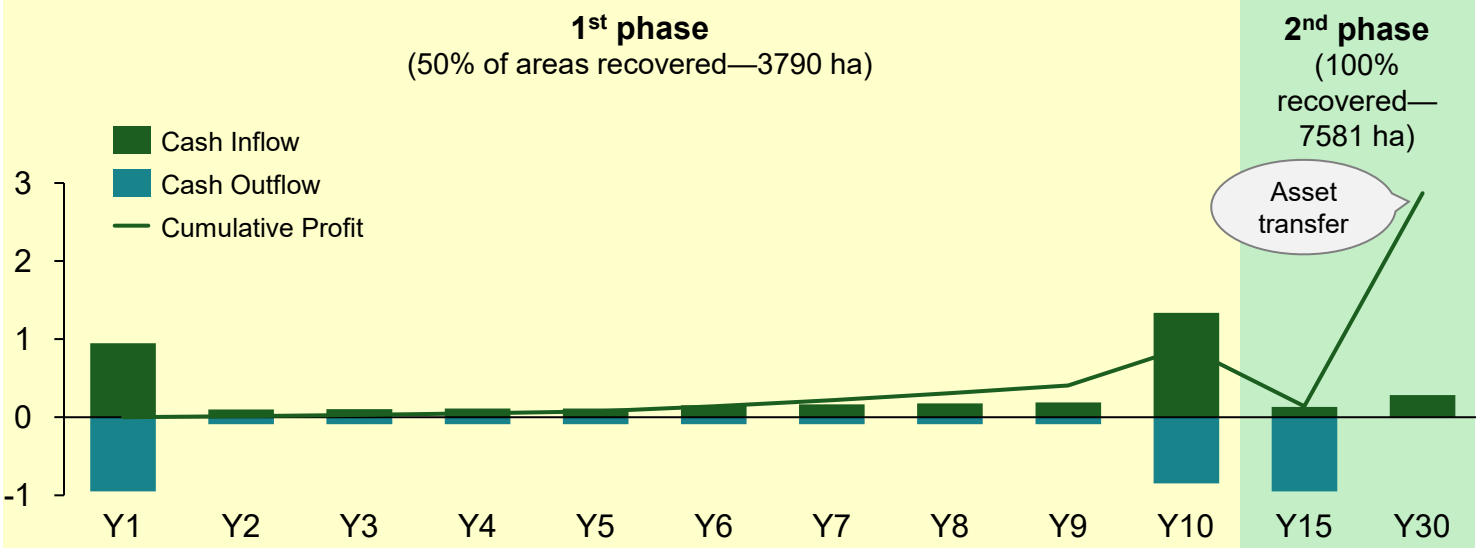
Source: 1. Central Bank of Indonesia

# AAA Fund delivers competitive returns with downside protection

IRR	<b>14.3%</b>	<b>13%</b>	DSCR	<b>2.15x</b>	<b>4.69x</b>	<b>1.08x</b>	Y30
	<i>Project IRR</i>	<i>Net IRR<sup>1</sup></i>		<i>Average</i>	<i>Peak</i>	<i>Ramp-Up</i>	

## AAA Fund Cash Position

(in USD mn, 30 years)



### Selected sensitivity analysis

Scenario	IRR	DSCR
Carbon price < 20%	<b>13.7%</b>	<b>1.91x</b>
Shrimp yield < 20%	<b>14%</b>	<b>2.08x</b>
Shrimp price < 25%	<b>13.9%</b>	<b>2.06x</b>
Farmer adoption (-50%)	<b>13.4%</b>	<b>1.97x</b>

### Revenue contribution per business:

Shrimp Revenue	-	100%	100%	100%	100%	77%	73%	70%	68%	65%	64%	73%
Carbon Revenue	-	-	-	-	-	23%	27%	30%	32%	35%	36%	27%



# Ecosystem is restored while increasing farmer income and resilience



2 ZERO HUNGER

Increase average income of small-scale food producers by 3x



2 ZERO HUNGER

Bring 2,274 ha of agricultural area under sustainable management



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Provide ~220 small-scale farmers with access to loans or lines of credit



13 CLIMATE ACTION

Sequester up to 0.2 MtCO<sub>2</sub>e of GHG emissions annually



13 CLIMATE ACTION

Train 5,000 – 7,500 residents in silvo-fishery practices and their benefits



14 LIFE BELOW WATER

Restore 5,307 ha of marine and coastal ecosystems



# Key risks are concentrated in the first cycle and actively mitigated



First cycle phase



Main risk



Lack of trust



Execution uncertainty



No change in income



Payment delay



Weak word-of-mouth

Mitigation plan

**Trust Building**

- Activate via village forums and cooperatives
- Leverage Muhammadiyah's local credibility

**100% OTIF delivery<sup>1</sup>**

Provide hands-on facilitation during farmer onboarding

**Proven implementation**

- Deploy science-backed silvofishery
- Partner with NGOs and embed local knowledge

**Fast payment cycle**

- Guarantee payment within 14 days post-harvest
- Ensure early income realization

**Social proof**

- Scale adoption through word-of-mouth
- First 5 farmers succeed will trigger peer validation



Notes: 1. OTIF = On-time in Full

# Our pilot proves the hardest assumptions before scaling

## Pilot project



Validate unit economics on silvo-fishery yields



Prove farmer enrollment conversion rates



First blue carbon credits verified under VM0033



Prove Muhammadiyah and cooperative model: farmer trust, onboarding, profit-sharing



Establish offtake relationships and onboarding protocols

## Expansion phase



Best practice from pilot project



Expand to rest of Indonesia and Southeast Asia



Larger fund with **no** philanthropic dependency



Shrimp revenue as resilient base

# What we believe in the AAA Fund





**We can restore  
world's greenbelt together,  
one mangrove shrimp pond at a time**



# Appendix



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## Indonesia's climate and mangrove efforts

Mangrove, aquaculture, and carbon market

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Success stories: Project Yagasu

Financial calculation details

Impact thesis and measurement

Risk mitigation



# Indonesia's outsized reliance on FOLU for ~60% of its NDC targets creates a structural demand for nature-based carbon projects

## Indonesia overview

<b>Location</b>	Southeast Asia
<b>Population</b> (in #, 2025)	287 million <sup>1</sup>
<b>GDP</b> (in USD, 2025)	\$1.44 Trillion <sup>1</sup>
<b>GDP / capita</b> (in USD, 2025)	\$5,083 <sup>1</sup>
<b>GDP growth</b> (in %, 2025)	5.11% <sup>1</sup>
<b>Other facts<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• 17,000 islands</li> <li>• 300 distinct ethnic groups</li> <li>• 700 local languages</li> <li>• 87% of the population is Muslim</li> </ul>

## Climate overview

- 4<sup>th</sup>**  
Largest CO2 emitter in the world<sup>3</sup>
- 1.6 – 2.2 GtCO2e**  
Total emissions in a year<sup>4</sup>
- 40%**  
Indonesia's emissions have come from land use change<sup>4</sup>
- ~600 MtCO2e**  
Emissions from fossil fuels<sup>4</sup>
- 60%**  
National energy mix from coal

## Targets & key actions so far

-  Indonesia is exploring scenarios toward net-zero by 2060 or sooner
-  Indonesia aims to reach net-zero emissions in FOLU by 2030
-  Indonesia has committed to 100% renewables and coal phase-out by 2040
-  A carbon tax has been put in place but has not been sufficiently implemented
-  Indonesia is reopening its carbon market to foreign buyers in 2025

Source: 1. Statistics Indonesia; 2. United Nations Population Fund (UNFPA); 3. Emission Index; 4. FOLU Net Sink: Indonesia's Climate Actions Towards 2030, Ministry of Environment and Forestry (2023); Electricity Supply Business Plan 2021-2030, Indonesia State Electricity Corporation (2020)

# Mangrove degradation compounds Indonesia's \$1.3B/yr coastal disaster losses and traps smallholder shrimp farmers in debt



## Indonesia's restoration urgency



*Between 2000 and 2016, Indonesia suffered average direct disaster losses of around USD 1.3 Bn per year<sup>1</sup>*



## Shrimp industry bleeding value



*Most of Indonesia's shrimp ponds are smallholder-operated and failing to meet international standards*



## Indonesia's farmer poverty trap



*Farmers are locked in patron-debt cycles — middlemen provide inputs on credit at exploitative terms.*



# Indonesia's mangrove estate is the world's largest, but achieving the restoration target by 2030 requires a step-change in execution

Despite Indonesia's significant role...



**Total Area:** As of early 2026, Indonesia's mangrove coverage stands at approximately **3.46 million hectares**<sup>1</sup>.



**Global Share:** This represents roughly **23% of the world's remaining mangroves**<sup>2</sup>, making it the largest and most biodiverse mangrove ecosystem.

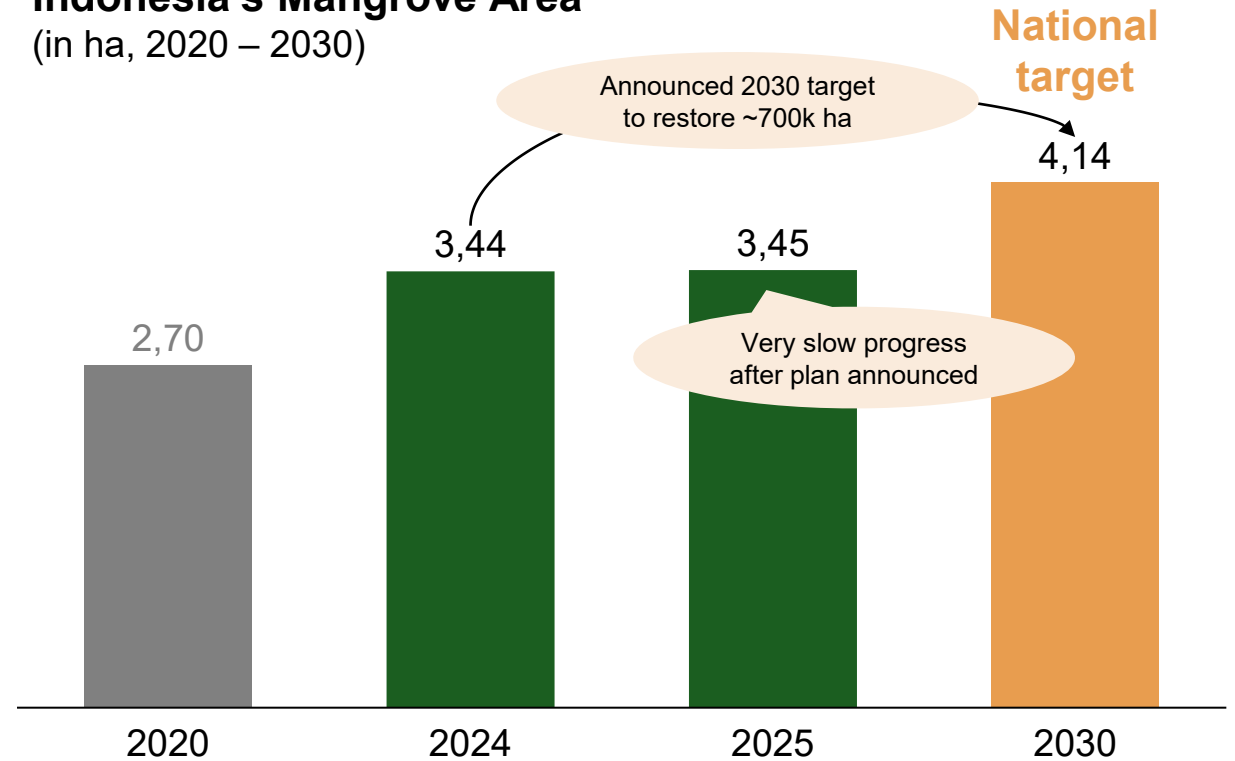


**Carbon Sink Potential:** Indonesian mangroves store an estimated **3.14 billion tCO<sub>2</sub>e**<sup>3</sup>, a massive natural asset for global climate mitigation.



... they still struggle to achieve the ambitious target

**Indonesia's Mangrove Area<sup>4</sup>**  
(in ha, 2020 – 2030)



**Private capital is essential to close the remaining national restoration gap**



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# Superior science, economics, and co-benefits make mangrove restoration the highest-conviction play in blue carbon

- Mangroves sequester 3–5× more carbon per hectare than terrestrial forests<sup>1</sup>
- This makes the per-hectare climate impact dramatically higher than reforestation or afforestation projects in upland ecosystems.

- Mangrove restoration costs are generally \$1,000–\$5,000/ha<sup>2</sup> depending on context
- Blue carbon credits can trade at significant premiums (\$15–\$35+/tCO<sub>2</sub>e)<sup>3</sup> above many standard forestry credit prices.



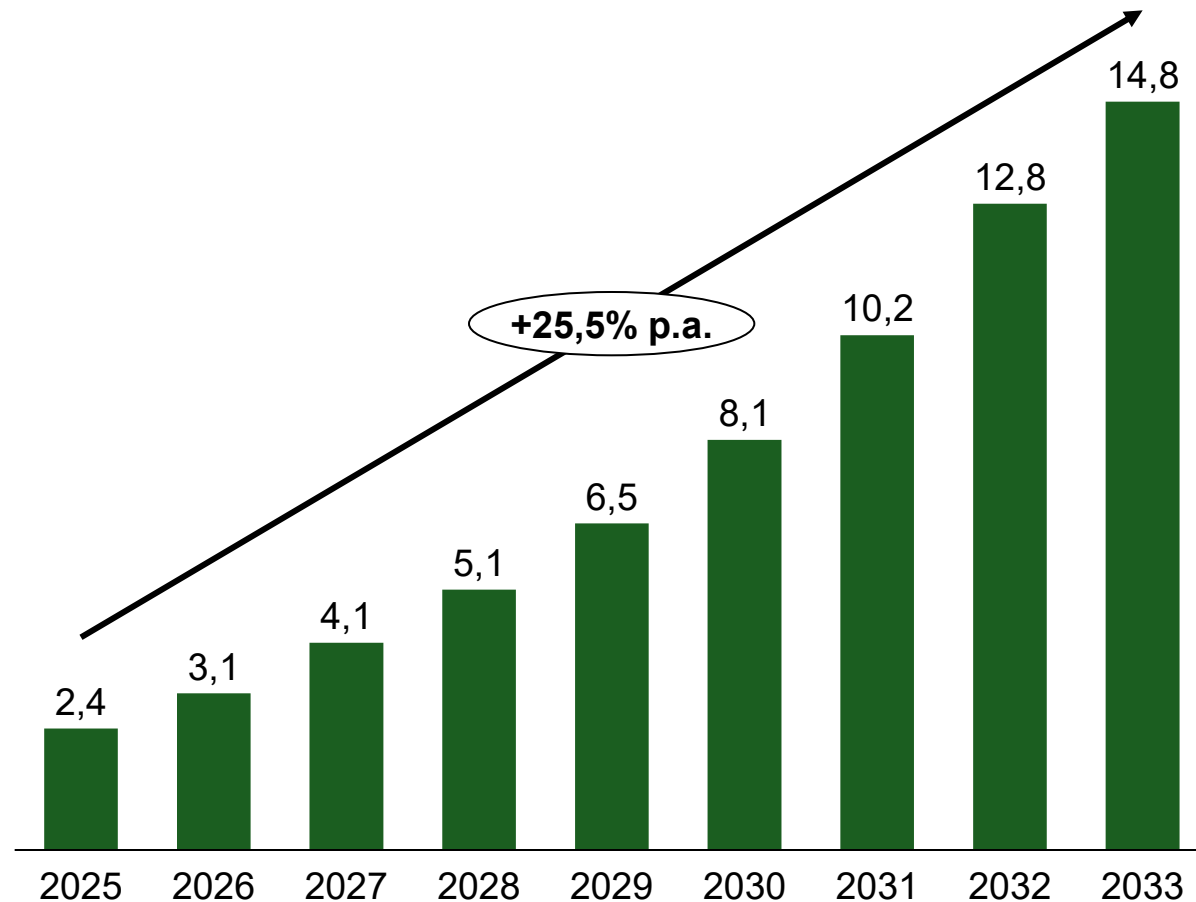
- Mangrove soil carbon stocks can persist for centuries to millennia if the ecosystem remains intact
- This directly addresses the reversal risk issue

- Coastal protection
- Fisheries productivity
- Biodiversity uplift
- Water quality filtration
- Livelihood generation for coastal communities



# Supply scarcity and premium pricing position blue carbon as the highest-value segment of the voluntary carbon market

**Blue carbon market size<sup>1</sup>**  
(in USD Million, 2025 – 2033)



## Key facts

**99%**

Credits issued 2014–2024 are from Mangrove projects<sup>2</sup>

**\$13–35/tCO<sub>2</sub>e**

Premium prices compared others<sup>3</sup>

**94 Projects**

But only 10 actively issuing – massive supply constraint<sup>4</sup>

**39%**

of market is from Asia-Pacific region<sup>1</sup>

**<1%**

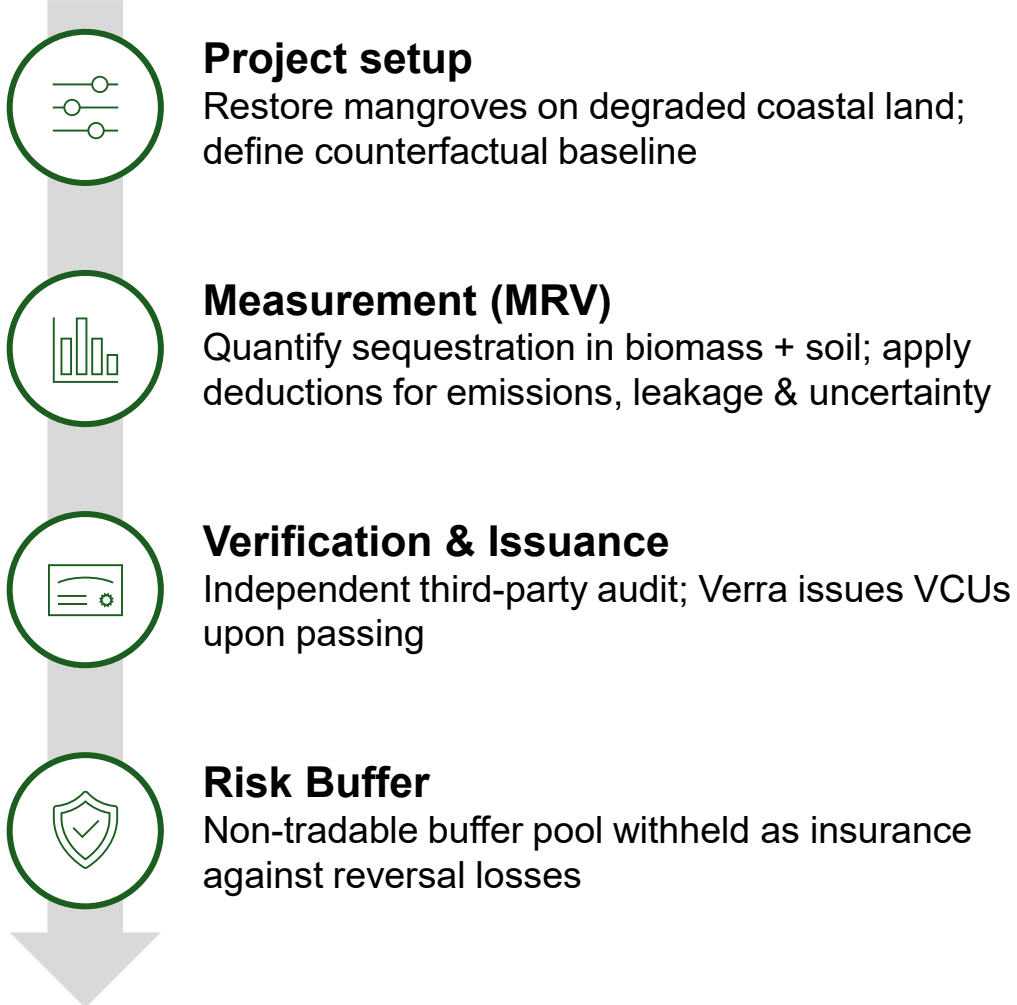
of total VCM transactions – boutique & premium market<sup>5</sup>



Source: 1. Grandview Research; 2. BeZero Carbon; 3. Deep Blue: Opportunities for Blue Carbon Finance in Coastal Ecosystems, International Finance Group (2023); 4. Carbon Wire; 5. State of the Blue Carbon Market, Ecosystem Marketplace (2024)

# Rigorous Verra-certified process yields ~250,000 tradable VCUs annually

## Credit creation process



## Annual output of our pilot project

**250,000+**

Tradable VCUs per year (after deductions)

<b>Standard</b>	Verra VCS: VM0033 (Blue Carbon)
<b>Deductions applied</b>	Project emissions + leakage + uncertainty
<b>Buffer withheld</b>	~15% in non-tradable insurance pool
<b>Project type</b>	Mangrove restoration on degraded coastal land
<b>Calculations</b>	7,500 ha × 39 tCO <sub>2</sub> e/ha/year = ~292k gross VCU ~292k × 85% (excl buffer) = ~250k net VCUs

## Go-to-market tiers

Tier	Buyers	Price/VCU	Structure
I	Direct Corporate Sales	\$18–35	Long-term Offtake Contracts (5–10 yr)
II	Brokers & Intermediaries	\$12–18	Broker Partnerships
III	Exchanges (Secondary)	\$8–12	Exchange Platforms



# Carbon credit offtakers confirmed in IDXCarbon platform<sup>1</sup>

No.	Entity	Sector	Notes
1	Bank Central Asia (BCA)	Banking	Named in public coverage of the first buyers
2	Bank Mandiri	Banking	Named in public coverage of the first buyers
3	Bank Rakyat Indonesia (BRI)	Banking	Named in public coverage of the first buyers
4	Bank Negara Indonesia (BNI)	Banking	Named in public coverage of the first buyers
5	Bank Syariah Indonesia (BSI)	Banking	Named in public coverage of the first buyers
6	PT Pertamina Patra Niaga	Energy	Explicitly mentioned as a buyer in public reporting
7	PT Pupuk Indonesia (Persero)	Fertilizer / Industrial	Included among first buyers in public coverage
8	PT Semen Indonesia (Persero) Tbk	Cement / Industrial	Included among first buyers in public coverage
9	PT Indocement Tungal Prakarsa Tbk	Cement / Industrial	Included among first buyers in public coverage
10	PT Chandra Asri Petrochemical Tbk	Petrochemical	Included among first buyers in public coverage



Notes: 1. IDX Carbon is Indonesia's official carbon exchange, where carbon credits and other eligible emission reduction units can be bought and sold in a regulated market.

Source : IDX Carbon

# Strong corporate demand for high-integrity blue carbon credits

Leading multinationals are actively investing in and purchasing nature-based and blue carbon credits, supporting premium demand for Verra-certified coastal restoration projects

## Past Blue Carbon Corporate Buyers

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## What buyers are looking for

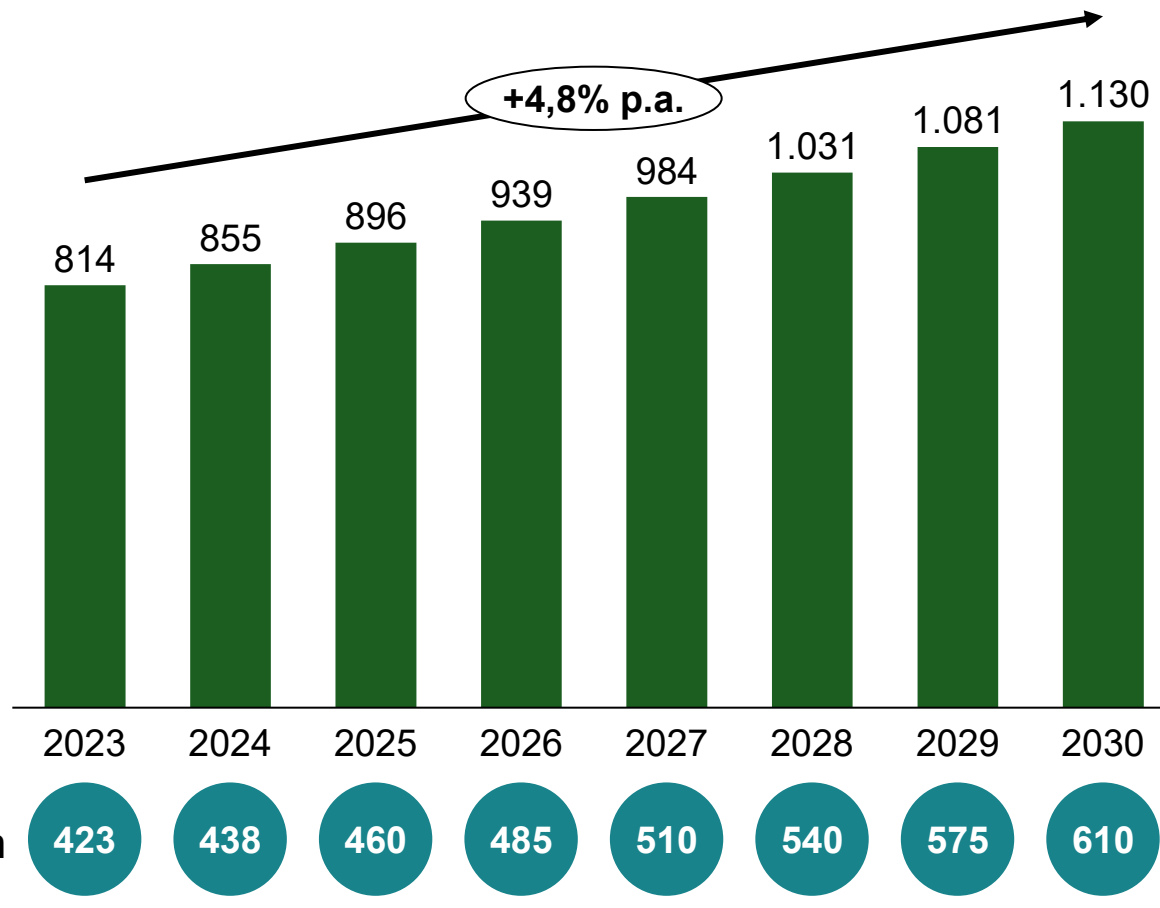
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1. High-integrity, Verra-certified credits
2. Measurable carbon benefit
3. Measurable biodiversity benefits
4. Scalable, community-based projects
5. Long-term offtake potential



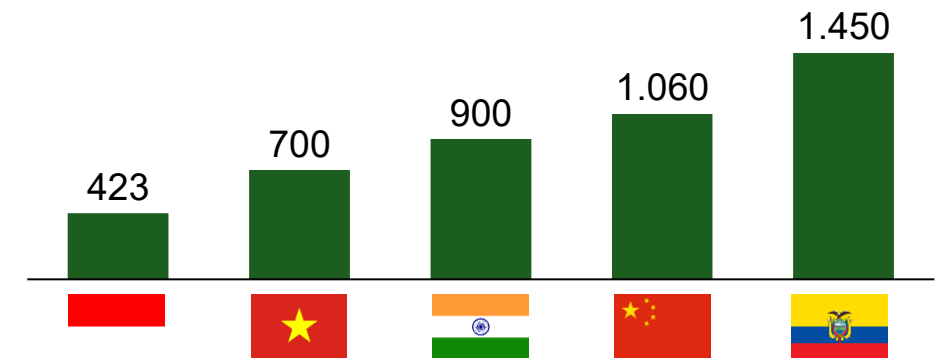
# Indonesia's shrimp sector — large, growing, and export-oriented — represents a structurally attractive market for value creation

Indonesia's shrimp industry market size<sup>1</sup>  
(in USD Million, 2023 – 2030)



## Indonesia is a top shrimp producer...

Top shrimp producers by production<sup>2</sup>  
(in '000 MT, 2023)



## ... for global premium markets<sup>3</sup>

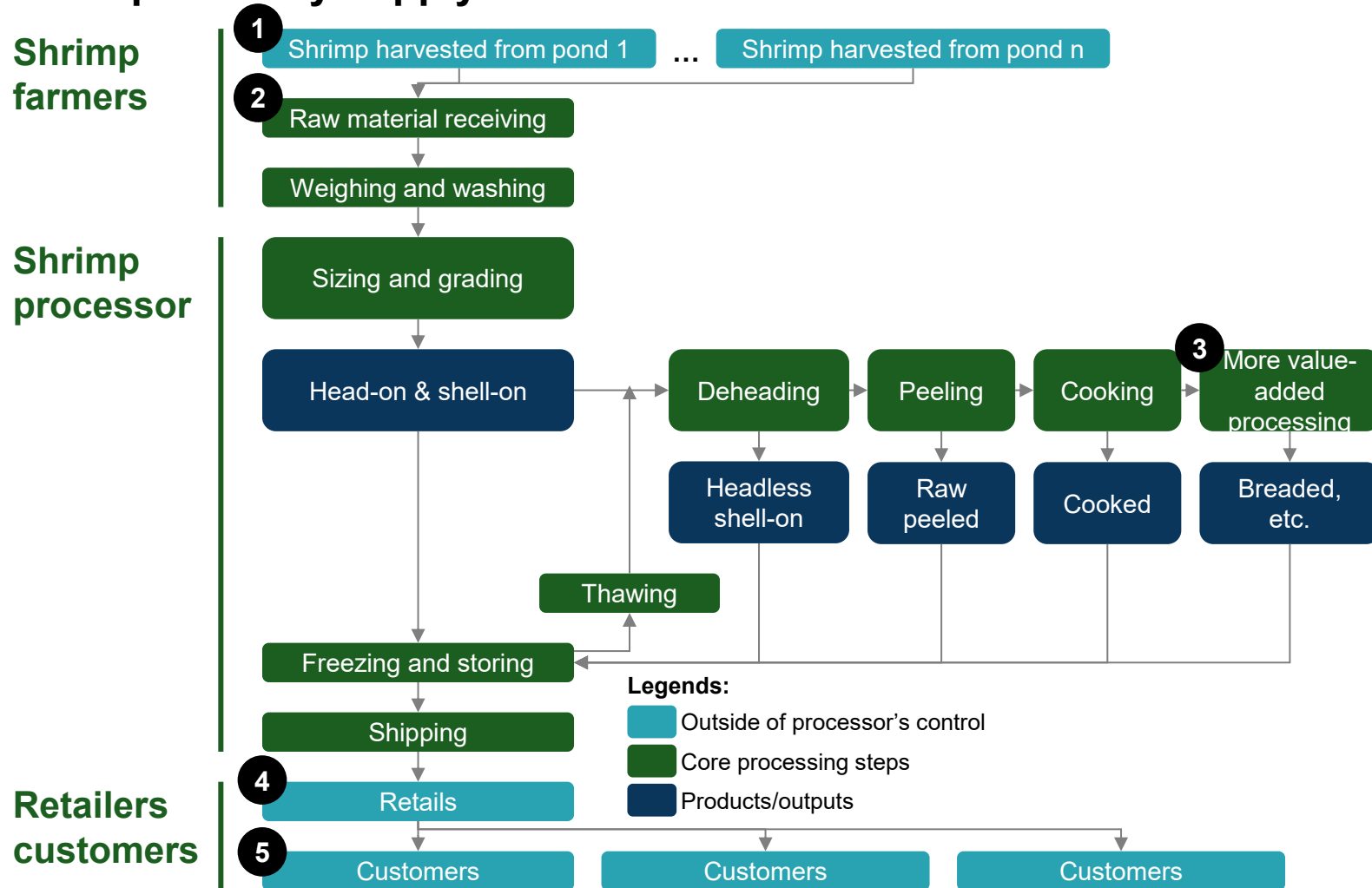
Country	Volume (in MT, 2024)	% of total
United States	136,700	63.7%
Japan	32,200	15%
China	10,700	5%
European Union	8,600	4%
ASEAN	5,400	2.5%
Others	20,980	9.8%



Source: 1. Indonesia Shrimp Market by Region, Competition, Forecast & Opportunities, Research and Markets (2023); 2. Aquaculturemag; 3. Tempo News

# Fragmentation across the shrimp supply chain limits value capture and export competitiveness

## Shrimp industry supply chain<sup>1</sup>



## Key challenges

- Lack of quality control & traceability**  
Scattered ponds make consistent standards impossible
- Inefficient small-scale operations**  
Fragmented collection causes logistical waste
- Low value capture**  
Most output sold raw/frozen, missing higher-margin processing
- Fragmented & multi-layered intermediaries**  
Too many middlemen erode margins
- Limited direct export access**  
Small processors lack international buyer relationships



# Disease and price are what keep shrimp farmers awake at night

## Shrimp farmer's key challenges

% of farmers, 2025



# We have mapped 21 of Indonesia's leading shrimp exporters as the universe for screening

No	Company name	Website
1	PT. ALTER TRADE INDONESIA	<a href="http://www.atina.co.id">www.atina.co.id</a>
2	PT. BAHARI MAKMUR SEJATI	<a href="http://www.bmsfood.com">www.bmsfood.com</a>
3	PT. BARAMUDA BAHARI	<a href="http://www.baramudabahari.com">www.baramudabahari.com</a>
4	PT. BUMI MENARA INTERNUSA	<a href="http://www.ptbmi.com">www.ptbmi.com</a>
5	PT. CENTRAL PROTEINAPRIMA TBK	<a href="http://www.cpp.co.id">www.cpp.co.id</a>
6	PT. FIRST MARINE SEAFOOD	<a href="http://www.indonesiashrimp.com/detailpost/pt-first-marineseafood">www.indonesiashrimp.com/detailpost/pt-first-marineseafood</a>
7	PT. INDOKOM SAMUDERA PERSADA	<a href="http://www.indokomseafood.com">www.indokomseafood.com</a>
8	PT. ISTANA CIPTA SEMBADA	<a href="http://www.ics-seafood.com">www.ics-seafood.com</a>
9	PT. KALIMANTAN FISHERY	<a href="http://www.kalfish.co.id">www.kalfish.co.id</a>
10	PT. KELOLA MINA LAUT	<a href="http://www.kelolagroup.com">www.kelolagroup.com</a>
11	PT. LOLA MINA	<a href="http://www.lolaminagroup.com">www.lolaminagroup.com</a>
12	PT. MULTI MONODON INDONESIA	<a href="http://www.monodonshrimp.com">www.monodonshrimp.com</a>
13	PT. MEGA MARINE PRIDE	<a href="http://www.megamarinepride.com">www.megamarinepride.com</a>
14	PT. PANCA MITRA MULTI PERDANA	<a href="http://www.pancamitra.com">www.pancamitra.com</a>
15	PT. SEKAR BUMI TBK	<a href="http://www.sekarbumi.com">www.sekarbumi.com</a>
16	PT. SUMBER PANGAN NUSANTARA	<a href="http://www.ptspn.co.id">www.ptspn.co.id</a>
17	PT. SURI TANI PEMUKA	<a href="http://www.japfacomfeed.co.id">www.japfacomfeed.co.id</a>
18	PT. SURYA ALAM TUNGGAL	<a href="http://www.pt-sat.com">www.pt-sat.com</a>
19	PT. WAHYU PRADANA BINAMULIA	<a href="http://www.wahyupb.com">www.wahyupb.com</a>
20	PT. WINAROS KAWULA BAHARI	<a href="http://www.winaros.co.id">www.winaros.co.id</a>
21	PT. WIRONTONO BARU	<a href="http://www.wirontono.com">www.wirontono.com</a>



# We divided partner co-op into field they focused in: shrimp co-op and carbon co-op

## Shrimp Co-Op



**Mibama Cooperative**  
Banyuwangi, East Java



**Shrimp Club Indonesia**  
East and West Java



**Budidaya BUBK**  
Kebumen, Central Java

## Carbon Co-Op



**Wana Manunggal Lestari**  
Yogyakarta



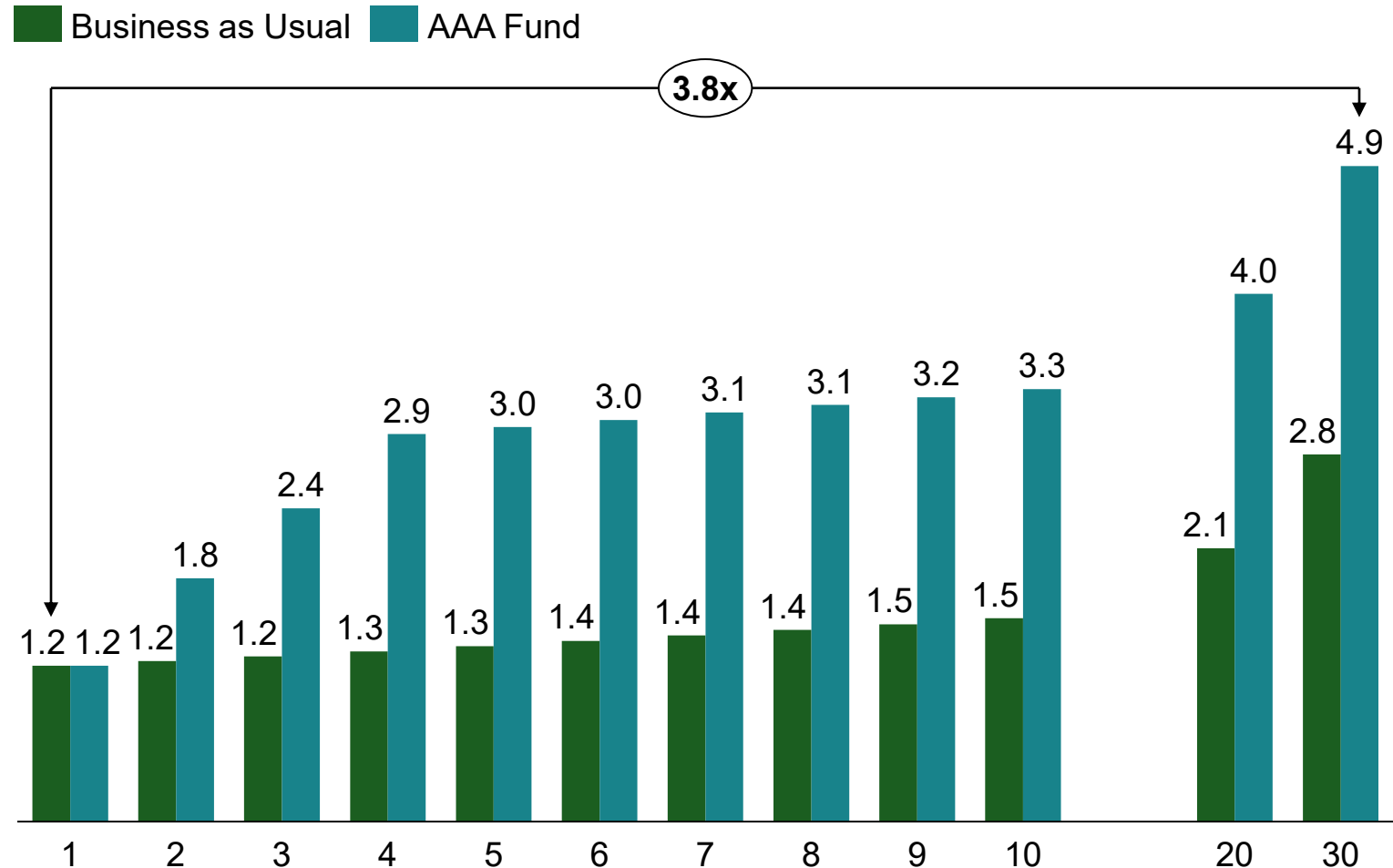
**Social Forestry Co-Op**  
Java Region



**Merah Putih Co-Op**  
Java Region

# AAA Fund triples smallholder farmer income by Y30 while restoring mangrove ecosystems

Income uplift after AAA Fund,  
in USD thousand, Y1-Y30



## Smallholders Farmer Profile

### Before AAA Fund:

1. ~2 hectares per farmer
2. ~\$2,000 annual income per pond
3. Limited access to financing and unstable yield.

### After AAA Fund:

1. 3x revenue increase by Year 30, 2x revenue increase by Year 14
2. More stable and predictable cash flows
3. Mangroves restored, generating carbon revenue



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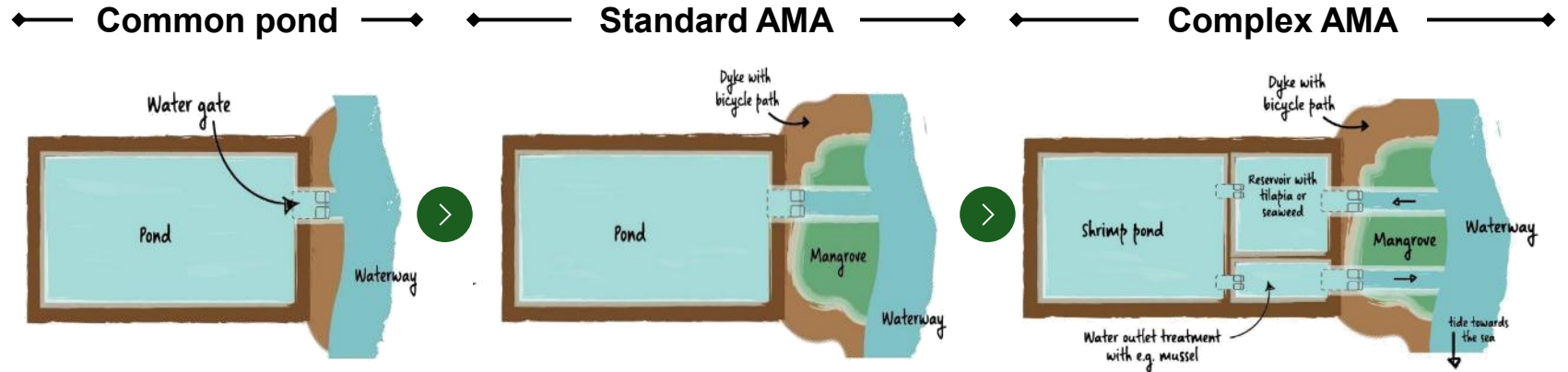


# By planting mangroves outside ponds, AMA eliminates the productivity trade-off inherent in traditional silvo-fishery systems

## Associated Mangrove Aquaculture (AMA)

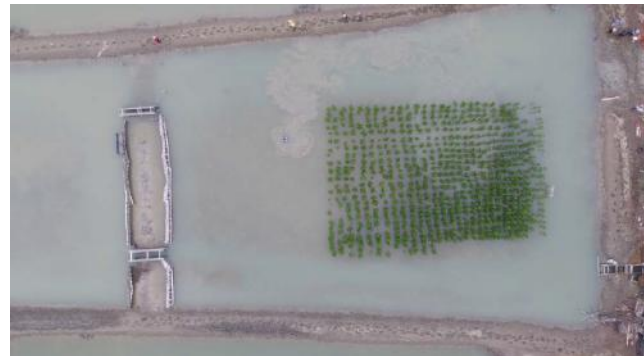
- AMA plants mangroves outside ponds along rivers — preserving aquaculture productivity unlike traditional silvo-fishery models
- Greenbelt shields pond dykes from wave damage, erosion, and soil subsidence
- AMA acts as a natural biofilter, reducing toxic material levels.

### Key illustration



### AMA in Practice — Tambakbulusan, Demak, Indonesia

← Shortly after construction → ← 6 months after construction →



In Demak, **applying AMA** allowed farmers to **triple their income** from milkfish and shrimp farming



# Global mangrove restoration is a \$10.73B TAM, with a \$120M serviceable opportunity for AAA Fund in Indonesia

## AAA Fund's potential market size:

**TAM: \$10.73 billion**

Market for restoring global mangrove forest.

**SAM: \$1.1 billion**

Indonesia's potential restoration area from ponds.

**SOM: \$120 million**

Areas with highest-value benefits to shrimp farmers.

## Key assumptions

- Covers global mangroves lost between 1996 and 2020
- There are 756,182 ha required to restore by the Government of Indonesia
- 84% of them come from abandoned shrimp ponds (631,802 ha)
- Government-owned lands with high value for fisheries support services in Java, Nusa Tenggara Timur, Sulawesi, and Sumatra (70,422 ha)



# Indonesia's 222k+ cooperatives offer a proven, member-governed channel to deploy capital at scale

Cooperatives in Indonesia

Cooperatives build self-sustaining community enterprises

**222k+**





Active cooperatives nationally<sup>1</sup>

**37 million**

Total cooperative members<sup>2</sup>

**131,617**

Based in Java Island<sup>1</sup>

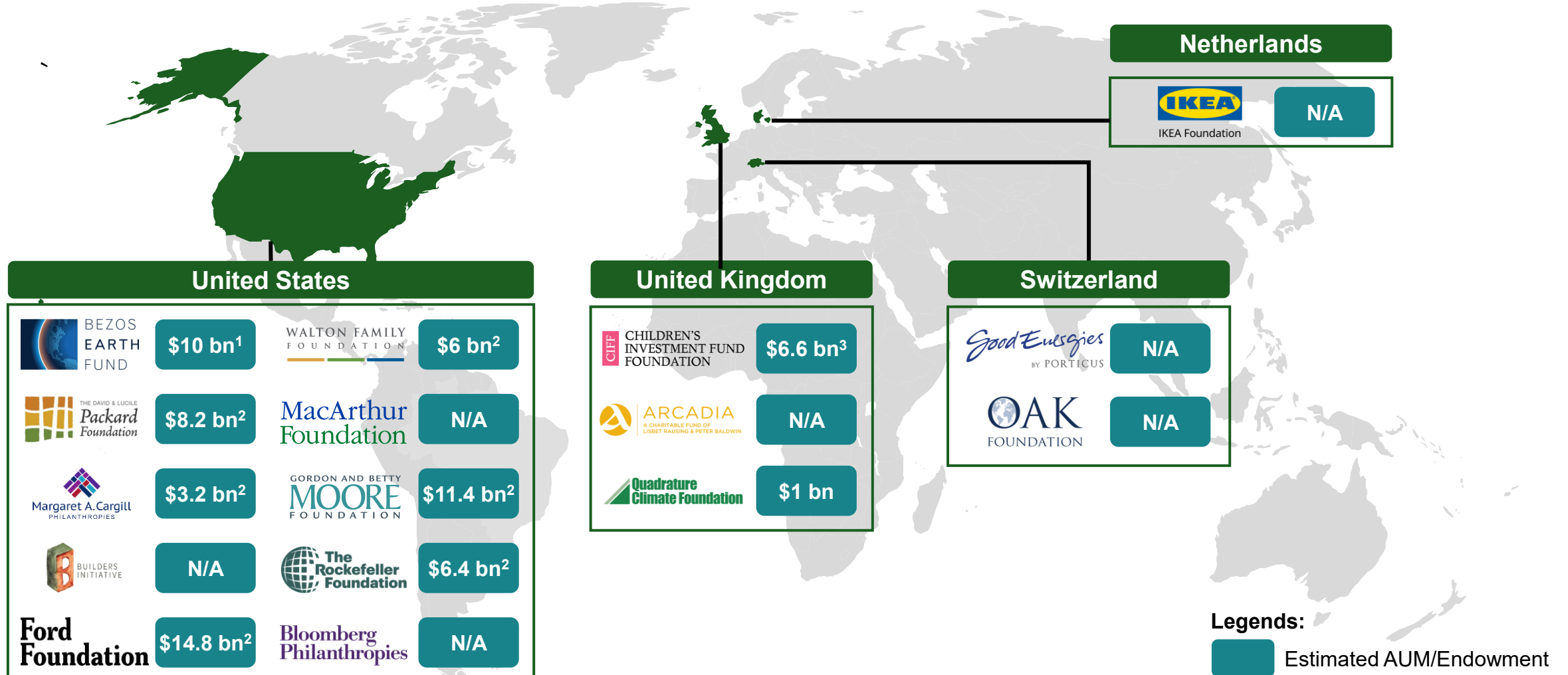
Dimensions	Cooperatives	Corporation
<b>Ownership</b> 	Members are simultaneously owners and users. Membership cannot be transferred or sold.	Shareholders own equity based on capital contribution. Shares can be freely traded.
<b>Governance</b> 	One member, one vote regardless of capital. Member Assembly (Rapat Anggota) is the highest authority.	One share, one vote. Control concentrates with largest shareholders.
<b>Surplus</b> 	Net profit distributed proportionally to each member's participation, not capital.	Dividends distributed based on shareholding percentage.
<b>Purpose</b> 	Exists to improve member welfare. Capital serves welfare, not the other way around.	Exists to maximize shareholder returns.



Source: 1. Statistics Indonesia; 2. Ministry of Cooperatives and SMEs (2016)

# Several large philanthropic funds across the US and Europe represent a sizable, high-potential LP pool for AAA Fund

Potential climate change focus philanthropic funds (non-exhaustive)



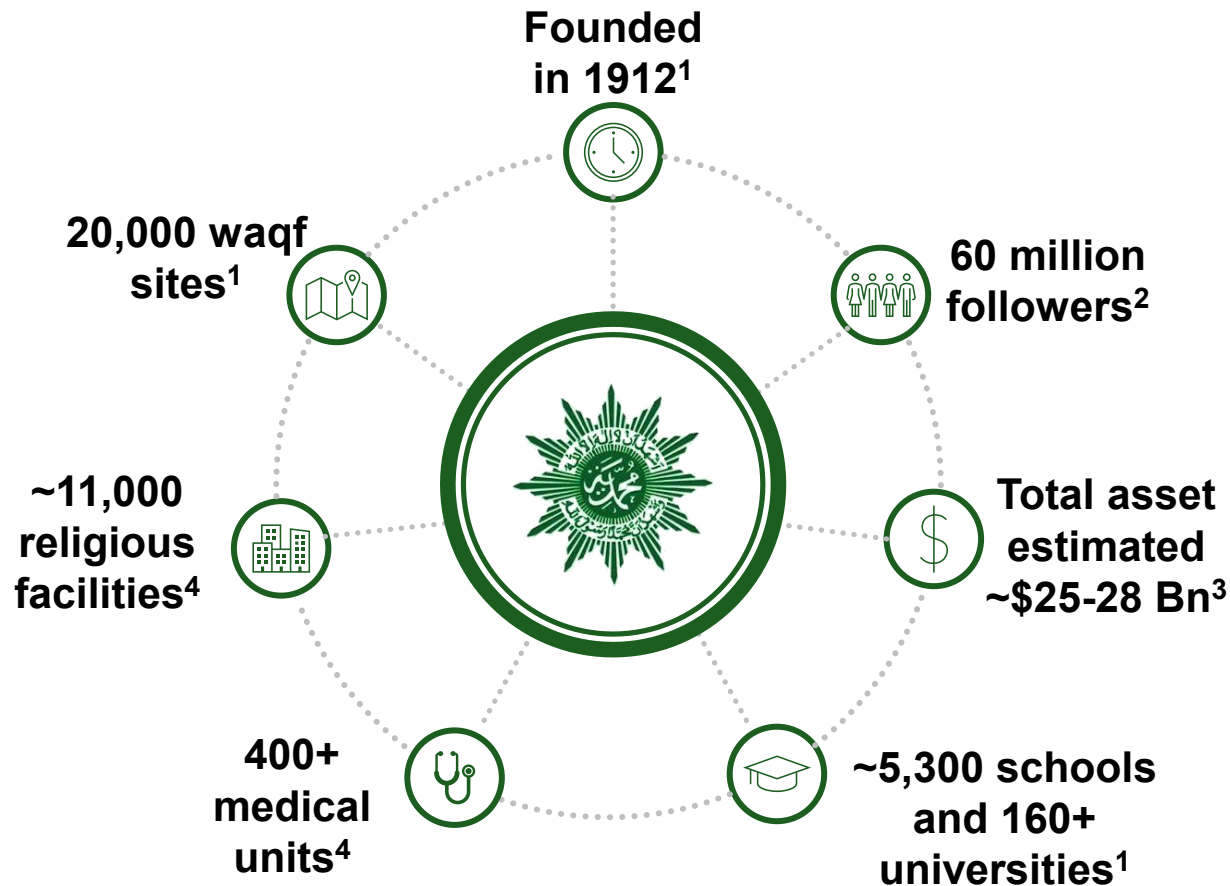
Source: 1. Bezos Earth Fund website; 2. Arcolab; 3. Alliance Magazine; 4. QCF website

# Muhammadiyah's capital, community reach, and governance make it an ideal strategic anchor for AAA Fund



A century-old religious institution with unrivaled scale across Indonesia

Three complementary roles that de-risk and accelerate fund deployment



## Capital provider

- Sharia-compliant sukuk investment aligned with Muhammadiyah's principles.
- The \$1M minimum ticket size easily fits their organizational scale.



## Community mobilizer

- Local leaders offer unmatched moral authority in coastal communities.
- Trusted local endorsements drive cooperative enrollment more effectively than external outreach.



## Governance partner

Network integration between cooperatives & Muhammadiyah ensures ongoing governance, financial literacy infrastructure, and long-term community support.

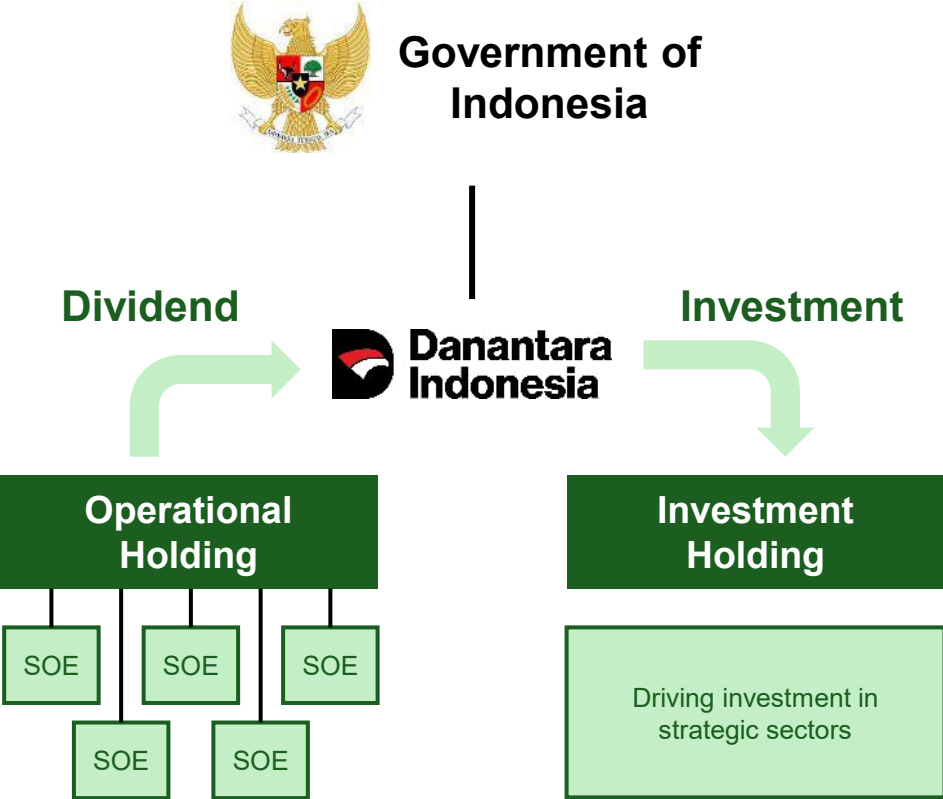


Source: 1. Muhammadiyah website; 2. Mongabay News (2024); 3. Seasia Stats Report (2025); 4. Islamic-based Organization in Indonesia: Role of Muhammadiyah in Health Improvement, Rachmawati (2019)

# With ~\$900B in SOE assets, Danantara's resilience agenda creates a natural home for AAA Fund's investment thesis

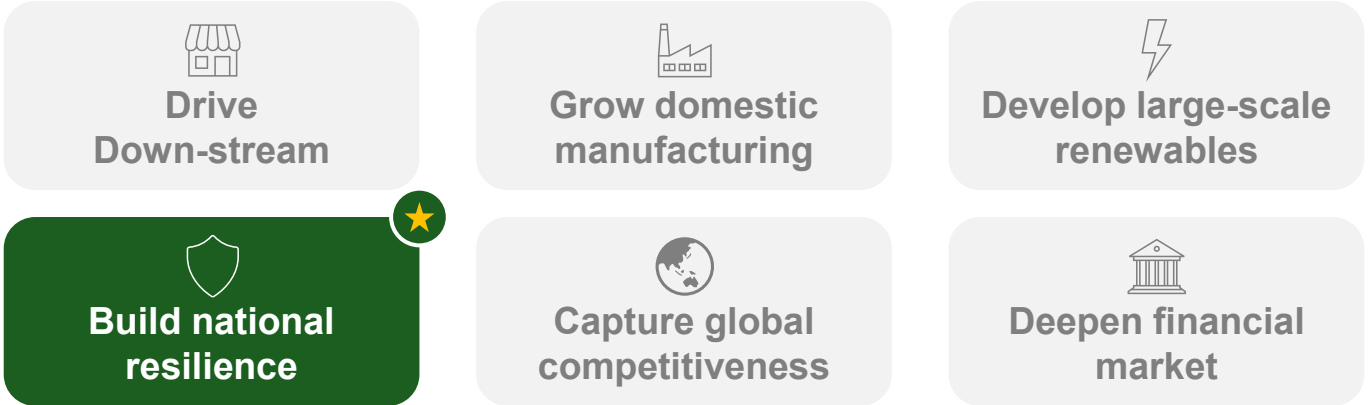


Danantara is Indonesia's SOEs based Sovereign Wealth Fund

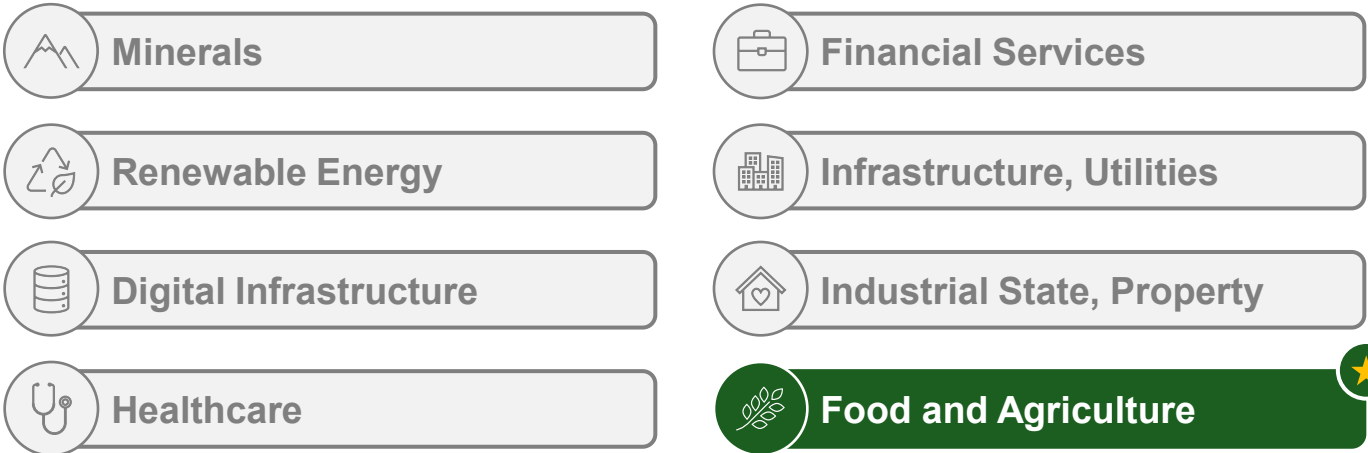


**Danantara controls +1,000 SOEs with total Asset Under Management of ~\$900 billion**

## Key investment themes



## Priority sectors



Source: Danantara Indonesia presentation (2025)



# Contents

Indonesia's climate and mangrove efforts

Mangrove, aquaculture, and carbon market

Project, market, and structure overview

## Success stories: Project Yagasu

Financial calculation details

Impact thesis and measurement

Risk mitigation



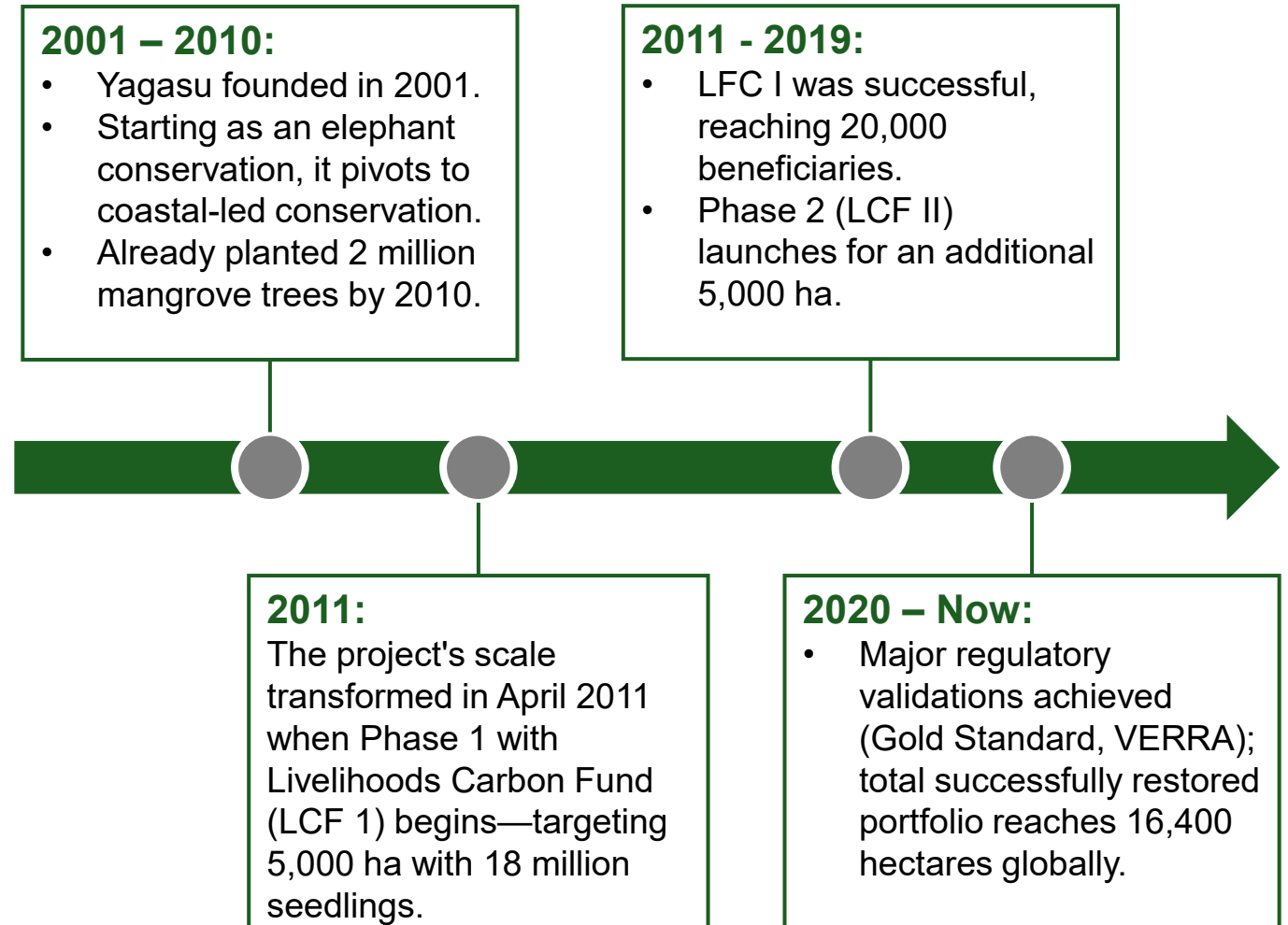
# Yagasu Project (1/2): This project has scaled from a local NGO to Indonesia's leading mangrove platform



## Project overview:

<b>Institution</b>	Yayasan Gajah Nusantara (Yagasu)
<b>Location</b>	13 Indonesian provinces across Java, Sumatera, & Sulawesi
<b>Mangroves restored</b>	<ul style="list-style-type: none"> <li>• 30 million trees</li> <li>• More than 16,000 hectares</li> </ul>
<b>Cost structure</b>	<ul style="list-style-type: none"> <li>• 70% for planting, 20% for social &amp; economic development, 10% for project management</li> </ul>
<b>Example Investors</b>	Danone, Hermès, Schneider Electric, Crédit Agricole, Michelin, and SAP

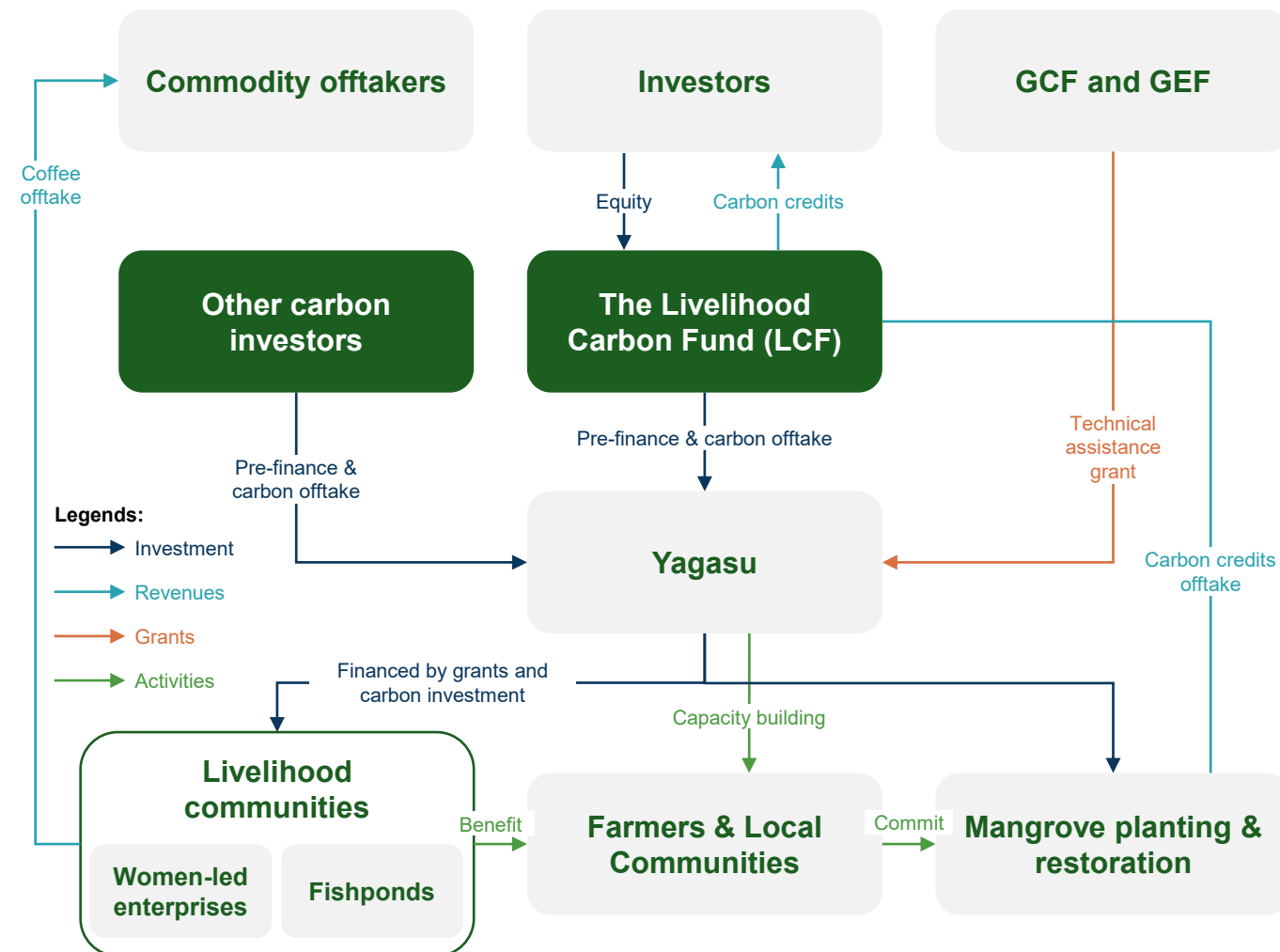
## Project timeline:



# Yagasu Project (2/2): Its investment model delivered 4.5M tonnes of CO<sub>2</sub> sequestration



## Yagasu's investment model:



## Yagasu's impact:



### Climate change mitigations:

- 2 million tonnes of CO<sub>2</sub> to be sequestered over 20 years (Livelihoods Carbon Fund I), with an additional 2.5 million tonnes planned for LCF II.



### Disaster risk reduction:

- Mangrove ecosystems play a significant role in preventing erosion and sedimentation and buffer coastal communities from extreme weather events.



### Environmental loss and degradation:

- 10,000 ha of mangroves restored/planted
- Protection of 23 species of mangroves, 16 species of reptiles and amphibians, 32 species of invertebrates, 82 species of birds and 41 species of fishes.
- Set up of Community Mangrove Patrolling Units to ensure ecosystem integrity.



### Economic and social development:

- Implementing the “silvofishery” approach: combining 70% of mangrove vegetation with 30% open water
- The male/female ratio of beneficiaries is 40/60.



# Contents

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# We have built key assumptions reflecting real operating data and market benchmarks (1/3)

## Key financial assumptions

Parameter	Unit	Value	Remarks
<b>Shrimp business</b>			
Shrimp price	USD/ha	11.5	Shrimp price is projected to grow 3% YoY benchmarking from GDP Growth in similar estimate
Yield production	Kg/ha/year	225	Based on International Journal of Innovative Science and Research Technology (ISSN No:- 2456-2165)
Pond Area	Ha	2,274	Total area restored
% from total area restored	%	30%	70:30 distribution with Mangrove area
COGS as % of revenue	%	55%	Covers feed (~70–80% of variable cost per Kumar et al., Aquaculture 2021), PL, energy, and water treatment
OPEX as % of revenue	%	15%	Semi-intensive operating model — labor, biosecurity, pond maintenance, G&A; in line with ADB project benchmarks.
Farmer's profit share from Operating profit	%	80%	
Shrimp price growth	%	3%	Growth is based on GDP Growth (3%)



# We have built key assumptions reflecting real operating data and market benchmarks (2/3)

## Key financial assumptions

Parameter	Unit	Value	Remarks
<b>Carbon business</b>			
Carbon price	USD/tCO <sub>2</sub> e	25	Average blue carbon price taken as median from range (\$15-\$35)
Carbon sequestered	tCO <sub>2</sub> e/ha	38.5	Based on World Bank study of Indonesian mangrove restoration; combines GHG baseline reduction, biomass sequestration, and soil carbon burial.
Buffer withheld	%	15%	Buffer is used for Verra VCS (VM 0033) sale estimation
Mangrove Area	ha	5,307	Total area restored
% from total area restored	%	70%	70:30 distribution with shrimp ponds area
OPEX as % of revenue	%	30%	OPEX covers MRV, monitoring, maintenance, Verra fees, and community benefit share; 30% reflects the MRV intensity of blue carbon vs. terrestrial projects.



# We have built key assumptions reflecting real operating data and market benchmarks (3/3)

## Key financial assumptions

Parameter	Unit	Value	Remarks
<b>Others</b>			
Total area restored	ha	7,581	Calculated based on the approachable restoration areas in Java considering the plantation condition and overall operational coverage
CAPEX requirement	USD/ha	2,500	Based on journal and desktop research the approximate CAPEX is around \$2000-\$3000, number taken \$2500
Depreciation rate	%	10%	Straight-line depreciation
Tax rate	%	22%	Indonesian tax rate
Weighted average cost of capital	%	8%	
% Grants from total fund	%	20%	
% Sukuk from total fund	%	50%	
% Junior from total fund	%	30%	
Sukuk's coupon rate	%	9%	
Junior's coupon rate	%	16%	



# Pilot project in Java generates strong and growing free cash flow over 30 years (1/3)

## AAA Fund's project cash flow (Year 1 – 10)

Project Cash Flow											
Pilot project - Java	Unit	1	2	3	4	5	6	7	8	9	10
<b>Total Revenue</b>	<b>USD mn</b>	—	<b>\$1.21</b>	<b>\$2.19</b>	<b>\$3.22</b>	<b>\$3.31</b>	<b>\$4.43</b>	<b>\$4.79</b>	<b>\$5.15</b>	<b>\$5.52</b>	<b>\$5.88</b>
Shrimp Pond	USD mn	—	\$1.21	\$2.19	\$3.22	\$3.31	\$3.41	\$3.51	\$3.62	\$3.73	\$3.84
% Production Capacity	%	0%	50%	70%	100%	100%	100%	100%	100%	100%	100%
% Farmers Adoption	%	20%	80%	100%	100%	100%	100%	100%	100%	100%	100%
%Areas Covered	%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Carbon Credit	USD mn	—	—	—	—	—	\$1.02	\$1.28	\$1.53	\$1.79	\$2.04
% Production Capacity	%	0%	0%	0%	0%	0%	40%	50%	60%	70%	80%
%Areas Covered	%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Verra VCS Buffer	USD mn	—	—	—	—	—	\$0.15	\$0.19	\$0.23	\$0.27	\$0.31
% from revenue	%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Contribution Shrimp Revenue	%	—	100%	100%	100%	100%	77%	73%	70%	68%	65%
Contribution Carbon Revenue	%	—	0%	0%	0%	0%	23%	27%	30%	32%	35%
<b>Total COGS</b>	<b>USD mn</b>	—	<b>\$0.67</b>	<b>\$1.20</b>	<b>\$1.77</b>	<b>\$1.82</b>	<b>\$1.88</b>	<b>\$1.93</b>	<b>\$1.99</b>	<b>\$2.05</b>	<b>\$2.11</b>
Shrimp Pond	USD mn	—	\$0.67	\$1.20	\$1.77	\$1.82	\$1.88	\$1.93	\$1.99	\$2.05	\$2.11
% from Revenue	%	0%	55%	55%	55%	55%	55%	55%	55%	55%	55%
<b>Total OPEX</b>	<b>USD mn</b>	—	<b>\$0.18</b>	<b>\$0.33</b>	<b>\$0.48</b>	<b>\$0.50</b>	<b>\$0.82</b>	<b>\$0.91</b>	<b>\$1.00</b>	<b>\$1.10</b>	<b>\$1.19</b>
Shrimp Pond	USD mn	—	\$0.18	\$0.33	\$0.48	\$0.50	\$0.51	\$0.53	\$0.54	\$0.56	\$0.58
% from Revenue	%	0%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Carbon Credit	USD mn	—	—	—	—	—	\$0.31	\$0.38	\$0.46	\$0.54	\$0.61
% from Revenue	%	0%	30%	30%	30%	30%	30%	30%	30%	30%	30%
<b>Operating Profit</b>	<b>USD mn</b>	—	<b>\$0.36</b>	<b>\$0.66</b>	<b>\$0.96</b>	<b>\$0.99</b>	<b>\$1.59</b>	<b>\$1.76</b>	<b>\$1.93</b>	<b>\$2.10</b>	<b>\$2.28</b>
Farmers Profit Sharing	USD mn	—	\$0.29	\$0.52	\$0.77	\$0.79	\$0.82	\$0.84	\$0.87	\$0.89	\$0.92
% of Shrimp Operating Profit	%	0%	80%	80%	80%	80%	80%	80%	80%	80%	80%
<b>EBITDA</b>	<b>USD mn</b>	—	<b>\$0.07</b>	<b>\$0.13</b>	<b>\$0.19</b>	<b>\$0.20</b>	<b>\$0.77</b>	<b>\$0.91</b>	<b>\$1.06</b>	<b>\$1.21</b>	<b>\$1.35</b>
Depreciation	USD mn	—	—	—	—	—	—	—	—	—	—
% of Shrimp Operating Profit	%	0%	80%	80%	80%	80%	80%	80%	80%	80%	80%
<b>EBIT</b>	<b>USD mn</b>	—	<b>\$0.07</b>	<b>\$0.13</b>	<b>\$0.19</b>	<b>\$0.20</b>	<b>\$0.77</b>	<b>\$0.91</b>	<b>\$1.06</b>	<b>\$1.21</b>	<b>\$1.35</b>
<b>NOPAT</b>	<b>USD mn</b>	—	<b>\$0.06</b>	<b>\$0.10</b>	<b>\$0.15</b>	<b>\$0.15</b>	<b>\$0.60</b>	<b>\$0.71</b>	<b>\$0.83</b>	<b>\$0.94</b>	<b>\$1.06</b>
-NET CAPEX (Depre- Gross PPE)	USD mn	\$9.48	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)
<b>FCFU</b>	<b>USD mn</b>	<b>\$(9.48)</b>	<b>\$1.00</b>	<b>\$1.05</b>	<b>\$1.10</b>	<b>\$1.10</b>	<b>\$1.55</b>	<b>\$1.66</b>	<b>\$1.77</b>	<b>\$1.89</b>	<b>\$2.00</b>



# Pilot project in Java generates strong and growing free cash flow over 30 years (2/3)

## AAA Fund's project cash flow (Year 11 – 20)

Project Cash Flow											
Pilot project - Java	Unit	11	12	13	14	15	16	17	18	19	20
<b>Total Revenue</b>	<b>USD mn</b>	<b>\$6.25</b>	<b>\$6.63</b>	<b>\$6.75</b>	<b>\$6.87</b>	<b>\$7.00</b>	<b>\$12.57</b>	<b>\$12.85</b>	<b>\$13.13</b>	<b>\$13.42</b>	<b>\$13.72</b>
Shrimp Pond	USD mn	\$3.95	\$4.07	\$4.20	\$4.32	\$4.45	\$9.17	\$9.44	\$9.73	\$10.02	\$10.32
% Production Capacity	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% Farmers Adoption	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
%Areas Covered	%	50%	50%	50%	50%	50%	100%	100%	100%	100%	100%
Carbon Credit	USD mn	\$2.30	\$2.55	\$2.55	\$2.55	\$2.55	\$3.40	\$3.40	\$3.40	\$3.40	\$3.40
% Production Capacity	%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%
%Areas Covered	%	50%	50%	50%	50%	50%	67%	67%	67%	67%	67%
Verra VCS Buffer	USD mn	<b>\$0.34</b>	<b>\$0.38</b>	<b>\$0.38</b>	<b>\$0.38</b>	<b>\$0.38</b>	<b>\$0.51</b>	<b>\$0.51</b>	<b>\$0.51</b>	<b>\$0.51</b>	<b>\$0.51</b>
% from revenue	%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Contribution Shrimp Revenue	%	63%	61%	62%	63%	64%	73%	73%	74%	75%	75%
Contribution Carbon Revenue	%	37%	39%	38%	37%	36%	27%	27%	26%	25%	25%
<b>Total COGS</b>	<b>USD mn</b>	<b>\$2.17</b>	<b>\$2.24</b>	<b>\$2.31</b>	<b>\$2.38</b>	<b>\$2.45</b>	<b>\$5.04</b>	<b>\$5.19</b>	<b>\$5.35</b>	<b>\$5.51</b>	<b>\$5.68</b>
Shrimp Pond	USD mn	\$2.17	\$2.24	\$2.31	\$2.38	\$2.45	\$5.04	\$5.19	\$5.35	\$5.51	\$5.68
% from Revenue	%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%
<b>Total OPEX</b>	<b>USD mn</b>	<b>\$1.28</b>	<b>\$1.38</b>	<b>\$1.40</b>	<b>\$1.41</b>	<b>\$1.43</b>	<b>\$2.40</b>	<b>\$2.44</b>	<b>\$2.48</b>	<b>\$2.52</b>	<b>\$2.57</b>
Shrimp Pond	USD mn	\$0.59	\$0.61	\$0.63	\$0.65	\$0.67	\$1.38	\$1.42	\$1.46	\$1.50	\$1.55
% from Revenue	%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Carbon Credit	USD mn	\$0.69	\$0.77	\$0.77	\$0.77	\$0.77	\$1.02	\$1.02	\$1.02	\$1.02	\$1.02
% from Revenue	%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
<b>Operating Profit</b>	<b>USD mn</b>	<b>\$2.45</b>	<b>\$2.63</b>	<b>\$2.66</b>	<b>\$2.70</b>	<b>\$2.74</b>	<b>\$4.62</b>	<b>\$4.71</b>	<b>\$4.79</b>	<b>\$4.88</b>	<b>\$4.97</b>
Farmers Profit Sharing	USD mn	\$0.95	\$0.98	\$1.01	\$1.04	\$1.07	\$2.20	\$2.27	\$2.33	\$2.40	\$2.48
% of Shrimp Operating Profit	%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
<b>EBITDA</b>	<b>USD mn</b>	<b>\$1.50</b>	<b>\$1.65</b>	<b>\$1.66</b>	<b>\$1.66</b>	<b>\$1.67</b>	<b>\$2.42</b>	<b>\$2.44</b>	<b>\$2.46</b>	<b>\$2.47</b>	<b>\$2.49</b>
Depreciation	USD mn	—	—	—	—	—	—	—	—	—	—
% of Shrimp Operating Profit	%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
<b>EBIT</b>	<b>USD mn</b>	<b>\$1.50</b>	<b>\$1.65</b>	<b>\$1.66</b>	<b>\$1.66</b>	<b>\$1.67</b>	<b>\$2.42</b>	<b>\$2.44</b>	<b>\$2.46</b>	<b>\$2.47</b>	<b>\$2.49</b>
<b>NOPAT</b>	<b>USD mn</b>	<b>\$1.17</b>	<b>\$1.29</b>	<b>\$1.29</b>	<b>\$1.30</b>	<b>\$1.30</b>	<b>\$1.89</b>	<b>\$1.90</b>	<b>\$1.92</b>	<b>\$1.93</b>	<b>\$1.94</b>
-NET CAPEX (Depre- Gross PPE)	USD mn	\$(0.95)	—	—	—	\$9.48	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)
<b>FCFU</b>	<b>USD mn</b>	<b>\$2.12</b>	<b>\$1.29</b>	<b>\$1.29</b>	<b>\$1.30</b>	<b>\$(8.17)</b>	<b>\$2.84</b>	<b>\$2.85</b>	<b>\$2.86</b>	<b>\$2.88</b>	<b>\$2.89</b>



# Pilot project in Java generates strong and growing free cash flow over 30 years (3/3)

## AAA Fund's project cash flow (Year 21 – 30)

Project Cash Flow											
Pilot project - Java	Unit	21	22	23	24	25	26	27	28	29	30
<b>Total Revenue</b>	<b>USD mn</b>	<b>\$15.74</b>	<b>\$16.06</b>	<b>\$16.38</b>	<b>\$16.72</b>	<b>\$17.07</b>	<b>\$17.43</b>	<b>\$17.80</b>	<b>\$18.18</b>	<b>\$18.57</b>	<b>\$18.98</b>
Shrimp Pond	USD mn	\$10.63	\$10.95	\$11.28	\$11.61	\$11.96	\$12.32	\$12.69	\$13.07	\$13.46	\$13.87
% Production Capacity	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% Farmers Adoption	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
%Areas Covered	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Carbon Credit	USD mn	\$5.11	\$5.11	\$5.11	\$5.11	\$5.11	\$5.11	\$5.11	\$5.11	\$5.11	\$5.11
% Production Capacity	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
%Areas Covered	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Verra VCS Buffer	USD mn	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>	<b>\$0.77</b>
% from revenue	%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Contribution Shrimp Revenue	%	68%	68%	69%	69%	70%	71%	71%	72%	72%	73%
Contribution Carbon Revenue	%	32%	32%	31%	31%	30%	29%	29%	28%	28%	27%
<b>Total COGS</b>	<b>USD mn</b>	<b>\$5.85</b>	<b>\$6.02</b>	<b>\$6.20</b>	<b>\$6.39</b>	<b>\$6.58</b>	<b>\$6.78</b>	<b>\$6.98</b>	<b>\$7.19</b>	<b>\$7.41</b>	<b>\$7.63</b>
Shrimp Pond	USD mn	\$5.85	\$6.02	\$6.20	\$6.39	\$6.58	\$6.78	\$6.98	\$7.19	\$7.41	\$7.63
% from Revenue	%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%
<b>Total OPEX</b>	<b>USD mn</b>	<b>\$3.13</b>	<b>\$3.17</b>	<b>\$3.22</b>	<b>\$3.27</b>	<b>\$3.33</b>	<b>\$3.38</b>	<b>\$3.44</b>	<b>\$3.49</b>	<b>\$3.55</b>	<b>\$3.61</b>
Shrimp Pond	USD mn	\$1.59	\$1.64	\$1.69	\$1.74	\$1.79	\$1.85	\$1.90	\$1.96	\$2.02	\$2.08
% from Revenue	%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Carbon Credit	USD mn	\$1.53	\$1.53	\$1.53	\$1.53	\$1.53	\$1.53	\$1.53	\$1.53	\$1.53	\$1.53
% from Revenue	%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
<b>Operating Profit</b>	<b>USD mn</b>	<b>\$6.00</b>	<b>\$6.09</b>	<b>\$6.19</b>	<b>\$6.29</b>	<b>\$6.40</b>	<b>\$6.51</b>	<b>\$6.62</b>	<b>\$6.73</b>	<b>\$6.85</b>	<b>\$6.97</b>
Farmers Profit Sharing	USD mn	\$2.55	\$2.63	\$2.71	\$2.79	\$2.87	\$2.96	\$3.05	\$3.14	\$3.23	\$3.33
% of Shrimp Operating Profit	%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
<b>EBITDA</b>	<b>USD mn</b>	<b>\$3.45</b>	<b>\$3.47</b>	<b>\$3.49</b>	<b>\$3.51</b>	<b>\$3.53</b>	<b>\$3.55</b>	<b>\$3.57</b>	<b>\$3.59</b>	<b>\$3.62</b>	<b>\$3.64</b>
Depreciation	USD mn	—	—	—	—	—	—	—	—	—	—
% of Shrimp Operating Profit	%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
<b>EBIT</b>	<b>USD mn</b>	<b>\$3.45</b>	<b>\$3.47</b>	<b>\$3.49</b>	<b>\$3.51</b>	<b>\$3.53</b>	<b>\$3.55</b>	<b>\$3.57</b>	<b>\$3.59</b>	<b>\$3.62</b>	<b>\$3.64</b>
<b>NOPAT</b>	<b>USD mn</b>	<b>\$2.69</b>	<b>\$2.70</b>	<b>\$2.72</b>	<b>\$2.73</b>	<b>\$2.75</b>	<b>\$2.77</b>	<b>\$2.79</b>	<b>\$2.80</b>	<b>\$2.82</b>	<b>\$2.84</b>
-NET CAPEX (Depre- Gross PPE)	USD mn	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	\$(0.95)	—	—	—	—	—
<b>FCFU</b>	<b>USD mn</b>	<b>\$3.64</b>	<b>\$3.65</b>	<b>\$3.67</b>	<b>\$3.68</b>	<b>\$3.70</b>	<b>\$2.77</b>	<b>\$2.79</b>	<b>\$2.80</b>	<b>\$2.82</b>	<b>\$2.84</b>



# Grants, Sukuk, and Junior tranches are structured to de-risk investor returns over 30 years (1/3)

## AAA Fund's capital structure (Year 1 – 10)

Debt + Equity Waterfall											
Pilot project - Java	Unit	1	2	3	4	5	6	7	8	9	10
FCFU	USD mn	\$(9.48)	\$1.00	\$1.05	\$1.10	\$1.10	\$1.55	\$1.66	\$1.77	\$1.89	\$2.00
Sukuk - Round 1	USD mn	\$(4.74)	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$5.16
Junior - Round 1	USD mn	\$(2.84)	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	\$0.45	\$3.30
Sukuk - Round 2	USD mn	—	—	—	—	—	—	—	—	—	\$(6.82)
Junior - Round 2	USD mn	—	—	—	—	—	—	—	—	—	\$(4.55)
<b>Fund / Equity CF before fees</b>	<b>USD mn</b>	<b>\$(1.90)</b>	<b>\$0.12</b>	<b>\$0.17</b>	<b>\$0.22</b>	<b>\$0.22</b>	<b>\$0.66</b>	<b>\$0.78</b>	<b>\$0.89</b>	<b>\$1.01</b>	<b>\$4.91</b>
Management fee impact	USD mn	—	\$(0.04)	\$(0.06)	\$(0.09)	\$(0.09)	\$(0.12)	\$(0.13)	\$(0.14)	\$(0.15)	\$(0.16)
Carry fee impact	USD mn	—	\$(0.01)	\$(0.01)	\$(0.02)	\$(0.02)	\$(0.11)	\$(0.14)	\$(0.16)	\$(0.19)	\$(0.21)
Fund / Equity CF after fees	USD mn	\$(1.90)	\$0.08	\$0.09	\$0.11	\$0.11	\$0.43	\$0.51	\$0.59	\$0.67	\$4.55
<b>Ending Cash after Fees</b>	<b>USD mn</b>	<b>—</b>	<b>\$0.08</b>	<b>\$0.22</b>	<b>\$0.40</b>	<b>\$0.62</b>	<b>\$1.16</b>	<b>\$1.90</b>	<b>\$2.76</b>	<b>\$3.74</b>	<b>\$8.62</b>
Ending Cash after Fees +											
Philanthropic Guarantee	USD mn	—	\$0.08	\$0.22	\$0.40	\$0.62	\$1.16	\$1.90	\$2.76	\$3.74	\$8.62
DSCR		1.08	2.36	2.46	2.58	2.59	3.62	3.89	4.16	4.43	0.39
Project Free Cash Flow	USD mn	\$(9.48)	\$1.00	\$1.05	\$1.10	\$1.10	\$1.55	\$1.66	\$1.77	\$1.89	\$2.00
Sukuk Debt Service	USD mn	\$(8.77)	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$0.43	\$5.16



# Grants, Sukuk, and Junior tranches are structured to de-risk investor returns over 30 years (2/3)

## AAA Fund's capital structure (Year 11 – 20)

Debt + Equity Waterfall											
Pilot project - Java	Unit	11	12	13	14	15	16	17	18	19	20
FCFU	USD mn	\$2.12	\$1.29	\$1.29	\$1.30	\$(8.17)	\$2.84	\$2.85	\$2.86	\$2.88	\$2.89
Sukuk - Round 1	USD mn	—	—	—	—	—	—	—	—	—	—
Junior - Round 1	USD mn	—	—	—	—	—	—	—	—	—	—
Sukuk - Round 2	USD mn	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$7.44
Junior - Round 2	USD mn	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73	\$0.73	\$5.28
<b>Fund / Equity CF before fees</b>	<b>USD mn</b>	<b>\$0.78</b>	<b>\$(0.06)</b>	<b>\$(0.05)</b>	<b>\$(0.04)</b>	<b>\$(9.51)</b>	<b>\$1.50</b>	<b>\$1.51</b>	<b>\$1.52</b>	<b>\$1.54</b>	<b>\$(9.82)</b>
Management fee impact	USD mn	\$(0.16)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)
Carry fee impact	USD mn	\$(0.23)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)
Fund / Equity CF after fees	USD mn	\$0.38	\$(0.49)	\$(0.48)	\$(0.47)	\$(9.94)	\$1.06	\$1.08	\$1.09	\$1.10	\$(10.25)
<b>Ending Cash after Fees</b>	<b>USD mn</b>	<b>\$9.36</b>	<b>\$9.28</b>	<b>\$9.23</b>	<b>\$9.18</b>	<b>\$(0.33)</b>	<b>\$1.16</b>	<b>\$2.67</b>	<b>\$4.19</b>	<b>\$5.73</b>	<b>\$(4.09)</b>
Ending Cash after Fees +											
Philanthropic Guarantee	USD mn	\$9.36	\$9.28	\$9.23	\$9.18	—	\$1.16	\$2.67	\$4.19	\$5.73	—
DSCR		3.45	2.09	2.10	2.11	(13.31)	4.62	4.64	4.66	4.69	0.39
Project Free Cash Flow	USD mn	\$2.12	\$1.29	\$1.29	\$1.30	\$(8.17)	\$2.84	\$2.85	\$2.86	\$2.88	\$2.89
Sukuk Debt Service	USD mn	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$0.61	\$7.44



# Grants, Sukuk, and Junior tranches are structured to de-risk investor returns over 30 years (3/3)

## AAA Fund's capital structure (Year 21 – 30)

Debt + Equity Waterfall											
Pilot project - Java	Unit	21	22	23	24	25	26	27	28	29	30
FCFU	USD mn	\$3.64	\$3.65	\$3.67	\$3.68	\$3.70	\$2.77	\$2.79	\$2.80	\$2.82	\$2.84
Sukuk - Round 1	USD mn	—	—	—	—	—	—	—	—	—	—
Junior - Round 1	USD mn	—	—	—	—	—	—	—	—	—	—
Sukuk - Round 2	USD mn	—	—	—	—	—	—	—	—	—	—
Junior - Round 2	USD mn	—	—	—	—	—	—	—	—	—	—
<b>Fund / Equity CF before fees</b>	<b>USD mn</b>	<b>\$3.64</b>	<b>\$3.65</b>	<b>\$3.67</b>	<b>\$3.68</b>	<b>\$3.70</b>	<b>\$2.77</b>	<b>\$2.79</b>	<b>\$2.80</b>	<b>\$2.82</b>	<b>\$2.84</b>
Management fee impact	USD mn	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)	\$(0.17)
Carry fee impact	USD mn	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)	\$(0.26)
Fund / Equity CF after fees	USD mn	\$3.21	\$3.22	\$3.24	\$3.25	\$3.27	\$2.34	\$2.35	\$2.37	\$2.39	\$2.41
<b>Ending Cash after Fees</b>	<b>USD mn</b>	<b>\$(0.45)</b>	<b>\$3.20</b>	<b>\$6.86</b>	<b>\$10.55</b>	<b>\$14.24</b>	<b>\$17.01</b>	<b>\$19.80</b>	<b>\$22.60</b>	<b>\$25.42</b>	<b>\$28.26</b>
Ending Cash after Fees + Philanthropic Guarantee	USD mn	—	\$3.20	\$6.86	\$10.55	\$14.24	\$17.01	\$19.80	\$22.60	\$25.42	\$28.26
DSCR		—	—	—	—	—	—	—	—	—	—
Project Free Cash Flow	USD mn	\$3.64	\$3.65	\$3.67	\$3.68	\$3.70	\$2.77	\$2.79	\$2.80	\$2.82	\$2.84
Sukuk Debt Service	USD mn	—	—	—	—	—	—	—	—	—	—
<b>NPV</b>	<b>USD mn</b>	<b>\$7.39</b>									
<b>IRR Project</b>	<b>%</b>	<b>14.3%</b>									
<b>Terminal Value (Y30)</b>		<b>\$93.27</b>									
IRR Sukuk Investors	%	9%									
IRR Junior Investors	%	16%									
<b>IRR Fund after fees</b>	<b>%</b>	<b>13.0%</b>									

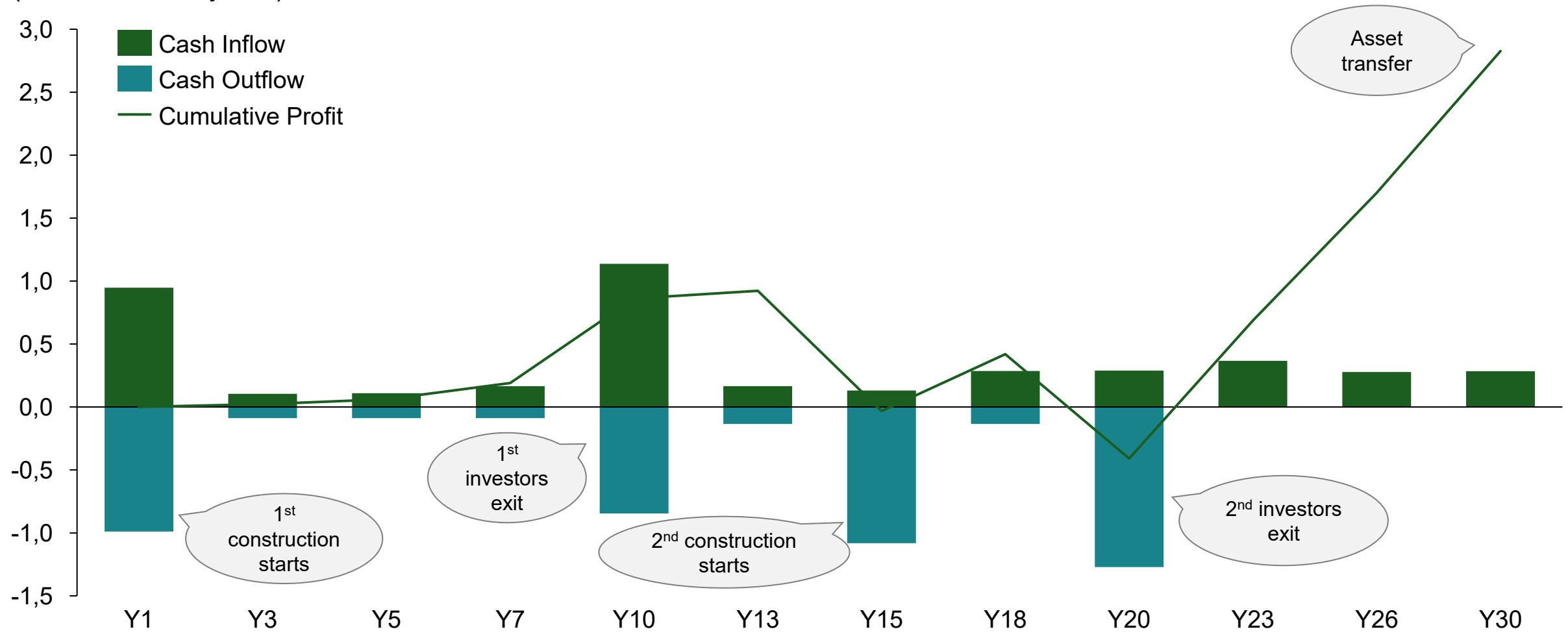
**DSCR is not applicable in Years 21–30 because the debt is fully paid off, leaving zero debt service obligations to measure against the fund's cash flow.**



# AAA Fund delivers two full capital recycling cycles over 30 years, returning proceeds to investors at Y10 and Y20

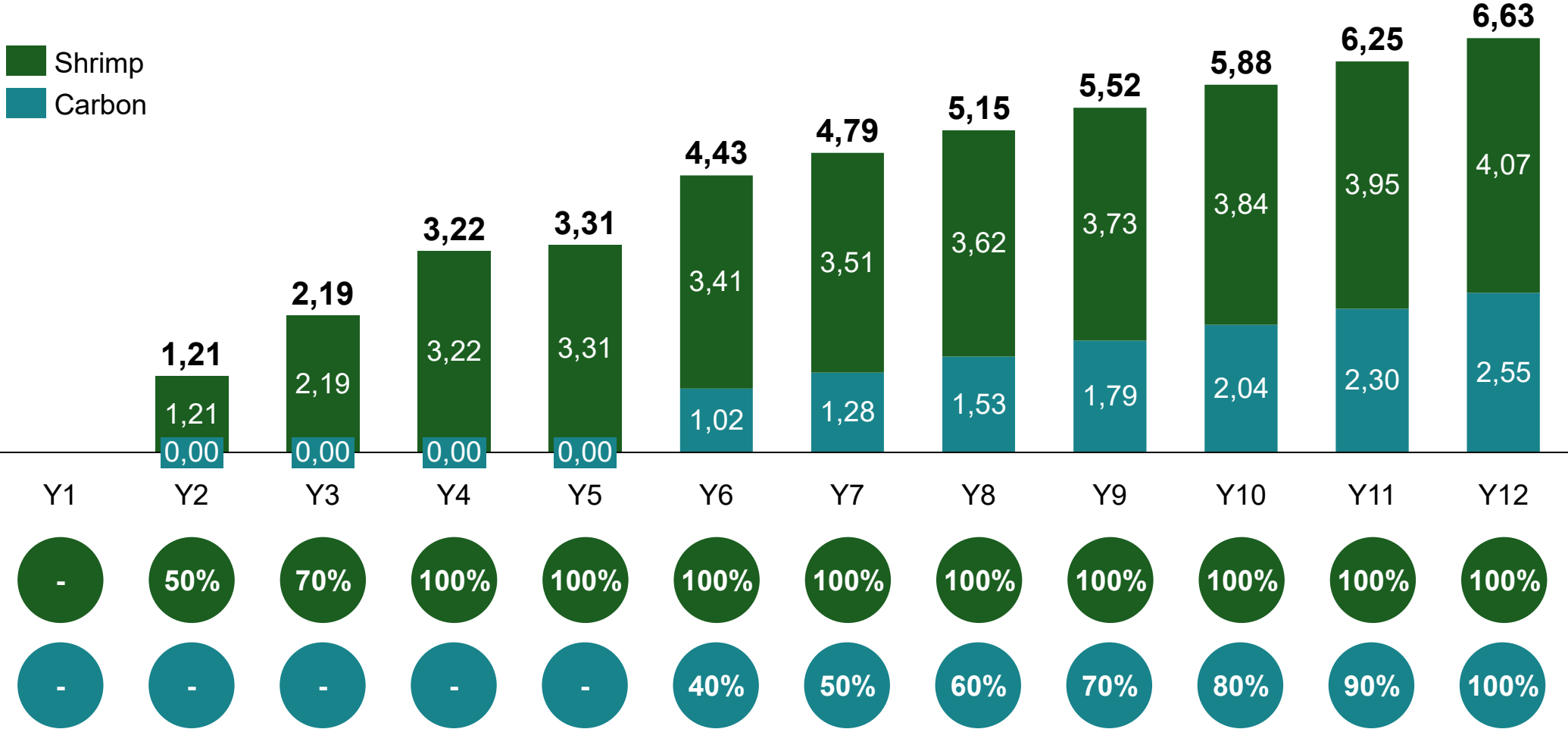
## AAA Fund Cash Position

(in USD mn, 30 years)



# Revenue ramps in two phases: shrimp fully scaled by Y4, carbon credits issued from Y6 and fully ramped by Y12

**AAA Fund's Revenue**  
(in USD mn, Y1 – Y12)



Notes: 1. % of full shrimp harvest capacity achieved each year; 2. % of full carbon credit issuance capacity achieved each year



# Sensitivity analysis on core revenue drivers confirms the robustness of the financial model

## Four sensitivity scenarios

### 1 Shrimp yield

Scenario	Change (in %)	Revenue (in USD mn)
Downside 20%	-14%	263.91
Downside 10%	-7%	285.87
Base case	0	307.82
Upside 10%	7%	329.78
Upside 20%	14%	351.73

### 2 Shrimp price

Scenario	Change (in %)	Revenue (in USD mn)
Downside 25%	-18%	252.94
Downside 5%	-4%	296.85
Base case	0	307.82
Upside 5%	4%	318.8
Upside 25%	18%	362.71

### 3 Carbon price

Scenario	Change (in %)	Revenue (in USD mn)
Downside 20%	-5.7%	290.17
Downside 10%	-3%	299
Base case	0	307.82
Upside 10%	3%	317.05
Upside 20%	5.7%	325.36

### 4 Farmer adoption

Scenario	Change (in %)	Revenue (in USD mn)
Downside 80%	-56%	132.27
Downside 50%	-35%	198
Base case	0	307.82



# Sukuk Investment Lens: AAA Fund delivers the highest yield relative to sovereign benchmarks

Investment Vehicle	Tenor / Lock-up	Target Return (p.a.)	Rate Structure	Liquidity Profile
<b>AAA Fund (Proposed)</b>	<b>10 Years</b>	<b>9.00%</b>	<b>Fixed (Target Hurdle)</b>	<b>Private / Patient Capital</b>
Govt. Savings Sukuk (ST)	2 - 4 Years	6.20% - 6.70%	Floating (with Floor)	Non-tradeable
Govt. Retail Sukuk (SR)	3 - 5 Years	6.00% - 6.50%	Fixed	Secondary Market Tradeable
Govt. Project Based Sukuk	5 - 10 Years	6.50% - 7.00%	Fixed	Tradeable (Institutional)

## MUHAMMADIYAH'S MISSION:

To empower communities and promote Islamic social justice through education, healthcare, and humanitarian relief

## AAA FUND IS FIT FOR MUHAMMADIYAH BECAUSE:

- **Enhanced Capacity:** Provides a 200 bps premium to amplify charitable spending and scale social services.
- **Strategic Asset-Liability Match:** 10-year term aligns with long-term infrastructure liabilities for hospitals and universities.
- **Community Legacy:** Direct impact and planned community handover ensure a permanent social legacy.
- **Maqashid Shariah Alignment:** Directly funds real-economy impact, driving holistic social change.



# How AAA Fund scales

## We scale through a three-step, repeatable adoption engine

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### 1. **Acquire (Trust):**

We onboard farmers through Muhammadiyah's local leaders, mosques, and cooperatives, leveraging existing trust networks to reduce friction and accelerate enrollment

### 2. **Convert (First Harvest Proof):**

We provide inputs, technical assistance, and guaranteed offtake to ensure farmers achieve a profitable first harvest within one cycle

### 3. **Scale (Social Proof Flywheel):**

Early successful farmers drive peer adoption, enabling expansion through word-of-mouth within existing cooperative networks

## This model is operationally repeatable at scale

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1. One cooperative serves 200–300 farmers

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2. One field officer supports 40–50 farmers

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3. One pilot region covers 7,500 hectares

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4. The model can be replicated across Indonesia, Southeast Asia, and the World

## Execution is clearly distributed across partners

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### 1. **Fund**

Provides capital and financial structuring

### 2. **Cooperatives**

Lead farmer onboarding and governance

### 3. **Technical partners**

Manage pond operations and disease control

### 4. **Offtakers**

Ensure guaranteed shrimp purchase

### 5. **Muhammadiyah**

Enables trust, access, and community mobilization



# At exit in year 30, cooperatives inherit a complete, debt-free, revenue-generating enterprise — not just a set of assets



## **Pond infrastructure & restoration assets**

All physical assets — ponds, pumps, aeration systems, mangrove-restored land, and supporting infrastructure — are transferred to the cooperative at zero cost, giving them a fully built, productive asset base worth tens of millions of USD.

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## **Shrimp offtake contracts (price floors)**

Long-term offtake agreements with buyers, including guaranteed price floors negotiated during the fund's tenure, are assigned to the cooperative — securing predictable revenue and buyer relationships from day one of self-operation.

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## **Carbon credit registration & MRV systems**

The fully certified carbon project — registry accounts, baseline studies, and Monitoring-Reporting-Verification (MRV) tooling — is handed over, enabling the cooperative to continue issuing and monetising credits as an ongoing revenue stream.

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## **Cooperative legal entity & governance docs**

A fully operational legal entity with bylaws, member agreements, decision-making frameworks, and regulatory permits is transferred — so the cooperative inherits a ready-to-run institution, not a shell requiring years of setup.

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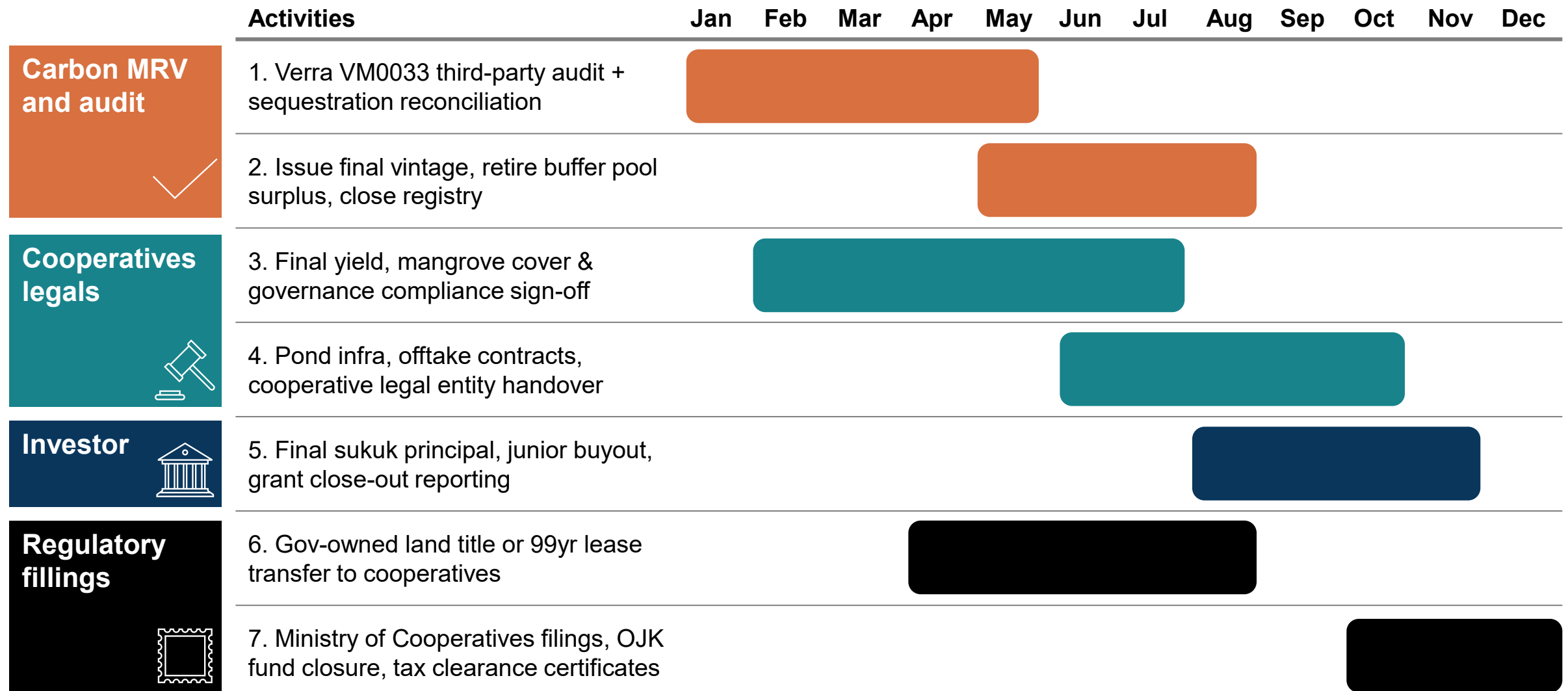


## **Surplus capital from operations**

Retained cash accumulated over the 30-year operating period, net of all debt service and distributions, is left on the balance sheet — providing working capital, reinvestment capacity, and a financial buffer against future shocks.

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# Year 30 exit follows a sequenced 12-month handover across four workstreams



# Contents

Indonesia's climate and mangrove efforts

Mangrove, aquaculture, and carbon market

Project, market, and structure overview

Success stories: Project Yagasu

Financial calculation details

**Impact thesis and measurement**

Risk mitigation



# Our ultimate goal is to break the current cycle and reduce the poverty trap happening in coastal communities

## Mission



*“To break the cycle of coastal poverty and environmental degradation in Indonesia by making mangrove restoration financially self-sustaining through community-owned aquaculture.”*

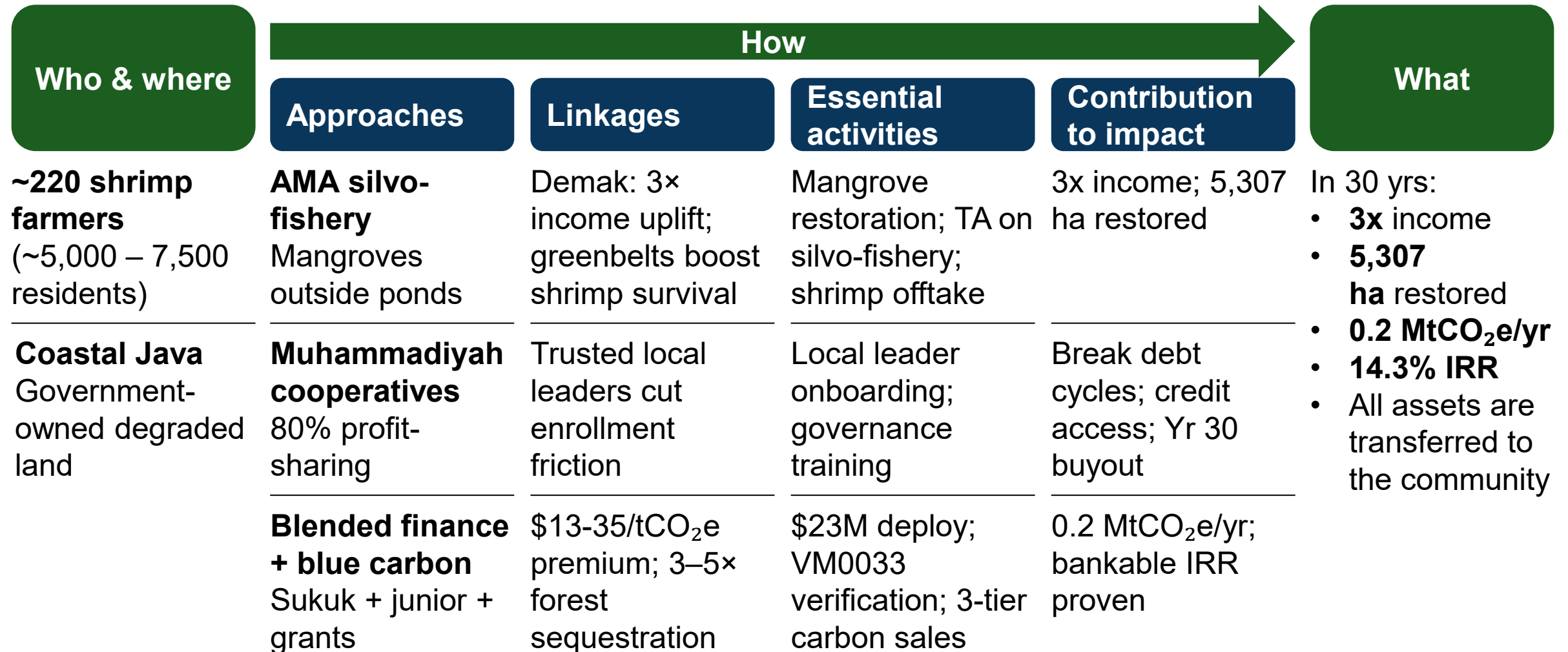
## Intended Impact




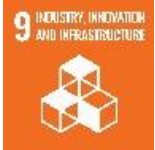


*“Over the next 10 years, 220 smallholder shrimp farmers across coastal Java, organized into Muhammadiyah-anchored cooperatives, will increase their household income by up to 3x, while restoring 5,307 hectares of degraded mangrove ecosystems and sequestering 0.2 MtCO<sub>2</sub>e annually — validated through Verra VCS certification.”*

# Through a dual reinforcing concept and a unique blended finance structure, we deliver real impact to beneficiaries

## AAA Fund's theory of change










# We have mapped our impact to the SDGs and our contribution to coastal communities

SDGs	What	Who	Our Contributions
	<p><b>2.3:</b> Increase of average income <b>by up to 54%</b> of small-scale food producers</p> <p><b>2.4:</b> Increase <b>2,274 Ha</b> 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.
	<p><b>9.3:</b> Increase <b>~220 of small-scale farmers</b> with a loan or line of credit</p>	Local shrimp farmers	Provide structured, risk-sharing finance and aggregation so smallholders who are currently unbankable can access affordable working capital.
	<p><b>13.1:</b> Absorb total GHG emissions by <b>up to 0.2 MtCO<sub>2</sub>e</b> annually</p> <p><b>13.3:</b> Educate <b>~5,000 – 7,500 residents</b> with silvofisheries practice and benefit</p>	Local coastal ecosystem	<p>Restore degraded ponds to mangroves, generating additional, verifiable long-term carbon storage.</p> <p>Provide understanding on silvofisheries, improvement of productivity yield, and climate impact of the practice</p>
	<p><b>14.2:</b> Restore <b>5,307 Ha</b> marine and coastal ecosystems</p>	Local coastal ecosystem	Improve water quality and habitat condition versus conventional ponds, strengthening coastal resilience to storms and erosion.




# Impact Calculations and Methodologies (1/4): Zero Hunger

Goals	Target	Indicator	Our impact	Methodology									
 <p><b>Zero Hunger</b></p>	<p><b>2.3:</b> By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.</p>	<p><b>2.3.2:</b> Average income of small-scale food producers, by sex and indigenous status</p>	<p>Increase of average income of small-scale food producers</p>	<p>Research shows that the potential profit increase of implementing mangrove<sup>1</sup>:</p> <table border="0"> <tr> <td><b>Before:</b></td> <td></td> <td><b>After:</b></td> </tr> <tr> <td><b>588</b></td> <td></td> <td><b>1,763</b></td> </tr> <tr> <td>USD/ha/year</td> <td></td> <td>USD/ha/year</td> </tr> </table> <p><b>3X income increase</b></p>	<b>Before:</b>		<b>After:</b>	<b>588</b>		<b>1,763</b>	USD/ha/year		USD/ha/year
	<b>Before:</b>		<b>After:</b>										
<b>588</b>		<b>1,763</b>											
USD/ha/year		USD/ha/year											
<p><b>2.4:</b> By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.</p>	<p><b>2.4.1:</b> Proportion of agricultural area under productive and sustainable agriculture</p>	<p>Increase of agricultural area under sustainable agriculture</p>	<p>Areas used for shrimp ponds business:</p> <table border="0"> <tr> <td><b>7,581</b></td> <td></td> <td><b>30%</b></td> </tr> <tr> <td>ha</td> <td></td> <td>Used for shrimp ponds</td> </tr> </table> <p><b>2,274 ha increase of agricultural area</b></p>	<b>7,581</b>		<b>30%</b>	ha		Used for shrimp ponds				
<b>7,581</b>		<b>30%</b>											
ha		Used for shrimp ponds											






Source: Sustainable Development Goals, United Nations

# Impact Calculations and Methodologies (2/4): Industry, Innovation, and Infrastructure



Goals	Target	Indicator	Our impact	Methodology
 <p><b>Industry, Innovation, and Infrastructure</b></p>	<p><b>9.3:</b> Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets</p>	<p><b>9.3.2:</b> Proportion of small-scale industries with a loan or line of credit</p>	<p>Increase of small-scale farmers with a loan or line of credit</p>	<p>On average, one farmer only manages 10 ha of a shrimp pond</p> <p><b>2,274</b> ha used for shrimp ponds <math>\div</math> <b>10</b> ha/farmer</p> <p><b>~220 farmers managed by this fund</b></p>



# Impact Calculations and Methodologies (3/4): Climate Action

Goals	Target	Indicator	Our impact	Methodology
 <p><b>Climate Action</b></p>	<p><b>13.2:</b> Integrate climate change measures into national policies, strategies and planning</p>	<p><b>13.2.2:</b> Total greenhouse gas emissions per year</p>	<p>Absorb total GHG emissions annually</p>	<p>Research shows that mangrove restoration can reduce GHG components per ha:</p> <p><b>5,037</b>  <b>38.5</b>                      ha used for mangrove tCO2e/ha/year reduction</p> <p><b>0.204 MtCO2e/year reduction</b></p>
	<p><b>13.3:</b> Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</p>	<p><b>13.3.1:</b> Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed</p>	<p>Educate residents with silvo-fisheries practice and benefit</p>	<p>We extrapolate from real mangrove programs by using an empirical “participants per hectare” ratio (0.7 – 1 participant/ha)</p> <p><b>7,581</b>  <b>0.7-1x</b>                      ha restored Participants/ha</p> <p><b>~5,306 – 7,581 residents educated with this practice</b></p>

# Impact Calculations and Methodologies (4/4): Life Below Water

Goals	Target	Indicator	Our impact	Methodology
 <b>Life Below Water</b>	<b>14.5:</b> By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	<b>14.5.1:</b> Coverage of protected areas in relation to marine areas	Restore marine and coastal ecosystems	Areas used for mangrove restoration <b>7,581</b> ha  <b>70%</b> Used for mangrove restoration <b>5,307 ha marine and coastal ecosystems restored</b>



# Contents

Indonesia's climate and mangrove efforts

Mangrove, aquaculture, and carbon market

Project, market, and structure overview

Success stories: Project Yagasu






Financial calculation details

Impact thesis and measurement

**Risk mitigation**





# Revenue shortfall and farmer lock-in are highest risks, mitigated by offtake and onboarding protocols (1/2)

Risk	Description	Mitigation Strategy	Severity	SDGs
<b>Revenue Shortfall</b>	Early-year yield underperformance can suppress farmer income and jeopardize repayment reliability.	<ul style="list-style-type: none"> <li>• Offtake agreements with price premiums</li> <li>• Productivity-first onboarding (hands-on support)</li> <li>• Shrimp-first economics (carbon as upside)</li> </ul>	<b>High</b>	
<b>Farmer Lock-In</b>	Entrenched debt relationships and low familiarity with silvofishery can slow farmer adoption and delay scale.	<ul style="list-style-type: none"> <li>• Partner with Muhammadiyah and cooperatives (trusted local institutions) for engagement and enrollment</li> <li>• Structured onboarding funnel with local nuances: Educate → Screen → Contract → Monitor → Intervene</li> <li>• Profit-sharing and guaranteed buyers → immediate incentives</li> </ul>	<b>High</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 as farmers only receive full benefits if mangrove cover is maintained</li> <li>• Quarterly field checks via cooperatives</li> </ul>	<b>Medium</b>	



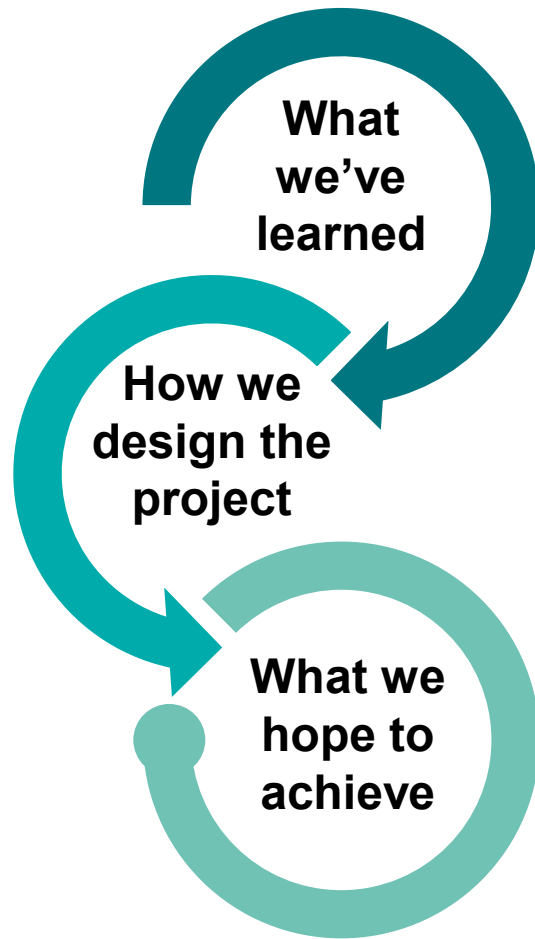
# Revenue shortfall and farmer lock-in are highest risks, mitigated by offtake and onboarding protocols (2/2)

Risk	Description	Mitigation Strategy	Severity	SDGs
<b>Operation</b>	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>	Medium	 
<b>Governance</b>	Cooperative operation non-compliance	<ul style="list-style-type: none"> <li>Enforce standard operating procedure, third-party audits, and performance-linked disbursement</li> </ul>	Medium	



# Designing around farmer realities — not institutional logic — drives adoption and unlocks scalable impact

## Human-centered design for better adoption engine



**Problem:** Top-down climate finance fails adoption — less than 2% of global climate funds reach smallholder farmers, as programs are designed around institutional logic, not farmer realities

**Insight:** Farmers optimize for cash flow, trust, and risk avoidance — they need tangible returns within one harvest cycle before committing to new practices

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### Design choices:

- **Immediate yield uplift** — productivity gains within 1 cycle via improved inputs & technical assistance
  - **Cooperative-based onboarding** — existing farmer groups as trusted entry points, lowering acquisition cost
  - **Faith-aligned capital** — sukuk endorsed by Muhammadiyah, unlocking trust in Indonesia's largest Islamic community
  - **Revenue sharing, not delayed payouts** — farmers earn each cycle, not years later via carbon credit monetization
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**Result:** Higher adoption → more hectares restored → scalable carbon + aquaculture returns  
Each converted farmer becomes a proof point that accelerates peer adoption, creating a self-reinforcing flywheel of restoration and revenue

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# Marketing materials on issues that matters to shrimp farmers

## Muhammadiyah Partnership



**MUHAMMADIYAH & MITRA LOKAL SIAP MEMBIMBING ANDA!**

**BERSAMA-SAMA MERAH KESEJAHTERAAN MELALUI KOPERASI RESTORASI MANGROVE!**

USTADZ & PENYULUH YANG PEDULI

BANTU DAFTAR & KELOLA KOPERASI

DAMPINGI KEGIATAN & PANTAU PROGRESS

**BERSAMA KITA MAJU, KITA SEJAHTERA!**

**KAMI SELALU SIAP MENDAMPINGI ANDA!**

- ✓ Pendampingan dan Pelatihan Langsung di Desa
- ✓ Bantuan Mengelola Usaha Tambak Mangrove
- ✓ Amanah, Transparan, Berdasarkan Musyawarah.

Hubungi Kami : (0819-2224-4566)

## Shrimp Yield



**TINGKATKAN HASIL UDANG ANDA!**

**GABUNG KOPERASI PETANI RESTORASI MANGROVE!**

- ✓ Hasil Tambak Naik Hingga 2x Lipat!
- ✓ Perbaiki Air dan Kualitas Tambak
- ✓ Pelatihan Budidaya Modern
- ✓ Harga Jual Lebih Tinggi

**GABUNG SEKARANG DAN TINGKATKAN PRODUKSI UDANG ANDA!**

**BAGAIMANA CARANYA?**

- 📞 Hubungi : AAA Fund
- 📍 Datang ke Balai Desa

## Cooperatives Involvement



**GABUNG BERSAMA KOPERASI PETANI**

**RAIH PENGHASILAN DARI MANGROVE!**

- BAGI HASIL USAHA**  
Penghasilan Tambahan
- PELATIHAN & BANTUAN**  
Dukungan Tehnologi
- JAGA ALAM KITA**  
CARBON CREDITS  
Lestarkan Mangrove




**BERSAMA KITA MAJU, KITA SEJAHTERA!**

**DAFTAR SEKARANG!**

- 📞 Hubungi : AAA Fund
- 📍 Datang ke Balai Desa

# We've structured AAA Fund so that shrimp revenues alone support investor returns under conservative assumptions

## Tranche-by-tranche risk and repayment map






Layer	Type	Role	Risk level	Paid by
<b>Senior debt</b> 	Institutional (DFIs, impact credit funds)	Main capital provider	Low	Shrimp cash flow
<b>Junior</b> 	Impact funds	Absorbs volatility	Medium	Shrimp and limited carbon
<b>Philanthropy</b> 	Grant	De-risk senior	High	Last in line

## Money flow waterfall



# Clean exit requires closing five post-exit gaps across MRV, sukuk, grants, land, and VCS registration

Fund structure: gaps & fixes for a clean exit

Structure	Gap	Fix
<b>MRV Financing</b> 	No post-exit reserve for Verra re-verification (\$50–150K needed)	Carve out 5% of surplus as ring-fenced MRV reserve at asset transfer
<b>Sukuk accountability</b> 	No mechanism for investors to re-engage if cooperatives collapse post-exit	Muhammadiyah retains a 3-year post-exit advisory role as governance legitimacy
<b>Grant layer</b> 	No intervention mechanism if cooperative fragmentation occurs	~\$500K stabilization escrow, released on cooperative KPI compliance
<b>Land tenure</b> 	No formal title or lease secured before asset transfer, especially for land	Legal workstream to formalize land title or long-term lease before exit
<b>VCS registration</b> 	20–30yr crediting period outlasts fund life; registration ownership unclear	Explicitly transfer VCS project registration to cooperative federation; agree with Verra in advance

