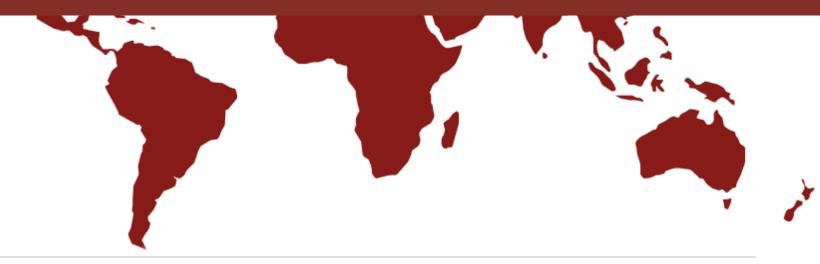


SEED PRACTITIONER LABS CLIMATE FINANCE

Prototyping financial products to drive climate-smart innovation

June – November 2018 | Bangkok, Thailand



SEED Practitioner Labs Climate Finance supported by:



SEED Practitioner Labs Climate Finance Contents











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SEED Practitioner Labs Climate Finance Facilitating Climate Finance Product Development



The 2018 SEED Practitioner Labs Climate Finance series in India, Thailand and Uganda brought together around 200 leading investors, banks, development finance institutions, foundations, governments, innovators and intermediaries to jointly prototype tangible solutions to major climate finance challenges.

Lab practitioners, facilitated by SEED Prototyping Tools, turned challenges into solutions as they designed and mobilised support for robust prototypes that innovate the next generation of climate finance products for their target markets.



From Kick-Off to Market:

Kick-Off Lab Co-create climate finance product prototypes	Product Refinement Refine prototype & mobilise resources (at group-level)	Transition Lab Incorporate feedback, roadmap scale-up & fortify partnerships	Deliver Climate-Smart Financing Bring products to market & drive change in sector
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Practitioner Lab Climate Finance Thailand Impressions









Practitioner Lab Climate Finance Thailand Bringing together stakeholders from over 40 organisations





- Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
 - 5

Practitioner Lab Climate Finance Thailand Developing innovative climate finance products





Turning challenges

Financing conservation projects

Supporting decentralised renewable energy uptake

Strengthening climateresilient agriculture through irrigation systems





Global Mangrove Trust – A Blockchain-Based 40 **Conservation Finance Initiative.** hosted by Global Mangrove Trust with KX



- Last of Ours A Blockchain-Based Conservation Fund, hosted by Last of Ours with KX
- **Blockchain for Automation of Carbon Credit** ල්ල්ල
 - Monitoring, Reporting and Verification,
- hosted by South Pole



Smart-Irrigation-as-a-Service Financing Vehicle, hosted by RCC UNFCC/IGES with UNDP





8 Last OF Ours









Federal Ministry

and Nuclear Safety

for the Environment, Nature Conservation

Global Mangrove Trust Product development hosted by Global Mangrove Trust with KX

Product synopsis

Offers is a digital platform based on the blockchain that enables households and businesses around the world to undertake direct, transparent and efficient support for community-based mangrove forest projects. The Global Mangrove Trust:

Provides a peer-to-peer-platform for global philanthropists

Utilizes the blockchain to unlock resources for mangrove conservation



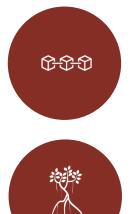






Global Mangrove Trust Innovative Characteristics





Enables radial transparency & efficiency through the blockchain

- Transfer occurs immediately, at near zero cost
- Public Ledger gives everyone access to information
- Impact to carbon, biodiversity and livelihoods is measured and verified by combining mobile-based and satellite technologies

Makes sustainability impact tangible via geo-intelligent tokens

- GRO-Coin and Planter Tokens linked to specific parcels of mangrove forest
- Tracing impact sponsored by individual coin-holdings, allowing to offset individual carbon footprints



Empowers social premiums and makes eco heroism fun through gamified philanthropy

- Collective experience as peer-to-peer philanthropists
- Global community supporting eco heroism

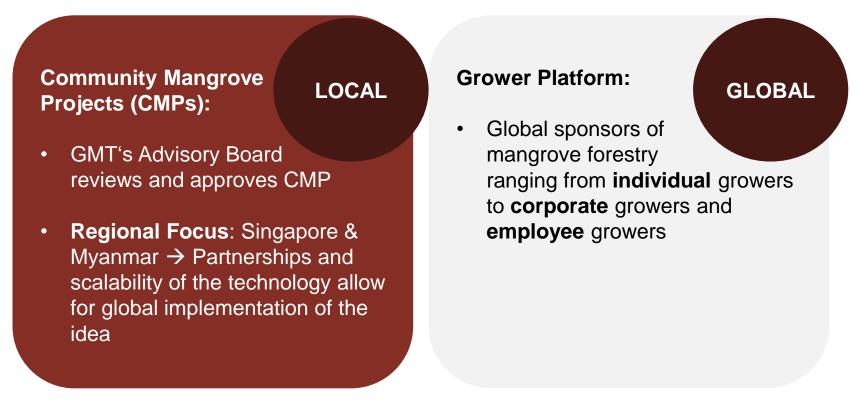




Global Mangrove Trust Target Market



The Global Mangrove Trust connects global supporters of mangrove forestry with local community-scale mangrove projects.







Global Mangrove Trust Impact Potential



Enable effective climate change mitigation through mangrove forestry Enhance coastal resilience through mangrove forestry

supports the ecosystem and catalyses local sustainable development

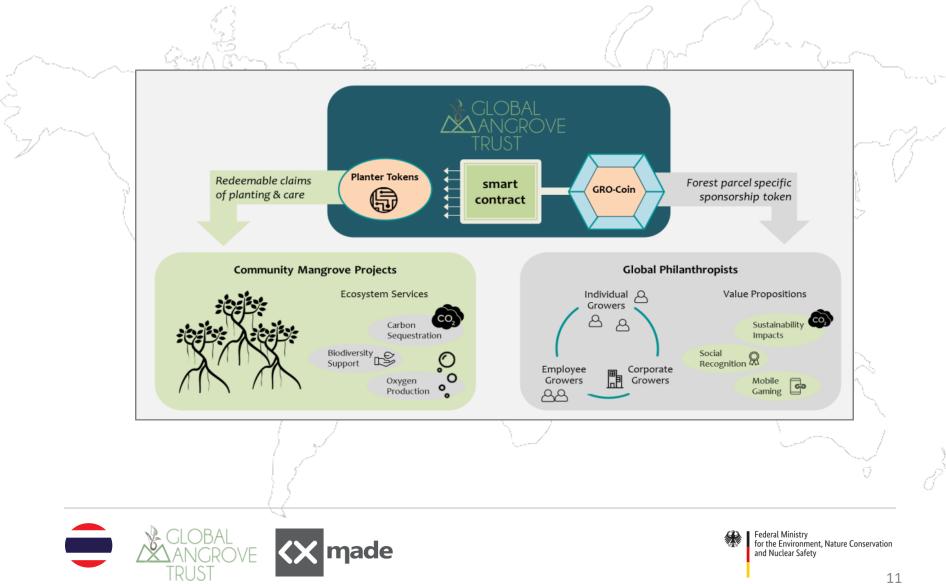
- Carbon sequestration: 1 ton CO² per tree (over 25 years) and up to 5 times more CO² than terrestrial trees
- Financial support to community-scale mangrove forestry that is not able to access global carbon markets
- Buffer terrestrial environments against natural disasters and sea level rise
- Support vulnerable coastal communities

- 10x increase in biodiversity and interconnecting wildlife corridors
- Food security through 50% boosts to fish stocks
- Secondary markets and livelihoods



Global Mangrove Trust Utilizing the blockchain to direct funds to mangrove conservation





Last of Ours Product development hosted by Last of Ours with KX



Product synopsis

Offers a platform for wildlife conservation initiatives to raise awareness and fund their projects. Last of Ours:

brings people together to protect our planet's endangered species & habitats

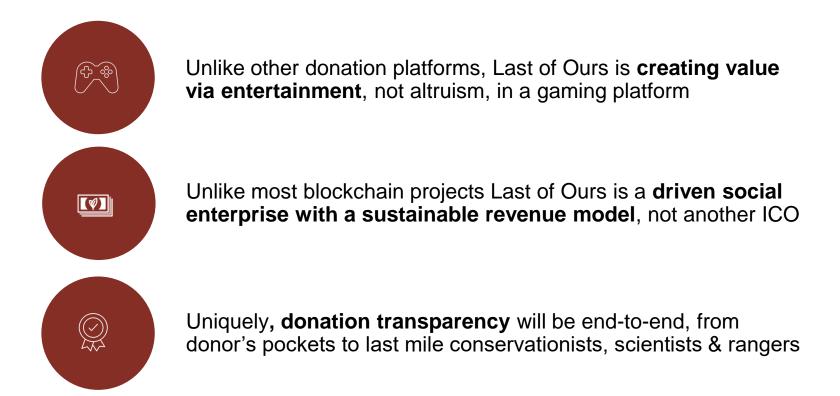
creates a shared value between social entertainment & realworld impact





Last of Ours Innovative Characteristics



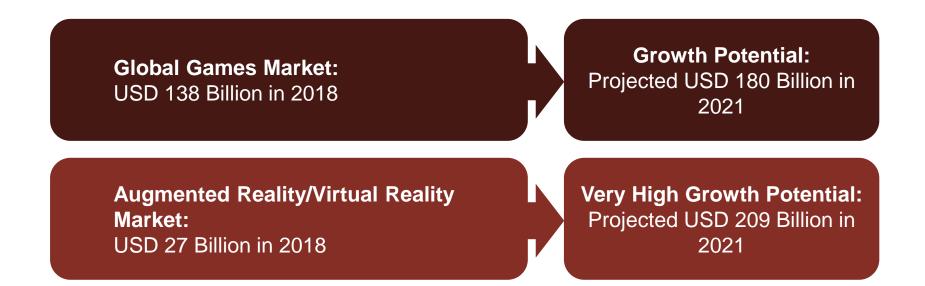




Last of Ours Target Market



Last of Ours revolutionizes access to donations for wildlife conservation by tapping into the high-growth market of augmented and virtual reality.





Last of Ours Impact Potential



The Last of Ours platform will increase and accelerate the access to donations for non-profits helping to protect the planet's endangered species and natural zones.

Reduce Time To Money

Raise Awareness & Funds for Wildlife Conservation

- Non-profits can raise funds
- Communicate their needs
- Get feedback from international experts

Non-profits don't
 have to write long
 proposals

- Donations reach nonprofits faster
- Automating processes through the use of smart contracts

Blockchain paves the way for a transparent record of money going in and out of an non-profit

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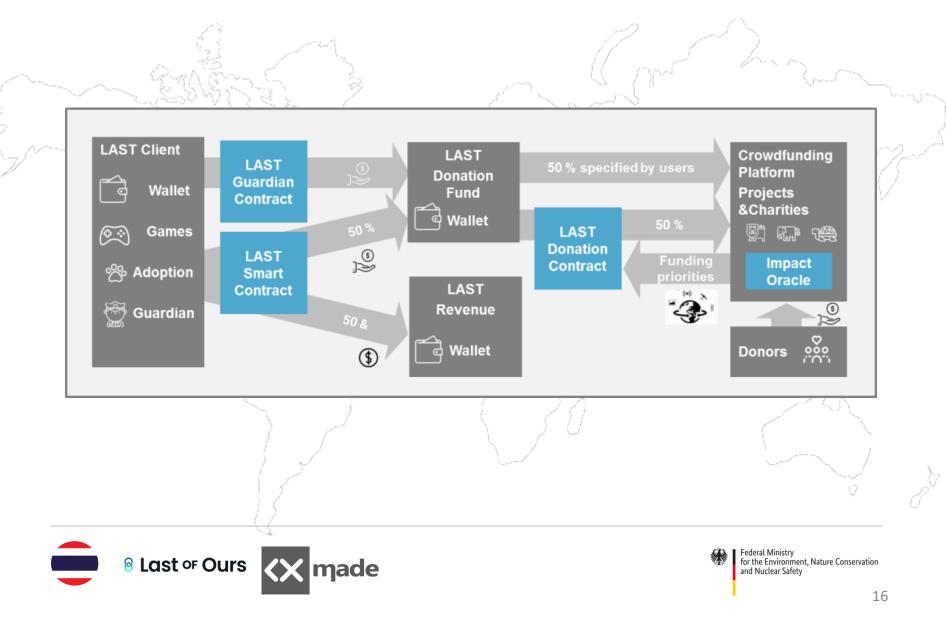
Improve Transparency

- Reduced
 transaction costs
 through
 disintermediation
- Impact reporting via
 the platform



Last of Ours

Utilizing the blockchain to crowdfund donations for wildlife conservationSEED



Blockchain for Automation of Carbon Credit MRV Product development hosted by South Pole



Product synopsis

Offers an application on the IXO impact blockchain that seeks to streamline and accelerate the data verification processes for generating, certifying and trading carbon credits. The project:

uses the blockchain to reduce MRV costs

enables automated issuance of carbon credits





Blockchain for Automation of Carbon Credit MRV Innovative Characteristics



Using the blockchain to integrate verification into monitoring and reporting allows to:



Reduce monitoring, reporting and verification (MRV) costs

- Potential to reduce MRV costs 10x in comparison to conventional practices
- Scalability of climate-change mitigation projects on a project, entity, sector and national level

Maximise efficiency of carbon credit issuance

- Enables real-time tracking and attribution of greenhouse gas inventories
- Allows for automated issuance of carbon credits



Provide transparency, trust and credibility

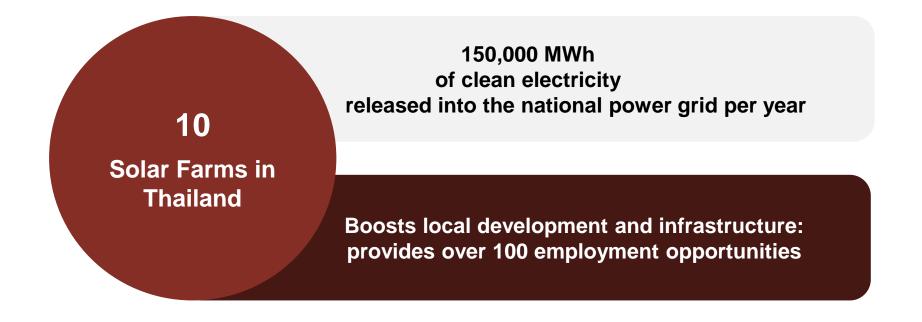
- Transparent data management and storage through the decentralized approach of the blockchain
- Registration under the Gold Standard, the benchmark standard for climate and development projects adding further credibility



Blockchain for Automation of Carbon Credit MRV Target Market of Pilot Project



The pilot project has the aim to auto-verify data and make the resulting impact tangible at the moment it is physically achieved. The project has been selected as one of **Asia's top 10 blockchain projects**.





Blockchain for Automation of Carbon Credit MRV Impact Potential



The *Blockchain for Automation of Carbon Credit MRV* paves the way for large-scale climate change mitigation impact.

Pushes climate change mitigation	>	Realizes climate mitigation impacts	Promotes local sustainable development
Scaling of climate change mitigation projects that would otherwise not be able to register for carbon credit Increasing relevance of cash flows that are linked to verified mitigation outcomes		Reduces carbon emissions Provides clean energy Protects forests attributes, monetizes attributes, monetizes and makes impacts tangible the moment that their are physically achieved	 Improves local infrastructure and financial transactions in the area Alleviates poverty & provides job opportunities
within the climate finance community in general	→	helps impact investors to derive financial value from impact creation	



Blockchain for Automation of Carbon Credit MRV Boosting the potential of the carbon market SEED Verification integrated Gold into Standard monitoring & Registry **Pilot Project:** Buyer reporting Network Solar PV in Thailand С Carbon Revenue (from 24 to 3 month)



Smart-Irrigation-as-a-Service Financing Vehicle Product development hosted by RCC UNFCCC/IGES with UNDP



Product synopsis

Directs deal flow to climate-smart irrigation systems to improve productivity and climate adaptation capacities of small-scale agribusinesses. The vehicle:

provides microfinance alongside technical assistance

aggregates small-holder farmers at the village level







Smart-Irrigation-as-a-Service Financing Vehicle Innovative Characteristics





Offers an all-in-one solution for small-scale agribusinesses

- Provides a package of both microfinance & technical assistance for smallholder agribusinesses and village cooperatives
- Concessional funding and blended financing minimizes the financing risk

Provides smart-irrigation as a service for small-holder farmers

- Offers smart-irrigation technology as a service as you go
- Overcomes the challenge to buy investment-heavy equipment upfront
- Bundles climate-smart agriculture solutions with increased productivity and well-being

Aggregates small-holder farmers at the village level

- Provide finance solutions to farmer organisations at the village level
- Allows for a high impact potential through large-level schemes





Smart-Irrigation-as-a-Service Financing Vehicle Target Market



The Smart-Irrigation-as-a-Service Financing Vehicle will connect small-scale agribusinesses with microfinance institutions and irrigation technology providers.



Small-Scale Agribusinesses: Aggregated at village level to reach the minimum size to implement a dripirrigation system (~ 500 hectares) **Regional Focus:** Cambodia, Myanmar, Thailand



10 Microfinance Institutions: financed by a Capital Market SPV and supported with technical assistance by technology providers

Capital Market Special Purpose Vehicle (SPV):

Raise up to 100 Million USD



Irrigation Technology Providers: offering climate-smart irrigation technologies **Technical Assistance:**

Provided for MFIs and agribusinesses going climatesmart





Smart-Irrigation-as-a-Service Financing Vehicle Impact Potential



The Smart-Irrigation-as-a-Service Financing Vehicle will leverage partnerships on the two levels of microfinance institutions and smart-irrigation technology providers to boost climate-smart impact.

Facilitates finance provision towards small-holder farmers going climate-smart

- Bridges the gap for small-holders to access climate-smart agriculture technologies and finance
- Pay-as-you-go mechanism mitigates the need for highupfront investment for small-holder farmers
- **SPV umbrella** provides liquidity for financing institutions wishing to participate in scheme

Increased resilience & climate change mitigation

• Facilitate adoption of climate-smart technologies, moving away from flood irrigation

- Smart land use,wateruse efficiency and crop diversification
- Higher quality of products with increased commercialisation potential especially for exports
- Knowledge transfer between technology providers, MFIs and small-holder farmers towards product and financial scheme adaptation

Technical Assistance for

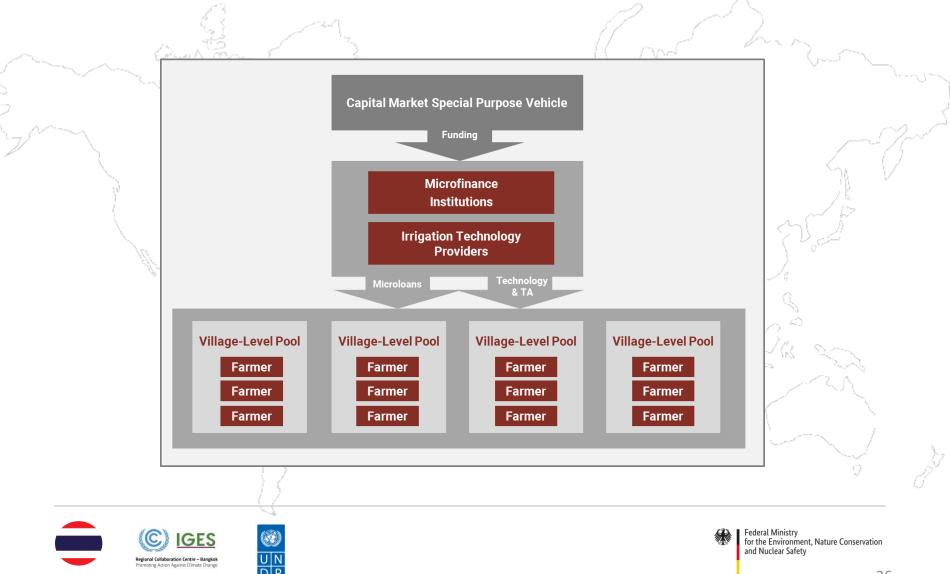
MFIs and small-holders



U N D P

Smart-Irrigation-as-a-Service Financing Vehicle for climate-resilient agriculture









SEED was founded at the 2002 World Summit on Sustainable Development in Johannesburg by UN Environment, UNDP and IUCN as a global partnership for action on sustainable development and the green economy. SEED is based on the understanding that the promotion of social and environmental entrepreneurship is pivotal for environmentally friendly and socially inclusive development and poverty reduction.

We work directly with growing enterprises and aspiring entrepreneurs in our Enterprise Support programmes to strategise, optimise and award achievements in eco-inclusive entrepreneurship. All our participating enterprises receive a comprehensive SEED Support Package of tailored business and capacity-building support, networking, and profiling at the national and international level.

Complimentary to our direct Enterprise Support programmes, we offer programmes to build an ecosystem of supporters and advocators necessary to the success of growing enterprises. Our Ecosystem Building activities fortify a global network of local business development services providers and offer platforms for coordination between key local, national and international stakeholders around eco-inclusive entrepreneurship.

SEED is hosted by adelphi research gGmbH, a non-profit institution committed to sustainable development and entrepreneurship, based in Germany. Partners in SEED, in addition to the Founding Partners, are the governments of Germany and Flanders, the European Union; the governments of South Africa, the Netherlands, India, and the United States of America; Conservation International; UN Women, UNIDO and Hogan Lovells.







SEED PRACTITIONER LABS CLIMATE FINANCE

Prototyping financial products to drive climate-smart innovation

SEED Practitioner Labs Climate Finance are part of the implementation of "Financing and capacity building for micro and small climate-smart enterprises: Filling the gap of the missing middle", a project supported by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety.



Contact: SEED c/o adelphi research gGmbH | Alt-Moabit 91 | 10559 Berlin, Germany | info@seed.uno | www.seed.uno

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