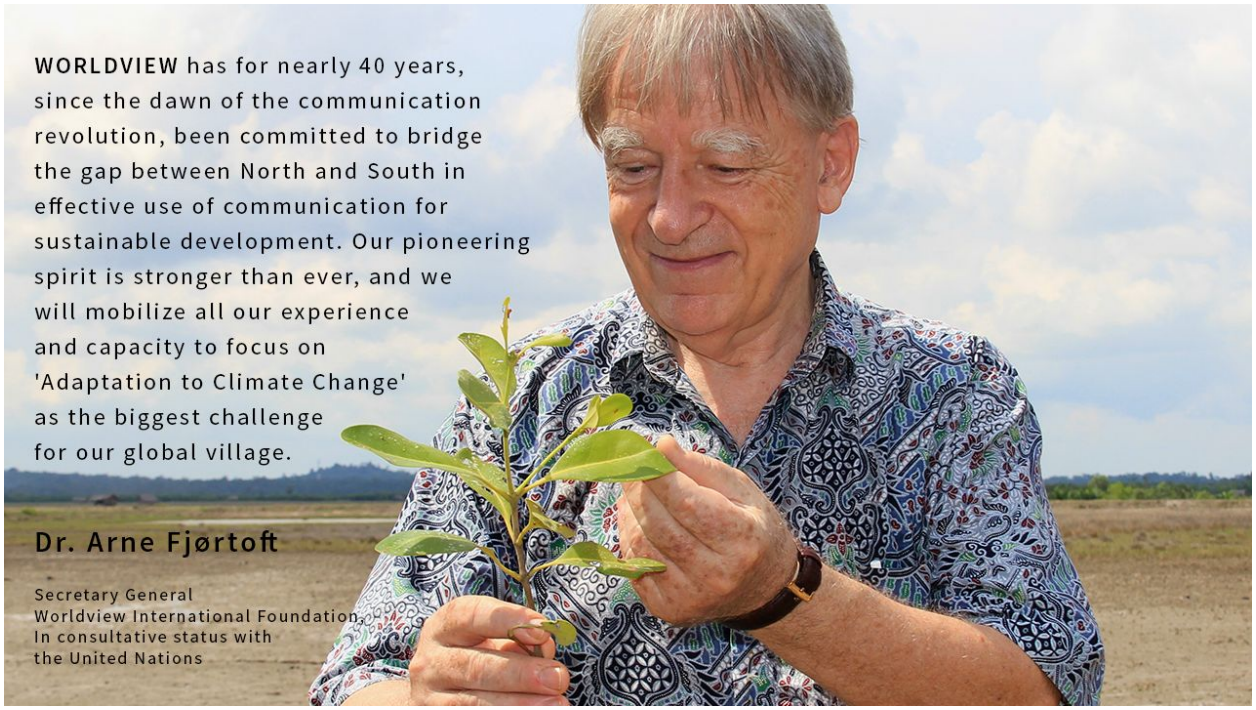
Heyerdahl Climate Pioneers (HCP) Private Placement
Blue Carbon Forestry Credits on Lykke Exchange

Overview

The health of our planet's ecosystems teeters precariously as mankind continues to emit more and more greenhouse gases into the atmosphere. In just three decades we've lost half the world's coral reefs, and if atmospheric CO2 levels exceed 450 ppm coral reefs will disappear.[1] A root cause of our escalating global ecological crisis is the failure to assign a monetary value to natural capital, which consists of the ecosystems that nurture life on earth. This is a solvable problem if we act decisively before irreversible tipping points are crossed.

You can be a part of the solution. WIF International Foundation (WIF) will be planting 8 million mangrove trees in Myanmar. Mangroves sequester CO2 at up to 5 times the rate of dry forest, provide critical habitat for birds and aquatic species, and protect coastal areas from storms, flooding and erosion. For $1 you can own carbon rights for a mangrove tree, with 50% of net proceeds from carbon credit sales allocated to support local communities in Myanmar and incentivize them to be good stewards of the mangrove forest. Each mangrove is expected to sequester 1 tonne of CO2 over 20 years, and carbon credits for this project are expected to sell for $10 per tonne or more.



Dr. Arne Fjortoft is a global pioneer in mangrove restoration and sustainable development

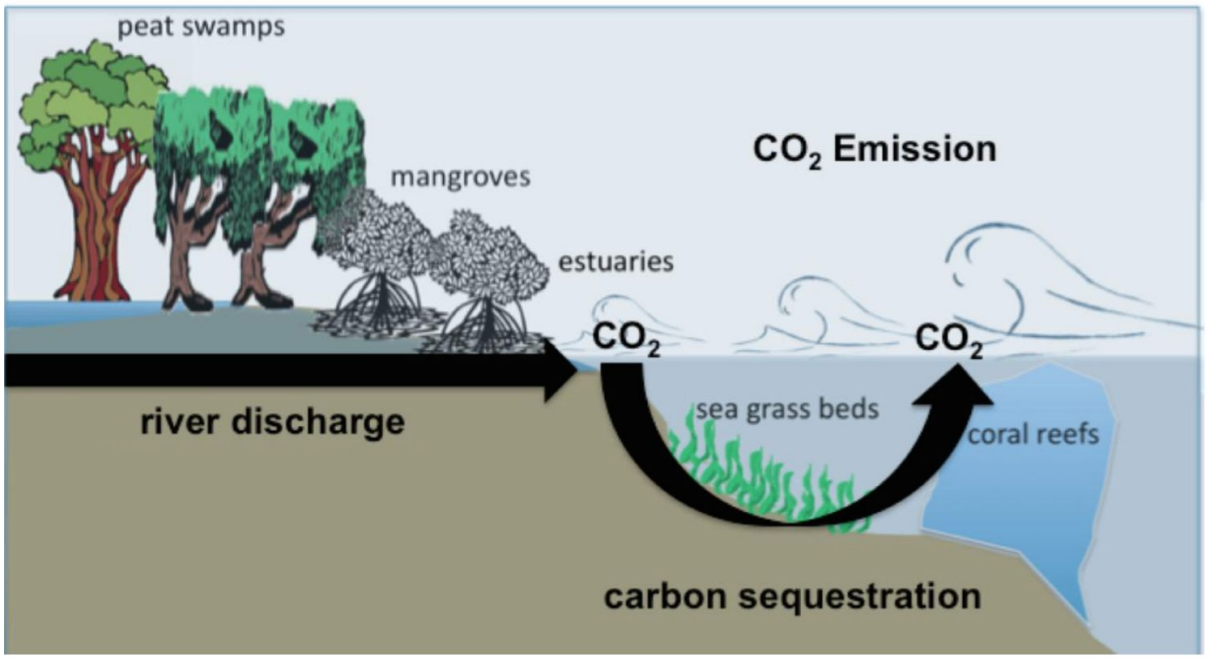
[1] Is there a threshold above which coral-dominated ecosystems will disappear?

The Challenge

Deforestation is the world's biggest source of carbon emission: "It is estimated that halting forest destruction would save the same amount of carbon over the next century as stopping all fossil-fuel emissions for ten years." Dr Sylvia Earle, The World Is Blue: How Our Fate and the Ocean's Are One

Most importantly, **the destruction of global coastal habitats at up to 2% per year[2] puts at risk the world's most important carbon sequestration engine: Blue Carbon**, which is responsible for 83% of global sequestration.

Figure 1. Miracle mangroves play a vital role in Blue Carbon sequestration



We need to urgently address the question of 'blue' carbon. The most crucial, climate-combating coastal ecosystems cover less than 0.5% of the sea bed, but they are disappearing faster than anything on land and much may be lost in a couple of decades. These areas, covering features such as mangroves, salt marshes and seagrasses, are responsible for capturing and storing up to some 70% of the carbon permanently stored in the marine realm. - Achim Steiner, UN Under-Secretary General[3]

"**Mangroves may be one of nature's best defenses against a changing climate**"reads WWF's recent Winter 2016 issue. And yet despite their vital role, more than half of global mangroves

[2] Green Payments for Blue Carbon Economic Incentives for Protecting Threatened Coastal Habitats Duke University Nicholas Institute, April 2011

[3] BLUE CARBON THE ROLE OF HEALTHY OCEANS IN BINDING CARBON, UNEP

have been destroyed in the last 35 years, with deforestation rates three times that of rainforests. **Mangroves are now at a critical depletion rate** and at risk of extinction: "approximately 100% of mangroves could be gone in the next century."[4] To prevent a cascading failure of coastal habitats and Blue Carbon sequestration, we must act now to restore and protect remaining mangrove habitats.

The Opportunity

Nature is the Real Gold: Mangrove Trees & "Blue Carbon" Credits

- **Oceanic "Blue Carbon" is responsible for 83% of global carbon sequestration**, with over 50% depending on coastal wetlands representing less than 0.5% of sea floor.
- **Mangroves are vital to Blue Carbon sequestration**, acting as a bio-filter to keep sea grasses and coral reefs healthy.
- **Mangroves are nature's frontline defence against climate change,** protecting coastal areas from storms, flooding, and soil erosion, and sequestering CO2 at up to 5 times the rate of dry forest.
- **Demand for premium "Blue Carbon" forestry credits** is growing with broader awareness of community and ecological co-benefits.

Amazingly, 70% of Blue Carbon sequestration is concentrated in shorelines, where mangrove forests play a critical role. Mangroves are a biodiversity nursery, and over 70 species of

[4] "Estimating Global "Blue Carbon" Emissions from Conversion and Degradation of Vegetated Coastal Ecosystems"

mangroves grow on two-thirds of the world's tropical shorelines. They are a critical link to Blue Carbon sequestration by filtering sediment that would smother seagrasses and coral reefs.

WIF has pioneered mangrove restoration research in Myanmar since 2012, in close cooperation with the Myanmar government, forestry department, Pathein and Myeik universities, and local communities. WIF established the world's first gene bank for mangroves, with 64 species including endangered species on IUCN red list. A three year research report summarizing findings is available, and the project has been endorsed by prominent world leaders. Swedish Minister of Foreign Affairs Margot Wallstrom has just indicated that she will plan a second visit to Thor Heyerdahl Climate Park and WIF will organize a series of meetings with her in Thailand and Myanmar focused on accelerating mangrove restoration throughout the region.

WIF plants mangroves for about $1 per tree (including funds for community development) and estimates that each mangrove sequesters over one tonne of carbon dioxide during 20 years of growth.[5] A 2014 landmark study[6] showed that each tonne of carbon offset may deliver up to $664 in economic, social and environmental benefits. In Myanmar's coastal communities, mangroves are a foundation for economic livelihood and food security. "Mangrove forests are the vital foundation for a complex marine food web, sustaining not only fisheries but many forms of bird and other wildlife. In Myanmar it is estimated that 75% of the game fish and 90% of the commercial species in certain areas rely on mangrove systems."[7] Crucially, mangrove forests act as a bio-shield to protect properties and lives from storms, floods, and soil erosion, and enable rice cultivation and other farming activities inland.

The Offering

Heyerdahl Climate Pioneers (HCP) is a digital token issued by WIF International Foundation (WIF) which represents a living mangrove tree in Thor Heyerdahl Climate Park. HCP entitles the owner to carbon credit rights, with 50% of proceeds from Verified Carbon Unit (VCU) sales shared with local communities. The initial offering of 500,000 HCP represents 20% of 2.5 million trees in healthy growth planted between 2015-2016. [8] A buffer of trees is used to replace trees which die. The health of mangrove forests is monitored by WIF foresters on site, with plans for live precision satellite monitoring with Global Forest Watch.

WIF has engaged one of the world's top forestry auditors (RINA Services) to conduct the Verified Carbon Standard (VCS) validation. The initial plan is to restore 8 million mangroves on

[5] Thor Heyerdahl Climate Park: In the FRONTLINE for Sustainable Development 2016
[6] Unlocking the Hidden Value of Offsetting, ICROA 2014
[7] Regrowing Forests Of The Tide Myanmar
[8] representing mangroves on 156 ha at a density of 3200 per ha, with expected CO2 accrual of 3500 tonnes per ha over 20 years.

2600 ha by 2020. Combined with protection of 1600 ha of sea grasses, WIF expects to generate over 700,000 tonnes of VCUs per year. Think of a mangrove as a goose that lays golden eggs, which are the VCUs. Every year, auditors monitor forest growth by precision satellite imagery, and VCUs are registered in an independently audited carbon credit registry by serial number and vintage year. VCUs can then be sold to organizations with their own carbon credit registry, or listed on Lykke Exchange as a digital token. VCUs never expire, but there is the option to "retire" them for companies who have pledged to be Carbon Neutral (e.g., leading global brands like Google, Microsoft, Puma, Adidas, IKEA, Allianz, PWC).

HCP will be available for purchase by invitation for $1 per tree on February 8, 2017. 100% of cash raised will be allocated to WIF as issuer. A minimum of 10% cash and 10% HCP will be held by Lykke Exchange as a liquidity buffer, and Lykke will share market making revenues with WIF. Lykke earns a 5% underwriting fee paid in trees, and will award these to Lykke Wallet holders as prizes. A secondary offering of 1 million HCP is planned at higher prices.

Community development is key to success

Sadly, many mangrove restoration projects fail. Without protection, most mangrove seedlings die within the first 2 years, and survivors are often cut down for charcoal after 6 years. WIF is successful by integrating state of the art mangrove restoration with community development. Half of Blue Carbon credit sales are allocated to community development. Mangroves will only survive if they protected, and are worth more alive than dead. WIF provides employment, education, healthcare, telecommunications, solar energy and lighting as part of the mangrove restoration project.

WIF's integrated development approach addresses virtually all of the 17 UN Sustainable Development Goals (SDGs). For example, the project aims to create "high value-added livelihood opportunities to disadvantaged coastal communities by reducing poverty – especially among women – by raising orchids, collecting Nypa palm sap and bee honey, and providing other new sources of revenue."(Mission-Blue) WIF established a gene bank for endangered mangrove species and wild orchids. An endangered orchid nursery produces orchids for exports, with one orchid re-planted in the wild for every orchid sold.

Fresh 700,000 mangrove seedlings from 2016 (left), and a few juvenile mangroves (right).

A Net Positive Tree-volution

Dr. Arne Fjortoft's inspiring leadership has brought together an incredible talent pool to make HCP a global movement. Svein Rasmussen, windsurf world champion legend and Starboard founder was the first pioneer sponsor of Heyerdahl Climate Park by planting a mangrove for every surfboard. Each board has a carbon footprint of 120kg, so planting one tree per board makes the company Net Positive. Feedback from clients has been overwhelmingly positive. People ask to buy more trees and some have even volunteered to plant at Thor Heyerdahl Climate Park. And for every 100 clicks in the banner below Starboard will sponsor a mangrove.

Having sponsored 81,500 trees, Starboard has committed to buying 1 million trees from WIF.

Starboard recently announced a partnership to make one of the world's leading watersports events Carbon Neutral. Svein has also led discussions with Matthias Neumann, CEO of Act GMBH, one of Germany's leading PR agencies and watersports organizers. As an advisor to many top brands, Matthias is building a platform to advise brands to make a *Net Positive pledge* to become sustainable. Inspired by Starboard, the plan is to embed sponsorship of trees in

business activities. He has received positive feedback from one of Germany's largest retailers for using HCP in their loyalty award program, and discussions are planned with three other leading European brands. Another idea is to give out HCP as prizes at major watersports events. The first focus is Sylt Windsurf World Cup which draws over 250,000 visitors and top sponsors.

Starboard is an amazing brand ambassador, with world leading SUP, windsurf and kitesurf athletes who are Key Opinion Leaders (KOLs) for millennials. 2016 Female Kitesurfing World Champion Bruna Kajiya was so inspired by Dr. Arne Fjortoft that she asked to be a spokesperson for Thor Heyerdahl Climate Park. Starboard will award some of their own top riders in trees.

Inspired by Lykke CEO Dr. Richard Olsen's Small World Effect TEDx talk, our idea is to **create a grassroots movement with a message so compelling that it will be passed from friend to friend**. Lykke has committed to sponsor one mangrove for every Lykke Wallet. As Richard announced at the Lykke 2016 Montenegro offsite: "Let's plant a million mangroves in 2017."

Every organization and individual can participate, one tree at a time. One tree per week makes anyone net positive. With 5000 mangroves, WIF will issue a "*Net Positive for Life"* certificate… with will be valid as long as you don't live over 100 years old! You will have breathed life into one of the most vital biodiversity nurseries in the world, a home for many species of birds, insects, fish and crustaceans. Mangroves are an investment in life, and broader realization of its benefits and business sponsorships could make this a top performing natural capital asset.

"Mangroves are natural carbon-scrubbers, taking CO2 out of the atmosphere and packing it away, for millennia or more, in their rich soils. ***So if you had a dollar to invest in carbon futures, my strongest advice of all would be to invest in preventing mangrove loss, or even restoration*****."** Science: Mangrove Forests as Incredible Carbon Stores, The Nature Conservancy

Forestry carbon credit market overview

The target market for HCP is leading brands who are serious about sustainability. This includes the growing list of leaders who made a voluntary pledge to be Carbon Neutral (e.g., Google, Microsoft, Adidas, Puma, PWC). The latest research by CDP shows an increasing trend of multinationals implementing carbon pricing. "Internal carbon pricing is moving from theory to practice with take up at more than 1,200 companies, a 23% increase year on year, with close to 150 embedding a carbon price deep into their corporate strategy." A number of leading companies like Microsoft have published their internal carbon pricing methodologies and price levels (e.g., Google's internal carbon price @$14 per tonne, while Disney uses a $10-$20 range, and Exxon uses a $60-$80 range).

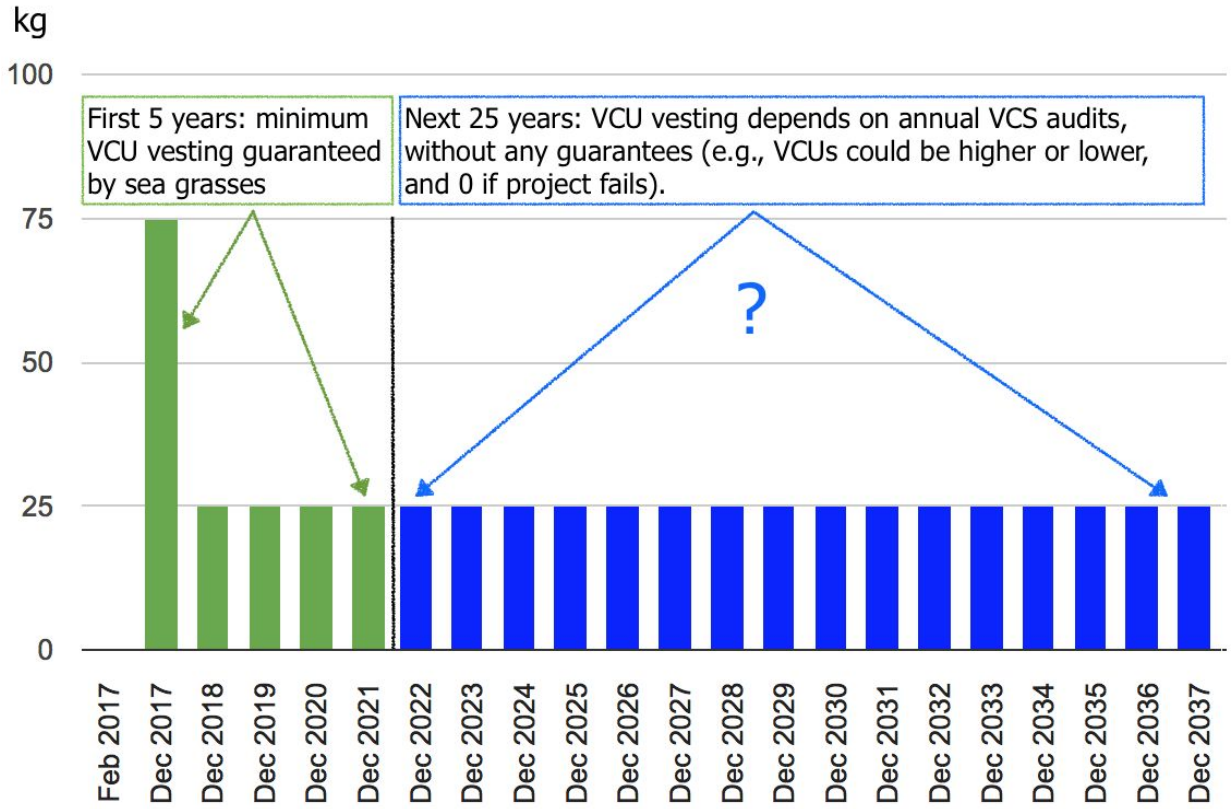
Given the vital importance of mangroves and many co-benefits, **Heyerdahl Blue Carbon VCUs should sell significantly above the average price for *tree planting* credits** of $7.5 per tonne in 2015.[9] Not all VCUs are created equal, with prices last year ranging from less than $1 to over $40 depending on the quality of the project and volume purchased. For every Blue Carbon purchased from Thor Heyerdahl Climate Park, there is a multiplier biodiversity and community impact (e.g., boosting fish stocks, sustainable honey and Nypa palm harvesting, jobs and

[9] See www.forest-trends.org. A forestry expert at Fauna & Flora International estimates that the average cost of producing their forestry credits is $10.

poverty reduction). The retail price of Heyerdahl Blue Carbon VCUs will likely start at $20 per tonne, with institutional bulk purchases expected at $10-15 per tonne.

WIF's first VCUs are expected in December 2017. WIF estimates that each mangrove will yield 1 tonne of VCUs in 20 years, which implies 50kg per tree per annum (with 50% of net proceeds allocated to local community). To reduce uncertainty, WIF guarantees minimum VCU vesting of 175kg allocated to HCP holders for the first 5 years: 75kg with first VCS vesting (expected in Dec 2017), and 25kg per annum for the next 4 years. VCUs allocated to HCP holders will be issued as Heyerdahl Blue Carbon (HBC) digital tokens on Lykke Exchange. If VCS validation is below expectations, WIF will apply VCUs from sea grasses to compensate HCP holders. After 5 years (and a second VCS validation), VCU vesting will be based per average mangrove, which could be higher or lower than the current expectation, as illustrated in Figure 2 below.

Figure 2. Annual vesting of VCUs per tree is fixed until 2021, without guarantees afterwards



VCS projects are re-validated every 5 years, with potential to continue for 100 years. WIF holds 30 year land use agreements based on an equal share of net proceeds from VCU sales to communities.

Last year's biggest CO2 news was the global aviation industry's pledge in October 2016 for carbon neutral growth: "From 2020, any increase in airline CO2 emissions will be offset by activities like tree planting, which soak up CO2." (BBC news) The airline industry alone has the potential to increase demand for forestry credits by 300 million tonnes per year (from less than 100 million tonnes currently).

The root cause of the escalating climate crisis is underpriced natural capital, and specifically underpriced negative externalities of CO2 emissions. Leading economists agree that **a global carbon price is the most effective policy response to address climate change**, and carbon taxes have been implemented in 40 countries. Global carbon markets currently account for approximately 13% of emissions according to The World Bank, projected to increase to 55% to reach Paris COP21 agreements. The average estimate of the *Social Cost of Carbon* is $40 per tonne, with credible scenarios up to $450.

Risks & Opportunities

There are no returns without risks. To start there is project execution risk. VCS validation is in process and may yield lower results than expected. Blue Carbon forestry credits are an emerging asset class and and there is competition from lower quality carbon credits. Forestry credit prices could decline. The project is located in one of the world's newest democracies with widespread poverty. Trees could be cut down or be destroyed by natural disasters. A significant risk, however, is mitigated by WIF's 5 year guaranteed carbon vesting of 175kg per HCP, supported by a substantial buffer of 1600 ha of sea grasses. Furthermore VCS rules include a 25% reserve VCU buffer for 5 years to protect HMC holders. And finally, as Starboard's mangrove sponsorship shows, the project has tremendous value even without VCS validation. HCP makes it easy for companies to implement a Net Positive pledge by planting mangroves.

HCP is a powerful portfolio diversifier. A 1% allocation "de-carbonizes" most portfolios and acts as climate risk insurance. Having far exceeded safe levels of CO2, the global *Subprime Carbon Bubble* is bursting, leaving behind vast ecological and financial damage. As climate risk escalates, more countries are likely to impose rising carbon taxes, which could result in an insurance like payoff for high quality forestry carbon credits. Thor Heyerdahl Climate Park could help save the world and your portfolio. And make it easy for anyone to be Net Positive!

Growth of conservation investment

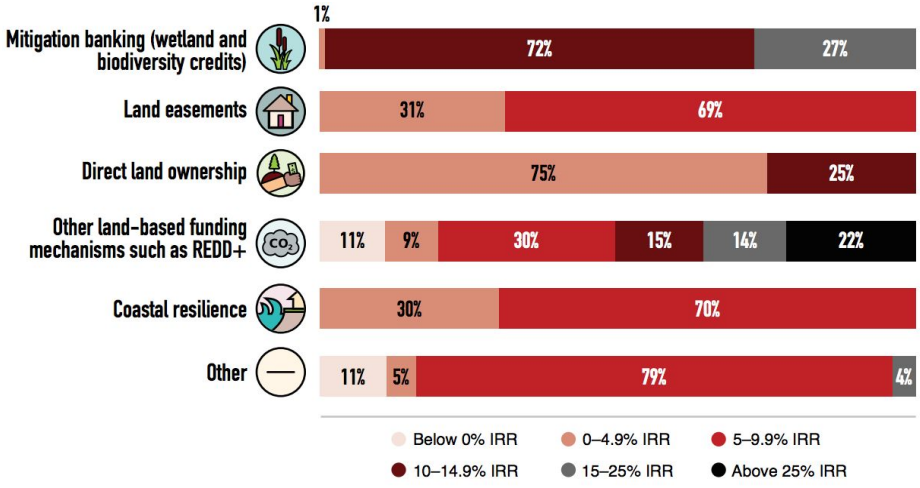
Conservation investing—intentional investments in companies, funds, and organizations with the goal of generating both a financial return and a measurable environmental result—is growing dramatically. In just two years, the total private capital committed to conservation investments jumped by 62%, to a total committed private capital of $8.2 billion (B)1 tracked

from 2004 to 2015. - Source: JPMorgan, State of Private Investment in Conservation 2016 - A Landscape Assessment of an Emerging Market

We have seen a tipping point in global awareness about ecological risk, and **momentum is building to invest in the world's most fundamental asset class: natural capital**. Human and financial capital has no future unless we invest in natural capital, which has dwindled to perilous levels due to ecosystems destruction: "*We are on the brink of a potential crisis from the combined effects of ecological degradation and population growth. Natural resources on which society and business are dependent are being lost at an unprecedented rate. This loss of natural capital is posing a new array of risks to business ranging from increasingly severe competition for access to resources, to tightening regulation and greater and more costly hurdles to accessing finance. Source: KPMG, Is Natural Capital A Material Issue?*

Natural capital is the world's most underpriced asset class, and is positioned to be the best performing asset class in the coming decade. Compare the expected returns of all financial assets surveyed in JPMorgan latest 2017 Long-Term Capital Markets Assumptions to return expectations from conservation investors in Figure 3 below. Specifically, **Mitigation Banking (wetland & biodiversity credits)** has the highest expected returns: 99% of respondents expect an IRR between 10-25%.

Figure 3. Return expectations of 35 Habitat Conservation Investors



Source: JPMorgan

The Operations (Lykke):

Lykke will make markets 24/7 for HCP using agent based models, backed by a liquidity capital buffer. Lykke Wallet enables trading of digital assets with real-time pricing and immediate blockchain settlement.

About Lykke:

Lykke is building the exchange of the future for all assets, with no transaction fees, immediate settlement, and unprecedented governance and transparency via Blockchain technology. Our dream is to use technology in a humane and transformative way - to set the foundations of an inclusive society that lives in peace with nature and gives back to nature in abundance.

About WorldView International Foundation:

WIF International Foundation (WIF) is a global non-profit organisation that empowers individuals and organisations globally to fight climate change, poverty and social injustice especially among populations at risk. It encourages people's participation in the sustainable development process through enhanced communication skills and appropriate low-cost clean technologies.

For updates, please visit Tree-volution.com and if any questions email alan@lykke.com.

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A mangrove seedling at Thor Heyerdahl Climate Park by film maker Margareta Engström

Drone footage of Thor Heyerdahl Climate Park by David Plattner, Raintrust