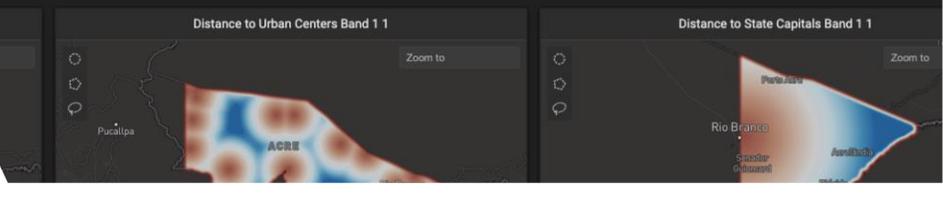
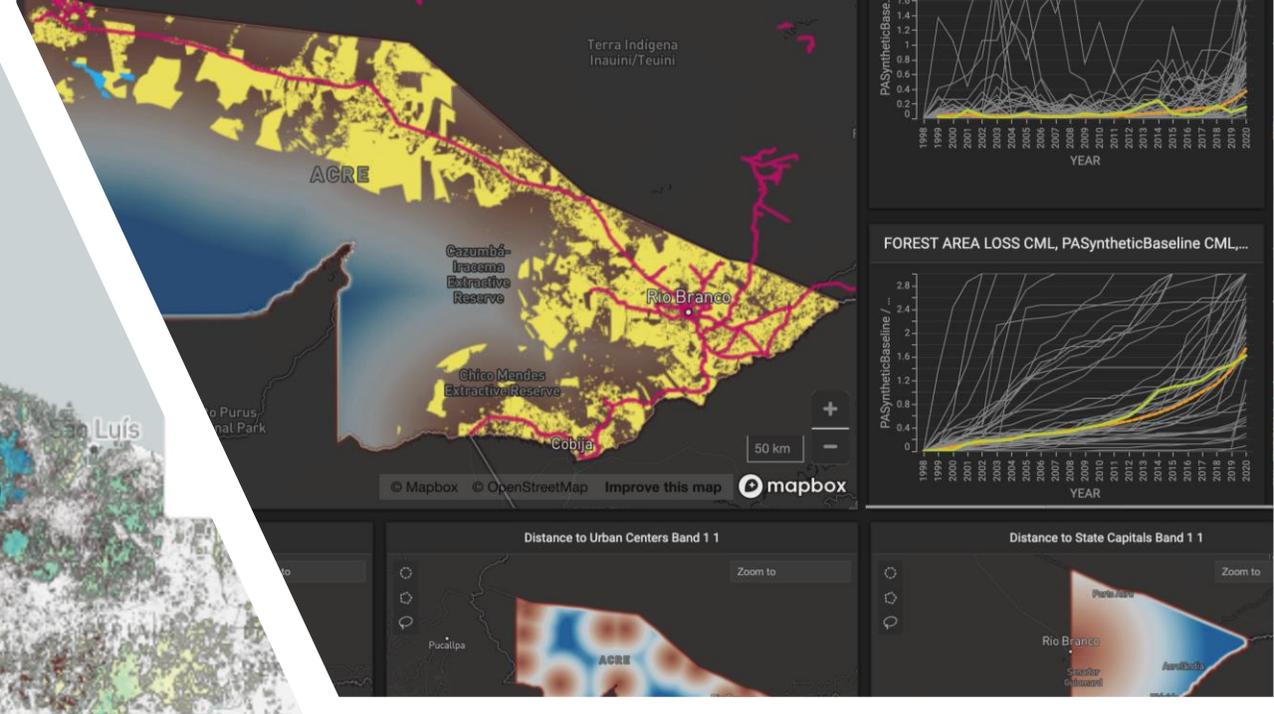
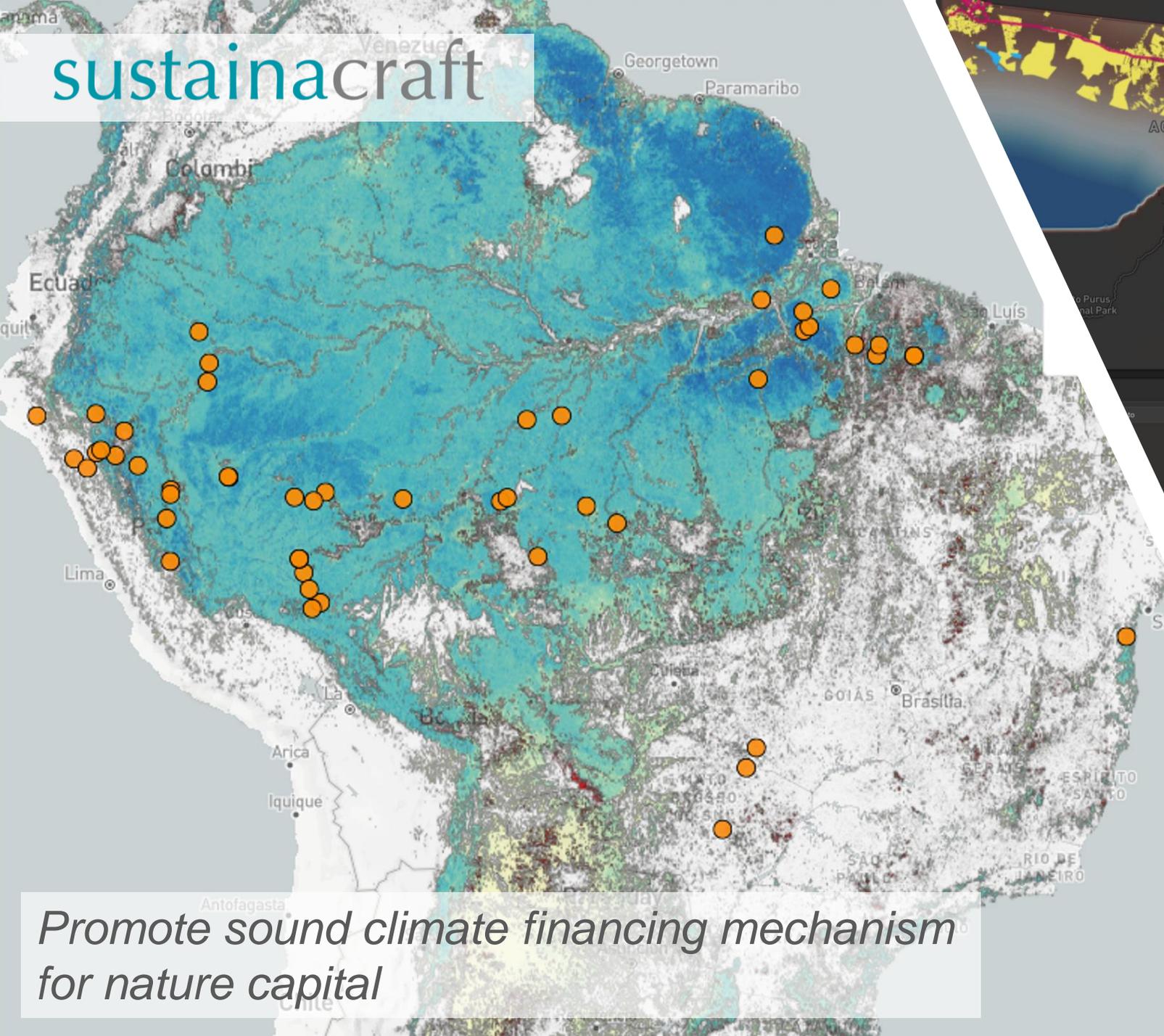
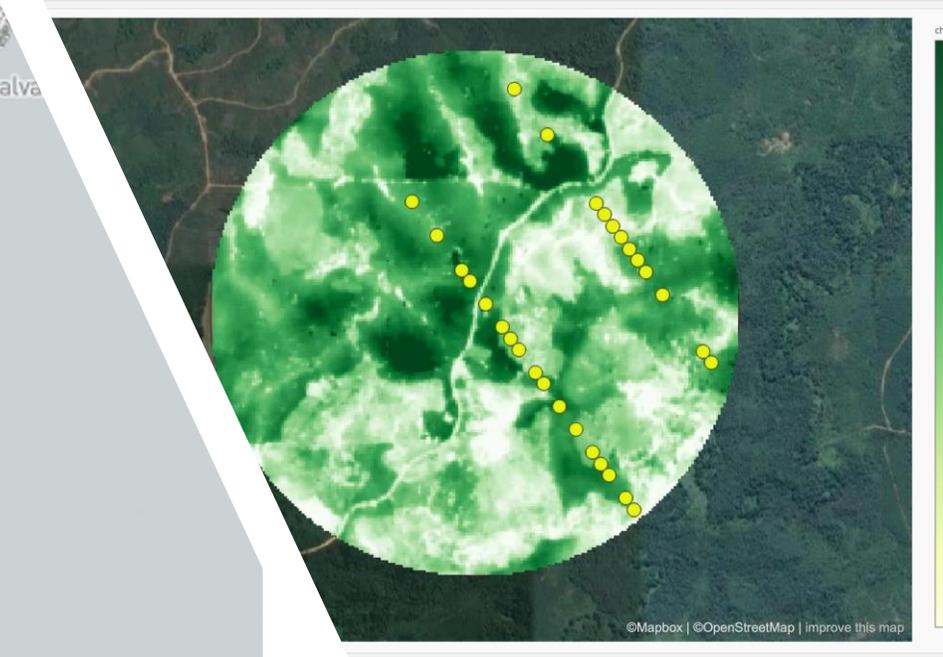


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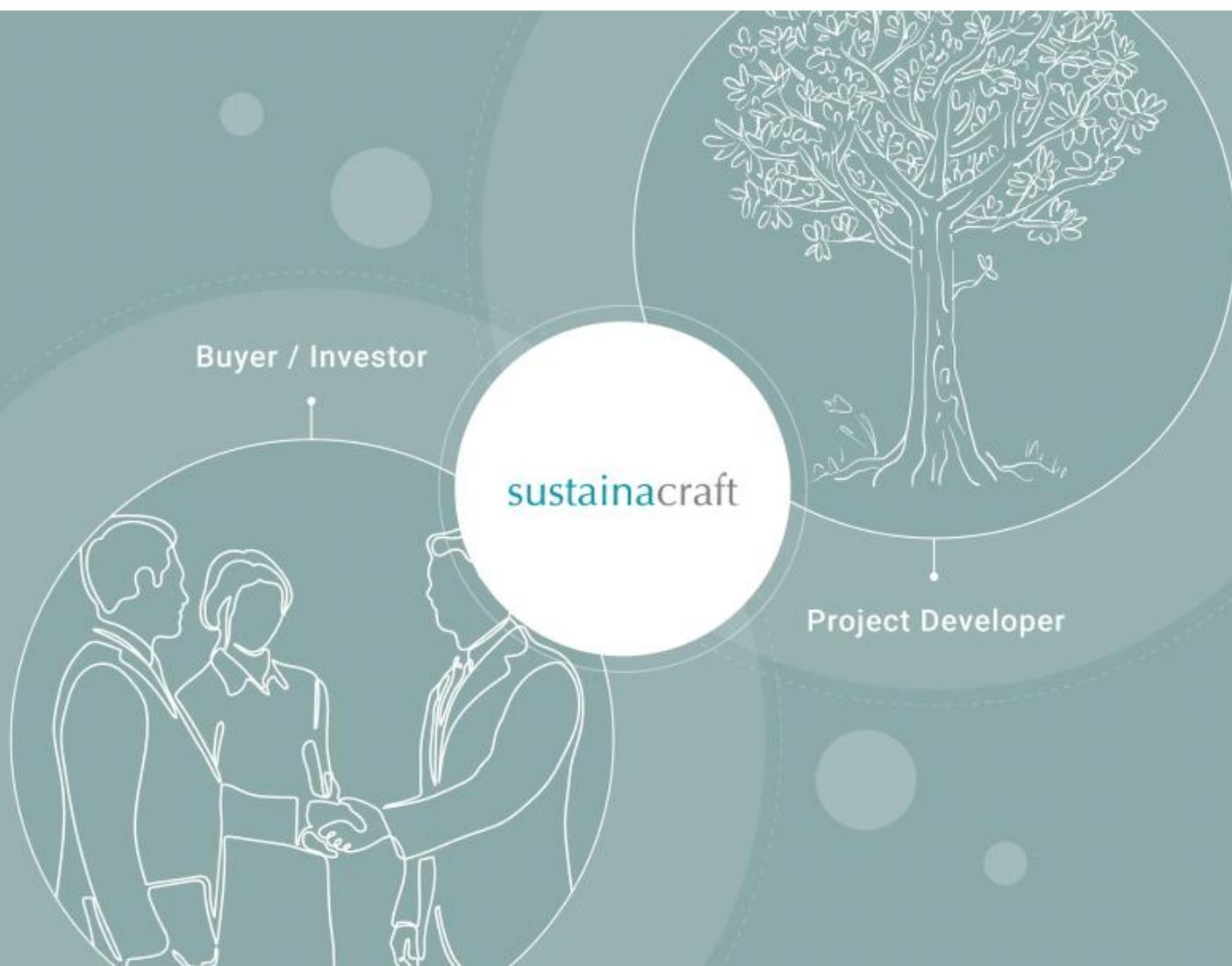


sustainacraft SATELLITE-BASED FOREST PARAMETER ESTIMATION



Promote sound climate financing mechanism for nature capital

カーボン市場の透明性を高める



We provide a platform for two-way communication.

We offer a reliable platform for transparent climate financing focused on nature-based voluntary carbon projects, with the aim of streamlining the process for project developers and credit buyers/investors alike.

Buyer / Investor

We provide DD (due diligence) support to companies and investors by assessing the value and risk of interested voluntary carbon credit projects.

Project Developer

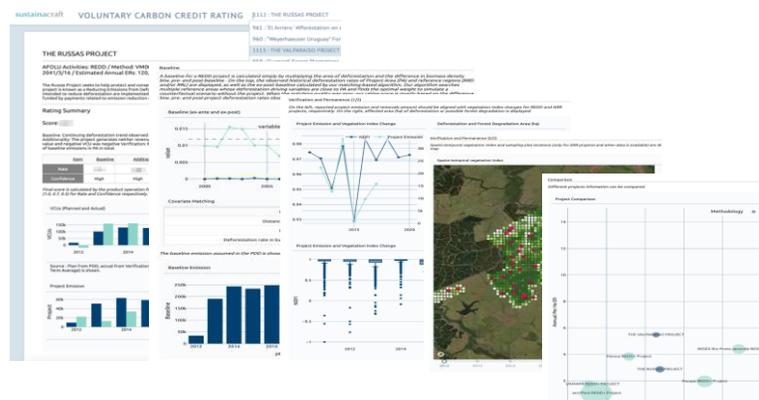
We provide project developers with support in project structuring (assistance in preparing Feasibility Studies and PDDs, etc.) and early financing.

透明性の高い自然資本のプロジェクト評価技術を用いて、買い手とプロジェクト開発者を繋げ、自然保全プロジェクトへの資金循環を後押しする

sustainacraft

Our company

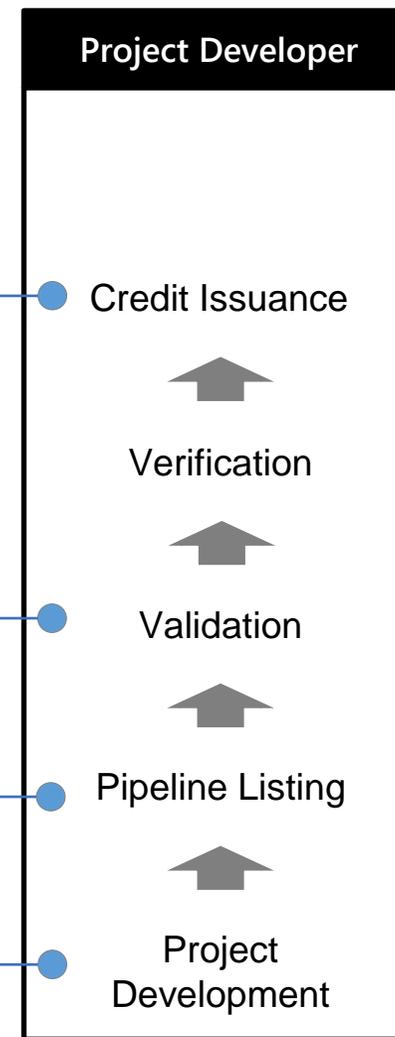
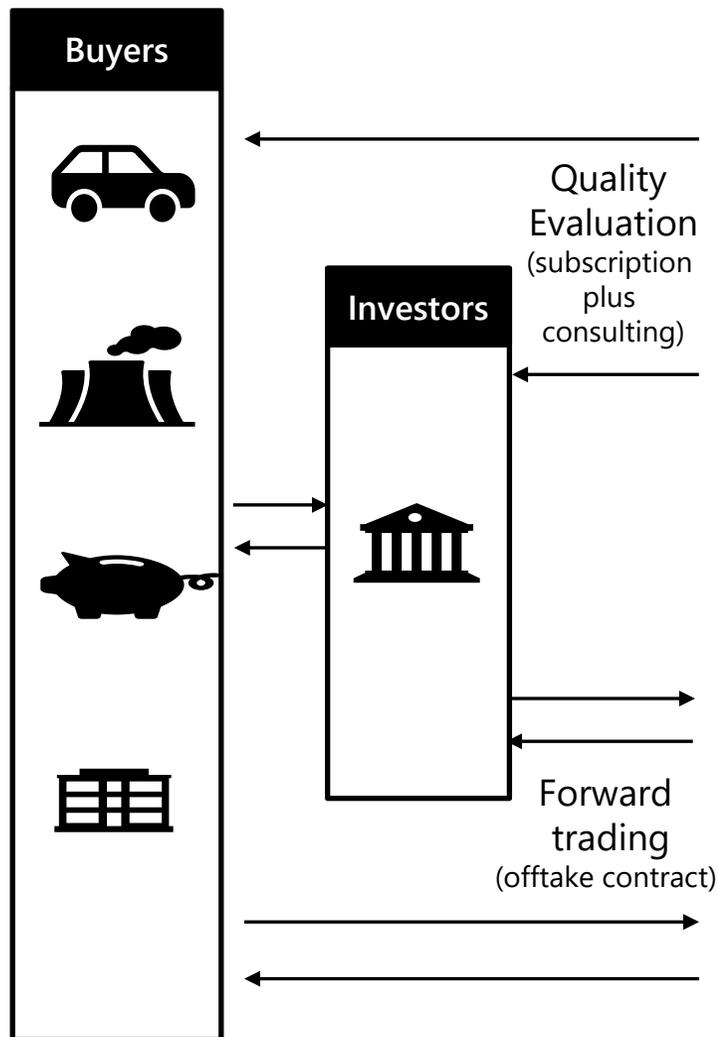
Carbon Credit Reporting Platform



Origination and Early Financing Platform

- Reporting +
- Cash flow analysis
 - Contract support
 - Delivery risk assessment
 - Analysis support
 - Causal-Inference
 - Matching
 - Benchmarking

- REDD
- IFM
- ARR
- ALM



グリーンウォッシングからグリーンハッシングへ

ジャンクカーボンクレジットに対する批判

Carbon offsets used by major airlines based on flawed system, warn experts

Guardian investigation finds carbon credits generated by forest protection schemes are based on flawed systems



Forests around the world are carefully protected. Photograph: REUTERS/ALAMY



Indonesian carbon credit project appears to betray its purpose

Revealed: more than 90% of rainforest carbon offsets by biggest provider are worthless, analysis shows

Investigation into Verra carbon standard finds most are 'phantom credits' and may worsen global heating

- 'Nowhere else to go': Alto Mayo, Peru, at centre of conservation row
- Greenwashing or a net zero necessity? Scientists on carbon offsetting
- Carbon offsets flawed but we are in a climate emergency



The Alto Mayo protection forest in Moyobamba, Peru, was supposed to be a flagship offsetting project but has faced human rights issues. Composite: Guardian Design/AFP/Getty Images

Australia's carbon credits are

Posted on 28 September

(達成目標について) 沈黙する企業

South Pole calls out 'green hushing' on SBTs

Firms going public with decarbonisation targets is key to 'inspiring' competitors

20 October 2022 / Business, Global, Net zero, Sustainability

More companies are setting science-based net zero targets (SBTs), but 25% will not be publicising them, according to a South Pole survey. Combined with uncertainty over how companies can actually hit their ambitious decarbonisation goals, the silence on target setting represents a worrying trend.



BUSINESS / CORPORATE

Companies keep climate goals secret as 'green hushing' takes off



Despite businesses setting more ambitious environmental targets, the phenomenon known as 'green hushing' continues to grow. | BLOOMBERG

Carbon Credit Reporting Platform

By combining remote sensing and causal inference technology, our service aims to enhance the transparency of carbon initiatives through an easy-to-understand visualization of the effects of both the reduction and absorption of greenhouse gas emissions in projects pertaining to afforestation or conservation of forests and peatlands.

Case Studies



Buyers

Project selection for carbon offsetting usually needs to be carried out in a very short timeframe. This service has enabled the selection of carbon projects from a short list, with efficient due diligence in a short period of time.



Project Developers

We were able to explain to our clients in a way that was easy to understand, what is often technical and difficult to communicate, such as carbon stocks per hectare and the emission reductions from reduced forest fires.

THE VALPARAISO PROJECT

AFOLU Activities: REDD / Method: VM0007 / Proponent: Multiple Proponents / Period: 2011/3/19 to 2041/3/18 / Estimated Annual ERs: 153,853

The Valparaiso Project seeks to help protect and conserve tropical forest by providing payments for ecosystem services. This type of project is known as a Reducing Emissions from Deforestation and forest Degradation project (REDD project). Project activities intended to reduce deforestation are implemented in and around a privately-owned property in the State of Acre, Brazil and are funded by payments related to emission reduction credits generated by the project. This project is being developed...[\(link\)](#)

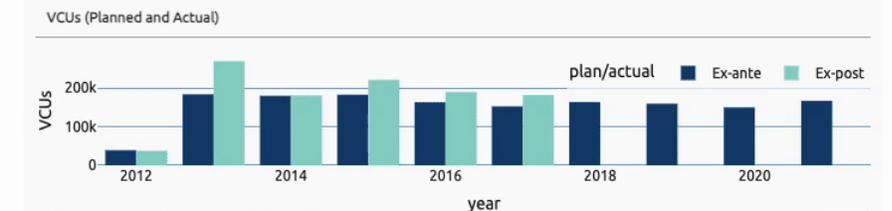
Rating Summary

Score: 0.21

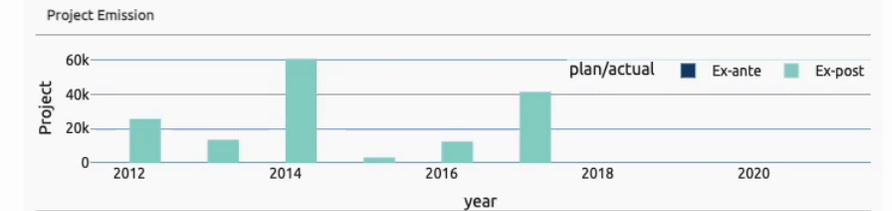
Baseline setting is overestimated due to the unappropriate proxy area setting. Ex-post evaluation reveals that deforestation trend decreases in the surrounding area after the project started. Baseline: Continuing deforestation trend observed in the last 12 years prior to the project initiation. UCEGEO is used for deforestation area monitoring. Additionality: The project generates neither revenues nor cost reductions Permanence: Project emission has been higher than exante estimations Verification: Both AGB and BGB biomass refer to reviewed papers. Leakage: Leakage is 13% of baseline emissions in PA.

Item	Baseline	Additionality	Permanence	Verification	Leakage	Co-benefit
Rate	0.25	High	Medium	High	None	None
Confidence	High	High	High	High	None	None

Final score is calculated by the product operation for all the confidence-adjusted rating. (High, Medium, Low) = (1.0, 0.85, 0.7) and (1.0, 0.7, 0.5) for Rate and Confidence respectively. For more about our rating framework, see [this](#)



Source : Plan from PDD, actual from Verification Report. For ARR with harvesting project, cumulative VCUs and LTA(Long-Term Average) is shown.

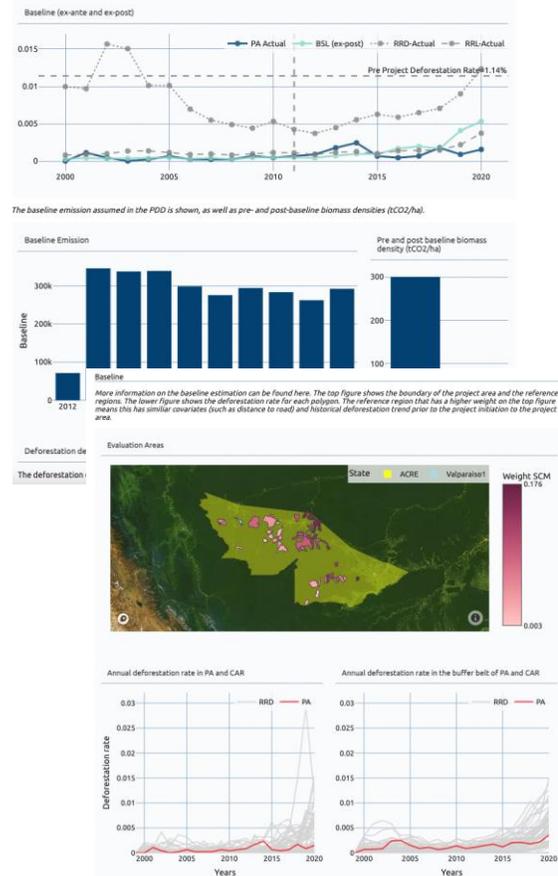


Source : Plan from PDD, actual from Verification Report

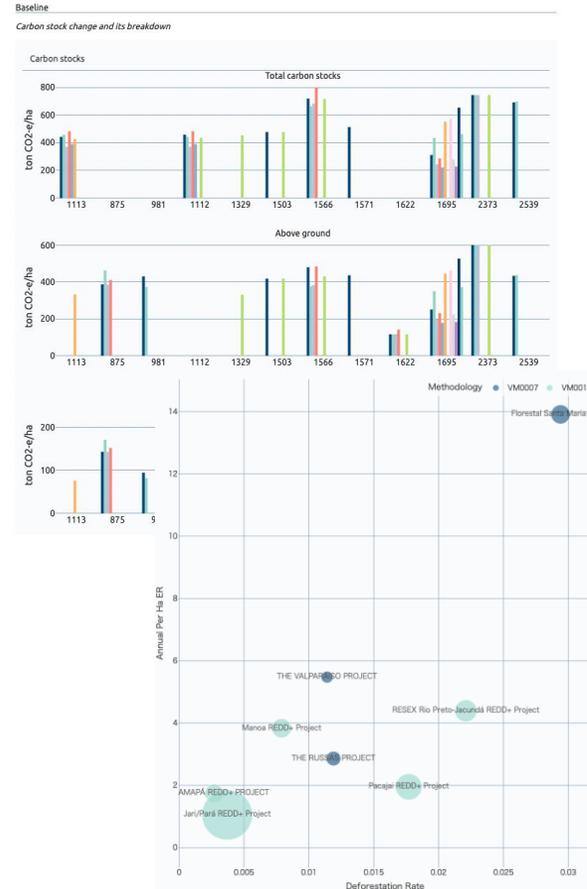
Carbon Credit Reporting Platform (cont.)

Our analysis covers **ARR**, **REDD** and **WRC** projects

REDD: baseline



REDD: Carbon Stock



Fact Sheet + IPCC DB

Fact Sheet

All facts on the project summarized in one sheet

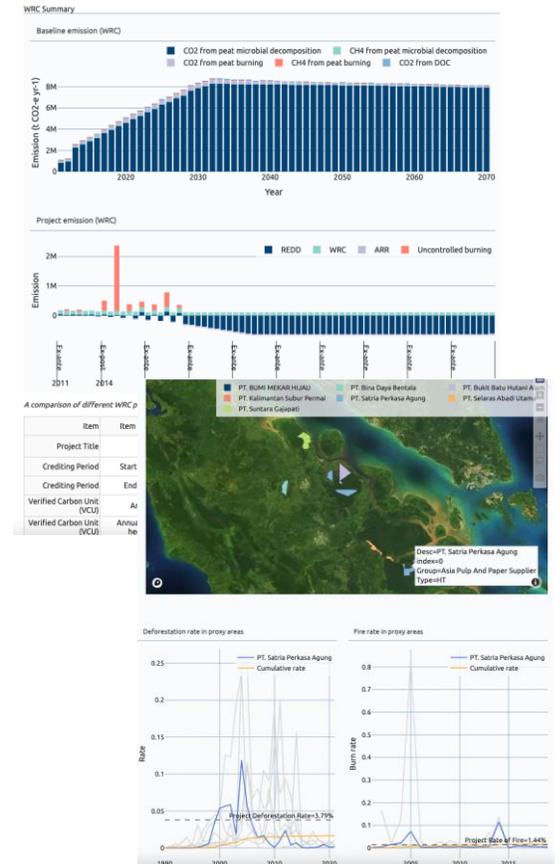
Categories Lv-1	Categories Lv-2	Key Lv-1	Key Lv-2	Key Lv-3	Unit	Value
Project Overview	Crediting Period	Start date	Year			30
Project Overview	Crediting Period	End date	Year			2011-03-19
Project Overview	Crediting Period	End date	Year			2041-03-18
Project Overview	ER	Total	ton CO ₂ -e			1538533
Project Overview	ER	Annual per hectare	ton CO ₂ -e/yr/ha			1538533
Project Overview	ER	Annual per hectare	ton CO ₂ -e/yr/ha			5.47598590546697
Project boundaries	RRD	Total Area	ha			4651620
Project boundaries	RRR	Deforestation Rate	%			0.011419032509104355
Project boundaries	RRD	Deforestation Rate	Area	ha		53117
Project boundaries	RRD	Deforestation Rate	Measurement Tool			IDRISI SELVA: An accuracy assessment of the 2011 forest/nonforest map was performed using 100 ground truth points per class for a total of 200 ground truthing points derived from high-resolution imagery in Google Earth (e.g. QGIS).

Reference (IPCC database)

The reference values from the IPCC database

Table	Domain	Ecological zone	Continent	Tree species	Planted forest type	Item	Unit	Mean	Min	Max	References
Table 4.7: Above-ground biomass in forests	Tropical	Tropical rain forest	Africa			AGB	(tonnes d.m. ha ⁻¹)	310	130	510	IPCC, 2003
Table 4.7: Above-ground biomass in forests	Tropical	Tropical rain forest	North and South America			AGB	(tonnes d.m. ha ⁻¹)	300	120	400	Baker et al., 2004a; Hughes et al., 1999
Table 4.7: Above-ground biomass in forests	Tropical	Tropical rain forest	Asia (continental)			AGB	(tonnes d.m. ha ⁻¹)	280	120	680	IPCC, 2003
Table 4.7: Above-ground biomass in forests	Tropical	Tropical rain forest	Asia (insular)			AGB	(tonnes d.m. ha ⁻¹)	150	280	520	IPCC, 2003
Table 4.7: Above-ground biomass in forests	Tropical	Tropical moist deciduous forest	Africa			AGB	(tonnes d.m. ha ⁻¹)	260	160	430	IPCC, 2003
Table 4.7: Above-ground biomass in forests	Tropical	Tropical moist deciduous forest	North and South America			AGB	(tonnes d.m. ha ⁻¹)	220	210	280	IPCC, 2003
Table 4.7: Above-ground biomass in forests	Tropical	Tropical moist deciduous forest	Asia (continental)			AGB	(tonnes d.m. ha ⁻¹)	180	10	560	IPCC, 2003
Table 4.7: Above-ground biomass in forests	Tropical	Tropical moist deciduous forest	Asia (insular)			AGB	(tonnes d.m. ha ⁻¹)	290	0	0	IPCC, 2003

WRC report



Our Technology

Proved causal inference-based baseline quantification

Baselines (in other words, what would have happened if the project was not implemented) are crucial for determining the quality of carbon credits. However, they can be misrepresented, making a project appear more effective at reducing emissions than it actually is, leading to greenwashing criticism. We avoid that by using multiple approaches to validate our baselines and ensure their accuracy.



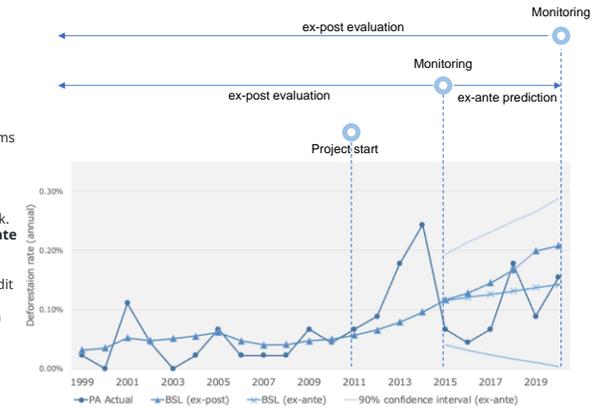
NeurIPS 2022 ([link](#)) **Best Paper**
(NeurIPS 2022: Climate Change AI workshop)

High-frequency tree growth monitoring

We have developed an integrated framework of satellite-based remote sensing and geospatial tree growth-model parameter estimation. Our technologies (accuracy and practicality) were proven in various forests across the globe.

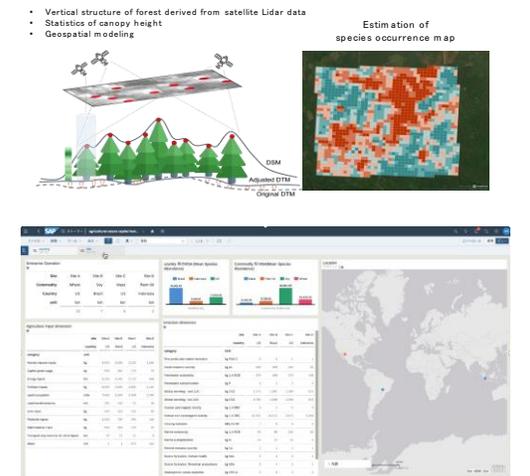
Baseline

- A carbon credit is issued based on the difference between the actual result and the counterfactual baseline, assuming the absence of the project.
- In forest carbon credit, the concept of **dynamic (or ex-post) baseline** has been discussed to overcome the criticism of junk carbon credit, while an ex-ante baseline is still necessary in terms of a project finance and risk assessment.
- We have developed a **Bayesian state-space SCM (Synthetic Control Method)**, which integrates both ex-ante and ex-post baseline estimation in a time-series causal inference framework. Our scientific paper has been accepted by **NeurIPS 2022 Climate Change AI workshop** and selected as a spot-light talk.
- Our own algorithm will play an important role for potential credit buyers when they consider early financing to a nature-based carbon project and evaluate the delivery risk in the anticipation of **PCU (Projected Carbon Unit)**.



Co-benefit

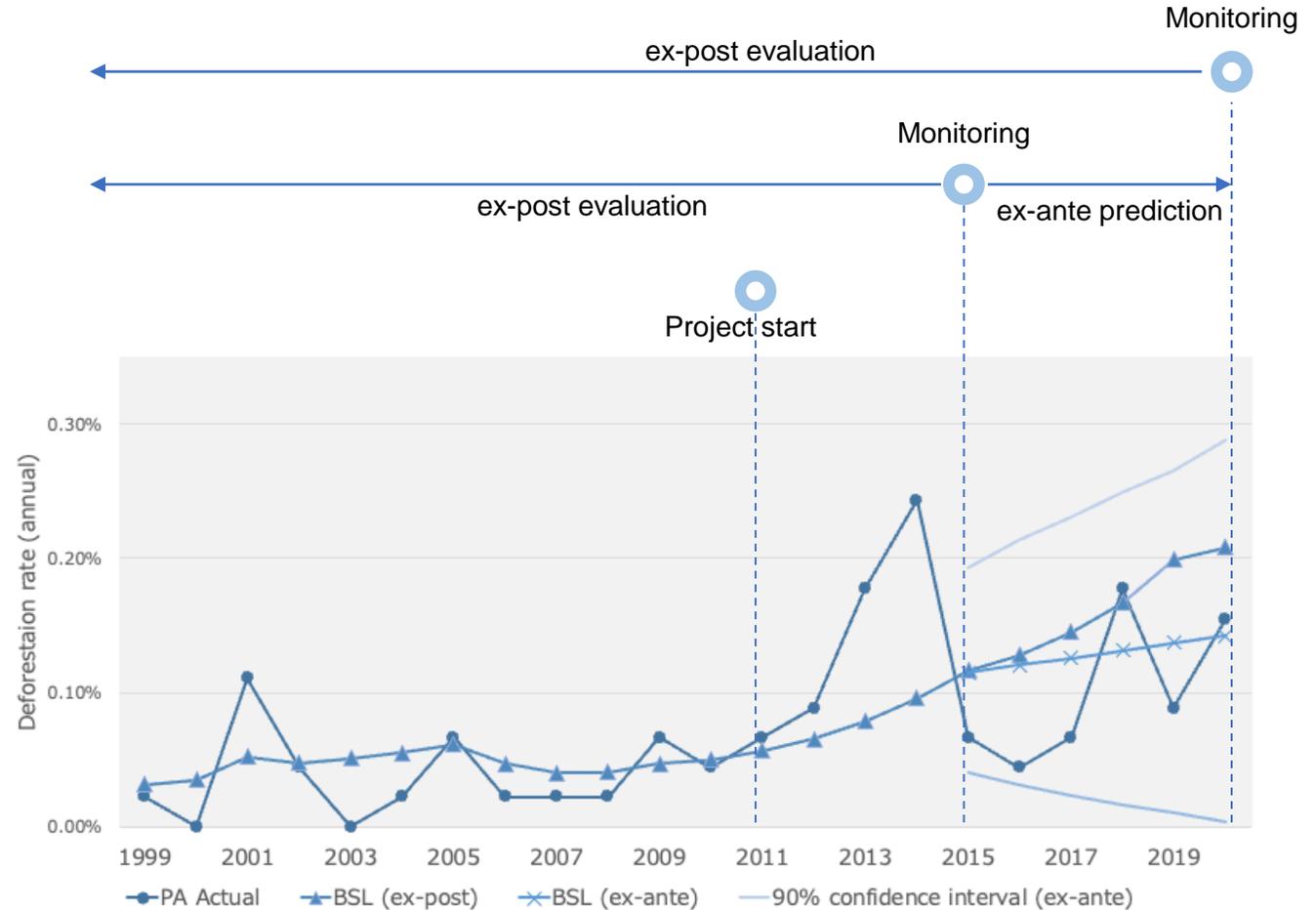
- sustainacraft actively contributes to the development of natural capital and biodiversity assessment methods. These include proprietary satellite imagery analysis and causal inference-based reference condition estimation technology.
- We have partnered with **NIES (National Institute for Environmental Studies)** and **Hitotsubashi University**, which are one of the leading institutions focusing on biodiversity, forest, and social studies in Japan (see this partnership [here](#)).
- We are also [selected as TNFD Data Catalyst Initiative](#) (see the participants list [here](#)). **TNFD** (Taskforce on Nature-Related Financial Disclosures) is an international initiative to provide a framework for how organizations can address environmental risks and opportunities with the ultimate goal of channeling capital flows into positive action.
- Our technology developed in this context could also be used for **ALM (Agricultural Land Management)** project development for companies in the agricultural commodity-related sector.



(1) Integrated ex-ante and ex-post baseline estimation framework

Baseline

- A carbon credit is issued based on the difference between the actual result and the counterfactual baseline, assuming the absence of the project.
- In forest carbon credit, the concept of **dynamic (or ex-post) baseline** has been discussed to overcome the criticism of junk carbon credit, while an ex-ante baseline is still necessary in terms of a project finance and risk assessment.
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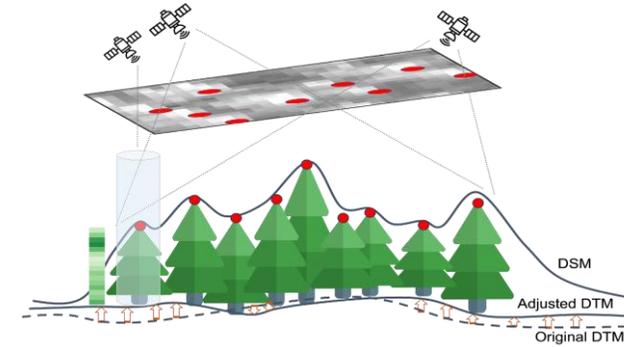


(3) Biodiversity monitoring

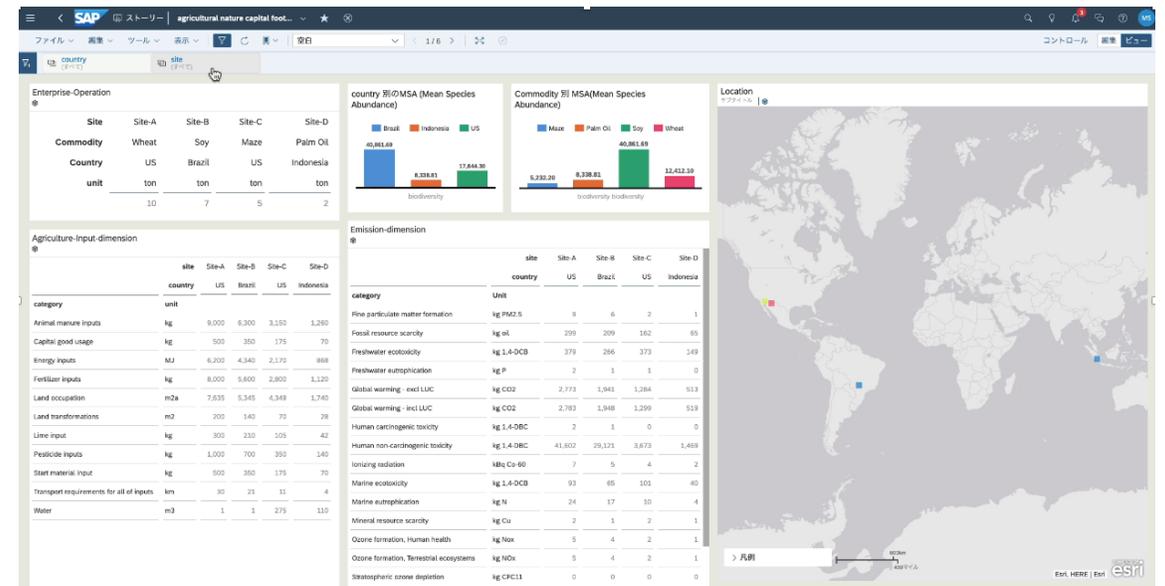
Co-benefit

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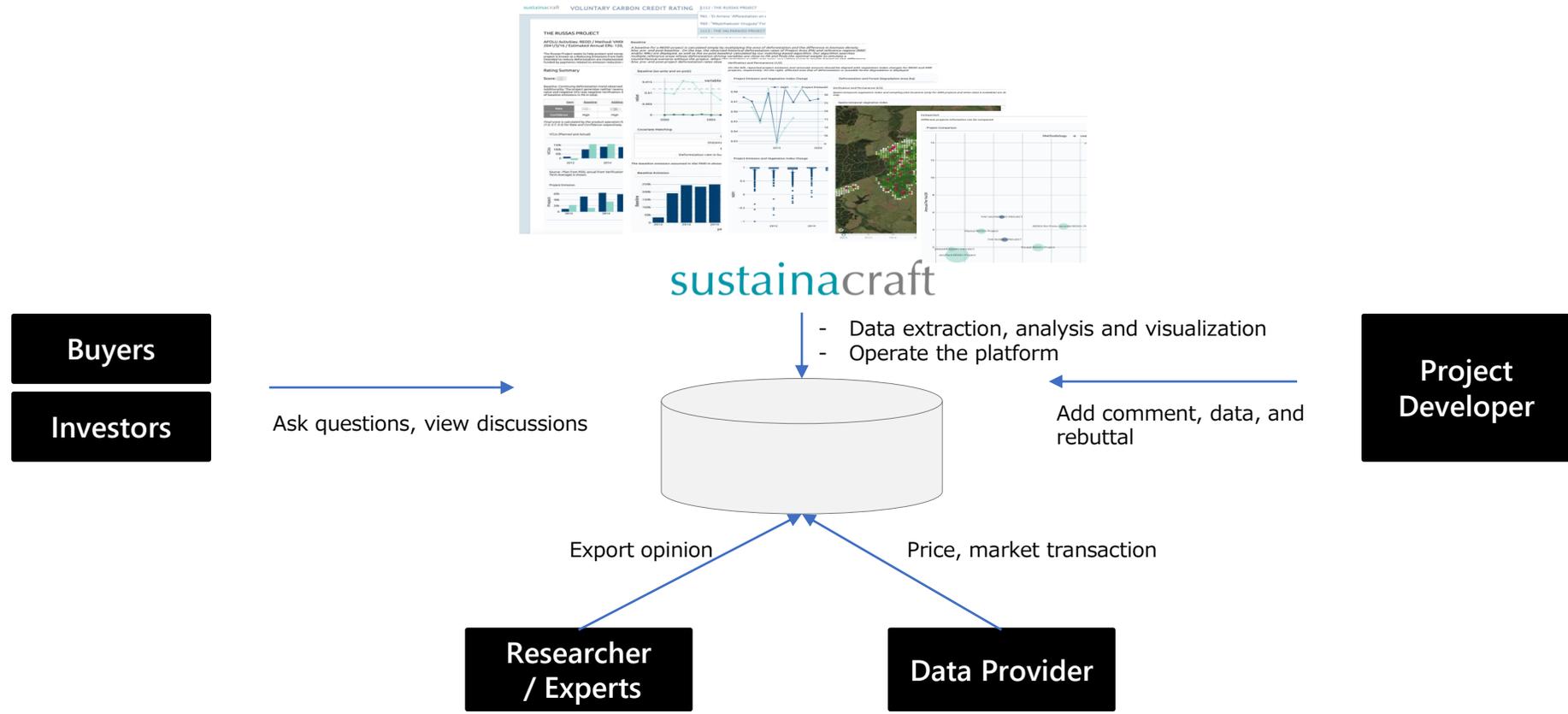
- Vertical structure of forest derived from satellite Lidar data
- Statistics of canopy height
- Geospatial modeling



Estimation of species occurrence map



カーボン市場の透明性向上に向けて、買い手と売り手、双方向のコミュニケーションPFを3月にβ版ローンチ予定



一緒に日本企業の資金を海外の自然保全活動に循環させていきませんか

Schroders and Conservation International to accelerate global investment in natural climate solutions

The collaboration has established Akaria Natural Capital as one of the first dedicated natural capital impact investment managers in Singapore.

25/07/2022



The HUB

Our Approach

Our Clients

Our Capabilities

About

Search

Kering and L'Occitane Group Join Forces to Finance Nature Protection at Scale

Source:
<https://www.schroders.com/en/global/media-relations/media-centre/schroders-and-conservation-international-to-accelerate-global-investment-in-natural-climate-solutions/>
<https://www.im.natixis.com/en-institutional/news/kering-and-l-occitane-group-join-forces-to-finance-nature-protection-at-scale>