Confidential information. Not for redistribution.

LACONIC

Sovereign Carbon as a Financial Asset

Converging the Carbon and Financial Markets

January 2026

Confidential information. Not for redistribution.

Laconic Global

Empowering nations & companies to be the net in net zero. Laconic is a fintech company providing the Natural Capital Management (NCM™) platform that enables nations, corporates, and financial institutions to meet their net-zero commitments by bridging the carbon markets with traditional financial infrastructure – transforming verified climate assets into investable instruments.

About Laconic

What We Do

NDC Development & Paris Compliance: We help nations develop and refine their Nationally Determined Contributions (NDCs) to ensure alignment with Paris Agreement requirements and ambitious climate goals.

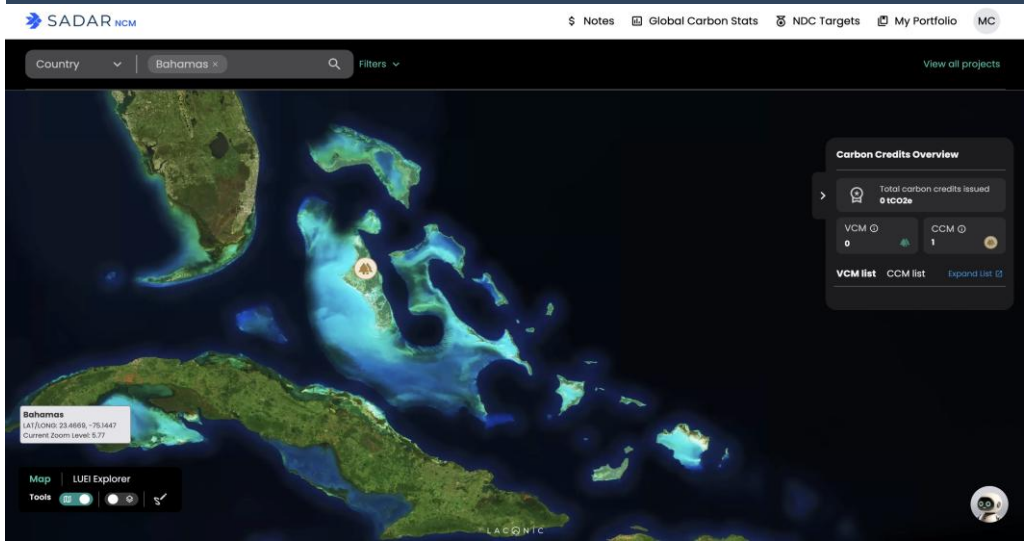
Article 6 Carbon Market Readiness: By standardizing and transforming carbon data, Laconic's platform enables participation from major financial institutions and global banks, leveraging existing market infrastructure for clearing, settlement, and custody.

Rigorous Data Verification: We authenticate carbon mitigation outcomes by ensuring they are real, additional, and verifiable through advanced data science methodologies and comprehensive verification protocols.

SADAR™: AI-driven geospatial monitoring platform aligned with the highest IPCCC data science and Article 6 carbon standards.

LUCID™ identifiers ensure transparency and consistency, prevent double counting, and enhances auditability.

The Natural Capital Management (NCM) Platform



- ✓ Laconic's platform delivers the secure, timely data needed for large-scale Securitized Carbon transactions. Supporting Article 6-compliant activities, the platform empowers countries to transform climate commitments into tangible, high-value financial products, providing the transparency and accountability essential for investors and governments alike.
- ✓ By supporting liquidity and compliance, the NCM Platform brings trust and transparency to carbon trading, allowing these assets to be confidently traded in pursuit of a global Net-Zero future.

LACONIC

Confidential information. Not for redistribution.

Multi-step Process to Unlock Sovereign Carbon

Baselining & Data Integrity

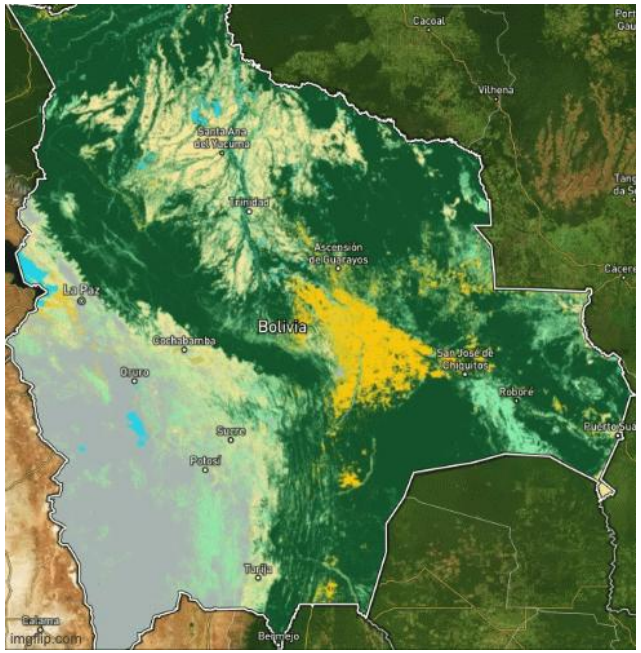
- Update the country's National Greenhouse Gas Inventory (GHGi) to Establish the baseline from which progress will be measured using SADAR™

Consulting to support NDC 3.0

- Strengthen national climate commitments and define enhanced, science-based targets.

Structuring Sovereign Carbon Securities (SCS)

- Coordinate with the Sovereign to maximize their ability to monetize their Sovereign Carbon



SADAR™: AI-driven geospatial monitoring platform aligned with the highest data science and carbon standards.

LUCID™ identifiers ensure transparency and consistency, prevent double counting, and enhances auditability.

LACONIC

Confidential information. Not for redistribution.

Investment Opportunity

Confidential information. Not for redistribution.

Investment Opportunity:

Unlocking the Next multi-Billion Dollar Capital Market

- **Sovereign Carbon Securities (SCS)** bridge the carbon markets with traditional financial infrastructure
- **Scale** – sovereign engagement versus small projects, ensures meaningful year-over-year reductions across the entire country
- **Verified** – best in class geo-spatial monitoring and timely tracking to provide efficiency and investor confidence
- **SADAR™** – proprietary software transforms tangible carbon reductions into financial assets
- **Tradable** – unlocks participation from major banks, corporations, and individual investors, leveraging existing market infrastructure for clearing, settlement, and custody.
- **First mover advantage** in sovereign carbon
  - ✓ Large scale terrestrial green carbon (Bolivia)
  - ✓ Large scale marine blue carbon (Bahamas)

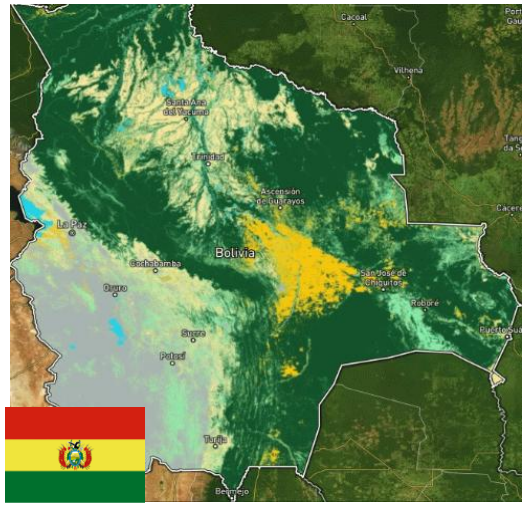
The Commonwealth of the Bahamas

- Blue carbon
- The world's largest seagrass meadow
- Mandated April 2025



Plurinational State of Bolivia

- Green carbon
- Second largest forestry emitter in the world
- Mandated November 2024



LACONIC

Confidential information. Not for redistribution.

Understanding ITMOs

Internationally Transferred Mitigation Outcome (ITMO)

What Are They?

- **ITMOs** are government-authorized carbon assets created under **Article 6.2 of the Paris Agreement**.
- Represent **verified reductions and/or removals of greenhouse gas (GHG) emissions** that can be **transferred between countries or organizations**.

How Do They Work?

- Each country sets a climate target (its **NDC**).
- When a country **over-achieves** its target, it can **transfer** the surplus reductions to another party.
- Both sides record a **"corresponding adjustment"** to ensure transparency and prevent double-counting.

Why Do They Matter to Investors?

- ITMOs establish a **sovereign-level carbon market**, enabling **financial-grade trading** of emission outcomes.
- Transactions are **government-approved** and **Paris-compliant**, reducing counterparty and reputational risk.
- They open a pathway for **institutional capital** to invest directly in **national-scale climate mitigation** with measurable returns.

ITMOs transform emission reductions into sovereign-backed, tradable climate assets — bridging climate policy and capital markets.

Confidential information. Not for redistribution.

Revolutionizing the Sovereign Carbon Market

Existing Market

Standard ITMO

- Primarily **country** to **country** bilateral transactions
- Lower Volume
- Currently ~10 primary buyers (sovereign nations)

Laconic's additional sourcing and financial structure will help expand this market through high quality ITMOs

Laconic Unlocks

Corporate Buyers

- **Country** to **company** transactions
- Sovereign Carbon reduces risk, enabling corporates to offset emissions with confidence.
- Can be recorded as a financial asset
- Auditability

Private Investors

- Securitized carbon enables secondary markets
- Liquidity attracts investors and price discovery
- Carbon becomes a tradable asset
- Enables investors to align returns with measurable climate impact

Confidential information. Not for redistribution.

Market Demand for Credible Emissions Reductions

Article 6 ITMOs – the next generation of Paris compliant carbon credits

- **63% of Forbes 2000** companies have net-zero targets in place.
- These companies generate over **$30 trillion** in annual revenue.
- **One-third** already buy and use carbon credits today.
- Participation will accelerate toward 2030 and 2040 commitments.

S&P Global

ENERGY TRANSITION, CARBON, EMISSIONS

February 25, 2025

Singapore Article 6 carbon credit tender attracts $19-$41/mtCO2e price offers

By **Ivy Yin, Market Specialist - Energy Transition, Rong wei Neo,** and **Eric Yep**

Government authorized carbon assets ensure tangible reductions, driving confidence and a premium in the market

Source(s): https://zerotracker.net/analysis/net-zero-stocktake-2025

Confidential information. Not for redistribution.

How it Works

Confidential information. Not for redistribution.

Where Finance, Technology & Climate Meet

Distinguished Global Leadership Group



James McCall
CEO

- Former SVP and Chief Sustainability Officer at HP, leading ESG programs in climate, human rights, and digital equity.
- Over 20+ years at P&G leading supply chain sustainability – achieving 100% renewable electricity and zero waste to landfill globally.
- Drove P&G's Climate and Carbon Reduction strategy toward carbon neutrality by 2030.



Joseph Niciforo
Chairman of the Board

- Former Chairman and CEO of HC Technologies, founder of Twinfields Capital, and Partner at Tudor Investment Corporation.
- Has served on major financial and nonprofit boards including CME Group and Misericordia.
- Holds degrees from Georgetown and Fordham Law.



Joe Sexton
Director

- Senior Go-To-Market executive with experience across software, SaaS, and PaaS companies.
- Led sales transformations at McAfee, Mercury Interactive, EMC, AppDynamics, and CA Technologies.
- Board member and growth advisor for multiple companies including CrowdStrike, PagerDuty, and Aqua Security.



Peter Borish
Director



Donald H. Morrison
Director



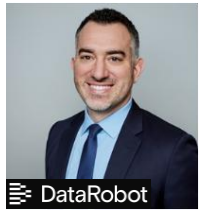
Phil Kenny
Director



Jessica Sohl
Director



David Matheson
CFO



Mitch Carmen
Chief Analytics Officer



Alistair Mullen
President of Business Development



Jonathan Yaffe
VP of Finance

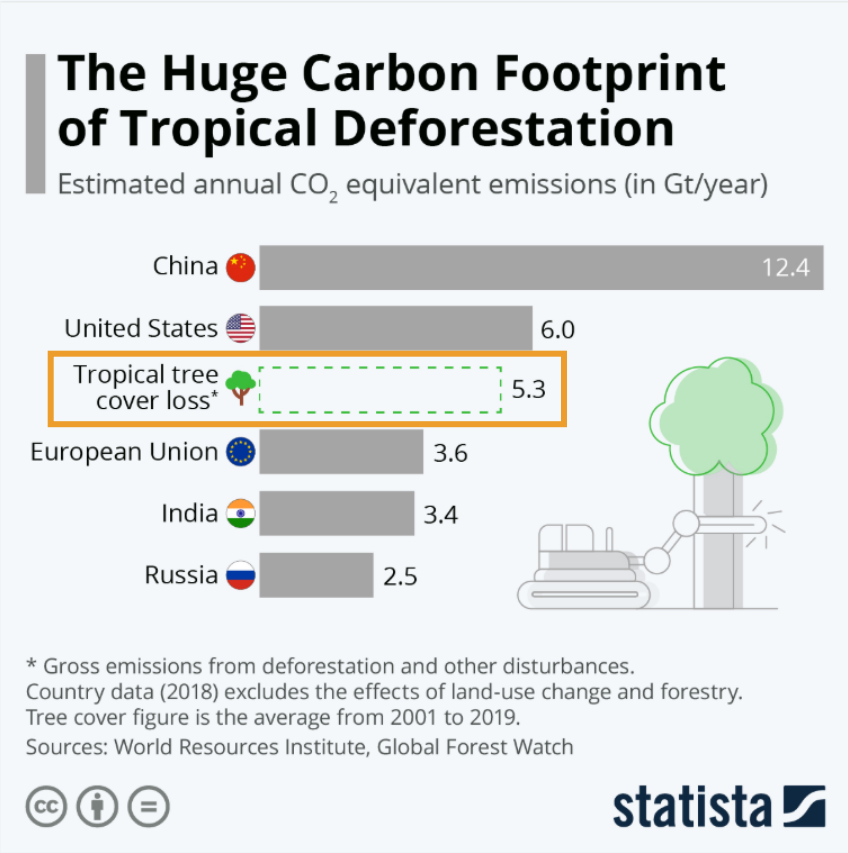


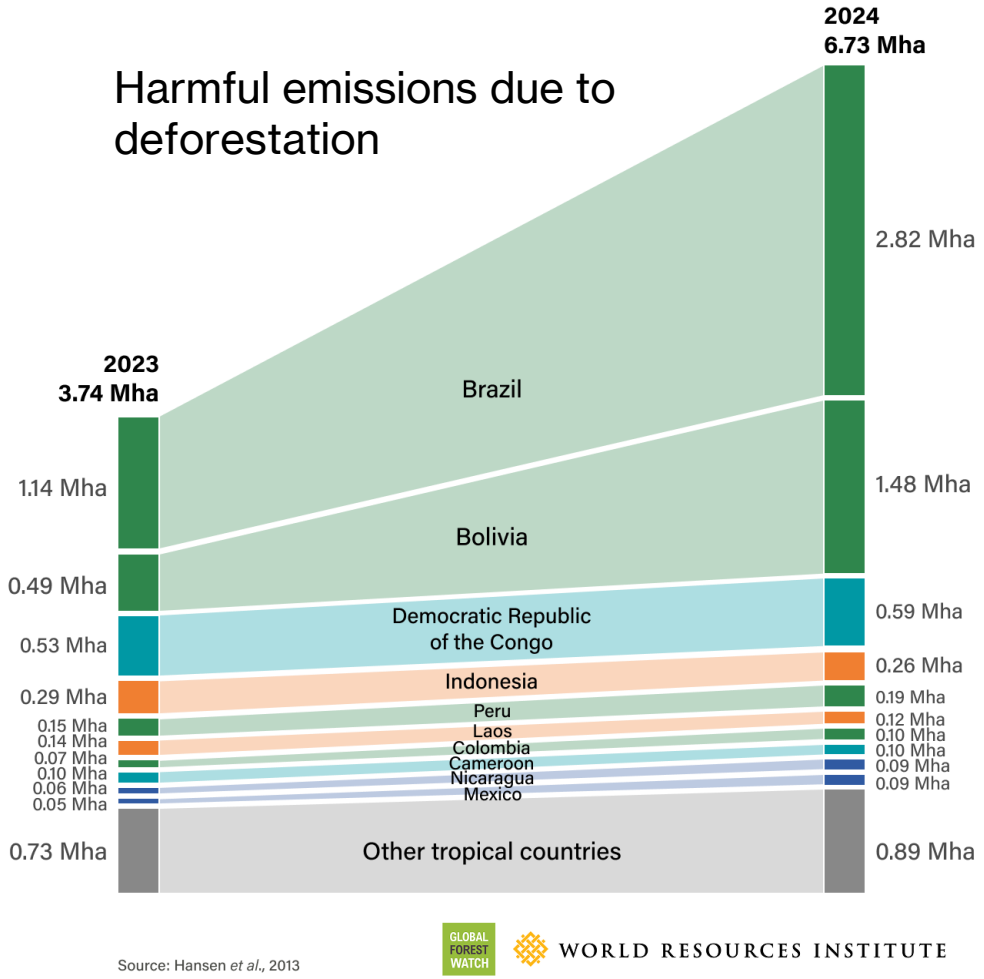
Tommy Olson
Dir. Security & People Operations

LACONIC

Confidential information. Not for redistribution.

Problem: Tropical Forests are Currently a Net Emitter
(due to slash & burn and deforestation)



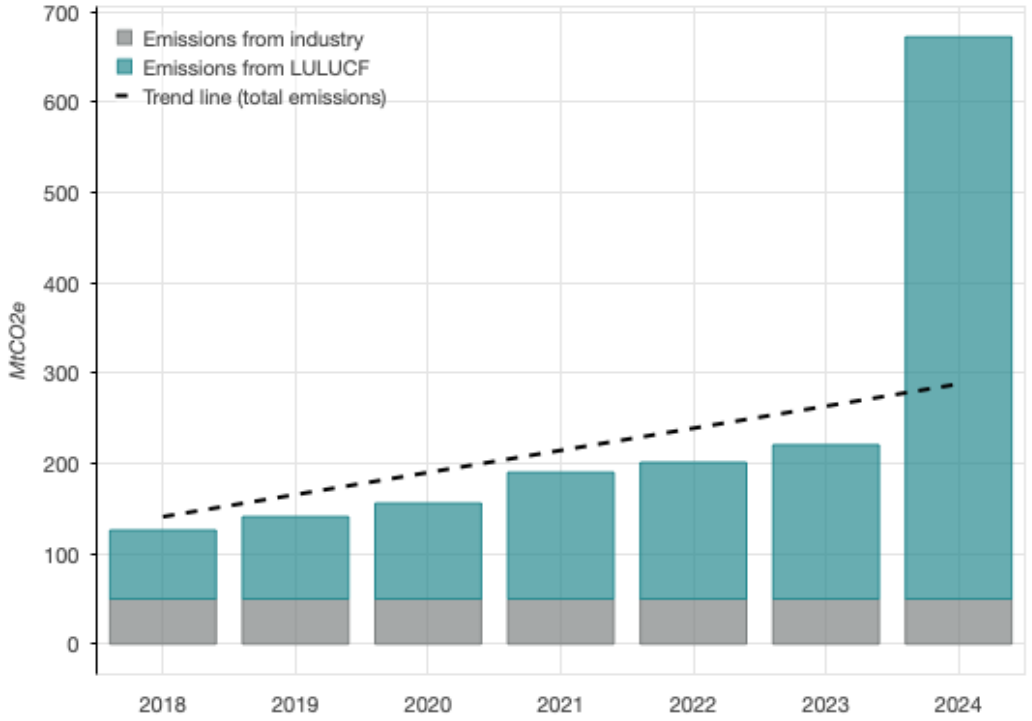


LACONIC

Confidential information. Not for redistribution.

Problem: Lack of Carbon Capacity at the Sovereign Level

Bolivia National Emissions
672,000,000 tons CO2e (2024)



For illustrative purposes. Not adjusted for CA. Only part of the Conditional Enhanced Ambition will be securitized.
Sources: Bolivia NDC 2.0, Bolivia NDC 3.0, Bolivia SCS program documents, Laconic

Voluntary Carbon Projects in Bolivia

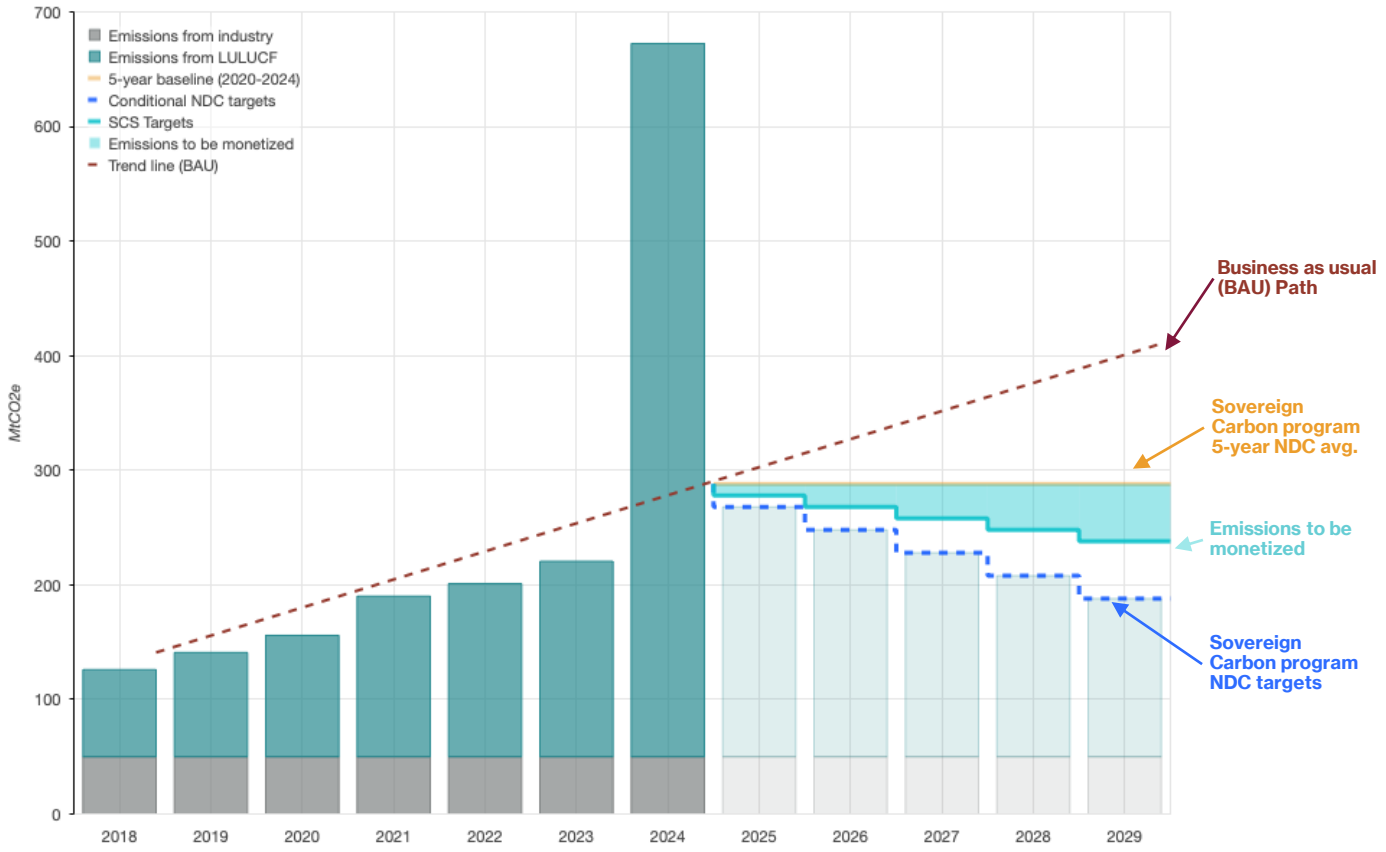
Smaller voluntary projects may successfully sequester GHG emissions, they are **not netted on a national level**. This means they can not effectively bend the climate curve.

- Microsoft – Biochar removal project with Exomad. Expected to remove 1.24 million tons of CO2 over a 10-year period (124,000 / year) that starts in 2025.
- LEAF / ART-TREES: jurisdictional Pando + Charagua
  Estimated tCO2e:
  - 2023: 726,489
  - 2024: 1,452,978
- Noel Kempff Mercado Climate Action Project (NKMCAP): Estimated per year:
  - Approximately 200,000 tCO2e

LACONIC

Confidential information. Not for redistribution.

Solution: Laconic's Sovereign Approach



For illustrative purposes. Not adjusted for corresponding adjustment. Only a portion of the Conditional Enhanced Ambition is expected to be securitized.

Sources: Bolivia NDC 2.0, Bolivia NDC 3.0, Bolivia SCS program documents, Laconic

Benefits of Sovereign Carbon Securities in Bolivia

- Flattening then bending the climate curve
- Sovereign full country level Nationally Determined Contribution (NDC)
- Verifiable quarterly data from satellite monitoring
- Prevents double counting (subtracts voluntary projects from national capacity)
- Bolivia represents ~11% of the Amazon Rainforest
- Total estimated carbon reduction across five years generates over $2B in carbon sales[1]

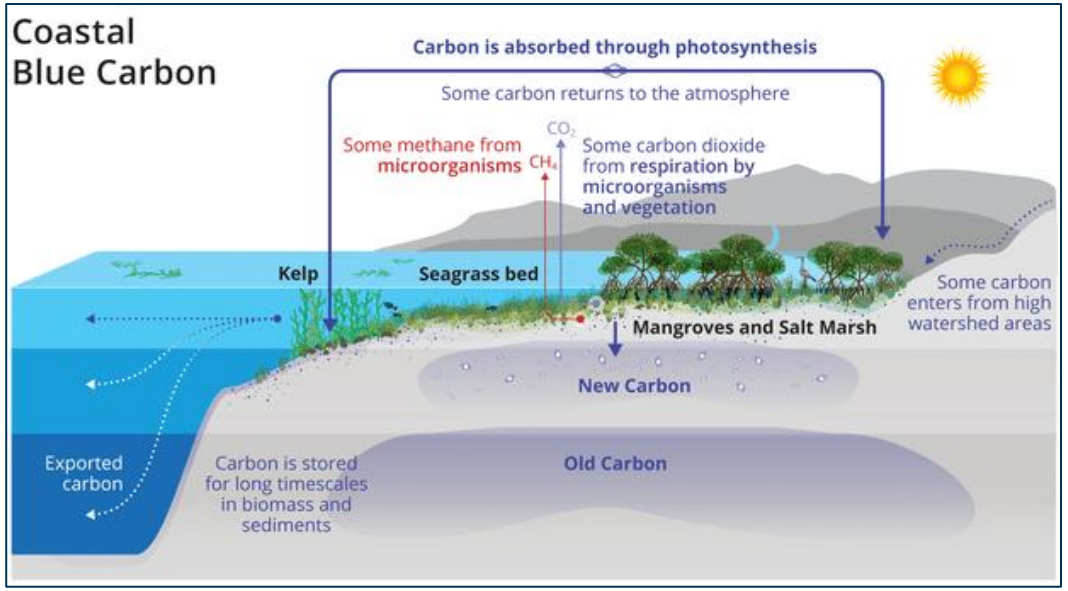
1 Assumes 20,000 ton CO2e reduction / year with a 50% reserve per year, multiplied by $15 / ton.

Confidential information. Not for redistribution.

Seagrass – A Carbon Capture and Storage Powerhouse

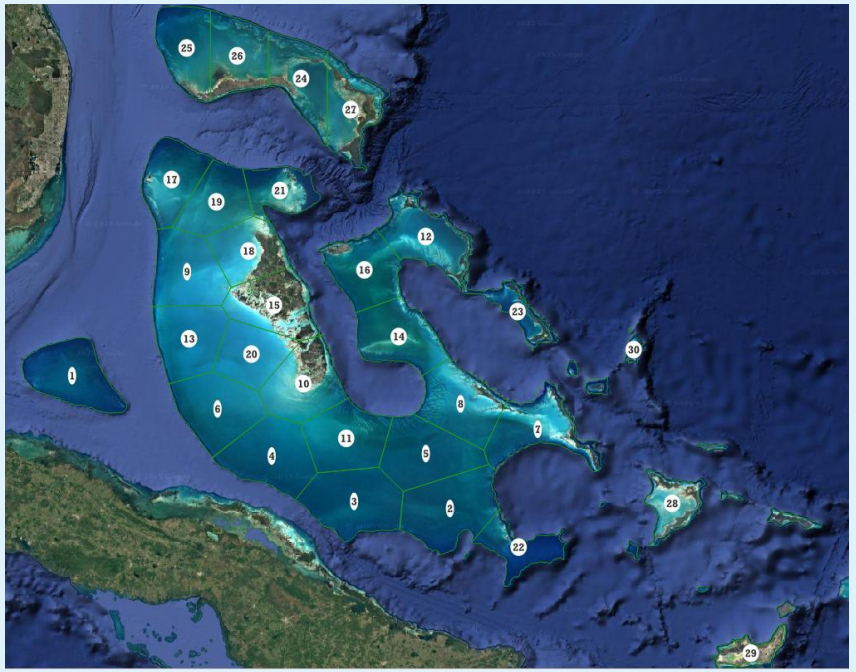
Seagrass occupies only 0.2% of the seafloor yet accounts for 10-18% of the ocean's carbon storage capacity. It captures carbon up to **35 times faster than tropical rainforests.**

- Carbon captured by seagrass is buried deep in sediment, providing exceptional permanence with storage lasting thousands of years compared to terrestrial ecosystems



The Bahamas represents the largest proportion of seagrass among all nations, representing ~33% of Global Sea Grass. Over 930km2 have already been MVR (sea grass measurement, reporting, and verification work)

- Artcap initial funding facility will allow the MVR of an additional [150,000]km2



LACONIC

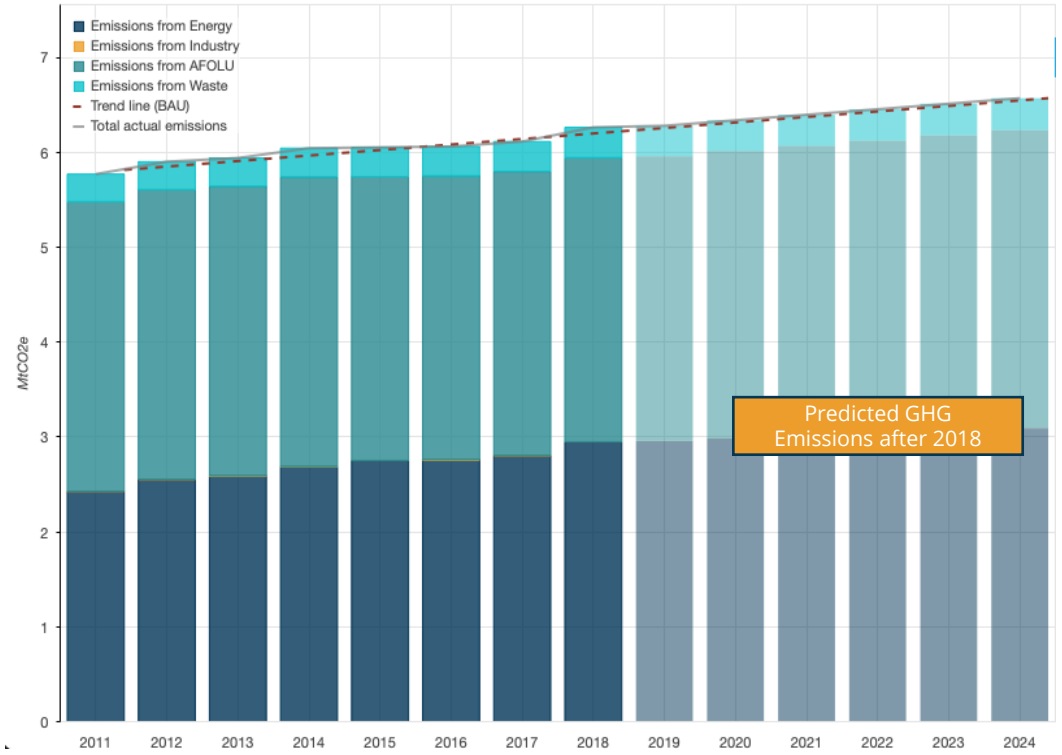
Confidential information. Not for redistribution.

The Bahamas NDC Overview

The Bahamas' NDC historically covered Energy, IPPU, AFOLU, and Waste, with emissions rising steadily before 2025, mainly from Energy and AFOLU. In 2025, the NDC was strengthened by adding seagrass emissions to AFOLU, causing a one-time upward baseline adjustment rather than a real increase in emissions. From 2026 onward, the focus is on bending the emissions curve and moving toward deeper reductions through 2035.

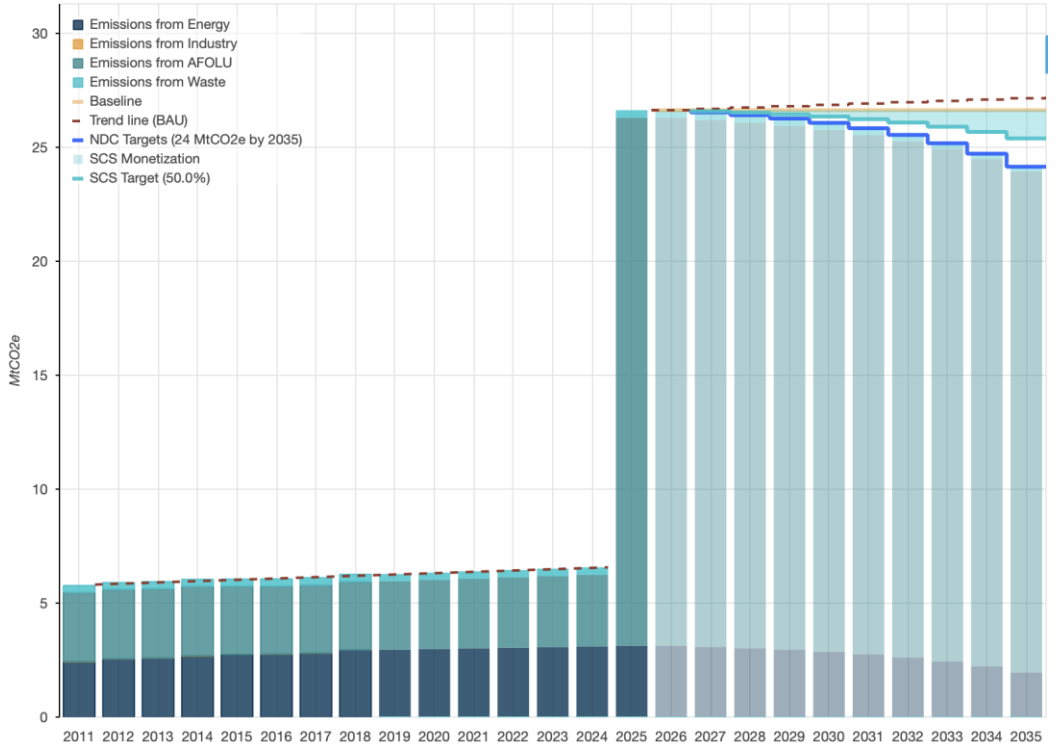
NDC Historical Performance (Pre-inclusion of Seagrass)

- Prior to 2025, the GHG emissions of Bahamas gradually increased on a yearly basis. With major sectors being Energy and AFLOU.



NDC Path (Post-inclusion of Seagrass)

- In 2025, Bahamas created a more robust NDC through the inclusion of seagrass emissions into the AFOLU sector. This is a one-time shift upward as the scope of emissions is included for the NDC.

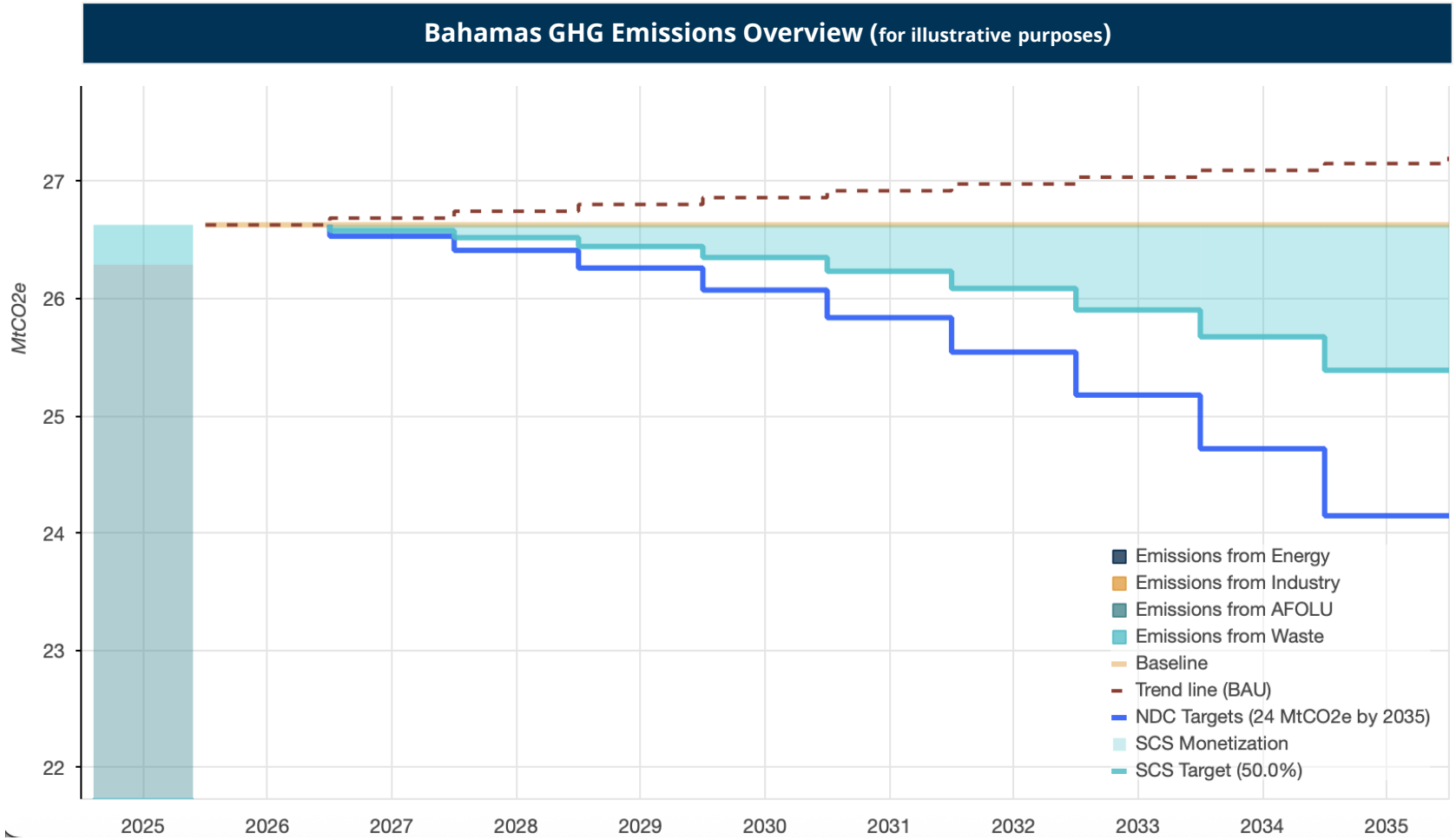


LACONIC

Confidential information. Not for redistribution.

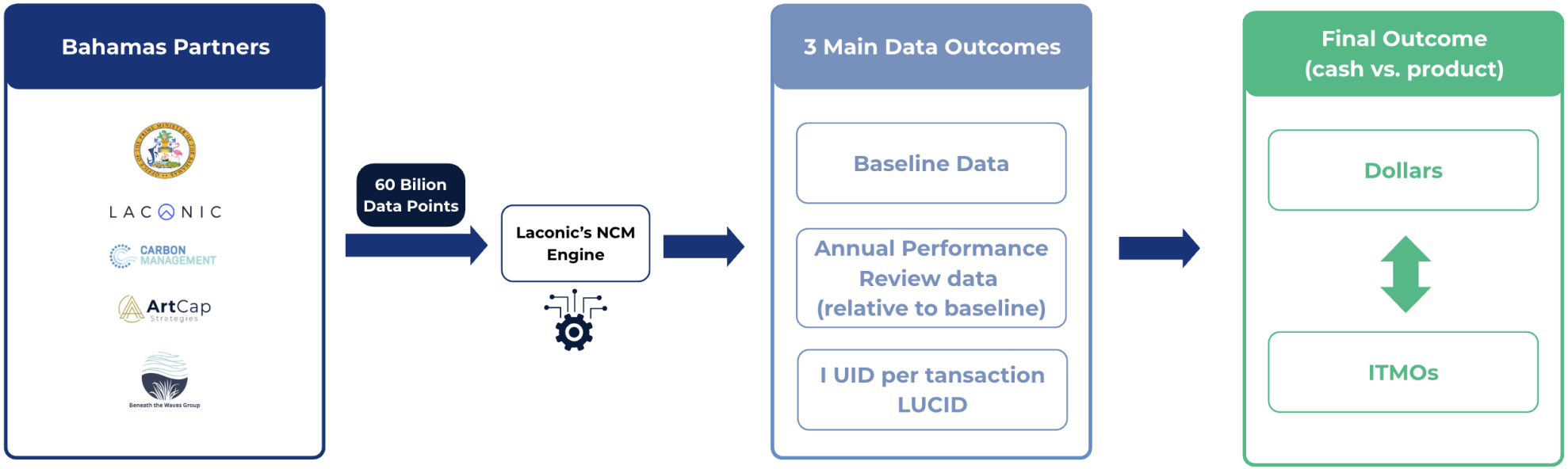
Bahamas NDC Targets

Through a set of targeted and clearly identified mitigation actions, The Bahamas will actively work to bend the emissions curve, enabling the country to meet both its unconditional commitments and its more ambitious conditional objectives, subject to the availability of international support, and financing.



LACONIC

Confidential information. Not for redistribution.



Confidential information. Not for redistribution.

Multi-step Process to Unlock Sovereign Carbon

Baselining & Data Integrity

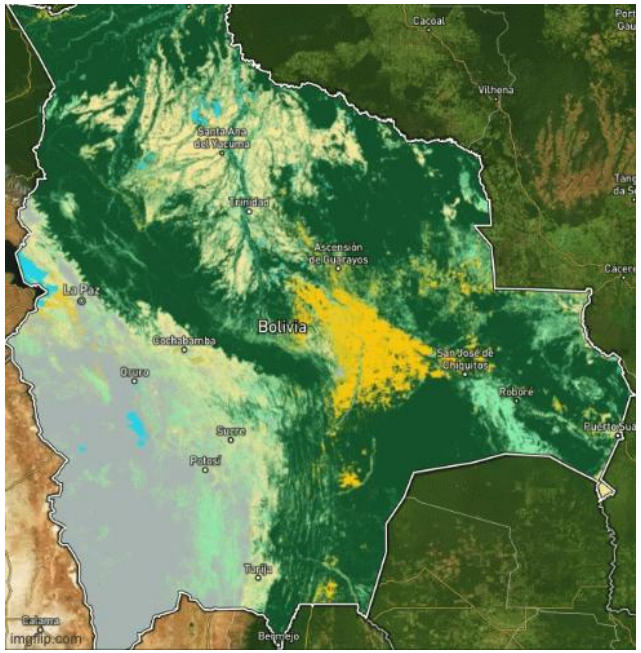
- Update the country's National Greenhouse Gas Inventory (GHGi) to Establish the baseline from which progress will be measured using SADAR™

Consulting to support NDC 3.0

- Strengthen national climate commitments and define enhanced, science-based targets.

Structuring Sovereign Carbon Securities (SCS)

- Coordinate with the Sovereign to maximize their ability to monetize their Sovereign Carbon

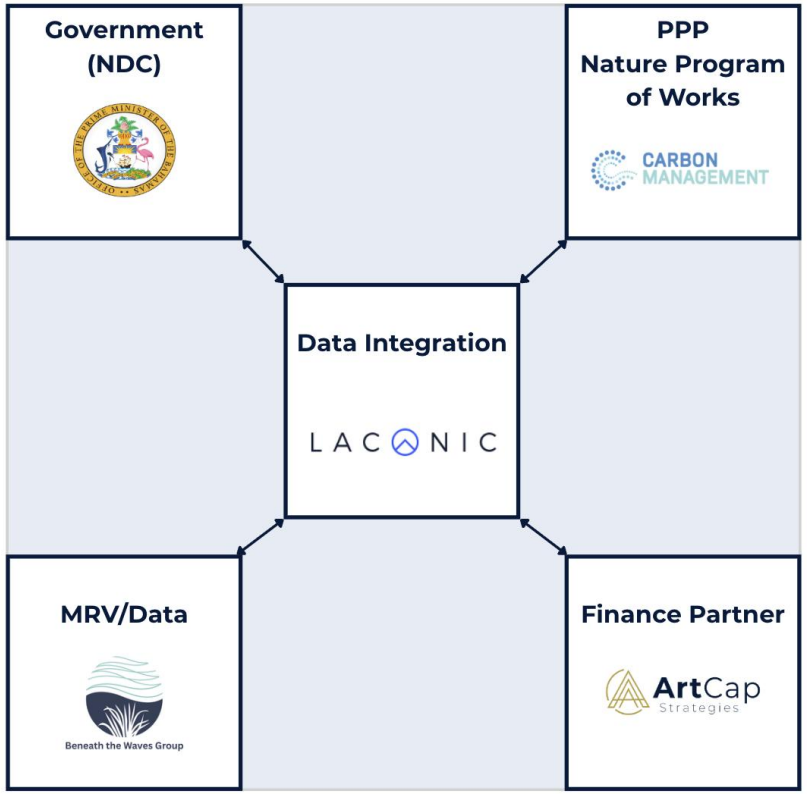


SADAR™: AI-driven geospatial monitoring platform aligned with the highest data science and carbon standards.

LUCID™ identifiers ensure transparency and consistency, prevent double counting, and enhances auditability.

LACONIC

Confidential information. Not for redistribution.

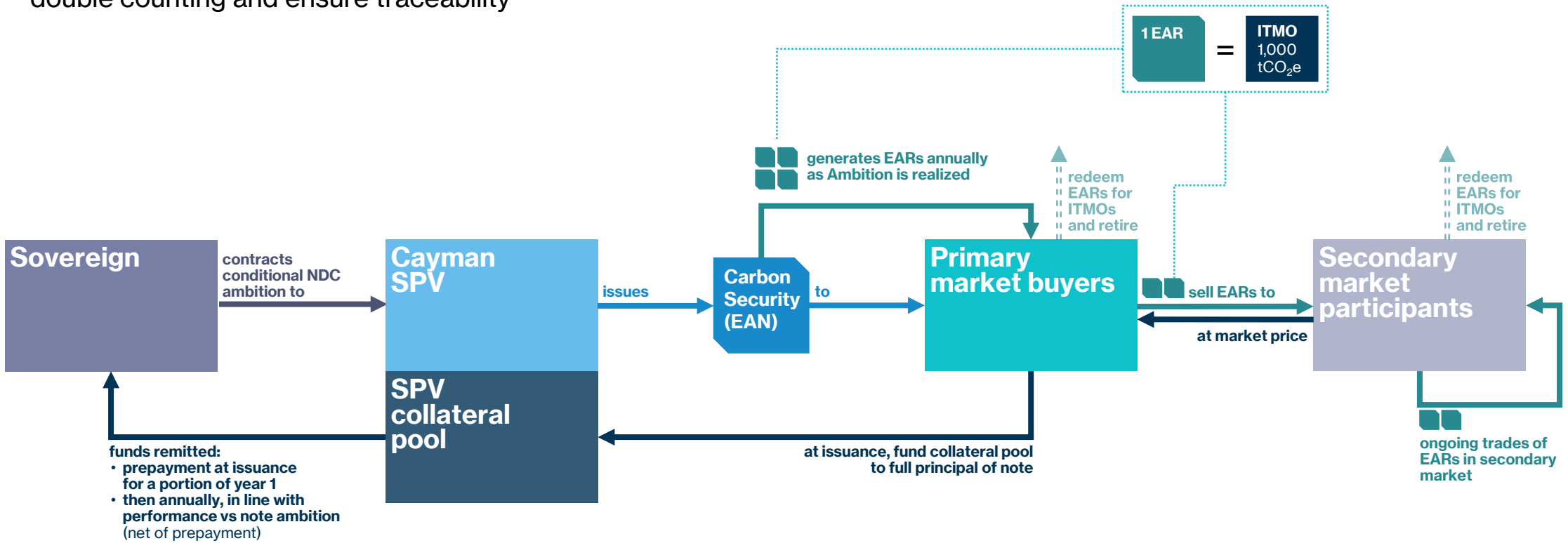


Confidential information. Not for redistribution.

Sovereign Carbon Securities make the complex simple

Proprietary platform (**SADAR™**) assigns a unique identifier (**LUCID™**) similar to a CUSIP for carbon, aggregating the reference data needed to remove double counting and ensure traceability

Powered by SADAR NCM



LACONIC

Confidential information. Not for redistribution.

Expansion and Growth

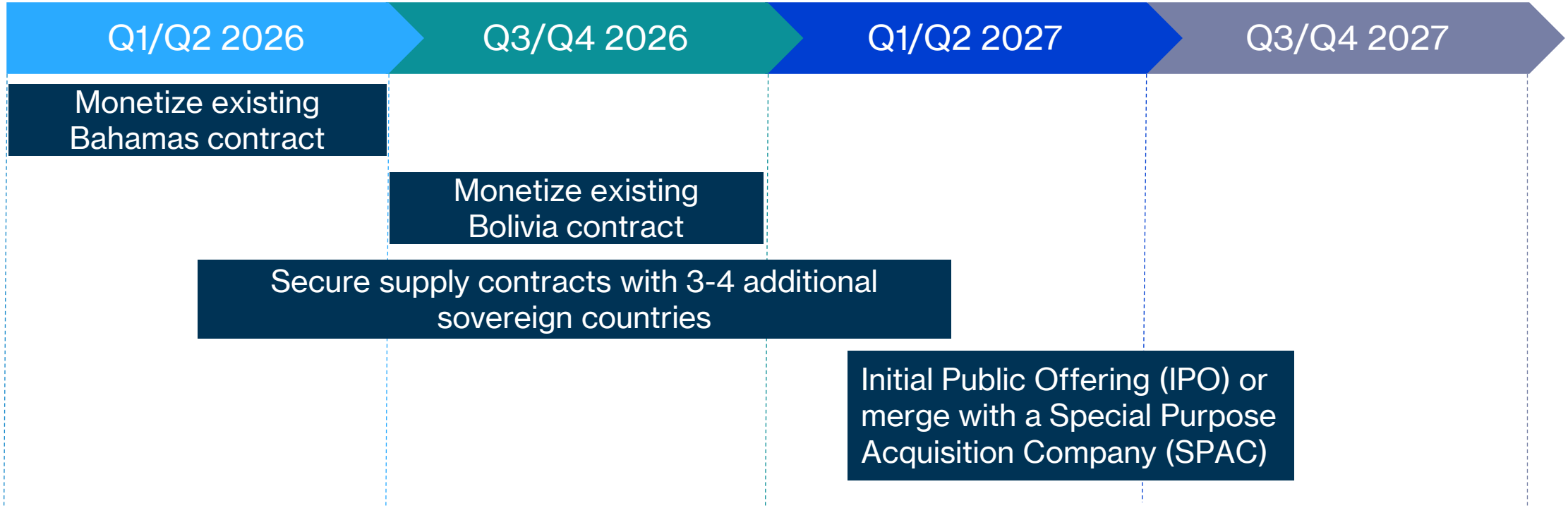
Confidential information. Not for redistribution.

Ability to rapidly scale with many natural capital rich countries

	Country	Comment	Natural Assets
Green Carbon	**The Plurinational State of Bolivia** (under contract) 	Second largest forestry emitter in the world	**Forest**: Over 50 million hectares
	Brazil (MOU received) 	Reapplying learnings from Bolivia together they equal **68% of amazon rainforest**	**Forest**: Upwards of 500 million hectares **Seagrass**: Upwards of 20,000 hectares
Blue Carbon	**The Commonwealth of The Bahamas** (under contract) 	World's largest seagrass meadow	**Forest**: Minimal **Seagrass**: Approximately 66,000-92,000 km²
	Alliance of Small Island States (AOSIS) (Prospective Partners) 	Since 1990, AOSIS has represent the interests of the **39 small island and low-lying coastal developing states** in international climate change, sustainable development negotiations and processes.	**16** Caribbean Nations (including The Commonwealth of The Bahamas), **14** Pacific Island Nations, & **9** nations from the African, Indian oceans, and South China Sea (AIS). This alliance represents abundant natural capital.
Blended	**Mexico** (Prospective Partner) 	With extensive forests, coastlines, and ambitious NDC goals, the country is well-positioned to leverage Laconic's blue and green carbon expertise to generate Sovereign Carbon Securities (SCS).	**Forest**: Up to 65 million hectares **Seagrass**: Coastal coverage (Gulf/Caribbean)
	Indonesia (Prospective Partner) 	With abundant forests, coastlines and ambitious NDC goals, Laconic's blue and green carbon expertise can be applied in the country to generate SCS	**Forest**: ~93.8 million hectares **Seagrass**: Ranges from ~150,700 hectares to ~800,000 hectares

Confidential information. Not for redistribution.

Laconic's Pathway to a successful IPO



- ✓ **Create the market** - build liquidity and confidence in **Sovereign Carbon Securities (SCS)** as financial assets
- ✓ **Scale the market** - leverage our global software platform (SADAR) to scale additional sovereign partnerships
- ✓ **Embed LUCID** as the de facto financial identifier for tracking and tracing carbon at the country level (i.e. CUSIP for carbon)

Confidential information. Not for redistribution.

Summary

- Laconic is a fintech company providing the global technology platform **(SADAR™)** that enables **sovereign nations** and **institutions** to meet their net-zero commitments.
- Through **Sovereign Carbon Securities (SCS)**, Laconic bridges the carbon markets with traditional financial infrastructure – transforming verified climate assets into investable instruments.
- By standardizing and transforming carbon data, SCS enables participation from **major financial institutions** and **global banks**, leveraging existing market infrastructure for **clearing, settlement, and custody**.
- Laconic's framework monetizes conservation, rewarding carbon sequestration over extractive land use.

Confidential information. Not for redistribution.

Contact Us

investor.relations@laconicglobal.com

Important disclaimers and disclosures

Disclaimers

This presentation (the "Presentation") is being provided by Laconic Development LLC (the "Program Sponsor") on a confidential basis to you for informational and discussion purposes only regarding Sovereign Carbon Securities (the "Instrument"). This Presentation does not constitute an offer to sell or a solicitation of an offer to purchase any investment or any securities. Any offer or solicitation of an offer to purchase any investment or any securities will only be made pursuant to definitive offering documents for the Instrument (the "Offering Materials"), which will be made available only to Qualified Institutional Buyers ("QIBs") as defined under Rule 144A of the U.S. Securities Act of 1933, as amended, and to non-U.S. persons in compliance with Regulation S. The information contained herein is qualified in its entirety by reference to the Offering Materials, which will contain information about the investment objective, terms and conditions of an investment in the Instrument, tax information, and risk disclosures that are important to any investment decision regarding an investment in the Instrument and which should be read carefully prior to an investment in the Instrument. Investments in the Instrument are speculative and involve a high degree of risk and potential conflicts of interest described in the Offering Materials. There is no guarantee that the Instrument will meet any investment objective and investors in the Instrument risk losing all or part of their investment in the Instrument. All information contained in this Presentation is preliminary, subject to revision and the information set forth in this Presentation does not purport to be complete.

There can be no assurance that the Instrument will be able to obtain returns comparable to the returns of the investment descriptions or achieve its objectives in the manner indicated. All opinions, estimates and forecasts of future performance are provided for informational purposes only, and based on information as of the date of this Presentation (unless an earlier date has been specified), and are subject to change. The inclusion of estimated or projected figures should not be regarded as an indication that such figures may be a reliable prediction of future events and such figures should not be relied upon by investors. There can be no assurance that the estimates or projections will be met or that investor capital will not be lost. Actual results may differ materially. Past performance is not necessarily indicative or a guarantee of future results.

This Presentation does not constitute investment advice and is not intended to be relied upon as the basis for an investment decision, and is not, and should not be assumed to be, complete. Prospective investors should make their own investigations and evaluations of the information contained herein. The information contained herein does not take into account the particular investment objectives or financial circumstances of any specific person or entity who may receive it. Each prospective investor should consult its own attorney, business adviser and tax adviser as to legal, business, tax, and related matters concerning the information contained herein and such offering.

Except where otherwise indicated herein, the information provided herein is based on matters as they exist as of the date of preparation and not as of any future date and will not be updated or otherwise revised to reflect information that subsequently becomes available, or circumstances existing or changes occurring after the date of preparation. Certain of the information contained herein, particularly in respect of market data, economic and other forecasts, and performance data, is from third-party sources. The inclusion of any third-party firm and/or company names, brands, and/or logos does not imply any affiliation with these firms or companies. None of these firms or companies have endorsed the Instrument or any entities or personnel.

Certain information contained in this Presentation constitutes "forward-looking statements," which can be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "anticipate," "target," "project," "estimate," "intend," "continue" or "believe," or the negatives thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events or results or the actual performance of the Instrument may differ materially from those reflected or contemplated in such forward-looking statements. Prospective investors in the Instrument should not rely on these forward-looking statements in deciding whether to invest in the Instrument.

Projected performance is not necessarily indicative of future results, and there can be no assurance that the Instrument will achieve comparable results to those presented herein, or that the returns generated by the Instrument will equal or exceed any projected returns presented herein. Any estimated future returns and revenue information set forth herein (the "Projections") are hypothetical and do not constitute a forecast. They have been prepared based on the program sponsor's view in relation to future events and various estimations and assumptions made by the program sponsor, including estimations and assumptions about events that have not yet occurred. Such estimations and assumptions may require modification as additional information becomes available and as economic and market developments warrant. Any such modification could be either favorable or adverse.

The recipients of this Presentation acknowledge and agree that it may contain material, non-public information, and that the United States securities laws prohibit any person who has material, non-public information about an issuer or securities from purchasing or selling securities of such issuer or from communicating such information to any other person.

Each recipient further agrees that it will (i) not copy, reproduce, or distribute this Presentation, in whole or in part, to any person or entity (including any employee of the recipient other than an employee directly involved in evaluating an investment in the Instrument) without the prior written consent of the Program Sponsor; (ii) keep permanently confidential all information contained herein that is not already public; and (iii) use this presentation solely for the purpose set forth in the first paragraph above. Except as otherwise provided in a written agreement between the recipient of this Presentation and the Program Sponsor, if the recipient receives a request under any applicable public disclosure law to provide, copy or allow inspection of this Presentation or other information regarding or otherwise relating to the Instrument, the recipient agrees to (a) provide prompt notice of the request to the Program Sponsor, as applicable, (b) assert all applicable exemptions available under law and (c) cooperate with the Program Sponsor, as applicable, to seek to prevent disclosure or to obtain a protective order of other assurance that the information regarding or otherwise relating to the Instrument will be accorded confidential treatment.

Securities Law Disclosures

The securities described herein have not been registered under the U.S. Securities Act of 1933, as amended (the "Securities Act"), or any state or non-U.S. securities laws. They may not be **offered, sold, pledged, or otherwise transferred** except (i) **to a QIB in reliance on Rule 144A**, (ii) **pursuant to Regulation S** (for non-U.S. persons outside the U.S.), or (iii) **under another exemption from registration** in compliance with applicable securities laws. No governmental or self-regulatory authority has passed on the merits of this offering or the adequacy of the information contained herein, and any representation to the contrary is unlawful.

Confidential information. Not for redistribution.

Appendix F.
Bibliography: methodologies and science underlying SADAR™ NCM

UNFCCC documents

UNFCCC Secretariat, 2024: **Article 6.2 - Reference manual for the accounting, reporting and review of cooperative approaches**
https://unfccc.int/documents/634354

UNFCCC Secretariat, 2022: **Reference Manual for the Enhanced Transparency Framework under the Paris Agreement: understanding the enhanced transparency framework and its linkages**
https://unfccc.int/sites/default/files/resource/v2_ETFreferencemanual.pdf

UNFCCC Secretariat, 2023: **Preparing for implementation of the enhanced transparency framework under the Paris Agreement, 2nd ed.**
https://unfccc.int/sites/default/files/resource/ETF%20Handbook-second%20edition%2023_final.pdf

Forest biomass estimation

Andersen LE, Doyle AS, del Granado S, Ledezma JC, Medinaceli A, et al. (2016): **Net Carbon Emissions from Deforestation in Bolivia during 1990-2000 and 2000-2010: Results from a Carbon Bookkeeping Model.** PLOS ONE 11(3): e0151241.
https://doi.org/10.1371/journal.pone.0151241

IPCC, 2019: **Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems** [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)].
https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf

Above-ground biomass estimation

Jin, S., Su, Y., Song, S., Xu, K., Hu, T., Yang, Q., ... & Guo, Q. (2020). **Non-destructive estimation of field maize biomass using terrestrial LIDAR: an evaluation from plot level to individual leaf level.** Plant Methods, 16, 1-19
https://plantmethods.biomedcentral.com/articles/10.1186/s13007-020-00613-5

Nakano, S., Homma, K., & Shiraiwa, T. (2021). **Modeling biomass and yield production based on nitrogen accumulation in soybean grown in upland fields converted from paddy fields in Japan.** Plant Production Science, 24(4), 440-453.
https://www.tandfonline.com/doi/full/10.1080/1343943X.2021.1881409

Lin, T. S., Song, Y., Lawrence, P., Kheshgi, H. S., & Jain, A. K. (2021). **Worldwide maize and soybean yield response to environmental and management factors over the 20th and 21st centuries.** Journal of Geophysical Research: Biogeosciences, 126(11), e2021JG006304.
https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2021JG006304

Dossa, Ekwe & Fernandes, Erick & Ezui, Kodjovi Senam. (2008). **Above- and belowground biomass, nutrient and carbon stocks contrasting an open-grown and a shaded coffee plantation.** Agroforestry Systems. 72. 103-115. 10.1007/s10457-007-9075-4.
via researchgate.net

Asigbaase, M., Dawoe, E., Lomax, B. H., & Sjogersten, S. (2021). **Biomass and carbon stocks of organic and conventional cocoa agroforests, Ghana.** Agriculture, Ecosystems & Environment, 306, 107192.
https://doi.org/10.1016/j.agee.2020.107192

López-Gutiérrez, J. et al. (2023). **Carbon stocks and cocoa yields in agroforestry systems of Central America.** Agroforestry and Sustainable Agricultural Production (pp. 95-112). MDPI.
https://doi.org/10.1016/j.agee.2020.107192

Toneli CAZ, Scardua FP, Martins RdCC, Matricardi EAT, Ribeiro A, Ferraz Filho AC (2024). **Aerial Biomass Estimation in the Cerrado Biome Using Canopy Height Data.** Forests. 15(3):507.
https://doi.org/10.3390/f15030507

Cerrillo, R. Mª Navarro, and P. Blanco Oyonarte. **Estimation of above-ground biomass in shrubland ecosystems of southern Spain.** Forest Systems 15.2 (2006): 197-207
https://fs.revistas.csic.es/index.php/fs/article/view/964

Ordóñez, R. A., Archontoulis, S. V., Martinez-Feria, R., Hatfield, J. L., Wright, E. E., & Castellano, M. J. (2020). **Root to shoot and carbon to nitrogen ratios of maize and soybean crops in the US Midwest.** European Journal of Agronomy, 120, 126130.
https://doi.org/10.1016/j.eja.2020.126130

Lopez, G., Ahmadi, S. H., Amelung, W., Athmann, M., Ewert, F., Gaiser, T., ... & Seidel, S. J. (2023). **Nutrient deficiency effects on root architecture and root-to-shoot ratio in arable crops.** Frontiers in plant science, 13, 1067498.
https://doi.org/10.3389/fpls.2022.1067498

Cai, Z. Q., & Gao, Q. (2020). **Comparative physiological and biochemical mechanisms of salt tolerance in five contrasting highland quinoa cultivars.** BMC plant biology, 20, 1-15.
https://link.springer.com/article/10.1186/S12870-020-2279-8

Donkor, E., Adu-Bredu, S., Jnr, E. M. O., Andam-Akorful, S. A., & Mohammed, Y. (2023). **Biomass Estimation Models for Cocoa (Theobroma cacao) Plantations in Ghana, West Africa.** Open Journal of Applied Sciences, 13(9), 1588-1618.
https://www.scirp.org/journal/paperinformation?paperid=128087

Tschora, H., & Cherubini, F. (2020). **Co-benefits and trade-offs of agroforestry for climate change mitigation and other sustainability goals in West Africa.** Global Ecology and Conservation, 22, e00919.
https://doi.org/10.1016/j.gecco.2020.e00919