



# An Investor's Perspective on Carbon Projects

1 Aug 2025



# Introduction

**GenZero** is an investment platform company focused on **accelerating decarbonisation globally**.

Founded by Temasek with an initial capital commitment of **S\$5 billion**, we seek to deliver **positive climate impact alongside long-term sustainable financial returns** by investing in opportunities with the potential to be nurtured into **impactful and scalable solutions**.





**POSITIVE  
CLIMATE  
IMPACT**



**LONG-TERM  
SUSTAINABLE  
FINANCIAL  
RETURNS**



# Investment Focus Areas

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## Nature-based Solutions



Protect and restore natural ecosystems

### Examples



Forestry



Sustainable agriculture



Community based projects

## Technology-based Solutions



Deep decarbonisation impact



Low-carbon materials



Carbon Capture, Utilisation and Storage (CCUS)



Advanced biofuels (e.g., SAF)

## Carbon Ecosystem Enablers



Effective, efficient, credible carbon markets ecosystem



Climate advisory services



Carbon infrastructure



MRV technologies

# GenZero has invested in a diversified global portfolio

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Broad range of climate solutions across geographies, project and carbon credit types:

## Americas



## Europe



## Africa



## Asia



Note: This list is non-exhaustive. Projects are at varying stages of development.

# The **Role** for Carbon Markets

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*Against global macroeconomic headwinds, carbon markets can unlock capital to enable commercial viability of climate projects*

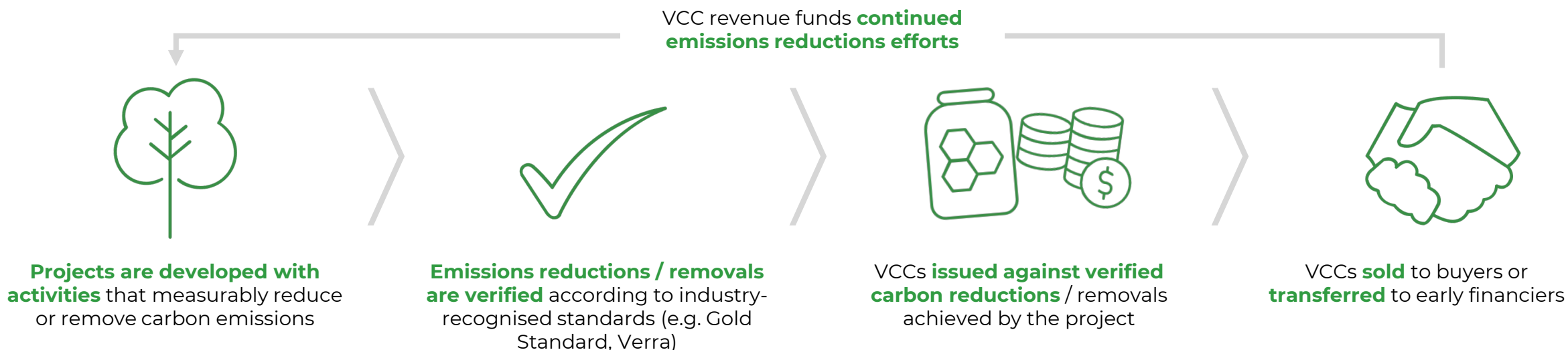
There is a gap in climate finance...

- **Significant financing gap** requires substantial investment by both public and private actors<sup>1</sup>
- With the trade frictions and macroeconomic headwinds, public investments into climate **may be challenged in the short to medium term**
- **Traditional institutional financing** can help,<sup>2</sup> alongside existing pools of concessionary and philanthropic funding

... that can be addressed by market-based instruments

- Market-based instruments can help allocate capital **with reduced fiscal intervention or burden**
- With appropriate safeguards, **high-integrity** verified carbon credits (VCCs) can **help bridge the financing gap**
- VCCs that satisfy integrity criteria **can serve voluntary and compliance markets**. They can be used for corresponding adjustments under Art 6.2, and by corporates to satisfy compliance obligations

The VCC Value Chain



<sup>1</sup> The 6<sup>th</sup> IPCC Synthesis Report estimates that the annual financing requirements for 2020 to 2030 is a factor of 3 – 6 more than current levels

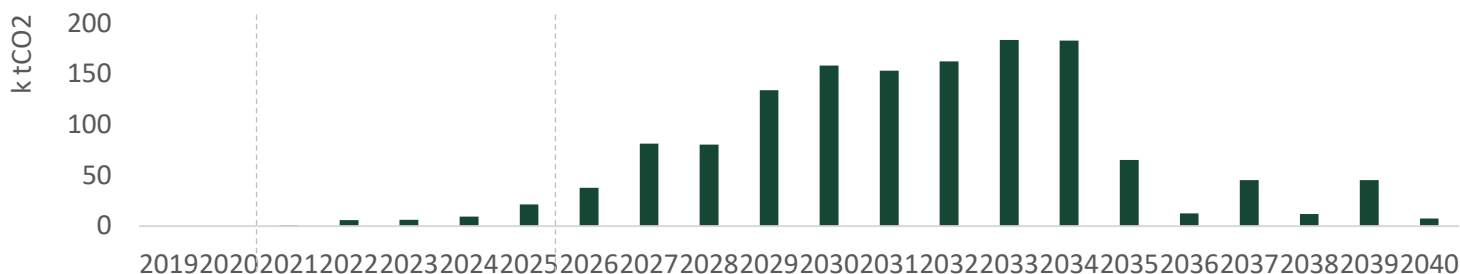
<sup>2</sup> The report also estimates that there is sufficient global capital and liquidity to bridge the financing gap, if barriers, risks, and uncertainty around climate financing can be addressed

# Profile of a Hypothetical VCC Project

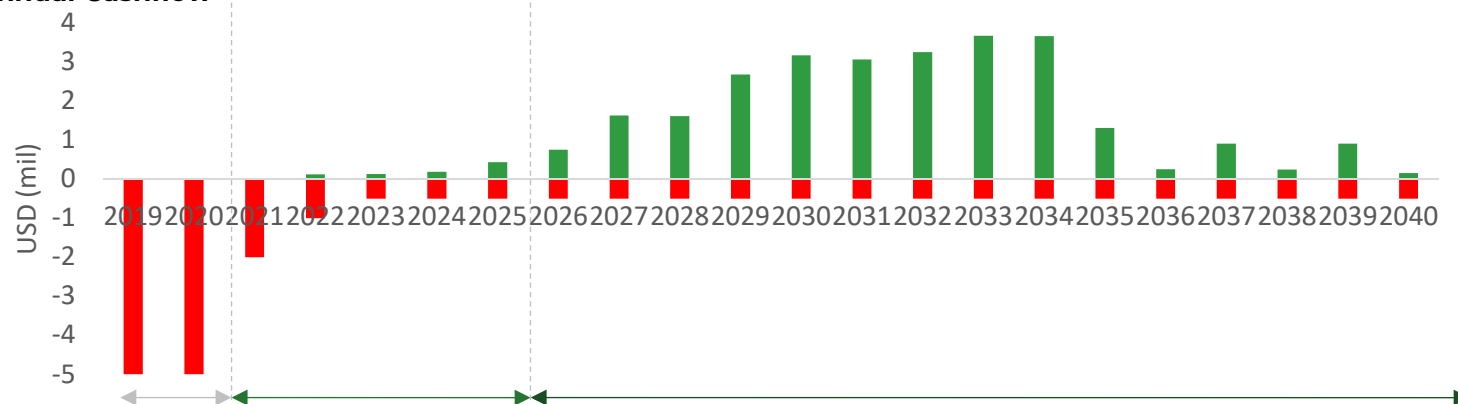
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Long investment horizons present a challenging returns profiles to investors based on traditional metrics. Legal and regulatory certainty will help with bankability of long term projects

## Credit generation profile



## Annual Cashflow



### 1. Preparation phase

Investment made to acquire land and seedlings, undertake feasibility studies

### 2. Planting and growth

>1 year period where planting happens and time for plants to grow

### 3. Maintenance and MRV

Plants mature and generate credits. Returns from investment begin to materialise  
After plants mature (~2035), additional carbon stored becomes marginal

## Illustration of Hypothetical VCC Project

- Afforestation, reforestation, and revegetation project to **restore 1003 ha of mangroves** (hypothetical example based on VCS2972)
- Project is made with **long investment horizon (>20 years)**. Project duration expected to be >40 years due to ICVCM CCP requirements
- Project is **loss-making in first 5 – 7 years** due to initial investment; only starts to turn a **profit from year 8** (i.e. 2026)
- Plants take **1 – 5 years to grow** (i.e. no credits generated); common for projects incur losses for many years
- **Breakeven point comes at ~year 15** (i.e. 2033)
- **Long investment horizon**: Long gestation periods (e.g. to restore habitats) and long monitoring periods (for permanence) present **challenging risk-return profiles** to investors

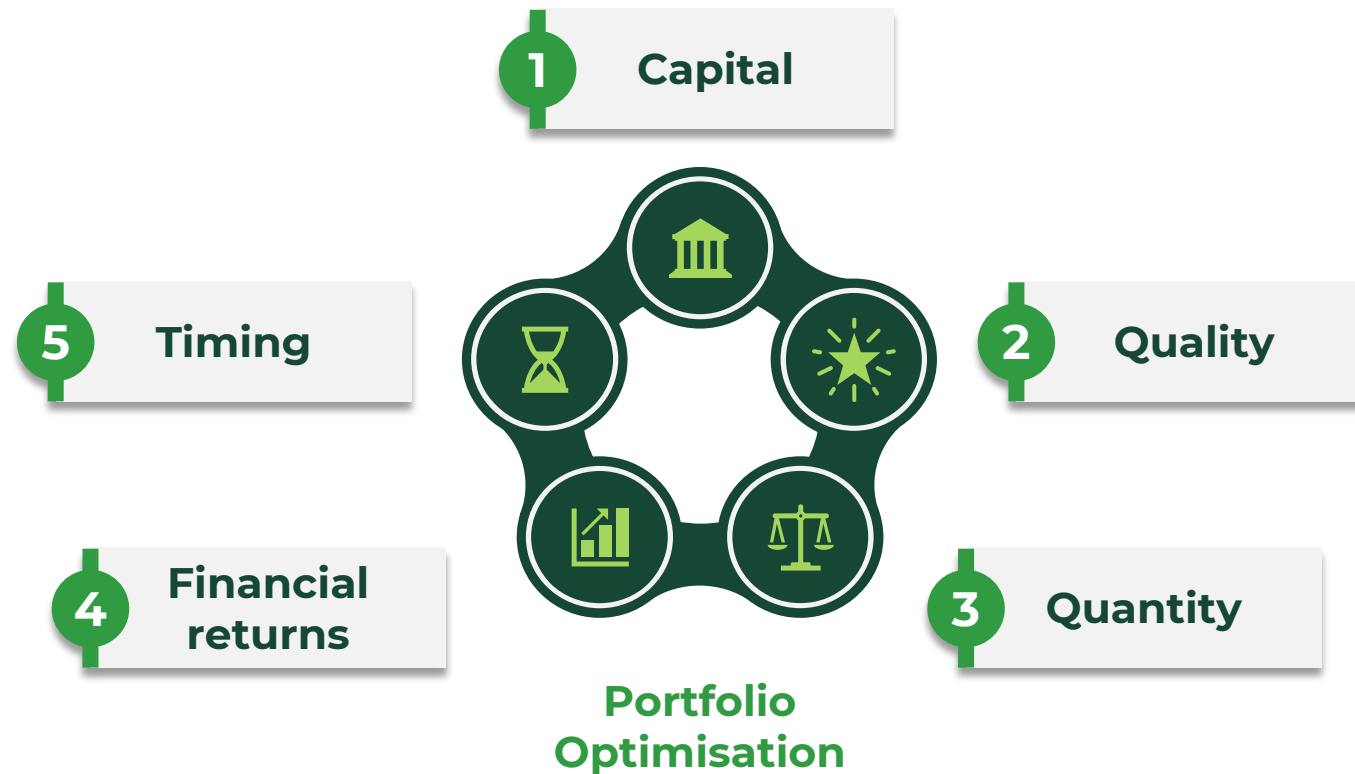
The VCC Value Chain

# Portfolio construction is **guided by 5 key considerations**

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Given the **constraint of available capital**, there are trade-offs between **quality and quantity** of climate impact, while safeguarding the **financial returns** of our portfolio, and managing the **timing** of achieving climate impact and returns

*Portfolio construction needs to carefully navigate nuances and complexity of the multi-dimensional trade-offs and risks involved*





# Short list of some challenges for Climate Finance

*Legal, Regulatory and Policy Framework are key considerations in assessing bankability of a carbon project*

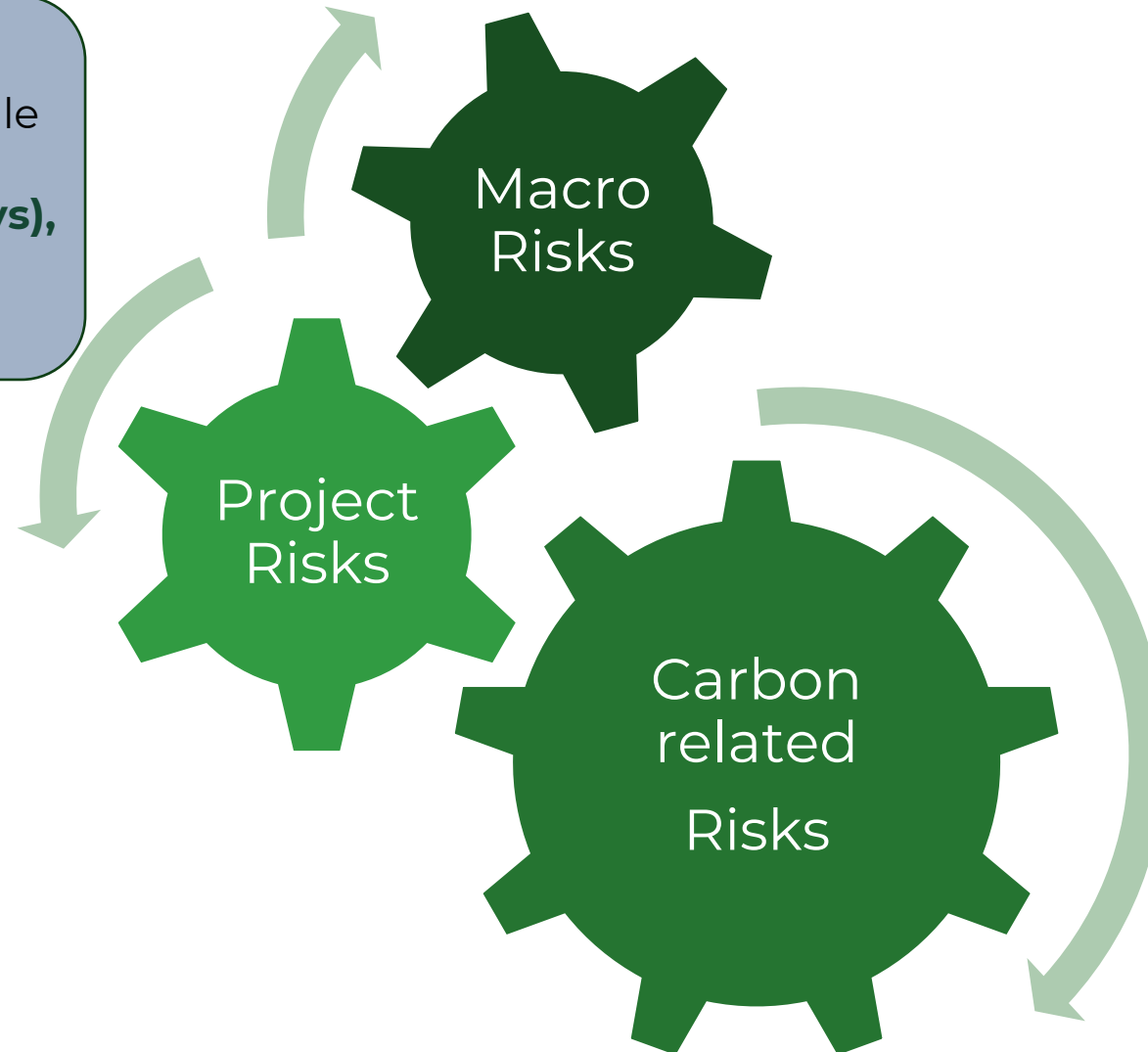
## Macro Risks

- Bankability: Economics, Scale
- **Legal Frameworks and approvals, timelines (delays), fees - Clarity, Certainty**
- Greenwashing claims

## Project Risks

- Land Tenure
- Delays
- Compliance
- Supply/Demand
- Continuity of project
- Supply chain\*
- IP\*
- Technological obsolescence\*
- Market Demand\*
- Integration with existing system\*

*\* For Tech Based Solutions*



## Carbon-related Risks

- Carbon Price uncertainty
- Demand Uncertainty
- **Carbon Framework**
- **Corresponding adjustment mechanism and process, reversibility of authorisation**
- **Clarity of eligible activities for Art 6.2**
- **Expropriation of carbon rights**
- Methodology
- Reversibility
- Measurement & Verification

# GenZero applies a **robust screening criteria** to **identify high-quality carbon projects**

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## Project Considerations

- Environmental integrity (e.g. additionality, permanence, robust quantification)
- Sustainable development and other co-benefits
- Methodology robustness and risks



## Partner Considerations

- Track record and experience
- Familiarity with project type
- Ability to execute
- Relationships with key stakeholders (e.g. government, local communities)



## Host Country's Policies

- Climate targets and policies (e.g. NDC, carbon tax)
- Environmental and human rights track record
- Political and business environment stability



## Carbon Market Readiness

- VCM projects track record
- Carbon Market Policies
- Article 6 readiness
- MRV infrastructure

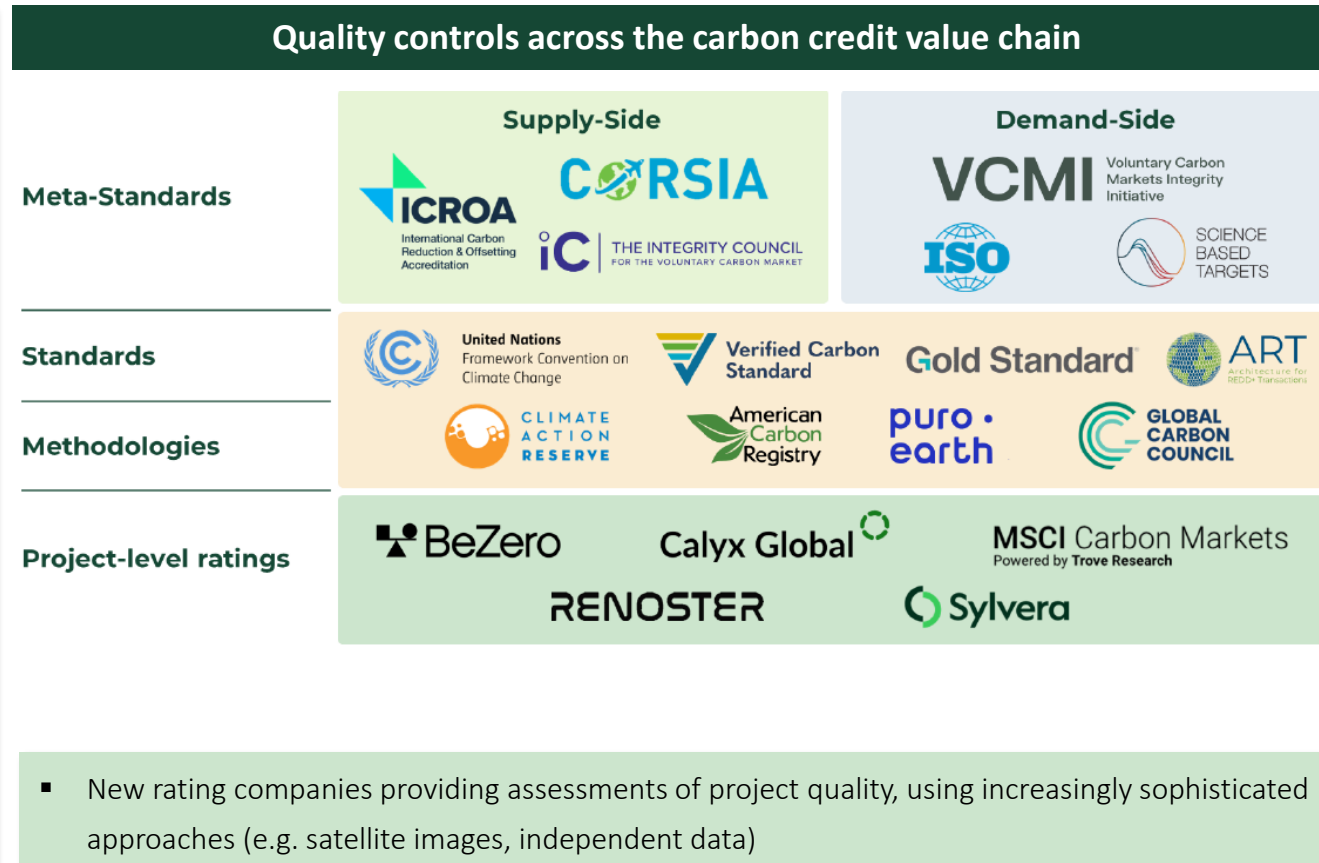
*NDC: Nationally-Determined Contribution  
VCM: Voluntary Carbon Market  
MRV: Monitoring, Reporting, Verification*



# International integrity standards are being developed

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- **ICVCM** introduced Core Carbon Principles and Assessment Framework in July 2023.
- Standards are adjusting to meet ICVCM CCPs.
- CCP methodologies announced (e.g. ARR, REDD+, landfill gas), more being assessed
- **CORSIA** reviewing eligible standards and methodologies for Phase 1.
- ACR, ART-TREES, Verra, Gold Standard are eligible.



- **VCMi** introduced Claims Code of Practice and Scope 3 flexibility guidance in 2023; Revisions underway
- **SBTi** introduced BVCM report and guidance; reviewing standard
- **ISO** developing a net zero standard
- Carbon credit standards introducing new guidelines to raise integrity.
- **Verra** introduced Standard V4.7 with new permanence requirements.
- **Article 6.4** operationalisation begun

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Our Investment Approach

*NDC: Nationally-Determined Contribution  
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# Thoughtful regulation is key to attracting investment

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Regulation by seller countries critical to provide investment certainty and conducive business environment, while ensuring host country and key stakeholders benefit from projects

## Broad principles for policy

**Regulatory certainty** can catalyse investment by providing:

- Consistency and certainty of **application, principles**
- **Process** clarity
- Clear '**whitelist**'/'**redlist**'

**Host country can benefit** from participating in carbon markets:

- Meet **NDC** and climate targets
- Generate **revenue**
- Create **benefits for local communities** (e.g. employment)
- Enable **environmental protection** (e.g. reduce air pollution)

*Key to balance between interests of host country and key stakeholders (e.g. local communities, project developers)*

# Thank you!

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