

Boosting Voluntary Climate Action in Aotearoa New Zealand

Motu Research Round Table

Catherine Leining, Policy Fellow

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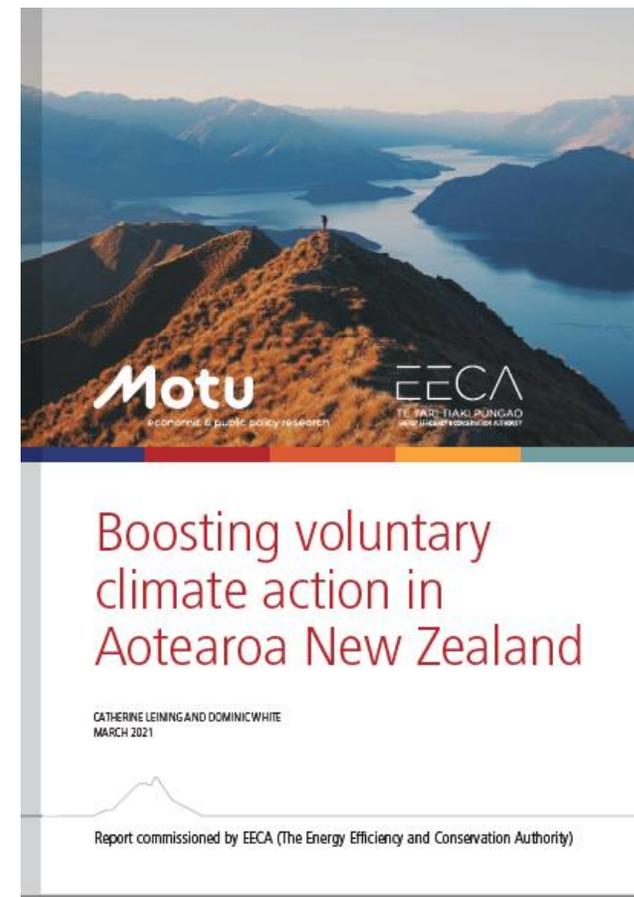
Acknowledgments

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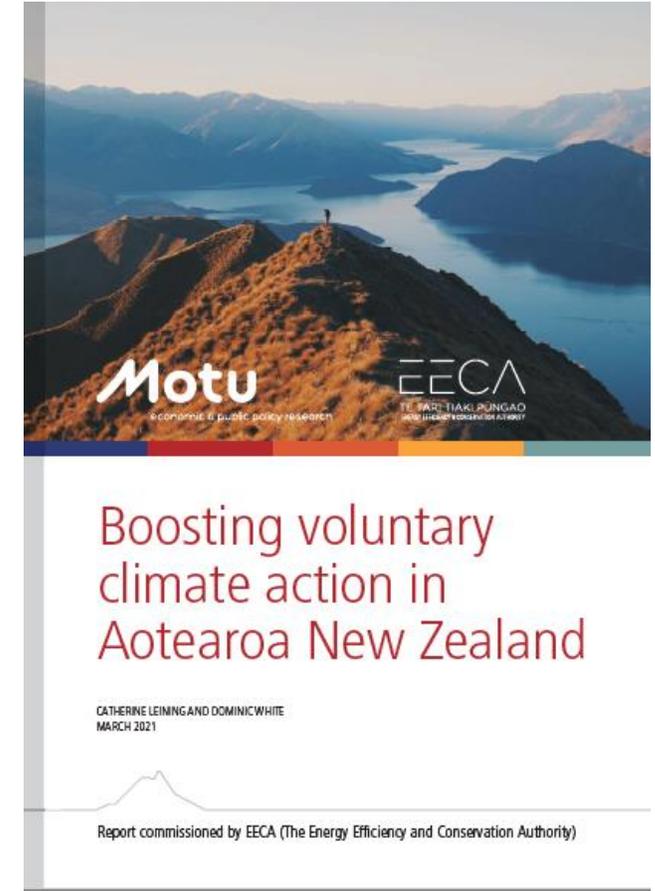
Our work was informed by cross-sector participants in Motu's Voluntary Mitigation Dialogue in 2020.

The paper does not represent the views of EECA or other government departments, dialogue participants or the New Zealand Climate Change Commission. No endorsement is implied.



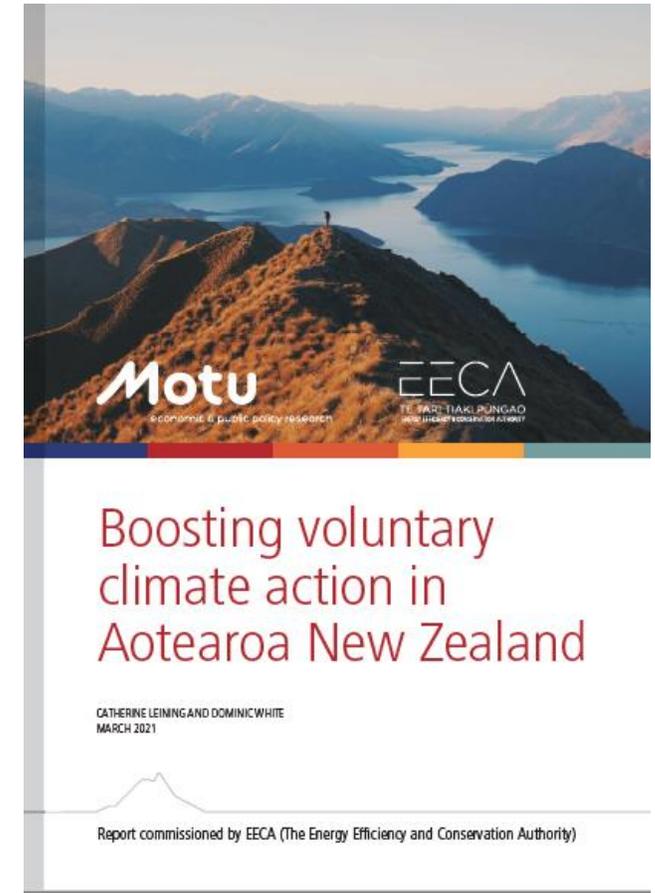
Key messages (1)

1. Aotearoa faces a gap to meet its Paris target – and the world faces a collective gap beyond Paris targets to prevent dangerous climate change.
2. Organisations are increasingly motivated – and pressured – to do extra to help but past approaches to voluntary offsetting won't work under the Paris Agreement and domestic policies.
3. We are proposing ambitious targets for organisations' own emissions and two tracks for recognising external voluntary mitigation that helps Aotearoa meet its Paris target – or mitigate beyond the Paris target.



Key messages (2)

4. This proposal would incentivise voluntary climate action and better enable credible, transparent and marketable claims – with or without corresponding adjustments by the Government under our Paris target.
5. The framework could accommodate the Carbon Neutral Government Programme.
6. Further market testing and policy development will be needed to advance the concept.



Presentation overview

1. What is voluntary mitigation?
2. Why crediting voluntary mitigation needs to change
3. The evolving international context
4. A proposal for a two-track solution
5. Practical examples for how this could work
6. Making this happen

1. What is voluntary mitigation?

What is voluntary mitigation?



Compliance mitigation

Actions to reduce/remove GHGs as required by government

Liabilities apply to designated entities within supply chains

Compliance carbon markets are controlled under legislation and unit supply and prices align with government targets



Voluntary mitigation

Actions to reduce/remove GHGs beyond government requirements

Participation is voluntary and can happen anywhere within supply chains

Voluntary carbon markets are driven by participant supply/demand and guided by market standards rather than laws (subject to fair trade requirements)

What is organisational carbon neutrality?

The current approach:

1. Measure own emissions
2. Reduce own emissions
3. Offset residual emissions

Offsets must be:

1. transparent
2. real, measurable and verified
3. **additional**
4. **not double counted**
5. address leakage
6. permanent

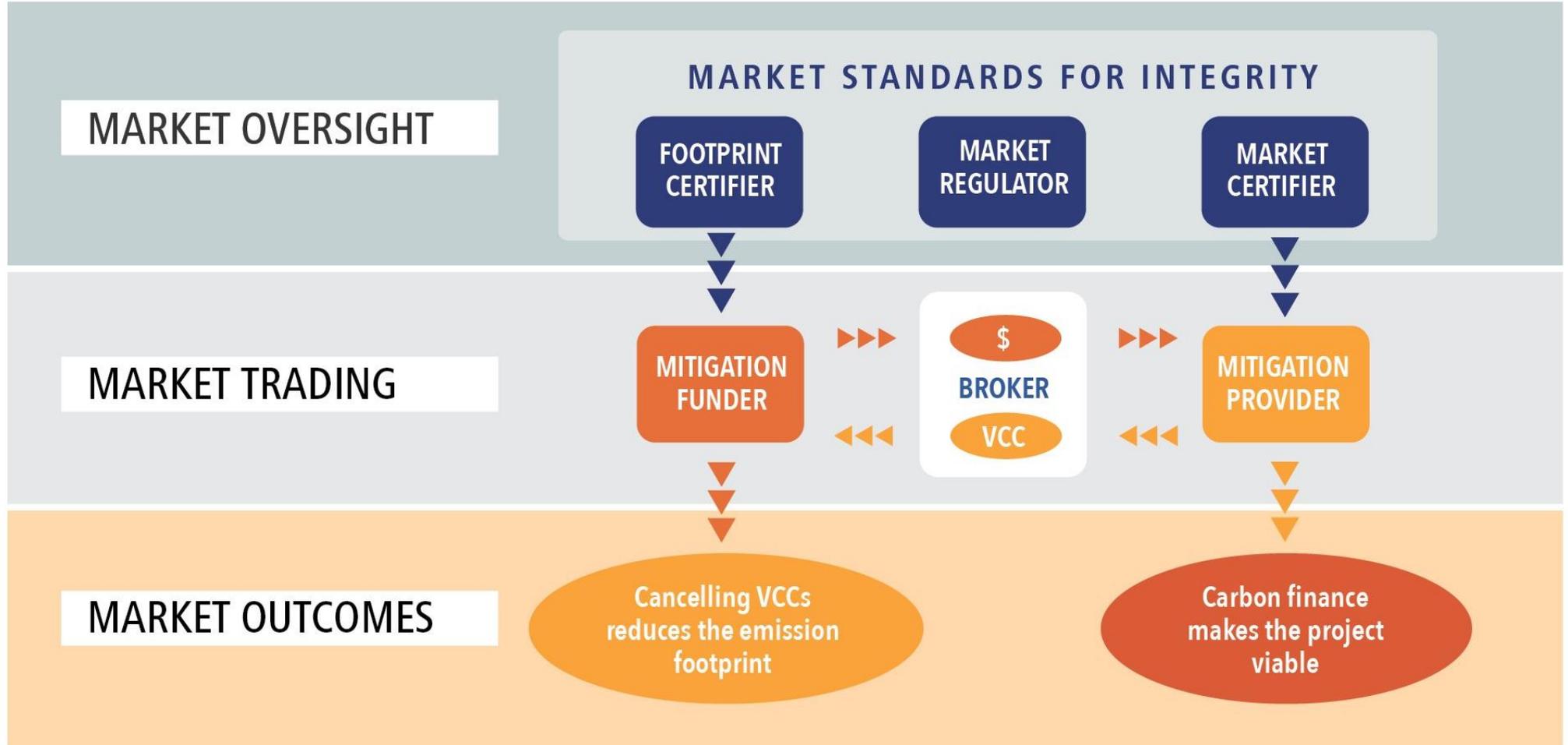


(MfE 2020)

Voluntary mitigation takes many forms

- Reducing one's own emissions
- Partnering in or otherwise supporting mitigation projects
- Marketing low-emission goods and services
- Buying and cancelling offsets through the voluntary carbon market

How the voluntary carbon market works



Note: \$ = carbon finance; VCC = voluntary carbon credit.

Benefits of voluntary mitigation

Organisations

- Demonstrating environmental and social responsibility and leadership
- Increasing market advantage

Aotearoa

- Boosting innovation and investment
- Redistributing mitigation costs for a just transition
- Educating people and shifting social norms

Growing risk drivers for voluntary mitigation



Climate-risk disclosure requirements for financing, investment and insurance



Social license to operate



Eco-labelling requirements



Supply chain requirements



More stringent emission prices and regulations



Consumer preferences

2. Why crediting voluntary mitigation needs to change

Change drivers for voluntary mitigation

1. Limitations of current offsetting
2. Different architecture of the Paris Agreement
3. Substantial accounting challenges.
 - Double counting by organisations and government
 - “Waterbed” (displacement) effects
 - Overlapping organisational GHG footprints

Current offsetting approaches have limitations

Inconsistent
accounting
boundaries

Obscuring own
emissions

Displacement of
gross emission
reductions by
forestry removals

Exclusion of co-
impacts

Limited
incentives to go
carbon negative

Demand exceeds
supply at large
scale

The Paris Agreement has different architecture

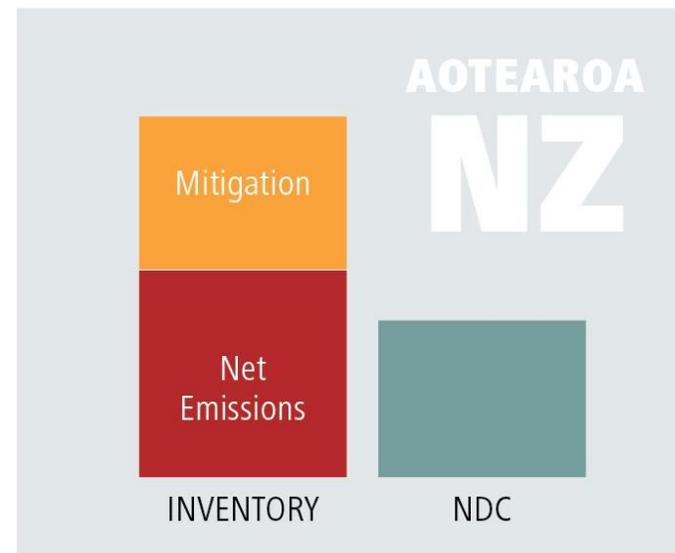
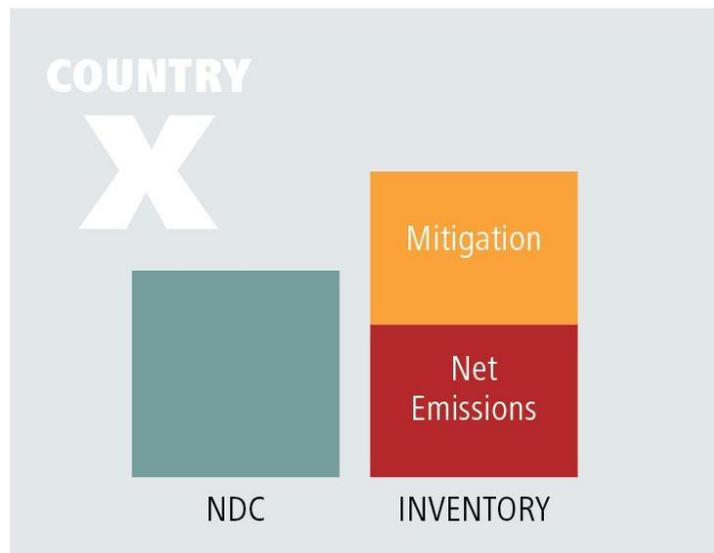
Kyoto model (2008 – 2020)

- Unit-based targets and projects
- Unit trading and cancellation enabled for organisations
- Unit cancellation boosted target ambition
- The voluntary market could avoid double counting; integrity required project additionality

Paris model (2021+)

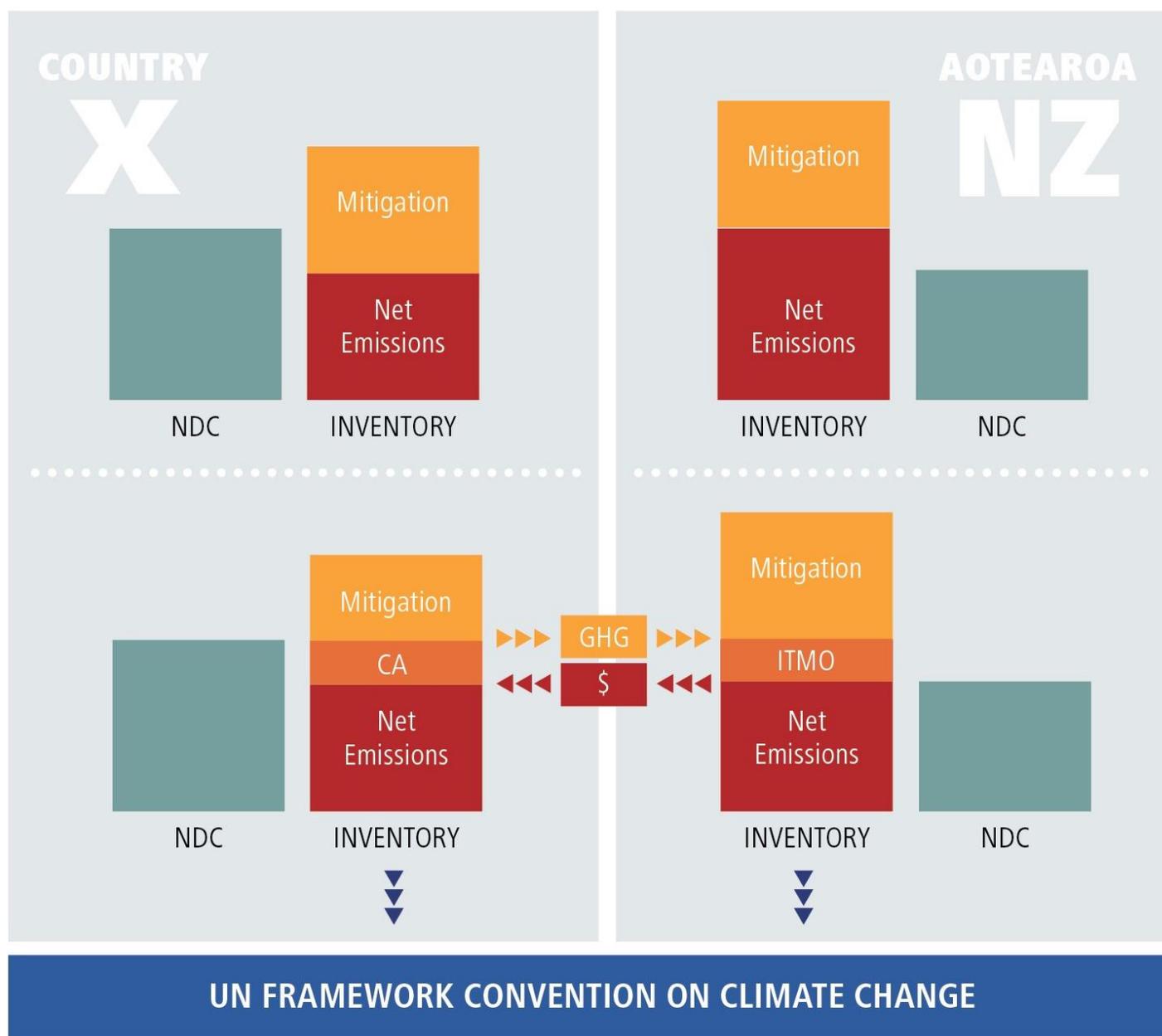
- Inventory-based targets
- Internationally transferred mitigation outcomes – limited to governments for now
- No way outside government to boost target ambition
- The voluntary market needs to rethink double counting and additionality

NDC accounting (under development)



Country X generates a mitigation surplus relative to its NDC, whereas NZ has a mitigation deficit.

NDC accounting (under development)



Country X generates a mitigation surplus relative to its NDC, whereas NZ has a mitigation deficit.

Country X sells the surplus mitigation to NZ as an Internationally Transferred Mitigation Outcome. NZ claims the mitigation, and Country X makes a Corresponding Adjustment.

Both countries meet their NDCs without double counting of traded mitigation.

Double counting by government

Project-based reductions will automatically be reflected in NZ's GHG inventory and counted by the government toward its Paris target unless they fall outside target accounting.

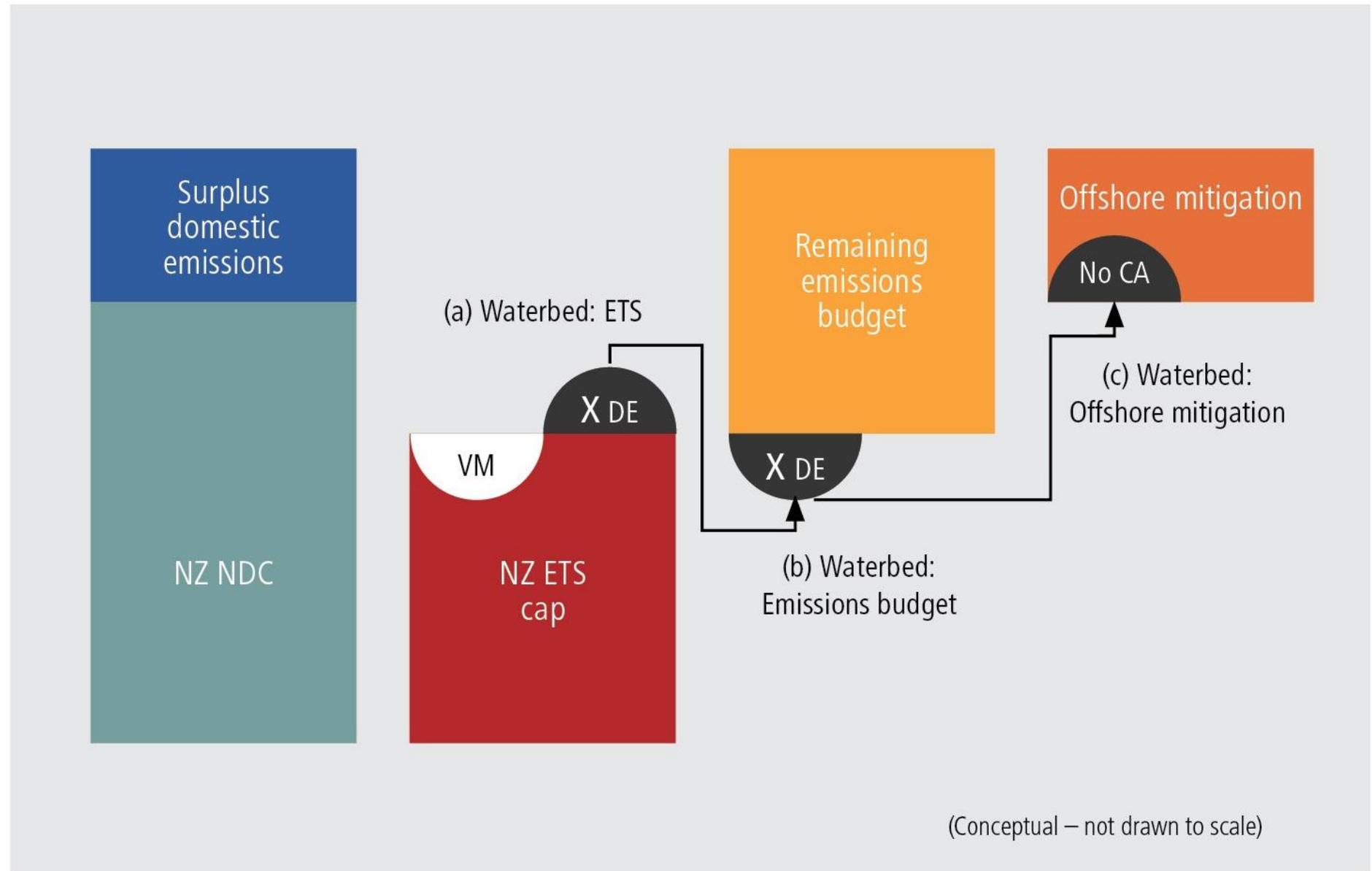
Current exclusions from the Paris target:

- Small-scale tree planting
- Soil carbon management
- Wetlands management
- Blue carbon

Waterbed effects

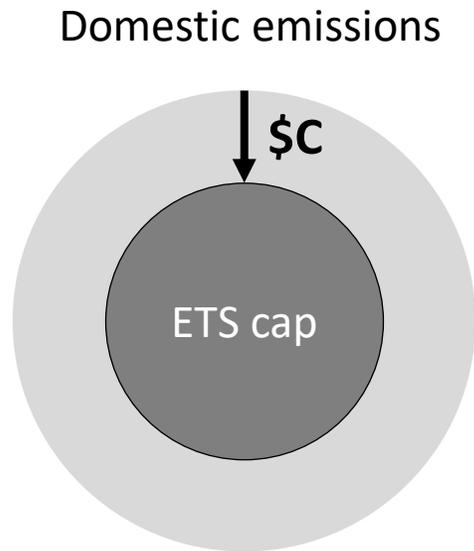
Complications:

- Cap adjustments
- Stockpiling NZUs
- Auction reserve price
- Cost containment reserve
- Forestry removals
- Possibility of not meeting the NDC



DE = displaced emissions
CA = corresponding adjustment

Interactions with the NZ ETS



Complying with the ETS and paying the ETS price do not neutralise emissions.

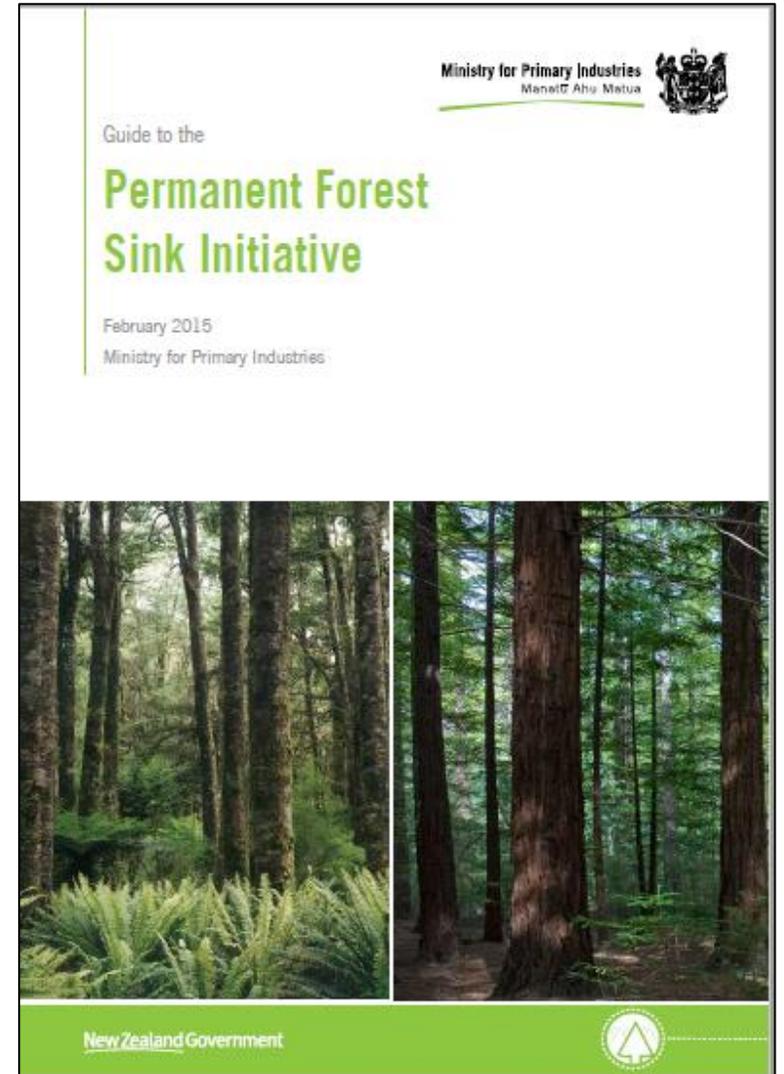
Voluntarily cancelling NZUs could trigger automatic supply feedbacks and will not change global climate outcomes without government adjustments (not enabled).

What was different in the past?

The Permanent Forest Sink Initiative issued units eligible for the NZ ETS or voluntary offsetting.

Voluntarily cancelling a PFSI unit (NZ AAU or NZU) made it harder for Aotearoa to meet its international target – preventing double counting by the Government.

The PFSI is merging into the NZ ETS and the Government's Kyoto Voluntary Cancellation Workflow is sunseting.



Organisational footprint boundaries



Scope 1

Direct emissions



Scope 2

Indirect emissions from
electricity, heat and steam



Scope 3

Other indirect emissions

Implications of organisational accounting

Organisations and governments count GHGs differently.

Organisational footprints double count supply chain emissions by design.

This has led to contradictory outcomes:

- An emitting organisation that also owns a forest can achieve carbon neutrality with double counting by the government. If it buys forestry offsets, those offsets cannot be double counted by the government.
- An organisation that reduces emissions within its supply chain can achieve carbon neutrality with double counting across the supply chain. If it buys external offsets, the reductions cannot be double counted by other entities.

Case study: bringing it all together

Company X provides funding to Greenhouse Y to replace a coal boiler with a biomass boiler fueled by farm waste. Greenhouse Y generates emission reductions that are independently verified and Company X claims offsets against its own operational emissions.

Additionality assessment must include the NZ ETS and other government incentives/policies.

Greenhouse Y reports emission reductions and Company X reports offsets. Both reduce their footprints. Other entities across both supply chains also report reduced footprints.

The government reports lower boiler emissions in its national GHG inventory.

Emission benefits will be displaced in the ETS unless the cap is adjusted downward.

Emission benefits will be displaced in non-ETS sectors unless the emissions budget is adjusted downward.

Emission benefits will be displaced by less offshore purchasing unless the NDC is adjusted downward.

3. The evolving international context

Can carbon-neutral offsets be double counted by organisations and governments?

Position	Initiative
Yes	International Carbon Reduction and Offset Alliance (ICROA)
No	Gold Standard (double counting accepted for carbon financing claims) GHG Management Institute/Stockholm Environment Institute
No position	Verra (label clearly)
Not (yet) decided	Task Force on Scaling Voluntary Mitigation (waiting on PA Art 6 negotiations) EDF/WWF/OkO Institut e.V. (considering)
Early development	Science Based Targets Initiative (net-zero target) ISO Carbon Neutral Standard
Replace offsetting with carbon financing/ contribution	Net Zero Initiative WWF/BCG

4. A proposal for a two-track solution



Key
assumptions

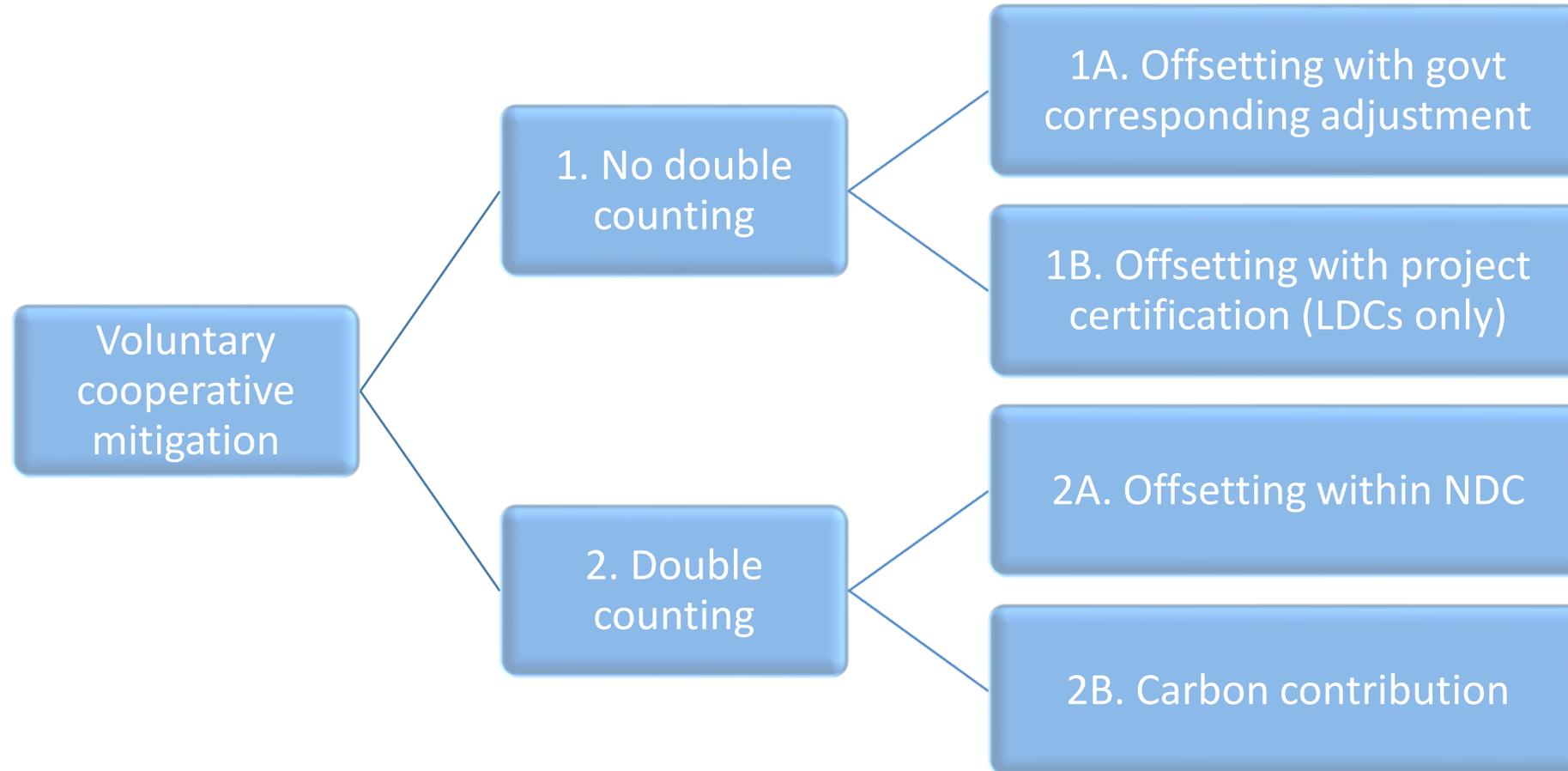
NZ will meet its Nationally Determined Contribution (NDC).

NZ will be able to bridge any NDC compliance gap with offshore mitigation.

Non-government actors will not be able to directly buy or sell Paris-compliant offshore mitigation for the foreseeable future.

The NZ ETS cap will be binding on net emissions.

Four tracks to choose from



Proposal

Organisation's own emissions

Internal mitigation targets (Scopes 1, 2 and 3) in line with the temperature goal of the Paris Agreement

Track 1: Carbon Horizon

Bridges the gap to **meet** Paris NDCs

Provides **certification or carbon credits** for external GHG mitigation beyond government requirements

Focuses on **shared claims** to mitigation

Track 2: Carbon Frontier

Supports global mitigation **beyond** Paris NDCs

Provides **carbon credits with corresponding adjustments** for external GHG mitigation beyond government requirements

Focuses on **single claims** to mitigation

Comparing claims

Carbon Horizon

- An organisation can claim a carbon neutral (or carbon positive) contribution to the NDC.
- Alternatively, an organisation can claim a carbon contribution to the NDC.
- Claims involve offsets or certification via a registry.
- No corresponding adjustments are required.

Carbon Frontier

- An organisation can claim a carbon neutral (or carbon positive) contribution to global emissions.
- Claims involve offsets via a registry.
- Offsets must have corresponding adjustments.

Implications

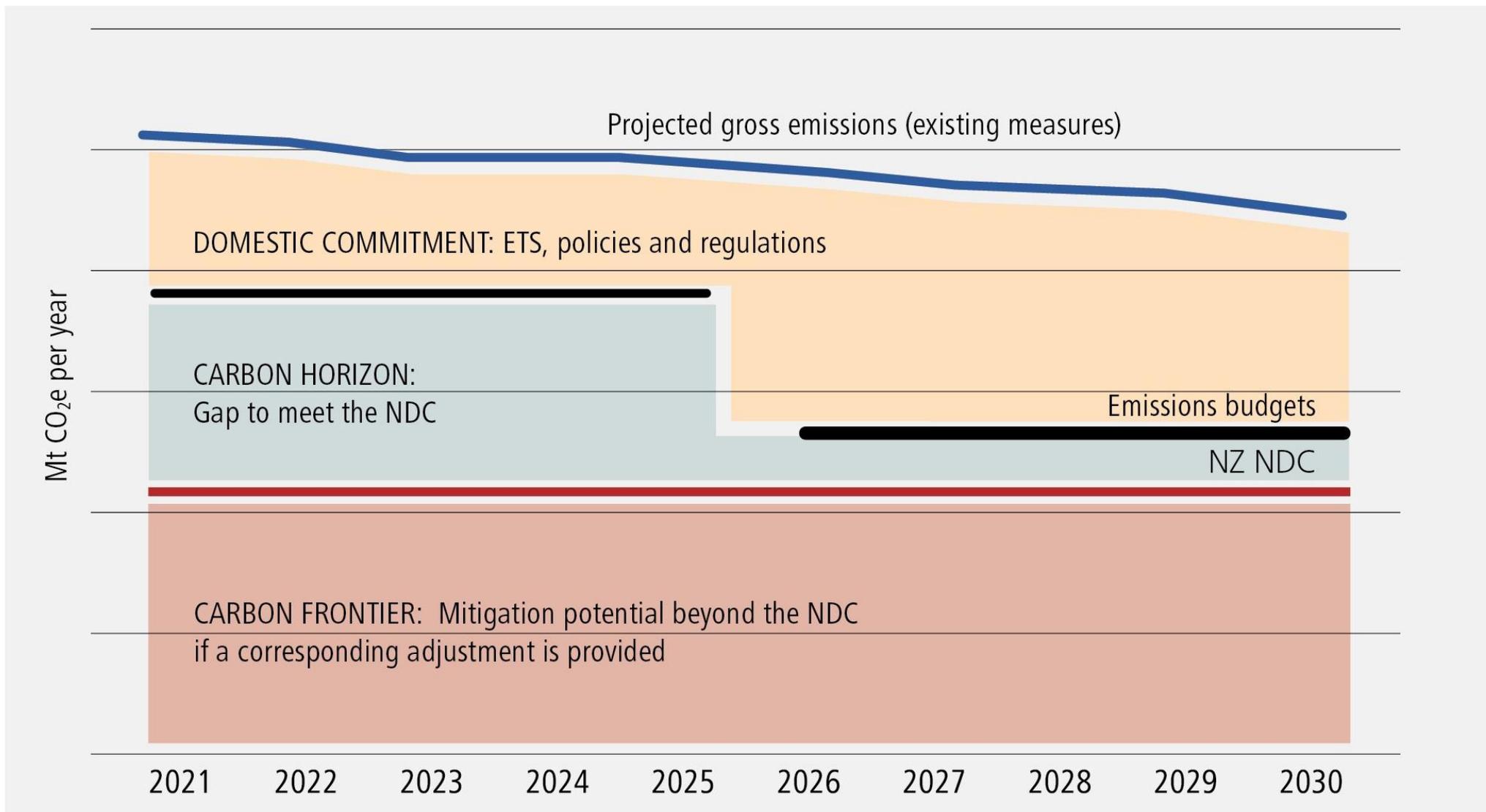
Carbon Horizon

- Encourages a broader range of activity and cooperation with shared gains
- Can be integrated with other frameworks (risk management, nature based solutions, ecosystem services, biodiversity crediting, impact investment)
- Scalable throughout the net-zero transition

Carbon Frontier

- If the NZ Government does not provide corresponding adjustments, this would be limited to offshore mitigation
- Suited to participants in export markets or CORSIA that require Paris-compliant corresponding adjustments

Additionality zones



Conceptual - not drawn to scale

Additionality assessment

Regulatory (beyond minimum govt. requirements)

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graph TD; A[Regulatory (beyond minimum govt. requirements)] --> B[Investment (beyond ETS price incentive)]; B --> C[Other barriers (beyond investment)]; C --> D[Technological (consistent with net zero in 2050)];
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Investment (beyond ETS price incentive)

Other barriers (beyond investment)

Technological (consistent with net zero in 2050)

Managing waterbed effects

Carbon Horizon

- Could operate with or without ETS cap adjustments
- With downward adjustments to the ETS and emissions budgets, this track could reduce offshore purchasing requirements to meet the NDC

Carbon Frontier

- Would require a corresponding adjustment to avoid double counting under the NDC
- This track would not reduce offshore purchasing requirements to meet the NDC

Reporting example: Net Zero Initiative dashboard

<i>The Net Zero Initiative Dashboard</i>		PILLAR A Reducing my GHG emissions	PILLAR B Reducing others' emissions	PILLAR C Developing carbon sinks
In my value chain	In my operations	Direct emissions <i>(scope 1)</i>		Direct removals
	Upstream and downstream	Indirect emissions <i>(scope 2+3)</i>	Emissions avoided by my products and services	Indirect removals
Outside of my value chain			Emissions avoided through the financing of reduction projects	Removals through the financing of absorption projects

Source: Carbone 4 -- Net Zero Initiative 2020.

See www.netzero-initiative.com/en and www.carbone4.com

Redrawn with permission.

5. Practical examples for how this could work

Example 1: Fuel switching

A firm is evaluating boiler options. A biomass boiler would cost \$2 million more than the fossil fuel alternative. If the VCM could mobilise carbon finance of \$1 million, the project could reduce emissions by 90,000 tCO₂e during the asset lifetime. This would correspond to an incremental carbon cost of \$11/tCO₂e under the VCM.
(Note: Numbers are illustrative only.)

Example 2: Energy efficiency

A local government invites businesses to help capitalise a revolving loan fund for energy efficiency improvements in low-income households. The supporting businesses can claim a pro rata share of the emission reductions generated by the project portfolio over time. The project overcomes both price and non-price barriers to accelerate energy efficiency gains, improve health outcomes and reduce household power bills.

Example 3: Native afforestation

A landowner is considering establishing a permanent native forest on marginal land but cannot make the business case work. If the landowner can mobilise additional impact investment reflecting the combined value of carbon sequestration, biodiversity and other ecosystem services and cultural amenity from native afforestation, the business case will become viable.

Example 4: Small-scale forestry

An NGO seeks to plant native trees at scales below the eligibility threshold for crediting under the NZ ETS or under Aotearoa New Zealand's NDC. Organisations helping to finance the planting receive certification of their carbon contribution, which they can report to Board members, shareholders and consumers.

6. Making this happen

Building blocks for successful implementation

This will require innovation, expertise, leadership, and resources from both the private and public sectors, plus:

- Credible processes for integrity
- Traceability of tradable instruments
- Transparency
- Robustness of market oversight
- Clear marketable claims
- Observable real benefits
- Low transaction costs
- Incentives for more ambitious action
- Critical mass for supply and demand

Research needs

Conditions making these tracks acceptable to organisations, investors, consumers and other stakeholders in both domestic and international markets

Potential alignment with existing ESG reporting frameworks and new requirements for climate-related financial disclosures

Implications for New Zealand's trade relationships and credibility in the international negotiations under the Paris Agreement

Policy challenges for government

Enabling corresponding adjustments under the Paris target

- Target, fiscal and equity implications

Enabling access to Paris-compatible offshore mitigation for organisations

Conditions for adjusting the NZ ETS cap and emissions budgets in response to voluntary mitigation

Providing guidance on integrity and marketing claims

Managing implications for the Carbon Neutral Government Programme

Conclusions (1)

Aotearoa has a significant opportunity to boost voluntary mitigation – but needs an enabling framework for marketable claims.

Requiring corresponding adjustments under the Paris target for all offsetting claims limits the potential for carbon cooperation.

Recognising voluntary mitigation that helps meet the Paris target could mobilise investment/action and shift social norms.

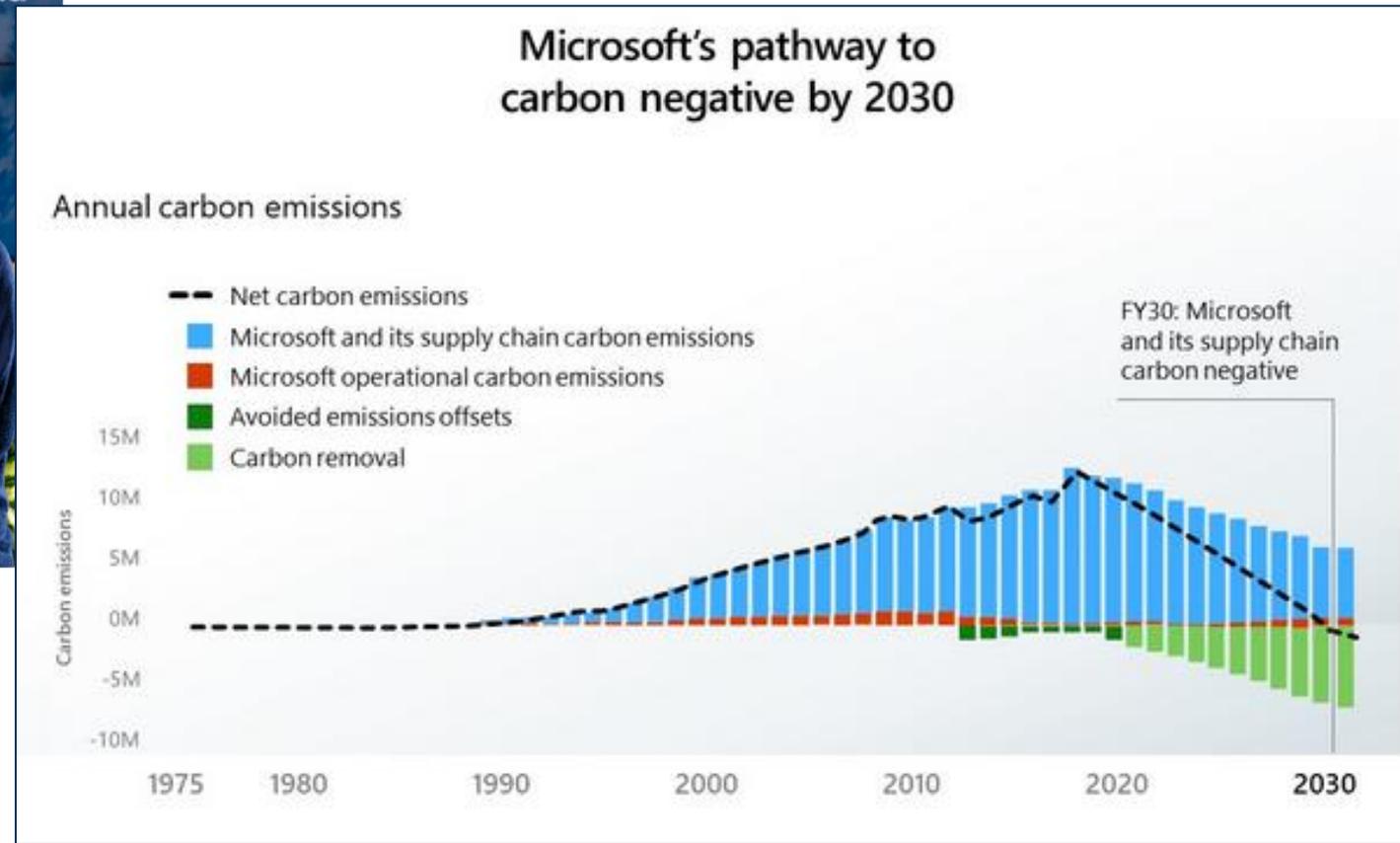
- Whether to label this a carbon-neutral claim or other form of carbon contribution is a secondary question – but it really matters to some participants.
- We can incentivise a broader range of actions beyond forestry.

Conclusions (2)

International conventions are rapidly evolving – and Aotearoa could help to shape them.

Solutions to these challenges will require cooperation and experimentation across the public, private and civil-society sectors.

Microsoft: Carbon negative by 2030



Walmart: Combating climate change and reversing nature loss

0 EMISSIONS ACROSS GLOBAL OPERATIONS BY 2040

Walmart aims to achieve this without carbon offsets by:

- 100% renewable energy by 2035.** Harvesting enough wind, solar and other energy sources to power its facilities with 100% renewable energy by 2035.
- Electrifying and zeroing out emissions from all of its vehicles, including long-haul trucks, by 2040.**
- Transitioning to low-impact refrigerants for cooling and electrified equipment for heating in its stores, clubs, data centers and distribution centers by 2040.**

PROTECT, MANAGE OR RESTORE AT LEAST

50 MILLION ACRES OF LAND & 1 MILLION SQUARE MILES OF OCEAN

AND PRESIDENT OF THE WALMART

Google: Carbon free by 2030

Carbon-free energy by 2030

Neutralised all emissions since 1998 with offsets

Deployed US\$5.75 billion in sustainability bonds in 2020

Investment in 5 GW of carbon-free energy in manufacturing regions by 2030

Science-based reforestation efforts

Launched €10M Climate Impact Challenge to accelerate EU green recovery



Announcing Google's third decade of climate action – our most ambitious yet.

Keep in touch...

Expert panel webinar:

16 April 2021, 12:30 to 2:00

Website: <http://motu.nz>

Email: catherine.leining@motu.org.nz

Blog: New Zealand's Low-Emission Future

Twitter: @MotuResearch, @SilverLiningGS

