

A dense forest with tall trees and a stream in the foreground. The trees are mostly evergreens, and the stream is in the lower part of the image. The lighting is bright, suggesting a sunny day.

El sistema de Nueva Zelanda que incorpora el sector forestal

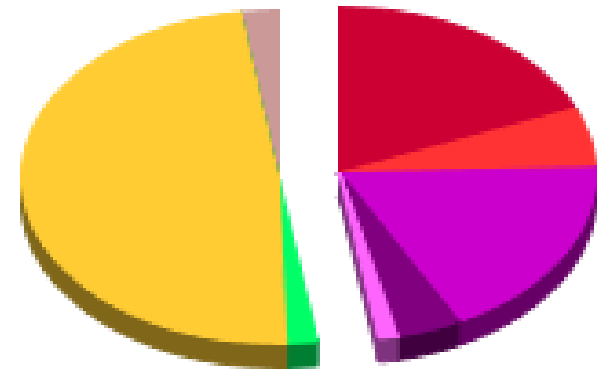
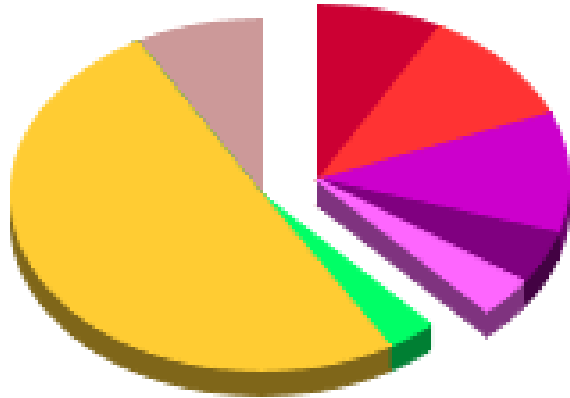
*Suzi Kerr, Motu Economic and Public Policy Research
Panama (by video link), October 2015*

Porque Nueva Zelanda?

Pequeno
No importante!
4.2 millon



Similar emissions profiles?



- Colombia

New Zealand

- Oportunidades por mitigación por reforestación.



El sistema en Nueva Zelanda

Compliance system has been operating since:

2008 forestry

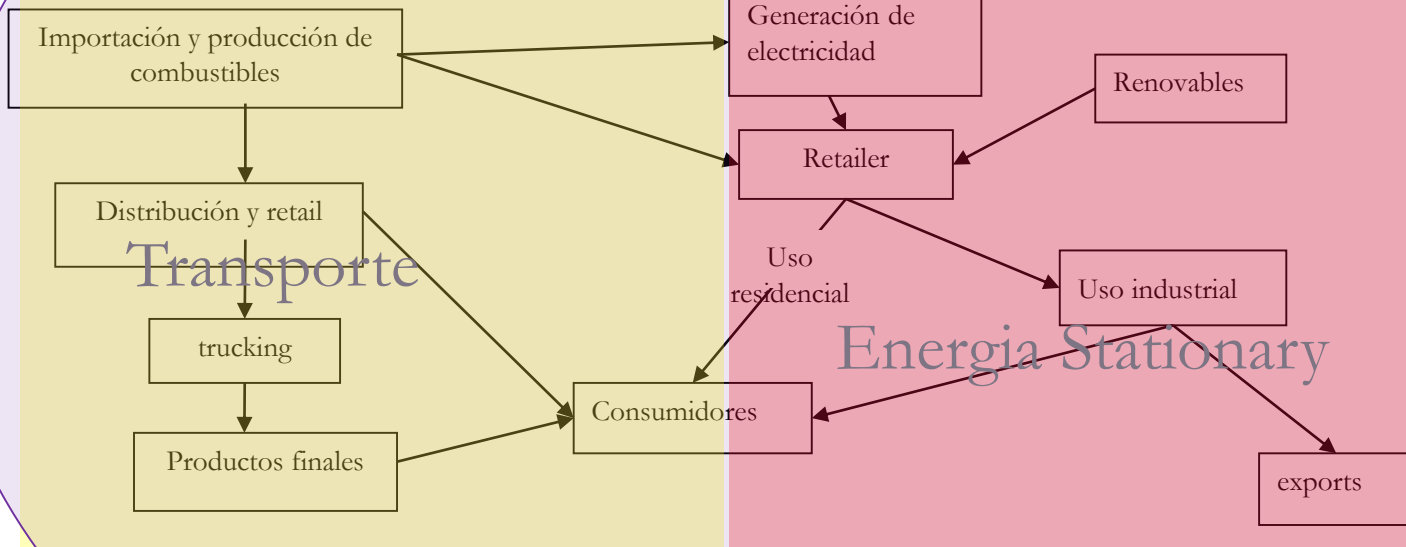
2010 liquid fuels, stationary energy and process emissions

Agriculture?

Simple system with high monitoring credibility



sequestration



Otros sectores: procesos industriales – e.g. cement
Reforestación; deforestación evitada; agricultura, residuos

'Cap'

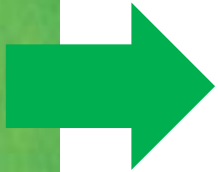
Measuring emissions

'National Inventory' measures all greenhouse gas emissions and sequestration based on international rules.

Target: 5% below 1990 emissions by 2020

$0.95 \times 1990 + \text{sequestration} + \text{purchased units}$

= 2012 national inventory



Devolution of obligations

Private actors at point of regulation must:

- Report information to model GHGs from chain of production
- Surrender emission units that match the inferred emissions (units are freely allocated by government or purchased from the carbon market)
- Claim emission units to match sequestration



Emissions = free allocation + purchase



In an all-sources, all-gases system,
the total units surrendered will
match the national inventory and
New Zealand will achieve its
international target.

Maintain simplicity

Lower transaction costs

Less scope for manipulation and opportunism

Less risk

Greater responsiveness



Reforestación

A credit is one tonne of carbon sequestered in plantation forests (or regenerating natural forest)

Participation for reforestation is voluntary

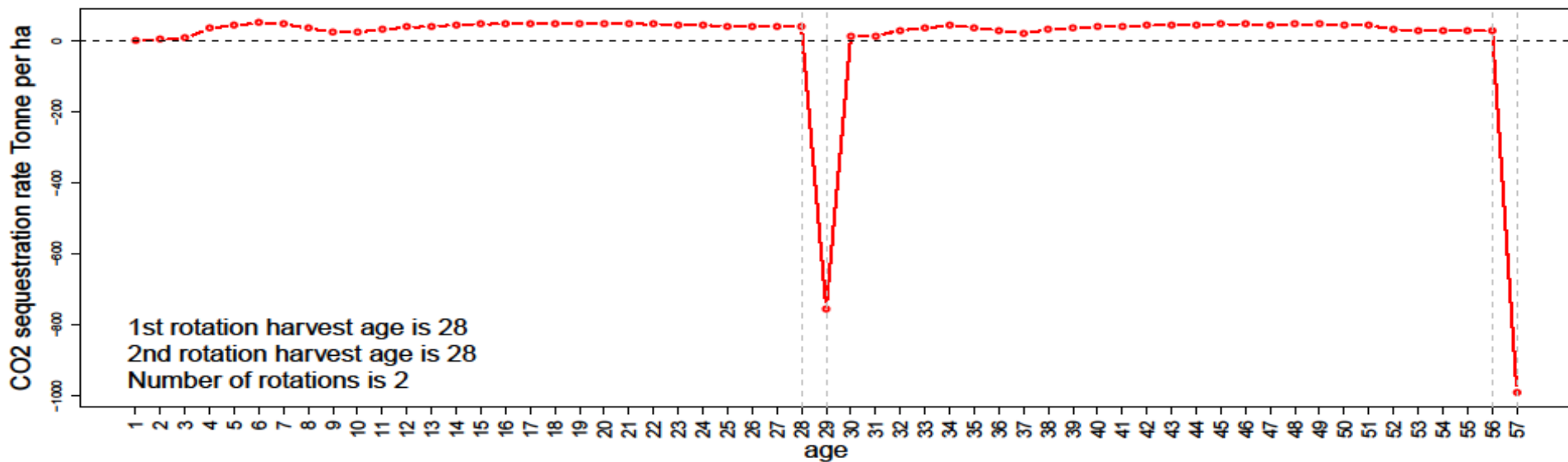
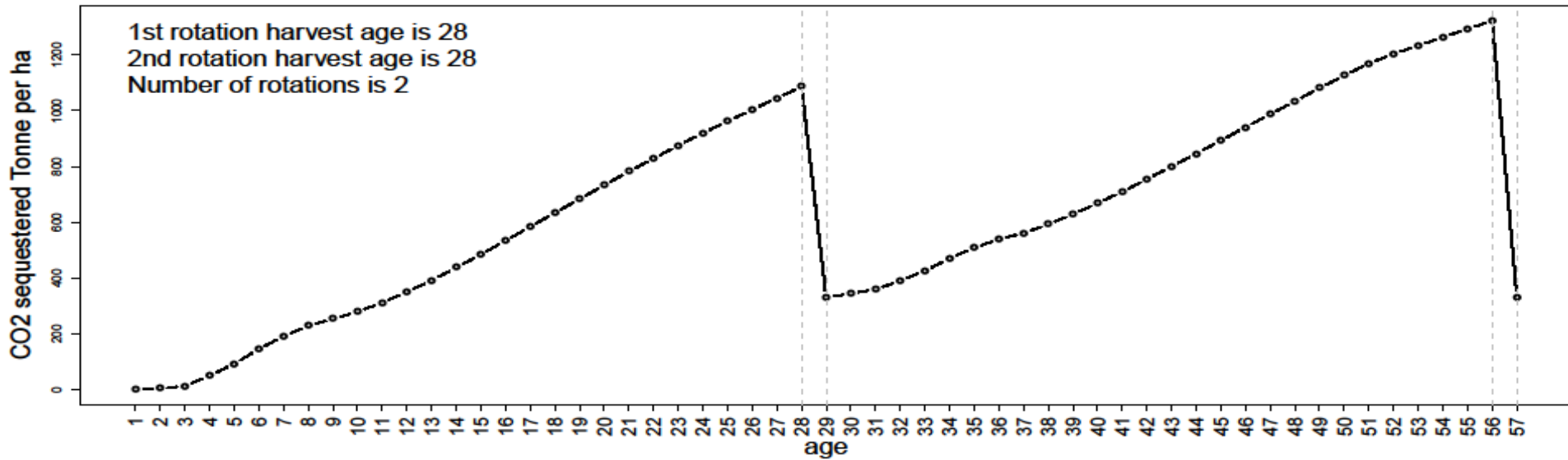
Baseline is no planting

Landowners receive credits as forests grow and are required to surrender them on harvest.

Deforestation of plantation faces a liability.



Sequestration and release



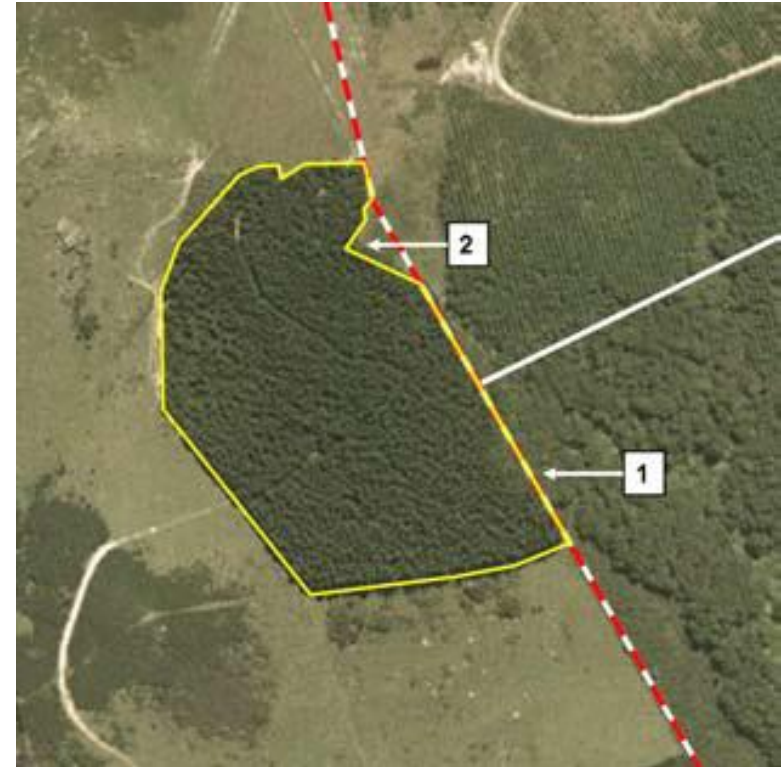
How is carbon monitored?

Monitor forest area and age:
Self reporting with auditing

Multiply by modeled carbon
stock:

regional carbon yield tables

Larger areas must provide
more accurate, certified
measures



Regeneración de nativos

Native forest is eligible for credit

Challenges with monitoring

- don't have sequestration tables for all natives
- don't know age of natives in 2008

No penalty for clearing natives – because covered by other regulations



Regeneración de nativos

Low returns relative to pine plantations because grows slowly

Co-benefits – biodiversity

Some land is not suitable for plantations – but could still plant pine and then abandon it

Potential for displacement of regenerating natives by pine



Experience to 2011 (Karpas and Kerr 2011)

The system is functioning well in a logistical sense.

Reasonable levels of participation by existing players

Behavioural change

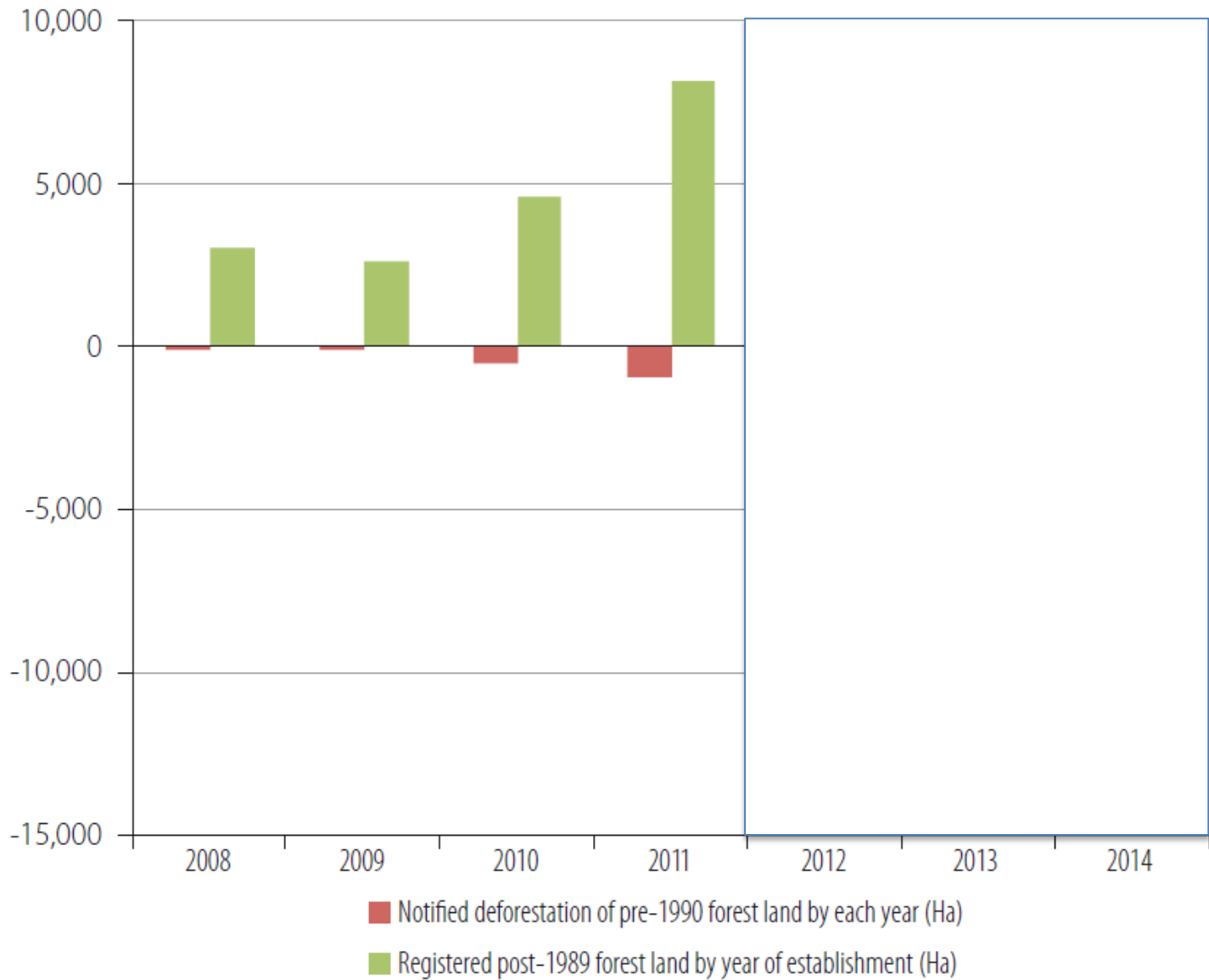
Almost no reported deforestation up to 2010 when price was high

Very little new planting yet – most under Afforestation Grants Scheme

Plans to change behaviour reported

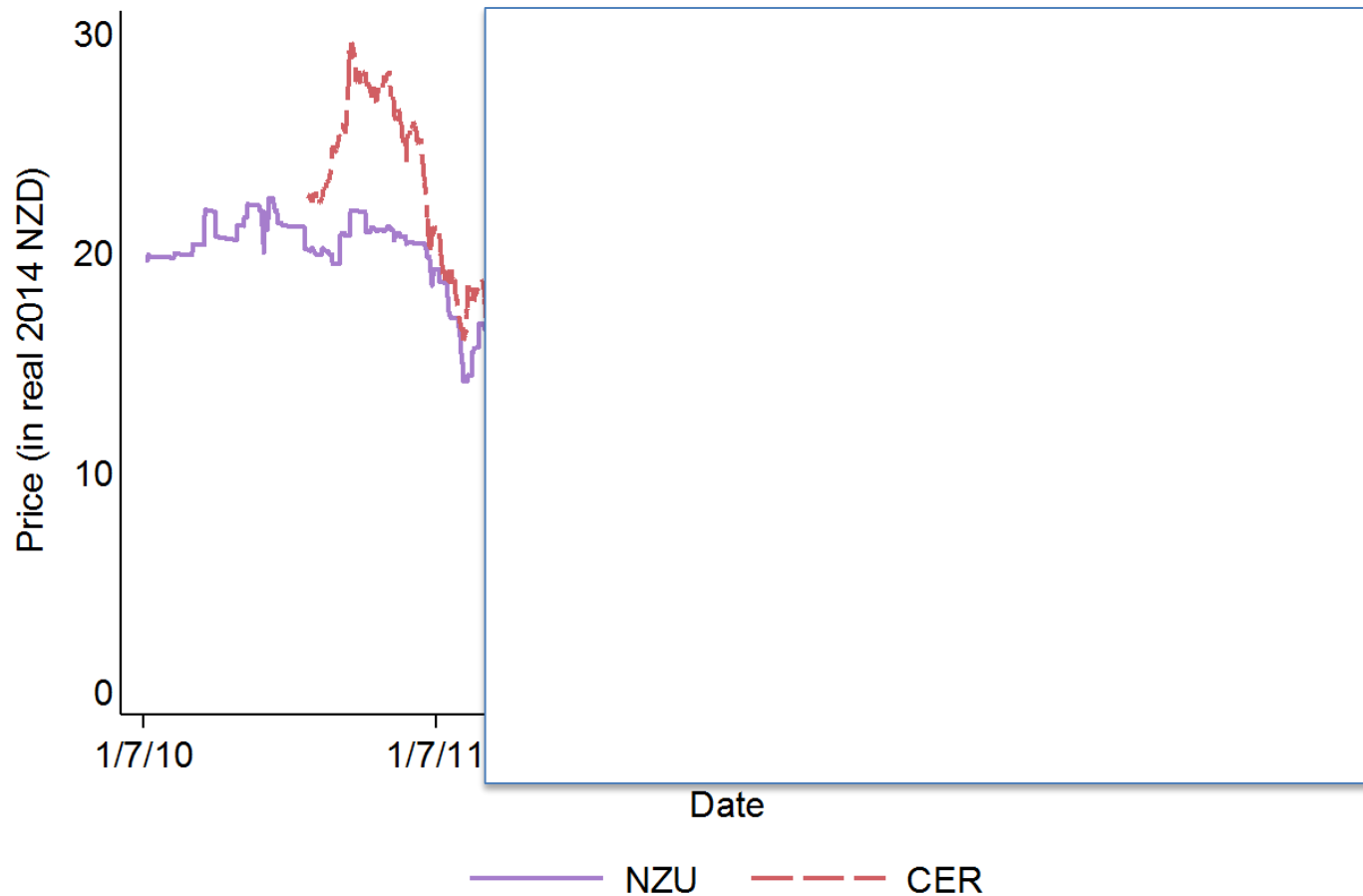


FIGURE 4: Afforestation and deforestation reflected in the ETS



Why?

- High levels of uncertainty about future carbon prices – price driven by European ETS, MDL and then New Zealand's exit from the Kyoto Protocol.



Data Source: OM Financial

Experience since 2010

Low prices

Need way to remove unreasonable policy uncertainty

Futures?

Joint investment?



Lecciones para Panama

Treat deforestation differently from reforestation

Avoid perverse incentives to deforest in order to claim reforestation incentive

Address investment uncertainty

Need to provide a lot of technical support for NZ style system – including for banks / lawyers

May want to avoid risk of landowners facing liability – pay only ‘rental’. Provides long-term income stream



Process is critical

NZ process took more than 10 years

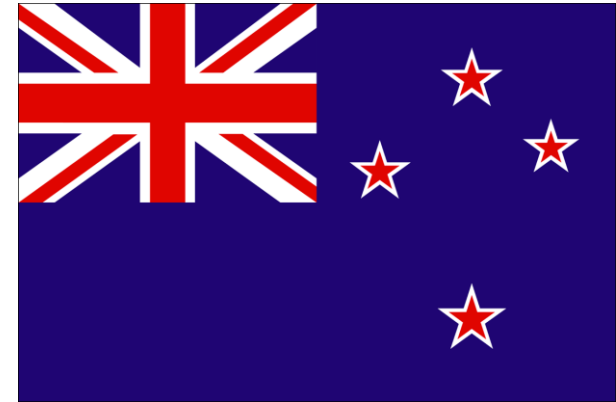
- Research, experimentation, dialogue

The best climate policy for Panama will be unique

Technical solutions to technical problems

Clarify political questions

Build understanding





www.motu.org.nz

www.climatechange.govt.nz

