



Unpacking Green Finance

Carbon and nature markets, offsets
and credits

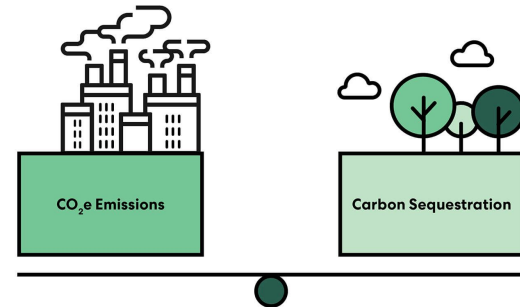
Dr. Will Lock

Some Questions to Consider

- What are the justice implications of carbon and nature markets?
- How do they 'produce' nature for it to function as a 'solution' to climate change and a destination for finance?
- What assumptions do they (need to?) make about the natural world?
- What risks or opportunities does this pose to diverse socionatural systems?

What Does 'Net Zero' Actually Mean?

- Not based on total carbon budgets, but reliant on future removals through **negative emissions technologies** (NETs) and **nature-based solutions** (NBS)
- Emissions need to be made **commensurable** across ecosystems, environments and nations – **tCO₂e** (see Lohmann 2010 or Paterson and Strippel 2012 for an explanation of this)
- All 'pathways' in the latest UN Intergovernmental Panel on Climate Change (IPCC) report that limit global warming to 1.5°C rely on negative emissions technologies



Carbon Offsetting as a Solution

- Forest-based offsetting could offer a 'triple-win':
 - **Emissions** can be reduced by avoided deforestation;
 - **Biodiversity** will benefit from more forests;
 - Communities will receive finance for **development**.
- Carbon has thus become a way of generating funding for conservation, but also made forests **central to climate change politics and a destination for climate finance**.

Climate



Biodiversity



People



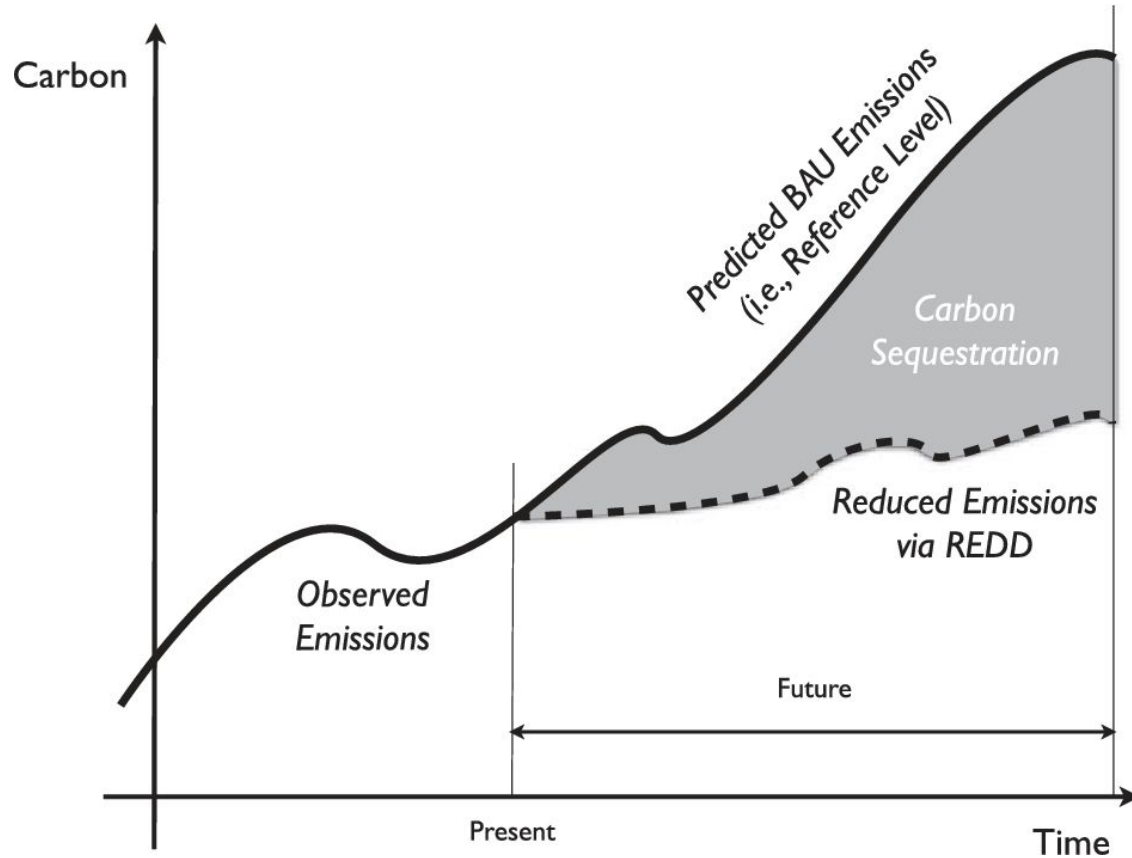


What do carbon
markets mean for the
natural world?



San
Martín,
Peru

Setting 'Baselines' for Conservation

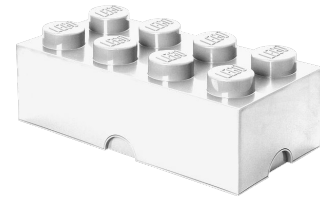
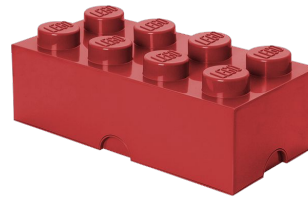
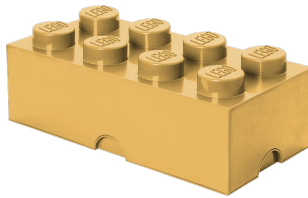
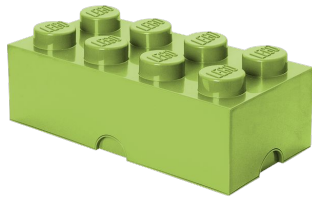




You Be the Project Developer!

- Use the **Lego bricks** as a team to design the best possible carbon credit project
- **1 hectare = 1 stud** (apparently that's what the little dots on top of Lego are called 🙋). You can have a **max project size of 400 Ha.** but there is no minimum. There are limited trees in the nursery
- Biodiversity score + co-benefits blended across project = Carbon credit premium! **The price of your credits £/tCO2e is blended score x2.** I'll also listen to arguments for the benefits of your project
- Additional management cost = **3+ planting forms results in a 20-30% additional developer cost**

You Be the Project Developer!



Brick
colour

Green/Blue

Orange/Brown

Red/Pink

White/Black

Type of
plantation

Rapid growth conifer
(e.g. Sitka Spruce)

Slower growth
native species (e.g.
Sessile Oak)

Agroforestry (e.g.
apple orchard)

Natural regrowth
(e.g. rewilding,
meadows)

Carbon
credits
(WCC)

5 tCO₂

1.5 tCO₂

1 tCO₂

0.5 tCO₂

Biodiversity
score

1

3

3

5

Co-benefits
score

4

3

4

2

Example Models from Peru

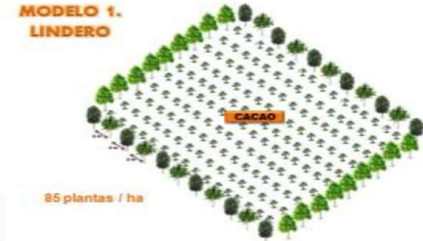
45 % of
plantations

MODEL 1

Plantations alongside the
cocoa fields' boundaries

Plantation of trees in rows,
around the field, 3 meters from
one another

Density of plantation:
133 trees/ ha



MODEL 2
Plantations
intercropped with
cocoa trees

Plantation of trees intercropped
with cocoa trees

Density of plantation:
252 trees/ ha



55 % of
plantations

MODEL 3
Plantations on damaged and
unsued lands

Plantation of trees on unused or
damaged lands, plantations every
3x3 meters

Density of plantation:
1111 trees/ ha



Simplify and Scale Up!

- Successful models need to be **simplified and scaled** across landscapes and geographies
- Growing focus on specific fast-growth trees, with nature “**(re)made to work harder, faster and better**” (Boyd and Prudham 2017: 877).
- Ever-greater claims of ‘**high technology**’ carbon-optimised forestry (clones, drones and data)
- All favours large companies with high capital. Driving processes of **privatisation and ‘green grabbing’**

Plantación Forestal con Alta Tecnología



Rationalising Landscapes

- Increasing **homogenisation of landscapes** with plantations of specific trees, selected for fast growth with limited biodiversity benefits
- Focus on **efficiency, calculability, predictability, and control**. The logic of...?



- Changing sense of what a 'forest' is – **shifting-baseline syndrome**

Offsetting as Ideology

- Offsetting as reduces the complex web of relations which drive climate change to “**a better climate = reductions in CO2 emissions**” Lohmann (2012: 91). Do you believe this is the case?
- Relies on a utilitarian view of the natural world which is seeing **the replacement of ‘forest’ with ‘plantations’**. The ‘**Cultural Poverty**’ of payments for ecosystem services and green capitalism (Sullivan 2009)
- This approach **overestimates** nature’s capacity and **underestimates** its instability, especially with fire and diseases
- I would argue that instead of assuming **carbon-optimised landscapes are healthy ecosystems** we should see **healthy ecosystems as carbon rich**. This would require different markets – or a shift away from them





Questions?



Current Discourses

There are some common assumptions around 'Nature' in these discourses:

- That it can be separated discursively and materially from 'Society'
- That it can be abstracted, measured and 'known'
- That it can be managed and controlled (and should be, often by national, international or private actors)
- That it can be optimised and improved (especially through technology)

Nature as problem to be managed...



...or part of the Web of Life?