ORBITAS

Agriculture in the Age of Climate Transitions

Stranded Assets. Less Land. New Costs. New Opportunities.

7TH DECEMBER, 2020

AN INITIATIVE OF

CLIMATE ADVISERS TRUST

SUPPORTED BY

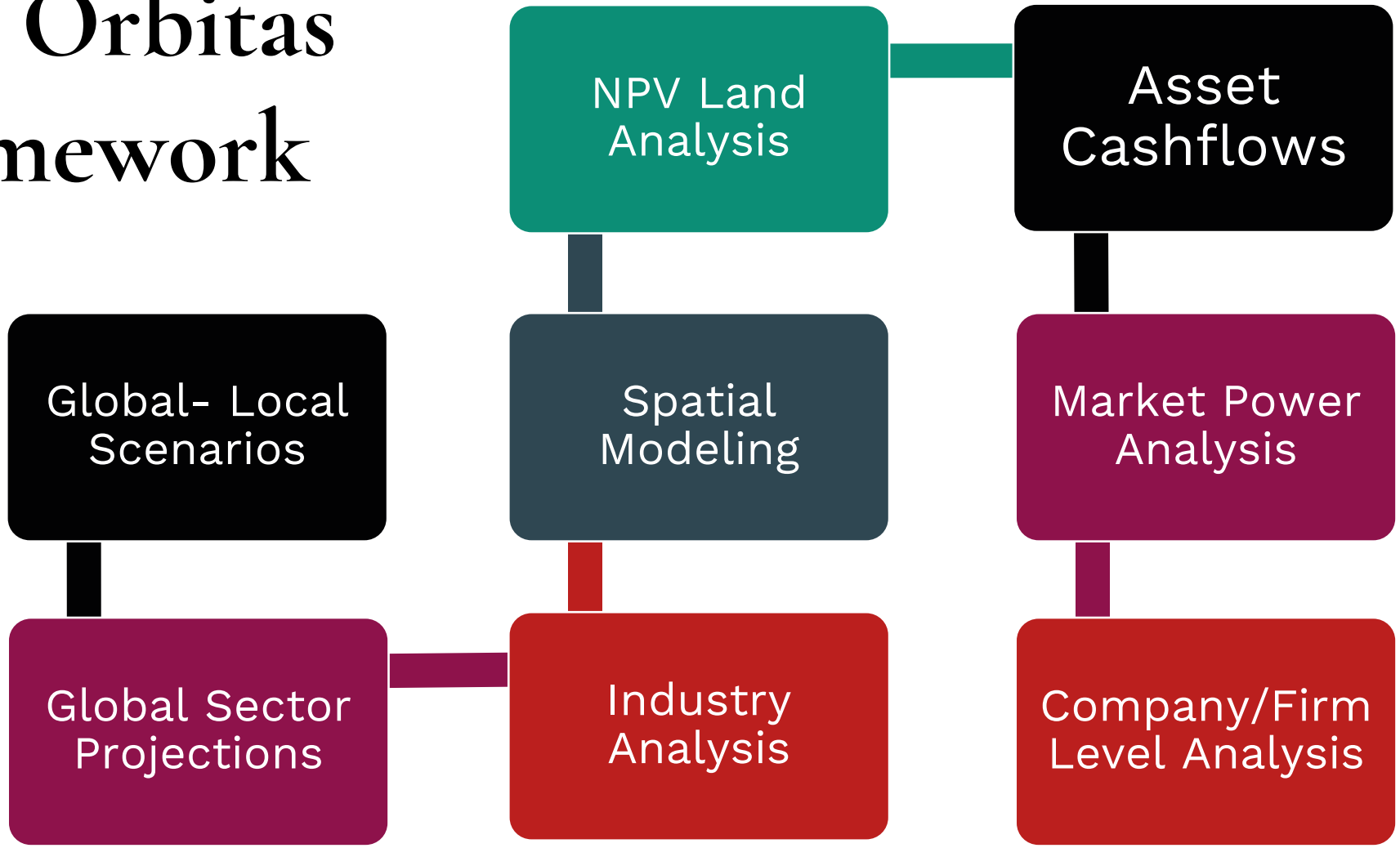
Norad

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

Why focus on transition risks in tropical agriculture?

- Agriculture, land use and forestry responsible for 24% of GHG emissions.
- Tropical deforestation is 12 million ha/year – area larger than Portugal.
- Tropical agriculture causes over 10% of global GHG emissions.
- Net zero world requires economy-wide transformations - all sectors will be exposed to climate transition risks.

The Orbitas Framework

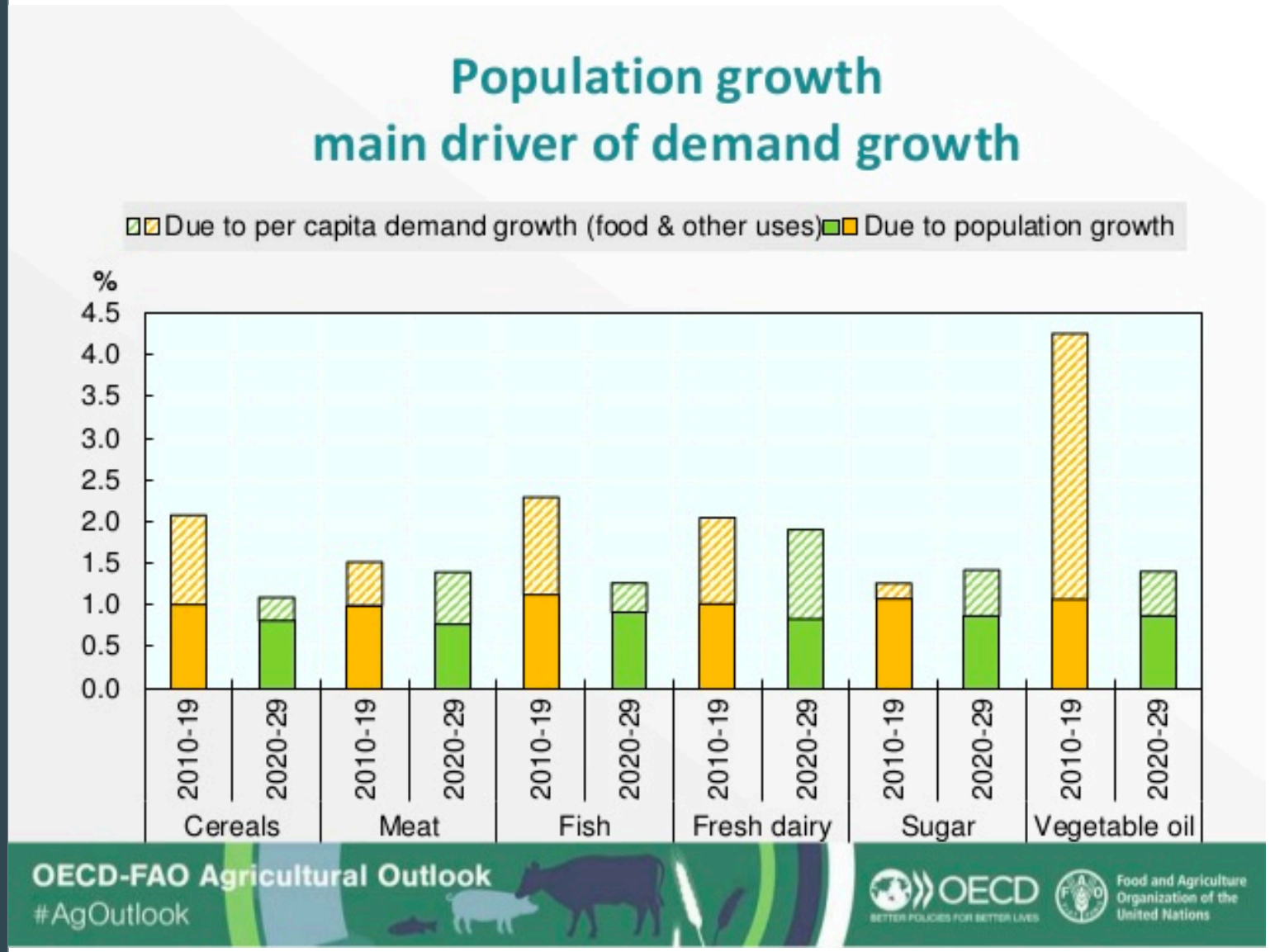


Global Policy Scenarios

	Scenario	Mitigation policy	Bioenergy demand	Technological progress	Area protection	Ruminant meat fadeout
3-4°	Business as usual	Currently implemented policies only	Limited	Medium	Current protection	BAU – no substitution
	Stabilising emissions	Currently implemented policies 2.8-3°-degree aligned carbon prices Partial participation of LU sector	Medium	Medium	Current protection	BAU – no substitution
2-3°	Disorderly response	Currently implemented policies 2°-degree aligned carbon prices Partial participation of LU sector	Medium	Medium	Current protection	Limited substitution
	1.5C Strong Ambition LI	Land use NDCs 1.5°-aligned carbon prices Complete participation of LU sector	Optimistic	High	Current protection	Limited substitution
<2°	1.5C Strong Ambition LP	Land use NDCs 1.5°-aligned carbon prices Complete participation of LU sector	Pessimistic	Medium (Sensitivity with high)	Expansion of area protection	Aggressive substitution

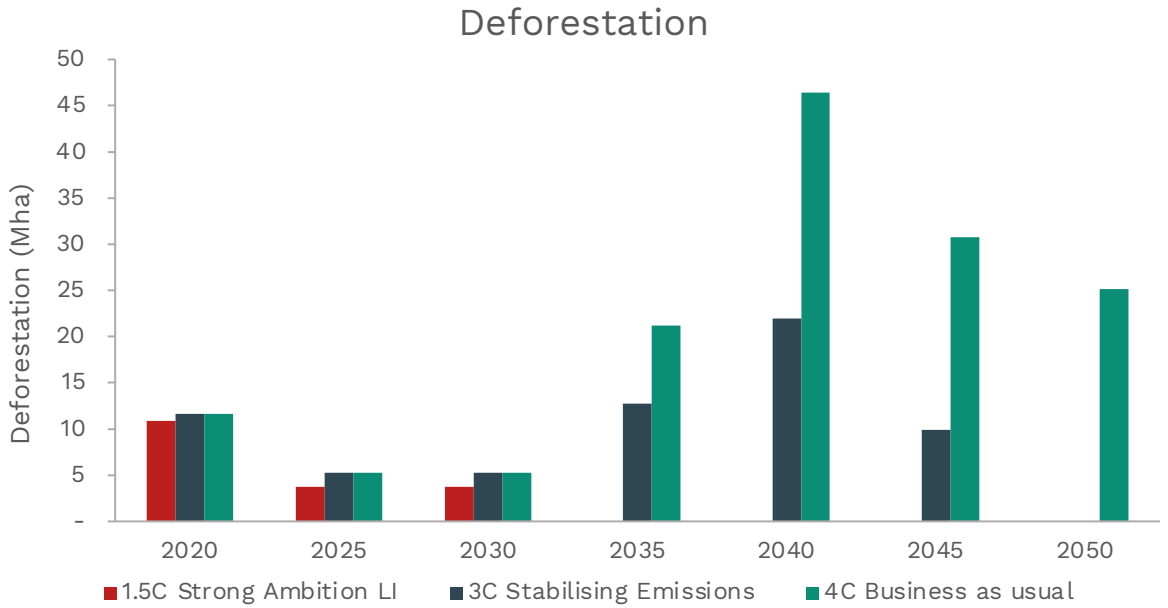
Commodity demand 2020-30

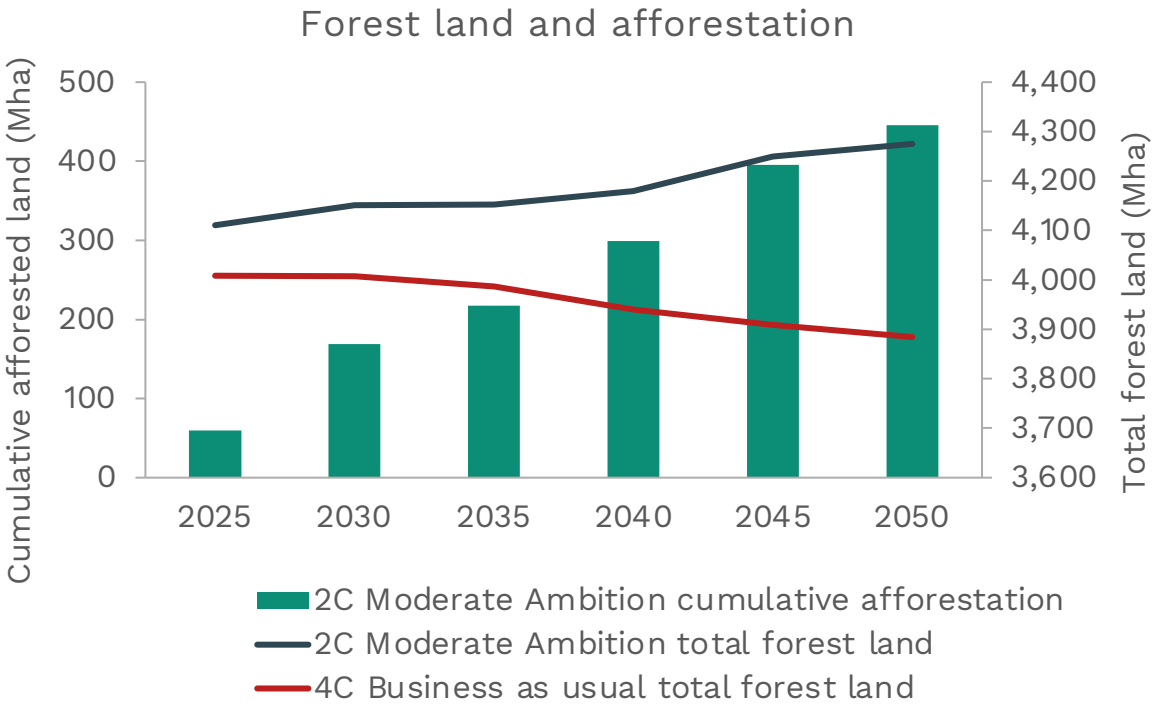
Under all scenarios commodity demand grows due to growing population and wealth



Even a weak carbon price halts deforestation by 2050

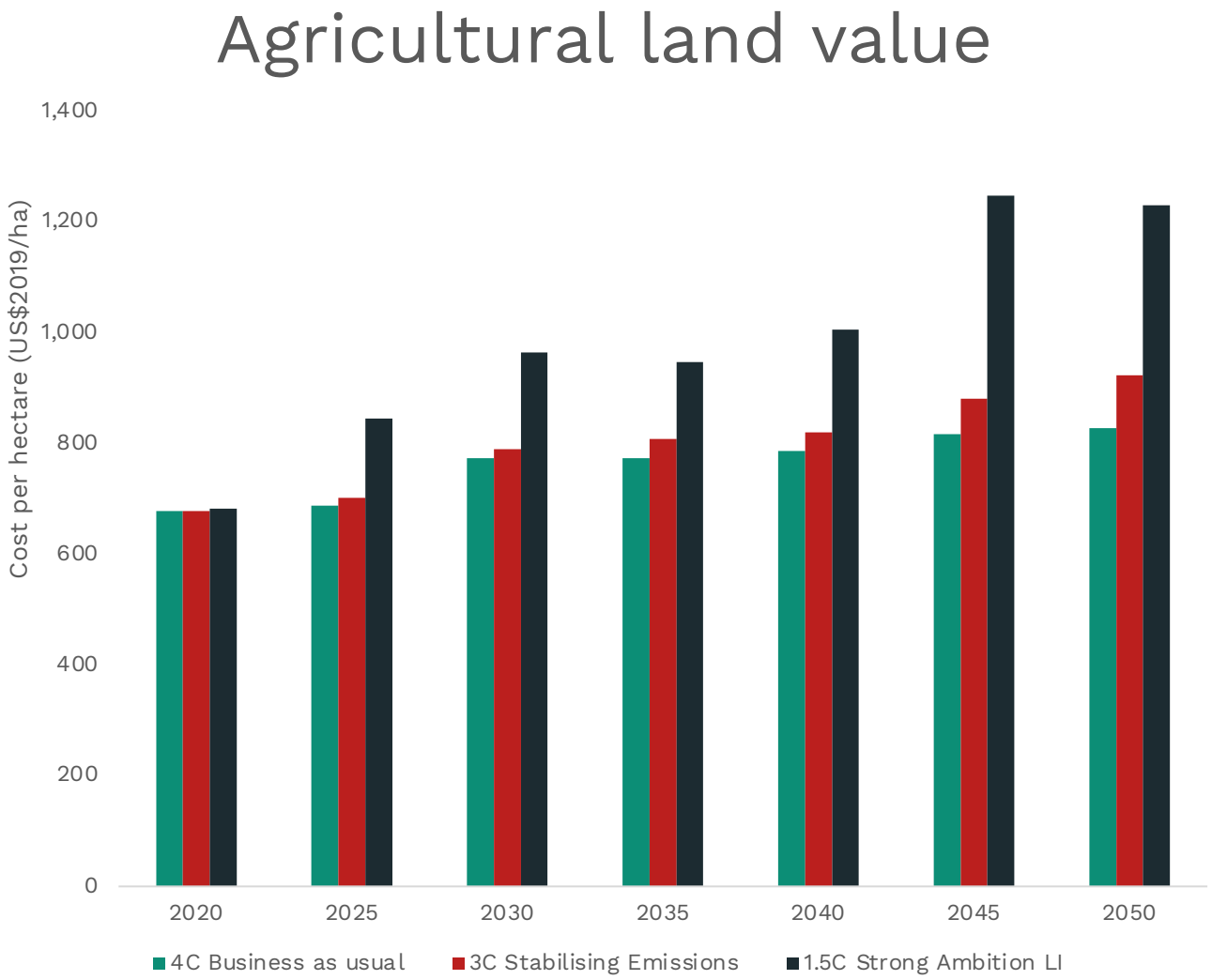
… and drives increase in forested land





Competition for land-use reduces area available for agriculture...

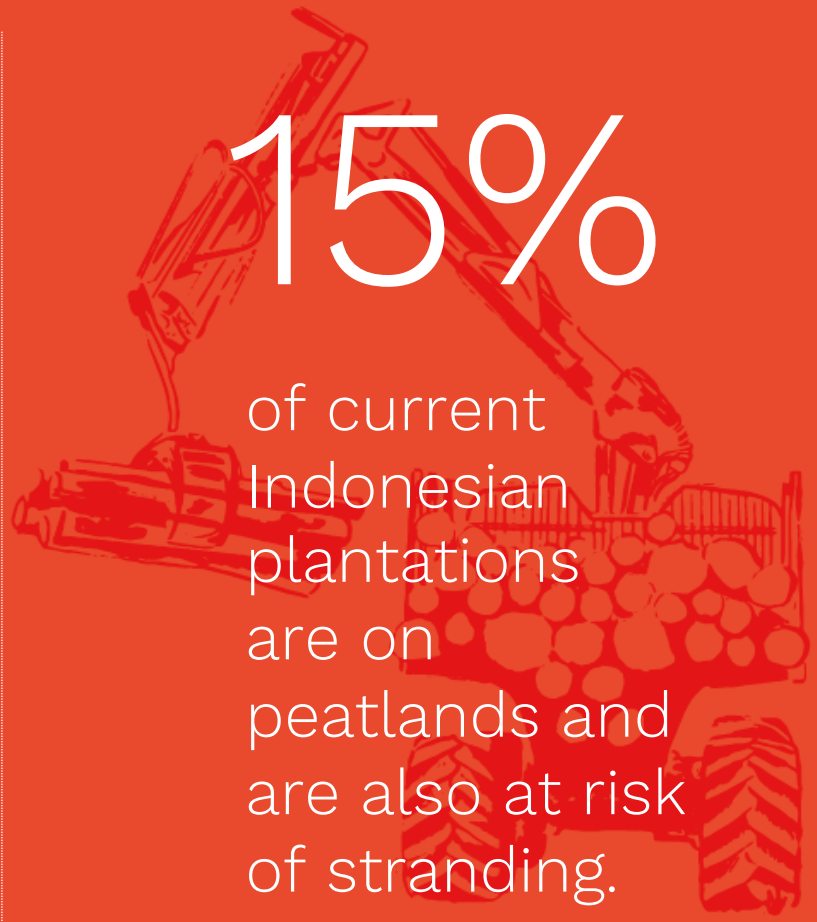
...pushing average costs of cropland to more than $1000/ha



Climate Transition Risks: Stranded Assets

76%

of Indonesia's unplanted concessions at risk of becoming stranded assets.



15%

of current Indonesian plantations are on peatlands and are also at risk of stranding.

78%

less land available in Peru for palm expansion compared to business as usual.

Climate Transition Risks: Growth Constraints

286-604
million
hectares of global agricultural land will be converted to forest by **2050**.

That’s over 10% of current agricultural land globally.

Commodity producers face up to

50%

higher cropland prices because of increased competition for land from reforestation and bioenergy.

Climate Transition Risks: Emissions Costs

$19 billion

annual emissions costs for tropical agriculture companies.

By 2040, up to

15%

of total operational costs for palm oil companies will be GHG emissions costs.

By 2040, emissions costs for Colombian cattle breeders are nearly

6 times

higher than production costs

Climate Transition Opportunities

Higher Commodity Prices

10-40%
higher prices and
up to 50%
more production.

(but food spending as a share of income drops).

Carbon Payments

Carbon sequestration payments for Colombian forests could reach

$485/ha,

far higher than revenues from dairy and beef sales.

Capital Upgrades

Installing biogas generation at Indonesian palm oil mills increases enterprise value by

400%.

Climate Transition Opportunities

By acting optimally, Indonesia's palm oil industry could gain

$9 billion

in additional value.

But taking advantage of these opportunities will require up to

$1.2 trillion

in annual investments across the agriculture sector by 2050.

Despite these material risks and opportunities, capital providers don’t appear to be paying attention

- Financial institutions are aware tropical soft commodity (TSC) investments carry climate risks, but none currently use scenario analysis to quantify them.
- One-third of financial institutions don’t assess climate transition risks at all and none interviewed considers climate risks (physical or transition) specific to tropical commodities.
- Financial institutions lack data and tools to monitor risks effectively: only 5 institutions currently use tools to assess climate transition risks.

So, all investing in or financing tropical commodities need to act:

- Require companies to assess and disclose climate transition risks.
- Shift capital towards sustainable companies and technologies and away from companies vulnerable to stranded asset risks.
- invest in sustainable yield improvements– especially smallholders, defining and delivering a just transition strategy.
- Identify new revenue streams: agroforestry, conservation and biogas cogeneration.
- Arrange results-based financing to incentivize company investments in emissions reducing growth strategies.
- Create international trade and financing partnerships for sustainably produced commodities.

ORBITAS

www.orbitas.finance