



Introduction

- From 2026, the EU Deforestation Regulation (EUDR) will restrict imports of seven forest-risk commodities, including natural rubber.
- Operators must prove that products are deforestation-free and legally produced, based on geolocation and legality data.
- Previous studies warn that smallholders may be excluded due to technical and financial compliance barriers (Zhunusova et al. 2022). They also suggest that exports could shift to non-EU markets.
- This study uses a cost-benefit analysis (CBA) to explore how compliant producers could benefit from price increases following reduced global exports to the EU.
- Ghana, a small but fast-growing rubber producer, serves as a case study.



Methods

- Fieldwork (July 2024): interviews with 15 producers, 3 factories, the regulator, and a focus group with an association.
- CBA of a 4-ha plantation (2020–2049) testing two scenarios: (1) reduced exports and EUDR-related price shifts based on a demand elasticity of –0.212, and (2) COVID-like market shock.
- The CBA uses key indicators, including net present value (NPV) with a 10% discount rate.
- Price scenarios rely on Monte Carlo simulation of Technically Specified Rubber 20 (TSR20), reflecting historical volatility.
- Producer price = $TSR20 \times 0.63 \times 0.58$, where 0.63 is the regulated producer share of the international price, and 0.58 is the official dry rubber content.

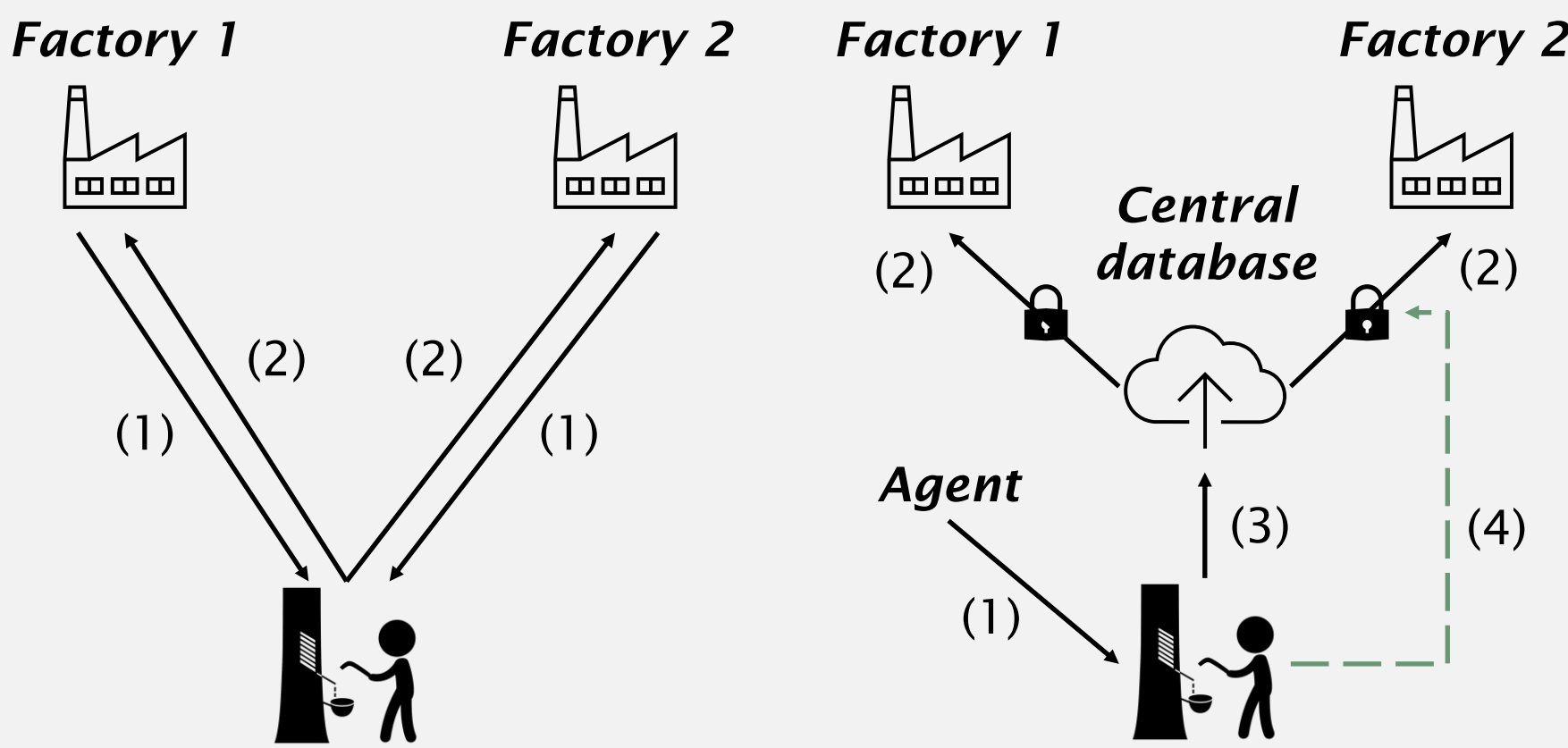
Discussion

Ensuring inclusive access to EUDR benefits for smallholders

- Centralize geolocation data:** Develop a national database under public oversight. Grant producers access and control to maintain compliance across buyers and avoid redundant mapping (*see illustration*).
- Standardize legality requirements:** Use a shared legality framework for all factories, based on existing codes of conduct, to ensure consistent EUDR interpretation.
- Support smaller factories:** Help them build traceability systems and comply with EUDR so their affiliated producers can keep EU market access.
- Access to finance:** Support independent producers in establishing and maintaining plantations that meet factory criteria.
- Track prices and payments:** Ensure higher prices for compliant rubber reach producers. Speed up payments to ease cash flow and reduce reliance on informal buyers.

Central geolocation database to unlock EUDR access

- GPS data collection in plantation
- Integration into factory system
- Central database storage
- Producer grants factory access to data



Current situation

- Producer receives no data
- Mapping done twice

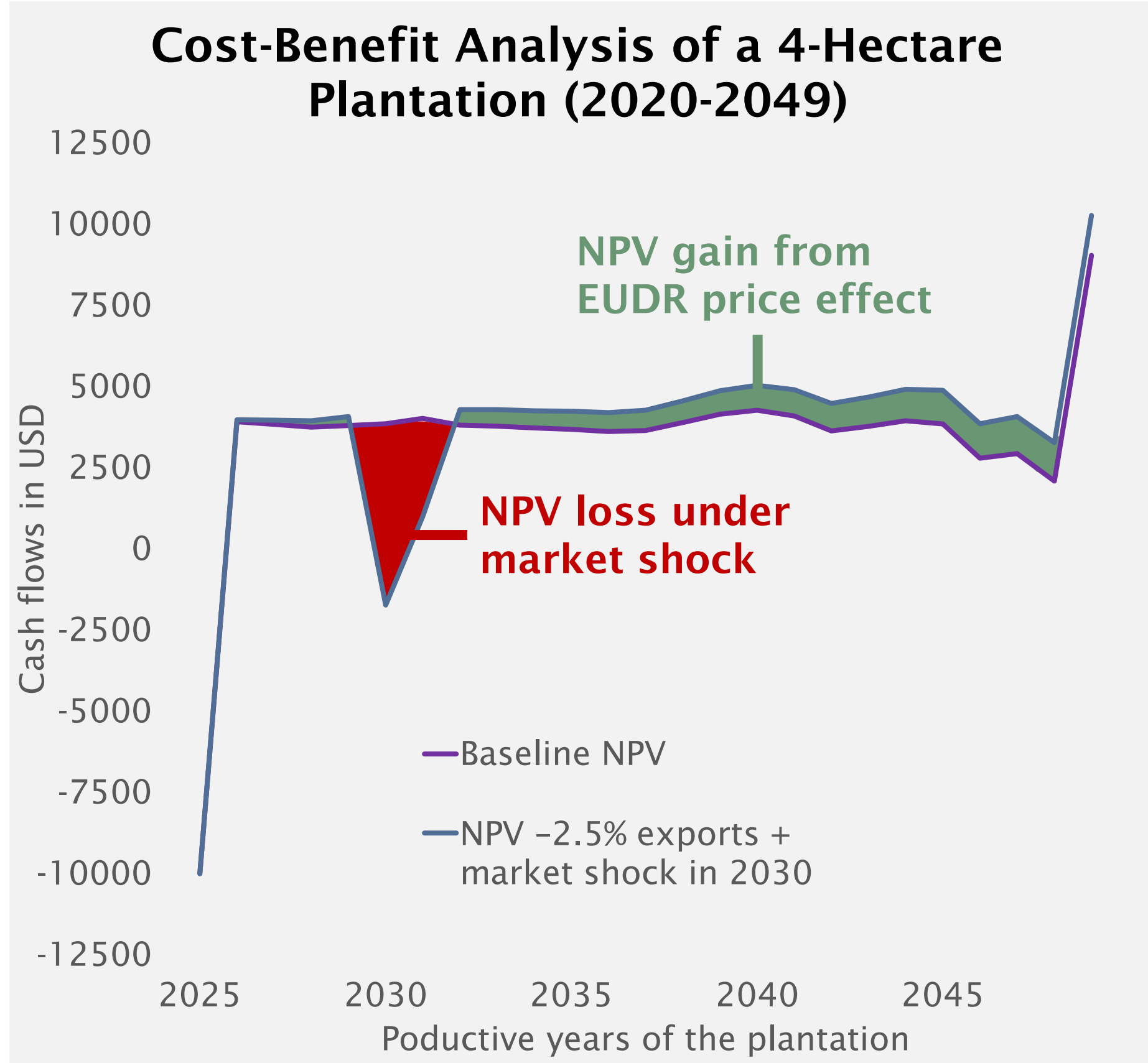
Proposed measure

- Producer shares data with compliant buyers
- No duplicated costs

Results

Reduced exports to EU	NPV change vs baseline	Shock effect in 2030
–2.5%	+17%	–20%
–5%	+30%	–15%
–10%	+69%	–13%

- A 2.5% drop in global rubber exports to the EU raises NPV by 17%.
- A COVID-like shock wipes out the gain.



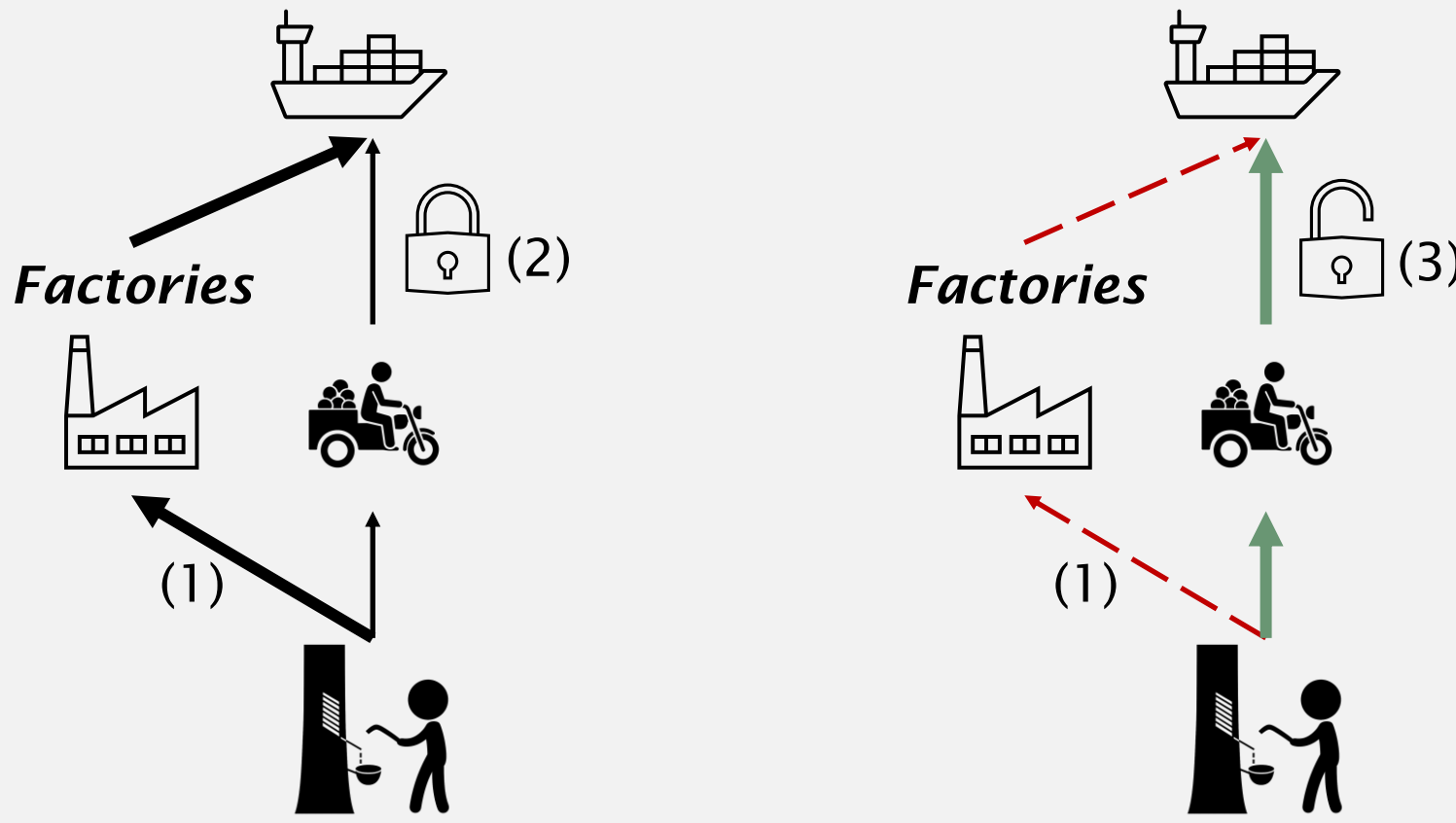
Discussion

Safeguarding gains from EUDR compliance under market crisis

- Allow unprocessed rubber exports during crises:** Permit exports by non-processing buyers when factories shut down due to low prices, so producers can maintain income (*see illustration*).
- Guarantee minimum factory purchases:** Authorities could coordinate with factories to set minimum purchase volumes during crises, supported by zero-interest loans to maintain cash flow, pay producers, and store rubber.
- Leverage traceability systems for early signals:** Digital platforms linking producers and factories can help anticipate demand shifts, enabling timely responses. This requires investment in connectivity, infrastructure, and capacity building.

Flexible export rules to maintain market access in crises

- Sale to local factory
- Export restrictions apply
- Export rules relaxed during crisis



Normal situation

- Rubber sold mainly to local factories
- Export strictly restricted

Market shock

- Factories reduce purchases; minimum volumes required
- Export restrictions eased