

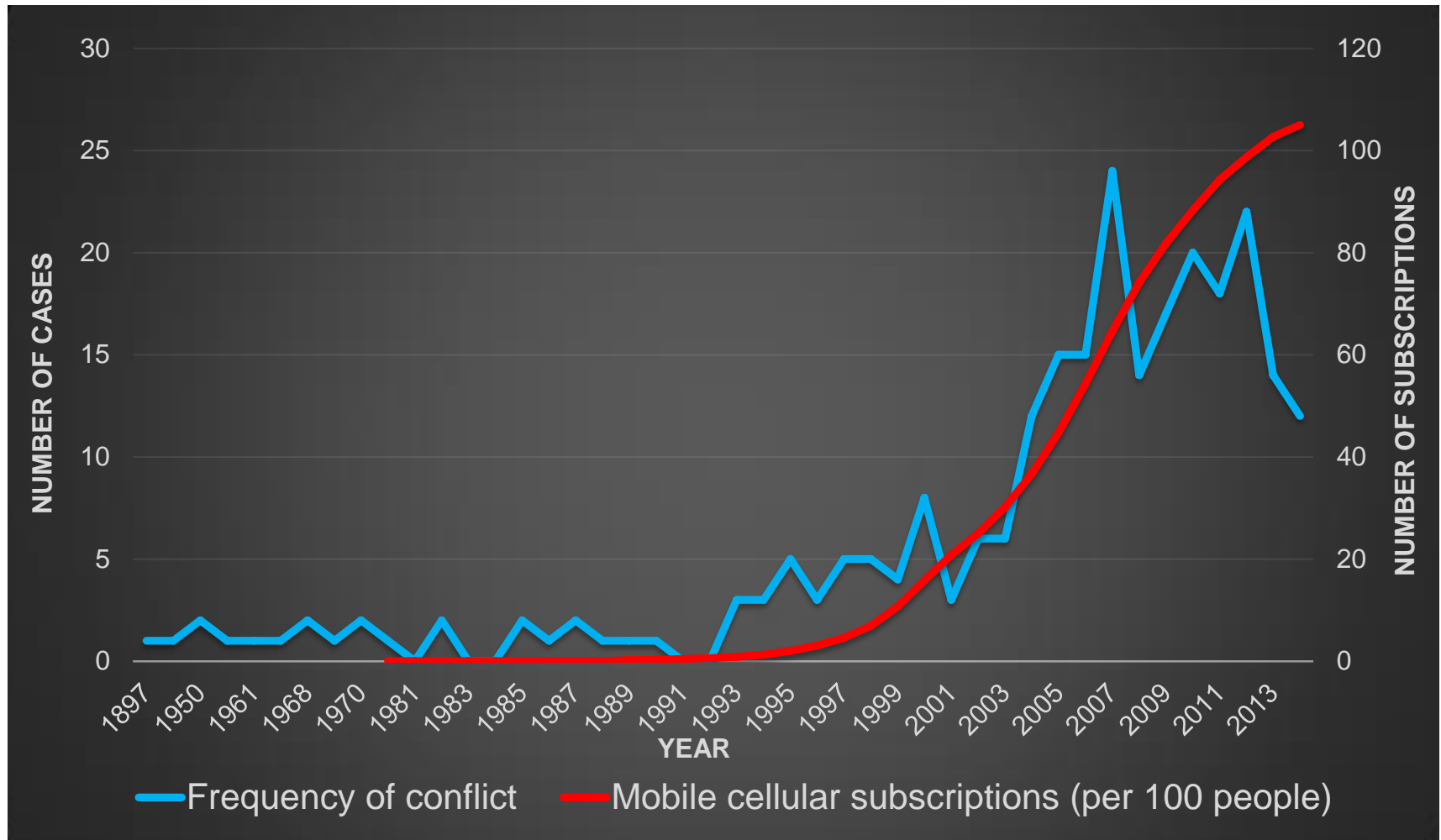
TMPSYSTEMS

Discover • Develop • Deploy

Land Tenure and Financial Risk

September 3rd, 2015 – NCAER

Rising Rate of Conflict



The Land Risk Tool (LRT)

Open-source, global, geospatial database

- 25 large datasets in three categories (social, environmental, governance)
- Formal release on September 30th at the Interlaken Conference, Bern

Social (sub-national)	
Demographic	Population count/density per 30-seconds cell; presence of IPs
Conflict	Incidence of civil unrest; time-series of displacement
Welfare	Access to sanitation; child mortality; asset ownership
Environmental (sub-national)	
Land use	Anthropogenic land use; soil health
Climate	Temperature; forecasted climate impacts
Water	Baseline water stress, watershed boundaries
Governance (national)	
Corruption	Perceptions of corruption; control of corruption
Effectiveness	Regulatory quality

Tenure Risk: Almost Ubiquitous

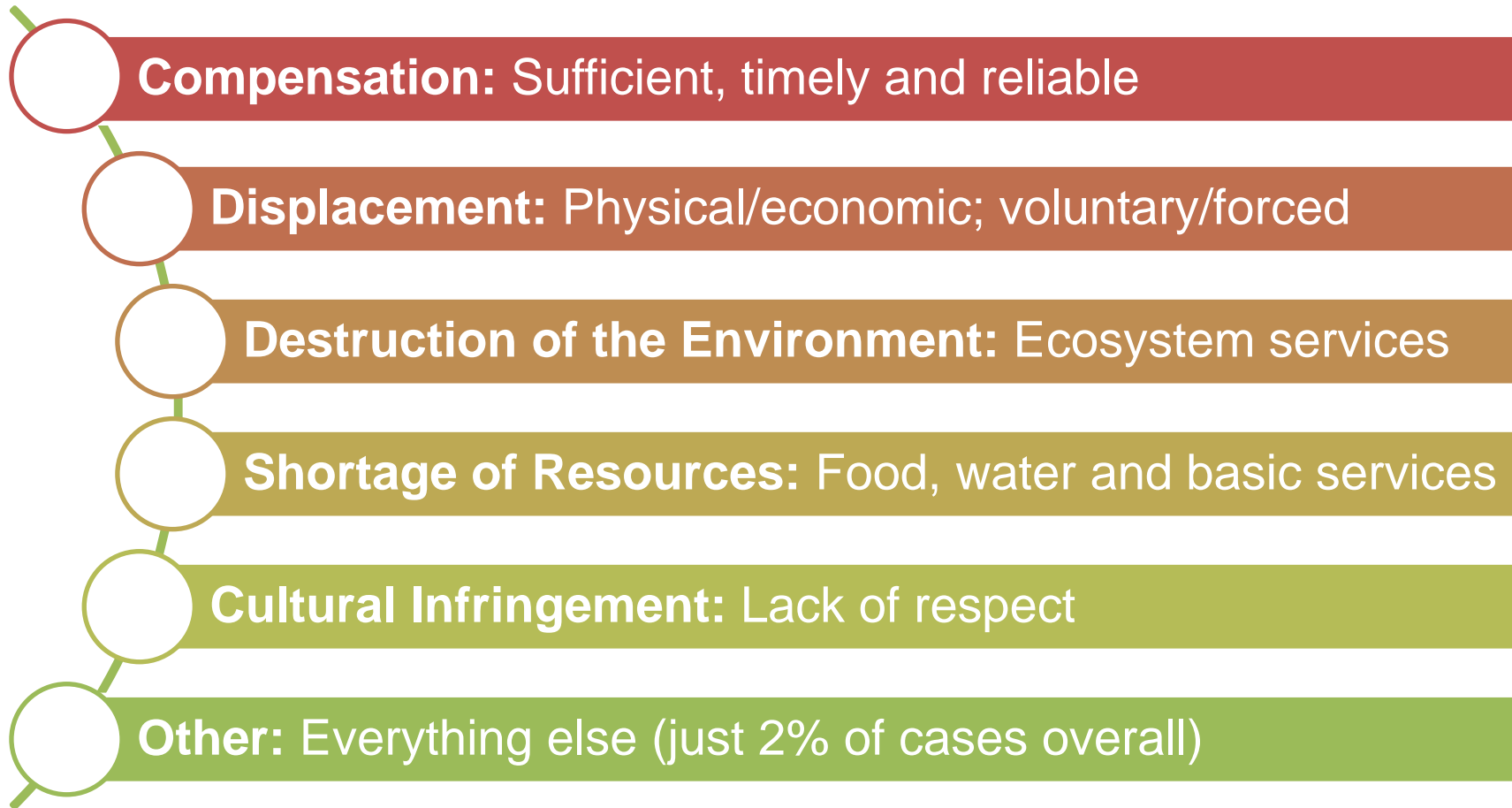
- “Clean” or uninhabited concessions are a myth
 - 93-99% of concessions are inhabited
 - Based on study of Brazil, Cambodia, Colombia, Indonesia, Liberia, Mozambique, Peru and the Philippines

- Significant impairments on the horizon
 - Study of INR 152248.5 crore of assets across 12 countries
 - Impairment of INR 33077.7 crore (21.7%)

Disputes Over Land: Global View

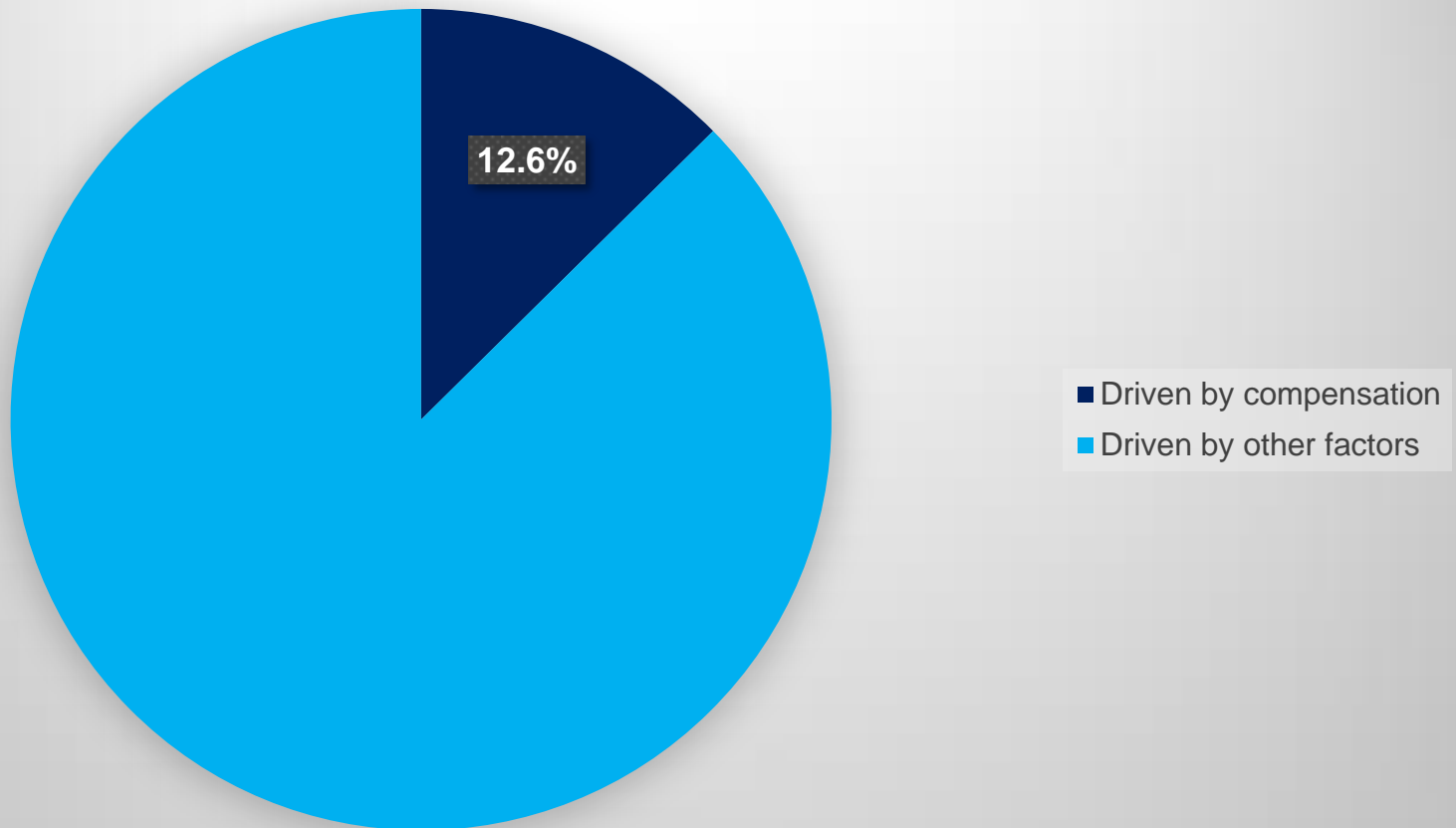


Drivers of Conflict

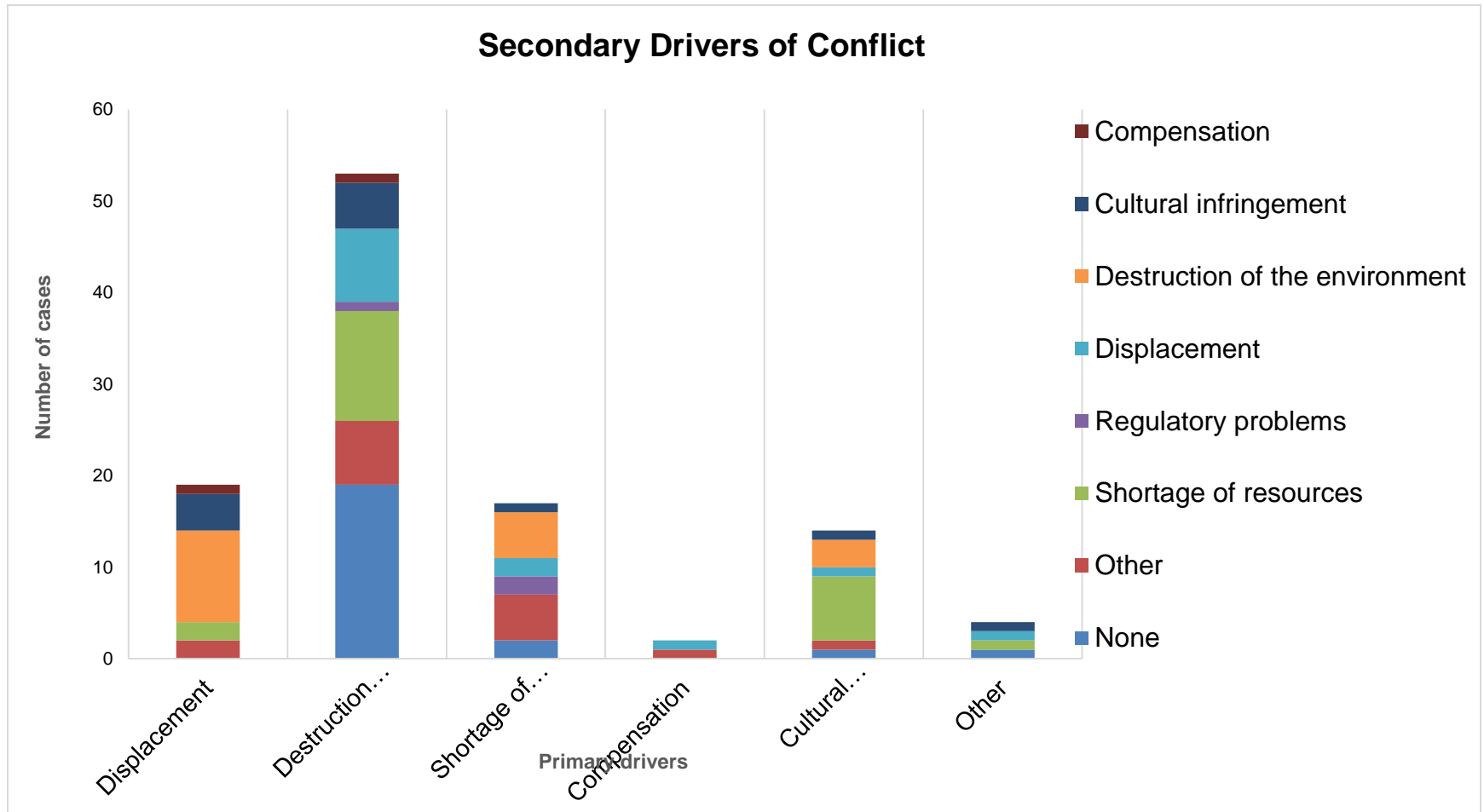


Not a Matter of Money

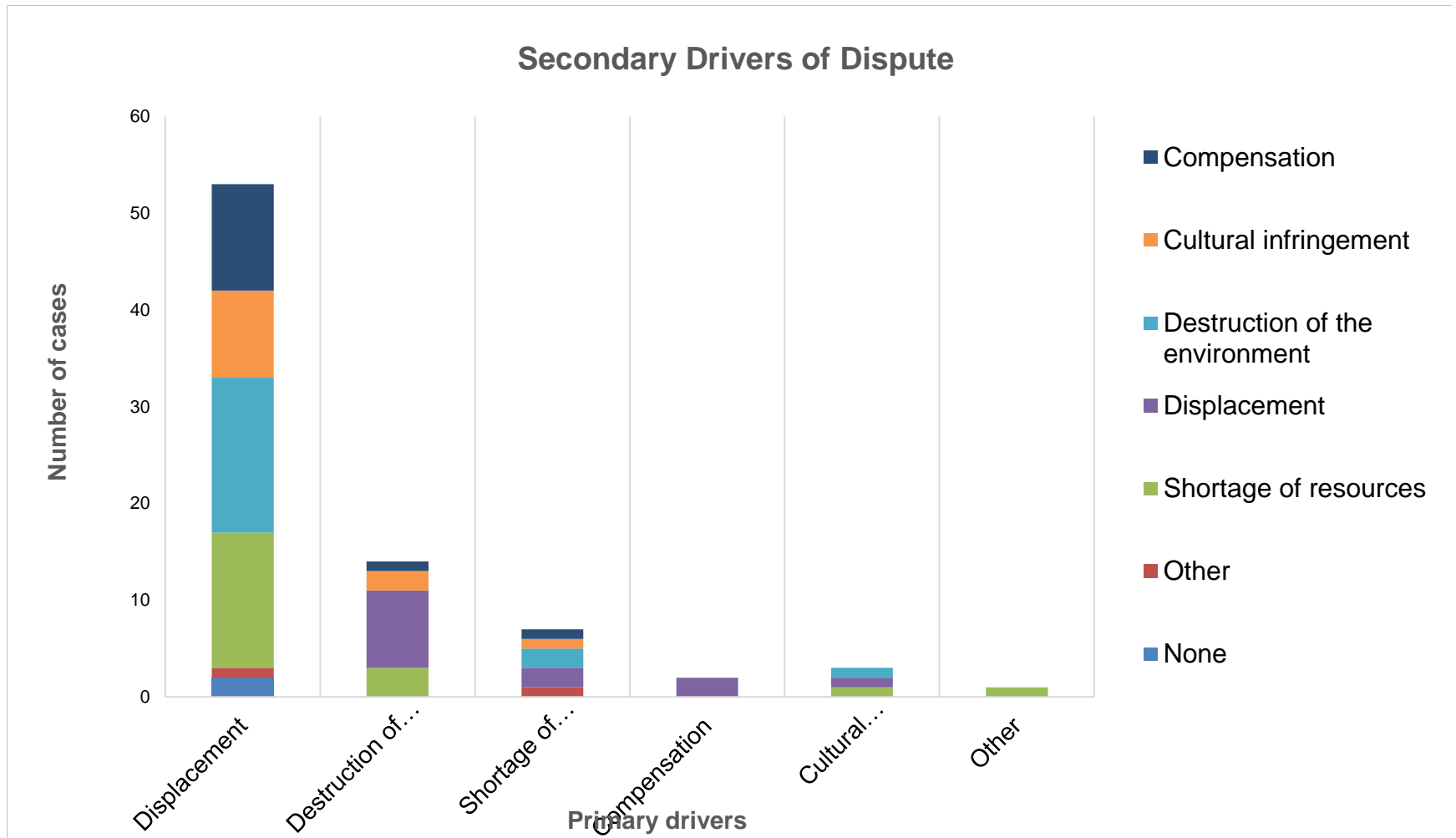
Compensation: Primary OR Secondary driver



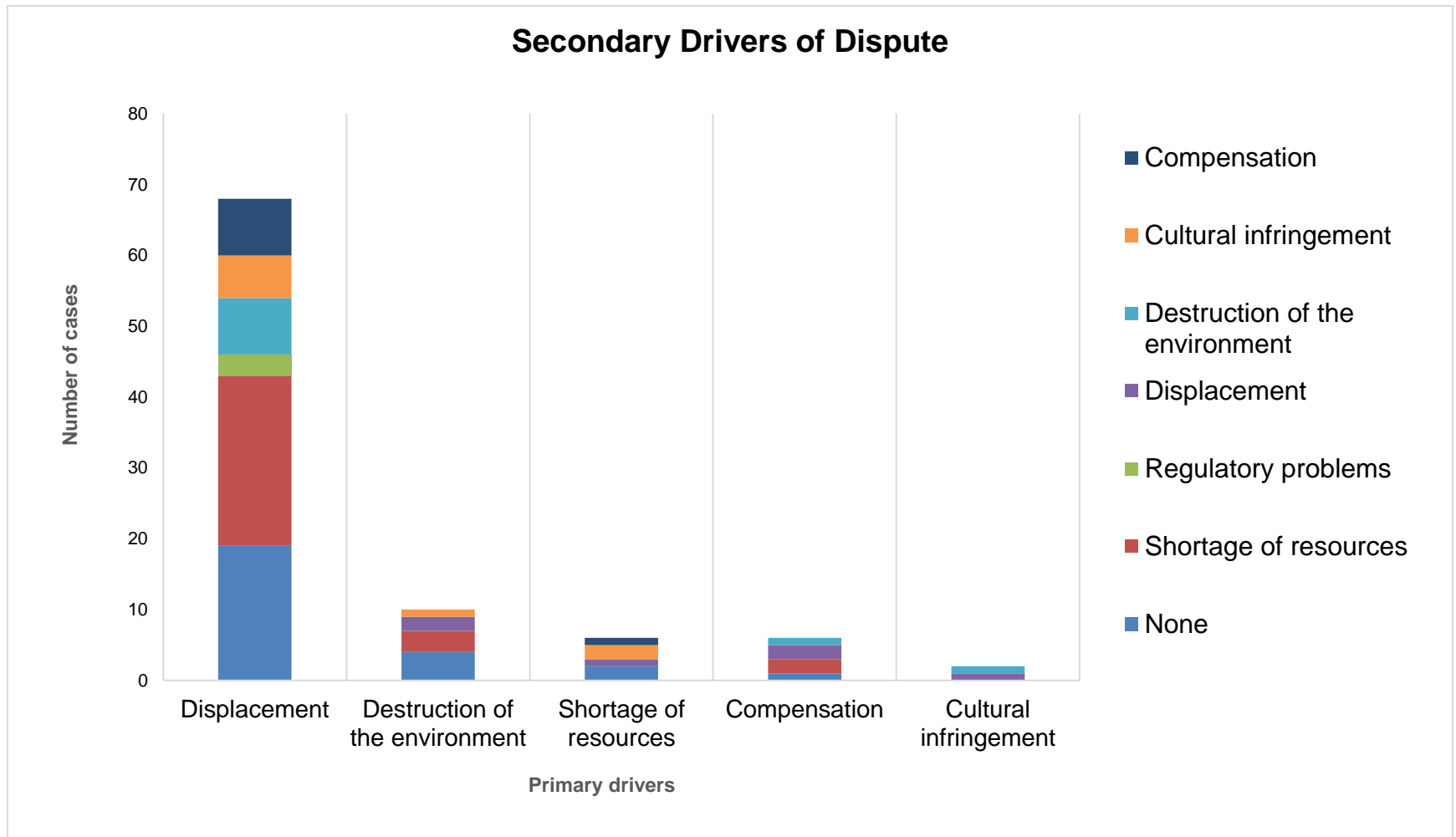
Drivers of conflict: Mining



Drivers of Conflict: Hydropower



Drivers of Conflict: Agriculture



Tenure Risk: Materially Significant

- What do we mean by materially significant?
 - Valuable equipment or property damaged by an invasion or arson
 - Production stoppages lasting more than 2.5% of annual working days
 - Significant regulatory intervention, which we rated as a fine in excess of \$500,000

- Do many project suffer from materially significant impacts?
 - Mining – 63%
 - Hydropower – 76%
 - Agriculture – 49%

Key Messages

- 1) Rural real assets inherently involve engagement with local populations
- 2) The pre-existing claims of these populations suggest strongly that the value of assets is impaired – although we don't yet know to what degree
- 3) Most of the conflicts these operations encounter are not because of failure to pay just compensation
- 4) Rather, they are about a grab bag of different environmental and social issues
- 5) These conflicts have some level of material impact across different sectors

Thank you

We appreciate your time

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