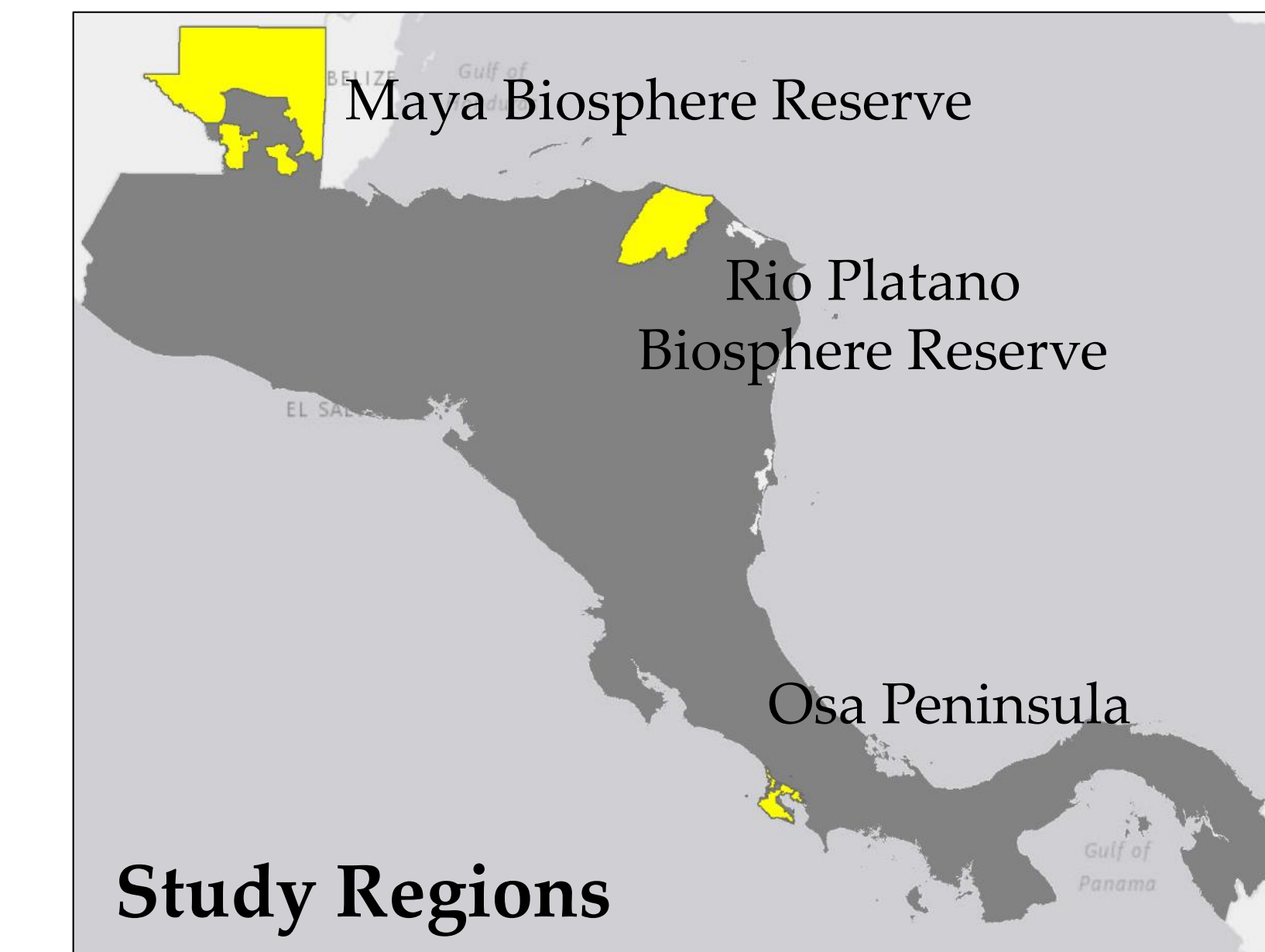


# Making the Hidden Visible: Accelerated Land-Use Change Caused by Narco-Trafficking In and Around Central America's Protected Areas

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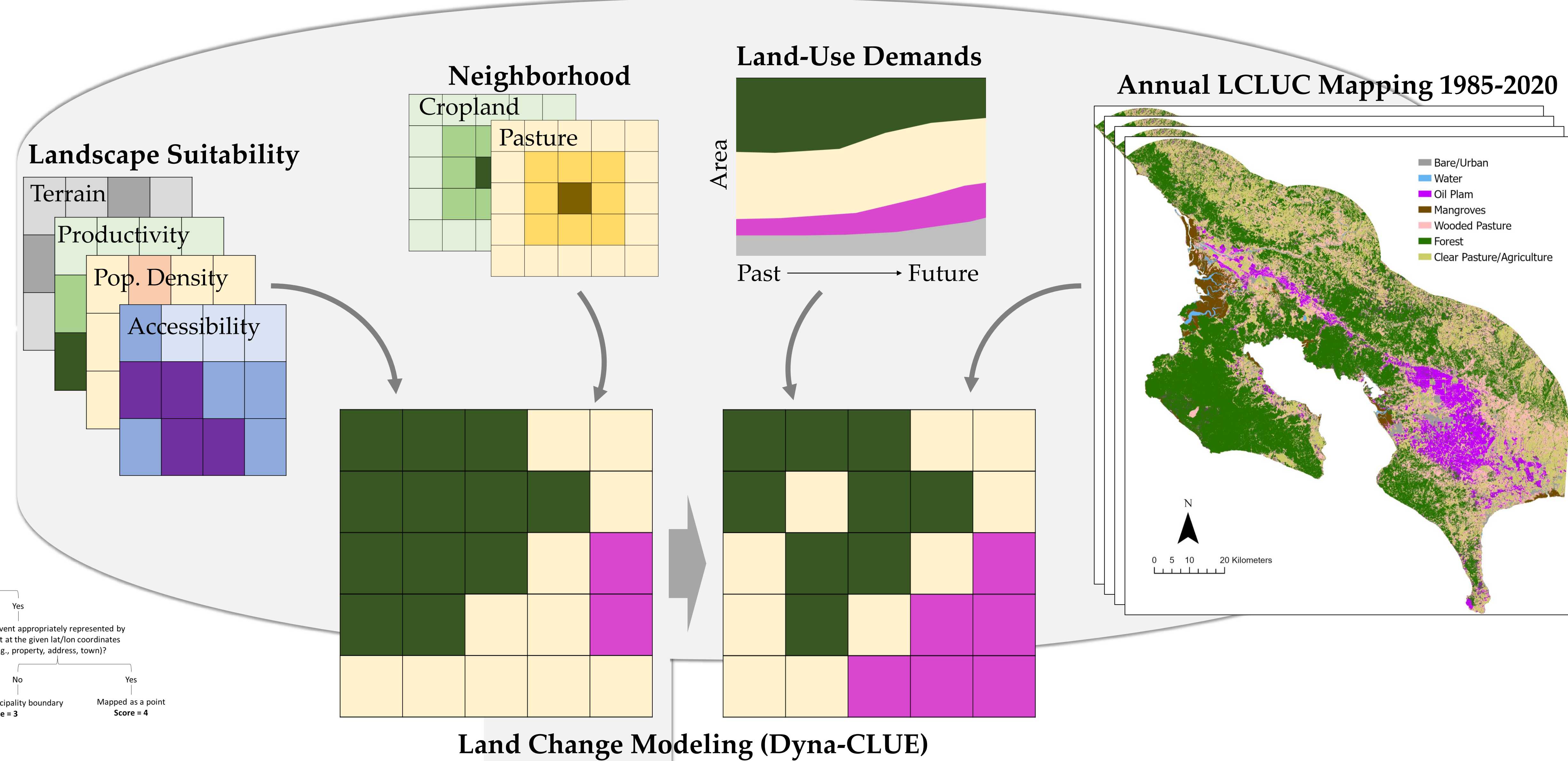


**Overview:** The Mesoamerican Biological Corridor (MBC) in Central America is a patchwork of protected areas, conservation schemes, and wildlife corridors containing an estimated 7-10% of the world's species, and was established with more than \$500 million of domestic and foreign investment. Despite its conservation importance, forest loss rates along the MBC were among the highest in the world over the last two decades. Accelerated deforestation throughout the MBC coincided in space and time with a shift to Central America as the preferred 'transit zone' for narco-trafficking, accounting for more than 80% of all U.S.-bound cocaine flows since 2010. This project uses narco-trafficking in the Central American MBC as a case study for how to render illicit activity spatially and temporally explicit – in other words, make the hidden visible.

## Research Questions :

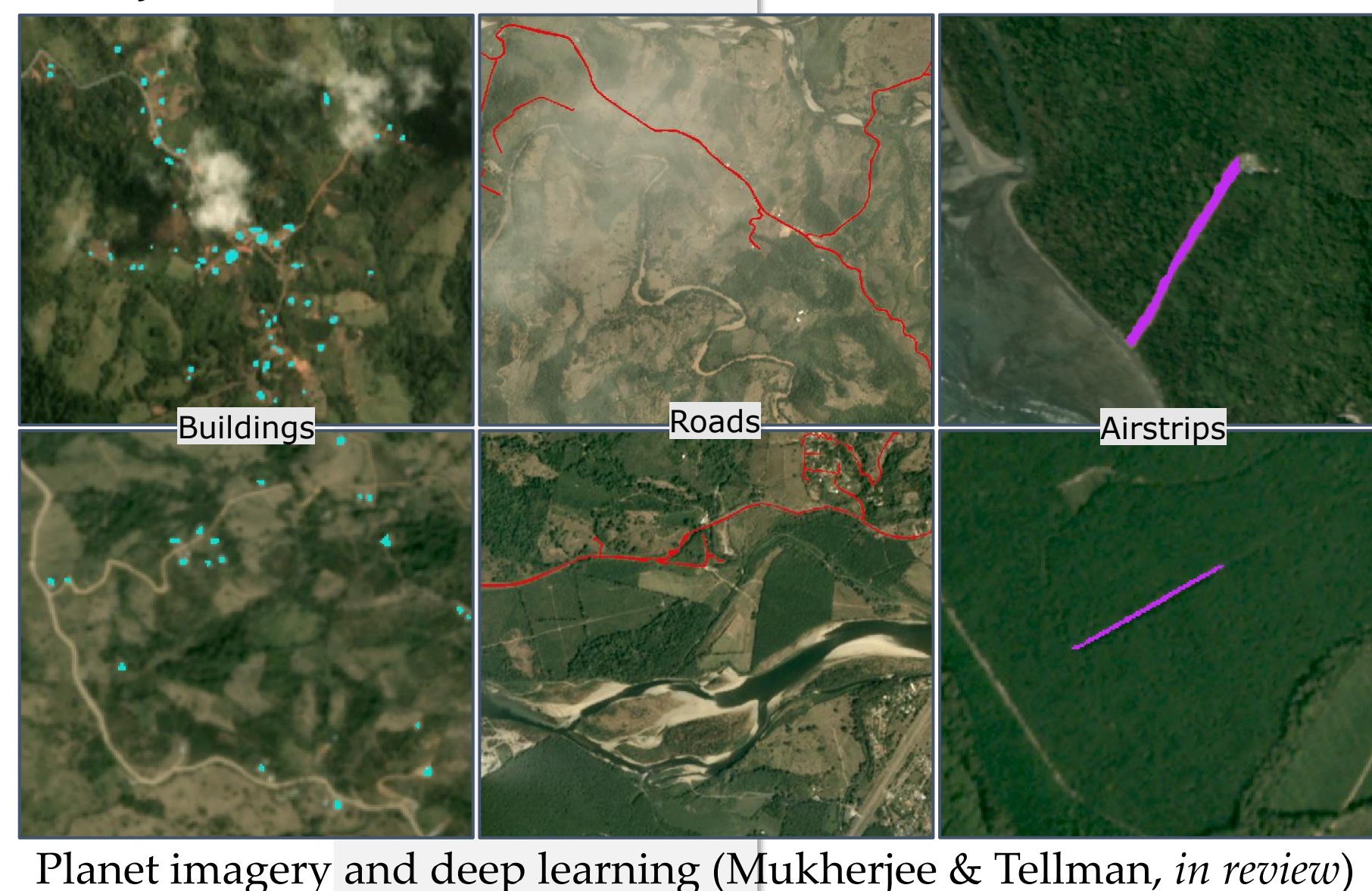
- What empirical evidence provides the earliest indicator of increased narco-trafficking activity for each study region?
- How does the *observed* quantity, timing, and location of LUC in and around protected areas differ from those *predicted* by "business as usual" social and economic factors?
- How much LUC and landscape degradation and landscape-scale habitat fragmentation can be attributed to narco-trafficking activities in and around PAs?

## 3. Land Change Mapping & Modeling



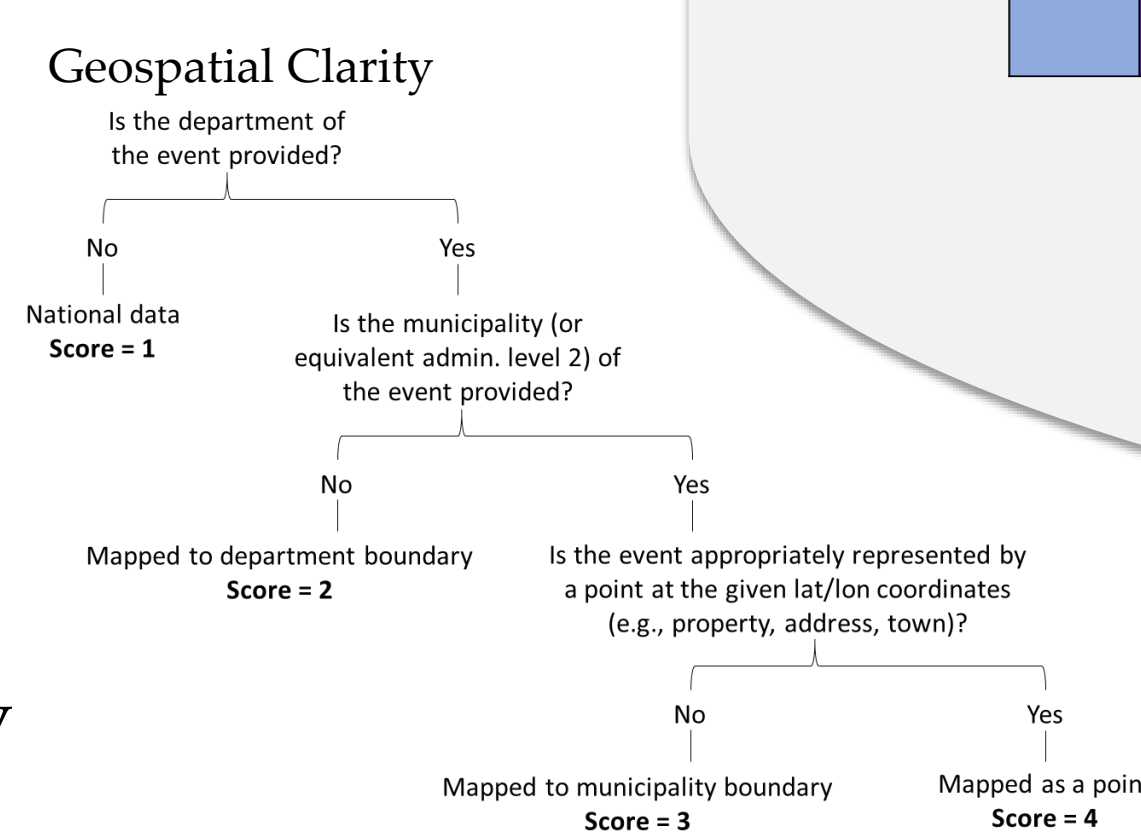
## 1. Consolidated Geodatabase

### Object Detection of Informal Infrastructure

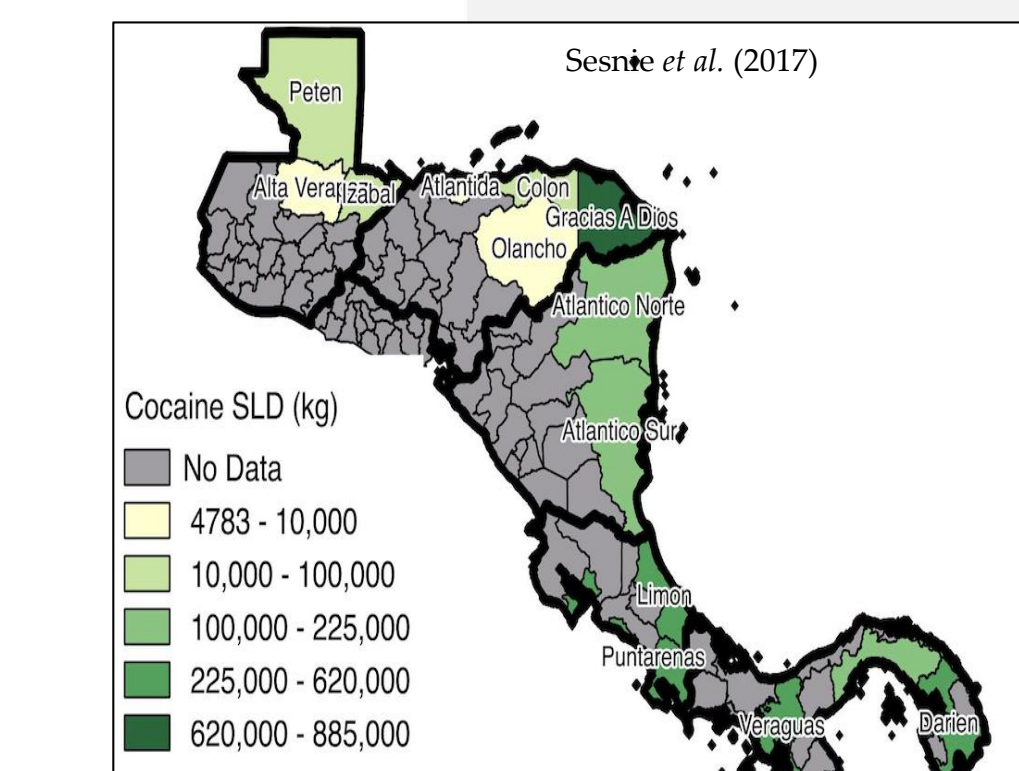


## 2. Data Pedigree

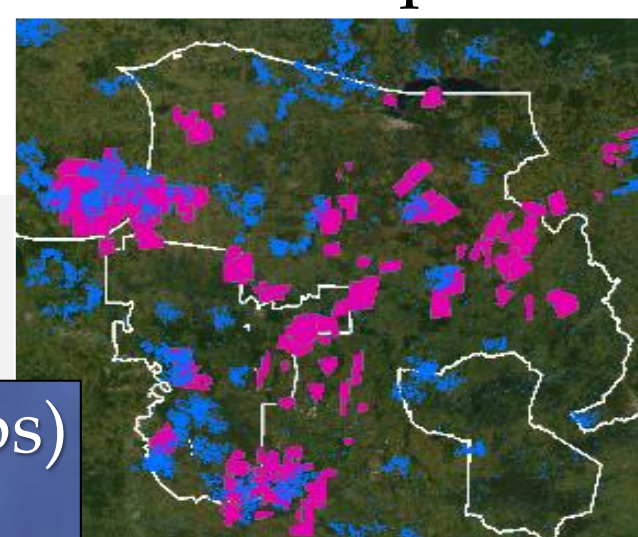
- Geospatial Clarity
- Temporal Accuracy
- Authorial Provenance
- Geospatial Interpretation
- Narco-Trafficking Certainty



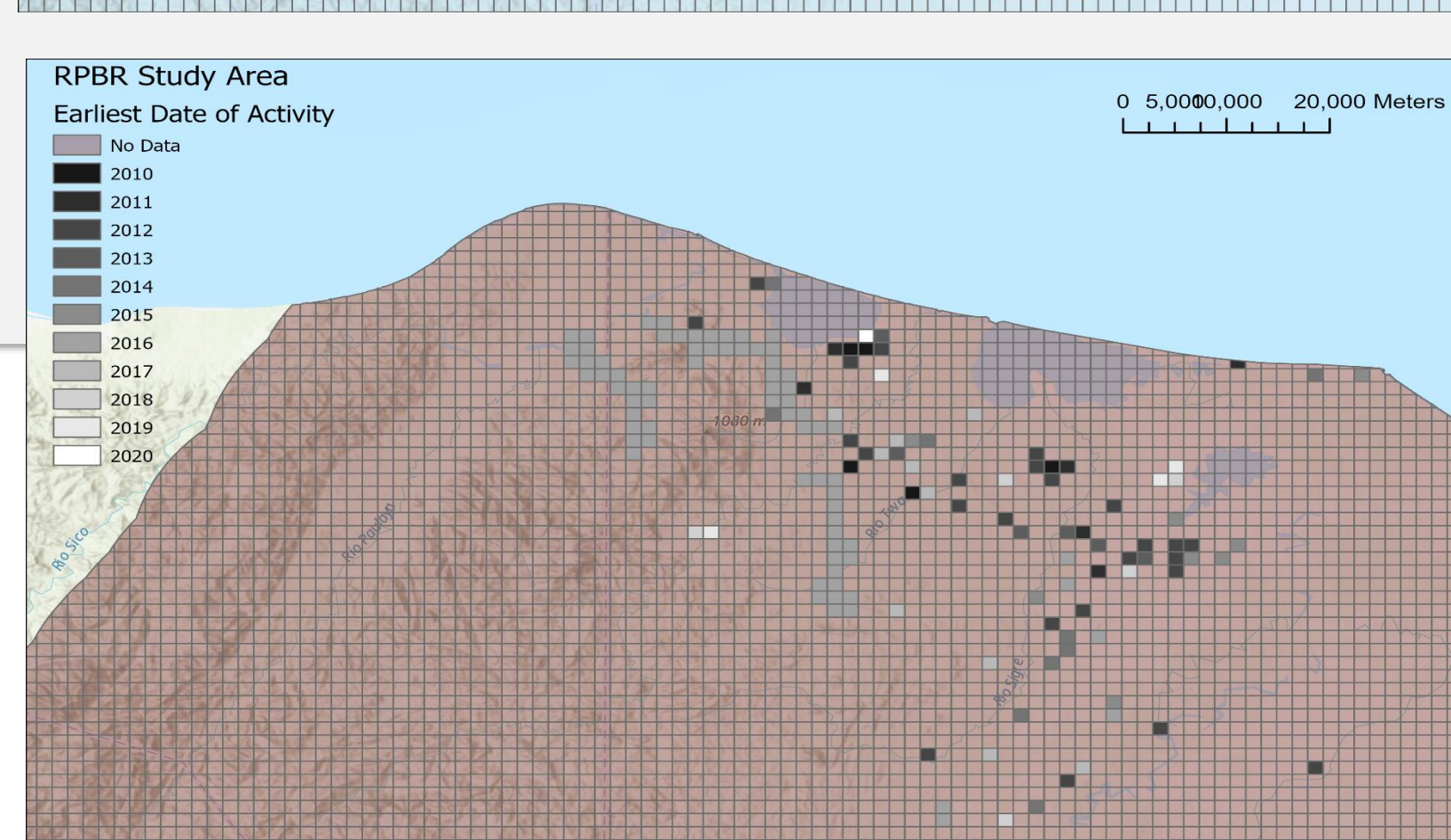
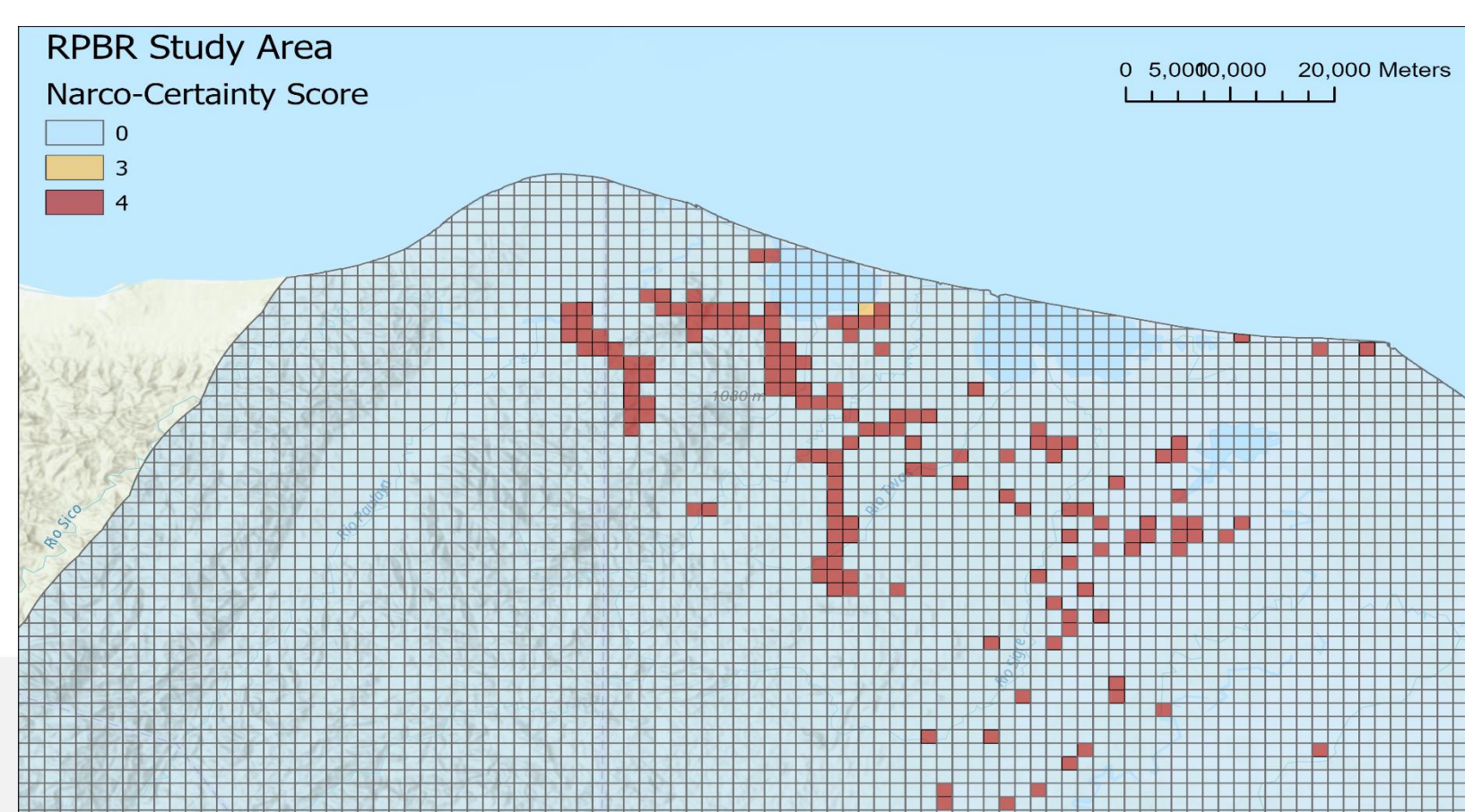
### Cocaine Seizures & Estimated Flows



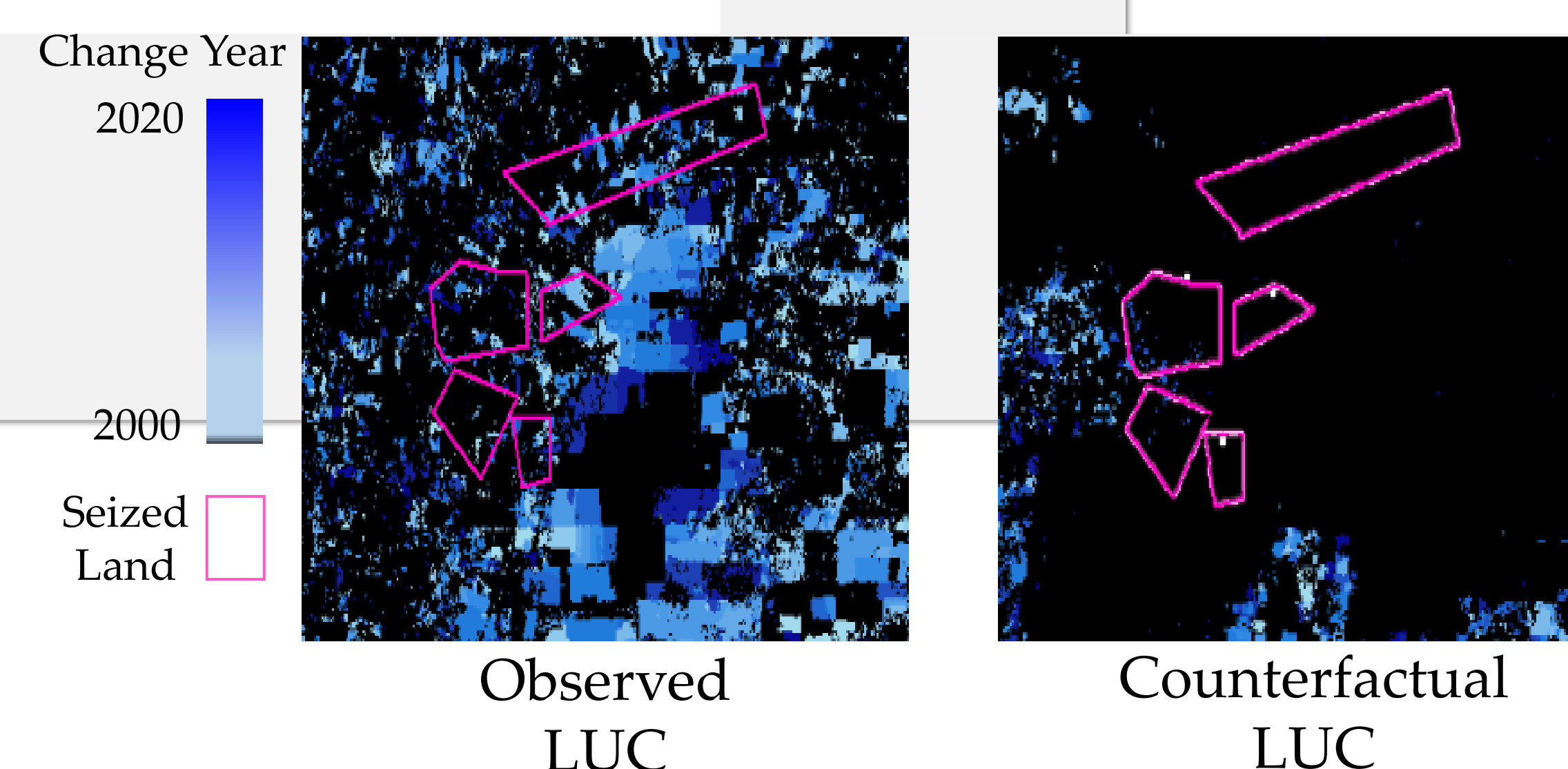
### Seized Properties



### News Media



## 4. Counterfactual Land Change Modeling



## 5. Effect Size of Narco-Trafficking Activity

