

# Evaluating the effect of interregional mobility on the spread of COVID-19 cases in Chile

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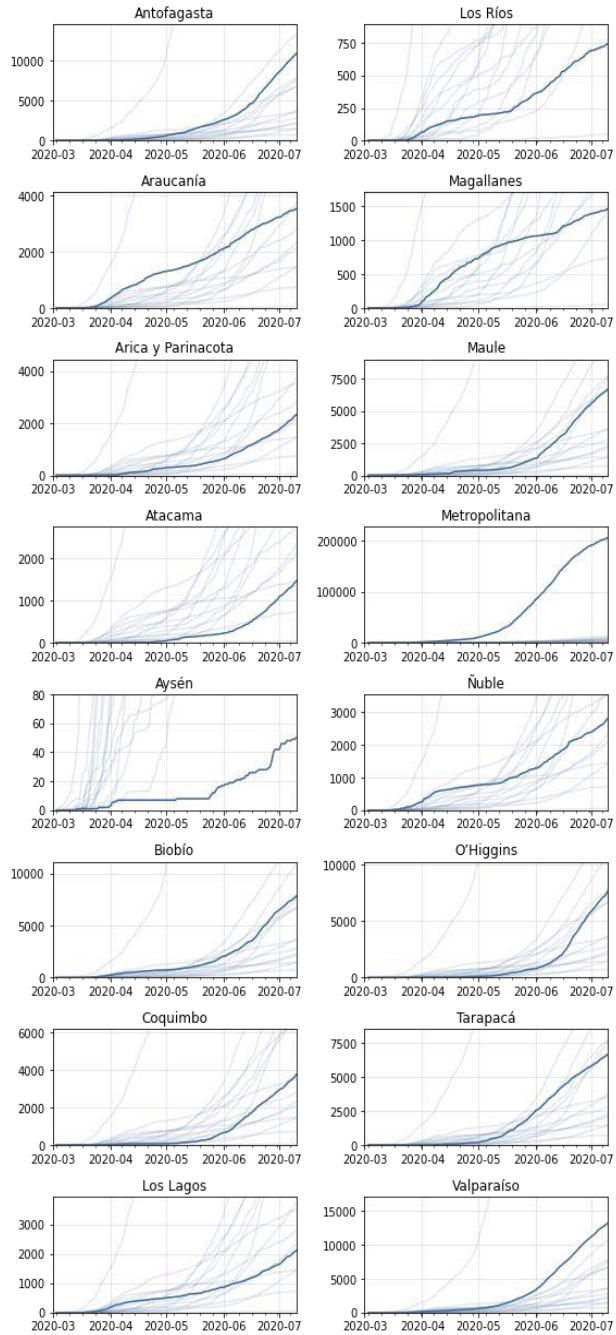
<sup>4</sup> ISI Foundation, Italy



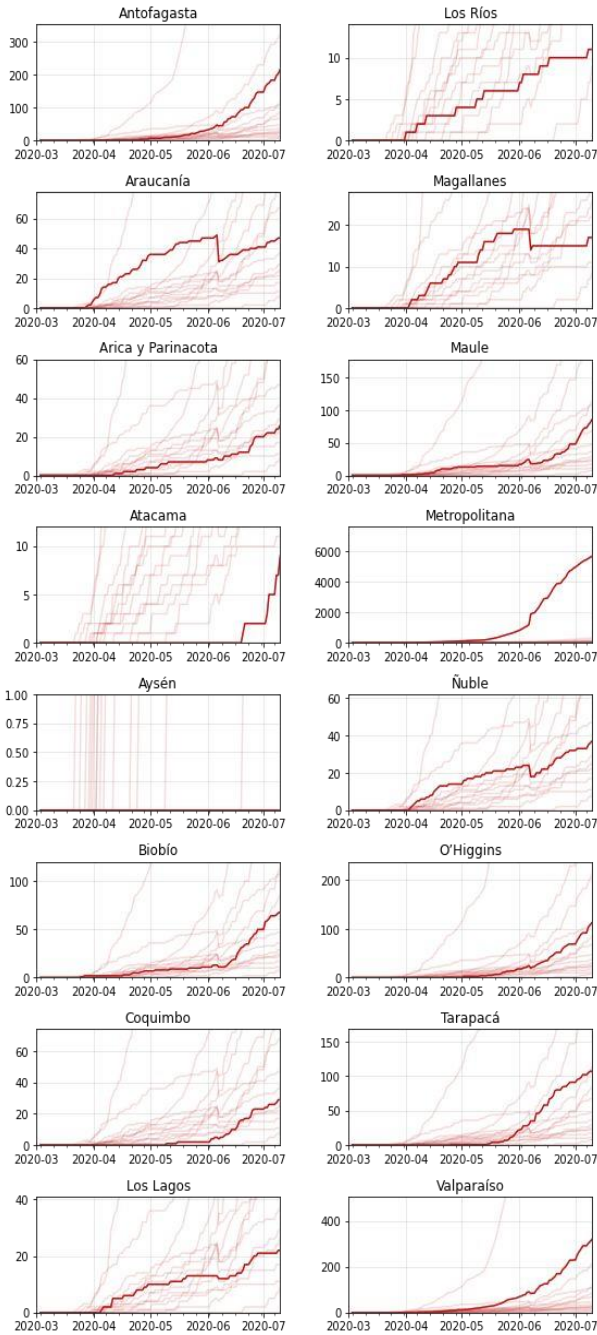
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Cumulative cases by Region



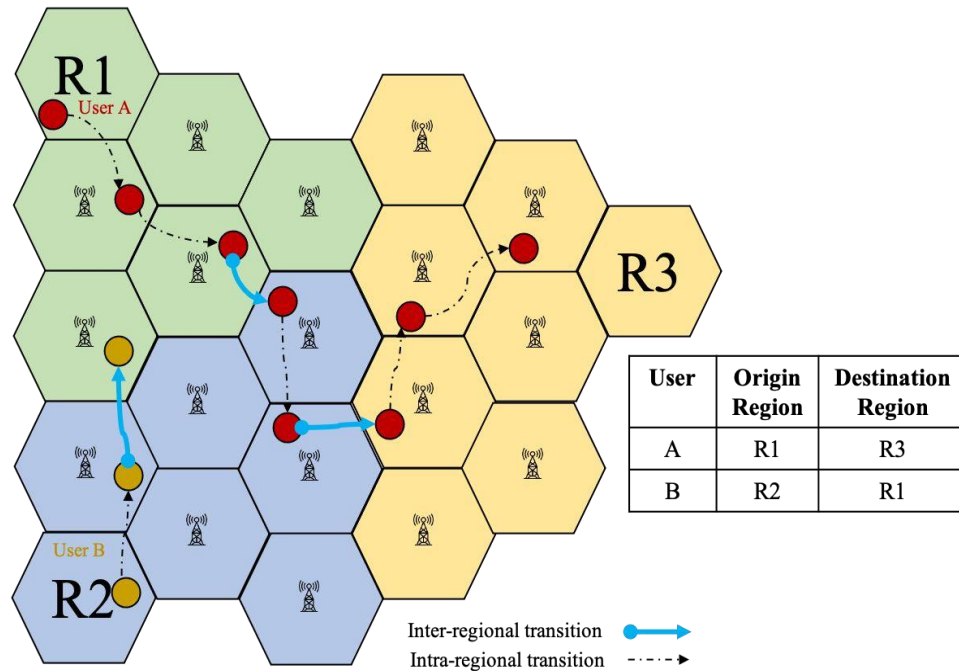
Cumulative deaths by Region



- Diverse Demographics
- Targeted **interregional** measures were employed to mitigate social and economic costs

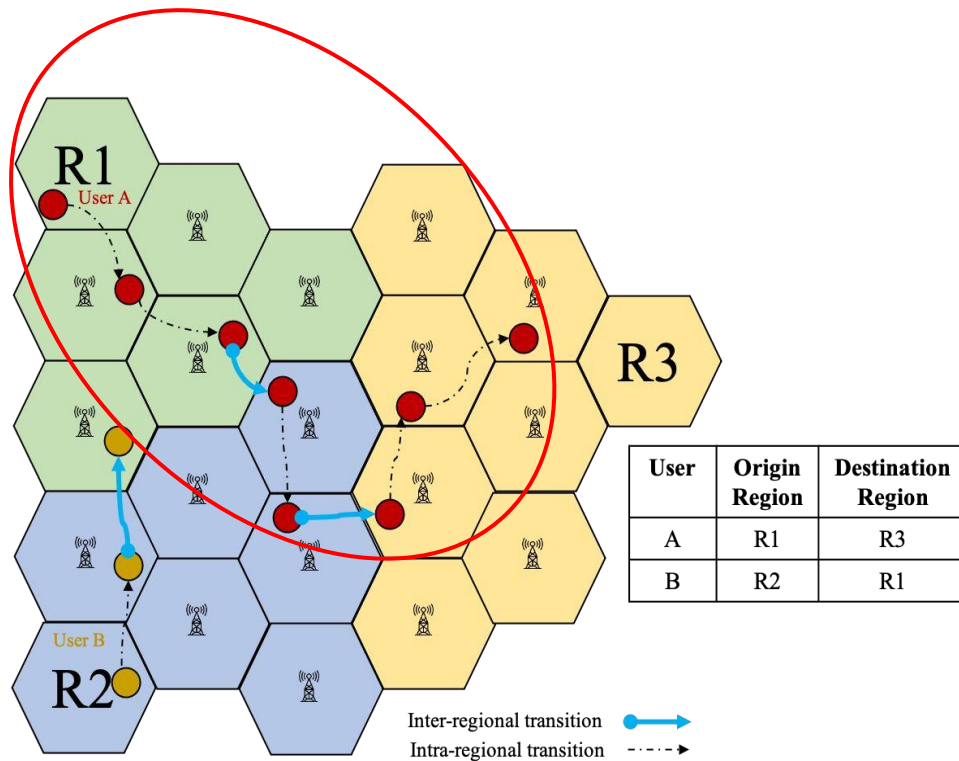
Can we **nowcast** the impact of mobility restrictions on each of the regions?

# Interregional trips from XDR data

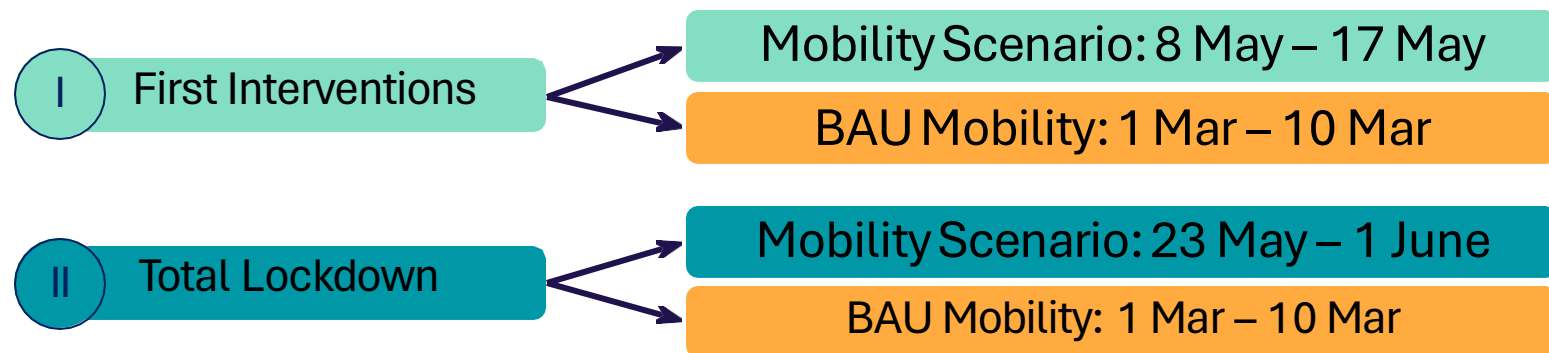
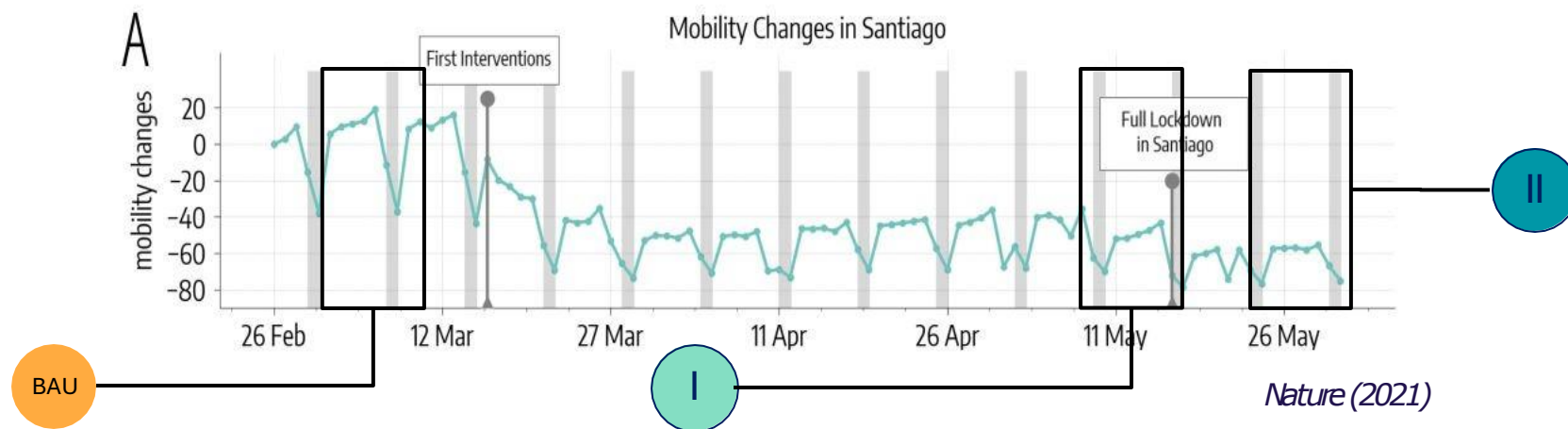


- One travel per-user, per-day
- Origin region is the first-registered region with staying time greater than one hour
- Destination region is the region with greater staying time, different from origin region

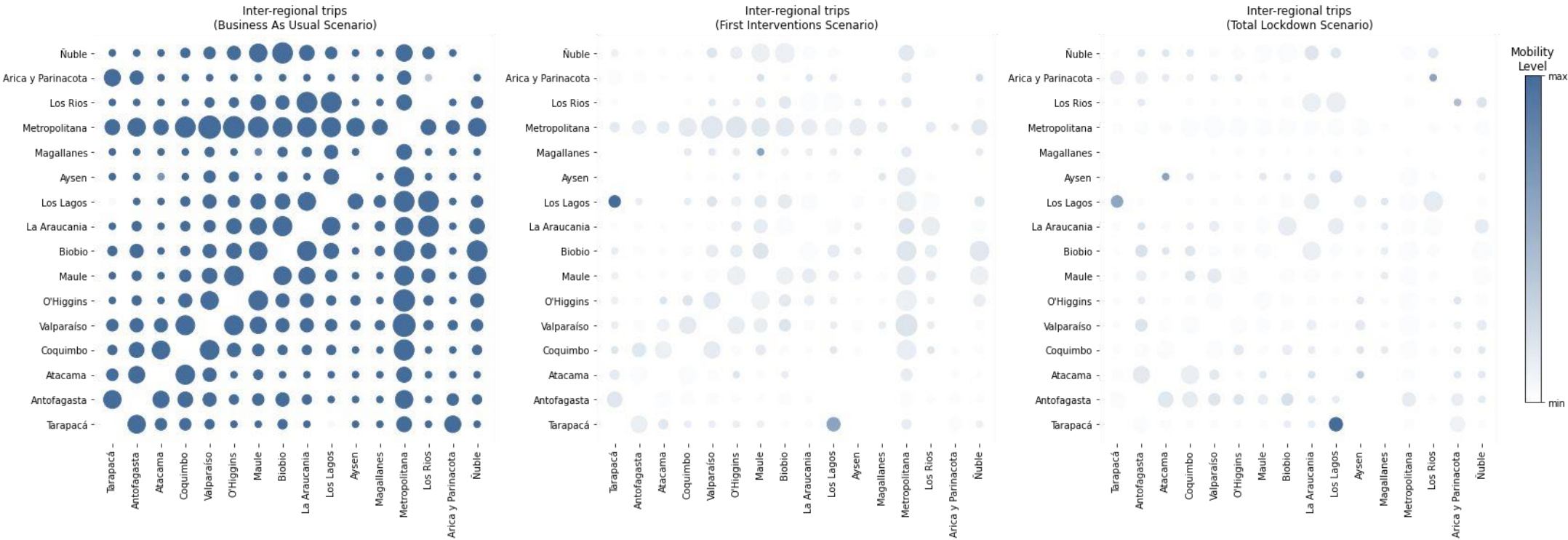
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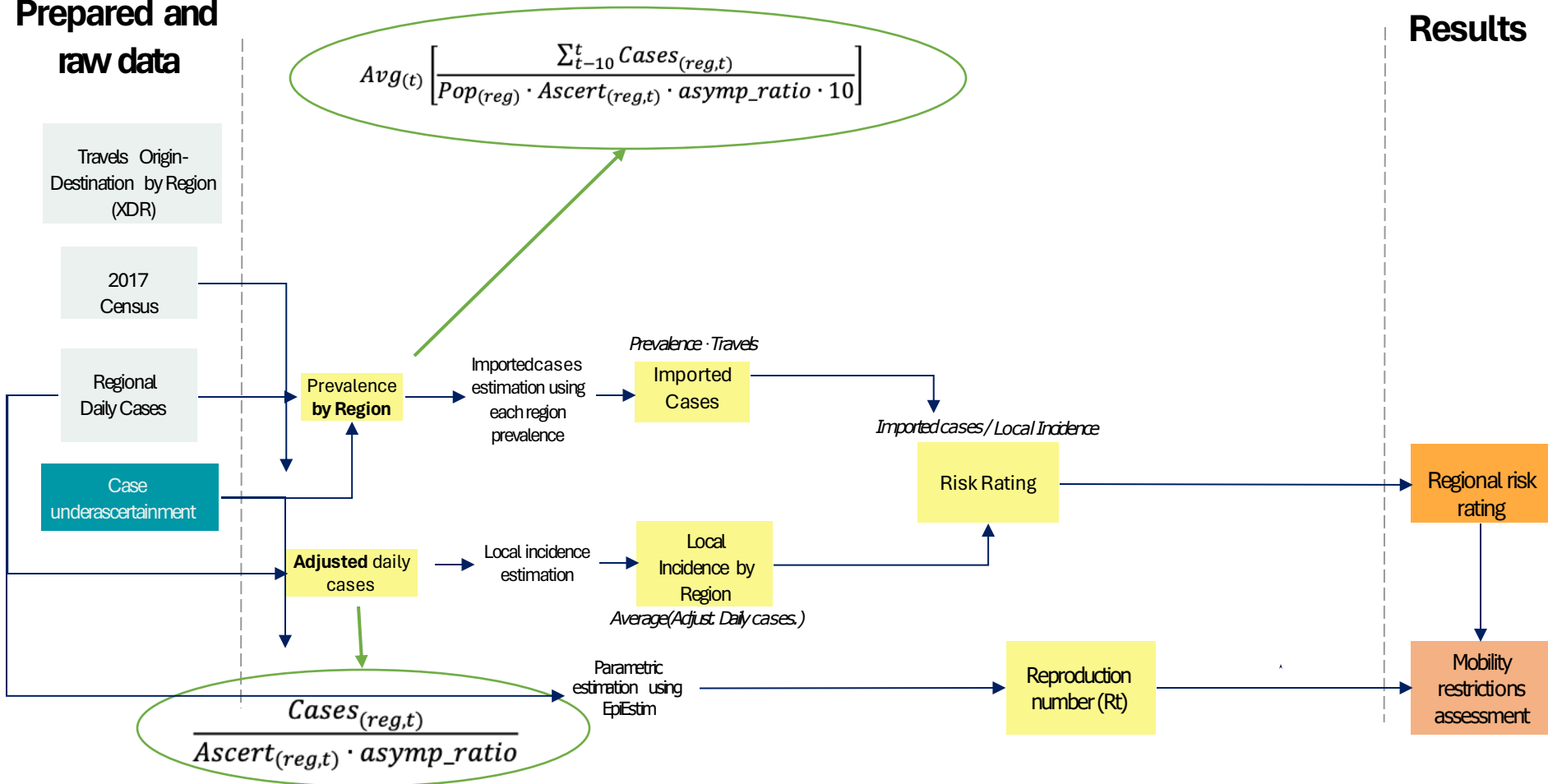


# Regional mobility changes



# Methods: Regional risk rating

## Prepared and raw data

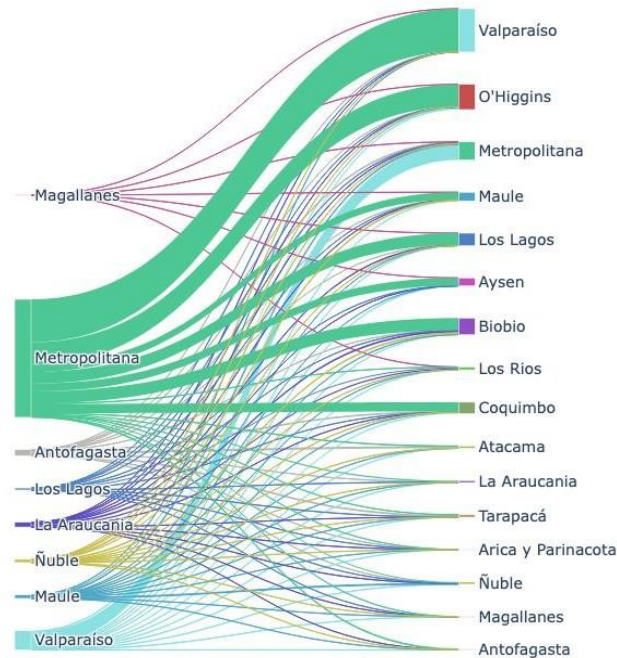




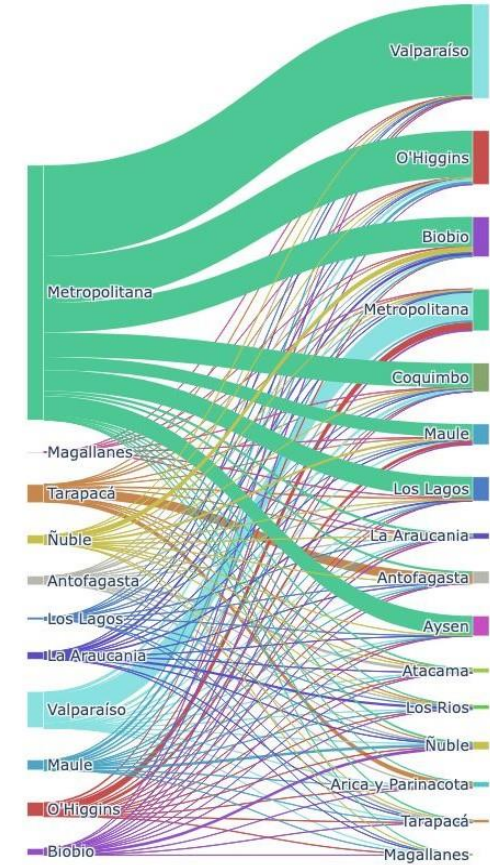
# Case importation

- Metropolitan Region is the main source of exported cases.
- Increased case imports are due to regional case number growth, not higher mobility.
- In regions like Valparaíso, Biobío, O'Higgins, Los Lagos, and Coquimbo, the Metropolitan Region contributed over 85% of imported cases.

Imported Cases for First Interventions Scenario

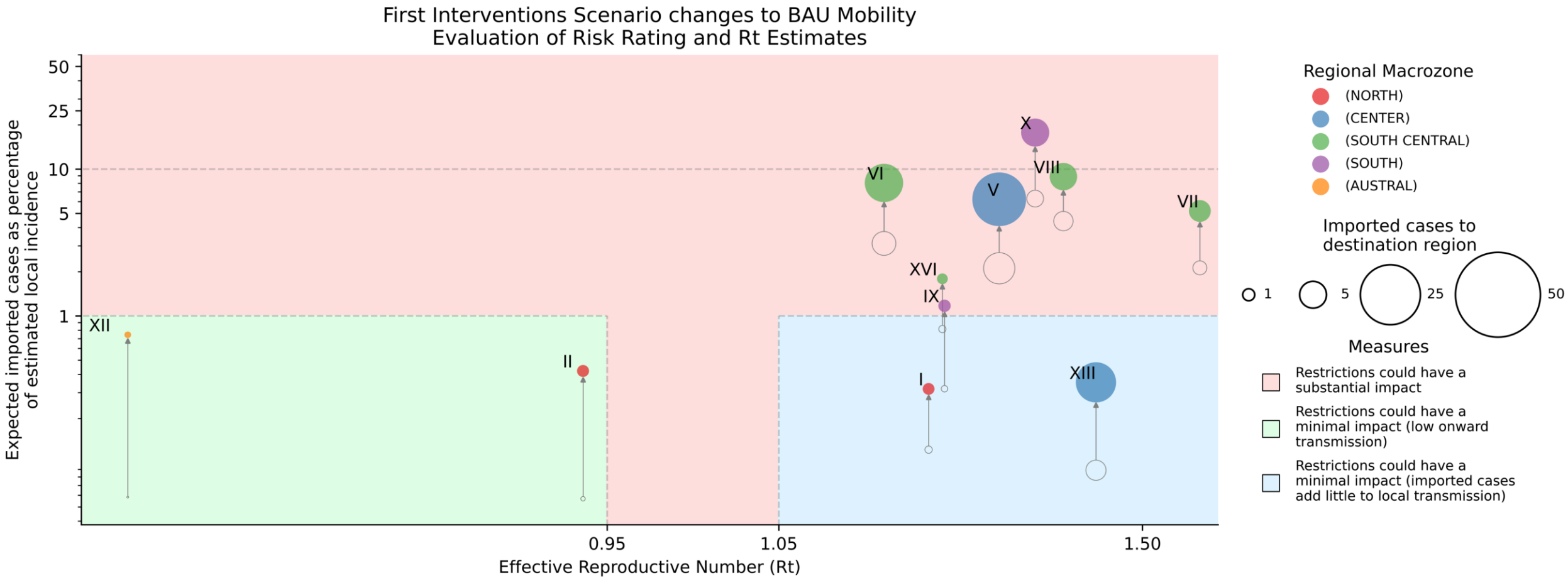


Imported Cases for Total Lockdown Scenario

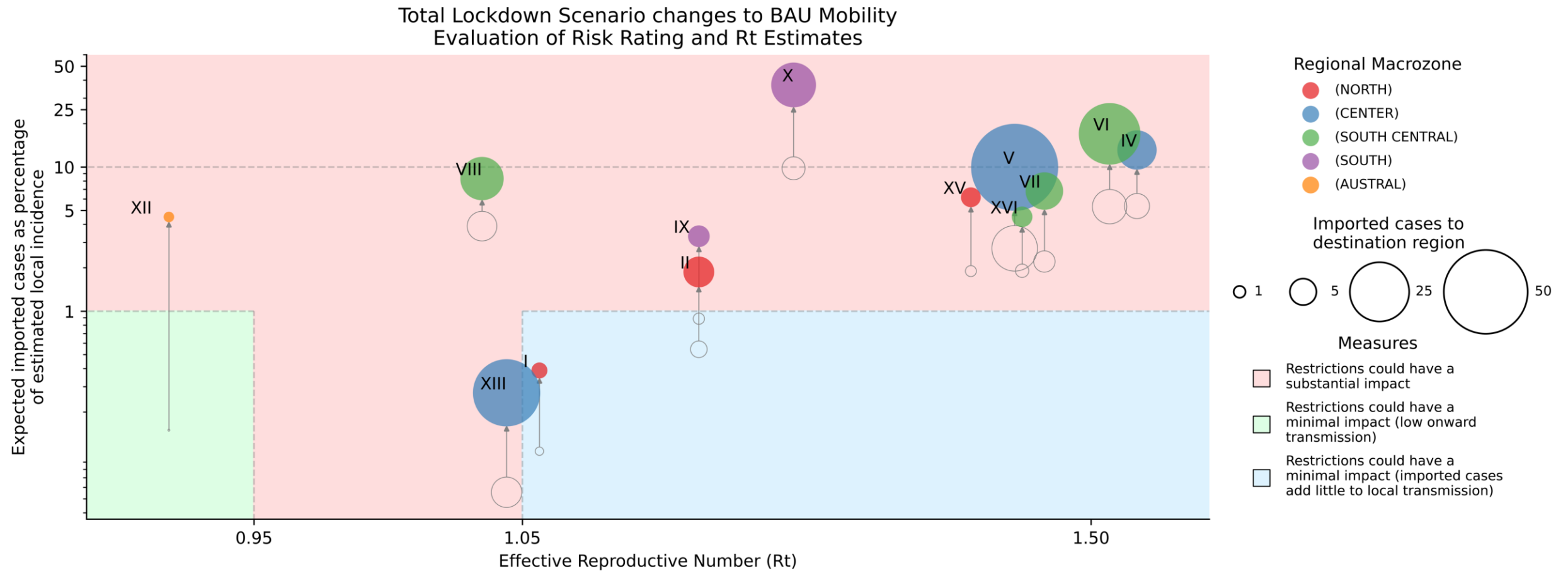




# Scenario evaluation (First interventions)



# Scenario evaluation (Total lockdown)



# Conclusions

Mobility reductions significantly **curtailed** cases and risk across regions.

High-risk Santiago Region it's the **main a source of infections** for the rest of regions. However, demonstrated **low risk rating** due to mobility changes.

By harnessing telecom-derived data, our approach can facilitate **near real-time** regional insights for informed **policy responses**