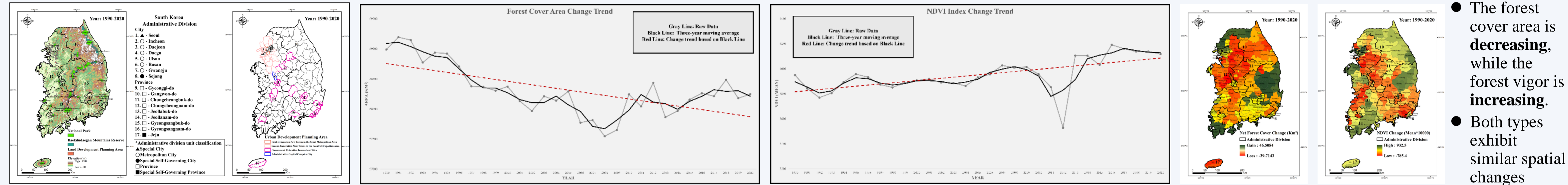
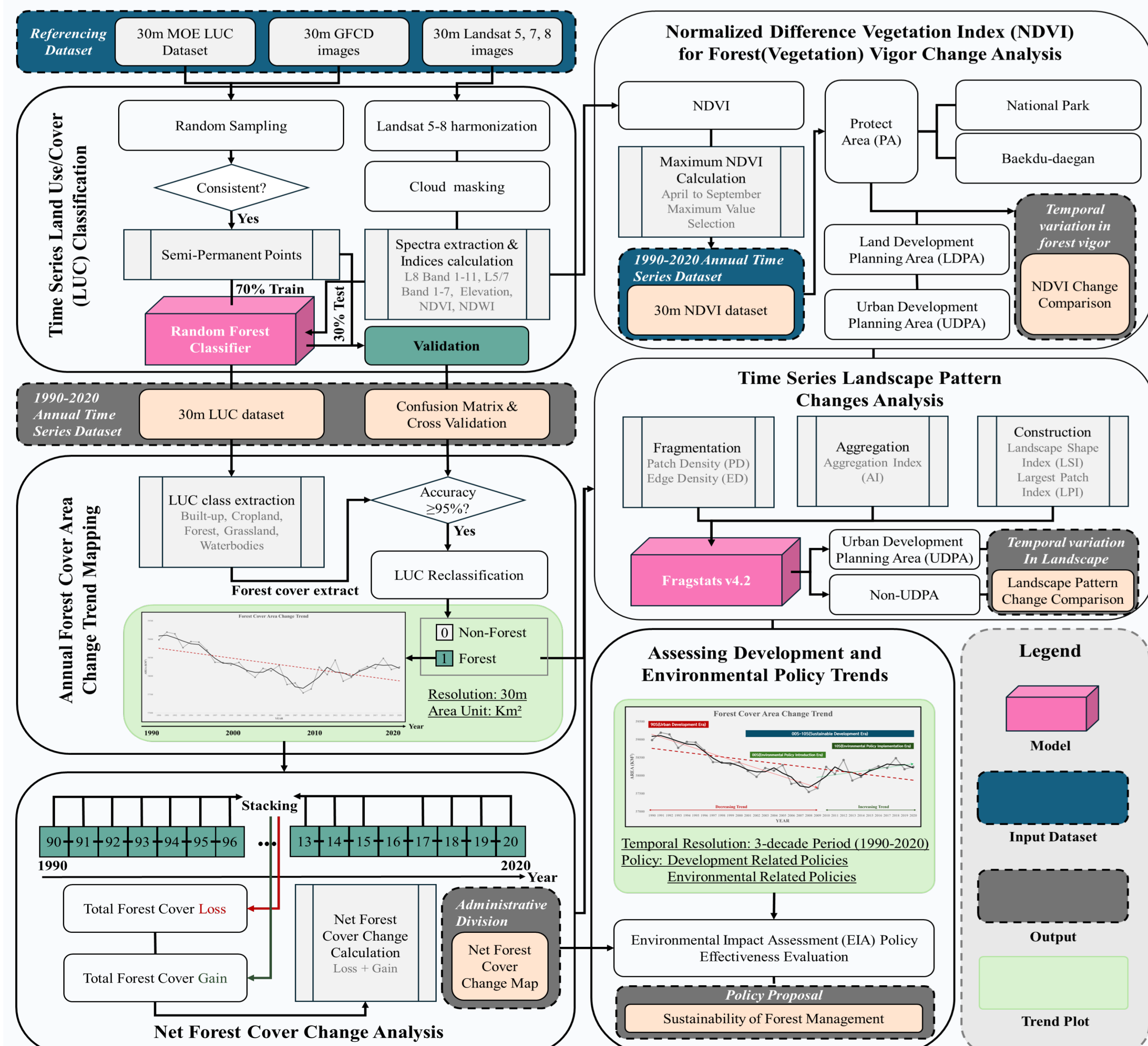


## Introduction & Scope

- Deforestation primarily occurred around planned economic development areas near the capital city
- Decrease in forest cover from 1990 to 2009, followed by an increase from 2010 to 2020. These changes correlate closely with the nation's development and environmental policy trends
- Over the three-decade study period, the net change in forest cover showed significant increases were only concentrated in capital city

This research focuses on the quantitative monitoring of forest cover loss in the Republic of Korea from 1990 to 2020, using semi-supervised classification. This work also evaluates South Korea's forest management practices by integrating vegetation and landscape indices to assess sustainability.

## Methods

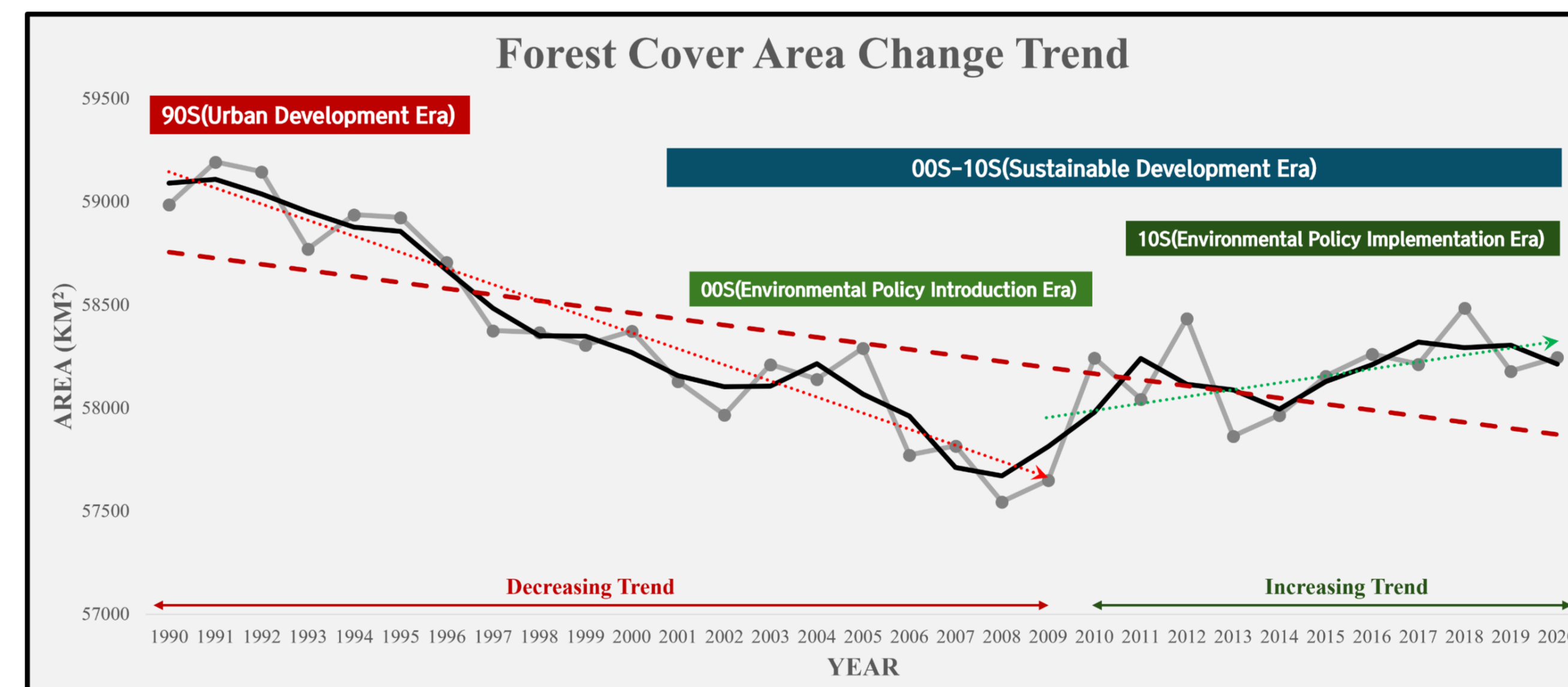


The forest cover area is decreasing, while the forest vigor is increasing. Both types exhibit similar spatial changes

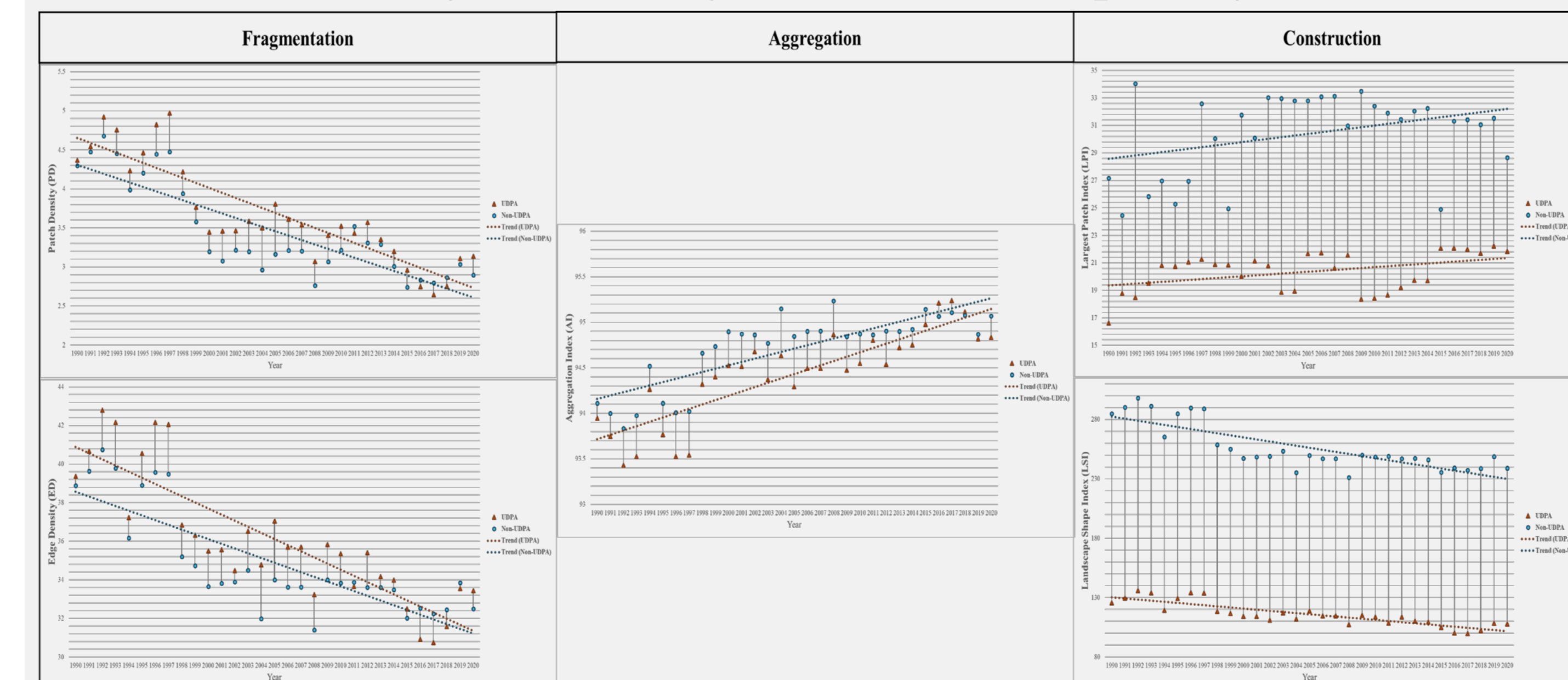
## Results

Changes in forest nets over a 30-year period

- Cities: **Seoul** and **Incheon** recovered, and other cities decreased
- Provinces: **Gyeongsangbuk-do** and **Jeollanam-do** recovered, and other provinces decreased



- In UDPA regions, urbanization and planning are creating more regular shapes at the edges of natural landscapes.
- Non-UDPA areas may face lower development pressure or have implemented effective conservation measures.
- Urban green spaces are being increasingly integrated, and over time, efforts to manage forest fragmentation are impacting both areas.



## Discussion

- Despite active land development in the capital region (Seoul and Incheon), there is an emphasis on coordinated and sustainable development strategies that balance urban development with greening. However, in various cities, the Land Development Planning Area (LDPA) is evidently treated as a development zone without sufficient constraints to ensure the enhancement of greening environments post-development.
- A national environmental protection policy different from the Environmental Impact Assessment (Korea policy that comprehensively considers the environmental feasibility of eco-friendly business development plans) is needed. This policy should not only require payment for green space development costs but also necessitate the return of the corresponding area of greening.

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