

Endless sprawl “cities” in the Greek islands: A Climate-resilience perspective

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Introduction

“This research uses Paros Island as a case study, to analyze spatial and environmental repercussions of what is perceived as an *endless sprawl* pattern of development, heavily transforming the traditional and ex-agricultural island territory into an idiosyncratic type of “city” for tourism. A spatial analysis perspective is adopted, underlining the dead ends of such a spatial/developmental process, also investigating the role of bottom-up social movements to question the economically driven business-as-usual scenario and to envision a climate-resilient and socially and environmentally-just future”.

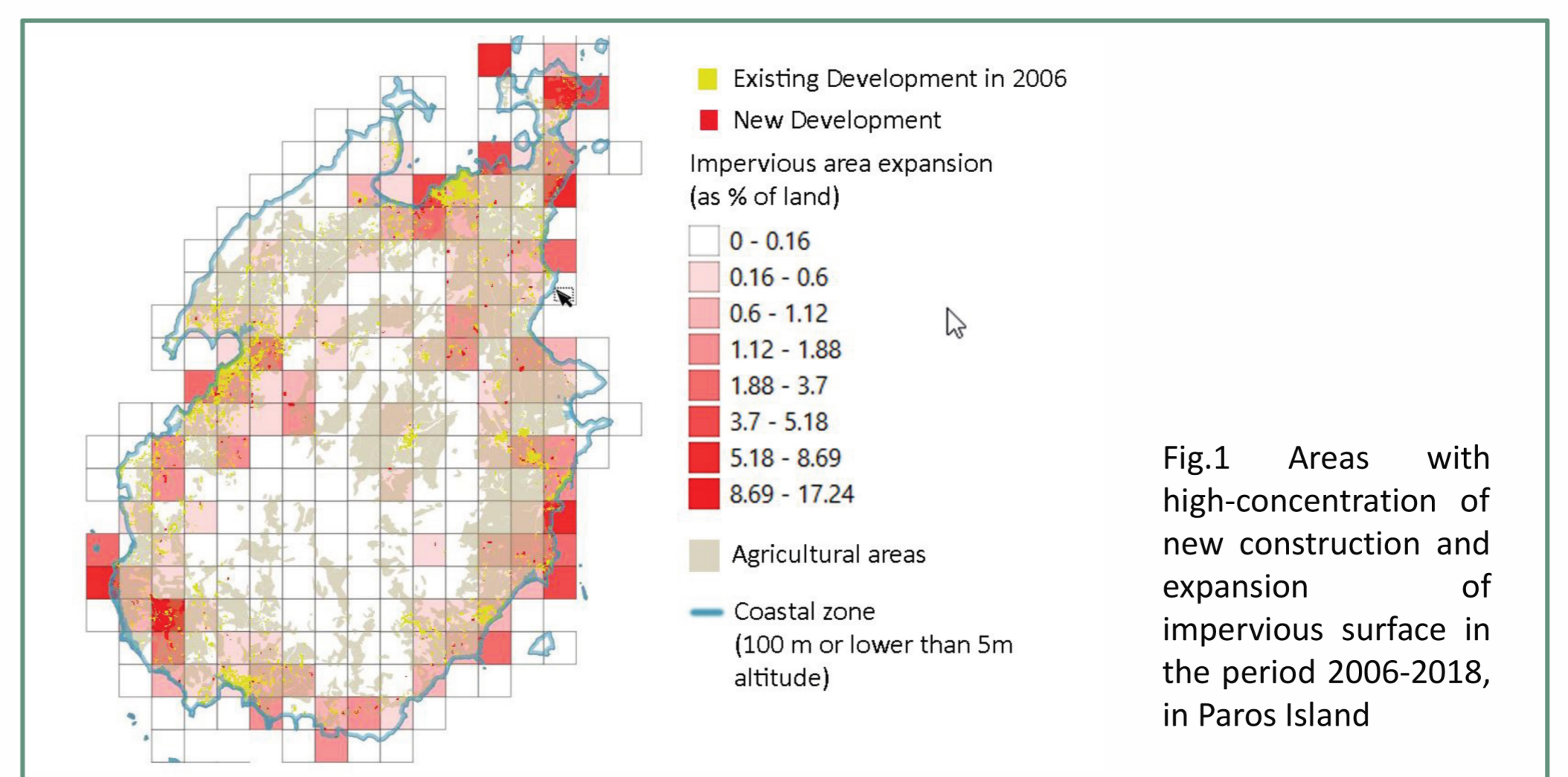
Theoretical Background

“A common ascertainment of people visiting the Greek Islands during the past decades is their sudden transformation into an idiosyncratic form of “cities” during the summer period, as a result of the accelerating expansion of tourism facilities, vacation houses and related infrastructure. Especially in the case of small or medium-sized, highly-reputable island destinations this could lead to overtourism (Lagarias et al., 2023) with a seasonal population exceeding the carrying capacity of places, thereby posing extreme pressure on natural resources, municipality services, healthcare system etc. Spatial patterns of development can be particularly dispersed encroaching across the island territories in a highly unregulated way, and resulting to what we could describe as “endless sprawl”. Our main hypothesis is that such a procedure could severely threaten the spatial resilience of islands, increasing vulnerability to climate-related risks like drought, coastal erosion, and biodiversity loss, also leading to irreversible land degradation and hampering efforts for a climate-resilient future”.

Methodology & Data

“GIS-based methods are applied in order to analyze the emerging patterns of urban sprawl in Paros. Methodology is based on the analysis of geospatial data, regarding the built-up environment (IMP database), combined by data regarding natural/agricultural resources and geomorphology, to assess recent land use changes”.

Results/Case Study



“Case study analysis confirms the hypothesis of excessive urban sprawl in Paros island, with new development continuing during the most recent period (2006-2018), taking up valuable agricultural land (fig.1). Tourism facilities are close proximity (or even within) the 100m coastal zone (considered as protected land by the Protocol on Integrated Coastal Zone Management in the Mediterranean, 2009), and within vulnerable in terms of coastal erosion and sea-level rise low-elevation coastal land (< 5m altitude). Moreover, new construction is spotted within Natura 2000 areas and IBA sites (fig.4). The pattern of development forms a continuous ring along the coastal zone, almost exclusively related to low-density exurban development that is transforming the islands’ territory into a vast “construction site”.



Fig.2 Expansion of urban sprawl (red color) within Natura 2000 zone (GR4220025) in the peninsula of Santa Maria (source: Own elaboration)

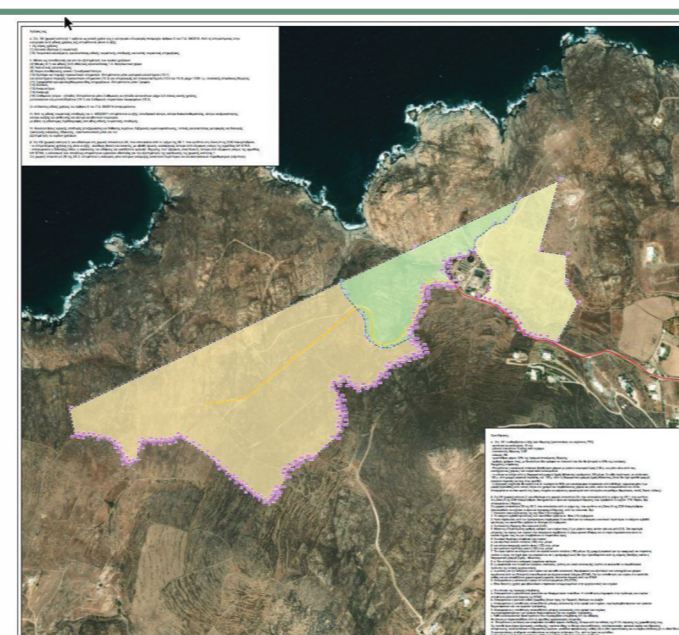


Fig.3 Proposed plan for new giga-hotel facility within the protected zone, temporarily blocked by the Council of the State (source: Special Urban Plan in location “Kolymbithres”, by EKTER Enterprise)



Fig.4 Assembly of the “People Movement of Paros for Beaches” at the theater inside the Environmental and Cultural Park of Ag.Ioannis Detis (source: <https://www.facebook.com/groups/685990379615823>)

Conclusions

“Results show that tourism development is continuously “consuming” space in a non-resilient and environmentally destructive way. Official top-down spatial planning approaches seem to be inadequate of controlling this economically-driven process: Urban sprawl continues during the most recent period, despite the regulations and restrictions of the recently adopted General Urban Plan of Paros in 2012, while a new Special Urban Plan for large-scale tourism development has been licensed within one of last remaining natural zones of the island (fig.3). Demand for an alternative future for the island has been recently formulated by social movements (fig.4), currently focusing on the public use of beaches; such movements could possibly enforce a more generalized local community reaction towards a climate-resilient land policy”.

References

- Lagarias, A., Stratigea, A., & Theodora, Y. (2023, June). Overtourism as an emerging threat for sustainable island communities—Exploring indicative examples from the South Aegean Region, Greece. In International Conference on Computational Science and Its Applications (pp. 404-421). Cham: Springer Nature Switzerland.
- Imperviousness High Resolution Layer (IMP) <https://land.copernicus.eu/pan-european/high-resolution-layers/imperviousness>