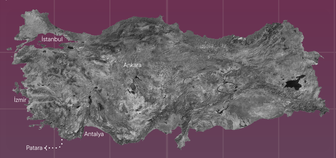
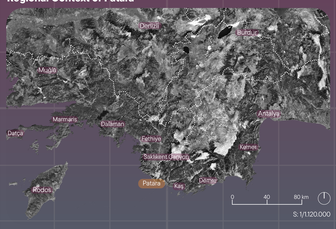
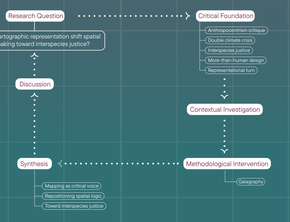
Mapping Interspecies Justice:
Gaiagraphy of Patara

Regional Context of Patara

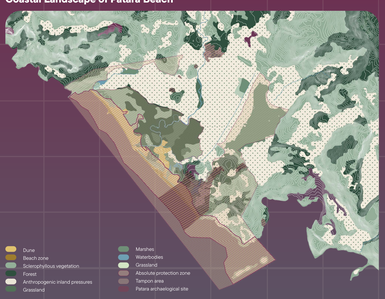




This thesis refuses the idea that landscapes are neutral surfaces organized around human priorities. In the context of climate change and biodiversity loss, it argues that the core conflict at Patara Beach is not only between tourism and conservation, but between competing spatial logics. When Caretta caretta is mapped as a spatial and temporal actor rather than a secondary conservation layer, the coastline restructures; dunes, sand temperature, sediment flows, and seasonal rhythms become primary organizers of space. Interspecies justice, therefore, begins with a representational shift—from human-centered control to more-than-human coexistence. Through Gaiagraphy, mapping becomes a critical act rather than an illustration. Instead of simplifying complexity for governance, the thesis proposes layered, relational cartographies that foreground the Critical Zone as a living continuum. It does not offer a masterplan; it offers a new way of seeing. By redrawing Patara as a multispecies territory in flux, the thesis repositions spatial decision-making toward interspecies justice.

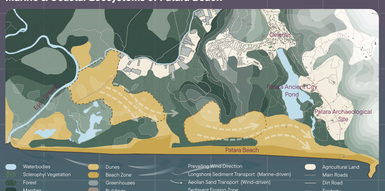


Coastal Landscape of Patara Beach



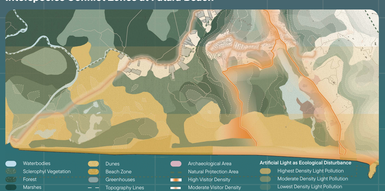
The marine and coastal systems of Patara function as a continuous ecological sequence shaped by sediment transport, dune migration, hydrological flows, and wind–wave dynamics. Longshore currents and aeolian processes maintain the dunes that stabilize the beach and enable nesting habitats, while river inputs and seasonal changes make the coastline highly sensitive to disturbance. Ecological resilience depends on the uninterrupted movement of sand, water, and species; disruptions through infrastructure, afforestation, or altered land use destabilize this balance. Mapping these dynamics reveals Patara not as a fixed shoreline, but as a living coastal organism sustained by material flows.

Marine & Coastal Ecosystems of Patara Beach



At Patara, human activities directly overlap with fragile ecological zones, producing spatial conflicts that affect Caretta caretta during nesting and incubation periods. Seasonal tourism intensifies foot traffic, lighting, noise, and temporary infrastructures exactly when turtles rely on dark, stable dunes; artificial light disorients hatchlings, while beach compaction and vehicle access damage nesting substrate. These conflicts are not accidental but structurally produced by planning decisions that prioritize accessibility and economic use over ecological rhythms. Mapping these overlaps exposes how human-centered land-use logic materializes as interspecies injustice.

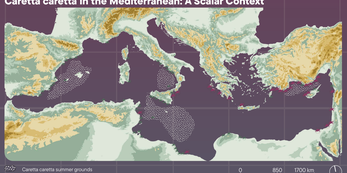
Interspecies Conflict Zones at Patara Beach



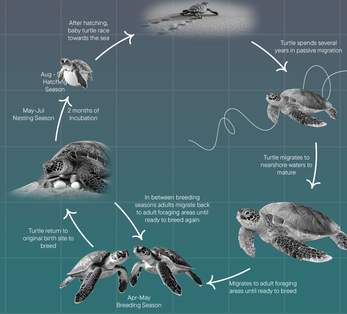
Reframing Caretta caretta as a spatial and temporal actor shifts the focus from human use of the coast to species-specific spatial logic. Nesting distance from the shoreline, dune morphology, sand moisture, and seasonal cycles structure how turtles occupy the beach, generating a geography fundamentally different from zoning or infrastructure planning. When mapped, the turtle's lifecycle reorganizes the coastline into temporal bands of nesting, incubation, and hatching, revealing how space is activated unevenly throughout the year. This perspective challenges anthropocentric hierarchies by positioning the turtle's biological rhythms as legitimate organizers of the landscape.

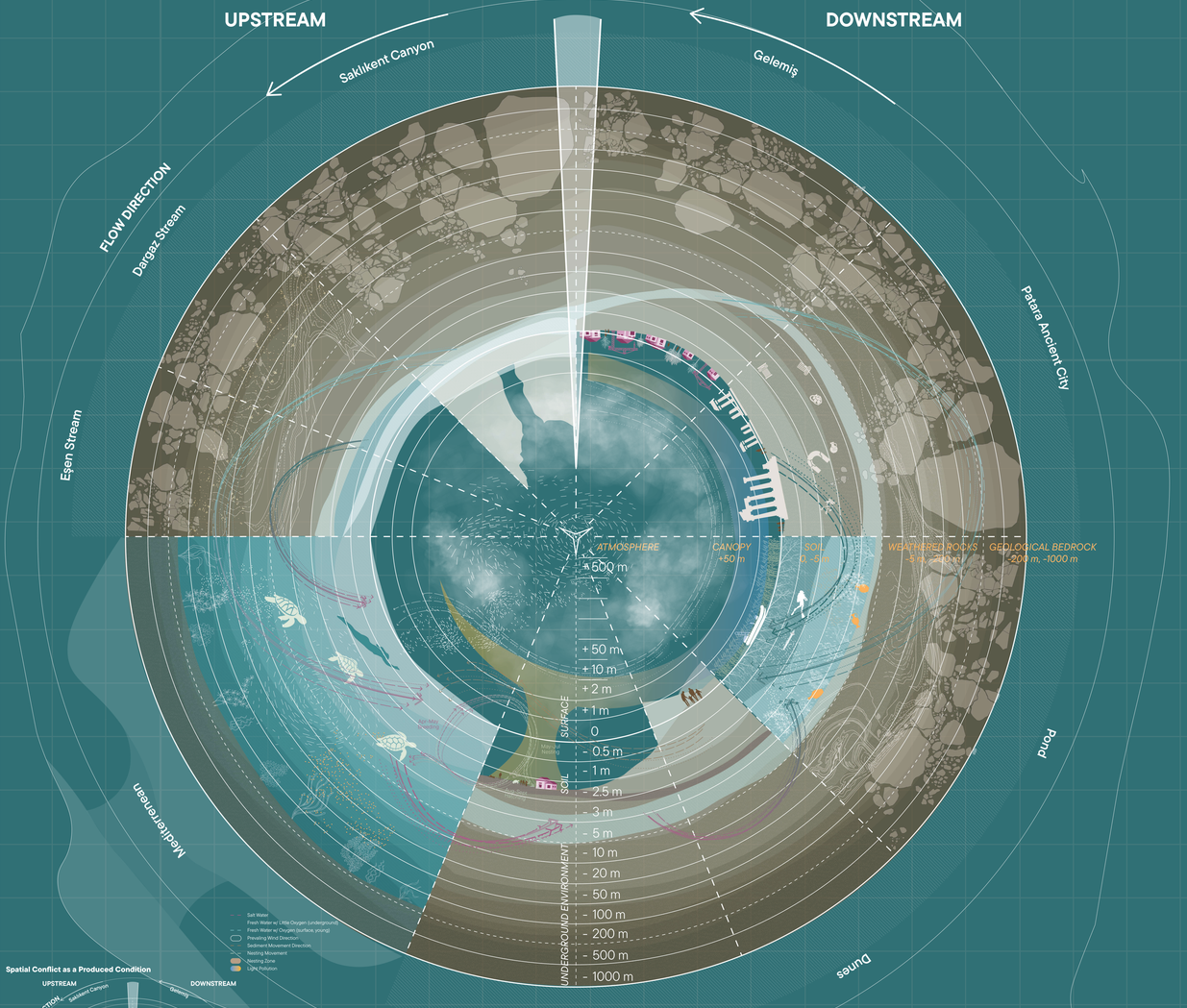
Loggerhead Sea Turtle Range

Caretta caretta in the Mediterranean: A Scalar Context

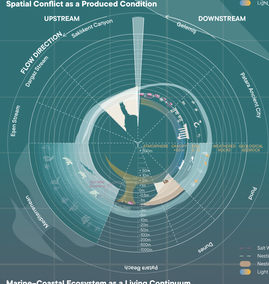


Lifecycle of Marine Turtles

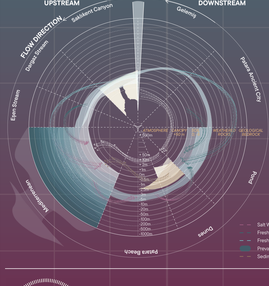




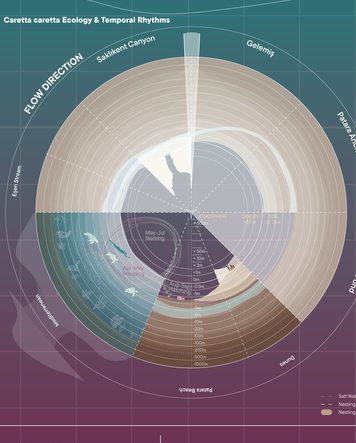
Spatial Conflict as a Produced Condition



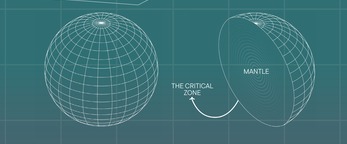
Marine–Coastal Ecosystem as a Living Continuum

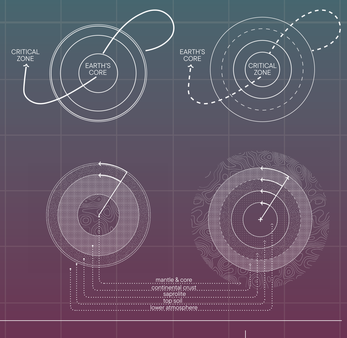


Caretta caretta Ecology & Temporal Rhythms



Gaiagraphy Principles





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Master Thesis
Mapping the Interspecies Justice: Gaiagraphy of Patara

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