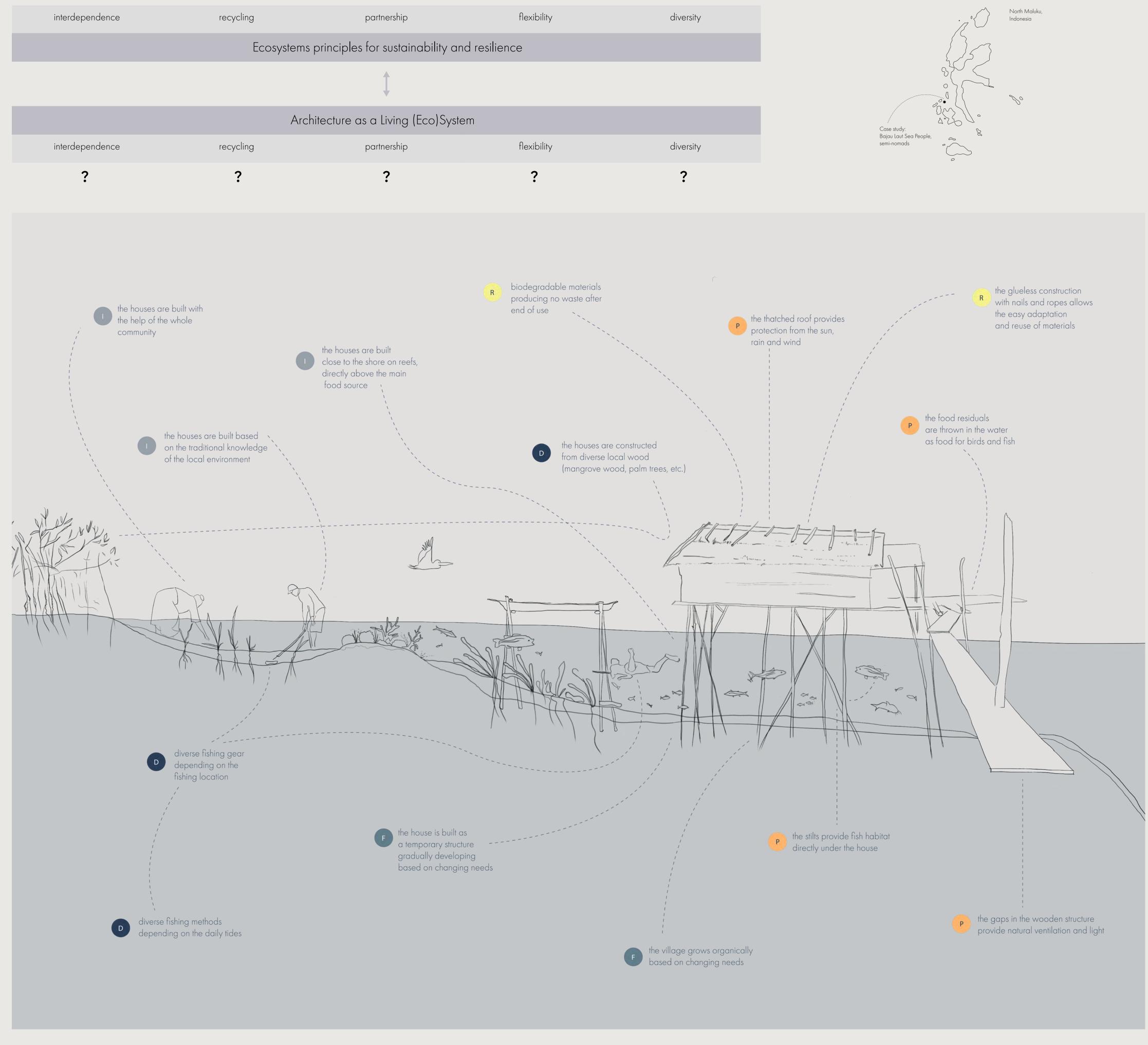
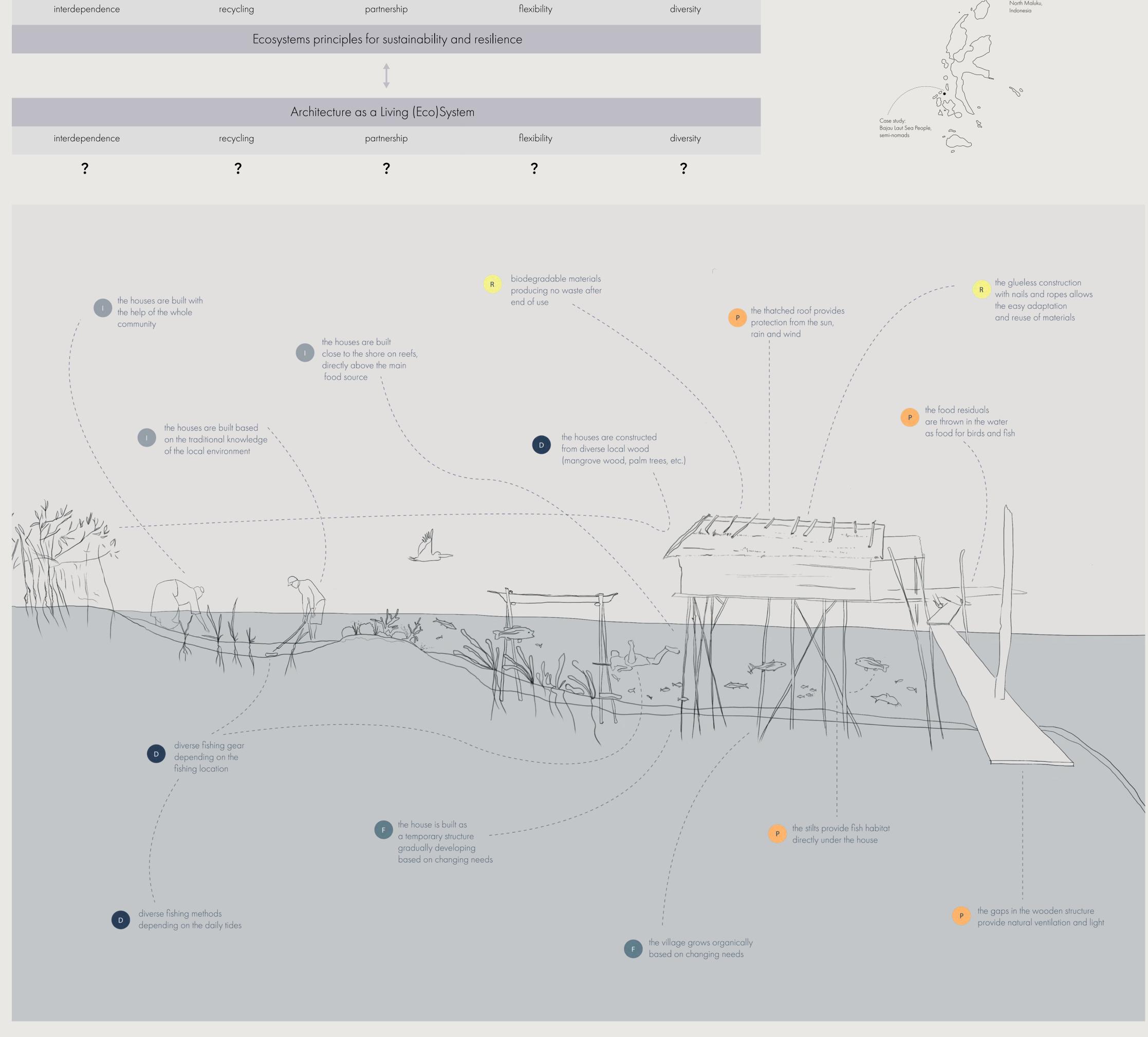
Architecture as a living system: towards a regenerative design





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Keywords: living systems, regenerative design, ecological design, traditional ecological knowledge, design principles

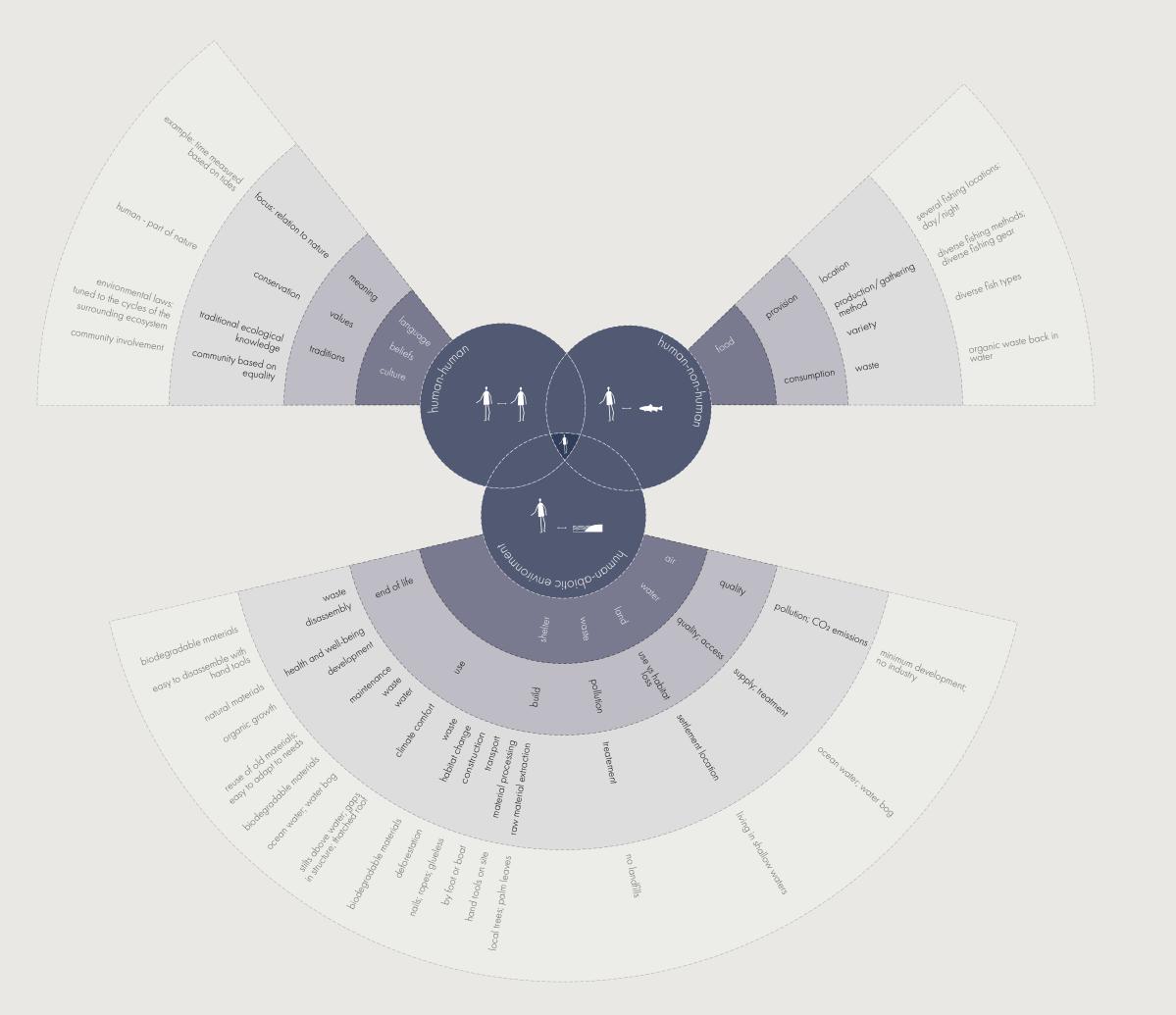
Current discourses within the built environment increasingly underline the need for a shift in perception, thinking and values as a prerequisite to moving from sustainability to regeneration. This paper discusses how re-thinking the position and role of architecture within the humanarchitecture-environment system can be an essential step in this transition. While the regenerative approach undoubtedly emphasises the need for the introduction of a positive ecological impact as a design requirement, the integration of ecological thinking and knowledge into the design process remains challenging. To explore this question, I draw upon Fritjof Capra's living systems theory and its application to the field of architecture, discussing how viewing architecture as a living (eco)system can be the answer to acquiring the deep ecological awareness needed to start designing regeneratively. Through the layering of design principles, the research synthesis becomes a tool for thinking and making regenerative architecture that can be applied to the design process of any design question. To showcase how this design tool can be put into practice, I further propose a method to study places by mapping the local human-architecture-environment system. The resulting map assists in gaining the necessary ecological knowledge about a given place by understanding how our culture and relationship with the local ecosystem shape its architecture. Finally, this paper encourages the introduction of such tools to design education and practice as a way to build the bridge between the regenerative theory and the practice of building.

Case study: Bajau Laut Sea People: understanding relationships between architecture and the local ecosystem

interdependence

P partnership R recycling

D diversity F flexibility



mutual dependence of all life processes on one another the behaviour of every living member of the ecosystem depends on the behaviour of many others vital importance of relationships	feedback loops along which energy and resources are continually recycled the ecosystem as a whole remains without waste	the cyclical exchanges of energy and resources are sustained by pervasive cooperation the tendency to associate, establish links, live inside one another, cooperate both partners learn and change - they co-evolve	the system is open to change and continually fluctuating multiple feedback loops bring the system back into balance in a flexible state, always ready to adapt to changing conditions	species with overlapping functions many different relationships the more complex the network, the more resilient the ecosystem				
interdependence	recycling	partnership	flexibility	diversity				
Ecosystems principles for sustainability and resilience								

Mopping Tool: context analysis, exploring the relationships and interactions within the humanorchitecture-environment system (case study example)

Student Coference

	Architecture as a Living (Eco)System					
interdependence	recycling	partnership	flexibility	diversity		
a reflection of awareness of interdependece between all life forms	circular use of resources during whole building life cycle (build; use; end of life)	creating conditions for nature to thrive/providing habitat (location, building elements, etc.)	organic development and adaptation based on needs in time based on adaptability and	use of diverse building materials based on availability in the particular context and need		
based on profound context analysis: understanding	use of renewable energy	tuned to the surrounding natural cycles and the climate	temporality	climate adaptive building		
relationships and impacts on all life forms	build for reuse of materials build for disassembly/reassembly	, establish links between different members of the ecosystem	seeking dynamic balance	a combination of innovation and traditional ecological knowledge		
nourishing those relationships		open to change				

Design Tool: Fritjof Capra's Ecosystems principles for sustainability and resilience translated into design principles for sustainable and resilient architecture

