Flexible Typologies to Adapt on Water and Ground with Adaptive Architecture and Urbanism

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The research paper focuses on climate change and flooding problems, effecting millions of people and infrastructure especially densely populated coastal area around the world. Majorly effecting urban poor, slums/neglected communities. Now challenge for coastal cities is to adapt as per climate change and extend cities on water and ground. The research is primarily focused on the coastal city region of Mumbai, India.

The main aspect of this paper is to study and understand typologies to adapt on ground and water by hybrid method for climate responsive, cost-effective and energy-efficient building to extend cities on water and ground.

The quest is to make hybrid flexible typologies based on local environment, socio-economic status, context and local materials. The typology design form, space and functional organization are in course of human behavior (time, space and activity) of the area, which can be adapted as per rising sea level, family growth and need. It does so through with fusion of design, science, engineering and technology along with people participation in building.

The term “adaptive architecture and urbanism” meaning adapting and building as per budget available, adapt to community need, adapt to climate, adapt to place and
context, adapting to architecture level to urban scale. This research paper is a chapter of PhD study at TU Innsbruck, Institute of experimental Architecture, Hochbau.

• Author Biography:

Ketham Santosh Kumar is an Architect, Educator, and Philanthropist. He is founder and principal of Thinking Hand NGO & Ketham's Atelier Architects. He was honored and awarded with IIA, CA2, Pidilite Design Excellence Award, Holcim, Azure, A.T Kearney scholarship, Falling Wall Lab, thesis topper and honored with distinction in Masters (Urban strategies IoA), B.Arch. (Landscape), Dipl.Arch. Currently, he is the PhD Researcher at TU Innsbruck, Awarded young research grant from vice rector of research. He is visiting faculty for Architecture, Urbanism, Landscape, Industrial and Fashion design in various National and International Universities, TU Innsbruck, NIFT, SPAV, JNIA, JBR, VSAP. Invited for lectures and design critic at Uni-AK (Art & Science), SVCA, CSII, JNFAU, IIT, TU Innsbruck, and NIFT Hyd.

He was speaker presented research at Approaching Research Practice in Architecture, event hosted by (TUM, TUD, KTH, BauHow5), PhD Workshop at University of Oulu, School of Architecture and also Speaker at RWTH Aachen University 25th Corp Conference. His works were published and exhibited in MAK Museum, Kunsthal haus Wien, Hinterland gallery, Architecture Festival U.A.U.I.M Romania and Vortex Architecture biennale Austria, Times of India, The Hindu, Eenadu, Siasat newspapers. Invited as one of the motivational speakers at JOSH Talks (bigger than TED Talks - Economic Times). Interviewed on Climate change – living on the water in ORF TV, 3sat, DW Documentary.