The KRVIA, with the objective of promoting active research in the fields of architecture, art, technology, humanities and urban studies, has been conducting its fellowship program since 1998.

This academic year, the Institute as part of the fellowship program invited research proposals from the faculty of the institute who wish to pursue independent research in the area of their interest. The institute in its endeavor to promote, assist and support Faculty Research, is making a provision for two Research Fellows, each of whom will work in collaboration with the selected Faculty, only for a period of 11 months.

To this purpose, applications are being invited from architecture graduates across universities who wish to pursue their research interests in any one of the following research projects undertaken by the faculty:

1) Architectural Design and Conservation as Sustainable Development – Sneha Kishnadwala
2) The Inhabited Sea – Rhea Shah
3) City of Invisible Islands – Sandeep B. Menon

The Applicants need to clearly state their reasons in not more than 400 words as to why they have selected any one of the above mentioned research projects.

Shortlisted candidates will be called for an interview in the first week of May 2019.

Selection, Appointment and Allowance of the Research Fellow: The Research fellow will be appointed by the Institute in consultation with the Faculty whose research proposal has been selected by them. The Research fellow is expected to spend 30 working hours per week (inclusive of research and up to 8 hours of teaching) at the Institute. A remuneration of Rs.150/hour of biometrically logged in time will be paid to the Research fellow by the Institute. The institute will not provide for any travel or other allowances incurred by the Research fellow during the course of the appointment. If the research project is prolonged beyond the assigned period of 11 months, the Institute shall not be responsible for compensating the Research fellow for any additional work. 50% of the payable amount per month (as per logged in time) will be released every month, 25% will be released after approval of adequate work by the Review Panel quarterly and 25% will be released on adequate completion at the end of the project. If performance is found below par, the stipulated amount for that review will be withheld till adequate improvements are made and shown during the next Panel review. Thus it is in the Researchers’ best interest to be on mark for every review. No requests for part release of amount etc. will be entertained in between reviews.
**Application Deadline:** Monday, 22nd April 2019.

The fellowship program will commence on 3rd June 2019 and end on 30th April 2020.

Interested candidates may please send their applications to:
Sarah George,
Fellowship Coordinator,
Upanagar Shikshan Mandal’s Kamla Raheja Vidyanidhi Institute for Architecture and Environmental Studies,
Vidyanidhi Marg, J.V.P.D Scheme, Mumbai – 400049.
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Abstract

Architectural conservation and sustainable development have been researched in isolation so far despite the mutual interdependence of both. This often leads to extreme arguments of whether a historic city should be frizzed as a memory or be allowed to adapt to the modern developments.

Some contemporary interventions in historic buildings done by architects without a specialisation in conservation fail to understand and incorporate the historic setting in their designs. There are however cases in which the background, sensitivity and skills of the architect allow to produce exemplar interventions to reflect on. This research will explore various cases and try to extract the key aspects that could guide other architects working in similar contexts. It will also try to inspire conservation architects to integrate better new design in a conservation project.

The curriculum of architecture, of both B. Arch and M. Arch in Urban Design under University of Mumbai is focused more on new designs rather than in the conservation and intervention on existing buildings. Ironically, most of the graduated and post graduated architects will have to work in a historic setting which is taught only to M. Arch in Urban Conservation under University of Mumbai, i.e. 15 – 17 students in the country. And therefore many a times, due to the lack of knowledge in this area of expertise many architects take arbitrary decisions with a poor background resulting in inappropriate interventions within historic cities.

The main aim of this research is to encourage architects to intervene in historic cities in a sensitive way. It will explore some interventions in different cultural contexts but carried out by skilled architects sensitive to the importance of history and heritage. Under this research the projects taken into consideration would be seen as successful and desiring model where architectural design and conservation were recognised as sustainable development. With help of various case studies around the world, the objective of this research will be to identify the approach and methodologies applied by architects in these historic cities.

The outcome of this analysis would be reflected as recommendations for our students and fellow architects to refer. This research would be a reference document for architects while they are designing in historic cities.

There are many examples which could have been taken as case studies, but considering the time limitation of only 11 months, only two to three case studies can be considered. There is also a large amount of literature in the subject, but the research has to be focused on the immediate work of the architects under study and other works important to understand its context.
Two-thirds of the world’s largest cities (of populations exceeding 5 million people) lie in low elevation coastal zones.\textsuperscript{1} Climate change promises to make this geography - once an asset to the cities’ rapid growth - the cause for their unmaking. Rising sea levels and increasing extreme weather events have created significant concern amongst scientists and planners about the future of these coastal cities, particularly in the Global South. \textit{Resilience} is the focus of abundant current scholarship in design, planning and administration. Most of this research - although anticipatory in some sense - continues to work towards stabilizing the city from the ground. It treats the sea as separate from the ground, the water as without qualities - an empty quantity.

Yet waters remember, waters grow and waters are made and unmade. The urban waters contain diverse substances, livelihoods and knowledges within. The sea is living - it is made by a rich biota but also by human effluents held and dispersed by lunar reined waves - creating qualities both vital and toxic to urban life. Can one separate city from sea, or more fundamentally, land and water? Can we continue to construct cities through binaries? Or can we reimagine cities through a continuous wetness and habitation - wetness that is in the seas, clouds, rains, dew, air, soils, minerals, rust but also in plants, animals and people - in habitation?

What is the sea made of? And how is it inhabited?
Where does the design of the city actually begin?
How can we imagine the city’s present and futures through ‘wetness’?
As an investigator on the ‘The Inhabited Sea’ project 2 my research looks to answer these questions through the analysis of the city, its inhabitants and their practices - through a trans-disciplinary collaboration with anthropologists, scientists and design researchers. The lost coast of Mumbai serves as a site that once extended from the Worli fort on the west to the Sewri fort on the east. Made of estuarial ground, this terrain is one of movements. Boats, people, fish, mangroves, flamingoes, trains, highways, waterlines, and nullas amongst others depend on this undifferentiated land-sea. The fishermen that still inhabit areas now completely inland, the mangroves that hold the tidal flats, the wells at Dharavi and the farms along the train tracks that draw fresh water, amongst others compose this third coast, revealing its openness. Emerging as they do from gradients of wetness, they constantly make the landscape, transcending with ease the boundaries drawn by design in state syntax.

The research proposes to change the terms of discourse and design from spatial land uses to temporal practices, from draining water to holding wetness in multiple ways, from separating land and water to negotiating rain and tide.

Can design initiatives that begin on this third coast with communities at Worli, Mahim, and what are parts of Dharavi today, be a starting point of recovering Mumbai’s estuary in the context of rising seas? Can we design form through negotiating these practices that shape wetness in a shifting ground? Can this site emerge to help Mumbai adapt to changing global temperatures and rising waters through systems that recognize wetness and its dynamism?


The proposal looks to (a) gather the uncertain chemical and biological qualities and presences of the urban sea (b) understand the beings (dock workers, fishers, flamingos, fish) and practices that negotiate these qualities of the sea and the knowledges contained within them and (c) use these living knowledges to rethink and reimagine the fundamental relationships with which urban habitats are being made and remade with the rising waters of our present and future.

In so doing, this project aspires to bring together cutting-edge approaches in earth sciences, urban planning and ethnographic field research towards formulating an original approach to Mumbai’s coast. It brings together unique physical, chemical and social features of the relationship between Mumbai and its sea so as to better understand the iterative, vital and dynamic relationship that coastal habitats construct.
The fellows will (a) document and analyze some of the components of this third coast (b) rethink the construction of modes of enquiry and representation that form the ground of design through the analysis of the components (c) work in collaboration with co-researchers of the Inhabited Sea grant - professors and scholars from UPenn, TISS and IIT Bombay to enhance their research (d) propose an alternate future for the site - in the context of creating resilience in a rapidly changing climate

They will participate in and present their work in the collaborative workshops and sessions organized for the Penn Research Project. The research will be presented at a public symposium at Penn organized by the Penn Program in Environmental Humanities.

3 Design:
Rhea Shah - Faculty, KRVIA / Fellow - UPenn
Anuradha Mathur - Professor Landscape Department, School of Design, UPenn
Dilip da Cunha - Chair MDes (RR), Graduate School of Design, Harvard

Ethnographic Research:
Nikhil Anand - Assistant Professor, Anthropology, UPenn
Amita Bhide - Dean, School of Habitat Studies, TISS
Lalitha Kamath - Associate Professor, Centre for Urban Policy and Governance, TISS
D. Parthasarthy, Professor, School of Humanities and Social Sciences, IIT B

Coastal Science:
Arun Inamdar - Professor, Center for Studies in Resource Engineering, IIT B
Helen White - Associate Professor, Chemistry Haverford College

PHD Students at IIT working with D. Parthasarthy and A. Inamdar
In today’s age of Anthropocene\(^1\), the questions of ‘resilience’ and ‘urban vulnerability’ are increasingly being discussed and researched on. Cities are viewed as complex human-dominated ecosystems composed of multiple, interconnected elements.

The city of Mumbai has undergone tremendous transformations mostly human-induced which have erased and obliterated the island landscapes shaped by natural processes over millennia. These transformations and the subsequent urbanisation have led to displacing and erasure of species and food webs. The disconnect between the patterns of urbanisation over time and the local ecologies only add to the vulnerability of the urban region in times of increased frequencies and intensities of climatic vagaries.

Urban studies tracing Mumbai’s transformations (mostly based on the archival maps and allied historic data) are limited to the colonial era interventions. They overlook the greater history to these islands which have been shaped by millions of years of natural processes. Scientific studies on these, if any, do limit themselves to scientific papers in their respective disciplines.

**Research Intent:**

The proposed study aims at reconstructing the evolutionary ecological histories of the landscape region around Mumbai. A diachronic study of the bio-geo-morphogenetic evolution and its intersections with the anthropogenic interventions could help in putting together a holistic understanding for the city. The study will be presented as a research paper and a set of recreated maps and visualisations of the landscapes using GIS as well as computational visualisation softwares which could possibly culminate in an exhibition or can be taken up further for publication.

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\(^1\) the present geological epoch characterised by human induced earth system changes.
Methodological Framework:

The study by virtue of its interdisciplinary nature will use both quantitative as well as qualitative modes of inquiry. The study will be developed in the following three stages:

Stage 1 | Preliminary preparation (8 weeks)
- Establishing a theoretical framework
- Delineation of the scope of the project
- Archival Data Collection and Literature Review

Stage 2 | Exploration and Analysis (12 weeks)
- Analysing the data and reporting the findings
- Tracing the bio-geo-morphogenetic evolution

Stage 3 | Synthesis (16 weeks)
- Georeferenced map generation and recreating visuals
- Research paper and Exhibition

Academic Contributions to the Institute:

The study is conceptualised to bridge a conspicuous lacuna in the understandings of the city’s evolutionary history at a time when there are significant challenges to local and regional sustenance including climate change, sea level rise, stormwater management, and irrational urban expansions. This study and the subsequent planned exhibition of the work would reinforce KRVIA as an academic space that encourages research pertaining to environmental realms beyond the anthropocentric.

The study could inform and add richness to the courseworks being developed for the ongoing ‘Building Resilient Urban Communities Program’ (BReUCom).

The eco-geological delayering of the city, its imagined juxtapositions with the present reality and the larger importance of understanding the interrelationships in strengthening the resilience of the city could be developed as a documentary/docu-series or MOOC.

This study could also form a strong base for developing future academic modules, Landscape Urbanism and Ecology based programs/summer schools at KRVIA.