DS18_2017/18

MONSOON ASSEMBLAGES DHAKA: DESIGN IN(G) A DELTA

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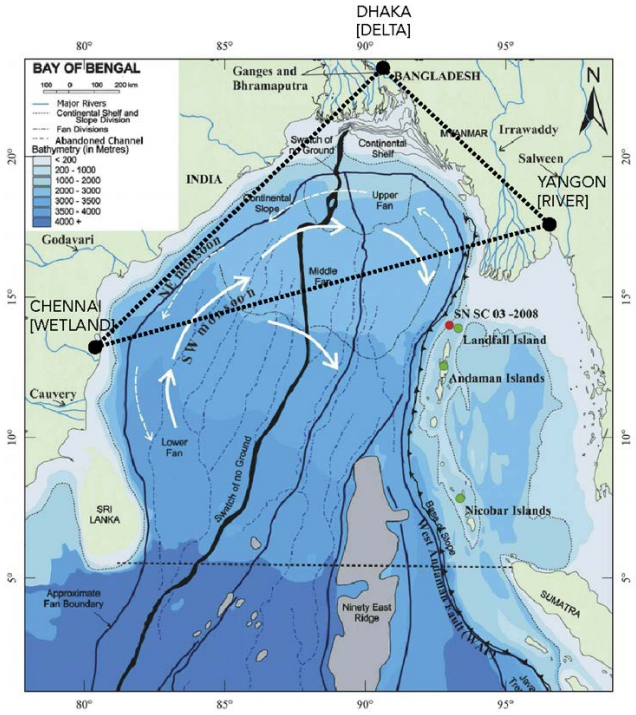
OVERVIEW



For three years DS18 is contributing to the agenda of Monsoon Assemblages, a five-year long research project funded by the European Research Council investigating three South Asian cities on the Bay of Bengal - Chennai, Dhaka and Yangon.[1] In 2016/17 the studio worked in Chennai, Tamil Nadu in South India, where design was framed by the materiality of 'wetland.' In 2017/18 we will work in Dhaka, Bangladesh, framed by the materiality of 'delta,' and in 2018/19 (should the political situation there not deteriorate) we will work in Yangon, Myanmar, framed by the materiality of 'river.' In the three studios, we will investigate interactions between the monsoon, topography and political economy and propose design interventions to reorganise land, water, weather and human habitation to improve the socio-ecological outcomes of the territory.


Chennai [Wetland]


Dhaka [Delta]


Yangon [River]

European Commission
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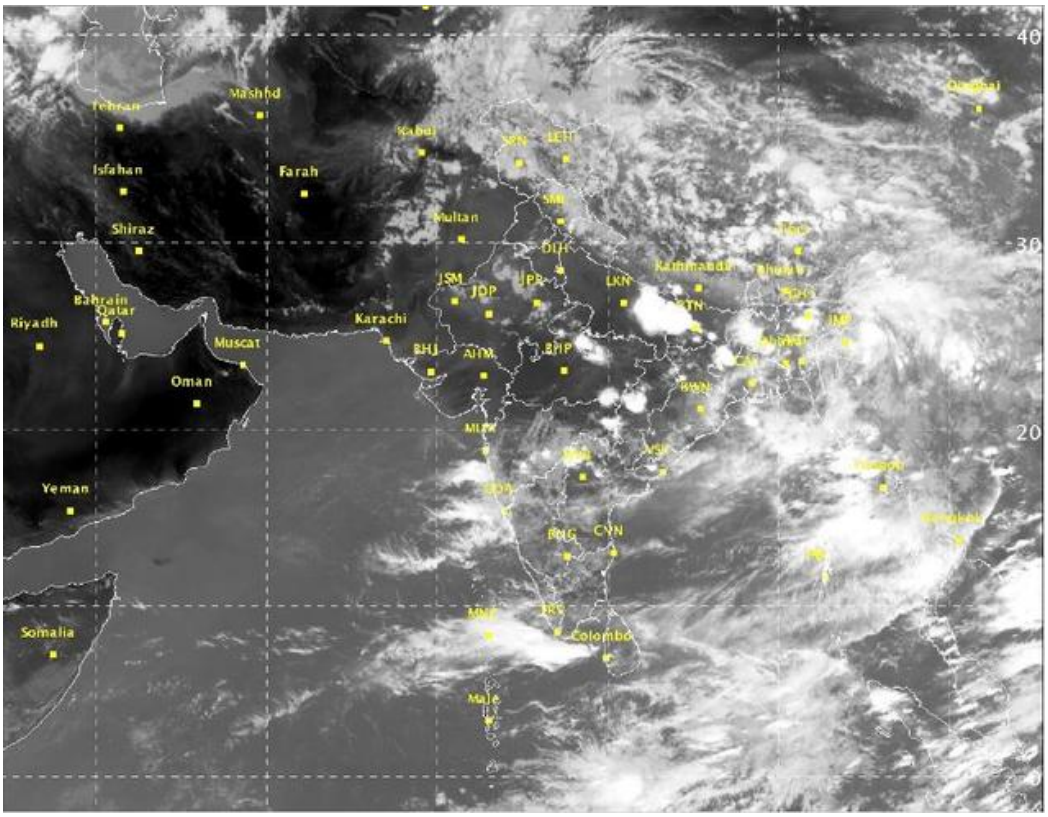
European Union funding
for Research & Innovation
MONSOON
ASSEMBLAGES
erc
European Research Council

[1] Note: The third Monsoon Assemblages case study city was previously Delhi. This has now been changed to Yangon, in order to focus the project spatially on the Bay of Bengal.

MONSOON ASSEMBLAGES DHAKA

Monsoon



The monsoon is a dynamic planetary-wide meteorological system, or rather assemblage of many out-of-phase interconnected meteorological systems that affects the lives of more than one third of the world's population. It is driven by air pressure and temperature differentials and the rotation of the earth. Our present understanding of the South Asian monsoon that it is impacted by different rates of heating and cooling of the Indian Ocean and the Asian plateau, producing on and off shore winds, by the sea saw of air mass and ocean temperature known as the El Nino-Southern Oscillation (ENSO) in the Pacific Ocean, and by the Madden-Julian Oscillation (MJO), an eastward moving tropical rain-belt that circulates the globe every 30-60 days. It is also affected by the timing and depth of snowfall in the Himalayas and by anthropogenic factors such as aerosol particles, forest cover and land use change. Today, while climate models suggest that South Asia's summer monsoon will persist and that the average summer rainfall may even increase by around 5%, these models also predict greater variability within seasons and from year to year, with extreme precipitation events or weak monsoons occurring more often and with increased severity. The IPCC's 5th Assessment Report predicts that this will have severe, pervasive and irreversible effects on the lives of the 1,6 billion people who live on the Indian subcontinent, slowing economic growth, affecting food security and impacting health and development.

- The monsoon is at the centre of the investigations and imaginations of the studio. Along with delta, it forms the theoretical core of the design intelligence we wish to develop.

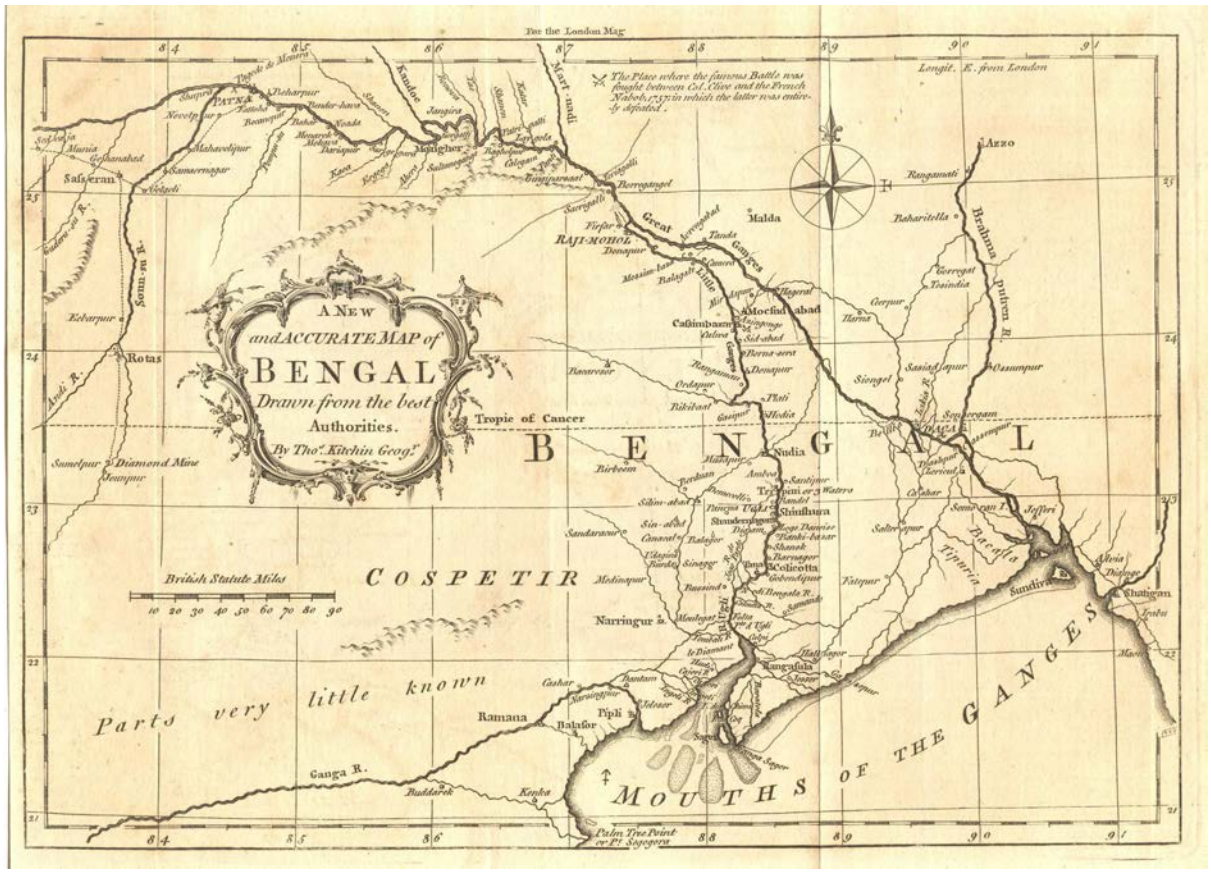


Delta

Bangladesh is located in the largest delta in the world. It is a constantly shifting, amphibious territory between land and sea, where the freshwater plumes of the Ganges, Brahmaputra and Meghna rivers deposit their silt and mix with the saline water of the Bay of Bengal. This delta has evolved over millennia through the deposition of upstream sediments and intertidal segregation, stabilised by the roots of the largest halophytic mangrove forest in the world. It is a territory where the line between land and water is impossible to draw or stabilise. Neither liquid nor solid, its landscape is oozy and squelchy, materialising and dematerialising in an on-going process of deposition, accumulation, stabilisation, erosion, ebb and flow. This produces an intimate, unstable relationship between territory, infrastructure and human habitation. Today these dynamics are being transformed by economic logics, population movement, land-use and climate change, which are increasing coastal subsidence, saline intrusion, floods, storm surges and cyclonic activity, and the uncertainties and anxieties associated with these risks for delta inhabitants.

- Questions of these territorial dynamics and their sociological and ecological consequences are key to the investigations and imaginations of the studio. Through mapping, simulation and design, we will nurture an architectural intelligence that engages land, water and infrastructure to address risks posed to the delta's human and non-human inhabitants.

Political Economy



Bengal 1760

This dynamic territory has been altered by successive economic, political, technological and socio-cultural regimes that have attempted to impose their stamp on it. Prior to 1757, when the British East India Company gained control of Bengal, it was known around the world for its cotton, with Dhaka serving as a manufacturing and trading hub. By 1830 its textiles had lost their market and viability, largely due to the industrial scale production of muslin in Britain and Dhaka's commercial significance declined. This, along with colonial administrative practices, devastating famines, floods and earthquakes resulted in the collapse of Bengal's manufacturing and peasant economies, which were replaced by economies of indigo and jute, largely centred on Calcutta. A century later, the partition of British India in 1947 placed East Bengal under the dominion of Pakistan. Large numbers of the Hindu population departed for India, while hundreds of thousands of Muslim immigrants arrived from neighbouring Indian states. In 1970, Cyclone Bhola devastated much of the region. Poor cyclone relief efforts and ongoing regional discrimination by Pakistan resulted, after what amounted to mass genocide, in the creation of the independent state of Bangladesh with Dhaka as its capital. It attracted migrant workers from rural areas across Bangladesh and grew rapidly. Since the 1990's Bangladesh has had one of the fastest growing economies in the world. Its urban population has grown from 10 million in 1990 to a projected 32 million in 2025, most of this concentrated in Dhaka.

- These dynamics have resulted in an "embattled scenario" (http://arch.bengal.institute/overview.php) between Dhaka and its delta, requiring new architectural and urban design thinking to secure its future as a viable human settlement.




PROGRAMME OVERVIEW

The studio will begin by requiring you to map and simulate geological, hydrological and socio-political processes and practices shaping the delta ecology of Bangladesh and the climatic challenges it faces. This will introduce you to the themes and techniques of the studio and invite you to think about what it might mean to intervene spatially in this mobile territory. At the same time as your mapping and simulation investigations, you will be required to design a prototype to intervene in some way in the delta ecology, such as to slow it down, harness its energies, redirect its flows etc. This prototype will be presented at a design workshop in Dhaka in November, when it will be subjected to critical appraisal by local students and experts. On return from Dhaka, you will refine this landscape intervention and model it as a physical prototype.

In the second semester of the year, the studio will move its concerns to Dhaka, where we will work along the city's western embankment, an infrastructural armature built after devastating floods in 1987 and 1988 that has shaped the city's development. You will identify a site along this armature for developing your prototype as an urban element to engage with the city at urban and architectural scales.

FIELD TRIP

The field trip to Bangladesh will take place from November 03 – 13 2017. You will spend 5 days in Dhaka hosted by the Bengal Institute of Architecture, Landscape and Settlements, followed by a five-day trip to the delta. The final itinerary for this trip is still under development.

FURTHER INTRODUCTORY READING

Anthony Acciaveti. (2015). *Ganges Water Machine: Designing New India's Ancient River*. San Francisco: ar+d.

Rohan D'Souza. (2006). "Delta's Integrity and Agrarian Rhythm." *Oxford Scholarship on Line.* DOI:10.1093/acprof:oso/9780195682175.003.0002

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Anuradha Mathur and Dilip Da Cunha. (2001). Mississippi Floods. Designing a Shifting Landscape. New Haven Yale University Press.

(2009). *SOAK. Mumbai in an Estuary*. Delhi: Rupa and Co.