*International Urban Planning Workshop*

# Call for Applications

Topic Document

## *Water and Metropolitanisation*

*A bioclimatic city of lakes,*
*Hyderabad comes full circle as Health Capital of the world*

*25 November - 06 December 2024*
*Hyderabad, India*

## Les Ateliers Internationaux de Maîtrise d'Œuvre Urbaine de Cergy-Pontoise

**Les Ateliers de Cergy** is a non-profit association created in 1982 at the initiative of the urban planners of the New Town of Cergy-Pontoise. Today, it is an international network of professionals, academics and decision-makers in urban planning. Focused on the practice of urban project management, the association organises workshops conceived as spaces for collective design and creativity.
In France and abroad, these workshops provide project managers with an international perspective and illustrated proposals for territorial strategies and urban development projects. Through the convergence of different professions and cultures, they also serve to question learning processes and provide exchange opportunities at the highest level.

## Les Ateliers team

**Pilots of the workshop**
Florence Bougnoux (France) and Reena Mahajan (India), architects and urban planners

**Assistant pilots of the workshop**
Rahul Palagani (India) and Sasank IVS (India), architects and historians

**Management team**
Véronique Valenzuela (Chile/France), geographer and director of projects,
Simon Brochard (France), geographer and coordinator

**Special thanks**
Jean Grébert (France), architect and mobility expert,
Anuradha Kanniganti (India), lecturer at the National Institute of Oriental Languages and
Jean-Baptiste Peter (France), urban designer and architect

# *Contents*

## *Premise*
Hyderabad, once a sustainability pioneer known as the city of lakes, today grapples with multiple ecological and identity crises as a rapidly evolving digital pharma megacity.

## *Focus*
Hyderabad's threatened water heritage in the context of rapid urbanisation.

## *Strategy*
Confronting 21st-century challenges through systemic ecosystem restoration.

## *Vision*
Hyderabad comes full circle, re-establishing itself as a thriving bioclimatic metropolis, balancing economic prosperity, water security and community resilience. Health is the goal, not (just) an industry.

# *1* | *Workshop origins*

Les Ateliers organizes collaborative workshops all over the world to support urban projects, in order to promote innovative, creative and relevant urban development, integrating both short and long-term perspectives. These workshops bring together professional volunteers of all nationalities, selected with utmost rigour from a variety of disciplines: urban planning, geography, economics, landscape design, sociology, art, engineering, environment, etc. Les Ateliers serves as a tool and methodology available to cities and their partners to help define urban development strategies and identify promising initiatives. It also acts as a catalyst for projects thanks to its platform of longstanding partners.

The International Urban Planning Workshop in Hyderabad is being launched at the request of the Municipal Administration and Urban Development (MA&UD) Department of the Government of Telangana, with the support of the French Development Agency and the French Embassy in India.

Following the Indo-French seminar co-organised by the Regional Economic Service of the French Embassy in Delhi in September 2022, the non-profit organisation was introduced to the Hyderabad authorities in March 2023. Subsequent field missions took place in Hyderabad, allowing for extensive site visits and meetings between Les Ateliers team, the French Embassy, the French Development Agency and the Government of Telangana in July 2023 and April 2024. The workshop was officially missioned by Mr Dana Kishore, Principal Secretary, MA&UD, Government of Telangana.

This workshop will be in phase with the ongoing projects led by the Musi Riverfront Development Corporation in Hyderabad and with the international impetus on water (notably the One Water Summit in New York).

The International Urban Planning Workshop will bring together fifteen local and international experts from various disciplines during two weeks, committed to volunteering their time on site in Hyderabad for a unique collaborative process. After a few intense days of visits and collective work, the three teams of participants will share localised strategic and innovative ideas to steer the Hyderabad metropolis towards a resilient future. The workshop's methodology is designed to enable the participants to develop creative and forward-looking proposals. The goal is to promote a collaborative working platform, bringing together elected officials, local stakeholders, organisations, businesses and civil society representatives to address the major challenges facing the city.



*Location of Hyderabad in India's southern state of Telangana*



*The Musi River flowing through the centre of Hyderabad (source: www.thehindu.com)*

# 2 | *Vision statement of the workshop*

Hyderabad, one of India's fastest-growing megacities is the thriving capital of India's Telangana state. The fourth most populous city in India, it is home to more than 11 million people and is expected to be one of the 30 most populous cities in the world by 2030. A racially, ethnically, socially, and linguistically diverse city, Hyderabad is a hub of trade and commerce and an international centre for knowledge-based industries such as Biotechnology, Pharmaceuticals, and Information Technology. Hyderabad Pharma City is the world's largest integrated cluster for bulk drug manufacturing. Hyderabad also boasts the world's largest metro project to be built through a public-private partnership.

Hyderabad is located in the heart of the Deccan plateau, a semi-arid region devoid of perennial rivers. Its geographical context has historically determined that life was sustained through a combination of natural and manmade networks of water harvesting systems comprising lakes, tanks, and stepwells. Hyderabad was a bioclimatic city at its inception. Its water architecture enabled a green and livable microclimate in an otherwise hot and dry climate.

*"Cities are born when they transform a site into an event or create a story from their geography".*
*- French philosopher Jean-paul Dollé*



*Hyderabad - the world's newest megacity (source: www.elements.visualcapitalist.com)*

Over the past two decades, these water bodies and their associated ecosystems have shrunk immensely under the tremendous strain of rapid urbanisation, demographic growth, and diverse sources of pollution.

It is ironic that the city that houses the largest pharmaceutical cluster in the world continues to have household sewerage and medical waste released directly into its water bodies, a toxic combination that endangers both human health and the health of the ecosystem. This has sparked international outrage and Hyderabad has been at the receiving end of considerable negative media coverage, be it regarding the unabated pollution levels of the Musi River, declining groundwater levels, acute water shortage during dry months, or traffic jams during flash floods.

As many of the world's megacities grapple with floods amid severe water scarcity, we understand today that true sustainable economic development is impossible to achieve without harmonising environmental considerations.

The crux of the issue is this: Hyderabad owes its glory to the delicate water ecosystem around which it was founded. Today it risks everything if it allows its water heritage to crumble. Or, it could take action and metamorphose into a world-class sustainability pioneer – the Health Capital of the world.

The workshop's focus is to highlight the immense functional, social, and ecological value of Hyderabad's water legacy and the importance of reviving its waterways to not only ensure the well-being of the city's residents but to establish itself among the world's most climate resilient cities.

By reinstating water's fundamental position in Hyderabad's social and aesthetic consciousness, we urge for Water to be seen not just as a resource for what it is, but essential to the city's prosperity, authenticity, attractivity, and world image.

The workshop aims to provide the local authorities with innovative and actionable approaches to sustainably manage Hyderabad's explosive growth and depleting natural resources through a combination of visionary leadership and community engagement.
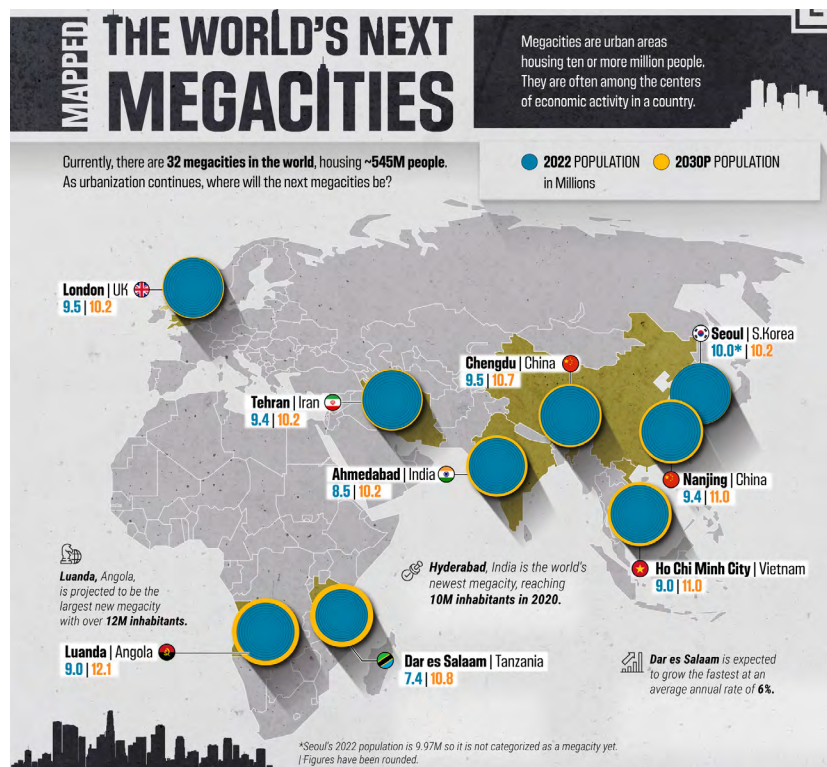
# 3 | *Hyderabad, a bioclimatic city*

Hyderabad, located in the Deccan region with a semi-arid climate, has historically thrived on an intricate network of biodiversity-rich wetlands that recharged groundwater aquifers and supported a sustainable environment. Its founders the Qutb Shahi rulers (1518-1687) and their successors the Nizams (1724-1948) constructed numerous artificial tanks (talaabs/lakes) for the retention of monsoon rainwater. This decentralised stormwater network of interconnected and cascading lakes eventually drained into the Musi River.

The earliest known waterworks in Hyderabad date back to Sultan Quli, who, to ensure water security for Golconda Fort, commissioned the Durgam Cheruvu lake. Water was transported from this far-off lake to the fort through subterranean channels, ensuring a reliable supply. A few years later the grand Hussain Sagar lake was constructed north of the Musi river, fed by diverting the Musi through a channel and served as a major drinking water source for centuries.

Other lakes were added over time forming a chain of tanks to capture the monsoon overflow and store it for post-monsoon use, preventing flooding and ensuring a continuous water supply. The surrounding littoral zones, rich in biodiversity, acted as natural filters and facilitated groundwater recharge. Also, the lakes and their fringing wetlands contributed to local climate regulation by maintaining humidity levels and providing a cooling effect. Besides these lakes, neighbourhood stepwells were also built throughout the region to manage groundwater for both irrigation and domestic use.

In 1798, an alliance between the Nizam and the British spurred Hyderabad's northern expansion, leading to the establishment of Secunderabad to the north of Hussain Sagar. Post-independence, Hyderabad and Secunderabad were integrated, driving industrial growth and urban expansion. As urban nodes shifted from Golconda to Charminar and Secunderabad, stepwells grew in number.

The catastrophic Musi River floods of 1908 prompted the last Nizam to commission the construction of Osman Sagar and Himayat Sagar reservoirs outside the city limits to consolidate Hyderabad's water supply and flood defence.

The late 20th century brought the IT boom and HITECH City's development that shifted urbanisation westward, radically transforming Hyderabad's urban structure and putting an immense pressure on the city's gradually depleting water reserves. The Outer Ring Road express-way was built at the turn of the century followed by an ambitious metro rapid transit system to cope with the city's expansion.
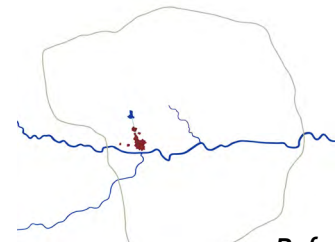


*Before 1591*

City: Golconda Fort
Prominent Lake: Durgam Chereuvu
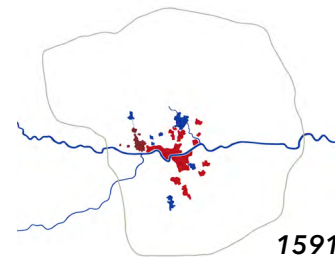


*1591 - 1798*

City Expansion: Charminar, Karwan
Prominent Lakes: Hussain Sagar, Mir Jhumla Tank
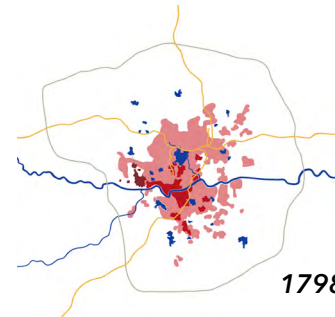


*1798 - 1908*

City Expansion: Secunderabad and Northern expansion
Prominent Lake: Mir Alam Tank
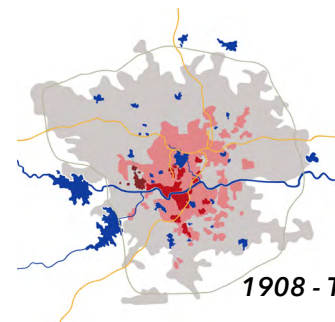


*1908 - Till Date*

City Expansion: Hitech City; Outer Ring Road and beyond
Prominent Lakes: Osman Sagar and Himayat Sagar

| MUSI RIVER | LAKES | BEFORE 1591 (GOLCONDA FORT) | 1591 - 1798 | 1798 - 1908 | 1908 - TILL DATE | OUTER RING ROAD (AS A CARTOGRAPHIC REFERENCE) | RAILWAY LINES |
|---|---|---|---|---|---|---|---|

# 4 | *Innovating for Hyderabad's future in the face of multiple challenges*

## *4.1 Recognising and re-establishing water's fundamental role in consolidating Hyderabad's identity*

### *An inexpensive slope-based water management system rendered inoperative*

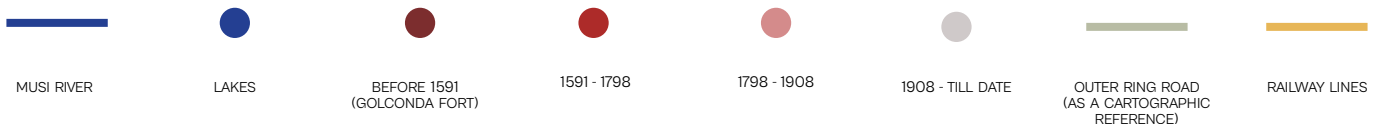Although the two main purposes of Hyderabad's highly engineered water system were flood control and a continuous supply of drinking water, it supported several supplementary activities like agriculture, fishing, recreation, and biodiversity. The water bodies also served as social and religious hubs. They provided the city with everything it needed, from basic amenities like water supply to urban comfort, livelihood, and spirituality.

Today this system is seriously damaged and exists only in fragments. Several of these tanks have been swallowed up by the demands of a growing city, buried under concrete structures. Only 185 remain out of 800, and the majority of those that remain are now depleted, polluted, disconnected from the once interconnected network (and hence drying up), and increasingly encroached upon.

Increasing pressures around land-use and urban housing shortage have steadily eradicated the agricultural lands surrounding the tanks, now bordered by roads with hardly any buffer areas. Large-scale constructions have led to the filling up of lake beds and conversion to built-up areas by both the government and private agencies over the last few decades, altering the natural drainage network of the city, simultaneously shrinking water reserves (decreased groundwater recharge) and exacerbating flood risk (increased runoff).



*Encroachment around Hyderabad's shrinking tanks (source: www.hydnews.net)*



*Musi water "unfit even for agriculture" (source: Deccan Chronicle)*

The absence of biodiversity-rich lake shores to recharge groundwater aquifers coupled with the dumping of construction debris and the indiscriminate discharge of untreated sewage runoff from residential and commercial areas have all heavily contaminated the once pristine freshwater lakes and surface ditches (nalas). What is strikingly alarming is that when domestic sewage mixes with heavy metals and industrial solvents released by pharmaceutical production sites, it creates a toxic cocktail that threatens everything from the near elimination of entire species to the feminisation of fish and the spread of antimicrobial resistance.

In essence, the ingenious and inexpensive system of potable water based on topography and gravity has been rendered inoperative due to a combination of water scarcity and water contamination. Now water has to be pumped in from faraway rivers at exorbitant costs to keep up with the ever-increasing demands of the fast-growing megacity.

### *Water crisis following loss of water heritage*

Urbanisation and climate change are together exacerbating the water crisis in Hyderabad. As Hyderabad's urban footprint expands and drainage is no longer integrated into the city's functioning as it was originally designed, new urbanisation projects treat water as a technical issue, giving it a lot less space and time, both of which are necessary for water to spread, flow and percolate into the ground.

Water, which laid the foundation of the city's identity, has shifted from a central position in Hyderabad's social and aesthetic consciousness to a secondary resource, hidden and channelled.

*"All the flooding happens because of the erasure of the land's memory."*

*- Dr. Anant Maringanti, Director, Hyderabad Urban Labs*

Without its water systems in place, the city faces numerous challenges such as depleting groundwater levels, declining lake littoral zones, a diminishing green cover and increasing urban heat islands. As weather patterns change and rainfall becomes more erratic, the city must deal with extreme water stress, from extreme drought during peak summer months to urban flooding during the monsoons.
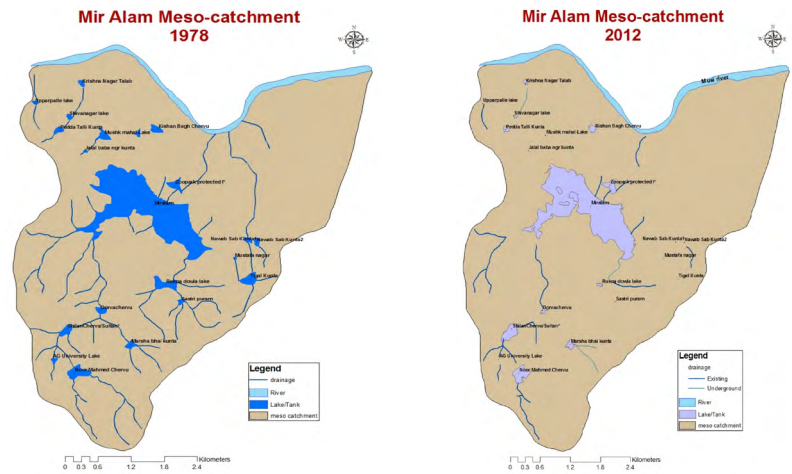


*Steady decline in the drainage capacity of tank catchments over the past few decades (source: Saci Waters)*

What this means is that Hyderabad, a city that owes its very existence as well as its glorious past to its lakes and canals, is highly vulnerable to climate change without its water heritage. To survive and thrive, it needs to restore its water legacy. It needs to restore its streams, lakes, and tanks with the proper management of wastewater to meet the growing water demand across different sectors and to safeguard its biodiversity and microclimate.

### Recognising water resource as socio-cultural heritage

The loss of Hyderabad's water heritage is not just an environmental loss, it is a socio-cultural loss, and the key to restoring its water systems might lie in recognising and re-establishing the symbiotic relationship between the people and their environment.

Traditionally, in Hyderabad, as elsewhere in India, water bodies were not privately or publicly owned. They belonged to the common people and served as a shared resource and a gathering point for people. Communities were collectively responsible for protecting and managing their tanks and stepwells. Hyderabad's stepwells served as platforms for artistic expression and cultural celebrations. In these communal spaces, women came together to engage in various educational activities such as storytelling, reading circles, and informal classes, they were active participants in decision-making processes and advocates for positive change within their communities. Stepwells transcended their utilitarian purpose as a source of freshwater. They were sacred, reflective spaces that nurtured and empowered women and society as a whole.

So how did Hyderabad lose this precious cultural heritage? After independence, the city authorities took control over the water bodies and water supply, ending the tradition of the "commons", eventually alienating local communities from their shared resources.

Today there is a clear disconnect between the residents and the city's water bodies. Despite the existence of government orders that intend to protect the water bodies and their catchment areas, environmental regulations are routinely disregarded and flouted, given the lack of clarity regarding ownership and usage of the water bodies and a booming reality market that views these areas as potential sites for future development. The loss of Hyderabad's water bodies is a tragedy that is acknowledged by its people who are intimately familiar with the city's original watersheds and who remember playing and swimming in the lakes as children. However, repairing the damage is not a priority and won't be unless the current dysfunctional negative spaces are attributed a positive value, that is, unless the 'commons' are restored with renewed functionalities and the citizens are engaged in the management of their resources.



*Hyderabad's stepwells were once a focal point for community rites and rituals (source - The Forgotten Stepwells of Telangana)*



*Residents queuing up to collect water from a water tanker*

## Beyond beautification

Improving the health of waterfronts is gaining increasing international prominence and has become a prime mandate of governments all over the globe, including that of India.

### | Beautification of tanks & stepwells

Several beautification projects of Hyderabad's tanks are underway, with the twofold intention to protect the lakes and provide public open green spaces for recreational walking. In the name of beautification, however, lake perimeters are often shrunk in order to maximise the housing potential of residential developments and rigid paths are erected around the tanks. This process completely disregards the littoral side of the tank (the shallow down-sloping shelf), which is supremely important as it is rich in biodiversity and supports a large number of native plants and aquatic life, purifies the water and even keeps mosquitoes at bay.

Aside from discounting the ecological importance of the buffer zone, the process of beautification also discounts the importance of the extended lake area for flood defence and other ecosystem services that have been traditionally associated with these water bodies, reducing the water body to a superficial ornament to enhance the city's aesthetics.

### | Musi Riverfront beautification

One of the most ambitious regeneration projects led by the government of Telangana is the revitalisation of Hyderabad's Musi River Corridor, aimed as "the best and most innovative restorations in urban landscape contours anywhere in the World". The design endeavours to activate the river stretch with facilities like amusement parks, waterfalls, children water sports, street vendors, business areas and shopping malls. A public realm network that would encourage walking and improve public health is much needed in the city but it must but it must



*The conservation of the Bansilal Stepwell has been a collective effort towards re-establishing the connection between people and the historical water systems (source: www.thesouthfirst.com)*

> *What is the path forward to creatively reconstruct the narrative of Hyderabad's water legacy so as to bring about a true ecological, social and functional renaissance of its water systems?*
>
> *How do we address the water governance challenge of delivering water and sanitation to all in a context of depleting water resources?*
>
> *How can shared waters be governed more effectively? How can residents be engaged in the management of their water bodies?*
>
> *Can the Musi river regeneration project serve as a catalyst to holistically restore Hyderabad's water quality and heritage?*



*Ongoing Musi Riverfront Development along 55km of the Musi River in central Hyderabad (source: Telangana Today)*

be acknowledged that today the Musi river stands as one of the most polluted rivers in the world, with wastewater and chemical sludge running through its veins. And no improvement in the river's water quality can be achieved without addressing the causes of pollution emanating from its catchment.

It cannot be stressed enough that the river is part of a vast ecosystem of interconnected lakes, ponds, tanks, canals, wetlands and stepwells. Its restoration must begin upstream. Prioritising the health of the river basin as a whole is a prerequisite to restoring the river and its banks.

In other words, the river revitalisation project can do so much more than beautify the banks of the river. It is an opportunity to bring about a collective awareness in the people of Hyderabad of the importance of restoring the integrity of the entire river ecosystem by recognising its urban, social, cultural, agricultural and ecological functions, and not just its potential aesthetic appeal.

## 4.2 Enabling community wellbeing and access to services at the right scale

### A city of biodiversity havens with child-friendly streets

Hyderabad is neither a monocentric nor a polycentric city. It has a visible primary network of waterways, roadways and metro lines but no central business district and no secondary network. The city is structurally based on its topography and watershed, and its urban fabric is structured by a metropolitan network of arterial roads, flyovers and an overhead metro rail that divides the city into macro-sectors or neighbourhoods that are green and serene residential sectors, each with their own lake providing optimal thermal comfort to the inhabitants. In the absence of secondary roads, most of Hyderabad streets are narrow and tree lined without any major traffic, perfectly adapted to a pedestrian scale. This is a huge asset to have in a world where every major city is desperately trying to embrace the 15-minute city model in order to reduce congestion, improve liveability and mitigate climate change.

### Maintaining the plurality of spaces in the city for a better quality of life

The city of Hyderabad is an urban mosaic of neighbourhoods organised around communal tanks or stepwells, each associated with a temple or gathering space. The exceptional quality of life once enjoyed by the residents of Hyderabad is increasingly compromised by the loss of water bodies and their associated public realm, largely due to the big moves of real estate and infrastructure development.

As is common in rapidly growing cities, there is a tendency to the default approach to improve mobility by building more roads, investing heavily in roads and flyovers. Unfortunately more roads means more cars, more congestion, noise, pollution and segregation.

### Logistics management

Some of the major challenges of urban logistics, especially when goods must be transported from the periphery to the city interiors, are the high cost of transporting goods and employees, and traffic congestion. Logistics circuits in the Indian context must be designed to adapt to the tight fabric of Indian cities and their narrow lanes. In the case of Hyderabad, urban logistics distribution nodes would be required to make the interface between the arterial transport network and the various neighbourhoods, minimising noise, pollution and congestion in urban areas.

### Last mile connectivity through micromobility

Micromobility or the use of small vehicles for short trips within the city (often the last km between the public transport and the place of destination) has great potential in Indian cities that are human intensive and open to technological innovation. The vast majority of commute in India is under 10 km and very well adapted to micromobility. Micromobility offers city leaders an opportunity to address congestion, emissions and air quality, thus making progress towards many of their goals, from carbon emissions to liveability, health outcomes and social inclusivity. Planning for micro mobility especially makes sense in the case of Hyderabad as such solutions can replace heavy infrastructure connections, bypassing a secondary transport network and directly connecting the metropolitan transport network to the city's sectors, sparing the inhabitants unnecessary noise and pollution. The sanctity and serenity of the city's neighbourhoods can be preserved by optimising delivery routes and delivery points for last-mile logistics and encouraging the use of active mobility and



*Hyderabad's typical neighbourhood street*

> **How can the greenery and social structure of Hyderabad's neighbourhoods be safeguarded from being swallowed up by big infrastructure projects?**

> **How can Hyderabad maintain its charm and avoid the negative impacts of infrastructure development such as noise, congestion, traffic jams and traffic injuries?**



*Construction of flyovers to keep pace with the increasing vehicle rush (source: Telangana Today)*

**"If you make more roads, you will have more traffic."**

*- Jan Gehl (Cities for People)*

environmentally friendly vehicles. Through a combination of innovation in service and delivery models and providing convenient options for people to access public transport, the urban experience can be focused around liveability, health and wellbeing, actively discouraging the use of the private car (especially for short distances) but without hindering the movement of people or goods.

The goal is to create vibrant and safe pedestrian-friendly environments that enhance the quality of life, foster community connections, and as an added bonus, also promote ecological sustainability. In such conditions, stepping out of the house during rush hour becomes a pleasurable experience. Children can play on the streets on their way back home. Conversations become possible in the absence of blaring horns. Groceries and parcels can be picked up while walking back home from the metro station.

Some real issues of the last-mile commute (between public transport and destination) is that it can add to the commuting cost, cause delays, and can prove to be inconvenient during the rainy season or a hot summer.

> *How can walking and cycling be made attractive to increase ridership for public transport providers and reduce car dependency?*

> *What can be done to encourage people to use public transport given that the last mile is often much more expensive than the metro journey?*

### Community resilience

Another reason for preserving the neighbourhood scale is to maintain local governance at this scale that has served the city since its inception.

The majority of households in Hyderabad still come within the informal unorganised sector even though privatisation is steadily on the rise. Residents Welfare Associations function like mini-governments and reflect the common interests of micro-communities. They offer the city's residents a platform to become active citizens and provide communities with a support system for small scale projects. Strong local governance at the neighbourhood level also acts as a guard to the hyper-individualisation of services, ensuring that everyone has access to basic services and are better equipped to respond to adverse situations and recover from disasters.



*Resilient communities where decentralised participation of communities at local neighbourhoods occurs (source: NOAA Office of Education)*

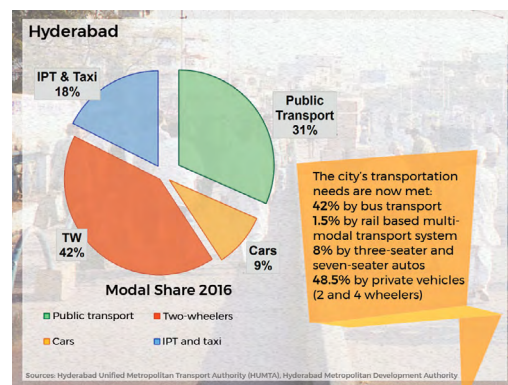*"A developed country is not a place where the poor have cars. It's where the rich use public transportation."*

*- Gustavo Petro, ex mayor of Bogota*



*A motion for last mile connectivity for clean, end-to-end mobility at Hyderabad Metro (source: WRI India)*



*SmartBike provision by Hyderabad Metro Rail at selected metro stations (source: HMR)*



*Transport modal share in Hyderabad – Despite increasing car-ownership, people with cars represent a minority (source: www.questionofcities.org)*

> *How can we best maximise the potential of the neighbourhood scale to foster social cohesion, dialogue, and the emergence of local leadership?*

> *What is the right scale for bringing services and amenities to the people while also providing sustainable living?*

## A digitally empowered society

Digital technology can play a significant role in assisting cities better manage climate and sustainability challenges. Digital platforms can help bridge the gap between departments, encourage bottom-up initiatives and startups and even enable collaboration and connections between public authorities, private operators, universities and civil society, putting everyone on the same page and creating all sorts of opportunities to improve the liveability of our cities.

Digitally mapping and monitoring urban sprawl at regular intervals is a crucial tool for the Telangana government and an unmissable opportunity to analyse and regulate Hyderabad's frenzied urban development. Satellite imagery can be used to highlight the risks of development projects around Hyderabad's water bodies or alert the authorities about encroachments or waste dumping. Community-based monitoring systems could be used to check the health of tanks and stepwells.

Hyderabad's booming digital culture is its most precious intangible asset that can be leveraged to serve its inherent heterogeneous structure, allowing people to work out problems of local governance at the neighbourhood scale, monitor the water quality of tanks and stepwells, practise shared mobility and much more.

However, digital innovation, appealing as it is, doesn't come without risks. As private players gain more ground in the making of the city and digital services become more individualised, citizens lose control over how much of their personal data (age, likes and dislikes, religion, political beliefs, gender identity, medical conditions etc.) is routinely collected, analysed, aggregated and stored on a massive scale.

> **> How can high-tech innovation be combined with low-tech solutions to manage Hyderabad's water crisis, restore its natural ecosystems and improve its livability?**
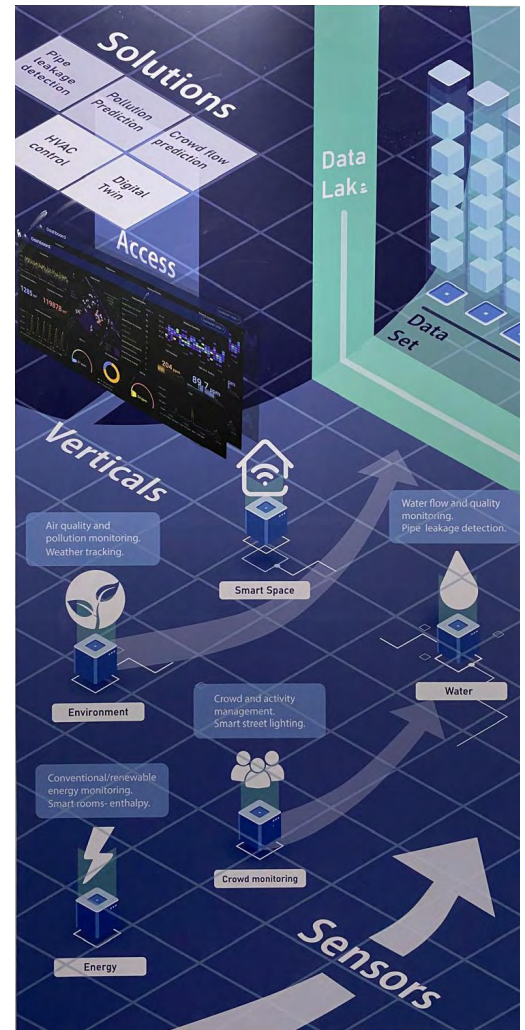>
> **> How can Hyderabad celebrate its digital revolution while simultaneously safeguarding the people's rights to protect their data?**
>
> **> When it comes to utility provision that is managed by private companies, how can the government ensure equitable access to basic services and amenities to all?**



*Digitally empowered society where access to data set enables holistic solutions (source: IIIT Hyderabad)*
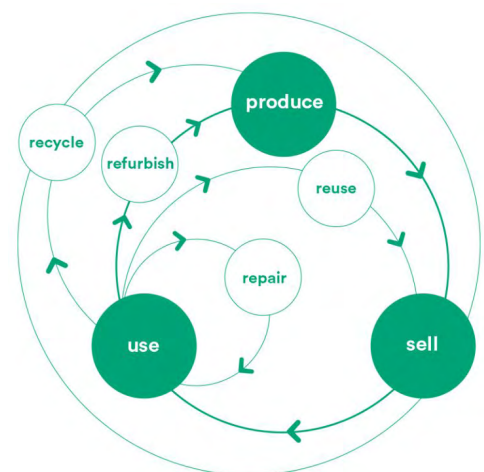
## Circular economy potential

Recycling has always been intrinsic to the Indian way of life. Consciously supporting and strengthening the circular economy and recycling has numerous advantages, including boosting the economy, bringing job opportunities, conserving natural resources and addressing pollution.

Applying the principles of circularity to water management is an absolute must for Hyderabad for it to address its water crisis as well as to achieve its lake restoration goals. Treating domestic waste and wastewater efficiently at the source is not only more sustainable, it also makes sound financial sense, as it could alleviate the financial burden (and energy consumption) of diverting the greywater away from the city and bringing freshwater into the city from faraway rivers, making Hyderabad more self sufficient in terms of water supply.



*Circular economy (source: www.rts.com*

## 4.3 Managing urban sprawl and urban regeneration by incorporating ecological and social resilience

### Rapidly evolving urban landscapes and weakened city limits

The frenzied pace of urbanisation and disorganised development patterns have resulted in severe environmental degradation of Hyderabad's natural reserves. Hyderabad's urban ecosystems of lakes and tanks, that perform important ecological and environmental functions to safeguard local climate, groundwater and habitat, are facing extinction due to the uncontained spread of urbanised areas into undeveloped land and green spaces. Rural lands are being progressively eroded and farmland converted into built-up areas, triggering large-scale migration and associated housing insecurity, as well as raising the question of food security.

Furthermore, with the expansion of Hyderabad outwards and beyond its administrative limits, the city faces ever-increasing infrastructure costs as services and utilities need to be provided across larger distances. With increased distances across low-density conurbations, public transport unavoidably becomes ineffective. As cars proliferate, not just within the suburban areas, but into the city as well, streets become congested, polluted and unsafe for pedestrians and cyclists. Parking lots emerge everywhere creating impervious cementscapes prone to urban flooding.

Meanwhile, the shift of economic activities and residential neighbourhoods towards the outskirts of the city has left several inner-city areas with poor quality services and decaying public spaces. The old airport and other industrial sites are now awkwardly situated in the middle of the city, throwing up questions regarding the future use of these spaces.

In essence, the city of Hyderabad faces two main challenges in terms of master planning:

#### 1| Urban sprawl containment
Development needs to be channelled in such a way that green ecological corridors at the territorial scale are conserved, maintaining access to nature and food security for the inhabitants.

#### 2/ Urban regeneration and renewal
The potential of the urban centre must be maximised by redeveloping abandoned and industrial sites within city limits, reactivating public spaces, strategically densifying around transit nodes and strengthening service delivery.

> *What can be done to safeguard the metropolitan region's remaining water bodies from being swallowed up by future development? How can it be ensured that future and ongoing urbanisation doesn't disrupt the natural water drainage of the catchment?*

> *How to avoid privatisation and gentrification that comes with urban regeneration ventures?*

### Systemically incorporating urban resilience alongside urban growth

The city must approach both urban sprawl and urban regeneration by embedding purposeful environmental policies in its planning processes. The local government must work with stakeholders and communities to develop strategies to protect the city's resources and restrict development on or near natural water systems.

Increasing green space in urban areas is an effective way to increase permeability and reduce flood risk. Urban growth must be contained so that the natural path of water drainage and the filtration capacity of the soil is maintained. Water needs to be given more space and structurally reinstated in the city's functioning so that people can come together around water bodies as they once used to. Increasing nature in the city is a high-impact adaptation solution to mitigate climate change while improving the health and wellbeing for residents.

With much of Hyderabad's urban infrastructure yet to be built, there is enormous potential to implement policies that safeguard the environment and increase the resilience of the city to the impacts of climate change.

### A multidisciplinary project-based approach

Working in isolation and lack of coordination among agencies leads to unsustainable use of land and uncoordinated urban growth. Different authorities and departments must come out of their silos and together view the risks and opportunities that the city faces in a holistic way. Alternative models of public-private partnerships are much needed for a stronger land management system with a project-based approach centred around communities. The entire city needs to be aligned with one vision and one purpose, focussed on the common goal of protecting and restoring the city's natural environment.

## 4.4 Overcoming binaries to enable a harmonious coexistence of a pluralistic and diverse society

### A global vision that integrates local imaginaries

Hyderabad has the aspiration to become a world class metropolis with world-class infrastructure and a world-class riverfront, but it remains a uniquely Indian city whose future hinges on how well it preserves its heritage, how it distributes the benefits of urbanisation amongst its people, and how well it is able to adapt to emergent climate risks.

Looking at Hyderabad's masterplan, one is dazzled by its mega projects and expanding metro network, its Hitech City and Pharma City, its IT corridors and SEZs, and its burgeoning real estate markets. It is clear to see why the megacity in the making attracts talent and businesses from around the world.

But when we look at the geographical map and trace the history of Hyderabad from its beginnings in Golconda (Chalukya dynasty) to Secunderabad (British rule) to Cyberabad (liberalisation of Indian economy), we notice the inextricable link between the city's neighbourhoods and its lakes and canals, its ridge and its watersheds.

> *> How do we incorporate community and local aspirations in visions of the future based on global imaginations?*

And when we zoom in to the neighbourhood scale, we notice a simpler way of life, we see the workings and struggles of the informal sector and we acknowledge the inhabitants who bring the city to life on a daily basis, and whose services are much needed by the creative classes.

This is the scale and these are the realities that make up the DNA of Hyderabad, expressed in the spatial characteristics best loved by the city's inhabitants that contribute most to its sense of identity. A collage city of interconnected tanks, each one surrounded by greenery, each one supporting its mini village by providing life (water is life!), livelihood and comfort. This genetic code must not be forgotten when planning for Hyderabad's expansion, so that the city remains 100% local even when it becomes 100% global.

*Cybertowers, Hitech City (source: www.newsmeter.in)*

### Breaking the urban/rural and formal/informal binary

Interestingly, even as the city expands outwards with scattered pockets of urbanisation along its arterial roads, it continues to receive a flow of migration from rural areas, resulting in the proliferation of informal settlements mostly as encroachments on the city's shrinking tanks and reservoirs.

Both peri-urban areas and informal settlements within city limits are areas of flux and transitions, of environmental degradation and inequalities. Both are vulnerable to water scarcity and often times are forced to rely on private tankers that cost three times the official government rate.

Formal housing also follows somewhat predictable patterns. Inner city regeneration and beautification projects attract real estate investment that often displaces existing informal settlements and truncates the tanks to maximise development opportunities.

It is common today to see high-end infrastructure projects along with real estate development superimposed on existing semi-urban or rural landscapes. Each year more agricultural land is lost to urban development and farmers are displaced further out or towards the city as migrants looking for alternative livelihoods.

In this dispersed urban landscape, gated communities proliferate, promising the creative class a higher quality of life and access to superior services. However, as is often the case, enclaves such as these fundamentally change the spatial and social fabric of the city, contributing to sprawl, breaking territorial continuities, impoverishing the public realm, creating more and more car dependency and consequently worsening traffic.

In such a scenario, dividing areas into rural and urban doesn't serve planners and policymakers anymore, who have no choice but to adopt a more nuanced approach that recognises the interactions and interdependencies between different types of settlements. What is at stake is ensuring a harmonious coexistence of a heterogeneous society and investing in urban ecosystems and green infrastructure despite a fragmented and segregated urban and social landscape.

For this, planning measures that incorporate continuous green corridors across the metropolitan scale can be extremely beneficial as they serve multiple purposes such as ensuring territorial continuity to flood defence, agriculture and food security, and access to nature for all of the city's inhabitants, rich or poor, urban or rural.

## Defining an "attractive" city

One of the consequences of globalisation is that cities find themselves increasingly in competition with one another, constantly attempting to attract more residents, tourism, investment and activities, and to position themselves at the top of the various "league tables" that have emerged in recent years to indicate the attractiveness of the great metropolises.

The notion of territorial attractiveness has become essential in the evaluation of the performance and dynamism of cities, one of the priorities of city planning policies today.

But what makes a city attractive? Economic progress and successful urban branding are not enough to guarantee a high quality of life, nor do they foster a sense of belonging in people. Health and wellbeing must be at the centre of urban planning and policy-making for a city to attract people and also make them want to stay.

Hyderabad has been subject to significant media scrutiny over the past few years, be it the coverage of acute water shortage, floods, lake encroachment by "land sharks" and traffic jams. Several news agencies have compared the Musi river to a giant sewer and lamented about its tragic eroded water legacy.

The city is countering this negative media image to some degree through the promotion of some of its high-profile urban mega projects, riverfront revitalisation and lake beautification initiatives. These have the power to impress but cannot eclipse the need by the state and city authorities to provide dignity to all sections of society and commit to the urgent climate action required to secure the city's resilience.

The Musi Riverfront project must recognise the pockets of informal housing along the river and guard against green gentrification. It must prevent private capital from closing down environmental commons, ensuring accessibility to all, and lay heavy focus on the environmental restoration of the river ecosystem in a holistic way.

A city cannot be attractive in the 21st century unless it has an action plan to survive and thrive in the face of 21st century challenges. Hyderabad megacity, Pharma capital of the world, will be attractive for residents and visitors when it is also the Health Capital of the world: a city whose waters are clean and whose streets are green and thriving with people.

*"To gauge the attractiveness of a city is to assess its sphere of influence, its capacity to generate movement and to exert lasting attraction."*

*- François Cusin and Julien Damon*

*"The Musi River Beautification Plan will displace thousands of people and spur real estate development, leading to potential land encroachment. The Musi river needs clean water, not beautification."*

*- Environmentalist Narsimha Reddy Donthi*

*> How can the city ensure that the Musi Riverfront project is not just an aesthetic addition to the cityscape but a valued resource to the city's inhabitants?*

*> How can we ensure that regeneration and "beautification" projects meet the aspirations of Hyderabad's digital nomads, but are also equally suited to the Indian lifestyle, serving the needs of the local residents and the rural migrants?*



*A typical Hyderabadi settlement at the edge of a tank*



*Durgum Cherevu, one of Hyderabad's historic lakes now stands as a backdrop to its IT Hub Hitech City. Widely popular amongst the city's digital nomads and tourists, it is one of Hyderabad's most prestigious beautification projects (source: The Siasat Daily)*

# 5 | *Workshop focus area*

The workshop adopts a multi-scale approach, integrating hyper-localized conditions within a broader metropolitan context. It employs a watershed-based methodology for the Musi River basin, comprising various inputs, including watercourses, lakes, wastewater, and rainwater. Consequently, the workshop's scope extends beyond the Musi River to include significant portions of the metropolis, such as the historic center and newly urbanized areas.

Anchored in the Musi River Revitalization Project, the workshop's focus expands to the Hyderabad Metropolitan Region. It covers a substantial portion of the upstream river catchment, beginning with the nalas feeding Hussain Sagar and extending north beyond the Outer Ring Road toward Medchal. Additionally, it considers the downstream river basin toward Uppal and beyond. This comprehensive approach recognizes that water is dynamic and interconnected; the revitalization zone's health is intrinsically linked to upstream conditions, just as downstream water quality directly reflects upstream management practices.



*Map of Hyderabad highlighting the city's water bodies, river basins and the focus area of the workshop*
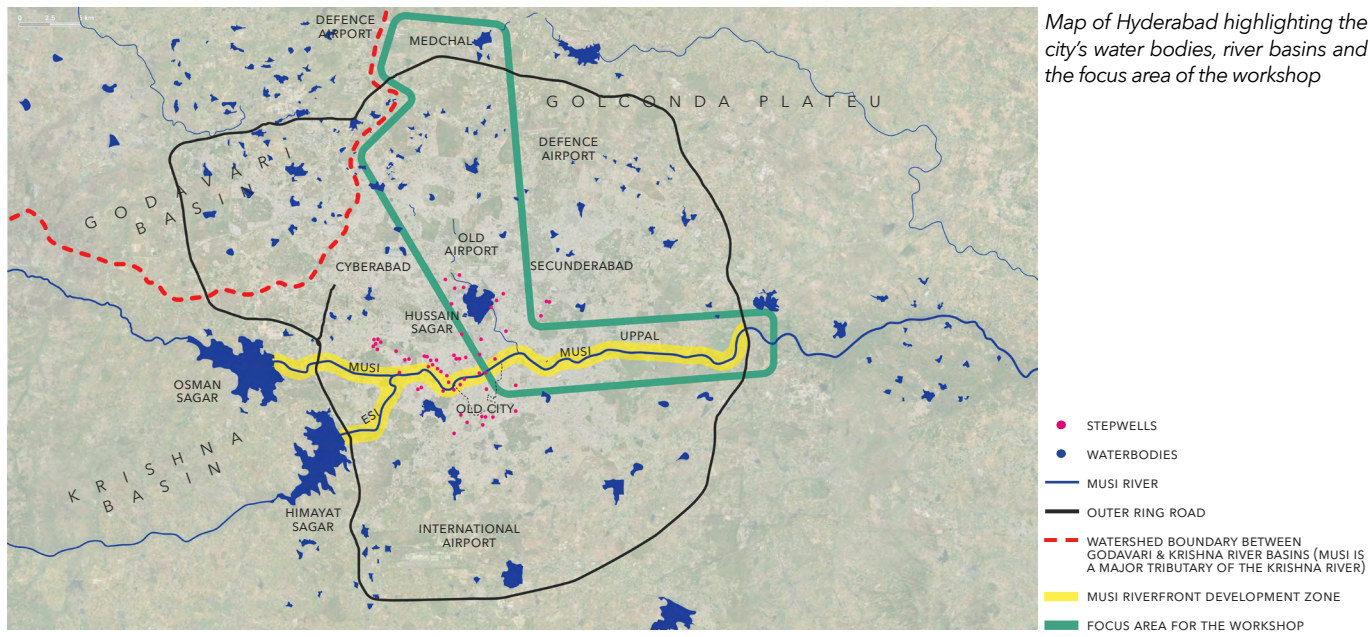
The central theme of the workshop is Hyderabad's water heritage. Viewed as systems, we find three distinct categories: ecological heritage or natural water bodies, architectural heritage or water infrastructure and stepwells, and intangible heritage, spanning the realm of the digital and the spiritual.

### 1| *Natural*
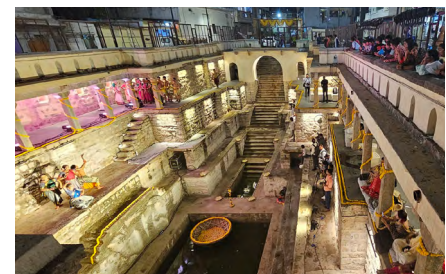*water bodies and ecological heritage*



*Surface water networks of rivers, lakes & wetlands*



*Groundwater networks*

### 2 | *Manmade*
*water infrastructure heritage*



*Surface water infrastructure of ponds, tanks & canals*



*Inverted water architecture (stepwells)*

### 3 | *Intangible*
*water heritage (spiritual, cultural and digital)*



*Community Participation*
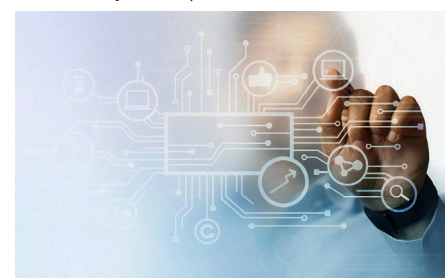


*Digital innovation for urban water governance*

# 6 | *Workshop format*

## *An international workshop in Hyderabad*

Les Ateliers de Maîtrise d'Œuvre Urbaine de Cergy-Pontoise (or Les Ateliers de Cergy) is a non-profit organisation. Solicited by local authorities, it has been organising innovative workshops addressing urban and regional development in France and all over the world since 1982. While Les Ateliers de Cergy remains a small organisation, its vast network of professionals, students, researchers, universities, local decision-makers and private stakeholders extends across the world.

The intensive two-week workshop, set to be held from 25th of November to 7th of December 2024, will bring together 15 local and international professionals from diverse nationalities and disciplines to work on site in multidisciplinary teams (urban planning, geography, architecture, ecology, hydrology, engineering, agronomy, landscape design, economics, sociology, arts, etc.). Working closely with the support of and inputs from the Telangana government and other stakeholders such as academia and civil society, these experts will work towards developing localised, innovative and actionable solutions for ecosystem restoration and sustainable urban water management.

At the end of the workshop, the teams will present their proposals to an international jury chaired by local authorities. The teams' projects will combine long-term visions with operational and illustrated propositions incorporating multiple scales of urban resource management, thus offering a range of potential projects and actions to decision-makers.

## *Format of the Hyderabad workshop*

The workshop will take place over a period of two weeks in Hyderabad, India. The actual workshop is a culmination of several preliminary stages involving a series of thematic round tables building up to the main event.

### *Research and preparation*
Three thematic round tables will be held online with participation from international and local experts as well as relevant stakeholders. Podcasts of these round tables will be made available, and a context document gathering all the main information on the topic of the workshop and Hyderabad's history and challenges will be shared with the participants prior to the workshop.

### *Immersion (2-3 days)*
Organised visits of the Hyderabad metropolitan region and of the focus areas, with inputs from local stakeholders, combined with thematic conferences and meetings with experts and civil society.

### *Teamwork and discussions (about 10 days)*
The participants will be divided in 3 different teams, with support from Les Ateliers and the local actors. An "exchange forum" allows for an open exchange with local actors and workshop partners on the progress of the teams' proposals at the half-way point of the workshop duration.

### *Presentation of proposals*
The workshop will conclude with the presentation of the teams' proposals to a panel of decision-makers, consisting of Hyderabad and Telangana representatives, as well as Indian and international experts.

# 7 | *How to participate*

This workshop is open to professionals of all ages, disciplines and nationalities, having an interest in the topic of the workshop. Town planners, designers, architects, geographers, engineers, hydrologists, artists, environmentalists, landscape designers, artists, journalists, etc. are welcome to apply.

*Place and Dates*

The workshop will take place in Hyderabad, India, from 25th of November to 7th of December 2024.

*Conditions and requirements*

- Proficiency in English to effectively collaborate with international teams.
- Full availability during the workshop dates.

This is an unpaid opportunity. All participation costs are covered, including travel to Hyderabad, accommodation, regional transportation, organised visits, group meals, lectures, and drawing materials.The participation is not paid. All participation costs (travel to Hyderabad, accommodation for the duration of the workshop, regional transport and organized visits, group meals, lectures and drawing materials) are taken in charge.

The selection of the 15 participants will be made by the workshop's pilot team based on the candidates' professional capacities, experiences with similar themes, ability to communicate (language, graphic skills) and motivation!

*How to apply*

 To apply, please prepare the following:

- Your CV (one to two pages).
- A motivation letter outlining your interest in the workshop and the skills and experiences you bring.
- The completed application form (available for download on our webpage)
- Upload your documents at www.ateliers.org/l/application-form-hyderabad


*Deadlines*

First Deadline: September 15th, 2024 (Applications submitted by this date will have a higher chance of selection).

Second Deadline: October 6th, 2024


Find all the links and information on the workshop page: https://ateliers.org/en/workshops/238/

Do not hesitate to contact our team if you have any questions via e-mail : hyderabad@ateliers.org

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