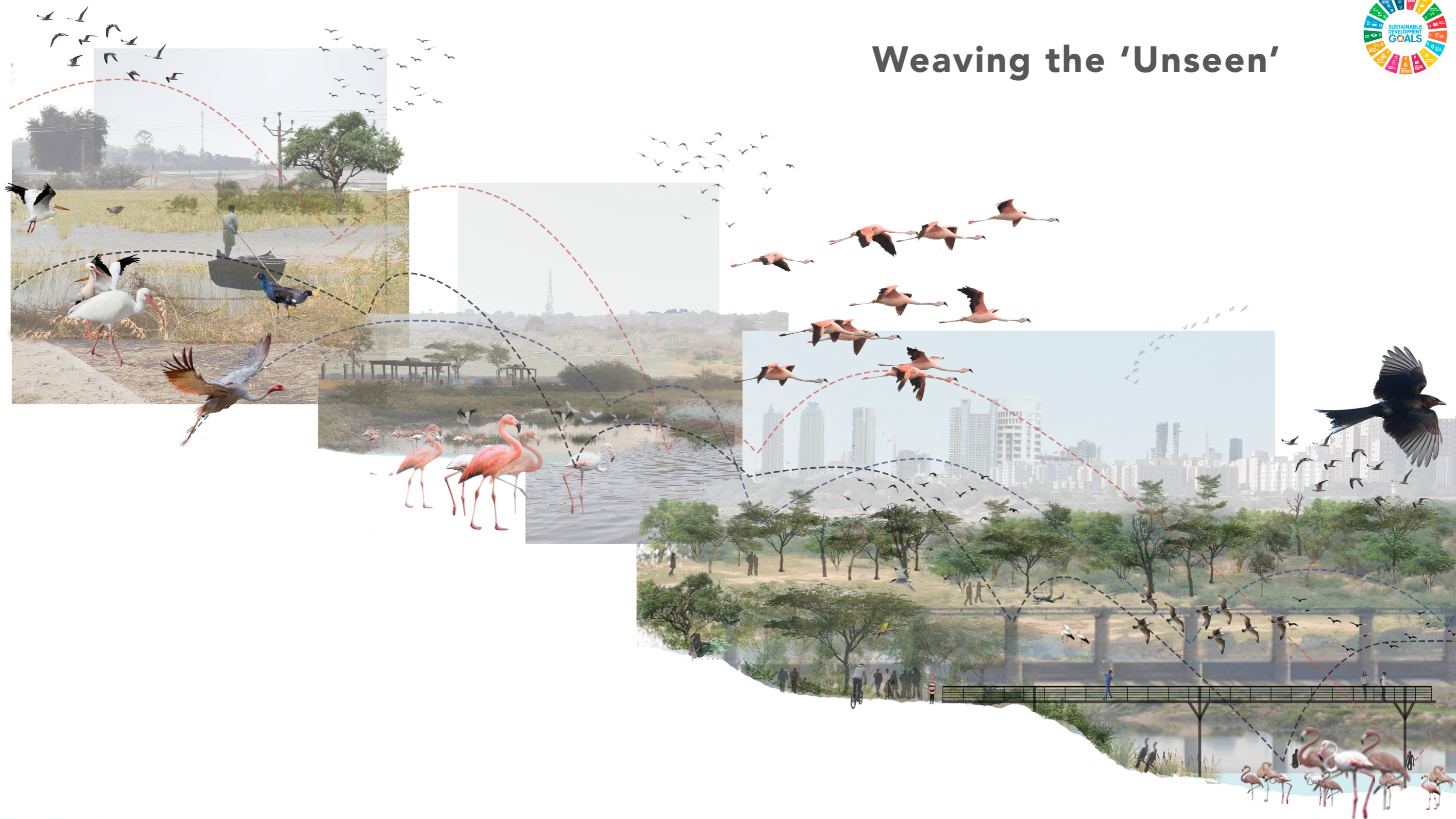




Weaving the 'Unseen'



Country / City India / Ahmedabad
University / School CEPT University
Academic year 2019-2020
Title of the project Weaving the 'Unseen' - Integrating urban wildlife habitats
Authors U. Vivin Shankar

TECHNICAL DOSSIER

Title of the project	Weaving the 'Unseen' - Integrating urban wildlife habitats
Authors	U. Vivin Shankar
Title of the course	Landscape Design Studio 4- (Site/Sight/Insight)
Academic year	2019-2020
Teaching Staff	Anjali Jain, Priyal Shah
Department/Section/Program of belonging	Master of Landscape Architecture
University/School	CEPT University



Wildlife habitats are inherent and invisible components of the urban fabric and the larger landscape of cities. Ahmedabad is a city of 8.5 million people. Located in the semi arid part of western India, it occupies the alluvial plains of a river (the Sabarmati), which merge into a series of very gently undulating, stabilized sand dunes towards the west. This has resulted in a unique topography-giving rise to numerous lakes in the depressed areas between the dunes. This system gradually dissolves into a large wetland (Nalsarovar) which is a Ramsar site (and part of the central Asian and Indus flyway). This topographical and geological system creates rich and varied habitats and is home to many bird and animals. As the city expands, these ecosystems are getting fragmented and turning into isolated islands, disconnected from the larger landscape.

Wildlife in the urban setting survives, if they can fit their four basic needs (food, water, cover and movement) to the spatial fabric of the urban region and the adjacent context beyond. The project investigates the possibility of an interwoven network of habitats (species sources, stepping stones, urban habitats), which would facilitate movement across the urban region and its adjacencies. It envisions integrating the remnant urban habitats into a system of linked patches that incorporates the 'unseen' components of the eco-system. While providing for fauna, these patches would also allow for a richer engagement of people with the natural attributes of a place.

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CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

Barcelona September 2020
SCHOOL PRIZE

Ahmedabad - habitats | movements+patterns



Urban habitats

Understanding movement + pattern



marshes/wetlands
Thol
Parij lake
Kaneval lake
Nalsarovar



woodlands
Indroda park



water courses
Sabarmati river
Khari river
Sewage treatment plants

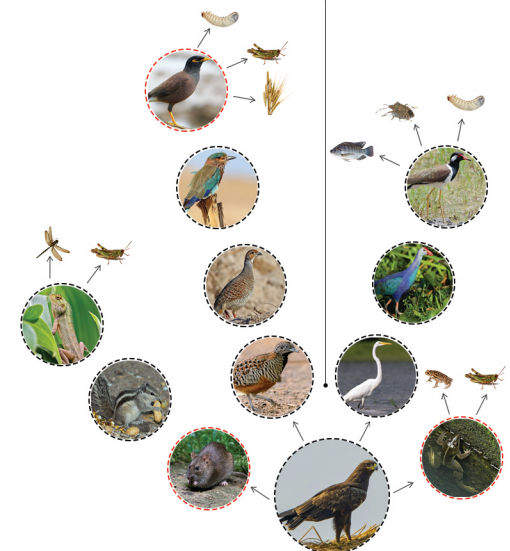


urban parks
65 urban parks within city limits of Ahmedabad

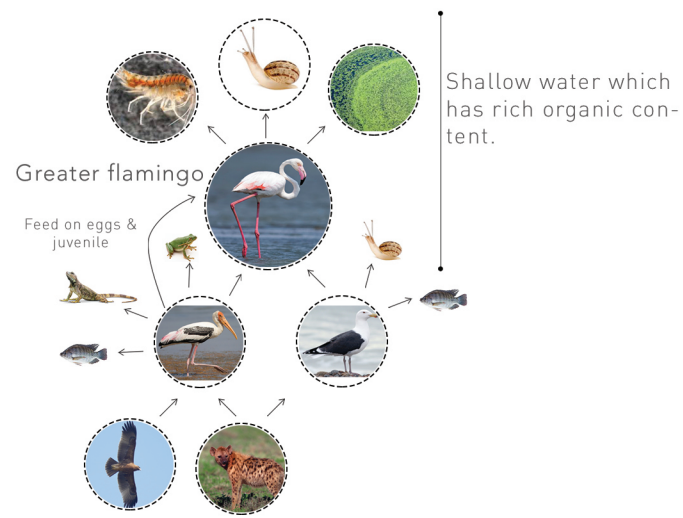


abandoned land
Textile mills
Cemeteries and burial grounds

Winter
During winters it prefers marshes close to grassland and forest..



Summer
Preferred habitat as groves of trees surrounded by parks, grassland and fields.



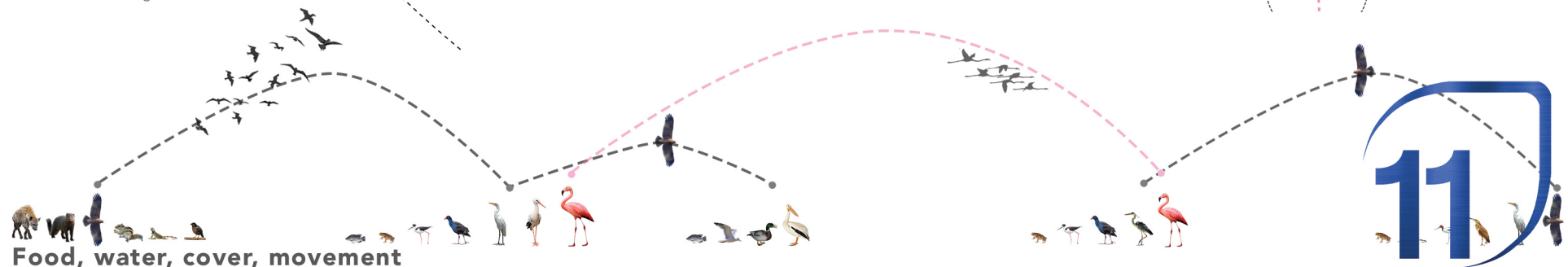
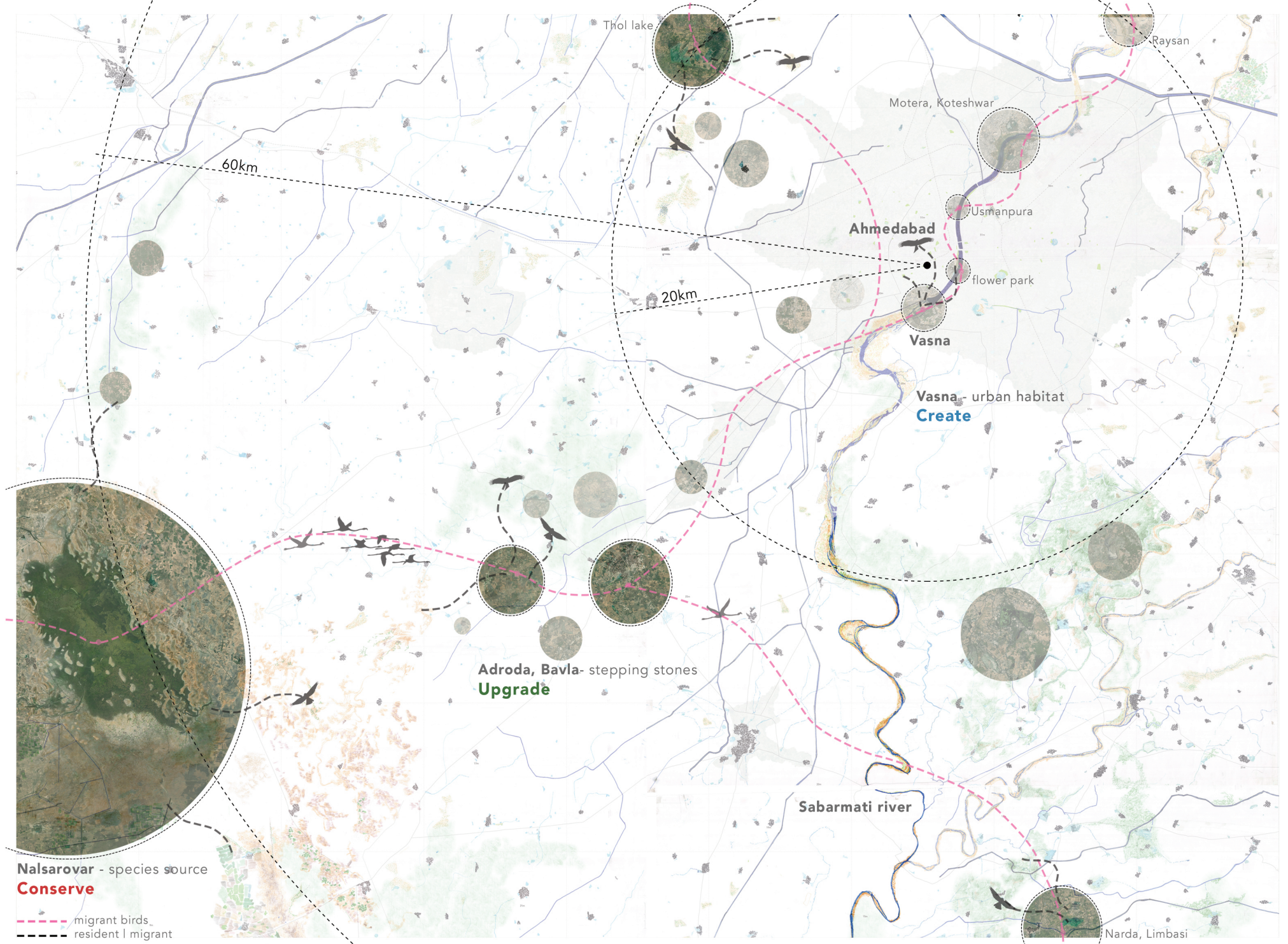
There existing a relation between various species and the habitat requirements.

Urban fauna is constantly in movement to accomplish its fundamental needs. The study on two species (greater flamingo and Indian spotted eagle) highlights the importance of the urban-region surrounding a metro area.



Map showing the relation of species reserves - stepping stones - urban habitats

The expanding urban area which tends to fragment some of these natural systems. It defines the necessity to integrate these natural habitats to the larger system.



Weaving the 'Unseen' - Integrating urban wildlife habitats



Conserve(wetland) - species source

Nalsarovar is located 60 kilometers to the southwest of the city of Ahmedabad. It is the biggest species reserve/source within the urban region and is a critical destination for migratory birds which travel along the Indus flyway to the Indian subcontinent.



Habitat types | wetland



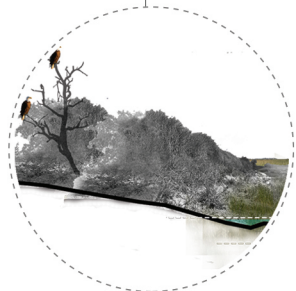
shallow water



islands



deep open water



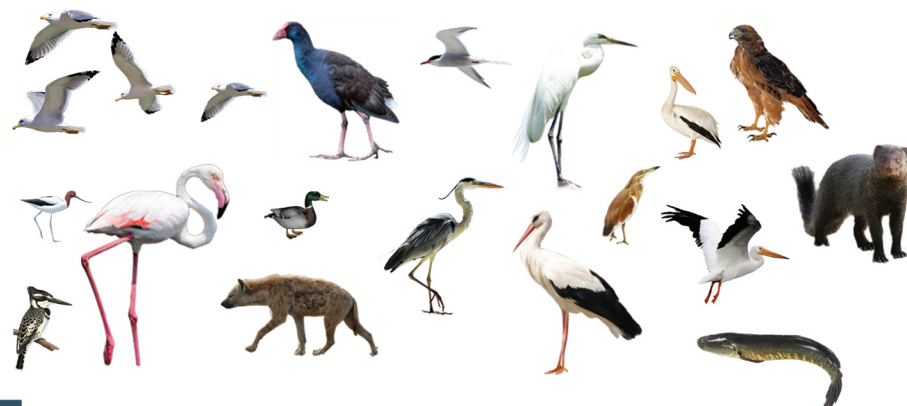
lacustrine edge



mudflats

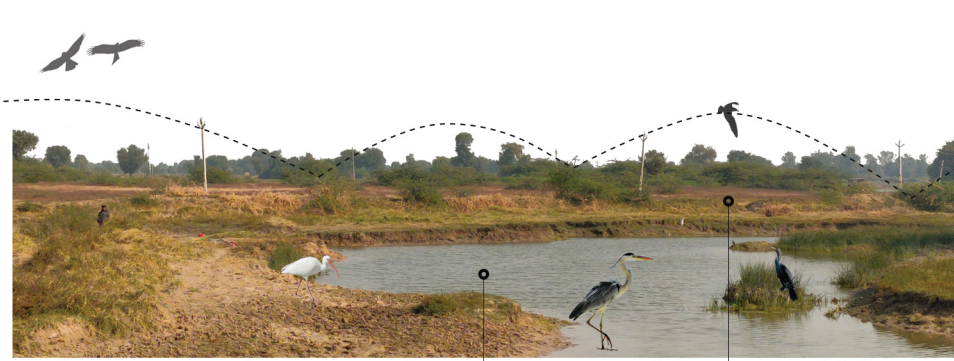
The shallow waters during the monsoon attracts diverse fauna, and the brackish water most-monsoon attracts birds like the greater flamingo and the lesser flamingo.

Supports a species pool of 320+ birds and animals



Upgrade - stepping stones

Region adjacent to **Adroda/Bavla** villages, have a cluster of lakes and habitat hotspots that function as series of stepping stones between Nalsarovar and the urban-area. The sprawling urban area and expanding farms have put tremendous pressure on the available resources within the region.



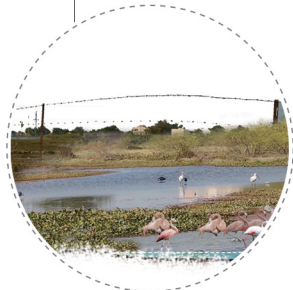
Habitat types | system of interconnected | seasonal lakes



seasonal streams



network of lakes



seasonally inundated land



Inundated fields | introduced edge | adjacent scrub-land(restored) | farm

Native vegetation like Babool, Neem, Cordia to be introduced to diversify the scrublands. Typha grass and scirpus grass can be introduced to promote root zone treatment in the filtration ponds.

Supports a species pool of 180+ birds



Create - urban habitats

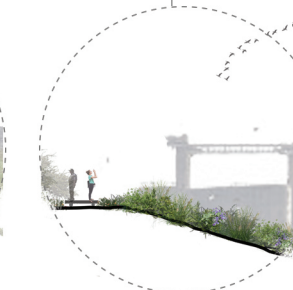
Vasna barrage - The banks of the Sabarmati, south of the barrage remain unseen and unexplored. Though degraded, this area sees the presence of fauna because of the presence of water from (source- citizenmatters.in/ahmedabad-sabarmati-rivfront-development). It thus offers the potential of creating a place that can host fauna and connect them to the city and its people



Habitat types | river banks



dynamic river-bed



grasslands



riparian edge



farm | restored riparian vegetation | seasonal grasses | Sabarmati river

The native riparian species to be introduced along with trees like ziziphus, ficus religiosa and neem to bolster the species pool. Flowering shrubs to be introduced along with the more hardy natives.

Supports a species pool of 120+ birds



Create - urban habitat

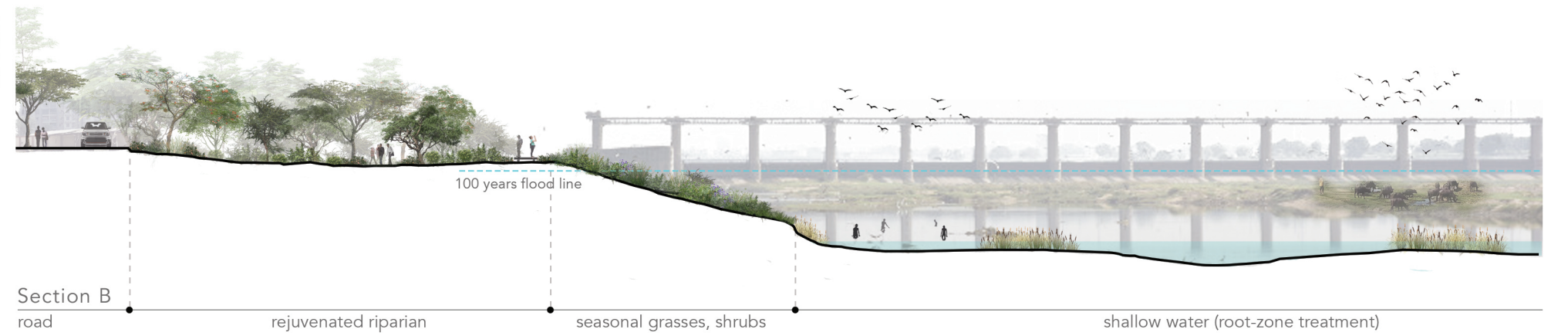
Beyond the barrage - is a potential habitat owing to the availability of a perennial source of water and STP's (food source). The degraded edge of the river offers an opportunity for create a potential urban reserve.



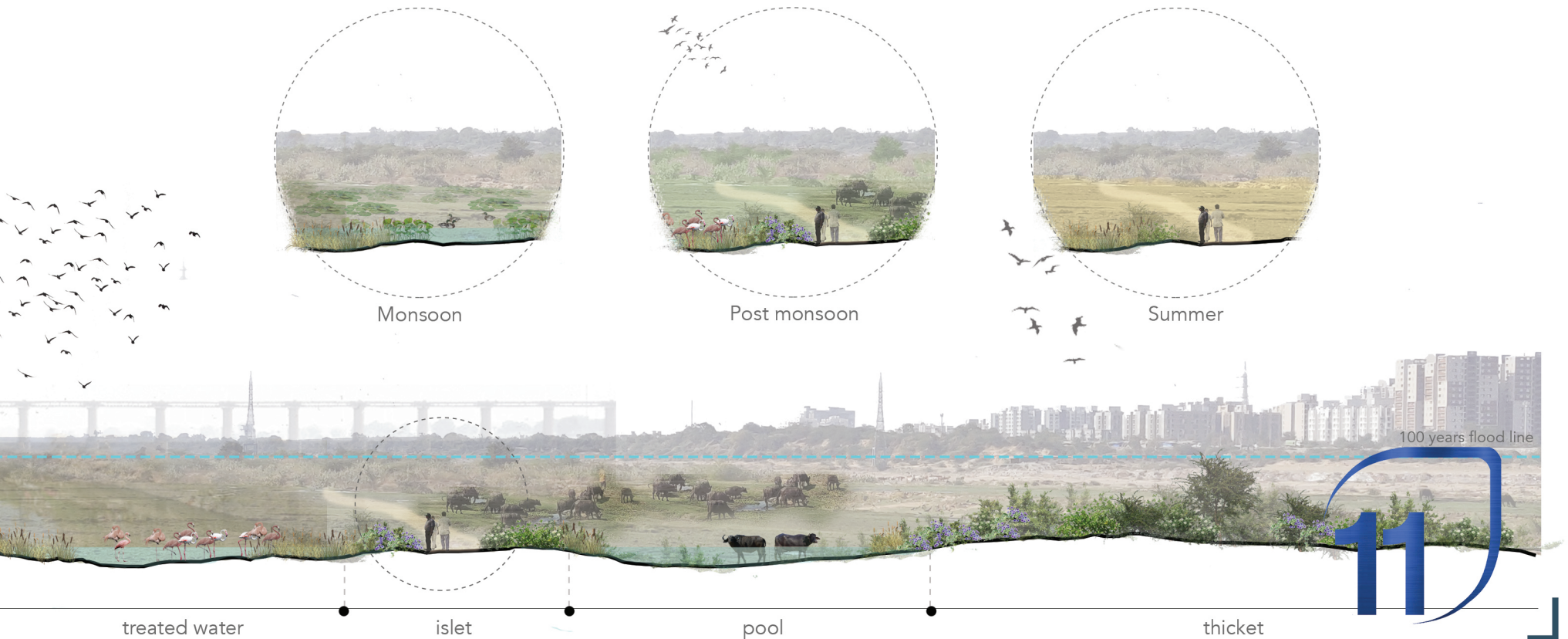
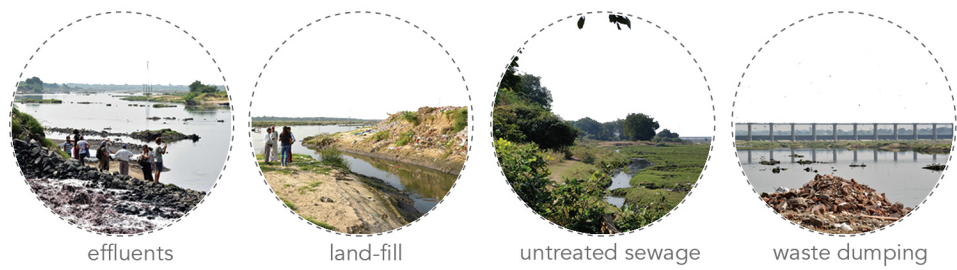
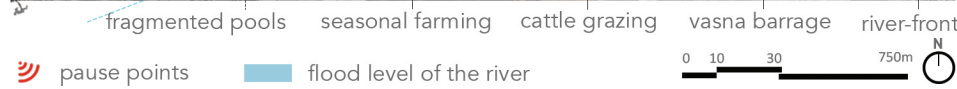
Rehabilitating the river edge



Biodiversity park - The section across the proposed biodiversity park by the Ahmedabad Municipal Corporation at the south end of the Sabarmati riverfront project. The promenades along the riverfront extend into the proposed park.



River walk Section taken right after the barrage reveals the first sight of what is beyond the barrage - 'the unseen'. Loud chirping of birds can be heard which from over the barrage. Seasonal fishing is an activity spotted on the shallow waters of the river.



Section E - Dynamic riverbed

