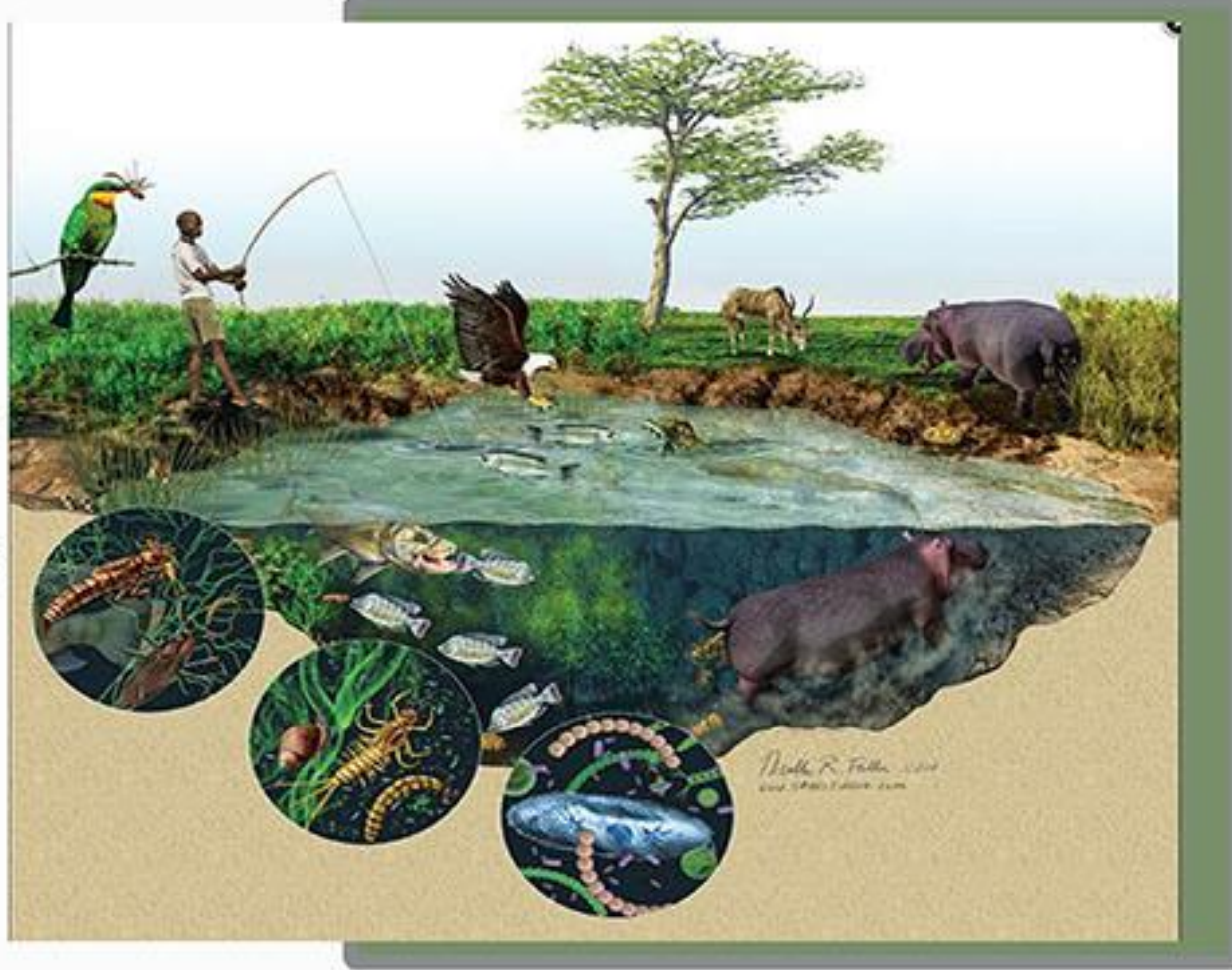


Ecology

study of the relationships between living organisms, including humans, and their physical environment



Ecological Architecture



Ecological architecture is about preserving and complementing the natural elements within an urban setting whether that's a green wall on a single building or integrating green spaces as a city is planned

BUILDING FOR AN ECOLOGY

The present scientific understanding of how nature functions and how structures relate to and impact nature is laid forth in Building Ecology. It offers important information for developing in harmony with nature and maintaining the health of the ecosystems that support life on Earth.

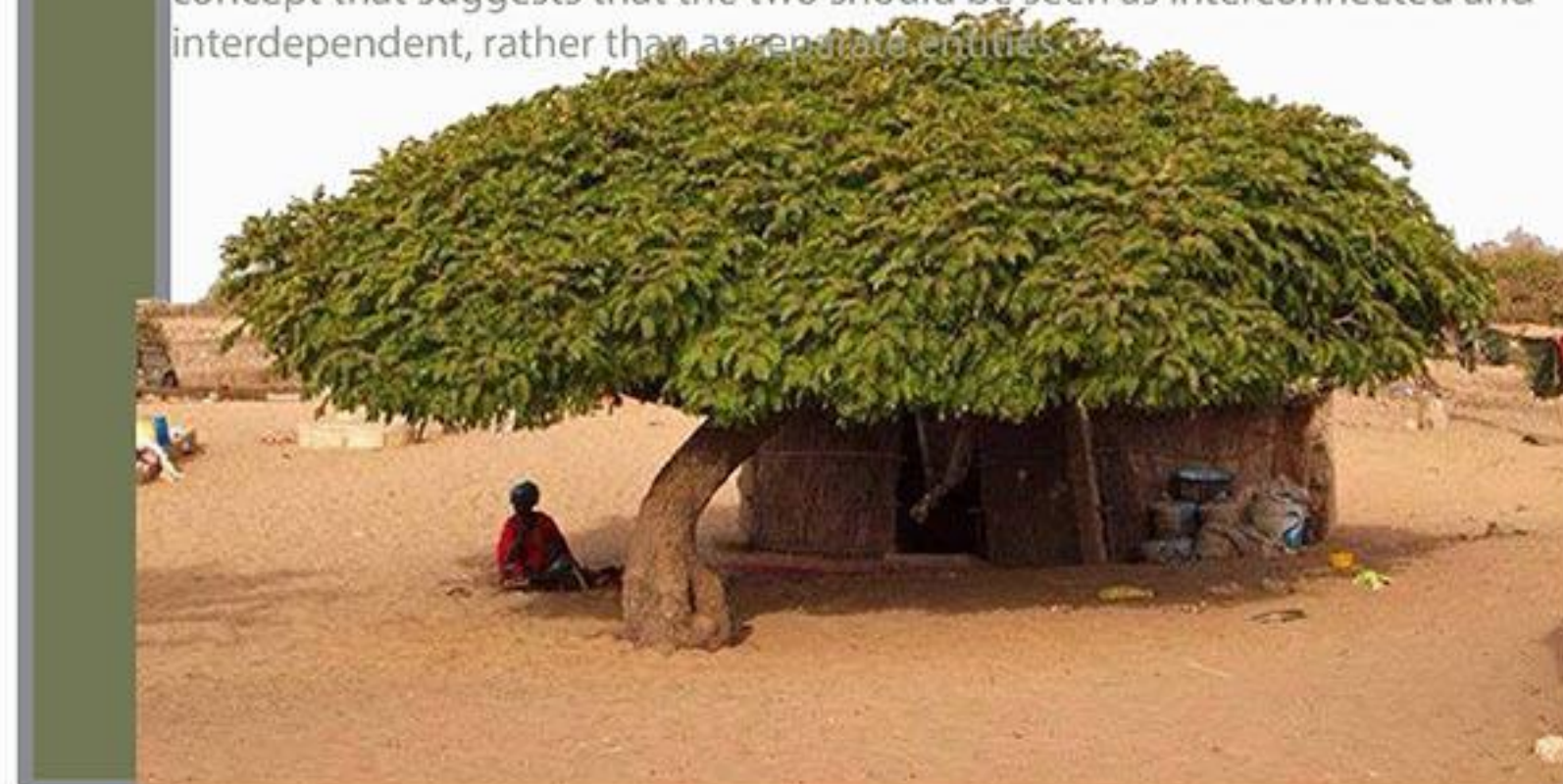


THE PRINCIPLES OF BUILDING GREEN

- Livable communities
- Energy efficiency
- Indoor air quality
- Resource conservation
- Water conservation

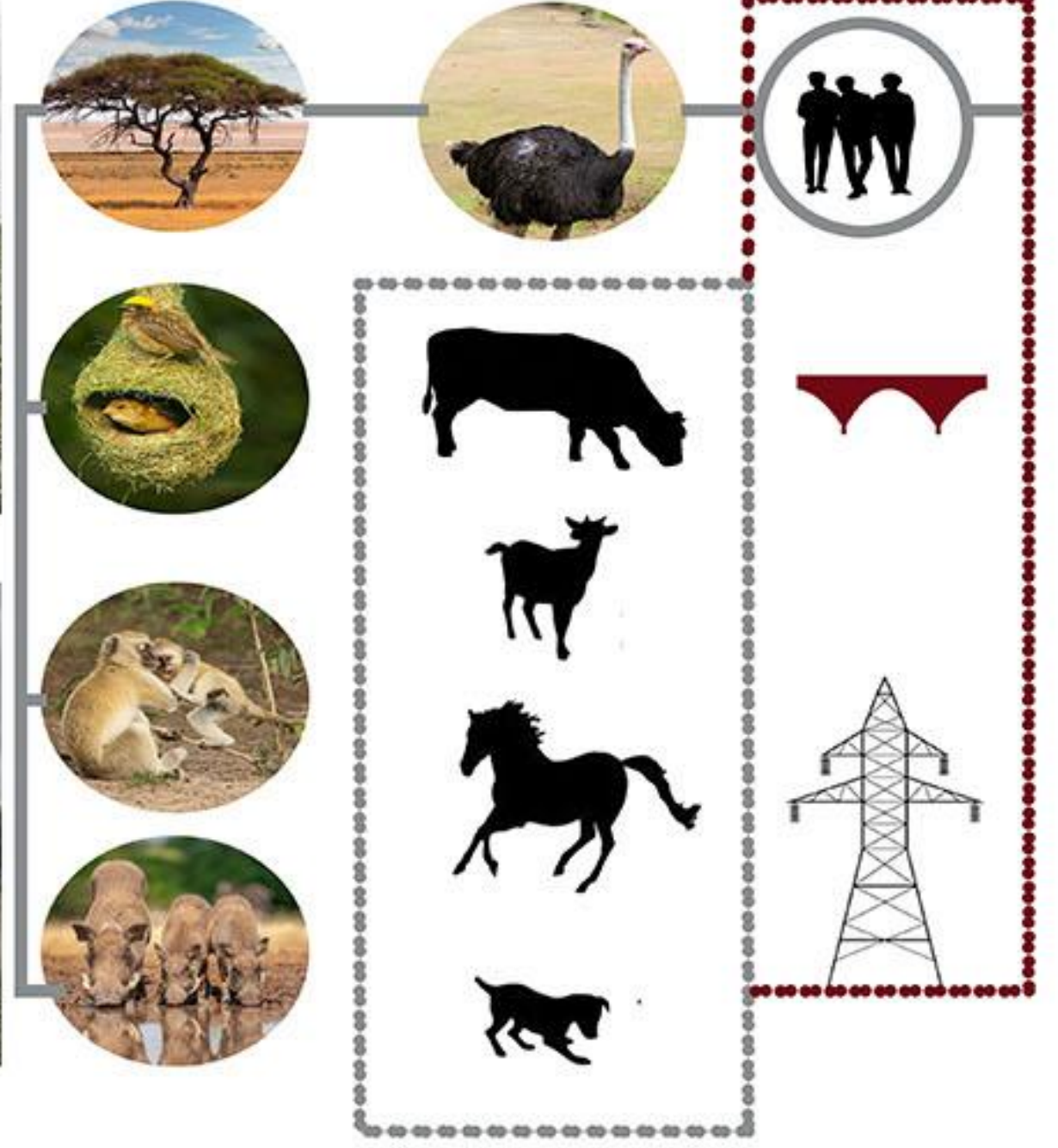
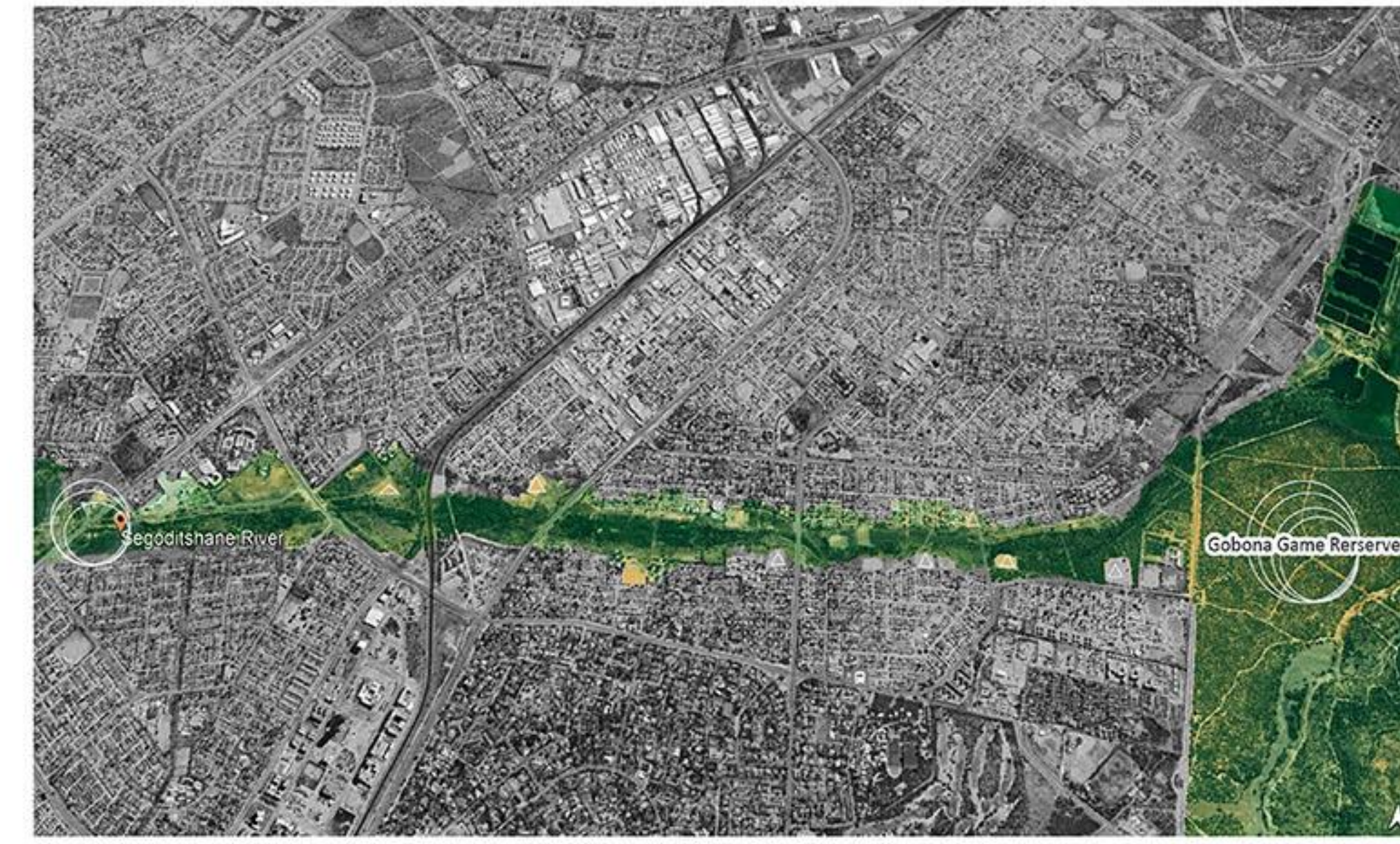
SYMBIOSIS OF ARCHITECTURE AND NATURE

The symbiosis of nature and architecture is a term used to describe the relationship between the natural world and the built environment. It is a concept that suggests that the two should be seen as interconnected and interdependent, rather than separate entities.



The symbiotic relationship between nature and architecture is based on the notion that the natural world may inspire, supply resources for, and serve as a basis for, the built environment, and vice versa. The coexistence of nature and architecture highlights how vital it is to maintain a connection to the natural world. Better connection is provided through experience.

SITE ANALYSIS



SEGODITSHANE RIVER

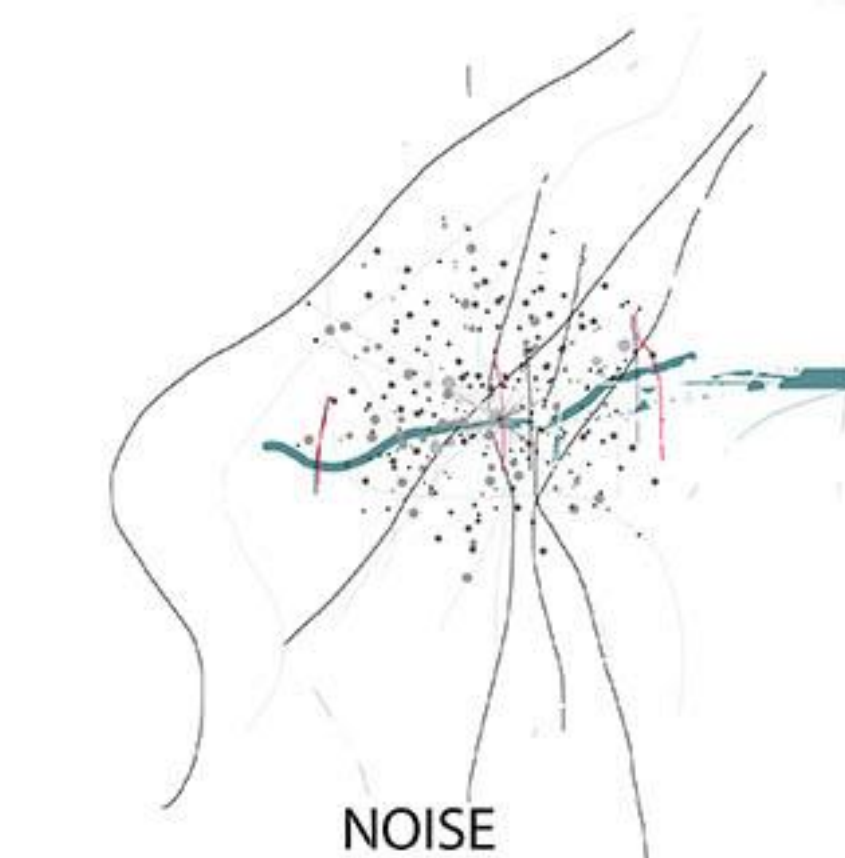
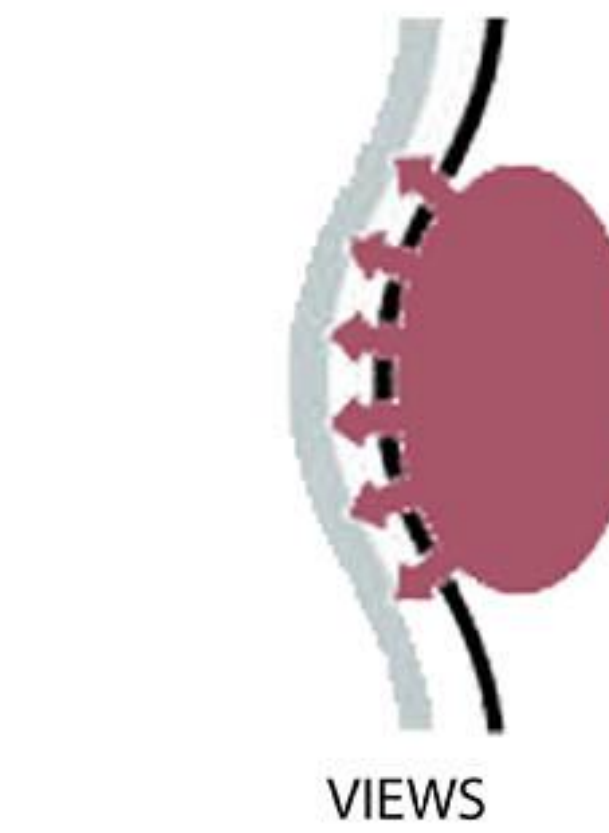
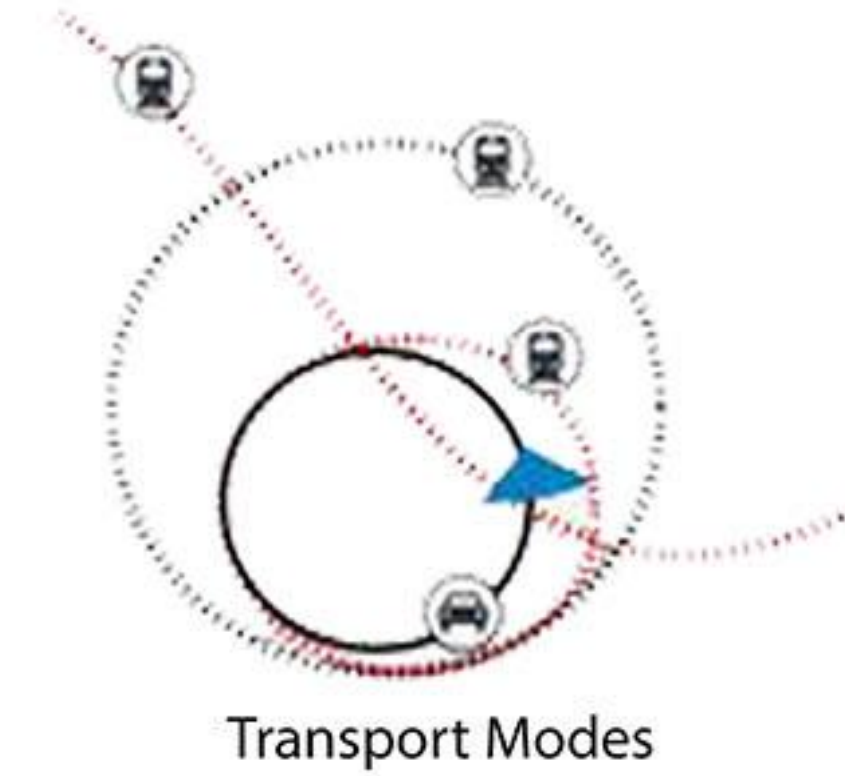
The river is prone to regularly being flooded, which often results in the floods which led to the temporary closure of Segoditshane Wellie Seboni and Nelson Mandela roads which disrupts transporting routes through segoditshane river identified low lying bridges/culverts and storm water drainage channels that failed to deposit runoff into the river channel as some of the contributory factors to flooding.

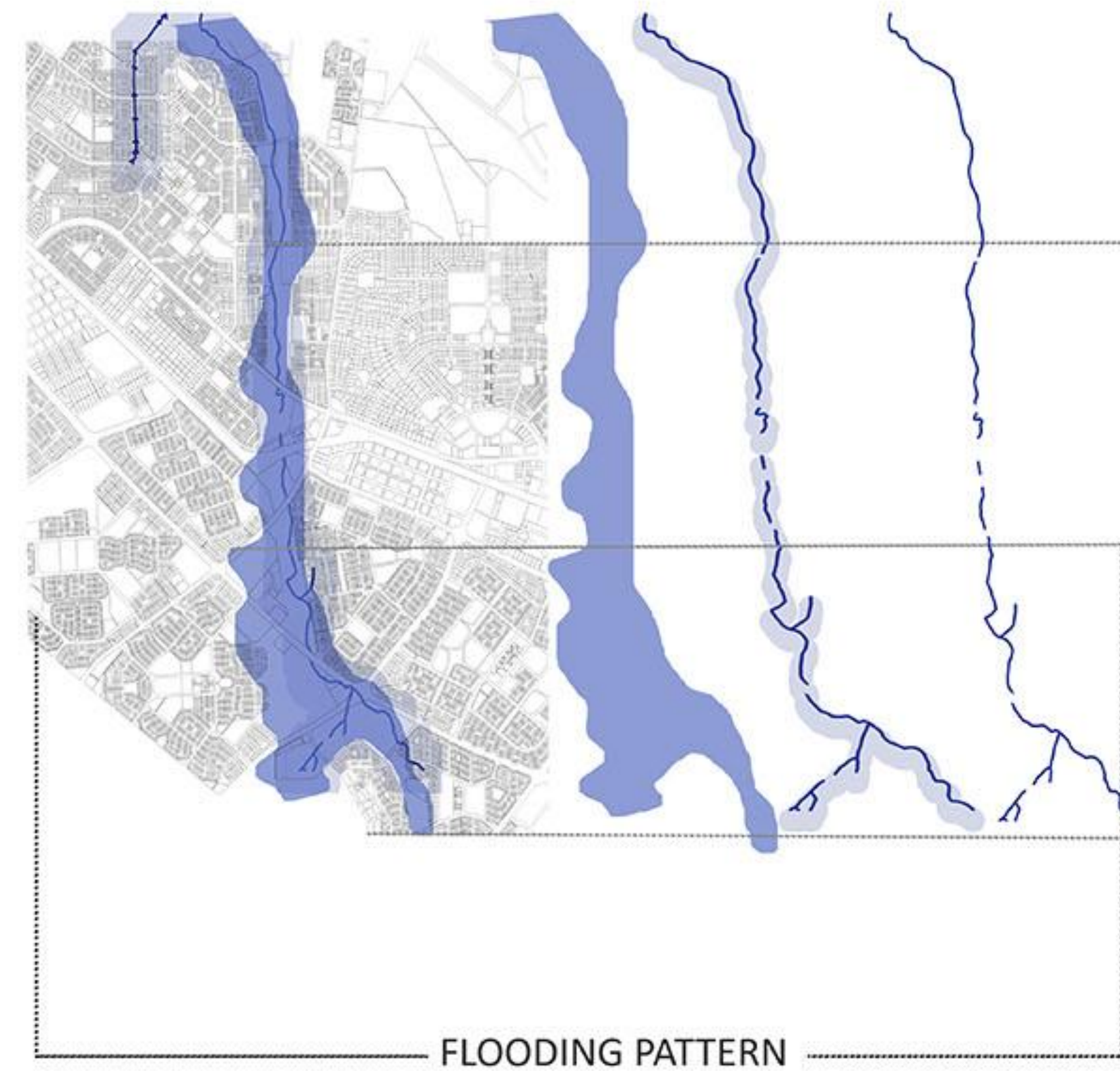
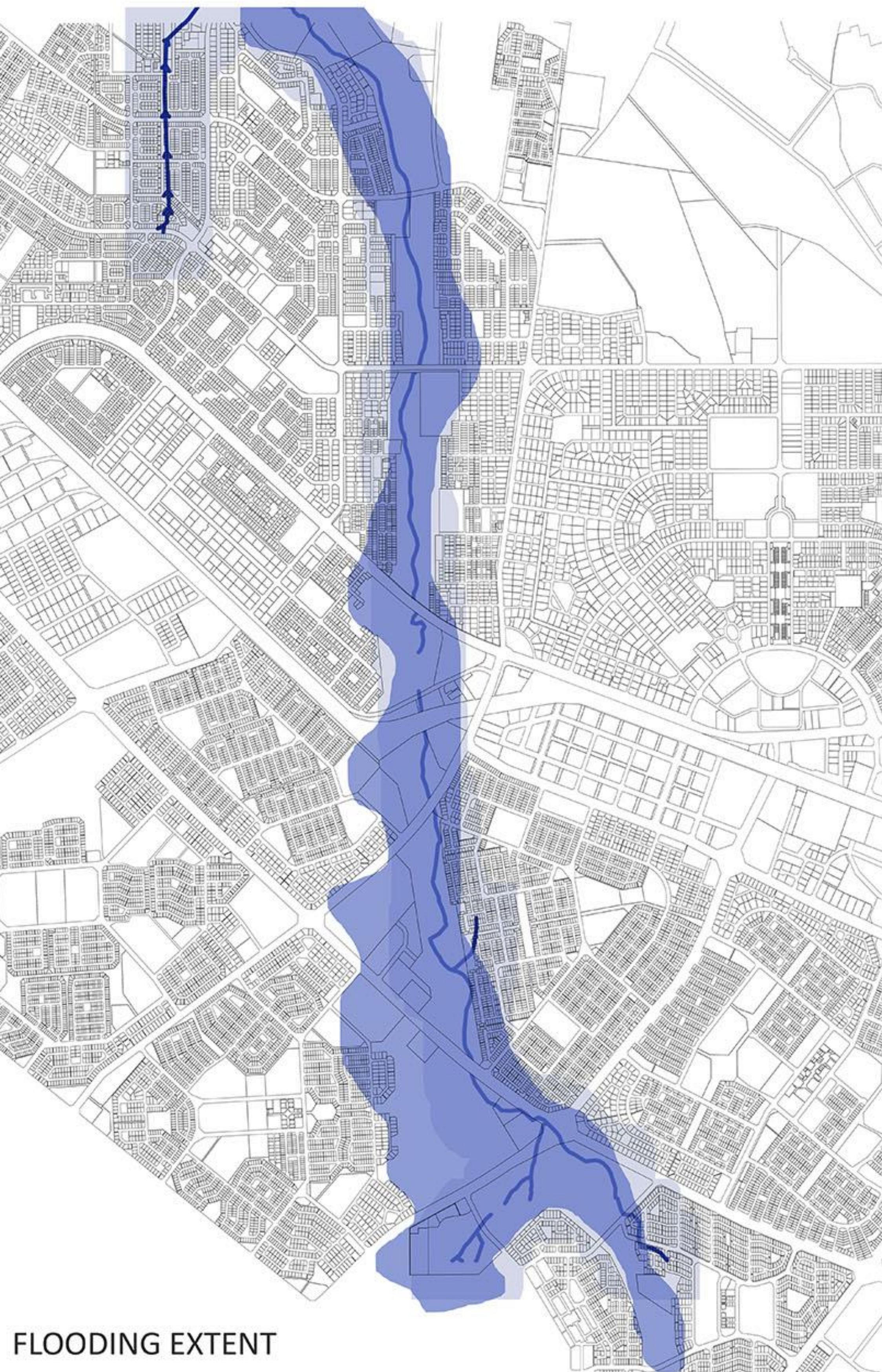
A comprehensive and long lasting solution was being worked on which included having water retention ponds along the river as additional storage capacity during heavy rains.

A comprehensive network to ensure that the existing storm water drainage outlets ultimately deposited water into the dredged river channel would also be developed.

That involved continuous maintenance of the drainage system and adjusting its carrying capacity to meet demand during heavy rains mechanisms must also be put in place to control water movement in and out of the retention ponds in response to heavy rains and reducing surface runoff velocity.

Storm water treatment can be importance of treating storm water before reaching the river channel. The removal of fine sand and other materials carried by running water and deposited in the river thus hindering free movement of rainwater.





Risks associated with floods impose greater damages to infrastructure projects especially in case of bridges destruction to these projects impacts the local community and overall economy of the country.



Health hazards due free flow of runoff water



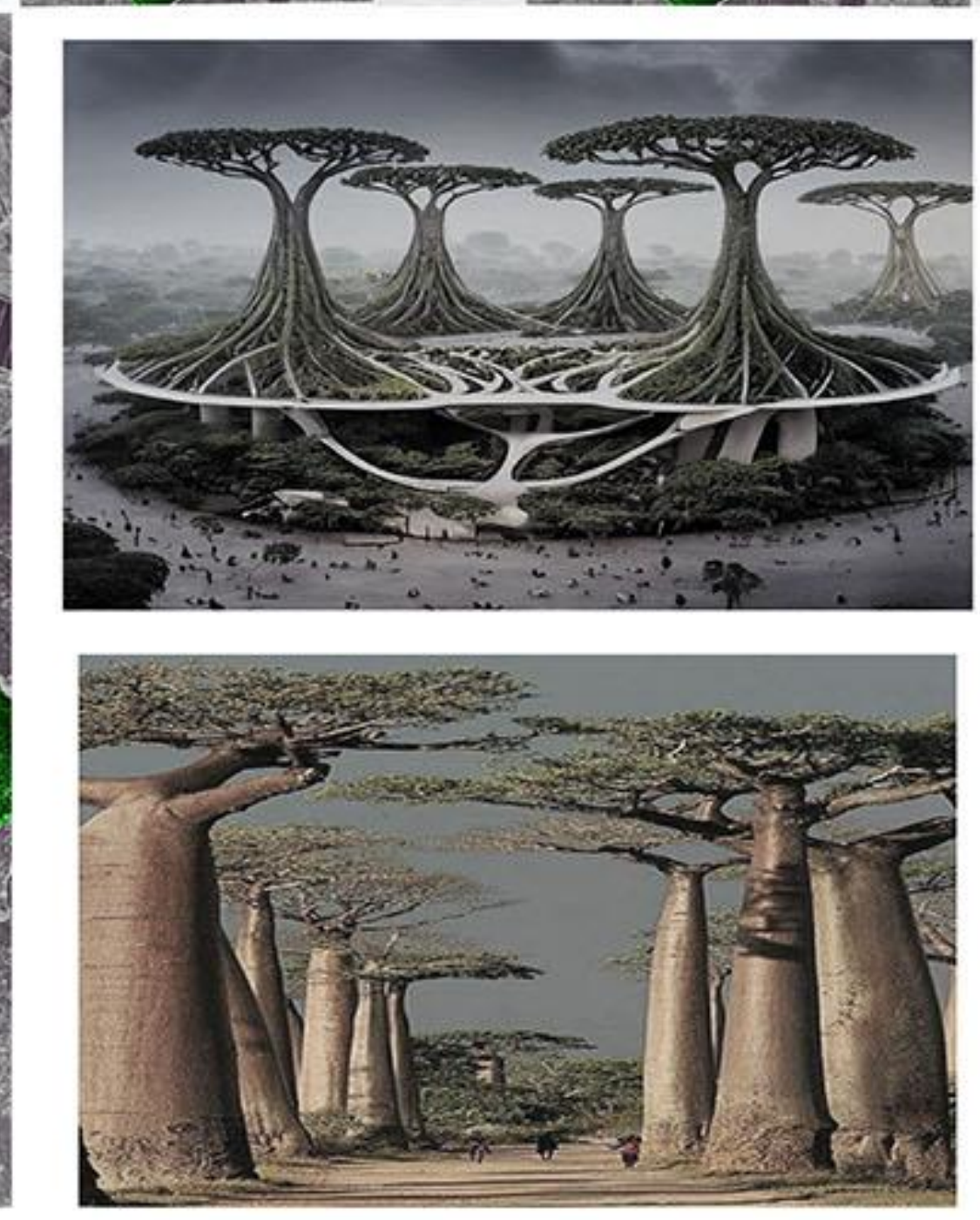
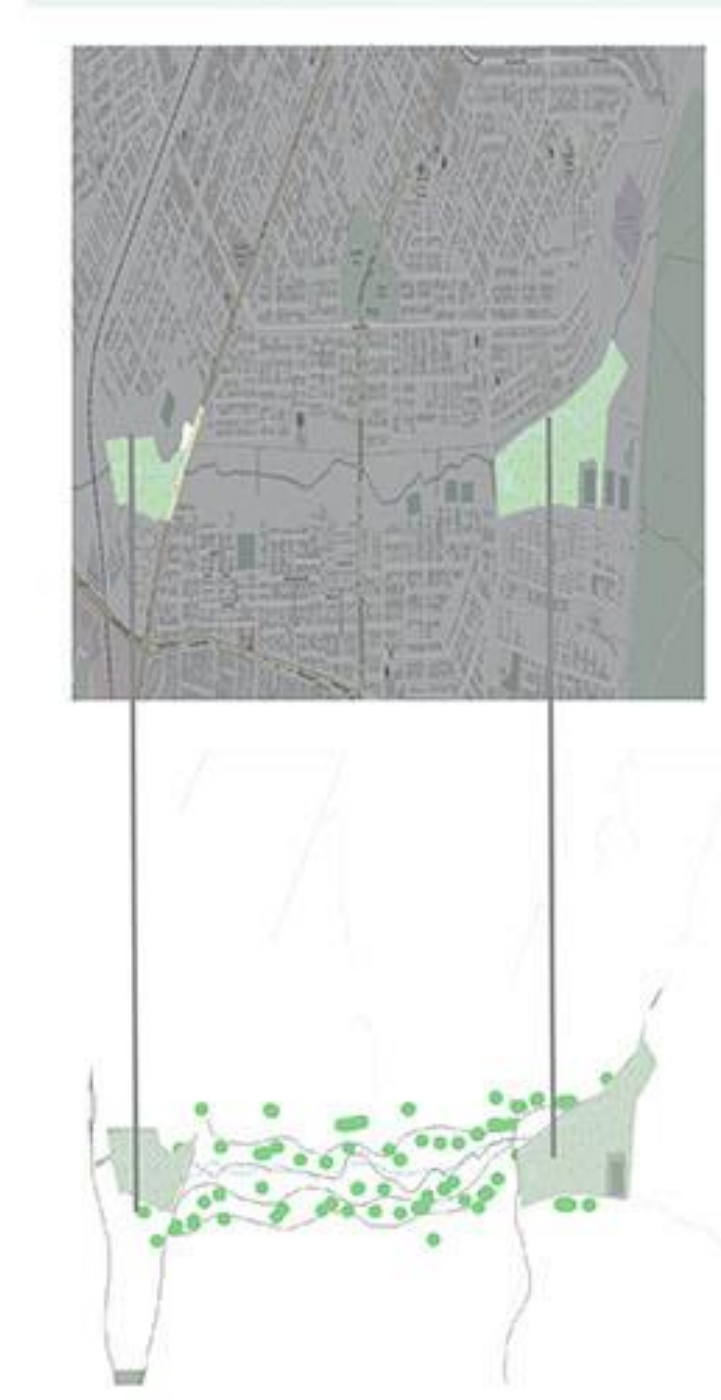
Closures can result increased costs due to transport delays and greater travel distances. in extreme cases, bridges closures can significantly reduce economic activity .

Floods as a natural phenomena that causes huge threat to people and buildings objects located in floods terrains. The negative impacts of watercourse surges will not always be manifested only after they have burst from the banks-the reasons for building damages cannot only be the direct action of water flowing on the surface. Underground water can also have unfavorable effects on structures.

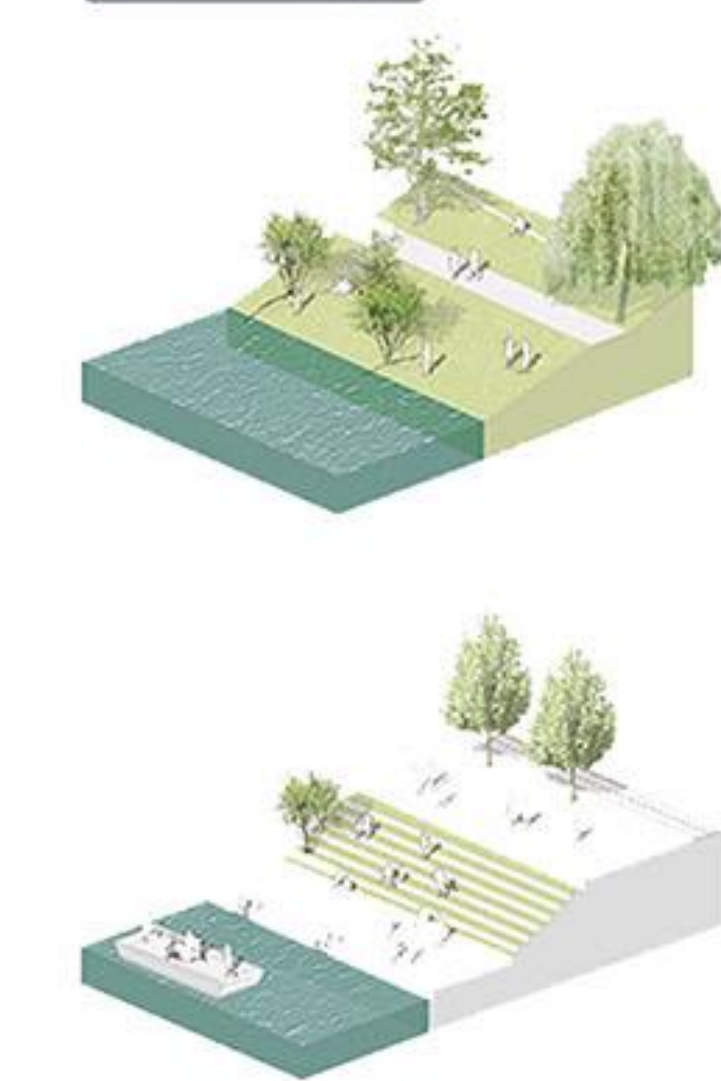
DESIGN STRATEGY

ECOLOGICAL UTOPIA

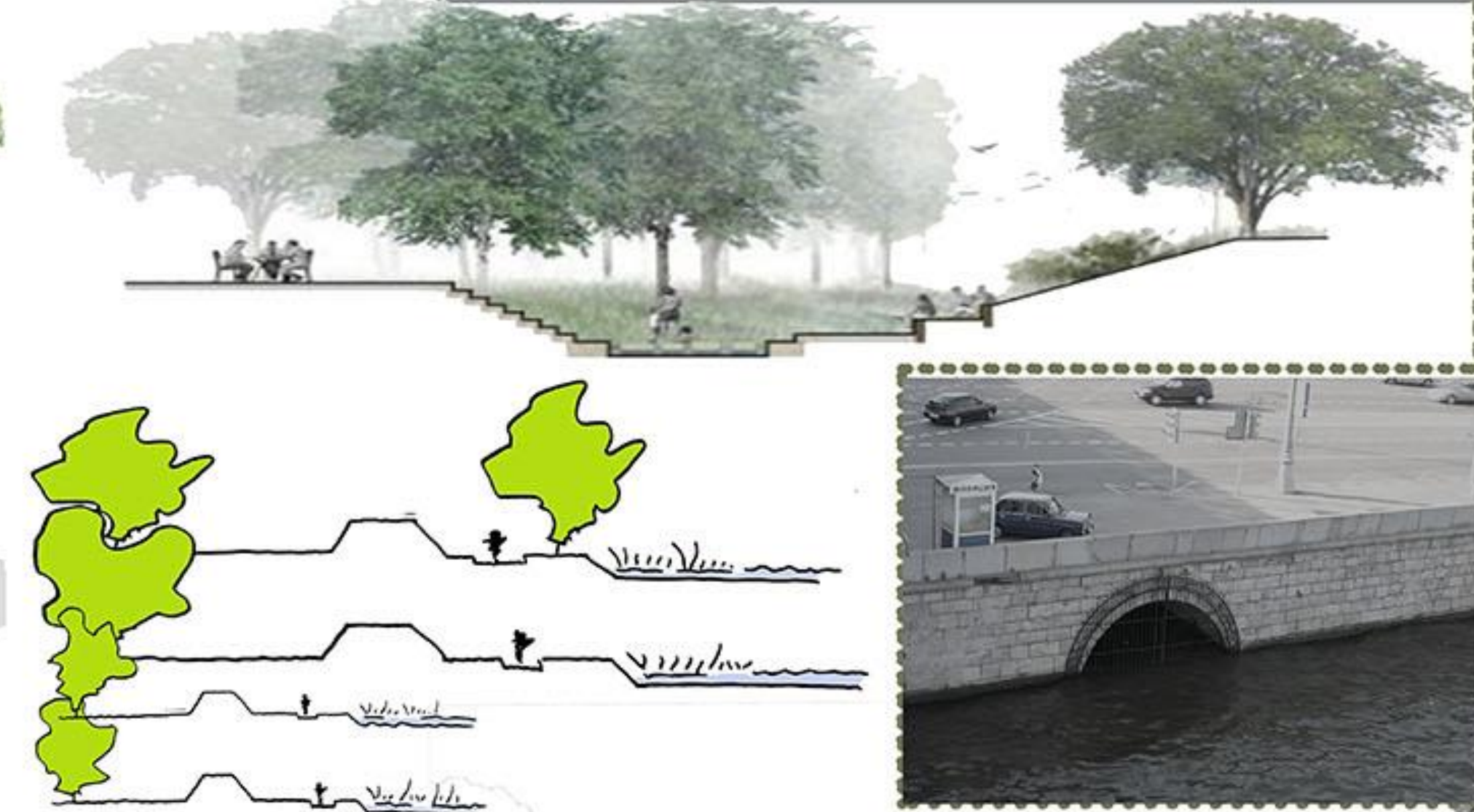
A place where humans live in perfect harmony with nature.
Zero pollution
Sustainable energy
Free food
Free transport



Flooding



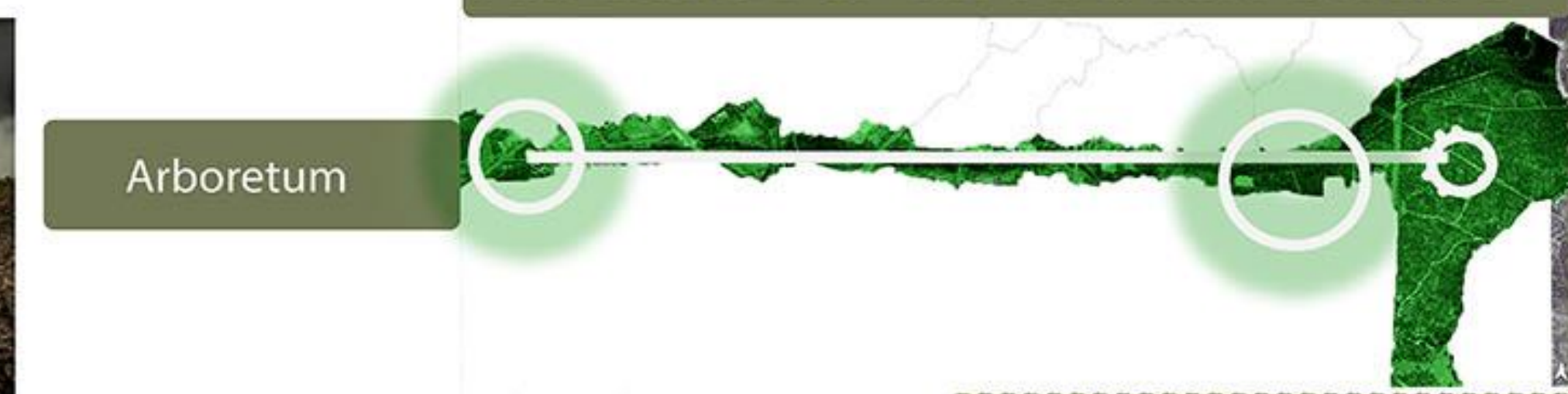
PROTECTION OF HUMANS FROM NATURE



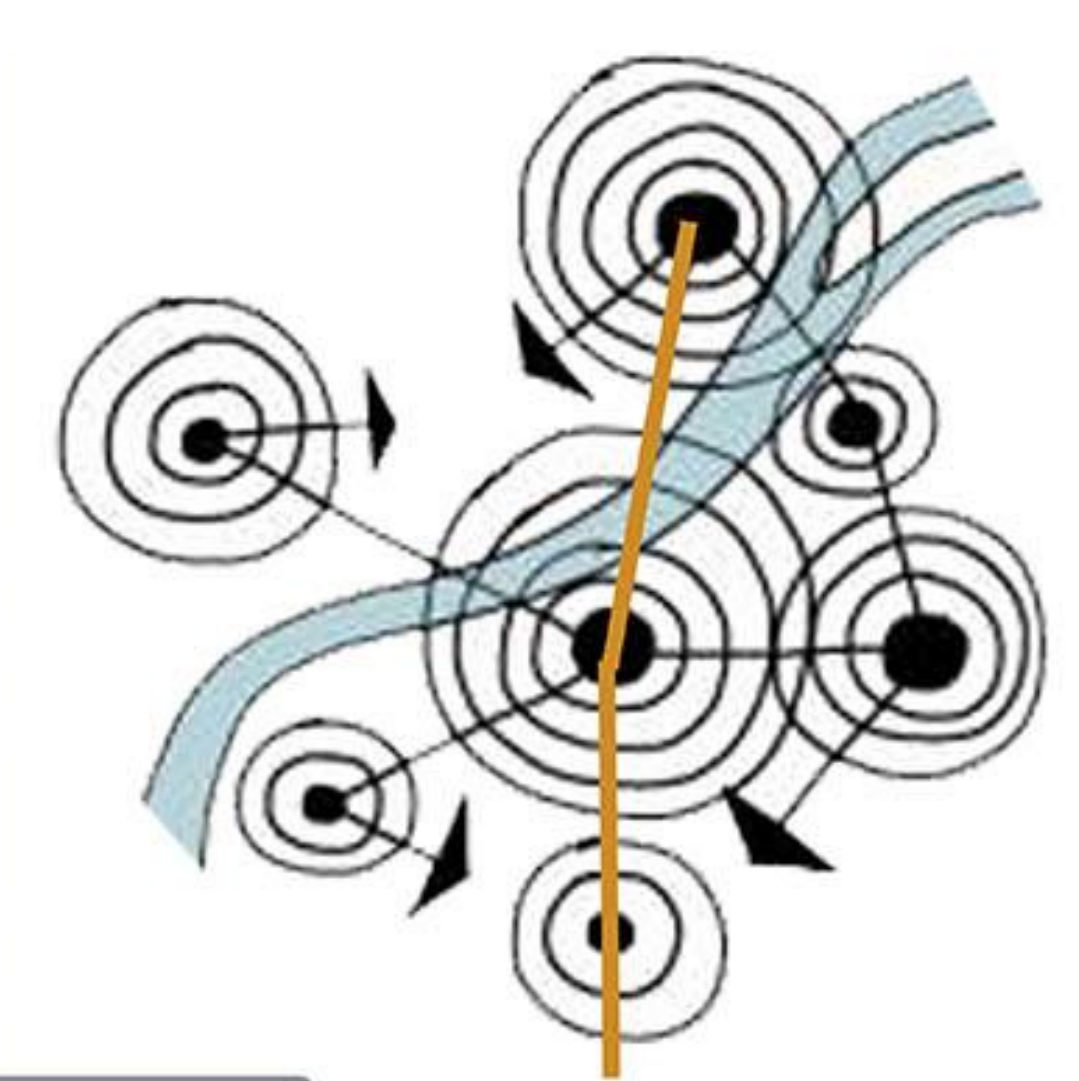
Neglinnaya River, Moscow it was buried underground in 4.7 miles (7.5 kilometers) of tunnels. Today it drains into the Moskva River via two openings.



PROTECTION OF NATURE FROM HUMANS



INCORPORATING TREES INTO ARCHITECTURE



WASTE WATER CLEANING

