MSIMBAZI FLOOD PLAIN today is a natural retention area for flood water that is important for housing, social gatherings, agriculture and provides Dar es Salaam with much needed vegetated space. However, the flood plain environment is heavily polluted, the area struggles with infrastructural problems, is more a barrier than well-used public space and the whole area is flooded every year during the rain seasons.

Due to its central location and the fact that the river still has not been channelized or restrained by walls, it provides valuable opportunities for improving both environmental, social and recreational factors.

MSIMBAZI WETLAND PARK is a reconstruction of the flood plain that restore its function as a retention area for floods, enhance the ecological functions and make it a better environment both for wildlife, vegetation and humans. At the same time, it creates a link between the different areas in the city and a sustainable public green space for the citizens of Dar es Salaam.

THE SITE

INFORMAL SETTLEMENTS
Due to the recent urbanization and lack of planning, large parts of the flood plain have been built upon. These dwellings are mainly informal settlements which get flooded every year, forcing the inhabitants to evacuate. The flood plain environment is also severely degraded and pollution levels in the river have reached such high percentages they can no longer provide basic functions needed by the population.

FLOODS
Succession of floods in Msimbazi River Valley today; Short rain season, Annual flood and Extreme flood. The natural flood plain has historically been vegetated and thus managed to handle the large amounts of excess water that enter the area during rain seasons. The seasonal rains, in combination with a lack of infrastructure and clogging of drainage channels and streams, causes large problems with floods in the area.

CONCEPT

RESTORE
Restoration of flood plain environment and ecosystem.

MANAGE
Sustainable management of flood water.

REDUCE
Reduction of pollution levels in water and soil by biological strategies.

USE
Multi-functional use of the flood plain for social functions and make it accessible even during floods.
The Recreational path brings the visitor from Jangwani Field to the Indian Ocean. Along the way, the visitor gets close to the Wetlands, Agricultural land and deep Mangrove forest.

**SECTION A**

**AGRICULTURE PHYTOREMEDIATION**

Crop rotation where parts of grown crops are species which can accumulate contaminants.

**RIFFLES AND POOLS**

These features create variation in the waterflow. The riffles speed up the flow, while the pools are deeper with slower waterflow.

**WATER PURIFICATION**

The urban wetlands are designed with species which can take care of contaminants. Some of the species need to be cut down and burned to get rid of the contaminants.

**FLOATING ISLANDS**

Phytoremediation in water.

**LOT OUT POINT**

The winding Recreational path ends with a look out point where the river reaches the Indian Ocean. The look out point constructed as stairs reaching towards the sky, where the visitor gets a view of the ocean and Msimbazi Wetland Park.

**VEGETATED RIPARIAN BUFFER ZONE**

**MSIMBAZI RIVERFLOOD ADAPTED HOUSES**

**PARK LIMIT**

**FLOOD LIMIT**

**RELOCATION OF HOUSES**

1. **FLOOD SAFE HOUSES** - Buildings outside flood limit are safe from floods.
2. **FLOOD ADAPTED HOUSES** - Buildings need to be adapted to manage floods.
3. **NO HOUSING** - All kind of buildings inside the park limit is prohibited. Existing buildings within this area need to be relocated.

**MARKET AND EVENT AREA**

A place for people to sell their things, hang around, sit in the shadow and which is also able to be transformed to an event area if needed.

**MEETING POINT WITH SPEAKERS CORNER & EVENT AREA**

Lots of space for informal events and large gatherings. The central meeting point has a "Speakers corner" where political or cultural events can take place.

**REINFORCED RIVER BANK**

Gabions are used to protect the river banks from erosion in areas that are too narrow for Riparian Buffer zones.

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**Strategic Site Plan, Scale 1:5000 (A1)**

The middle of Jangwani Field is higher than the surrounding areas, which makes it accessible both during short rains and annual floods. The field can be used for several activities, such as football, events and to hang out, sit and play.

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**Reinforced River Bank**

Gabions are used to protect the river banks from erosion in areas that are too narrow for Riparian Buffer zones.
**SHORT RAIN SEASON**

The flood water fills the riparian buffer zones and wetlands, which are constructed to manage flood water frequently. All infrastructure is accessible as well as all public areas.

**ANNUAL FLOOD**

During the Annual Floods, much of the flood plain is flooded, but leaving some elevated areas accessible for market activities and small gatherings. Elevated paths are still accessible.

**EXTREME FLOOD**

During the Extreme Floods, the whole flood plain is filled with water, including the flood adapted housing areas, during a few weeks. Only the flood adapted infrastructure on bridges is accessible.