Griya Katulampa
Lessons Learned

Griya Katulampa

Griya Katulampa is a community with great potential in relation to water and a privileged position between the Kali Baru River and the Ciliwung River. The community in Griya Katulampa has shown strong mutual cooperation in protecting the environment and initiative in takign care of the environment, especially in the case of water resources, such as using alternative water sources from existing springs and building a distribution system.

With its potential, Griya Katulampa can offer some valuable lessons in water resources management to become a water sensitive city. There is an opportunity to provide advice for better waste management in Griya Katulampa, using Green Infrastructure such as constructed wetlands, biofilters and bioswales to reduce water pollution to the river and stormwater runoff.

Currently, Griya Katulampa has implemented pilot projects for bioretention at communal and household scale. These pilot projects have been successful in reducing the stormwater runoff in the area. The Urban Water Cluster has also explored the capability of rainwater harvesting at the communal and household levels and finds that it has great potential for decreasing the reliance on city water for non-drinking purposes, such as irrigation, toilet flushing and fish ponds.

POPULATION
2,257

AREA
14.1 Ha

POPULATION DENSITY
160 / Ha

NUMBER OF DWELLINGS
460

AVERAGE HOUSEHOLD SIZE
4.9 People / Dwelling

ISSUES

WASTE WATER TREATMENT
Most dwellings have septic tanks to treat blackwater, however, some do not function well.

FLOOD RISK
The settlement is located on a slope between two rivers, therefore there is flood risk from the river located in the upper part of the settlement.

THREATS TO SPRING WATER ACCESSIBILITY
Land Use changes may compromise the ongiong reliability of the spring water access and quality.

WATER POLLUTION
Untreated stormwater and greywater are being discharged into the drains and river.

SOLID WASTE MANAGEMENT
The drains in the springwater distribution network are blocked by solid waste.

PLANNING RECOMMENDATIONS

- Protect the current agricultural land in the area by promoting sustainable mixed land-use models
- Katulampa is a strategic area of development for Kota Bogor and special attention should be placed for the future transformation of the village's social and economic systems.
- Reduce flooding and landslide risks for communities living near river banks by regulating the use of riverbank areas
- Promote low and medium density residential developments with integrated open public spaces and easy access to public transport networks
- Include participatory planning strategies in the development of new residential and commercial areas to provide a more active involvement of residents in the planning process.

URBAN DESIGN RECOMMENDATIONS

- Ensure public spaces are multi-functional to ensure they are providing a better community life and environmental performance.
- Green Infrastructure such as biofilters, bioswales, constructed wetlands and vertical gardens could be integrated in public spaces in order to reduce stormwater runoff and water pollution.
- Griya Katulampa could benefit from implementation of rainwater harvesting mechanisms at the household or communal levels to reduce dependency on city water supply system.

G.I EXISTING INITIATIVES

- Community-led springwater collection and distribution system, including fish ponds
- Celebration of water - The annual Festival of boats
- Existing Garbage bank and composting site
- Community vegetable garden / urban farming
- Demonstration biofiltration system for greywater treatment
- Abundant communal green open space
- Community recreation facility – basketball court
- Waste separation initiatives in place

G.I RECOMMENDATIONS

- Diversify water sources (e.g. by promoting rainwater harvesting using rainwater tanks)
- Characterise the springwater - Determine the spring catchment and test the water quality
- Treatment of the springwater using constructed wetlands (surface flow and/or floating)
- Vegetate the perimeter of the existing fish pond, washing pond & channels to enhance water quality
- Urban farming using rainwater
- Biofiltration (raingardens) in backyards and communal area treating stormwater & greywater
- Enhance efficiency of spring water collection system

Springwater distribution system

Pilot Bioretention System Implemented

The Australia-Indonesia Centre

URBAN WATER RESEARCH CLUSTER

For further reading, see urbanwater.australiaindonesiacentre.org/ for the report in full.