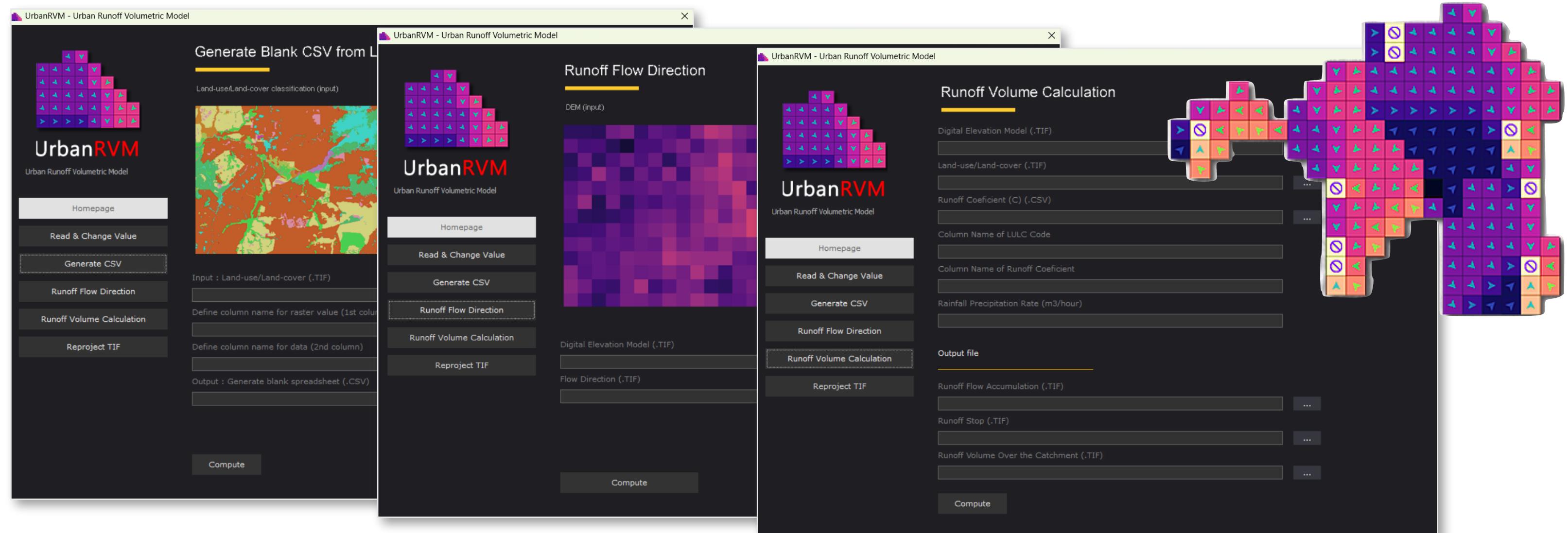
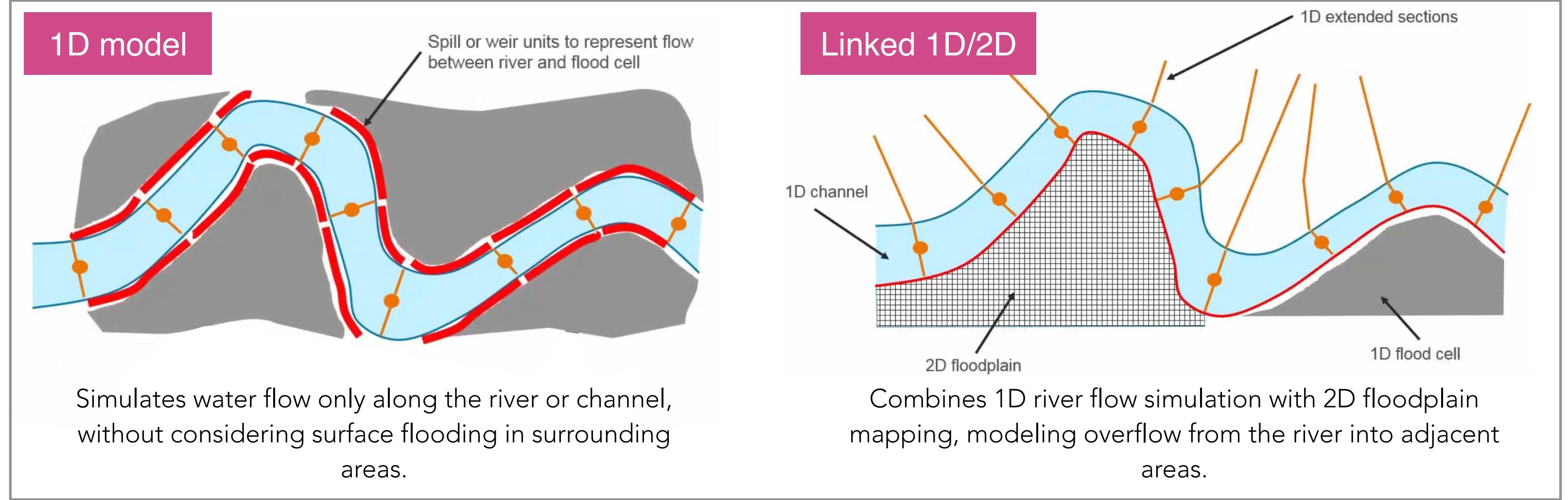


# UrbanRVM

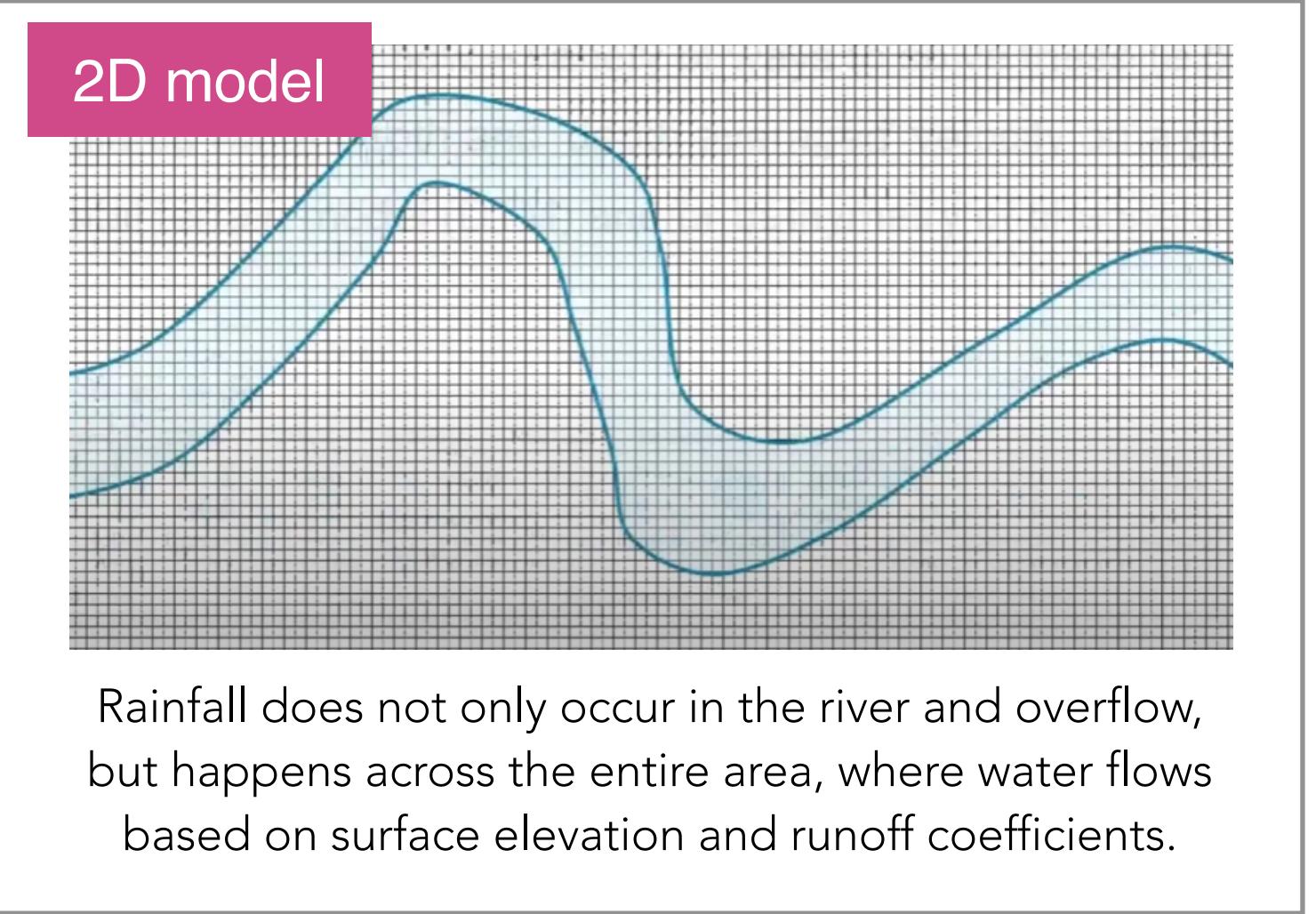
Reducing Local Flood Risk in Jakarta  
Through Spatial Runoff Management  
Using Run-Off Volumetric Model

# Rethinking Flood Modelling: Not Only From River Overflow!

## Common Approach

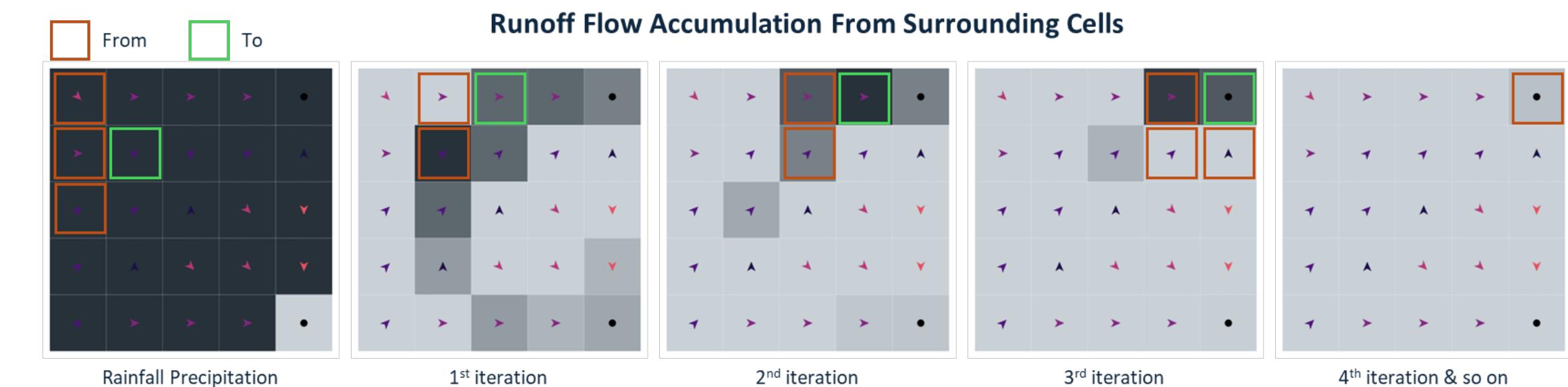
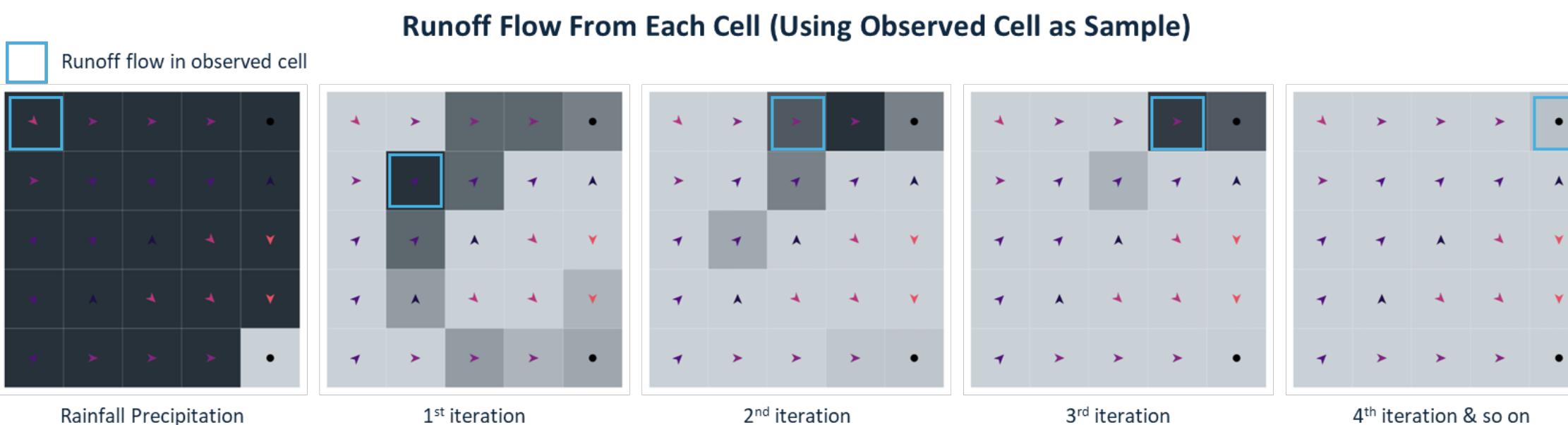
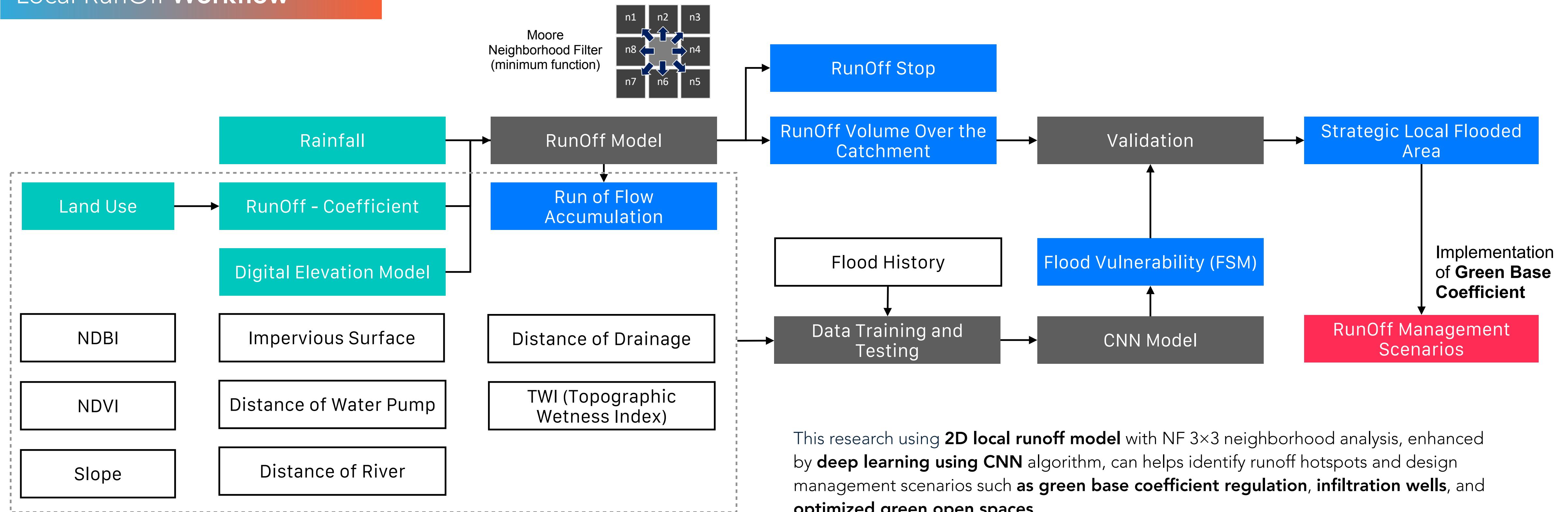


## Our Novel Approach

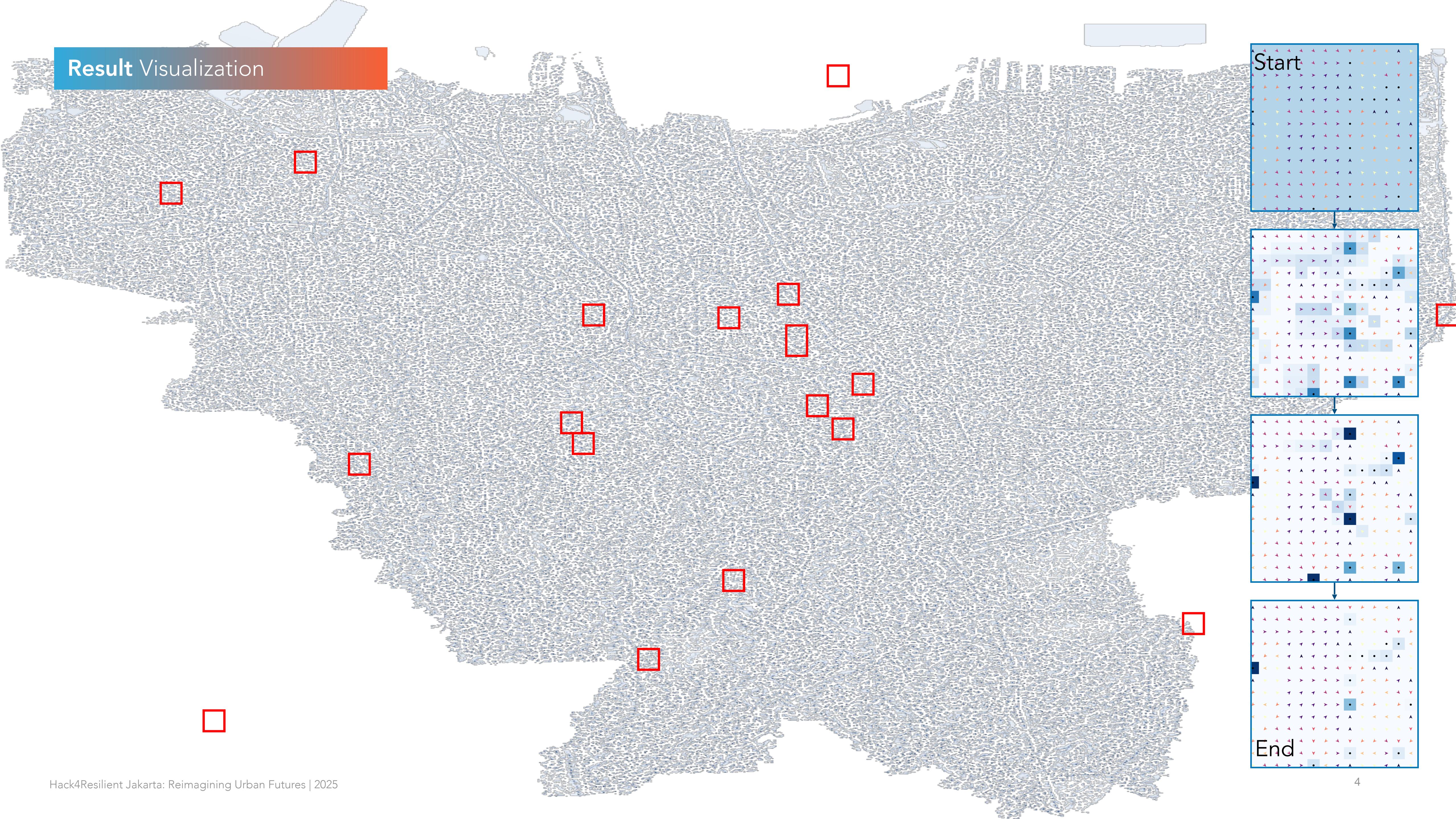


**UrbanRVM (Urban Runoff Volumetric Model)** is a runoff tool that was developed to the flat urban topographic condition. Purely using 2D model algorithm. In many cases, **insufficient infiltration capacity and reduced soil absorption become the dominant mechanisms that trigger localized flooding or water ponding in specific areas**, and that 1<sup>st</sup> contingency of flood mitigation starts from the land management itself. The model outputs such as surface runoff flow direction, runoff stop points, runoff flow accumulation and runoff over the catchment

# Local RunOff Workflow

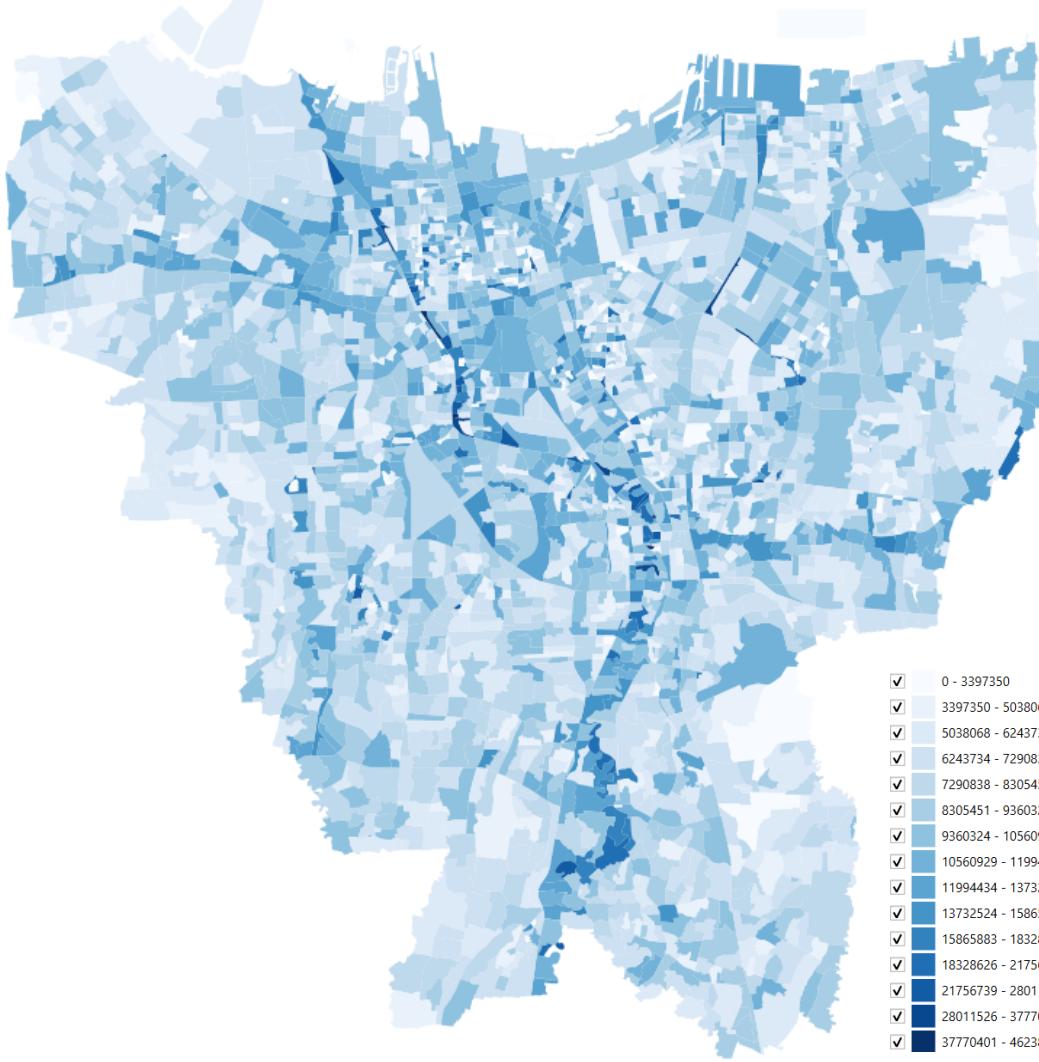
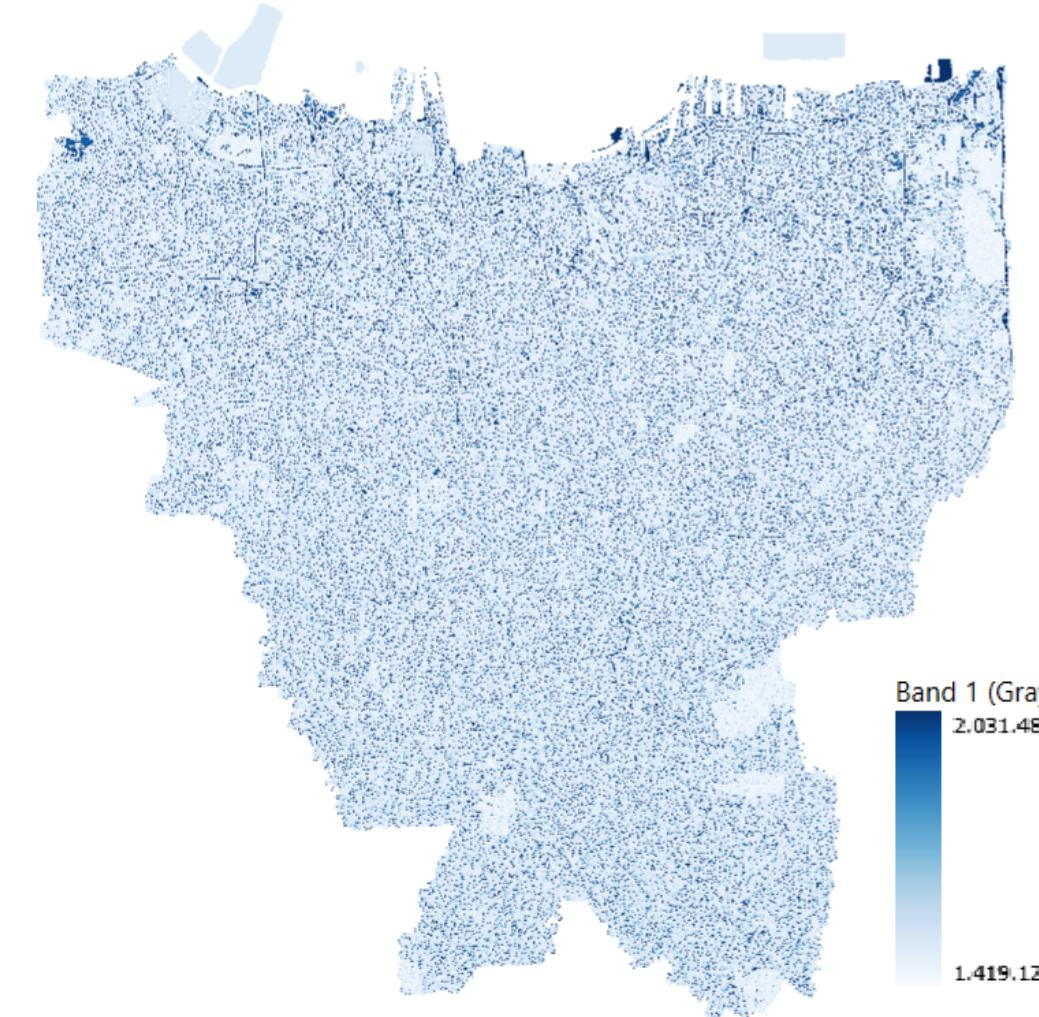


## Result Visualization

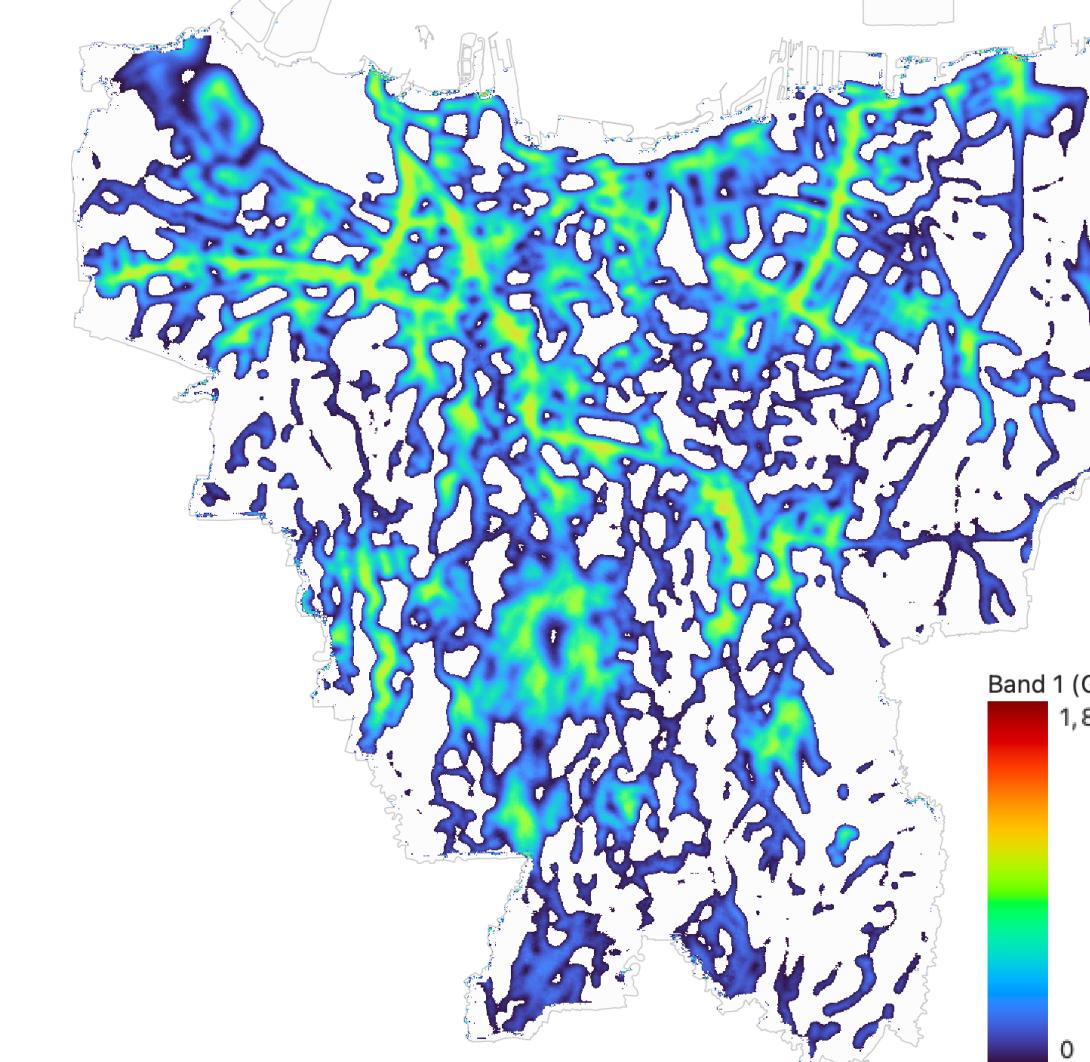
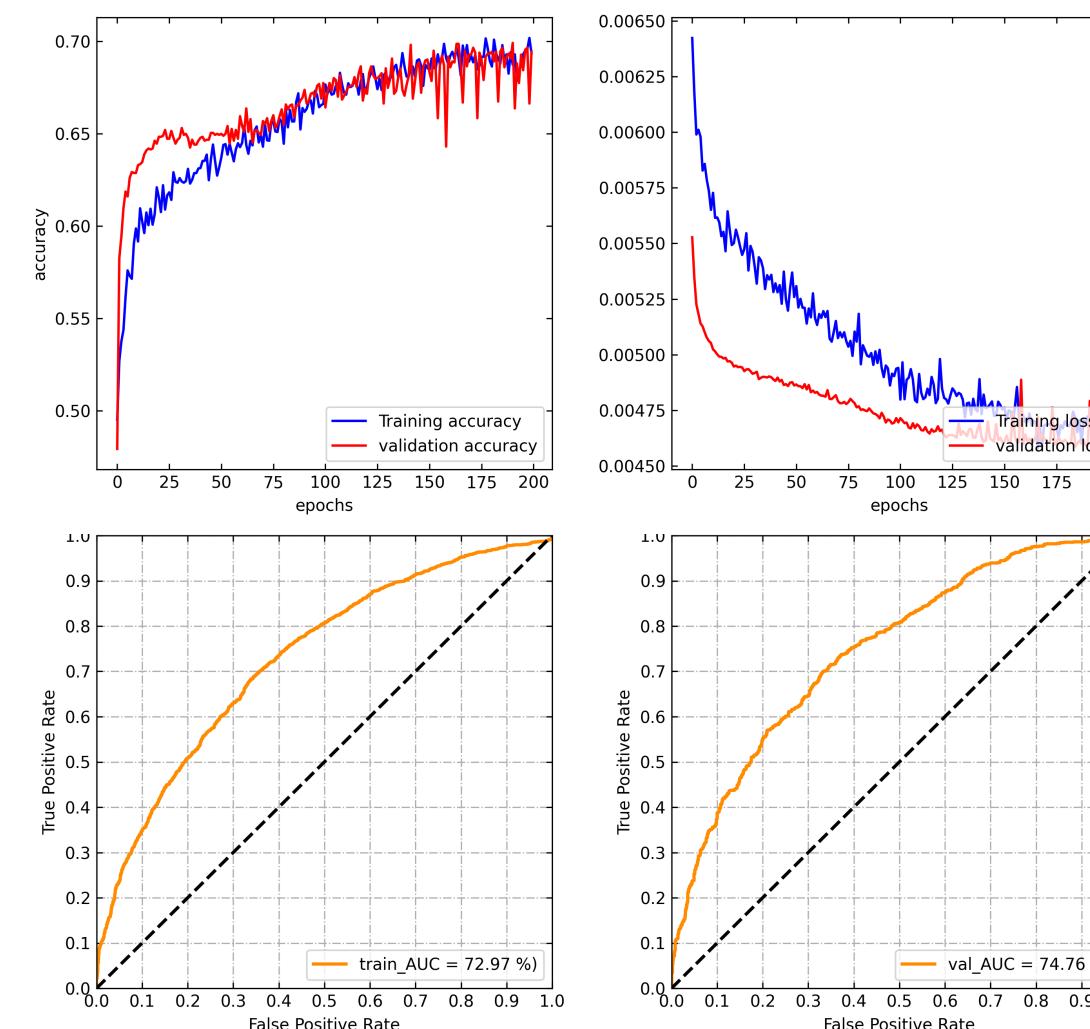


# Our Model Result

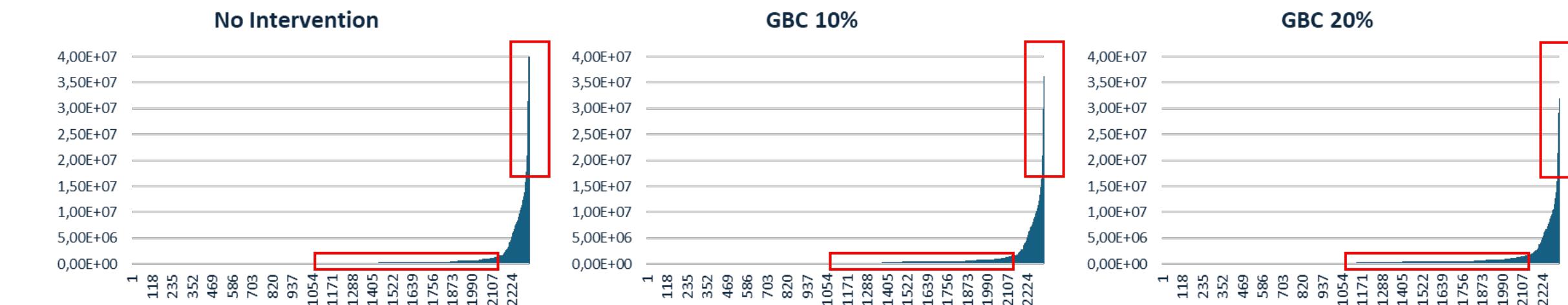
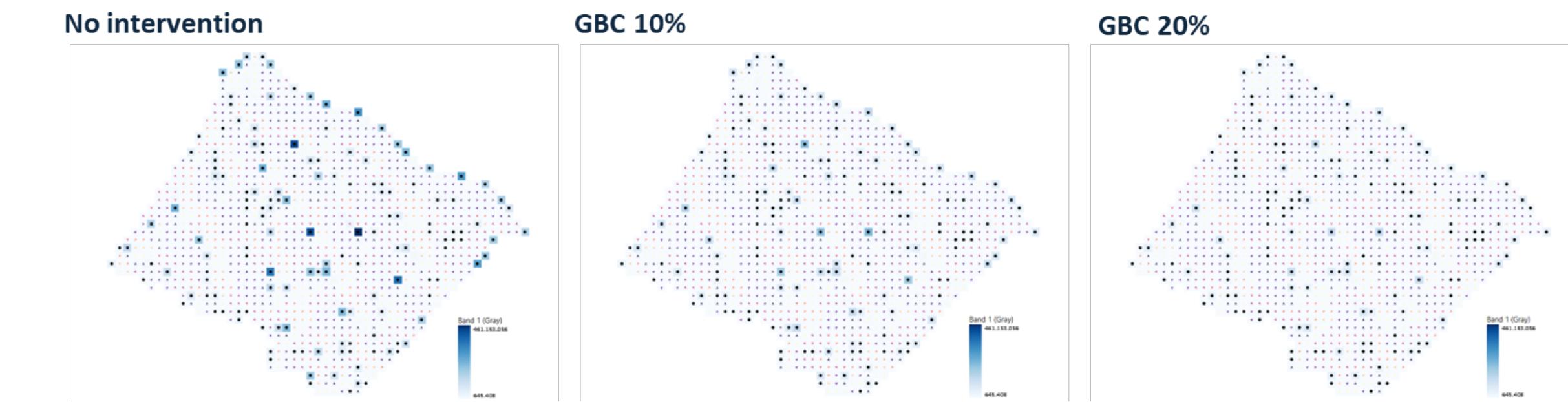
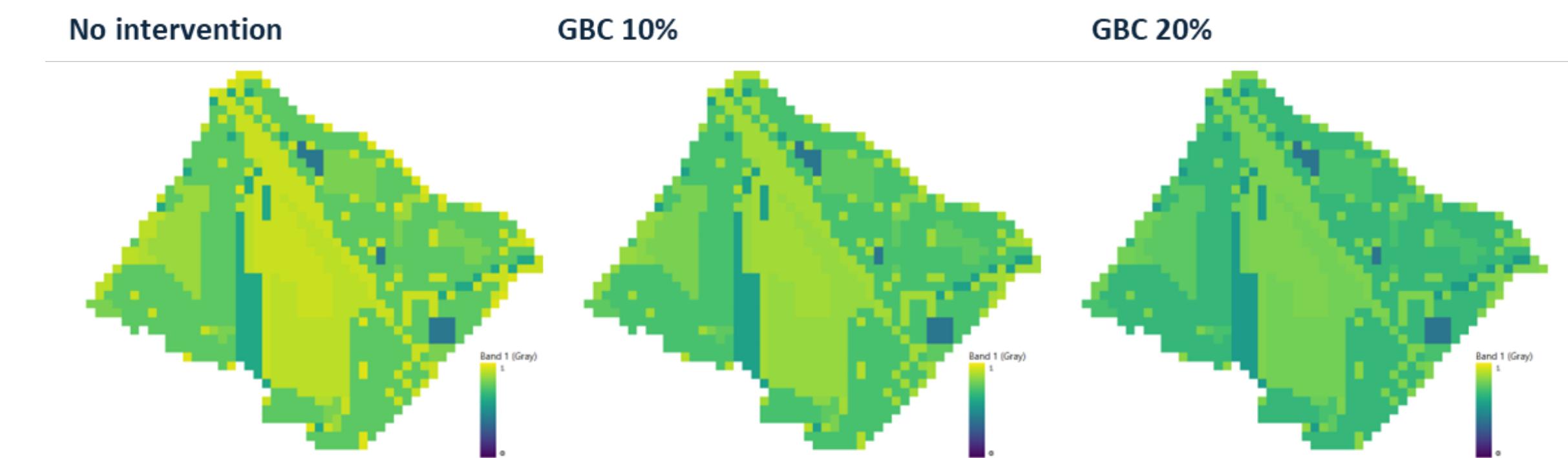
**Accumulated Runoff Over the Catchment -  
unabsorbed water (m<sup>3</sup>/year)**



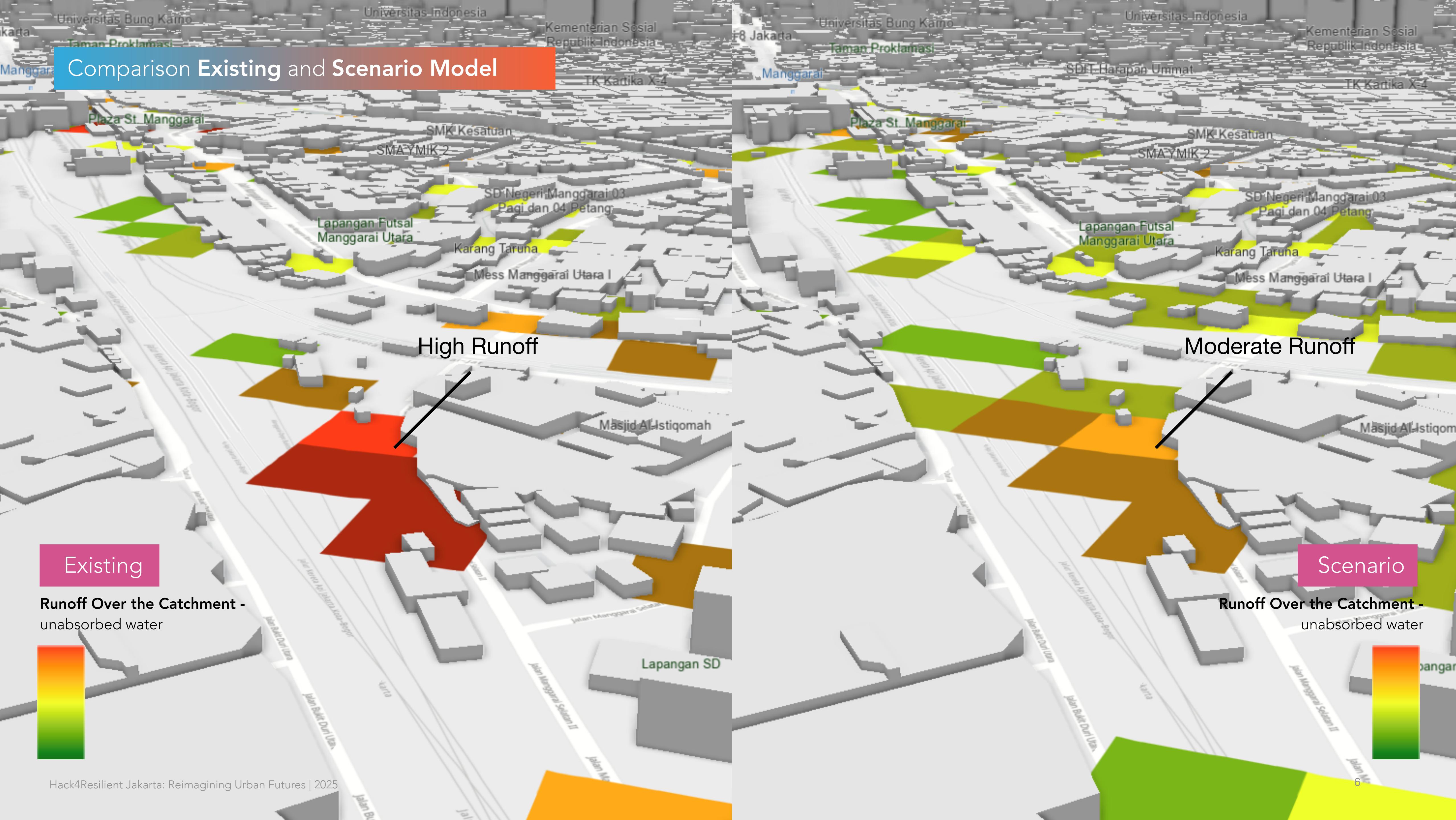
**Flood Vulnerability Model using CNN  
(Convolutional Neural Network)**



**Scenario Management – Implementation of  
Green Base Coefficient (GBC/KDH)**



\*this area is Manggarai sample data



## Comparison Existing and Scenario Model



Existing

Scenario