

# Yemen - Marib - Al-Jufaineh Hazard

## Flood Hazard 2024

1375  
Buildings at High Risk

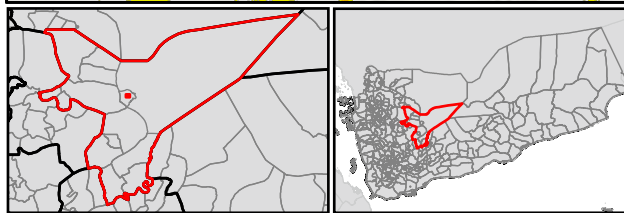
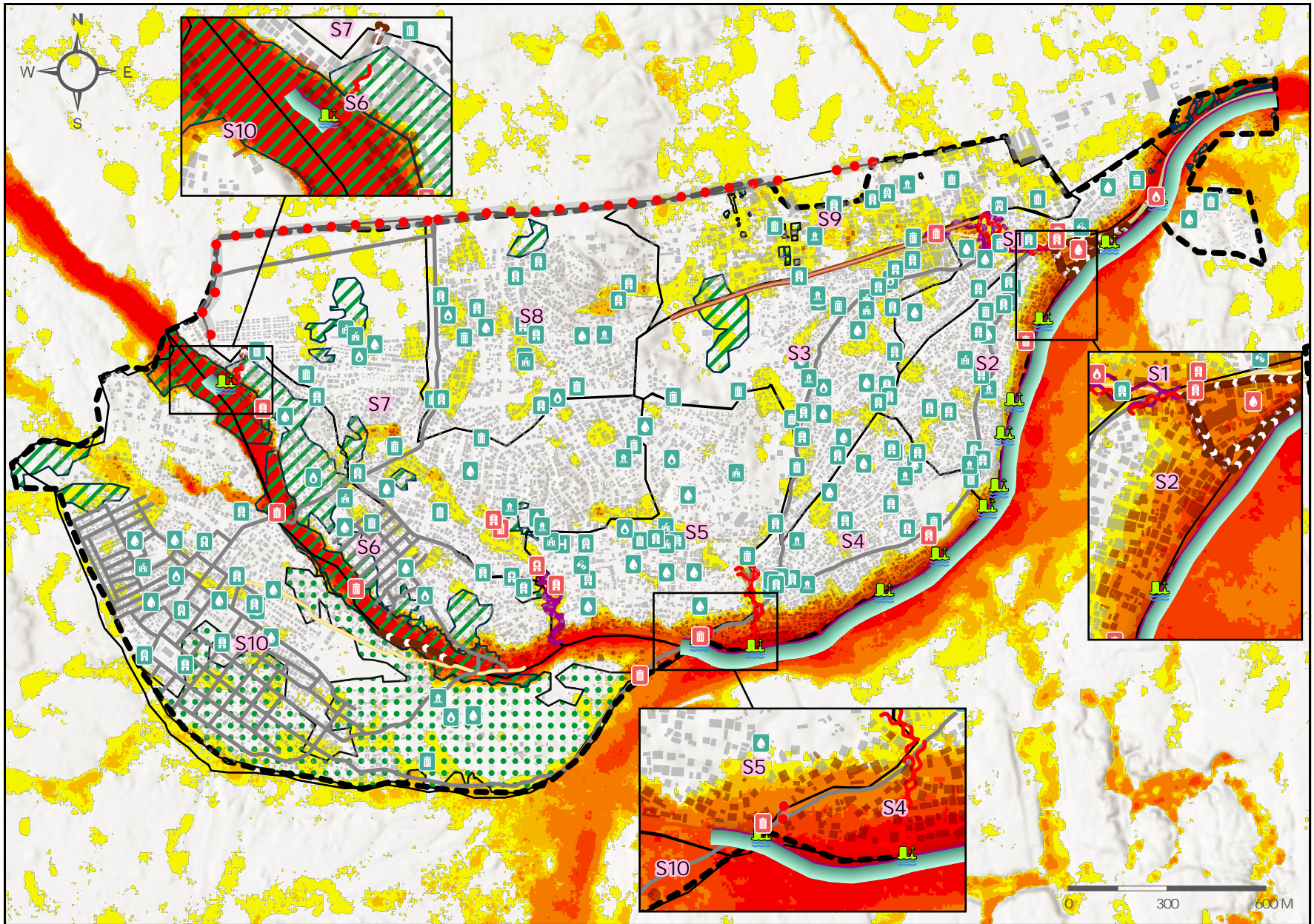
18  
Public Buildings at High Risk

Production Date : 30 May 2024

- Boundaries
- Al-Jufaineh Hazard Sectors
- Al-Jufaineh Agricultural**
- Agricultural land High Risk
- Agricultural land Low Risk
- Shelters Flood Depth**
- High Risk
- Low Risk
- Roads**
- High Risk
- Low Risk
- IOM Infrastructure**
- Culverts
- Masonry Pavement
- Earthen Barrier
- Earthen Embankment
- Flood Risk Path
- Gabion Wall
- Internal Drainage
- Retaining Wall
- Landmarks**
- High Risk Landmark
- Low Risk Landmark
- Waste Point
- Hospital
- Clinic, Medical Office
- Pharmacy
- Water Source, Water Point
- Community Center
- Fire Point
- Grocery Store
- Mosque
- School
- Hotel

### Modelled Flood Hazard (m)

- <= 0.2
- 0.21-0.50
- 0.5-1.5
- 1.51-2.5
- >2.5



A two-dimensional (2D) unsteady flow hydraulic model was set up using HEC-RAS software for the two catchments in the Al-Jufaineh region. The approach allows an understanding of flood hazards on a catchment-wide scale and identify areas prone to flood risk, especially areas exposed to flash flooding. The terrain used for the HEC-RAS 2D unsteady flow analysis of the Al-Jufaineh catchment was a satellite derived DEM product of 2.5 meters resolution. Flood hazard was obtained by multiplying depth and velocity. The flood water depth represents water flow extents and static accumulation of water in meters. It was classified into 5 flood hazard categories from very low to extreme according to the Japanese criteria of the Ministry of Land Infrastructure, where each hazard category is associated with the risk of damage, the threat to human safety, and the possibility of evacuation. Following a collaborative approach, REACH and CCCM Partner drew site boundaries of Al-Jufaineh IDP site.

Roads: OpenStreetMap  
Shelters and Agricultural land: Manually digitized by REACH Yemen  
Background: ESRI

ESRI Coordinate System: WGS 1984 UTM Zone 38N  
File: REACH\_YEM\_Map\_FloodHazard\_AJufaineh\_30May2024\_A4

In partnership with IOM  
THE UNITED NATIONS  
MIGRATION AGENCY

REACH  
A Collaborative Approach  
ACTED and UNWAT