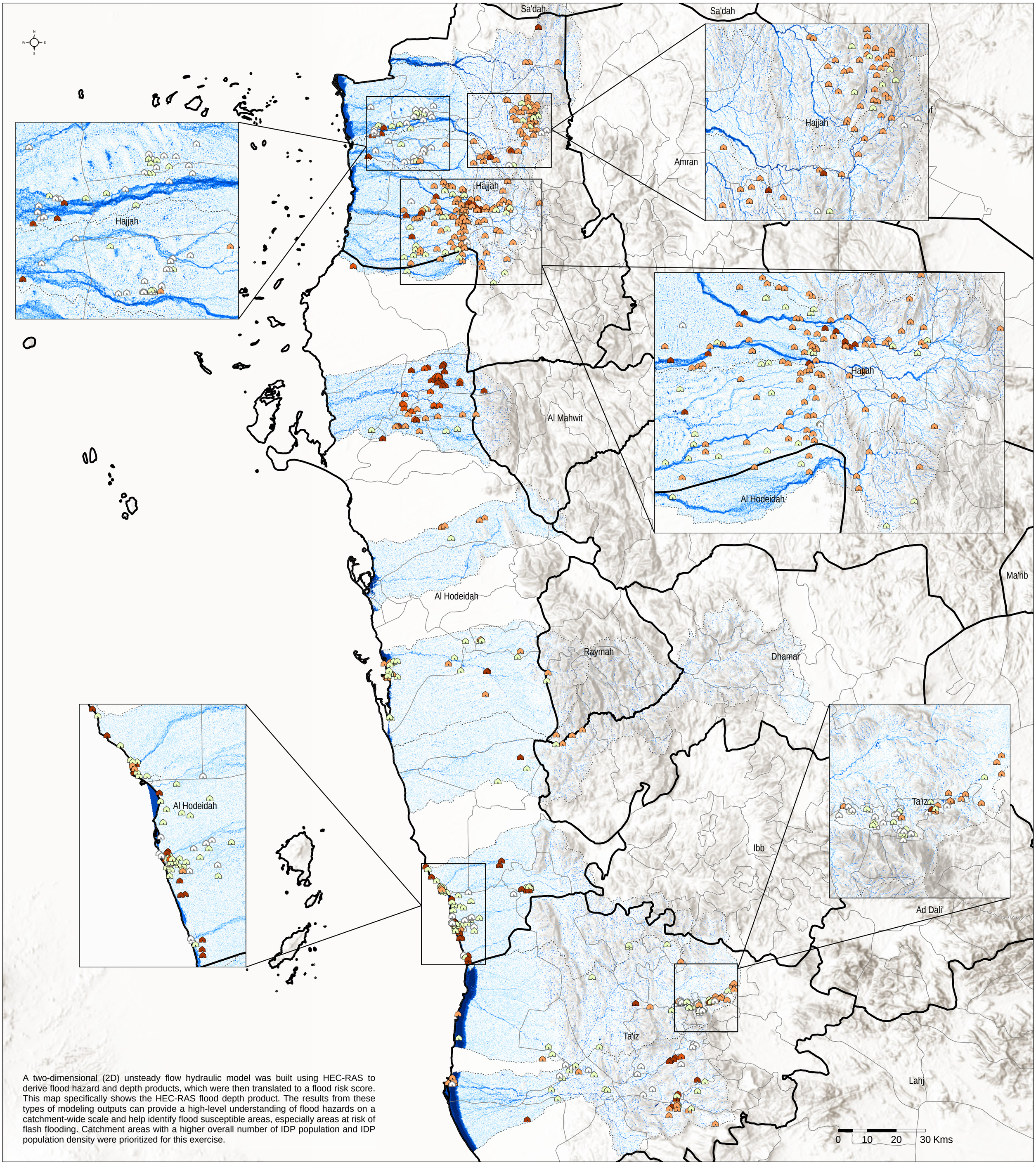
YEMEN
CCCM CLUSTER
دعم مجتمعات النازحين

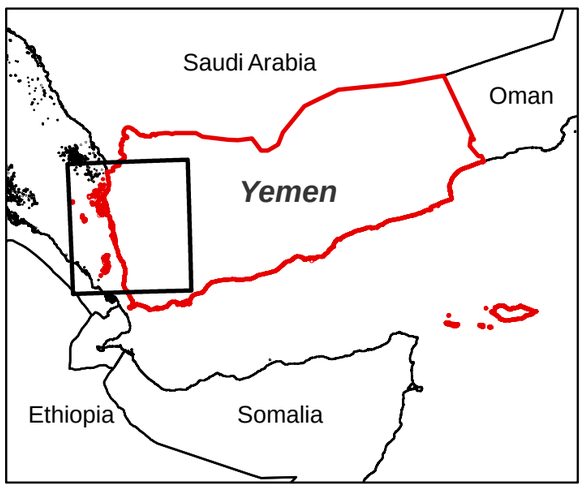
Yemen - Flood Risk Scores & IDP Sites Location

(2D HEC-RAS Depth Modelling) West of Yemen - March 2022

Version 1
Production date : 24 March 2022



A two-dimensional (2D) unsteady flow hydraulic model was built using HEC-RAS to derive flood hazard and depth products, which were then translated to a flood risk score. This map specifically shows the HEC-RAS flood depth product. The results from these types of modeling outputs can provide a high-level understanding of flood hazards on a catchment-wide scale and help identify flood susceptible areas, especially areas at risk of flash flooding. Catchment areas with a higher overall number of IDP population and IDP population density were prioritized for this exercise.



This map shows the estimated locations and Flood Risk Scores of 589 internally displaced person (IDP) hosting sites in some parts of the west of Yemen (incl. Hajjah, Al Hodeidah, Taiz governorates). REACH aimed to develop Flood Risk Scores for IDP Hosting sites by modeling the risk of flooding in 12 separate basins using HEC-RAS software and then triangulate the results with other available data sources (i.e., CCCM Site Report, CCCM Flood Report, CCCM 2022 SNCCs Flood Estimates) to estimate which IDP hosting sites are at risk of flooding. While the HEC-RAS model determines the extent to which an IDP site is at risk of flooding based on a designed storm, the CCCM Flood Report highlights sites where flooding actually occurred in 2021/2022. The CCCM Site Report reports whether a site is at risk of flooding, based on Key Informants perception. Overall, the CCCM Flood Report is considered the most authoritative dataset in this analysis, since it reports actual events. The CCCM Flood Report also allows REACH to validate its HEC-RAS model findings over time.

- Governorate
- District
- Basins

Flood Depth (meter)

- 0 - 0.5 (Low - No Risk)
- >0.5 - 1 (Medium)
- >1 - 2 (High)
- >2 - 5 (Very High)
- >5 (Extreme)

IDP Sites Flood Scores

- High risk
- Medium/High risk
- Medium risk
- No/Low risk
- Unknown

Data sources:
IDP Sites: CCCM Master List and CCCM Site Report List
Flood Data: REACH HEC-RAS Models, CCCM Site Report, CCCM Flood Report, CCCM 2022 SNCCs Flood Estimates.
Admin Boundaries: OCHA
Background: ESRI, NGA, USGS, CGIAR

Coordinate System: GCS WGS 1984
File: REACH_YEM_Map_West_CCCM_Flood_Depth_IDPSites_24Mar2022_A2_V1
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