

# MOJTABA KEIVANLOU

SENIOR HYDRAULIC & WATER RESOURCES ENGINEER

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## PROFESSIONAL PROFILE

Senior hydraulic and water resources engineer with **16 years of international experience** across Iran, Oman, and remote international engagements – currently serving as **Team Leader** on one of Oman's largest ongoing flood protection programmes, covering the North and South Al Batinah Governorates for the Ministry of Agriculture, Fisheries & Water Resources.

Specialist in flood modelling and protection, climate adaptation, dam and spillway design, stormwater masterplanning, irrigation, water supply, and transient analysis – with a project record spanning national-scale flood risk programmes, US-regulated dam safety assessment, multi-province flood hazard mapping, and urban water infrastructure across Iran. Distinguished by a combination rarely found at this seniority: **deep hydraulic engineering paired with modern computational practice** – automation of engineering workflows, spatial data pipelines, and AI-augmented project delivery.

## CORE COMPETENCIES

Flood Protection Design & Masterplanning	HEC-RAS 1D/2D Modelling & Automation	Engineering Workflow Automation & GIS Pipelines
HEC-HMS Rainfall-Runoff Modelling	Dam Engineering, Spillway Design & Breach Analysis	Flood Hazard & Risk Mapping
Stormwater, Drainage & Sewage Network Design	Water Supply, Transmission & Transient Analysis	Climate Change Hydrological Analysis
Arid Zone & Wadi Hydrology	Spatial Analysis – QGIS / ArcGIS / PostGIS	Technical Leadership & Client Management

## PROFESSIONAL EXPERIENCE

### Renardet S.A. & Partners

2022 – Present

#### Senior Hydraulic Engineer – Drainage

Muscat, Sultanate of Oman

#### Flood Protection Masterplan – North & South Al Batinah Governorates

Feb 2023 – present

Team Leader · Client: MAFWR · Value: USD 15.6M

- Leading the multidisciplinary technical team across hydrology, hydraulic modelling, flood risk mapping, dam site selection, and hydraulic structure design for a **15,000 km<sup>2</sup> national study area**
- Developed integrated 1D/2D rainfall-runoff and hydraulic models using HEC-HMS and HEC-RAS, incorporating post-Cyclone Shaheen data, wadi gauge records, and remote sensing inputs
- Engineered channel designs using SewerGEMS and InfoDrainage; deployed Flow 3D for dam spillway hydraulic performance and safety verification
- Produced flood hazard and risk maps under existing and proposed conditions to support insurance assessment, cost-benefit analysis, and investment prioritisation
- Managed client relationships and maintained delivery timelines in a complex multi-stakeholder environment

#### Majlas Dam Design Review

Mar 2026 – present

Hydrology & Hydraulic Engineer · Client: MAFWR

- Reviewing and updating hydrology report with revised rainfall analysis and design flood estimates; designing downstream flood protection channel in Quriyat

#### Flood Protection Schemes – Dhofar Governorate

Aug 2022 – present

Hydraulic Engineer · Salalah, Taqah, Mirbat, Rakhyoot & Dhalkoot · Client: MAFWR

- Hydrological studies, hydraulic strategy development, dam site selection, and dam break analysis across five wilayats in Dhofar Governorate

#### Upgrading of Batinah Dual Carriageway – Road Drainage (230 km)

Jan 2022 – Mar 2023

Hydraulic Engineer · Client: Ministry of Transport

- Comprehensive hydrology analysis and design of road drainage structures along 230 km of dual carriageway in the Al Batinah region

## DuBois & King

2021

### Senior Hydraulic Engineer — Independent Specialist

Vermont, USA (Remote)

#### Shadow Lake Dam Safety Assessment, Glover, Vermont, USA

Jan – Nov 2021

- Comprehensive dam safety hydrology analysis, hydraulic design, and dam breach modelling for a regulated structure under US federal and state oversight
- Hazard classification per **FEMA guidelines** and Vermont Agency of Natural Resources (ANR) standards; full dam safety assessment report

## Sazeh Pardazi Iran

2020 – 2021

### Water Resources Engineer — Drainage & Water Supply

Tehran, Iran

- **Flood hazard & risk mapping — Hormozgan Province (127 km):** HEC-RAS hydraulic modelling for provincial flood risk assessment
- **River training & rehabilitation — Lorestan Province (190 km):** hydraulic modelling and detailed design of bank protection and training works
- **Flood protection — Kerman Province (92 km):** hydraulic modelling and detailed structural design of flood defence facilities
- **Water transmission pipeline — Karaj WWTP to Eshtehard Industrial Zone:** hydraulic design and water hammer / surge analysis
- Rural water supply networks around Tehran; stormwater channel and pipeline design for three regions in Qazvin Province

## Hydrotech Toos (HTT)

2019 – 2020

### Senior Hydraulic Engineer — Water Supply & Sewage

Mashhad, Iran

- Hydraulic design of water supply, sewage, and irrigation landscape pipeline networks for developing zones of Mashhad city
- Hydraulic modelling, network optimisation, and leakage detection across multiple cities in Khorasan Razavi Province

## Majd Ab Shargh

2017 – 2019

### Project Manager — Drainage

Iran

- Managed flood hazard and risk mapping projects across multiple Iranian provinces from field survey through final design delivery; led teams using Leica survey instruments

## Earlier Positions — Iran

2010 – 2017

- **Behin Ab Pazh — Hydraulic Engineer (2015–2017):** hydrological analysis and HEC-RAS modelling of river systems for multi-province flood hazard mapping
- **Zharfab Pay — Hydraulic Engineer (2013–2015):** design of pressurised irrigation systems for agricultural infrastructure
- **Abgostaran Sabz Dasht — GIS & CAD Technician (2010–2013):** comprehensive drainage study, eastern Mazandaran Province — foundational geospatial engineering experience

## EDUCATION

### MSc — Hydraulic Structures Engineering

Sari University of Agricultural Sciences and Natural Resources (SANRU), Iran

2013

### BSc — Water Sciences and Engineering

University of Birjand, Iran

2009

## TECHNICAL SKILLS

CATEGORY	PROFICIENT	INTERMEDIATE	FAMILIAR
<b>Hydraulic &amp; Hydrological</b>	HEC-RAS 1D/2D, HEC-HMS, SewerGEMS, InfoDrainage, HY-8, HEC-SSP	InfoWorks ICM, WaterGEMS, Hammer, Flow 3D, InfoWater, OpenFOAM / ParaView	Delft3D
<b>GIS &amp; Spatial</b>	QGIS (advanced), ArcGIS / ArcGIS Pro, Global Mapper, Google Earth Engine	PostGIS, QGIS Python plugins	—
			C#, MATLAB, SPSS

CATEGORY	PROFICIENT	INTERMEDIATE	FAMILIAR
<b>Programming &amp; Automation</b>	Python (geospatial pipelines, HEC-RAS automation, HDF5)	VBA, R, PostgreSQL / PostGIS, Jython	
<b>CAD &amp; Design</b>	AutoCAD, Civil 3D, Storm & Sanitary Analysis (SSA), Subassembly Composer	Infraworks	—
<b>Data &amp; Dev Tools</b>	MS Office 365	Docker, GitHub, Power BI, AI-augmented engineering workflows	MS Project, SAP2000, ETABS

## LANGUAGES

**Persian**



Native  
Speaker

**English**



Fluent

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