

CV Louise Petersson Wårdh

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Nationality : Swedish

Role: PhD candidate, hydrologist, junior researcher

[Louise Petersson Wårdh | LinkedIn](#)



Education

PhD Student, 2023-ongoing

Topic: *Opportunistic sensors and affordable technologies for rainfall monitoring and urban flood management*

Lund University of Technology, Lund

Master of Science in Civil Engineering, 2019

Water management, hydrology, hydrological modelling, groundwater modelling.

Topic: *Community mapping for flood modelling: A case study of the Ramani Huria community mapping project in Dar es Salaam.* [TU Delft Repository](#)

Delft University of Technology, the Netherlands

Bachelor of Science in Political Science, 2017

International relations, democracy studies, political philosophy.

Topic: *Public participation – A tool for creating public acceptance for infrastructure projects? A statistical study of 42 Swedish road constructions.* [Bachelor theses, University of Gothenburg](#)

University of Gothenburg, Sweden

Bachelor of Science in Civil Engineering, 2017

Topic: *Multi-criteria analysis of sewage treatment techniques – a case study of Sjölanda wastewater treatment plant in Malmö.*

Chalmers University of Technology, Sweden

Work Experience (selection)

Swedish Meteorological and Hydrological Institute (October 2023 – ongoing)

Junior researcher, PhD candidate

Projects/roles:

- Researcher, *Stakeholder participation for climate adaptation - data crowdsourcing for improved urban flood risk management* (Sweden)
- Researcher, *DroneSat2Discharge* (Sweden)
- Researcher, *Unmanned Aerial Water Observation Systems* (Europe)
- Officer on duty in Sweden's impact-based flood warning system

Swedish Meteorological and Hydrological Institute (November 2021 – October 2023)

Project manager and hydrologist, international development cooperation.

Projects/roles:

- Project Manager, *Climate Information*, <https://climateinformation.org/> (Africa region)
- Assistant Project Manager, [Water and Climate Change Services for Africa – Ethiopia](#) (Ethiopia)
- Researcher, *Stakeholder participation for climate adaptation - data crowdsourcing for improved urban flood risk management* (Sweden)
- Hydrologist, *Evros river Early Warning System* (Greece)
- Officer on duty in Sweden's impact-based flood warning system

The World Bank, Dar es Salaam, Tanzania (November 2019 – November 2021)

Independent consultant supporting projects that apply innovative data collection tools strengthen flood forecasting, flood resilience and urban planning in Tanzania.

Projects/roles:

- Technical advisor focusing on flood issues, assist in preparation of terms of references and contracting.
- Technical coordinator of a large-scale probabilistic flood risk assessment that quantified the risk of flooding on city level in Dar es Salaam. Focus on data management and review.
- Assistant project manager for a project that quantified flows and sedimentation rates in the Msimbazi river in Dar es Salaam. Stakeholder coordination with Tanzania Meteorological Authority and Wami-Ruvu Basin Water Board.
- Assistant project manager for several mapping projects in different Tanzanian cities: Mwanza, Morogoro, Nungwi, Chwaka and Makunduchi. The projects surveyed geospatial information on stormwater networks, flood patterns, buildings, land use etc. using open source technologies and a citizen science approach. Stakeholder coordination with Zanzibar Commission for Lands and the President's Office for Local and Regional Government (PO-RALG).
- Assistant project manager for drone mapping projects in Zanzibar, Kahama, Kigoma and Morogoro, producing orthophotos, surface models and terrain models by using photogrammetry.
- GIS-analyst in developing sustainable waste management strategy in Dar es Salaam. Collection, compilation and visualization of large amounts of geospatial data.

Sweco, Gothenburg, Sweden (May – October 2021)

Hydrologist and technical advisor on climate change adaption and planning.

Projects/roles:

- Hydraulic modeler (MIKE 21, MIKE FLOOD, MIKE+), focus on modeling of extreme rainfall
- Project manager – budgeting, invoicing, stakeholder coordination
- Stormwater feasibility studies for local development plans in Swedish municipalities
- GIS-analyst
- Reviewer

Norconsult AB, Gothenburg, Sweden (October 2019 – April 2021)

Hydrologist with focus on urban flood modelling and flood risk assessments related to climate change scenarios.

Projects/roles:

- Hydraulic modeler (MIKE 21), focus on modeling of extreme rainfall
- Stormwater feasibility studies for local development plans in Swedish municipalities
- GIS-analyst
- Reviewer

Deltares Research Institute, Delft, the Netherlands (February – August 2019)

Engineering internship in urban flood modelling.

- Developed a coupled 1D-2D hydraulic model in SOBEK of Kijitonyama ward in Dar es Salaam, Tanzania. The effect of the drainage network was investigated by running the model with and without drainage data and comparing simulated water depth with water level observations.

Humanitarian OpenStreetMap Team, Dar es Salaam, Tanzania (February – March 2019)

Internship.

- Preparation and coordination of fieldwork for a group of 8 people, collection and processing of drainage data, aiming to build a coupled 1D-2D hydraulic model of Kijitonyama ward in Dar es Salaam.

City of Gothenburg Water Board, Sweden (June 2016 – January 2017)

Internship.

- GIS-analyst

Publications

Petersson Louise, ten Veldhuis Marie-Claire, Verhoeven Govert, Kapelan Zoran, Maholi Innocent, Winsemius Hessel C. (2020). Community Mapping Supports Comprehensive Urban Flood Modeling for Flood Risk Management in a Data-Scarce Environment. *Frontiers in Earth Science*.

[Frontiers in Earth Science](#)