Dr. Majid Delavar

Associate Professor of Water Resources Engineering and Management Department, Tarbiat Modares University

Address: Water Resources Eng. Department, Tarbiat Modares University

P.O.Box:14115-336, Tehran, Iran. Email: m.delavar@modares.ac.ir

Google Scholar: https://scholar.google.com/citations?user=NYM8wecAAAAJ&hl=en



ACADEMIC BACKGROUND:

 Ph.D., Water Resources Eng., University of Tarbiat Modares, Tehran-Iran, 2007-2012.

Thesis title: "Real time and Risk-Based Decision Making for Water Allocation During Droughts "

• MSc., Water Structures Eng., University of Tarbiat Modares, Tehran-Iran, 2002-2005.

Thesis title: " Assessment of Urmia Like level change and coastal risk analysis"

BSc., Water Eng. University of Bu Ali Sina, Hamedan-Iran, 1998-2002.

RESEARCH INTERESTS:

- Assessment of Climate change Impacts on Water Resources and Agricultural Systems
- Hydrological Forecasts
- Integrated River Basin simulation
- Planning and Optimization of Water Resources Allocation

EXPERIENCES:

- Team Leader and senior researcher. Assessing the water saving in the measures taken in the project of "local community participation in restoration of lake Urmia" and their effectiveness in increasing the inflow into the lake, Iranian Department of Environmentand and Tarbiat Modares University, 2019present.
- Team Leader and senior researcher. Integrated Hydrologic Simulation of Karkheh Basin for Impact Assessment of Environmental Changes on the Upper Karkheh Basin Inflow and Development of Its Long Term Flow Forecast System

Project, <u>Khuzestan Water & Power Authority (KWPA)</u> and Tarbiat Modares University, 2017-Prersent.

- Team Leader and senior researcher. Integrated simulation of water resources and agricultural systems, Case study: Task Bakhtegan Basin, Developing National Strategies and Adaptation Plans for Climate Change in the Water Sector project, Ministry of Energy and Tarbiat Modares University, 2016-2019.
- Senior researcher. Estimation of probable maximum flood (PMF) in Qomrood basin. Atmospheric Science & Meteorological Research Center, 2016.
- Senior researcher. Ensemble drought prediction in Urmia lake basin, Drought Risk Management Plan for Lake Urmia Basin, Iran, Department of Environment Tarbiat Modares University, 2013-2014.
- Senior researcher. Development of an optimization model for water resources allocation during drought in Urmia lake basin, Iran, Drought Risk Management Plan for Lake Urmia Basin, Iran, Tarbiat modares University, 2012-2013.
- Senior researcher. Development of integrated water resources management decision support systems, DSS work group of Iran water master plan, Water Research institute, 2009-2011.
- Researcher. Integrated Water Resources Management Research Project, Water Research Institute, Tehran-Iran, 2009-2010.
- Researcher. Development of Zayandeh Rud Drought early warning system, Tarbiat Modarres University. 2008-2010.
- Senior researcher. Development of drought indices calculation Software (DIC), Institute of Meteorology and Atmospheric Science, Tehran- Iran, 2009.
- Senior researcher. Assessment of methods of drought forecasting in Iran, Atmospheric Science and Meteorological Research Institute, Tehran-Iran, 2007-2008.
- Senior researcher. Assessment of snow cover and its relationship to large-scale climate signals in South West of Iran, Institute of Meteorology and Atmospheric Science, Tehran-Iran, 2008.
- Researcher. Forecasting of river discharge using large-scale climate signals (case study: Karun Basin-Iran) - Institute of Meteorology and Atmospheric Science, Tehran-Iran, 2008.

SELECTED PUBLICATIONS:

- Delavar M., Morid S., Shafeeifar M., 2009, Urmia Lake level risk assessment and impact of climate change on it, Iran's agriculture science research journal.
- Delavar M., Fattahi E., 2009, Long-term rainfall forecasts using artificial neural networks (Case Study:South West of Iran), Research and Construction Journal.
- Delavar M., Morid S., Shafeeifar M., 2010, Development of Urmia Lake level fluctuation model considering uncertainty in water balance components, journal of hydraulic.
- Delavar M., Fattahi E., Noohi K., 2010, assessment and forecasting of snow surface using black box models, Geographical Research journal.
- Delavar M., Morid S. ,2007, Simulation and Analyses of Uncertainty and Sensitivity of the Changes of the Urmia Lake Level to Water Budget Components Using ANNs and ANFIS, Geophysical Research, Vol. 9, 05507, 2007.
- Samani J.M.V., Delavar M., 2010, Application of Analytical Network Process (ANP) for Prioritize Shrimp Culture Sites, Iran Water Resources Research Journal.
- Delavar M., Moghadasi M., Morid S., 2012, A real time model for optimal water Allocation During Drought, Irrigation and Drainage (ASCE).
- Morid R., Delavar M., 2014, Assessment of climate change impacts on environmental flows using hydrological indicators, Iran Water Resources Research Journal.
- Mansuri B., Ahmadadeh H., Morid S., Delavar M., 2015, Assessment of Climate Change Impacts on Water Resources in Zarrinehrud Basin Using SWAT Model, Journal of Water and soil.
- Rezaei M., Delvar M., Morid S., 2015, Climate change Impacts on hydro climatic Variables, Case study: Siminehrood Basin, Iran, Iran Meteorological Journal.
- Moghaddasi, M., Morid, S., Delavar, M. and Arabpour, F., 2015. Managing of the agriculture water consumption to meet the environmental flows of the

- Lake Urmia during the droughts. Drought: Research and Science-Policy Interfacing, p.445.
- Hajihoseini, H., Hajihoseini, M., Morid, S. and Delavar, M., 2015. Hydrological Simulation of the Upper Hirmand Transboundary Catchment Using SWAT Model. JWSS-Isfahan University of Technology, 19(72), pp.255-268.
- Ahmadzadeh, H., Morid, S., Delavar, M. and Srinivasan, R., 2015. Using the SWAT model to assess the impacts of changing irrigation from surface to pressurized systems on water productivity and water saving in the Zarrineh Rud catchment. Agricultural Water Management.
- Zaman, M.R., Morid, S. and Delavar, M., 2016. Evaluating climate adaptation strategies on agricultural production in the Siminehrud catchment and inflow into Lake Urmia, Iran using SWAT within an OECD framework. Agricultural Systems, 147, pp.98-110.
- Morid, R., Delavar, M., Eagderi, S. and Kumar, L., 2016. Assessment of climate change impacts on river hydrology and habitat suitability of Oxynoemacheilus bergianus. Case study: Kordan River, Iran. Hydrobiologia, 771(1), pp.83-100.
- Heydari, F., Saghafian, B. and Delavar, M., 2016. Coupled Quantity-Quality Simulation-Optimization Model for Conjunctive Surface-Groundwater Use. Water Resources Management, pp.1-17.
- Hajihoseini, H, Hajihoseini, M., Morid, S., Delavar, M., Boije, M., 2016. Hydrological Assessment of the 1973 Treaty on the Transboundary Helmand River, Using the SWAT Model and a Global Climate Database, Water Resources Management, 30 (13), 4681-4694.
- Forootan, E., Safari, A., Mostafaie, A., Schumacher, M., Delavar, M. and Awange, J.L., 2017. Large-Scale Total Water Storage and Water Flux Changes over the Arid and Semiarid Parts of the Middle East from GRACE and Reanalysis Products. Surveys in Geophysics, 38(3), pp.591-615.
- Abedi, M., Shafizadeh-Moghadam, H., Morid, S., Booij, M.J., Delavar, M. Evaluation of ECMWF mid-range ensemble forecasts of precipitation for the Karun River basin (2020) Theoretical and Applied Climatology, 141 (1-2), pp. 61-70.
- Abbasi, H., Delavar, M., Bigdeli Nalbandan, R., Hashemy Shahdany, M.Robust strategies for climate change adaptation in the agricultural sector under deep climate uncertainty (2020) Stochastic Environmental Research and Risk Assessment, 34 (6), pp. 755-774.

- Delavar, M., Morid, S., Morid, R., Farokhnia, A., Babaeian, F., Srinivasan, R., Karimi, P. Basin-wide water accounting based on modified SWAT model and WA+ framework for better policy making (2020) Journal of Hydrology, 585, art. no. 124762.
- Zolfagharpour, F., Saghafian, B., Delavar, M. The impacts of climate variability and human activities on streamflow change at basin scale (2020) Water Science and Technology: Water Supply, 20 (3), pp. 889-899.
- Sadeghi, S.H., Sharifi Moghadam, E., Delavar, M., Zarghami, M. Application of water-energy-food nexus approach for designating optimal agricultural management pattern at a watershed scale (2020) Agricultural Water Management, 233, art. no. 106071.
- Aghsaei, H., Mobarghaee Dinan, N., Moridi, A., Asadolahi, Z., Delavar, M., Fohrer, N., Wagner, P.D. Effects of dynamic land use/land cover change on water resources and sediment yield in the Anzali wetland catchment, Gilan, Iran (2020) Science of the Total Environment, 712, art. no. 136449, .
- Pooralihossein, S., Delavar, M.A multi-model ensemble approach for the assessment of climatic and anthropogenic impacts on river flow change (2020) Hydrological Sciences Journal, 65 (1), pp. 71-86.
- Sanginabadi, H., Saghafian, B., Delavar, M. Coupled groundwater drought and water scarcity index for intensively overdrafted aquifers by Hamid Sanginabadi, Bahram Saghafian, and Majid Delavar (Journal of Hydrologic Engineering DOI: 10.1061/(ASCE)HE.1943-5584.0001764)(2019) Journal of Hydrologic Engineering, 24 (11), art. no. 08219001, .
- Nouri, A., Saghafian, B., Delavar, M., Bazargan-Lari, M.R. Agent-Based Modeling for Evaluation of Crop Pattern and Water Management Policies (2019) Water Resources Management, 33 (11), pp. 3707-3720.
- Raeisi, L.G., Morid, S., Delavar, M., Srinivasan, R. Effect and side-effect assessment of different agricultural water saving measures in an integrated framework (2019) Agricultural Water Management, 223, art. no. 105685.
- Eini, M.R., Javadi, S., Delavar, M., Monteiro, J.A.F., Darand, M. High accuracy of precipitation reanalyses resulted in good river discharge simulations in a semi-arid basin (2019) Ecological Engineering, 131, pp. 107-119.
- Sanginabadi, H., Saghafian, B., Delavar, M. Coupled groundwater drought and water scarcity index for intensively overdrafted aquifers(2019) Journal of Hydrologic Engineering, 24 (4), art. no. 04019003.

- Somaye Imani, Delavar, M., Niksokhan, M.H. Identification of Nutrients Critical Source Areas with SWAT Model under Limited Data Condition (2019) Water Resources, 46 (1), pp. 128-137.
- Rajaei, F., Sari, A.E., Salmanmahiny, A., Randhir, T.O., Delavar, M., Behrooz, R.D., Bavani, A.M. Simulating long-term effect of Hyrcanian forest loss on phosphorus loading at the sub-watershed level(2018) Journal of Arid Land, 10 (3), pp. 457-469.
- Aminyavari, S., Saghafian, B., Delavar, M. Evaluation of TIGGE Ensemble Forecasts of Precipitation in Distinct Climate Regions in Iran (2018) Advances in Atmospheric Sciences, 35 (4), pp. 457-468.
- Moghaddasi, M., Morid, S., Delavar, M., Hossaini Safa, H. Lake Urmia Basin Drought Risk Management: A Trade-Off Between Environment and Agriculture (2017) Irrigation and Drainage, 66 (3), pp. 439-450.

HONORS/AWARDS:

- Member of the Iranian Elite Foundation from 2009.
- Top PhD. Thesis Award, Fourth Festival of Iranian Water Engineering and Management, 2012.