



Amir Sadoddin

Associate Professor, Watershed Management Department
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PERSONAL DETAILS

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DOB	December, 1967
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EDUCATION

PhD Studies

2002- 2006 (Watershed Management) The Australian National University

Graduate Program in Resource Management and Environmental Science

Thesis topic: Bayesian network models for integrated catchment-scale management of salinity

- This research investigates implementing a decision-based model to assist in the integrated assessment and management of dryland salinity. The value of Bayesian Decision Networks in making tools for assessing how to manage dryland salinity, from a catchment-wide perspective, has been demonstrated in this thesis through undertaking several important steps:

1. Developing an integrative conceptual framework comprised of bio-physical and socio-economic components;
2. Integrating qualitative and quantitative data and information extracted from a range of pre-existing sources;
3. Developing and/or choosing from different model components to estimate bio-physical and socio-economic outcomes of salinity management options for the Little River catchment;
4. Estimating various outcomes of salinity management scenarios being tested in a probabilistic context to communicate the uncertainties in the estimates;
5. Implementing a functioning Bayesian decision network in a modelling platform (ICMS for this application), and also a user-interface for the Little River catchment BDN decision support system; and
6. Exploring and displaying the trade-offs among various outcomes arising from implementing the salinity management scenarios.

The Little River catchment BDN decision support system is available to stakeholders in the catchment and to policy makers as a management tool that can help them develop their understanding of the system components, run scenarios and explore the possible outcomes of scenarios being tested without having specific modelling skills. It will also inform policy makers and downstream interests of the likely scope for, and catchment scale outcomes of, altering land cover in the Little River catchment. This can assist policy makers by suggesting the preferred management options and also setting targets and deciding on policy instruments at a catchment scale.

Supervisors: Professor Anthony John Jakeman, Dr Rebecca Kelly (Letcher) and Dr Barry Croke

Master of Science (Watershed Management)

1992-1995 Tarbiat Modarres University, Tehran, Iran Full time (course and research)

Thesis topic: Investigation on the effects of hydro-geomorphological factors on mass movements in the Chashm and Khatirkuh Watershed, Semnan (In Persian)

- In this research the focus was on the driving factors on mass movements and their characteristics in the Chashm & Khatirkuh Watershed in Kabir River Basin in Iran.

Supervisors: Dr Mohsen Mohseni Saravi, Dr Majid Ownegh and Dr Jamal Ghoddosi

Bachelor of Science (Range and Watershed Management)

1986-1991 University of Gilan (Iran) + Gorgan University (Iran) Full time

RESEARCH INTERESTS

- Integrated assessment and management of watershed systems
- Bayesian network models for natural resource problems
- Decision support systems for natural resource management
- Resilience & vulnerability thinking
- Water quality assessment and management
- Natural hazards assessment and management

EMPLOYMENTS

Department of Watershed Management

Gorgan University of Agricultural Sciences and Natural Resources

Sep. 1995 -ongoing

Associate Professor (integrated watershed management, flood control, drought management, Research methods, Principles of hydrology and applied hydrology courses, and supervision of the thesis for MSc and PhD students)

Watershed Management Office

Semnan Province

July 1991 – March 1992

Contribution in the following projects:

- Farm dams
- Land preparation practices for dryland farming
- Flood spreading techniques

ORGANISATIONAL ACTIVITIES

- Director, The National Mega Project on the Integrated Watershed Management (2012-ongoing).
- Dean of Faculty of Range and Watershed Management, Fisheries and Environment, (2007- 2016)
- Member, National Committee to Combat Desertification (2012-2013).
- National advisor, International Project on Sustainable Management of Land and Water Resources in Hable-Rud Basin (2012-2013)
- Member, Watershed Management Committee in Golestan Province (2000- 2001)
- Head, Watershed Management Department, Gorgan University (1999-2000)
- Member, Watershed Management and Soil Conservation Committee, Water

Commission, Iranian Scientific Research Centre (1997)

- Adviser, Flood Spreading Project, Research Centre of Natural Resources, Semnan Province (1994).

RESEARCH COLLABORATIONS

Supervisory panel for the following postgraduate theses:

- Efficiency of geomorphologic and geomorpho-climatic instantaneous unit Hydrograph in Dargezin Representative Watershed, Semnan Province (1997)
- Evaluation of drought trend and its implications for water resources management in Yazd Povince (1998)
- Efficiency of geomorphologic and geomorpho-climatic instantaneous unit Hydrograph in Kasilian Representative Watershed, Mazandaran Province (1997)
- Techniques for estimation of peak flow discharge in sub-watersheds of Gorgan-Rood River Basin (2000-2001)
- Prediction of the vegetation management impacts on the risk of wind erosion in the southern parts of the Varamin Plain, Iran (2007-2008)
- Estimating annual water yield and hydrograph characteristics for ungauged watersheds in Kharestan Watershed, Fars Province-Iran (2008)
- Drought hazard assessment and water deficiency management in the northern areas of Semnan Province, Iran (2008)
- Multiple-criteria decision making to manage surface water resources in a multiple reservoir system, the Boostan Dam-Golestan Province, Iran (2008)
- Simulating the hydrological effects of checkdams to evaluate structural management scenarios for flood control in Jafar-abada Watershed, Golestan Province-Iran (2008)
- Hydrograph simulation using the SWMM model in Khoshk River Basin, Shiraz-Iran (2010)
- Agricultural drought management using a Bayesian decision model for rainfed wheat farmlands in the east of Golestan Province (2010)
- Groundwater Management Using Bayesian Decision Networks (2011)
- Relationship between land-use I land-cover pattern and surface water quality in the Chel-chay Watershed (2011).

HONORS AND AWARDS

- Gorgan University of Agricultural Sciences and Natural Resources, top student for BSc Degree (1991)
- Tarbiat Modarres University, top student for MSc. Degree (1995)

- Iranian Ministry of Sciences, Research and Technology, scholarship for doctoral study (2002)

REFERENCES

- Professor A. J. Jakeman

Director, Integrated Catchment Assessment and Management Centre
Professor, Centre for Resource and Environmental Studies
Editor-in-Chief, Environmental Modelling and Software (Elsevier)
The Australian National University (Building 48A, Linnaeus Way)
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- Dr Rebecca Kelly (Letcher)

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- Dr Mohsen Mohseni Saravi

Faculty of Natural Resources
University of Tehran
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- Dr Majid Ownegh

Faculty of Range and Watershed Management
Gorgan University of Agricultural Sciences and Natural Resources
Beheshti St. Goran, Iran
Tel: 0098 171 4427040
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Email: mownegh@yahoo.com

WORKSHOPS

- Soil and Water Conservation in Arid areas. 2000, Yangling, China
- Integrated Water Resources Management. 2007. Gorgan, Iran. 8 May
- The R User. 2008. Dortmund. Germany. 12-14 August

- Water Quality Assessment & Modelling.2008. Gorgan, Iran. 13-16 December.
- Integration Watershed Management (IWM). 2009. Gorgan University of Agricultural Sciences and Natural Resources-Iran. 25 January(In Persian)
- The Socio-Economic and Environmental Impacts of Drought. 2009. Venice, Italy.5-7 October.
- Workshop on Metrics and Methodologies of Estimation of Extreme Climate Events. 2010. UNESCO headquarters, Paris. 27-29 September
- Application of Baysian Model in Natural Resourse Management. 2010. Tarbiat Modarres University, Natural Resources & Marine Sciences, Noor, Iran. 27 November.
- R Workshop. 2013. Gorgan University of Agriculture Science and Natural Resource, Gorgan, Iran. March.
- The first workshop Integrated Watershed Management. 2012. Identification of the objectives and implementation steps. Gorgan University of Agriculture Science and Natural Resource, Iran. 5 and 6 December.
- The Second workshop Integrated Watershed Management. 2013. Workplan identification. Klack institute, Iran. 23 and 24 December.
- The Third workshop Integrated Watershed Management. 2013. Workplan identification. Geilan University, Iran. 24 and 25 April.
- The forth workshop Integrated Watershed Management. 2013. Projects framework development.Shiraz University, Iran. 19 and 20 June.
- The fifth workshop Integrated Watershed Management. 2013. Projects framework development. Sari University of Agriculture Science and Natural Resource, Iran. 8 and 9 July.

BOOKS

- Bayesian Network Models for Integrated Catchment-scale Management of Salinity. 2010. LAP LAMBERT Academic Publishing AG & Co. KG, 227p.
- **Sadoddin, A.**, and Babaei, A. 2010. How to write a better thesis? Gorgan University of Agricultural Sciences and Natural Resources Publishing. 213 p.
- **Sadoddin, A.**, Mostafa zade, R., Shahabi, M., Bai, M., Integrated watershed assessment and management: principles and approaches for modeling and decision making. (In Persian) (In press).

PUBLICATIONS

- Heshmatpour A., Saravi,M. M., **Sadoddin, A.**, and Erfanian, M. 2002. The efficiency of geomorphologic and geomorpho-climatic instantaneous unit hydrograph models for estimating flood discharge, Journal of Natural Resources. 55 (1): 3-22. (In Persian)

- **Sadoddin, A.**, Letcher, R. A., Jakeman, A. J., and Newham, L. T. H. 2005. A Bayesian decision network approach for assessing the ecological impacts of salinity Management. *Mathematics and Computers in Simulation*. 69 (1-2): 162-176. (ISI)
- Mostafazadeh, R., Bahremand, A.,**Sadoddin, A.** 2009. Simulating the direct runoff hydrograph using Clark instantaneous unit hydrograph. (Case study: the Jafar-Abad Watershed, Golestan Province), *Journal of Water and Soil Conservation*. 16 (3): 105-122.(In Persian)
- Halili, M.Gh., **Sadoddin, A.**, Mosaedi, A., and Salman Mahini, A. 2009. Fuzzy multicriteria decision making for surface water resources management in the Bustan Dam-Golestan Province, *Journal of Water and Soil Conservation*. 16 (4): 105-122. (In Persian)
- Halili.M.Gh, **Sadoddin. A.**, Mosaedi, A., and Salmanmahini, A. 2009. Multiple-criteria decision making to manage surface water resources in a multiple reservoir system, the Boostan Dam-Golestan Province. *Journal of Watershed Management Science & Engineering*.4 (11):34-25 (In Persian).
- Halili, M. Gh., **Sadoddin, A.**, Mosaedi, A., and Salman Mahini, A. 2009. Fuzzy multicriteria decision making for surface water resources management in the Bustan Dam-Golestan Province, *Journal of Water and Soil Researches*. 16 (4): 105-122. (In Persian)
- **Sadoddin. A.**, Sheikh. V.B., Mostafazadeh. R., and Halili, M. Gh. 2010. Analysis of vegetation-based management scenarios using MCDM approach in the Ramian Watershed, Golestan Province-Iran *International. Journal of Plant Production*. IJPP. 4(1):51-62. (ISI)
- Akhzary, D., **Sadoddin, A.**, and Noora, N. 2010. Prediction of vegetation management impacts on the risk of wind erosion (Case study: south of the Varamin Plain, Iran), *Journal of Water and Soil Conservation*17 (1):63-80. (In Persian)
- Saberi, N., Salmanmahini, A. R., Merkarimi, H., **Sadoddin, A.**, and Abdi, O. 2010. Application of geostatistics in assessment of N and P pollution in the east Gorgan_Iran. *Journal of Zagros landscape*. (In Persian).
- Rahmani, R., **Sadoddin, A.**,andGhorbani, S. 2011. Measuring and modelling precipitation components an oriental beech stand of the Hyrcanian region, Iran. *Journal of Hydrology*.404: 294-303.(ISI)
- Keshtkar, A. R., Mahdavi, M., Salajegheh, A., Ahmadi, H., **Sadoddin, A.**, and Ghermezcheshmeh, B. 2011. Exploring the relationship between land use and surface water quality using multivariate statistics in arid and semi-arid regions. *The Desert Journal*. 16: 33-38.
- Zare Garizi, A., Sheikh, V., and **Sadoddin, A.**2011.Assessment of seasonal variations of chemical characteristics in surface water using multivariate statistical methods. *Int. J. Environ. Sci. Tech*. 8 (3):581-592.(ISI)
- Pahlavani, H. Bahremand, A., Dehghan., A. A., and **Sadoddin, A.** 2011. Assessment efficiency of artificial natural works in simulation for intelligent estimation flood hydrograph in Jafar-Abad in the Gorgan. *Journal of Water and Soil Conservation*. 1: 6. (Scientific short report).

- Karimi, A., Ownegh, M., **Sadoddin, A.**, and Najafi Nejad, A. 2011. Landslide hazard zonation using logistic regression and GIS for the Chehel-chai Watershed, Golestan Province, Iran. *Journal of Forest and Rangeland*. (In Persian)
- **Sadoddin, A.**, Akhzary, D., and Sheikh, V. B. 2012. Prediction of vegetation management impacts on the risk of wind erosion (Case study: south of the Varamin Plain, Iran), *the Desert Journal*. 13 pp. (In Persian).
- Bai, M., **Sadoddin, A.**, and Salmanmahini, A. R. 2013. Predicting of the implementing ecological management scenarios on landscape structure for Chehel-Chai Watershed in Golestan Province-Iran. *Journal of Geographic Space*. (In Persian).
- Mostafazadeh, R. **Sadoddin. A.**, Bahremand, A. Sheikh, V. B, and Nazarnajad, H. 2010. Assessing hydrologic effects of Jafar-Abad Watershed management project in Golestan project using HEC-HMS model. *Journal of Water and Watershed*. 2(2):83-93. (In Persian).
- Zare Garizi, A., Sheikh, V., and **Sadoddin, A.** Modeling the spatial pattern of land-cover change, using logistic regression (Case study: the Chehel-Chai Watershed, Golestan Province). *Journal of Iran Water Research*. (In Persian).
- Zare Garizi, A., Sheikh, V., and **Sadoddin, A.** Long-term trend analysis of water quality variables for the Chehelchay River (Golestan Province). *Journal of Geographic Space*. 6 (10): 155-165. (In Persian).
- Kalteh, A., Sheikh, V.B., **Sadoddin, A.**, and Noora Nader. Application of physically – based LISEM model in the Kechik: experimental catchment, Golestan, Iran *Journal of management watershed*. 1 (2): 65-83. (In Persian).
- Zare Garizi, A., Sheikh, V., **Sadoddin, A.**, and Mahiny, A. 2012. Simulating the spatiotemporal changes of forest extent for the Chehelchay Watershed (Golestan Province), using integrated CA-Markov model. *Iranian Journal of Forest and Poplar Research*. *Iranian Journal of Forest and Poplar Research*. 20 (2): 273-285. (In Persian).
- Bai, M., **Sadoddin, A.**, and Salmanmahini, A. R. 2013. Using Multi criteria decision making technique in evaluation of structural landscape Characteristics in the Chehel-chai Watershed, Golestan Province, Iran. (*Journal of Natural Environmental, Iranian Journal Resources*. 65 (4): 431-150. (In Persian).
- Saman manesh, H., **Sadoddin, A.**, and Najafi Nejad, A. Regional flood analysis by Fuzzy (c- mean) cluster analysis for some of the river basins of the Fars Province– Iran. (Under review), (In Persian)
- Rahimi, M., Ownegh, M., **Sadoddin, A.**, and Salmanmahini, A. R. 2012. Land use planning for Sustainable Development of Chehl-chai Watershed of Golestan Province. *Journal of Environmental Researches*. *Environmental Researches*. 3 (6): 27-36. (In Persian)
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- Karimi Sangchini, E., Ownegh, M., **Sadoddin, A.**, and Mashayekhan, A. 2011. Probabilistic landslide risk analysis and mapping (Case Study: the Chehel-Chai Watershed, Golestan Province, Iran). *Journal of Rangeland Science*. 2 (1): 425-437
- Keshtkar, A. Salajegheh, R.,**Sadoddin,A.**,andAllan, M. G. 2013.Application of Bayesian networks for sustainability assessment in catchment modeling and management (Case study: The Hablehrood river catchment. *Ecological Modelling*. 268: 48–54. (ISI)
- **Sadoddin, A.**, Letcher (Kelly), R.,Jakeman, T.,Croke, B., and Newham, L. 2013. A bayesian decision support system model: Dryland salinity management application. *The International Journal of Environmental Resources Research*. 1(1): 16 p.
- Zare Garizi, A., Sheikh, V., **Sadoddin,A.**, and Mahiny, A. 2012. Simulating the spatiotemporal changes of forest extent for the Chehelchay Watershed (Golestan Province), using integrated CA-Markov model. *Iranian Journal of Forest and Poplar Research*. *Iranian Journal of Forest and Poplar Research*. 20 (2).273-285. (In Persian)
- Mohajerani, H., Kholghi, M., Mosaedi, A., **Sadoddin, A.**, andMeftah, M. 2013. Quantitative Management of Groundwater Using Bayesian Decision Network. *Journal of Water and Soil*. 26 (6): 1522-1534.(In Persian)
- Mofidipoor, N., Sheikh, V., Ownegh, M., and **Sadoddin, A.** 2013.The analysis of relationship between meteorological andhydrological droughts in Atrak Watershed.*Journal of Watershed Management*. 3 (4): 12 p.(In Persian).
- Adhami, M., Najafi Nejad, A., **Sadoddin, A.**, and Abghari, H. 2013. Analysis of long_term changes in flow and sediment in some of the hydrometer stations in Golestan Province. *Quarterly Journal of Region Geography Environmental*. 2 (3): 21- 38.(In Persian)
- MohammadiAlvar, M., **Sadoddin, A.**, Barani, H., and Mahboobi, M. 2013. Predicting the community acceptance level of the vegetation - based management scenarios for the Chehel-Chai Watershed Golestan ProvinceIran. *Journal of Water and Soil Conservation*. 20 (2): 11 p.
- Bai, M., **Sadoddin, A.**Predicting the impacts of management scenarios on landscape structure for the Chehel-Chai Watershed in Golestan Province_Iran. 2013. *Journal of Geographic Space*. (In Persian).
- Nikobazl, A., Salman Mahimi, A., and **Sadoddin, A.** 2013.BayesianTheoryand application of Environmental impact assessment. *Application Journal of and develop*. 3 (6): 57-66. (In Persian).
- **Sadoddin, A.**, Alvandi, E., 2014. The feasibility study on the use of compensatory MADM techniques to prioritise the management scenarios for the Chel-chai Watershed, Golestan Province-Iran. *Journal of Pajouhesh-Sazandeghi*. No 105 pp:67-79. (In Persian)
- Abdolazadeh, A., Ownegh, M., **Sadoddin, A.**, and Mostafazadeh, R. 2014. Development of a landslide management plan under normal and critical scenarios for Ziarat Watershed, Golestan Province.*Watershed Management Research (Pajouhesh & Sazandegi)* No 104. pp:75-84. (In Persian).

- Silakhori, E., Ownegh, M., **Sadoddin, A.**, and Filekesh, E. 2014. Comparing efficiency of Iranian desert hazard assessment models, namely MICD and IMDPA (Case study: Sabzevar region). *J. of Water and Soil Conservation*, Vol. 21(4): 1-28. (In Persian).
- Silakhori, E., Ownegh, M., and **Sadoddin, A.**, 2014. Assessing desertification hazard and risk in Sabzevar region using MICD Model. *Journal of Emergency Management*. 3(1): 89-99. (In Persian).
- Silakhori, E., Ownegh, M., and **Sadoddin, A.**, 2015. Developing desertification management plan in Sabzevar region. *J. of Water and Soil Conservation*. 21(6): 51-71. (In Persian).
- **Sadoddin, A.**, Alvandi, E., and Sheikh, V. 2015. Development of decision support system to implement participatory and integrated management of the Chehel-Chai Watershed- Golestan Province-Iran. *Journal of watershed Management*. 6(11): 124-136 (In Persian).
- Nikoubazrad, E., Salmak Mahini, A., and **Sadoddin, A.**, 2015. Environmental impacts assessment of compost plants using a Bayesian approach: case study Golestan province. *Iranian Journal of Natural Recourses*. 2 (68): 305-319. (In Persian).
- Mostafa, M., Shataee Jouibary, Sh., Lotfalian, M., and **Sadoddin, A.**, 2015. Investigation methods evaluation of forest road network according to graph theory. *J. of Conservation and Utilization of Natural Resources*. 4(2): 41-63. (In Persian).
- Kornejadi, A., Ownegh, M., and **Sadoddin, A.**, 2015. Landslide Risk and Hazard Zonation Case study: Ziarat Watershed- Golestan province. *Journal of Emergency Management*. 4(1): 51-62. (In Persian).
- Sadeghi, H. R., Mostafazadeh, R., and **Sadoddin, A.**, 2015. Response of Sedimentgraphs and Sediment Rating Loops to Land Use Type and Spatial Pattern. *Watershed Engineering and Management*. 7(1): 15-26. (In Persian).
- **Sadoddin, A.**, Shahabi, M., and Sheikh, V.B. 2016. A Bayesian decision model for drought management in rainfed wheat farms of North East Iran. *International Journal of Plant Production* 10 (4), 1735-8043 (Online).
- Jafari Shalamzari, M., Sheikh, V.B., **Saadodin, A.**, and Abedi Sarvestani, A. 2016. Public Perception and Acceptability toward Domestic Rainwater Harvesting in Golestan, Limits to up-scaling. *Ecopersia*. 1437-1454.
- Jafari Shalamzari, M., **Saadodin, A.**, Sheikh, V.B., and Abedi Sarvestani, A. 2016. Analysis of adaptation determinants of domestic rainwater harvesting systems (DRWHs) in Golestan Province, Iran. *Environmental Resources Research*. 4(1): 27-43.
- Dahmardeh Ghaleno, M.R., Sheikh, V.B., **Sadoddin, A.**, and Sabouhi Sabouni. M. 2016. Optimal Cropping Pattern for Water Resources Management in Sistan Region of Iran using Goal Programming Method. *Ecopersia*. 4(4), 1555-1567.
- Abdolazadeh, A., Ownegh, M., **Sadoddin, A.**, and Mostafazadeh, R. 2016. Suitability Assessment of Rural Settlement Land-use Using Systematic Model in Ziarat Watershed, Gorgan. *Journal of Geography and Regional Development*. 13(2).

- Davudirad, A. A., Sadeghi, H. R., and **Sadoddin, A.**, 2016. The Impact of Development Plans on Hydrological Changes in The Shazand Watershed, Iran. *Land degradation & development*. 27: 1236–1244.(ISD).
- Akbari, M., Ownegh, M., Asgari, H., **Sadoddin, A.**, and Khosravi, H. 2016. Drought Monitoring Based on the SPI and RDI Indices under Climate Change Scenarios (Case Study: Semi-Arid Areas of West Golestan Province). *Ecopersia*. 4 (4), 1585-1602.
- Mohammadi, M., Sheikh, V. B., and **Sadoddin, A.**, 2016. Modeling the effects of land use changes on flood hydrograph (A case study: Ja'farabad watershed, Golestan province). *J. of Water and Soil Conservation*. 22 (5), 171-185.(In Persian).
- Akbari, M., Ownegh, M., Asgari, H., **Sadoddin, A.**, and Khosravi, H. 2016. Desertification risk assessment and management program. *Global J. Environ. Sci. Manage*, 2(4): 365-380.
- Sangchini, E.K., Ownegh, M., and **Sadoddin, A.**, 2016. Landslide Hazard Management for Two Normal and Critical Scenarios in the Chehel-Chay Watershed, Golestan Province. *Journal of Watershed Management Research*. 7 (13): 173- 181.(In Persian).
- Davudirad, A. A., Sadeghi, H. R., and **Sadoddin, A.**, 2016. Monitoring temporal and spatial changes in land use in the Shazand Watershed. *Iranian Journal of Eco hydrology*. 2 (4): 405-415.(In Persian).
- Akbari, M., Ownegh, M., Asgari, H., **Sadoddin, A.**, and Khosravi, H. 2016. Soil Erosion Risk Assessment Using the CORINE Model (Case Study: Semi-Arid Region in Golestan Province). *Desert Ecosystem Engineering Journal*. 12 (5): 63-78. (In Persian).
- Akbari, M., Ownegh, M., Asgari, H., **Sadoddin, A.**, and Khosravi, H. 2016. Design and Development of Early Warning System for Desertification and Land Degradation, *Environmental Resources Research*, 12(4):111-130.
- **Sadoddin, A.**, Sheikh, V.B., Ownegh, M., Najafi Nejad, A., and Sadeghi, H.R., 2016. Development of a national mega research project on the integrated watershed management for Iran. *Environmental Resources Research*. 4(2): 231- 238.
- Mohajerani, H., Kholghi, M., Mosaedi, A., Farmani, R., **Sadoddin, A.**, and Casper, M. 2017. Application of Bayesian Decision Networks for Groundwater Resources Management Under the Conditions of High Uncertainty and Data Scarcity. *Water Resource Manage*. 31:1859–1879.
- Dahmardeh Ghaleno, M.R., **Sadoddin, A.**, Sheikh, V.B., and Sabouhi Sabouni. M. 2016. Optimal Utilization of the Chahnimeh Water Reservoirs in Sistan Region of Iran using Goal Programming Method. *Ecopersia*. 5(1), 1641-1654.
- Pishdad, L., NajafNejad, A., **Sadoddin, A.**, Chapi, K., Mohammadi Kangarani, H., 2016. Degradation dynamics of the Zeribar Wetland using multiple scale satellite data. *Journal of Wetland Ecobiology*, 8(27):5-22.
- Sangchini, E.K., Ownegh, M., and **Sadoddin, A.**, Tahmasebipour, N., and Rezaei, H. The application of system dynamics model to predict the ecological effects implementation scenarios vegetation

management on the ecological structure of landscape Hablehrud watershed Watershed Engineering and Management (In press).

- Sangchini, E.K., Ownegh, M., and **Sadoddin, A.**, Tahmasebipour, N., and Rezaei, H. The investigate the factors affecting on the public participation and the predicting public acceptance of scenarios vegetation management Hablehrud watershed. Watershed Engineering and Management. (In press).
- Mostafa, M., Shataee Jouibary, Sh., Lotfalian, M., and **Sadoddin, A.**, Watershed Road Network Analysis with an emphasis on Fire Fighting Management. Journal of Environmental Engineering and Landscape Management. (In press).
- Mostafazadeh, R., **Sadoddin, A.**, Bahremand, A., Sheikh, V., and Zare Garizi, A., Scenario analysis of flood control structures using a multi-criteria decision making technique in Northeast Iran. Natural Hazards (NHAZ). (In press).
- Gohardoust, A., **Sadoddin, A.**, Ownegh, M., and Najafi Nejad, A., Identify hazard areas using land use planning approach (Case Study: Chehelchay watershed - Golestan). Iranian Journal of Range and Desert Research. (In press) (In Persian).
- Mostafa, M., Shataee Jouibary, Sh., Lotfalian, M., and **Sadoddin, A.**, Evaluation of network connection of roads of mountainous watershed using graph theory in the chel- chai watershed. Journal of watershed Management. (In press).
- Sangchini, E.K., Ownegh, M., and **Sadoddin, A.**, Tahmasebipour, N., and Rezaei, H., Impact assessment of Vegetation management scenarios on the volume of flood and water pollutants of Hablehrud watershed using (L-THIA) model. Journal of Pajouhesh-Sazandeghi. (In press).

REPORTS

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- **Sadoddin, A.**, and M. Hashemi, 1995. Soil Erosion Report for the Shur-Tangeh Watershed, Semnan Province, 42 pp. (In Persian).
- **Sadoddin, A.**, 1996. Climate Report for Narli Watershed, Golestan Province, 43 pp. (In Persian)
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- Mosadei, A., Yakhkeshi, A., **Sadoddin, A.**, Zanganeh, M.A., Mohammadi-ostadkalayeh, A., and Farazjoo, H. 2009. Performance analysis of different methods to estimate suspended sediment load for some river gauge stations in Golestan Province- Iran. Final Report for the Golestan Regional Water Agency -Iran, 155 pp. (In Persian).
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