Dr. rer. nat., Mostafa Shaaban

Position: Postdoctoral Scientist
WG: Land Use Decisions in the Spatial and System Context
RA3: Agricultural Landscape Systems

Academic education and scientific degrees

01/2020	Pharmacy Practice in Germany license (Approbation)
10/2014 – 10/2017	PhD in Earth System Sciences, Institute of Geography, Hamburg University
07/2009 – 03/2011	M.Sc. in Renewable Energy and Energy Efficiency, Kassel University/Cairo University
09/2007 – 9/2008	Diploma in Total Quality Management
09/2001 – 06/2006	B.Sc. in Pharmaceutical Sciences, Ain Shams University, Cairo

Professional experience

Since 08/2019	Postdoctoral scientist, at Leibniz Centre for Agricultural Landscape Research (ZALF)
11/2017 – 07/2019	Associated researcher, at Research Group Climate Change and Security (CLISEC), Institute of Geography, Hamburg University
01/2018 – 07/2018	Internship in Buchen Pharmacy, Hamburg
01/2014 – 09/2014	Pharmacist in Hossam ElWerdany Pharmacy, Cairo
02/2012 – 12/2013	Co-coordinator of the Development of an Egyptian prototype concentrated solar power system at Cairo University
04/2011 – 01/2012	Pharmacist at Abou Khaled Pharmacy, Cairo
08/2010 – 01/2011	Internship at Desertec industrial initative (Dii) GmbH, Munich
06/2007 – 07/2009	Microbiology drug quality control analyst at pharmaceutical industries, Cairo
09/2006 – 01/2009	Pharmacist at Goher Pharmacy

Research Profile

Background
- Sustainability impact assessment
- Energy systems
- Social-ecological system

Research Activities
- Agent-based modelling
- Multi-criteria decision analysis
- GIS spatial data analysis

Awards

07/2009 – 03/2011	Deutscher Akademischer Austauschdienst (DAAD) for REMENA M.Sc. program
11/2011	Desertec thesis award

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https://www.researchgate.net/profile/Mostafa-Shaaban-2 (copy-paste)

https://www.zalf.de/en/ueber_uns/mitarbeiter/Pages/shaaban_m.aspx

Publications

Peer-reviewed Journals:

- **Shaaban, M.**, Scheffran, J., 2017. Selection of sustainable development indicators for the assessment of electricity production in Egypt. Sustainable Energy Technology Assessment 22, 65–73. https://doi:10.1016/j.seta.2017.07.003

- Scheffran, J., Link, P.M., **Shaaban, M.**, Süsser, D., Yang, J., 2017. Technikfolgenabschätzung in Energielandschaften. TATuP Journal for Technology Assessment in Theory and Practice.26, 44. https://doi.org/10.14512/tatup.26.3.44

- **Shaaban, M.**, Scheffran, J., Böhner, J., Elsobki, M., 2018. Sustainability Assessment of Electricity Generation Technologies in Egypt Using Multi-Criteria Decision Analysis. Energies 11, 1117. https://doi.org/10.3390/en11051117

- **Shaaban, M.**, Scheffran, J., Böhner, J., Elsobki, M.S., 2019. A dynamic sustainability analysis of energy landscapes in Egypt: A spatial agent-based model combined with multi-criteria decision analysis. Journal of Artificial Societies and Social Simulation 22 (1) 4. http://doi.org/10.18564/jasss.3906

- **Shaaban, M.**, Schwartz, C., Macpherson, J., Piorr, A., 2021. A Conceptual Model Framework for Mapping, Analyzing and Managing Supply–Demand Mismatches of Ecosystem Services in Agricultural Landscapes. Land 10, 131. https://doi.org/10.3390/land10020131

- Schwartz, C., **Shaaban, M.**, Bellingrath-Kimura, S. D., & Piorr, A., 2021. Participatory Mapping of Demand for Ecosystem Services in Agricultural Landscapes. Agriculture, 11(12), 1193. https://doi.org/10.3390/agriculture11121193

- **Shaaban, M.**, Scheffran, J., Elsobki, M. S., & Azadi, H., 2022. A Comprehensive Evaluation of Electricity Planning Models in Egypt: Optimization versus Agent-Based Approaches. Sustainability, 14(3), 1563. https://doi.org/10.3390/su14031563

Book Chapters:

- **Shaaban, M.,** 2020. The roadmap to energy security in Egypt. In: Climate Change, Security Risks, and Violent Conflicts. Essays from Integrated Climate Research in Hamburg. Der Verlag der Staats- und Universitätsbibliothek Hamburg Carl von Ossietzky, Hamburg, Germany, pp 83–102. http://doi.org/10.15460/HUP.208

- **Shaaban, M.**, Scheffran, J., 2021. A Dynamic-Agent-Based Sustainability Assessment of Energy Systems, in: Ren, J. (Ed.), Energy Systems Evaluation (Volume 1), Green Energy and Technology. Springer International Publishing, Cham, pp. 161–181. https://doi.org/10.1007/978-3-030-67529-5_8

Models:

- **Shaaban, M.**, Scheffran, J., Böhner, J., Elsobki, M., 2018. ELTAP-Egy model (Energy Landscape Transition Analysis and Planning in Egypt) (Version 1.0.0). CoMSES Computational Model Library. Retrieved from: https://doi.org/10.25937/zre0-r244

- **Shaaban, M.**, 2022. The Viability of the Social-Ecological Agroecosystem (ViSA) Spatial Agent-based Model (1.0.0). CoMSES Net. https://doi.org/10.25937/6CEA-B617

Thesis:

- **Shaaban, M.**, 2011. Examination of impacts that desert power generation has on EUMENA countries (M.Sc.). Kassel, Germany.

- **Shaaban, M.**, 2017. The Roadmap to Energy Security in Egypt [Doctoral thesis, University of Hamburg]. http://ediss.sub.uni-hamburg.de/volltexte/2017/8835/

Conferences and Workshops:

- **Shaaban, M.**, Scheffran, J., 2015. An empirical analysis of the impact of renewable energy deployment in MENA deserts on CO2 emission reduction. Presented at the EWACC 2015 building bridge conference, Nicosia, Cyprus.

- **Shaaban, M.**, 2015. Economic Impact Assessment of Desertec in terms of GDP. Presented at the European Association of Environmental and Resource Economists 21st Annual Conference, Helsinki, Finland.

- **Shaaban, M.**, Scheffran, J., 2017. A dynamic sustainability analysis of energy landscapes in Egypt: An agent-based model combined with multi-criteria decision analysis. Presented at the 1st Hamburg Workshop on Agent-based Modeling of Environmental Challenges and Climate Policy, Hamburg, Germany.

- **Shaaban, M.**, Schwartz, C., Macpherson, J., Piorr, A., 2021. Modelling Decision Adaption Pathways for the Integration of Societal Demands for Ecosystem Services and their Impacts on SDGs in Agricultural Landscapes. Presented at the 16th Congress of the European Association of Agricultural Economists, EAAE: Raising the Impact of Agricultural Economics: Multidisciplinarity, Stakeholder Engagement and Novel Approaches, Prague, Czech Republic.

- **Shaaban, M.**, Piorr, A., 2021. Simulation of Dynamic Adaptation of Social-Ecological-System in Agricultural Landscapes. Presented at the Landscape 2021, Berlin-Online.

- Mouratiadou, I., Lemke, N., Zander, P., **Shaaban, M.**, Macpherson, J., Gaiser, T., Melzer, M., Hosseini-Yekani, S.-A., Niemann, N., Lingemann, K., Piorr, A., Helming, K., Bellingrath-Kimura, S.D., 2021. Digital Agricultural Knowledge and Information System: the DAKIS decision support platform for management design and ecosystem services provision. Presented at the Landscape 2021, Berlin-Online.

- Schwartz, C., **Shaaban, M.**, Bellingrath-Kimura, S.D., Piorr, A., 2021. Participatory Mapping of Demands for Ecosystem Services. Presented at the Landscape 2021, Berlin-Online.

- **Shaaban, M.**, Mouratiadou, I., & Piorr, A., 2022. Cooperative versus non-cooperative behaviour: Using agent-based modelling to identify spatial supply-demand mismatches of ecosystem services and to coordinate conflicting actors' demands. The IALE 2022 European Landscape Ecology Congress, Warsaw, Poland (Online). https://doi.org/10.13140/RG.2.2.14062.08005

Masterclass:

Shaaban, M., Häfner, K., 2021. Choice Experiment and Agent-based Modelling for Evaluating Preferences of Agricultural Landscape Diversification. Presented at the Landscape 2021, Berlin-Online.