

## CURRICULUM VITAE

### i. PERSONAL PARTICULARS

*Name:* Amira Abdel Rahim Abdel Gader Mekawi.

*Date & Place of Birth:* 04/05/1976, Algaba - Sudan.

*Nationality:* Sudanese.

*Sex:* Female.

*Languages:* Arabic (mother tongue),  
English & German (instruction).

*Marital Status:* Married.

*Address:* The Hydraulics Research Centre (HRC-Sudan)  
  
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*Title:* Assistant Professor (since Feb. 2016), HRC-Sudan.

### ii. ACADEMIC QUALIFICATIONS

- Ph D (Water Management), Water Management and Irrigation Institute, Gezira University, 17 March 2019.

*Theme title:* "The Use of the Blue Nile Water in the Sudan after Roseires Heightening and GERD Construction with Especial Emphasis on the Agricultural Development".

- M.Sc. (Water Resources Management), Dept. of Civil Engineering, Lueneburg University, Germany, April 2003 - March 2005.

*Theme title:* "Hydrology and Flood Propagation of the Blue Nile in the Sudan".

- Postgraduate Diploma on Hydraulic Engineering in River Basins, Hydraulic Research Institute, Egypt, Sep.-Dec. 2001.
- B.Sc., Dept. of Civil Engineering, Faculty of Engineering & Architecture, University of Khartoum, 1995-2000.

### iii. MEMBERSHIP

- Sudan Engineering Council (MSEC);
- Sudanese Engineering Society (MSES);
- Cancer Disease Friends Association;
- National Environment Protection Society – Wad Medani branch; and
- Sudan Spate Irrigation Network (SSpN) since year 2013.

### iv. TRAINING COURSES, WORKSHOPS & CONFERENCES

1. Postgraduate Course on Sediment Transport Technology, General Directorate of State Hydraulic Works, Turkey, 3-28 Jun. 2002.
2. Seminar for Photogrammetry, Aerial Photo Interpretation and Remote Sensing, Germany, Apr. 2004.
3. Regional Training Workshop on Rain Water Harvesting, ATP<sup>1</sup> of NBI<sup>2</sup>, Ethiopia, 7-18 Aug. 2006.
4. International Sediment Initiative Conference (ISIC), Khartoum, Sudan, 12-14 Nov. 2006.
5. Research Proposal Polishing Workshop, ATP of NBI, Egypt, 28-30 Aug. 2007.
6. Efficient Water Use for Agricultural Production, EWUAP<sup>3</sup> of NBI, Nile Basin Research and Studies Centre, Sudan, 3-8 May 2008.
7. National Training Course on GIS & Remote Sensing (Basic Level), MAMofTWR/IGAD<sup>4</sup>, Sudan, 3–8 Nov. 2012.
8. Smart ICT for Weather and Water Information and Advice to Smallholders in Africa, 1<sup>st</sup> Capacity Building Workshop, HRC, Wad Medani, Sudan, 15-17 Jan. 2013.
9. Smart ICT to Advice the Gash Farmers, 2<sup>nd</sup> Capacity Building Workshop, Kassala, Sudan, 27-29 Aug. 2013.
10. Project Launch Workshop: Harnessing Floods to Enhance Livelihood and Ecosystem Services, Kassala, Sudan, 28-30 Apr. 2015.
11. Introduction to River Basin Simulation Model (RIBASIM) and its Application on Reservoirs Operation, HRC, Wad Medani, Sudan, 11-15 Oct. 2015.
12. Workshop on Awareness Raising on Cooperation within ENB Countries, HRC-Sudan, Jun. 2016.

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<sup>1</sup> Applied Training Project.

<sup>2</sup> Nile Basin Initiative.

<sup>3</sup> Efficient Water Use for Agricultural Production Project.

<sup>4</sup> Mapping, Assessment & Management of Transboundary Water Resources in the IGAD Sub-Region.

13. Project Closing Workshop: Harnessing Floods to Enhance Livelihood and Ecosystem Services, Kassala, Sudan, 14-16 Dec. 2016.
14. Seminar on IWRM Project in Sudan - Problem Tree Analysis, organized by JICA Team, Dec. 2016.
15. Application of International Specifications in Soil Analysis, University Education Development Center, Gezira University, May 2017.
16. National Workshop: Knowledge and Experience Sharing of the Water Management Practices of Flood-Based Farming in Sudan, Elsimih, North Kurdofan, Sudan, 2-3 Jul. 2017.
17. The Second National Workshop: Toker Delta: Revitalizing the Bright History for a Brighter Future, Toker – Port Sudan, Sudan, 14-15 Jul. 2018.
18. Tailor Made Training Course: Using Soil & Water Assessment Tool (SWAT) in Water Resources Management, Ministry of Irrigation and Water Resources, Wad Medani, Sudan, 21-25 Aug. 2022.
19. WaPOR Phase 2, Training 1: Introduction to WaPOR, HRC-Sudan, Wad Medani, 13-15 Sep. 2022.
20. Monitoring and Evaluation (M&E), Ministry of Irrigation and Water Resources, Wad Medani, Sudan, 5-7 Dec. 2022.

#### **v. EXPERIENCES**

##### Feb. 2001 – Apr. 2003

- Assistant research engineer, Water Resources Research Unit of HRC-Sudan.

##### Apr. 2003 – Mar. 2005

- M.Sc. student at Dept. of Civil Engineering, Lueneburg University, Germany.

##### 2005 – 2016

- Promoted to a research engineer at HRC-Sudan.
- Team leader assistant of the research project “The Sediment Monitoring Program in the Blue Nile and Gezira Scheme”, years 2010 and 2011.
- Team leader of the research project “The Sediment Monitoring Program in the Blue Nile and Gezira Scheme” implemented by HRC in years 2012, 2013 and 2014.
- Assistant of the country project team leader of the research project “The Smart ICT for Weather and Water Information and Advice for Smallholders in the Gash Area” funded by IFAD, (Jan. – Dec. 2013).
- Country project team leader of the research project “Spate Irrigation for Rural Economic Growth and Poverty Alleviation” funded by IFAD, UNESCO IHE is the leading partner, (Nov. 2013 – Dec. 2014).

##### 2016 – Now

- Promoted to assistant research professor at HRC-Sudan.
- Country project team leader of the research project “Africa to Asia - Testing Adaptation in Flood-Based Resource Management Project” funded by IFAD, (Apr. 2015 – Jul. 2019).
- Country project team leader of the research project “Harnessing Floods to Enhance Livelihoods and Ecosystem Services in the Gash Area” funded by CGIAR/IWMI, (Jan. 2015 – Dec. 2016).

#### General responsibilities

- Field and office data collection, processing, analysis, documentation and reporting of research findings.
- Management of research projects, planning of work activities, coordination between partners and reporting on activities progress (technically and financially) under my direct responsibilities.
- Research proposals writing.
- Coordination of workshops, training courses on local and regional levels.

#### Areas of interest

Research activities related to the Water Resources Management contexts, specifically:

- Hydrological studies;
- Sedimentation studies and river morphology investigations; and
- Research works on irrigation water management.

With high capability of working on hydrological modelling and time series analysis (RIBASIM, FREQ, Spell-stat, SWAT ...), hydraulic packages (WinSRFR, PROFILE, ...), in addition to other softwares (ArcGIS, AquaCrop, ...) as required by the research studies.

#### List of technical reports (Apr. 2005 – Now)

1. Selection of Pumping Location for Al-shaab Agriculture Scheme. Technical Report, HRC-Sudan, May 2022.
2. Weeds Control Program in the Gezira Irrigation Scheme. Technical Report, HRC-Sudan, May 2021.
3. Amira Mekawi et. al, Modification of On-farm Water Management in Gash Agricultural Scheme – Phase IV. Technical Report, HRC-Sudan, November 2018.
4. Amira Mekawi et. al, Modification of On-farm Water Management in Gash Agricultural Scheme – Phase III. Technical Report, HRC-Sudan, April 2018.
5. Amira Mekawi et. al, On-farm Water Management in Gash Agricultural Scheme – Phase II: Modeling Results. Technical Report, HRC-Sudan, April 2017.

6. Final Reports "Harnessing Floods to Enhance Livelihoods and Ecosystem Services in Gash Area, Sudan: Vol. I - Vol. IV", Sudan Research Team, January 2017.
7. Amira Mekawi et. al, On-farm Water Management in Gash Agricultural Scheme – Phase I: Data Analysis. Technical Report, HRC-Sudan, April 2016.
8. Amira A. A. Mekawi, Younis A. Gismalla "Annual Report: Sediment Monitoring Program of the Nile River System and Gezira Scheme - Season 2014", July 2015; HRC Tech. Report, Wad Medani – Sudan.
9. Y. A. Mohamed, A. B. Ahmed, A. Mekawi, A. Hayati "Water quality-agriculture-food safety-health nexus: Sudan situation assessment report", prepared for the: Land and Water Division – FAO, May 2015.
10. Amira A. A. Mekawi, Younis A. Gismalla "The Sediment monitoring programme – Season 2013", June 2014; HRC Tech. Report, Wad Medani – Sudan.
11. Selection of Pumping location for East Nile Scheme. Technical Report for Boshan Machinery & Equipment Imp. Exp. Corporation. Prepared by HRC staff, May 2014.
12. Yasir Hageltom, Amira A.A. Mekawi and Younis A. Gismalla (2014). The Use of Turbidimeter in Suspended Sediment Measurements. HRC Technical Report.
13. Contribution to the preliminary analytical phase of "Sedimentation and Operation Study for Atbara Dams Complex", Feb.-Mar. 2014.
14. Younis A. Gismalla, Yasir A. Mohamed, Amira A. A. Mekawi "The Gash Project Evaluation Report". The Smart ICT Project. February 2014.
15. Amira A. A. Mekawi, Younis A. Gismalla, "Interviews with Stakeholders and Institutions Policy Mapping for the Use of ICT in the Gash". The Smart ICT Project. February 2014.
16. Amira A. A. Mekawi, Younis A. Gismalla "The Sediment monitoring programme – Season 2012", April 2013; HRC Tech. Report, Wad Medani – Sudan.
17. Younis A. Gismalla, Amira A. A. Mekawi "The Sediment monitoring programme – Season 2011", June 2012; HRC Tech. Report, Wad Medani – Sudan.
18. Younis A. Gismalla, Amira A. A. Mekawi "The Sediment monitoring programme – Season 2010", March 2012; HRC Tech. Report, Wad Medani – Sudan.
19. Flood Embankment Design, Operation and Maintenance Manual, HRS, Sudan, Jan. 2010.
20. Investigation of a Pump Site for North Omdurman Fodder Production Scheme", HRS report, August 2006.
21. Blue Nile River Bank Protection: Singa area. HRS staff, March 2006.
22. Amira A. A. Mekawi et al. "An Analytical Study of the Yield of the Nile River and its Tributaries in the Sudan; Volume I: Data Validation (1965-2000)", Aug. 2005.

### List of reports on project management

1. Annual reporting on the research project “Harnessing Floods to Enhance Livelihoods and Ecosystem Services”, years 2015-2016, submitted to MetaMeta-Research, The Netherlands (leading partner).
2. Annual reporting of the research project “Africa to Asia - Testing Adaptation in Flood-Based Resource Management Project”, years 2015-2018, submitted to MetaMeta-Research, The Netherlands (leading partner).
3. Spate Irrigation for Rural Economic Growth and Poverty Alleviation in Sudan (SIREGPA), Annual Report: Jun. 2013 – Dec. 2014, submitted to UNESCO-IHE (leading partner).
4. Spate Irrigation for Rural Economic Growth and Poverty Alleviation in Sudan (SIREGPA), Activities progress, June 2013 – April 2014, submitted to UNESCO-IHE (leading partner).
5. (2) reports on refresher courses activities held at HRC-Sudan in years 2013 and 2015 submitted to UNESCO-IHE (leading partner).
6. Reporting on the Tailor Made Training Course on “Water Management in Mega Irrigation Schemes” organized by HRC-Sudan and MetaMeta Research and funded by NFP<sup>5</sup>, administrated by NUFFIC, 14-25 August 2016.
7. More than ten (10) financial statements relevant to funded research projects submitted to MetaMeta Research and UNESCO-IHE.

### Published papers

1. Amira A. A. Mekawi, An Analytical Study of the Yield of the Nile River and its Tributaries in the Sudan, Mar. 2008 (in Arabic).
2. Ageel Bushara, Amira A. A. Mekawi, Analysis of the long-term flows of the Nile River, Nile Water Science and Engineering Journal, Vol. 1, Issue 2, 2009.
3. Amira A. A. Mekawi, Flood propagation of the Blue Nile in the Sudan using Muskingum routing, Nile Water Science and Engineering Journal, Vol. 3, Issue 1, 2010.
4. Amira Mekawi, Dry Season Water Requirements in the Blue Nile basin (Sudan) after Roseires Dam Heightening, Nile Water Science and Engineering Journal, Vol. 6, Issue 1, 2013.
5. Amira Mekawi et al, Calibration of Turbidimeter for measuring suspended sediment concentrations in the Blue Nile and Atbara River systems in Sudan, Sudan Journal of Agricultural Research, published by the Agricultural Research Corporation, ISSN:1561 – 770X, 2015.
6. Amira A. A. Mekawi, Assessment of sediment monitoring of Khashm el Girba dam, Nile Water Science & Engineering Journal, Vol. 8, Issue 2, 2015.

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<sup>5</sup> The Netherlands Fellowships Programs - The Netherlands Government.

7. Abu Obieda B. Ahmed, Abraham Haile Mehari, Amira A. Mekawi, Flood and Water Harvesting Systems in Sudan: Rich Diversity & History, Significant Contribution to Water & Food Security, submitted to WIF2, Nov. 2016.
8. Ahmed M. Babiker et. al. Effect of Reliability of Water Releases Downstream Abu Ushar Head Regulator, Gezira Scheme, Sudan. Sudan Journal of Science and Technology 18(2) (2017): 72-83.
9. Igbal Ali, Amira Mekawi, Hydrological response of the Blue Nile catchment to downstream flows prediction. Nile Water Science & Engineering Journal, Vol. 10, Issue 1, 2017.
10. Amira A. A. Mekawi et. al, Insights on the performance of the Blue Nile gauging stations with special emphasize on Khartoum gauging station, Nile Water Science & Engineering Journal, Vol. 11, Issue 1, 2018.

#### Others

1. Project coordinator of the Tailor Made Training Course on: “Water Management in Mega Irrigation Schemes” held at HRC-Sudan in collaboration with MetaMeta Research (The Netherlands), 14-25 August 2016.
2. Project leader from HRC-Sudan side of the refresher course “Water Harvesting: A missed potential for food security in the semi-arid regions of Sub Sahara Africa” held at HRC-Sudan in collaboration with UNESCO IHE (The Netherlands), 22-26 Nov. 2015.
3. Contribution to the lecture note: Regional training of trainers in Hydrological Forecasting and Time Series Analysis, prepared for the: IGAD-HYCOS Project, Dec. 2014.
4. Course coordinator of the regional refresher course “Revisiting Water Management in Irrigation Systems in Sub-Saharan Africa: Opportunities and Constraints for Productivity Increase” held at HRC-Sudan in collaboration with UNESCO IHE (The Netherlands), 6-10 Oct. 2013.
5. Membership of the scientific promotion committee at HRC-Sudan.
6. Involvement in HRC internal committees for preparation of annual performance reports besides other technical committees.
7. Leading the internal committee for the upgrading of the HRC-Sudan website in year 2015.
8. Contribution to the scientific visits of Sudanese universities to HRC by giving introductory power point presentations about the center’s mission and its research activities in addition to providing scientific support to trainee students at HRC on different levels (BSc, MSc, etc...).
9. Coordination of the national training program of the undergraduates held at HRC-Sudan under the umbrella of the Ministry of Water Resources and Electricity (two batches).
10. Lecturing in training courses held at HRC on national and regional level.

11. Direct supervision on Spate Irrigation newsletter in Sudan in years 2013-2014 and contribution to HRC former newsletter and current magazine.
12. Coordination of monthly seminars at HRC in year 2015.
13. Blog on “Freeing up her time with electric churners”, Amira Mekawi & Matthijs Kool, May 2015. Part of the work of the Spate Irrigation Network under the IFAD/EU supported program "From Africa to Asia and Back Again"

<http://thewaterchannel.tv/thewaterblog/348-freeing-up-her-time-with-electric-churners>