

GENERAL INFORMATION

Contact	- Phone: +20 10 8650816 - Email: meame_69@yahoo.com - Address: Nile Forecast Centre, Planning Sector, Ministry of Water Resources and Irrigation, Korniche El-Nil, Embaba, Giza 12666, Egypt
Profession	- Hydrologist/Water Resources Engineer (Ministry of Water Resources and Irrigation, Egypt)
Experience	18+ years
Qualifications	- Member, Egypt Syndicate of Engineers, 1991 - Imperial College Alumni, 2006 - Member, Nile Basin Capacity Building Network for River Engineering (NBCBN-RE), 2006 - Nile Basin Research Programme Alumni, 2007 - National Committee on Climate Change Member, 2009
Year of Birth	1969
Nationality	Egyptian
Specialisations	- Water Resources Management - Hydrology/Land Surface Modelling - Flood Forecasting - Climate Change Impacts on Water Resources - Agro-Economic Modelling - Translation of Water Related Books
Languages	- Arabic (mother tongue) - English (excellent)

KEY QUALIFICATIONS

- 18+ years experience with mathematical models in the fields of water resources planning and management, hydro-meteorological forecasting, climate change impacts on water resources. This experience includes application, calibration, and validation of a variety of models in addition to development/modification of model codes in Visual Basic, FORTRAN, and C.
- Experience with statistical analysis of time series (e.g. flood frequency analysis) and spatial fields (e.g. satellite rainfall fields) using simple and complex methods.
- Experience with handling and processing global climate datasets including re-analysis datasets and output of global climate models.
- 18+ years experience in computer programming using Visual Basic (including program and interface design), FORTRAN, and the General Algebraic Modelling System (GAMS). High experience in using different software packages (e.g. Office, ArcGIS) under both Windows and Linux operating systems.
- Participated in more than 15 publications including journal papers, conference papers, and study reports in addition to many unpublished or internally published documents.

- Experience in dealing with different cultures and working/living in different countries/environments as a team member/leader.
- Experience in teaching/providing training for engineering/climate change subjects and computer programming.
- Attended more than 25 workshops and conferences where I have mostly participated either by submitting a paper, giving oral or poster presentation, and/or through discussions. I have also participated in the organization of a few workshops.
- Attended more than 20 training courses held at national and international training centres on different subjects related to modelling, computer programming, and troubleshooting or HW/SW problem

EDUCATION

B.Sc.	Cairo University, Egypt	Civil Engineering	1986 – 1991
M.Sc.	University of Southampton, UK	Irrigation Engineering	1993 – 1994
DIC	Imperial College, University of London, UK	Civil and Environmental Engineering – Climate Change and Hydrology	1999 – 2000
Ph.D.	Imperial College, University of London, UK	Civil and Environmental Engineering – Climate Change, Hydrology, and Land Surface Schemes	2002 – 2006

CAREER SUMMARY

NOV 2009-	Egyptian National Coordinator for the Flood Preparedness and Early Warning Project	Nile Basin Initiative (NBI) Eastern Nile Technical Regional Office (ENTRO), Addis Ababa, Ethiopia	Egypt
OCT 2010-	Post-Doctoral Researcher for the ACCION (Adaptation to Climate Change Impacts on the Nile River Basin)	Department of Hydro-informatics, UNESCO-IHE	The Netherlands & Egypt
OCT 2009-	Manager of the Nile Forecast Center (NFC)	Nile Forecast Centre, Ministry of Water Resources and Irrigation (MWRI)	Egypt
JUL 2008-Sep 2009	Hydrologist/Climate Change (Assistant Manager of Works then Manager of Works since Oct 1 st 2008)		
AUG 2007-APR 2008	Senior Guest Researcher	University of Bergen	Norway
DEC 2006-JUN 2007	Part-time Sub-Consultant	Scott Wilson UK	Egypt
SEP 2006-	Hydrologist (Assistant Manager of Works)	Nile Forecast Centre, Ministry of Water Resources and Irrigation (MWRI)	Egypt
2002-2006	PhD Researcher	Imperial College London	UK

2000-2002	Hydrologist (Assistant Manager of Works)	Nile Forecast Centre, MWRI	Egypt
1999-2000	Researcher	Imperial College London	UK
1992-1999	Water Resources Engineer	Planning Sector, MWRI	Egypt
1991-1992	Structural Design Engineer	Egyptian Engineering Group	Egypt

MAJOR WORK ACCOMPLISHMENTS

- Managing the “Forecasting and Integrated Water Resources Management” component of the “Climate Change Risk Management Programme in Egypt”.
- Participating in the translation of the book titled “Water in the Arab World: Management Perspectives and Innovations”, published by the World Bank.
- Participating in NBCBN Research Activities to model the Sudd Marshes in Southern Sudan, 2009 – 2010.
- Participating in the Nile Basin Research Programme, 2007 and 2008.
- Leading the preparation of the technical report "Assessment of Vulnerability and Adaptation of Water Resources to Climate Change" to be incorporated in the Egyptian second national communication to the UN Framework Convention on Climate change, 2007.
- Participating in the enhancement of the Nile Forecasting System (NFS) – a satellite-based hydrological modeling and forecasting system of the Nile Basin – ongoing activity.
- Participating in the development of a decision support system (DSS) for the Karun-Dez river system in Iran. This work was done for Scott Wilson UK, 2007.
- Participating in the preparation of the “Lake Nasser Flood and Drought Control: Integration of Climate Change Uncertainty and Flooding Risk (LNFDC/ICC)” Project proposal, 2001 and final reports, 2008.
- Leading the preparation of the component activities and workplan for the National Water Availability Management Component of the “National Water Quality and Availability Management” Project, 1999.
- Participating in the update of the Ministry's water policy till the year 2017; this was approved by the cabinet in November 1998.
- Participating in the preparation of the report “Technical report on Water and Land Resources Planning and Management in Egypt” using the Egyptian Agricultural Sector Model, 1998.
- Participating in the upgrading and enhancing the Egyptian Agriculture Sector Model – A GAMS optimization model for agricultural planning. 1997.
- Participating in the study on "Maximizing Global Efficiency of Egypt's Nile Irrigation System", 1996.
- Leading a team for debugging and enhancing the Planning Distribution Model, 1996.

EXPERIENCE**Nov 2009 –****National Coordinator of Egypt for the Flood Preparedness and Early Warning (FPEW) Project, Eastern Nile Technical Regional Office**

This post is additional to the managerial post at the NFC with main responsibilities to communicate and coordinate activities of the project within Egypt in close contact with the Nile Basin Initiative (NBI) focal point in Egypt and the project coordination unit in Ethiopia. Two main activities of the project have recently been accomplished. The first is Enhancing the Nile Forecast Centre which has been conducted through a contract with Hull University, UK for which I directed NFC staff to evaluate the enhancements before approving the enhanced system. The second is participating in the annual flood forum held in the period 13-16 Jan 2010 in Nazareth, Ethiopia.

Oct 2009 –**Manager of the Nile Forecast Centre (NFC), Ministry of Public Works and Water Resources (MWRI), Egypt**

In addition to the technical work given below, I assumed managerial responsibilities of the centre in terms of personnel, equipment, operations, and interaction with other departments within MWRI and beyond. My responsibilities include also management of the “Improving rainfall estimation over the Nile basin using merged multi-channel infra-red and microwave satellite observations” conducted in collaboration with the University of Louisiana at Lafayette, USA and the “Forecasting and Integrated Water Resources Management” component of the “Climate Change Risk Management Programme in Egypt - CCRMP”. CCRMP is a multi-component programme managed by several UN organizations. My responsibilities include planning of activities, coordinating with other components and UN agencies, and managing the implementation of activities assigned to the NFC such as using Regional Climate Model results to investigate the impacts of climate change on Nile River flows conducted in close collaboration with the Danish Hydraulic Institute (DHI) and the UK Met Office. NFC is also one of the collaborating parties in the EU-FP7 “Improved Drought Early Warning and FORecasting to strengthen preparedness and adaptation to droughts in Africa” which is due to start in January 2011.

Oct 2009 –**Part-Time Post-Doctoral Researcher, UNESCO-IHE, the Netherlands**

I will be working on a project titled “Adaptation to Climate Change Impacts on the Nile River Basin – ACCION”, mainly focussing on quantification of uncertainty of climate change impacts and how to address that when formulating adaptation strategies and policies in a risk-based framework. The project involves 5 other post-docs from 5 different Nilotic countries and will involve work at home countries with some time spent in Delft. The launch meeting was held on 16-10-2009. I spent the periods 11/7/2010 to 13/8/2010 and 19/9/2010 to 14/10/2010 at IHE applying the GLUE methodology to characterize the uncertainty of climate model results. A publication on the subject is under preparation.

Jul 2008 – Sep 2009**Hydrologist (Assistant Manager of Works then Manager of Works since Oct 1st 2008), NFC, MWRI, Egypt**

Resumed work as a hydrologist/climate change specialist. See Section (Sep 2006) below. In addition to these recent activities:

- Finalization of the Documentation the “Lake Nasser Flood and Drought Control Project” especially the main report (Vol I) and the climate change report (Vol VI).
- Working on the “Forecasting and Integrated Water Resources Management” component of the “Climate Change Risk Management in Egypt” (CCRM) Project funded by the Millennium Development Goals Fund (MDGF) administered through the UN. This component will focus on the adoption and application of the Regional Climate Model (PRECIS) to the Nile Basin to investigate the impacts of climate change on river flows, in collaboration with the Danish Hydraulic Institute and the UK Met office through a contract with UNEP. UNESCO is involved in capacity building activities and policy formulation based on the results of the impact study. I am one of the operational focal persons and have participated in drafting the work plan of the component. I was involved earlier in 2007 in writing the proposal of this component before it was integrated with other components to formulate the whole programme.
- Working on the project “Enhancement to Nile Forecasting System Satellite Precipitation Estimation and Hydrological Models in National Forecast Centre in Egypt (ENFS)” to be implemented by Hull University, UK and funded by the “Flood Preparedness and Early Warning” project managed by the “Eastern Nile Regional Technical Office (ENTRO)”. I am one of the key recipients of the project outputs

responsible for reviewing the technical work and documentation.

Apr – Jun 2009

Sub-Consultant to the World Bank Group

This is a three-month assignment to participate with another colleague in the translation of a large edited book titled “Water in the Arab World: Management Perspectives and Innovations” published by the World Bank. The Arabic copy will be available soon from the Arab Water Council.

Aug – Dec 2007, Feb – Apr 2008

Senior Guest Researcher, Nile Basin Research Programme, University of Bergen, Norway

This is a four-month post-doctoral research in 2007, followed by a two-month continuation period in 2008, focussing on climate variability and change within the Nile Basin and their impacts on river flow and health. The programme aims at bringing qualified researchers from the Nile Basin to perform collaborative research on subjects of interest in the basin and to produce quality joint publications on these issues. I led the runoff group in collecting and analysing river flow data, and conducting hydrological simulations for current and future climate scenarios. I have worked jointly with climate scientists from Bjerknes Center for Climate Research at the University of Bergen, to generate detailed climate scenarios for the Nile basin and with other hydrologists to use these scenarios to drive hydrological models (HBV and NFS). The results were submitted for publishing to the Hydrological and Earth Systems Sciences (HESS) journal (See publications below).

Feb – Jul 2007

Part-Time Hydrologist, Resources Technology Bureau, Egypt

This 6-month assignment focused on the preparation of the technical report "**Assessment of Vulnerability and Adaptation of Water Resources to Climate Change**". The report has been submitted to the national committee on climate change responsible for preparation of the second national communication of Egypt to the UNFCCC. The report included a review of the Egyptian water resources system, a review of previous assessments of climate change on the Nile Basin, the construction of climatic scenarios for the Nile basin and Egypt, and analysis of the vulnerabilities and

adaptation options for the water resources sector in Egypt.

Dec 2006 – Jun 2007

Part-time Egypt-Based Hydrologist/Water Resources Engineer, Scott Wilson UK

I have been involved in the following projects:

1. The development of a decision support system (DSS) for the Karun-Dez river system in Iran. My responsibilities included review/update/upgrade of developed models (flow forecasting, optimization of multi-reservoir operation using GAMS, water allocation and water quality using MIKE BASIN, flood inundation using HEC-RAS) and their integration into the DSS which was developed using MS-ACCESS.
2. A pre-feasibility work for a hydropower dam in Malaysia. My responsibilities included data needs assessments, analysis of hydro-meteorological data, record filling, and flood frequency analysis.
3. Hydrological study for the assessment of flood and sediment characteristics for two proposed dams on the Blue Nile, Ethiopia. My responsibilities included analysis of meteorological, hydrological, and sediment data, record filling and development of regional relationships to obtain flow and sediment time series at the the Karadobi, Mendaia, Border (Ethiopia) dam sites, and flood analysis.

Sep 2006 – Aug 2007

Hydrologist (Assistant Manager of Works), Nile Forecast Centre (NFC) of the Ministry of Water Resources and Irrigation (MWRI), Egypt

Resumed work as a hydrologist/climate change specialist. The centre is responsible for issuing hydrological forecasts using the Nile Forecasting System (NFS) which utilizes satellite rainfall estimation techniques to forecast the inflow of the Nile at Aswan. My responsibilities include the operation of the Nile Forecast System (including software and hardware maintenance and troubleshooting) and the supervision of young engineers in performing hydrologic related studies. Since my return I have been reviewing the climate change reports of the “Lake Nasser Flood and Drought Control: Integration of Climate Change Uncertainty and Flooding Risk (LNFDC/ICC)” Project (2002-2005). The project has been extended till December 2008 and I am the main responsible for reporting the results of the statistical downscaling model developed by the project consultants. In addition, I am partly responsible for finalizing the enhancements to the NFS performed during the project and for producing the final project documents.

Oct 2002 – Jun 2006**PhD Researcher, Imperial College London, UK**

The study was titled “**Improvement of the hydrological performance of land surface parameterisation: an application to the Nile Basin**”. The research involved the evaluation, calibration and modification of the UK Met Office Surface Exchange Scheme (MOSES, FORTRAN code) to simulate parts of the Nile at the GCM grid scale. The study involved analysis of rainfall and flow time series for the Nile, the development and calibration of a weather generator for disaggregating monthly rainfall into daily series, and the calibration of the UK land surface scheme. I passed the PhD viva on 26/5/2006 with minor corrections and the degree was awarded on 30/6/2006.

During the same period, I assisted in tutorials and coursework marking for hydrology, FORTRAN, and Civil Drawing. In addition, I worked as a part-time assistant to my PhD supervisor on the “**Yucca Mountain Nuclear Waste Disposal**” project. My responsibilities included literature management and collection and analysis of rainfall and flow data.

During the period October 2005-May 2006, I worked as a part-time research assistant in the Department of Civil and Environmental Engineering of Imperial College London on the **Nirex Radionuclide Safety Assessment Programme**. The study was titled “Demonstration of Model Applicability under Field Condition: 50-Year Simulation of Caesium Migration in Silwood Soil” and I was responsible for applying soil-water-plant and solute transport models to study the migration of Caesium in soil. The study results have been documented in a Nirex report which is currently under review.

Oct 2000 – Sep 2002**Hydrologist (Assistant Manager of Works), NFC - MWRI, Egypt**

The centre is responsible of issuing hydrological forecasts using the Nile Forecasting System (NFS) which utilities satellite rainfall estimation techniques to forecast the inflow of the Nile at Aswan. My responsibilities included:

- Operation of the Nile Forecast System
- Supervision of young engineers in performing hydrologic related studies
- Procurement of computing equipments for the center, and troubleshooting software and hardware problems to ensure the smooth operation of the NFS/NFC

Examples of the studies include:

- The assessment of the reliability of the ensemble streamflow prediction (ESP) method utilized for forecasting Nile flows within the NFS
- The backward extension (pre-1992) of satellite rainfall maps using canonical correlation analysis of available rainfall grids (1992-2001)

I also participated in the preparation of the proposal for “**Lake Nasser Flood and Drought Control: Integration of Climate Change Uncertainty and Flooding Risk (LNFDC/ICC)**” Project. I was one of the committee members who reviewed the technical bids submitted to the Ministry of Water Resources and Irrigation. The project started in May 2002 by a consortium of companies led by Delft Hydraulics and was scheduled to run till the end of 2005 but has now been extended till April 2008 and further till December 2008.

Oct 1999 - Sep 2000

Researcher: Imperial College London, UK

The research focussed on the “**Impact of Climate Change on the Inflow of the Nile River at Aswan**”. The study involved statistical analysis of climate change patterns (temperature and rainfall) over the Nile basin. In addition to investigating the use of a monthly water balance model to simulate the impacts of the climate change on river flows.

During this year, I have also participated in a literature review study on the “**Impacts of Climate Change on Water Resources**” conducted by the Department of Civil and Environmental Engineering of Imperial College for **British Petroleum (BP)**.

Jun 1998 – Sep 1999

Technical Assistant Component Manager: National Water Availability Management Component of the “National Water Quality and Availability Management” Project, Planning Sector of the Ministry of Public Works and Water Resources.

The goal of the NAWQAM Project is to reach “an effective and coordinated national system for sustainable water resources management”. The purpose is help “GOE institutions acquire the capacity to manage the water resources from a national perspective, using collaborative techniques and necessary stakeholder involvement”. Three specific outcomes have been identified for the Water Availability Management

Component to be achieved by the end of the project. These are:

1. Improved access and dissemination of water resources management information by/to stakeholders in forms suitable for influencing policy dialogue,
2. Greater capacity of the MPWWR Planning Sector to conduct analyses and prepare policy options for supply demand management, and
3. A functioning mechanism for consultation, coordination and cooperation among stakeholders.

My responsibilities included day-to-day management of the component activities, preparation of terms of reference for project consultants, preparation of progress reports, review and follow-up of work done by staff as well as consultants. I participated heavily in the development of the component activities documented in the component inception report and work plan.

Sep 1992 – May 1998, excluding Oct 1993 – Oct 1994

Water Resources Engineer, Planning Sector, Ministry of Public Works and Water Resources, Egypt

I worked for several projects including the “**Water Security project**” for Egypt, working for the “**Planning Studies and Models**” project, and working, part time, for the Dutch project “**Strengthening the Planning Sector & Water Quality Modelling - SPS**”.

Most of the projects assigned to the Planning Sector aim at short and long-term planning of the available water resources in Egypt to meet the demands of various water users in the most efficient way. These demands include Navigation, Municipal & Industrial, Fisheries, and Hydropower, in addition to the main user, which is the agricultural sector. Salt balance should also be considered. Water Quality and Integrated Management came into focus with the SPS Dutch project.

The work in these projects involved field data collection, data manipulation and analysis, operation, calibration and validation of computer models, and analysis of models' results. It also included conducting studies concerned with water resources planning and management in Egypt, **preparing water policy documents to be presented to top-level decision makers** (e.g. The Minister), and preparing reports and presentations about water policy issues that have been presented by myself, the head of the planning sector, and the minister. In addition, I have been responsible in some periods for the maintenance of computer software/hardware including the local area network.

The major part of my work dealt with the following models:

1. The “Nile Water Security Model - NILESIM” simulating the Lower part of the Nile (the part inside Egypt) in general terms.
2. The “Operational and Planning Distribution Model - OPDM” for detailed planning of water allocation at directorate level
3. The “Command Area Model - COMMOD” for detailed planning and operation of water distribution on farm level.
4. “Canals” and “Steady” models for simulating the hydraulic routing of flow through branching networks.
5. The Nile Economic Model “NILECON” and the Egyptian Agricultural Sector Model “EASM” (later called “ASME”, the Agricultural Sector Model of Egypt) for studying the economics of the water and agricultural Sectors. Both models are written in GAMS, the General Algebraic Modelling System, as optimisation models.
6. The Conjunctive Use Model for the generation and testing of policies to utilise groundwater and surface water in the Nile Valley and Delta conjunctively.
7. The Decision Support System for Water Quality Management “DSSWQM” which combines a database, a geographic presentation package (Mapper) for presentation of results, and four models, integrated and encapsulated by a graphical user interface, as follows:
 - RIBASIM: River Basin Simulation
 - WLM: Waste Load Model
 - DELWAQ: Delft Water Quality Model
 - COIN: Financial Analysis Model

Oct 1993 – Oct 1994

MSc Study, University of Southampton, UK

On study leave from the Ministry to study for the degree of MSc at the Institute of Irrigation Studies (IIS), University of Southampton. The MSc courses included irrigation systems, drainage systems, design of hydraulic structures, soil physics, hydrology, and irrigation management. For my thesis, I developed a Visual Basic version of the “**Irrigation Management Game**” which can be used as a training package for irrigation engineers/managers. The class room and PC versions of the game have been used for several training session conducted by the IIS worldwide. More information about the game is included in a paper published about it in the ICID Journal (see publications below).

Sep 1991 – Sep 1992**Structural Design Engineer, Egyptian Engineering Group, Egypt**

I worked in the field of design and construction supervision of steel and concrete buildings. I have participated in the design of many projects ranging from apartment building to garages, sheds, and chimneys. I especially participated in the design of project of “**Cairo West Power Station**”. A great part of the analysis is done on personal computers using Cads-Analyse for plane problems and SAP80, then SAP90, for flat slabs, raft foundations and space analysis. Special problems may require programming to save time. For Example, I wrote a program to analyse stresses in a tall chimney using Turbo Basic.

PUBLICATIONS

I led/participated in the following papers and reports:

- 1- Abdel-Ghaffar, E. and **Elshamy, M.**, 2009, Application of hydrological models for climate sensitivity estimation of the Atbara sub-basin, Ain Shams Journal of Civil Engineering (ASJCE) Vol. 2, p367-378.
- 2- **Elshamy, M.E.**, Sayed, M.A.-A., and Badawy, B., 2009, Impacts of climate change on Nile flows at Dongola using statistically downscaled GCM scenarios, Nile Water Science & Engineering Magazine 2, Special issue on Water & Climate, p1-14.
- 3- **Elshamy, M. E.**, Seierstad, I. A., and Sorteberg, A., 2009, Impacts of climate change on Blue Nile flows using bias-corrected GCM scenarios, Hydrological and Earth Systems Science, 13(5), p551-565.
- 4- **Elshamy, M.E.** and Wheater, H.S., 2009, Assessment of the Hydrological Performance of GCM Land Surface Schemes: an evaluation of MOSES for the Nile basin, Published online in Hydrological Processes on 22/4/2009, DOI: 10.1002/hyp.7298.
- 5- **Elshamy, M.E.**, Baligira, R., and Abdel-Ghaffar, E., and Moges, S.A., 2009, Investigating the climate sensitivity of Different Nile Sub-basins, Proceedings of the Thirteenth International Water Technology Conference (IWTC 13), 12-15 March 2009, p17-31, Hurghada, Egypt.
- 6- Nawaz, R., Bellerby T., Sayed M.A., and **Elshamy, M.E.**, 2009, Quantifying uncertainties in the assessment of Blue Nile flow sensitivity to climate change, Hydrological Processes (under review).
- 7- Moges, S.A., Baligira, R., and **Elshamy, M.E.**, 2008, Potential Application of Gauge merged Satellite Derived Precipitation data in Nile Basin for Local Scale Climate Change Impact Assessment and Hydrological Modelling, Proceedings of the 2nd Nile

- Basin Development Forum, 17-19 November 2008, Khartoum, Sudan.
- 8- **Elshamy, M.E.**, 2008, Assessing the Hydrological Performance of the Nile Forecast System in Long Term Simulations, Nile Water Science & Engineering Magazine 1, p22-40.
 - 9- **Elshamy, M.E.**, Seierstad, I.A., and Sorteberg, A., 2008, Impacts of Climate Change on Blue Nile Flows using Bias-Corrected GCM Scenarios, Hydrological and Earth System Sciences Discussions 5, p1407-1439.
 - 10- **Elshamy, M.E.**, 2006, Using fine-scale hydrological models to assess the performance of land surface schemes at the GCM scale, paper presented at the Nile Basin Development Forum, Addis Ababa, Ethiopia.
 - 11- **Elshamy, M.E.**, Wheater, H.S., Gedney, N., and Huntingford, C., 2006, Evaluation of the Rainfall Component of a Weather Generator for Climate Impact Studies, Journal of Hydrology 326, p1-24.
 - 12- **Elshamy, M.E.**, Mathias, S.A., and Butler A.P., 2006, Demonstration of Radionuclide Transport Modelling under Field Conditions: 50-Year Simulation of Caesium Migration in Soil, Report submitted to Nirex UK limited, Imperial/NRP_016.
 - 13- **Elshamy, M.E.**, Wheater, H.S., Gedney, N., and Huntingford, C., 2005, Development of a Rainfall Disaggregation Scheme for Climate Impact Studies, Poster presented at the European Geosciences Union General Assembly Meeting, Vienna, Austria.
 - 14- **Elshamy M.E.**, and Wheater, H.S., 2000, Impact of Climate Change on Water Resources, A report to BP by Imperial College, UK.
 - 15- Clarke, D., and **Ezzat, M.**, 1999, A Computer Simulation Game for Irrigation Management, Journal of the International Commission on Irrigation and Drainage, Vol. 48(2).
 - 16- Attia, B.B., and **Elshamy, M.E.**, 1998, Triggers and Application of Water Demand Management: A case study from Egypt, Proceedings of the Arab Water 98 International Conference, Cairo, Egypt.
 - 17- **Elshamy, M.E.**, and Attia, B.B., 1999, Water Demand Management in Egypt, Proceedings of the Seventh Nile 2002 Conference.
 - 18- Strengthening the Planning Sector Project, 1998, Nile Water Pollution Control Strategies: A Case Study Using the Decision Support System for Water Quality Management, Water Quality Management Working Paper WQM04, Ministry of Public Works and Water Resources, Egypt.
 - 19- Attia, B.B., Mohamed A.S., **Mohmoud M.E.**, El Masry, N., El-Din Y.M., Gomaa A.S., and Nawar A., 1997, , A Study on Developing a Revised, Integrated Land and Water Plan, Reform Design and Implementation Unit, Agricultural Policy Reform Project,

Ministry of Agriculture and Land Reclamation, USAID contract No. 263-C-00-97-00005-00.

- 20- Strengthening the Planning Sector Project, 1996, Minimization of Nile Water Losses to the Sea – Inception Report, Water Resources Planning Working Paper WQM05, Ministry of Public Works and Water Resources.
- 21- Water Resources Strategic Research Activity, 1996, Maximizing Global Efficiency of Egypt's Nile Irrigation System, WRSR Special Study Report by a collaborating team from Strategic Research Program, Planning Sector, and Irrigation Sector, Egypt.

CONFERENCES/WORKSHOPS ATTENDED

- 1- Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) Conference on “Sustainable Solutions for Strengthening the Capacity of the Nile Water Professionals”, 28-30 November 2010, Cairo, Egypt.
- 2- Workshop of the EU-FP7 project “Water Availability and Security in Southern Europe and the Mediterranean - WASSERMed” on the Egyptian Case Study “Water-related Security threats in the Rosetta area and the Nile Delta, Egypt”, 23-34 November 2010, Cairo, Egypt.
- 3- Nile Basin Research Programme (NBRP) second conference “Collaboration in the Nile Basin: The way forward”, 25-27 October 2010, Munyonyo, Uganda.
- 4- “Deltas in the Times of Climate Change” conference, 29 Sep – 1 October, 2010, Rotterdam, the Netherlands.
- 5- Consultation Meeting on “Climate Change Impacts on Water Resources and Coastal Zones in Egypt” held on 1/4/2010 in Cairo, Egypt and organized by the Climate Change Risk Management project. I presented the preliminary results of the Regional Climate Model (PRECIS) runs over the Nile Basin.
- 6- Third Nile Flood Forum organized by the Eastern Nile Technical Regional Office (ENTRO) during the period 13-16 Jan 2010 in Nazareth, Ethiopia. I presented the Flood Report of Egypt of the Water Year 2009/2010.
- 7- Training of trainers workshop on “Integrated Flood Management” organized by the World Meteorological Organization (WMO) in collaboration with Nile Basin Capacity Building Network (NBCBN), IGAD Climate Prediction and Application Center (ICPAC), The Swiss Federal Office for the Environment (BAFU), CapNet, and UNESCO-IHE.
- 8- First Joint Nile Basin Research Conference of the Applied Training Program (ATP) of the Nile Basin Initiative and the Nile Basin Research Program (NBRP) of the University of Bergen, 12-16 June 2009, Dar es Salam, Tanzania.
- 9- Climate Change Forum of the Eastern Nile Technical Office (ENTRO) on “Findings of

- the Approach Paper on Climate Change”, 28-29 May 2009, Addis Ababa, Ethiopia.
- 10- Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) 5th Regional Workshop on “GIS and Modelling”, 29 March - 2 April 2009, Cairo-Ismailia, Egypt.
 - 11- International Alliance of Research Universities (IARU) Congress on “Climate Change: Global Risks, Challenges and Decisions”, 10-12 March 2009, Copenhagen, Denmark.
 - 12- Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) Workshop on “The Impact of Climate Change on the Water Resources System of the Nile Basin”, 27-28 October 2008, Cairo, Egypt.
 - 13- Training of Trainers Workshop on “Climate Change and its Impacts on Water Resources Management”, 13-16 October 2008, Damascus, Syria
 - 14- Regional Seminar on “Building adaptive capacity - Mainstream adaptation strategies to climate change in managing African transboundary river basins”, 25-29 August 2008, Entebbe, Uganda
 - 15- Nile Basin Research Programme Workshop on “Climate and Health in the Nile Basin Region”, 20-21 November 2007, Bergen, Norway.
 - 16- Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) Workshop on “Knowledge Networks for the Nile Basin”, 5-7 March 2007, Cairo, Egypt.
 - 17- Third Regional Arab Water Conference, 9-11 December 2006, Cairo, Egypt.
 - 18- 1st Nile Basin Development Forum 2006, 30 November – 2 December 2006, Addis Ababa, Ethiopia.
 - 19- Workshop of the GIS and Modelling Cluster of the Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) on “The second phase of the Joint Cluster Research Activities & Initiation of local Action”, 16-18 September 2006, Cairo, Egypt.
 - 20- European Geophysical Union (EGU) 2nd General Assembly Meeting, 26-30 April 2005, Vienna, Austria.
 - 21- British Hydrological Society (BHS) International Conference, July 2004, Imperial College, London, UK.
 - 22- International Closing Workshop of the Monitoring, Forecasting, and Simulation (MFS) Project: MFS Achievements and Future Vision, 15-18 January 2002, Fayed, Egypt.
 - 23- National Closing Workshop of the Monitoring, Forecasting, and Simulation (MFS) Project: MFS Achievements and Future Vision, 24-27 October 2001, Alexandria, Egypt.
 - 24- 7th Nile 2002 Conference, 15-19 March, 1999, Cairo, Egypt.
 - 25- Arab Water International Conference, 26-28 April 1998, Cairo, Egypt.

- 26- Closing Workshop of the Irrigation Management Systems (IMS) Project, April 1997, Port Said, Egypt.
- 27- Workshop on the Planning Distribution Model (PDM), November 1996, Port Said, Egypt.
- 28- International Commission on Irrigation and Drainage (ICID) 16th International Congress on Irrigation and Drainage, 15-22 September 1996, Cairo, Egypt.

TRAVEL EXPERIENCE

I travelled to the following countries for academic or training purposes:

- 1- The Netherlands for participating in the launch of the “Adaptation to Climate Change Impacts on the Nile River Basin – ACCION” project, October 2009 and for conducting research, July/August 2010 and September/October 2010.
- 2- Tanzania for participating in the First Joint Nile Basin Research Conference, June 2009.
- 3- Denmark for attending the Climate Change Congress of the International Alliance of Research Universities (IARU) and meeting at the Danish Hydraulic Institute (DHI) related to the project “Climate Change Risk Management In Egypt”, March 2009.
- 4- Syria for participating in regional training workshop on climate change impacts on water resources management (October 2008)
- 5- Uganda for participating in the regional seminar on climate change adaptation in transboundary river basins (August 2008), and for participating in the NBRP Second Conference (October 2010).
- 6- Norway for conducting collaborative research on climate variability and change within the Nile Basin (August – December 2007, February – April 2008)
- 7- UK for conducting MSc (1993-1994), DIC (1999-2000), and PhD (2002-2006) Studies and to attend a training course at Hull University (August 2007) and finally to visit the UK Met Office (May 2010)
- 8- Turkey for a field trip to different irrigation, drainage, and dam projects as part of the MSc course (April/May 1994).
- 9- USA for training on mathematical models (April – June 1996), privatization strategies (April 1998), and validation of hydrological models (February 2001).
- 10- Austria for attending the EGU 2nd Assembly Meeting (April 2005).
- 11- Ethiopia for attending and presenting a paper the Nile Basin Development Forum (November/December 2006) and for being interviewed for the post of “Regional Water Resources Modeller” for the Shared Vision Program of the Nile Basin Initiative (February 2007) and for the post of “Regional Hydrometeorologist” for the Eastern

Nile Flood Preparedness and Early Warning Project” (February 2008), to participate in the Climate change Forum (May 2009), and finally in the Third Annual Flood Forum (January 2010).

HOBBIES/OTHER INTERESTS

- Collecting Stamps/Coins
- Photography of Natural Scenes
- Playing/Watching Soccer
- Reading in the History of Science

REFERENCES**Prof. Howard Wheeler**

Head of Environmental and Water Resources Engineering Section
Department of Civil & Environmental Engineering
Skempton Building
Imperial College London, South Kensington Campus
London SW7 2AZ
UK
Tel: +44 (0)20 7594 6066
Fax: +44 (0)20 7594 1511
Email: h.wheater@imperial.ac.uk

Dr. Ann van Griensven

Associate Professor in Environmental Hydroinformatics
Department Hydroinformatics and Knowledge Management
UNESCO-IHE Institute for Water Education
P.O. Box 3015, 2601 DA DELFT, The Netherlands
Visiting address: Office W.321, UNESCO-IHE, Westvest 7, 2611 AX Delft, NL
Tel: +31 15 215 18 12
E-mail: a.vangriensven@unesco-ihe.org

Dr. Tore Sætersdal

Director
Nile Basin Research Programme
UNIFOB Global
University of Bergen
Postboks 7800
N-5020 Bergen
Norway
Tel: + 47 55589300
Fax: + 47 55589892
Email: tore.satersdal@global.uib.no

Dr. Derek Clarke

Lecturer
School of Civil Engineering and the Environment
University of Southampton
Highfield
Southampton SO17 1BJ
UK
Tel: +44 (0)23 8059 3573
Fax: +44 (0)23 8067 7519
E-mail: D.Clarke@soton.ac.uk

A list of attended training courses is available upon request

Last Updated on December 7, 2010