

Contents

Nile River Biography and its Journey from Origin to End	1
Nader Noureldeen Mohamed	
 Part I The Aswan High Dam Reservoir	
Estimating the Life Time Span of Aswan High Dam Reservoir Using Numerical Simulation of Nubia Lake	35
Abdelazim M. Negm, Tarek Abdel-Aziz, Mohamed Nassar, and Ismail Fathy	
A Satellite Remote Sensing Approach to Estimate the Lifetime Span of Aswan High Dam Reservoir	57
Abdelazim Negm, Mohamed Elsayabi, and Kamal Ali	
Estimating the Sediment and Water Capacity in the Aswan High Dam Lake Using Remote Sensing and GIS Techniques	79
Abdelazim Negm, Mohamed Elsayabi, and Sommer Abdel-Fattah	
Water Quality Assessment of Aswan High Dam Reservoir	105
M. Elshemy and G. Meon	
 Part II The Nile from Aswan to its Promontories	
Morphological Variation of the Nile River First and Second Reaches Using RS/GIS Techniques	147
Abdelazim Negm, Mohamed Elsayabi, Reham El-Sayed, Neama Abd El-Basset, Shenouda Ghaly, and Kamal Ali	
Bed Morphological Changes of the Nile River DS Major Barrages	171
Ahmed M. Abdel Sattar	

Distribution of Natural Radioactivity in the Egyptian Part of the Nile River from Aswan to El-Minia.....	187
Ayman A. El-Gamal	
Assessment of Water Quality and Bed Sediments of the Nile River from Aswan to Assiut, Egypt	207
Abbas Sharaky, Talaat Salem, and Ayman Abdel Aal	
Morphology of the Nile River due to a Flow Rate over the Maximum Current: Case Study Damietta Branch	239
Abdelazim Negm, Tarek M. Abdel-Aziz, Mohamed N. Salem, and Wessam Yousef	
Nile River Bathymetry by Satellite Remote Sensing Case Study: Rosetta Branch.....	259
Abdelazim Negm, Saleh Mesbah, Tarek Abdelaziz, and Omar Makboul	
Toward a Dynamic Stability of Coastal Zone at Rosetta Promontory, Egypt.....	275
Ali Masria, Abdelazim Negm, and Moheb Iskander	
Part III Ecosystem, Fish and Fisheries	
Ecosystem and Biodiversity in the Nile Basin “Case Study: Lake Nasser”	305
Mohamed Abdel-Meguid	
Impact of Water Quality on Ecosystems of the Nile River	357
Mostafa Mohamed El-Sheekh	
Fish and Fisheries in the Nile Basin	387
Abdel-Fattah M. El-Sayed	
Part IV Upper Nile Challenges and Opportunities	
Trend Analysis of Precipitation Data: A Case Study of Blue Nile Basin, Africa	415
Osama Ragab and Abdelaziem Negm	
Recent Trends and Fluctuations of Rainfall in the Upper Blue Nile River Basin.....	451
Mosaad Khadr	
Productivity of Rainfed Agriculture of the Upper Nile River.....	467
Nader Noureldeem Mohamed	

Impacts of the Upper Nile Mega Projects on the Water Resources of Egypt.....	503
Alaa El din M. Elzawahry and Hesham Bekhit M. Bekhit	
Part V Climate Change: Variability, Vulnerability and Adaptation	
Nile Basin Climate Changes Impacts and Variabilities.....	533
Khaled Khir-Eldien and Sherien Ahmed Zahran	
Climate Changes Vulnerability and Adaptive Capacity.....	567
Khaled Khir-Eldien and Sherien Ahmed Zahran	
Part VI Hydropolitics and Legal Aspects	
The Hydropolitics of the Nile River Basin.....	599
Mohamed Salman Tayie	
The Legal Aspects of the International Rivers: The Nile River as a Case Study	655
Mohamed Salman Tayie	
Part VII The Nile River: Conclusions	
The Nile River: Conclusions and Recommendations	719
Abdelazim M. Negm	
Erratum to: Estimating the Sediment and Water Capacity in the Aswan High Dam Lake Using Remote Sensing and GIS Techniques	731
Abdelazim Negm, Mohamed Elsayhaby, and Sommer Abdel-Fattah	
Index.....	733



<http://www.springer.com/978-3-319-59086-8>

The Nile River

Negm, A. (Ed.)

2017, XVII, 741 p., Hardcover

ISBN: 978-3-319-59086-8