



Cairo University

IMPACT ASSESSMENT OF THE PROPOSED WATER RESOURCES DEVELOPMENT PROJECTS IN THE BLUE NILE BASIN ON NILE FLOW AT ASWAN

By

Osama Mahrous Mossad Tarabih

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Irrigation and Hydraulics Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Title of Thesis:

Impact Assessment of the proposed water resources development projects in the Blue Nile Basin on Nile flow at Aswan

Key Words:

Blue Nile, Eastern Nile, GERD, High Aswan Dam

Summary:

Nile River is considered the primary renewable source of water to Egypt. Nile Basin could be divided into two main sub-basins. Eastern Nile sub-basin is the major one that contributes with about four fifth of water inflows that arrives at Aswan. Blue Nile is a major part of the Eastern Nile sub-basin that lies in Ethiopia and Sudan. Blue Nile is a target for many water resources development projects such as hydropower projects and irrigated agriculture. These projects may have negative impacts on downstream countries. This study introduces a hydrological model for Blue Nile to generate river system flows, which is then coupled with river and reservoir simulation model to simulate current flow conditions in addition to simulate different development scenarios in order to assess their impacts on High Aswan Dam.

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