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Stage Based Filling of GERD: An Adaptive and Cooperative Approach

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Abstract

The initial filling of Grand Ethiopian Renaissance Dam (GERD) with its storage capacity 74 billion cubic meter (BCM) has been the concern of all the parties since the beginning of its construction 2011. The international panel of experts also entreated the parties on the initial filling of GERD based on detail hydrological analysis with multiple scenarios (IPoE, 2013). The three countries (Egypt, Ethiopia, and Sudan) also affirmed to cooperate on the filling of GERD through the declaration of principles signed in 2015 and hired an international consultant to do the IPOE recommended hydrological analysis to be the base for the rules and guidelines of first filling and the annual operation of the GERD. Unfortunately, the consultants were not able to set an appropriate baseline, which can be acceptable by all parties. The National Independent Research Group (NISRG), which consists of 15 researchers, five from each country, brings a breakthrough idea called 'stage based filling', which gets acceptance by all parties. The stage-based filling has the flexibility to change the filling period based on the hydrological conditions of the Blue Nile with accelerated and decelerated filling, which is referred to as adaptive to the hydrological variability and changes. Similarly, it considers the availability of water in the downstream reservoirs and raises the level of cooperation among the parties. Therefore, the introduction of GERD in the Blue Nile system, together with the innovative efforts of NISRG, establishes the new concepts of stage-based filling that is adaptive and cooperative by its nature to solve such complex transboundary water resources management and development issues.

Keywords: Stage-based filling, adaptive, cooperative, GERD, NISRG, Blue Nile River

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