

## **Impact of a New Nile Basin Agreement on the Economy of Egypt**

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This research extends the work of a previous World Bank-financed IFPRI consultancy on the multiplier effects of the Aswan High Dam using CGE modeling under the existing Nile Basin Agreement. This new work will examine how a New Nile Basin agreement resulting in upstream increases in annual consumption and episodic flow reductions due to reservoir filling will impact the Egyptian Economy. The High Aswan Dam impact on Egyptian water supply was to take a highly seasonally intra-annual Nile flow that was also variable from year to year converts them to an effectively constant annual water supply. This water supply sitting behind the dam is available for release any time during year, effectively allowing for the intra-annual water supply to match the optimal intra-annual water demand pattern. A detailed hydro-economic model of the Egyptian Water Resources system will examine the potential impacts on the hydropower and irrigation water supply for a set of scenarios of future Nile inflows to the High Aswan Dam. The engineering impacts will be integrated into a dynamic CGE model of the Egyptian Economy to project the “economy-wide” allowing for reallocation of water and substitution of factors to optimize economic welfare. The results show that average impacts are low but there are risks of drought coupled with episodic reservoir filling that could have significant impacts on the Egyptian economy. There are water management options that could mitigate the impacts during drought by regional cooperation.