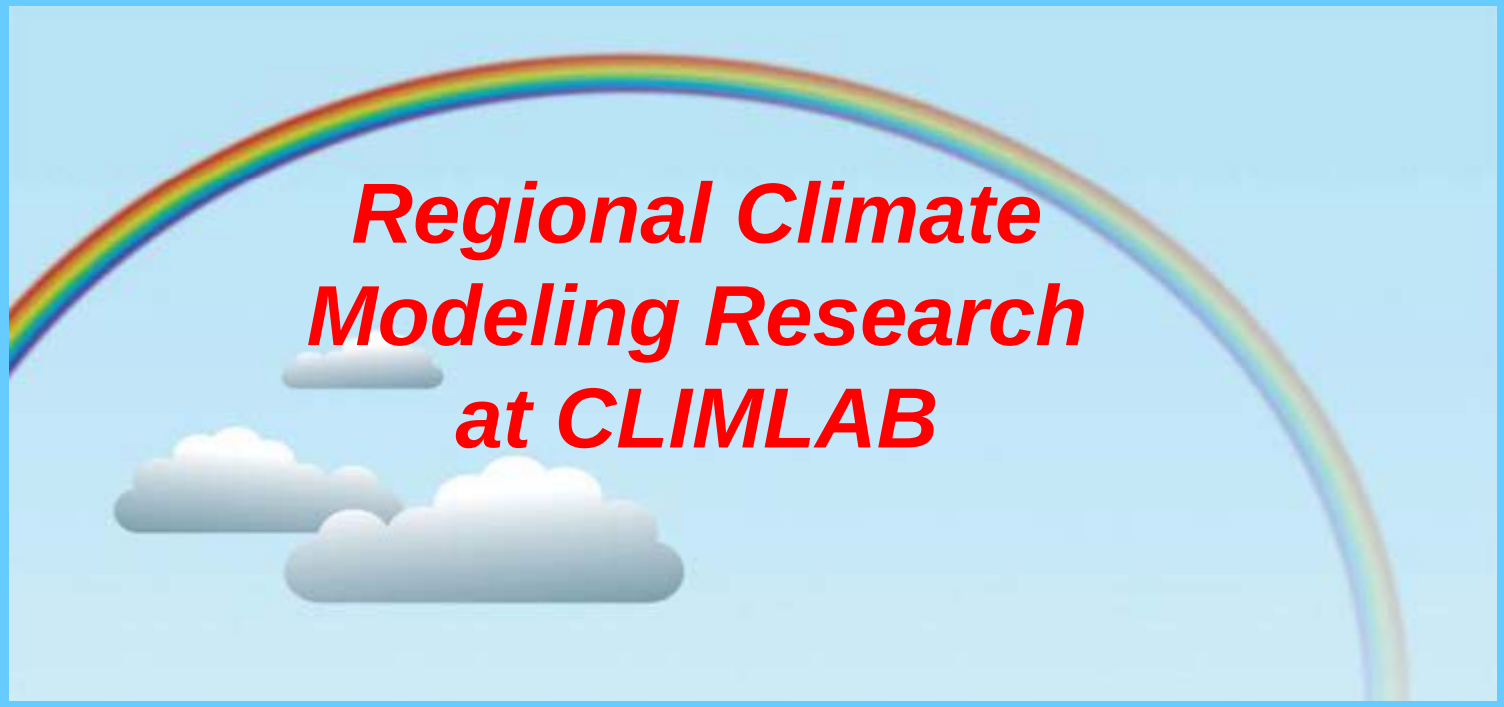

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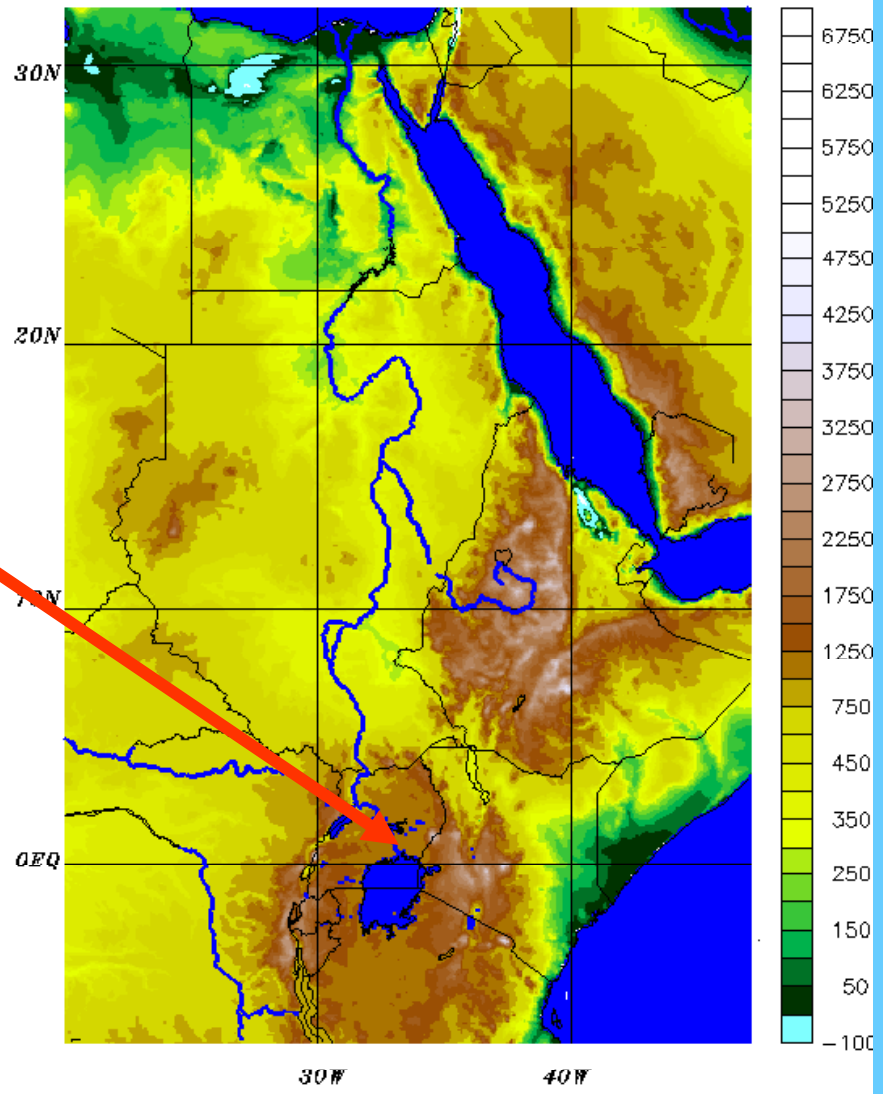
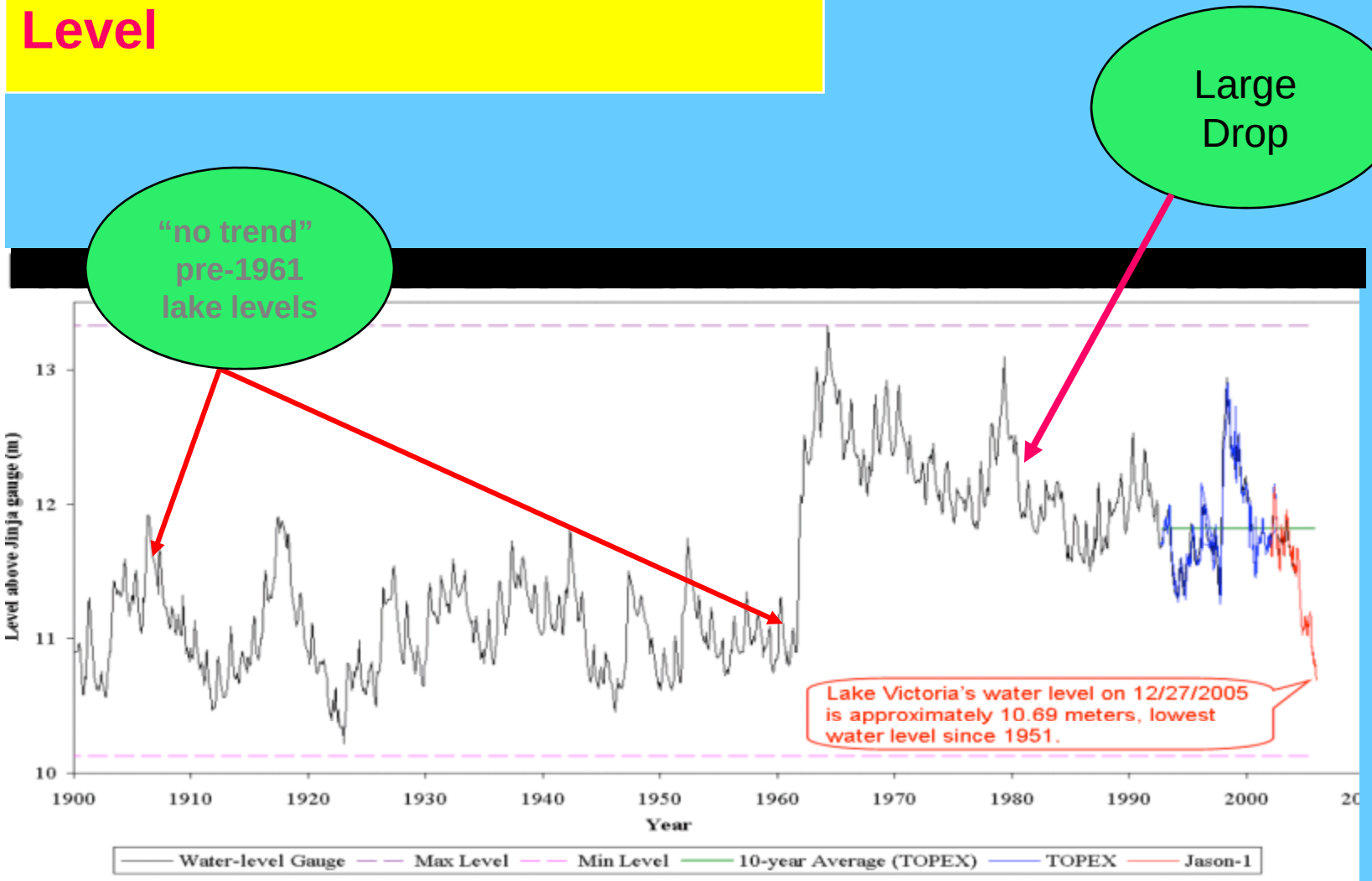
The Nile Basin

Hydropower generation A function of Lake Victoria Levels



Aerial view of Nalubaale-Kiira Dam Complex: Uganda

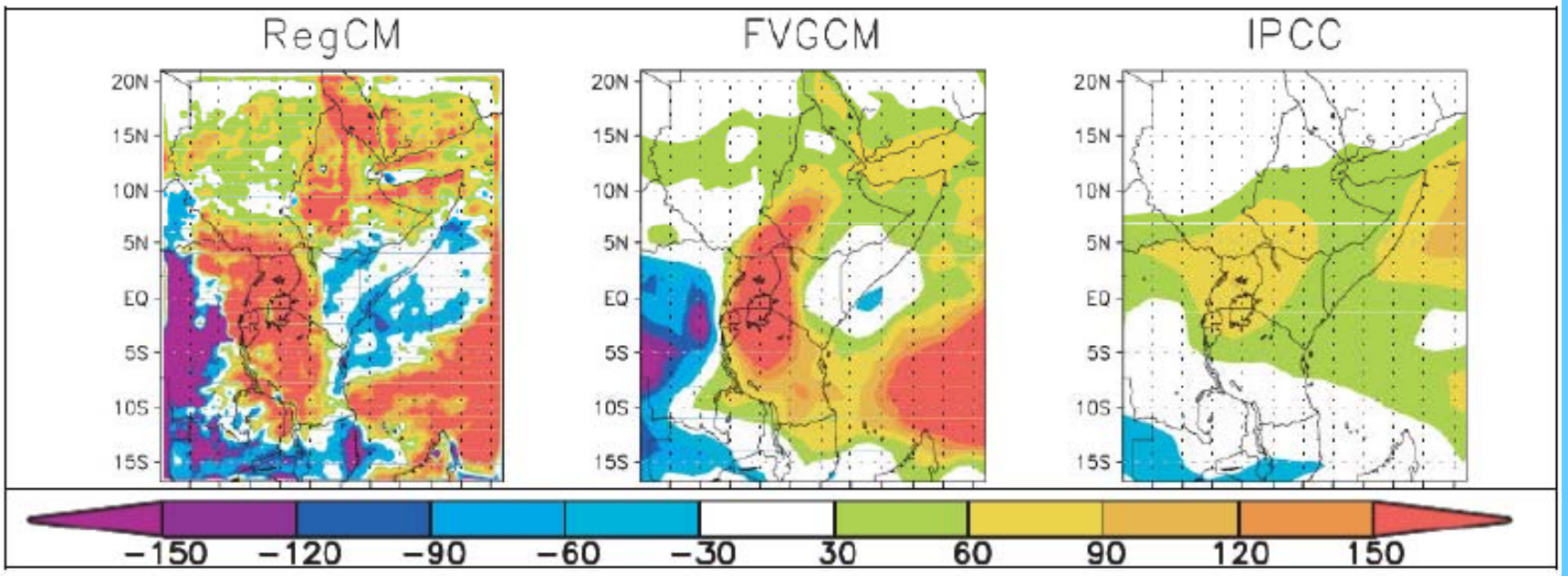
Dramatic Drop in Lake Victoria Level



Data Source:
Historical water level gauge data from Jinja, Uganda (near Lake Victoria's outlet).
Satellite radar altimeter data from USDS/NASA/UMD at:
http://www.pecad.fas.usda.gov/cropexplorer/global_reservoir/

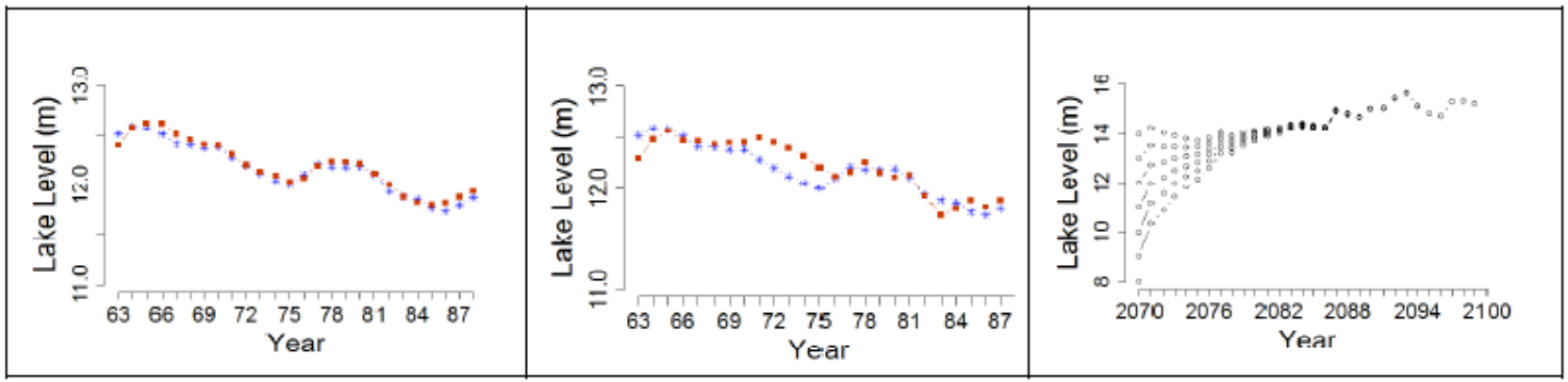
U.S. Department of Agricultural (USDA
Foreign Agricultural Service (FAS)
Production Estimates & Crop Assessment Division (PECAD)

Regional Climate Projections



Rainfall projections (A2: 2071-2100 average) minus (RF: 1961-1990 average) for the Oct-Dec short rains: (left) RegCM3 (40 km grid); (centre) 2-member FvGCM ensemble average; (right) eight IPCC GCM super ensemble average. Units, mm.

Regional Hydrological Projections



Ten year running mean of Lake Victoria observed levels (blue) compared to estimates based on our modified version of Tate et al (2004) water balance model for Lake Victoria with observed rainfall from six rain gauge stations (red); (center) Ten year running mean of Lake Victoria observed levels (blue) compared to estimates based on our modified version of Tate et al (2004) water balance model for Lake Victoria with rainfall from RegCM3-20km resolution reference run (red); (right) lake levels projections (2071-2100) based on rainfall input from RegCM3 (20km grid) A2 simulation. Since the initial level of the lake for 2071 is unknown, we assume multiple initial conditions for the hydrological model. All initial states converge to the same projection curve after about 10 years.