

The effect of selected climate change scenarios on engineering risk associated with slope stability of embankment dams

M-C. PREZIOSI, City University London, UK

T. MICIC, City University London, UK

SYNOPSIS. This paper presents the application of Advanced Probabilistic Slope Stability Methodology for Precipitation Effects (APSMP), developed to evaluate the notional probability of slope failure of earthfill embankment dams when exposed to future climate change scenarios. For this analysis the selected climate change scenarios are defined using the UKCP09 future climate projections. Notional probabilities are presented for the selected dam site, specific soil and climate scenarios. Using data collated from APSMP, the engineering risk associated with such failure events will be established and can then be related to the risk qualification. Using this approach, it will be possible to quantify the impact future climate change scenarios will have on the engineering risk associated with specific dam failure.