A System Dynamics Analysis of the Humanitarian Crisis in the Gaza Strip

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Abstract: The Gaza Strip may experience a grave humanitarian crisis in the near future due to the effect of its increasing population on its water security, energy security and infrastructure. The purpose of this report is to develop a simulation model to serve as an initial, high-level analysis of this problem and provide decision-makers with the tools to forecast the future of this crisis if the current trends are left unchanged. The primary focus of this model is on the challenges of water security given the population growth in Gaza; the current water supply will become insufficient for minimum thresholds of survivability at around 2038, thus identifying the need to mitigate further humanitarian risk. This model is made with the sincere hope that it will spur diplomatic action and investment for the people of Gaza to eschew massive humanitarian catastrophe, as the problems facing Gaza will soon become unsustainable.

Keywords: System Dynamics, Gaza, Humanitarian Crisis