Flooding simulation

This sub-model simulates the number of events of flooding in a year in each neighborhood, given a probability. Three initial prototype had been explored so far to obtain these probabilities: 1) a contingency Bayesian matrix approach based on calculating the partial probabilities of number of events, given the amount of rainfall. The second model uses the same bayes contingency table approach, but divides the city in term of age, and define contingency tables a for an old city and a newer city. Instead of rainfall, these tables uses the capacity of the sewer system as a predictor. In this case the model calculates the partial probability that a census block would have a number of event in intervals, conditional to the capacity of the sewer system. Both variables show a relationship and therefore a new model that combines the effect of all variables was also include. This model is a regression of the form

These model were derived from observed frequencies of total precipitation events, capacity of the sewer and the average age of the city based on data collected from the system of water of Mexico City... (metadata of age layer).

A new model is been develop that combined all information in a single unify model.