

## **Analysis of Mexico's Narco-War Network (2007-2011)**

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Since December 2006, more than a thousand cities in México have suffered the effects of the war between several drug cartels, amongst themselves, as well as with Mexican armed forces. Sources are not in agreement about the number of casualties of this war, with reports varying from 30 to 100 thousand dead; the economic and social ravages are impossible to quantify. In this work we analyze the official report of casualties in terms of the location and the date of occurrence of the homicides. We show how the violence, as reflected by the number of casualties, has increased over time and spread across the country. Next, based on the correlations between cities in the changes of the monthly number of casualties attributed to organized crime, we construct a narco-war network where nodes are the affected cities and links represent correlations between them. We find that close geographical distance between violent cities does not imply a strong correlation amongst them. We observe that the dynamics of the conflict has evolved in short-term periods where a small core of violent cities determines the main theatre of the war at each stage. This kind of analysis may also help to describe the emergence and propagation of gang-related violence waves.