**Is there any correlation (or a causal relationship) between (adverse) weather shock/variability and crime rates?**

There exists empirical evidence which shows that adverse weather shocks increase the level of stress hormone cortisol among humans. In Kenya, [Haushofer, De Laat  and Chemin (2012](https://www.dartmouth.edu/~neudc2012/docs/paper_195.pdf)) find that farmers' cortisol level increases further than non-farmers. This empirical articulation can be taken a step further to hypothesize an increased incidence of violence due to weather shocks, possibly through the channel of stress.

In this [document](https://www.dropbox.com/s/oarer53jm1abra3/Use%20of%20satellite%20based%20micro-data%20for%20geographically%20disaggregated%20economic%20analysis.docx?dl=0) I have detailed some of the interesting 'big data' sources that have been used in the empirical Economics literature in the top  journals in recent years. In our case, we can look at 'minor' weather shocks, such as higher than average rainfall in a particular week or month as well as 'major' shocks such as flood exposure and try to see if there is any statistically significant correlation with crime rates that we can get from the newspaper data.

Generally, in the empirical Economics literature, researchers use different statistical methods to go beyond showing correlations and attempt to establish a causal link between different factors. But it is generally accepted that incidence of different weather shocks is 'random' and such randomness makes it easier to make the case of a causal relationship.

In our case, if we can construct a panel/longitudinal data across several years and locations (say, districts or upazila) we can control for the location and time trend (they call it the panel fixed effects methods in the econometric literature) and other time-varying variables to look at the effect of a weather shock on crime rates. Of course, we can disaggregate the both the crime and weather shock into different types to locate any interesting pattern.

I think we can come up with interesting questions using these data sources.

I also have access to several nationally representative data from Bangladesh Bureau of Statistics on different socio-economic dimensions such as education, health, migration, etc. I think several of these 'traditional' data sources can be merged with the interesting new data sources we are talking about to produce interesting research.