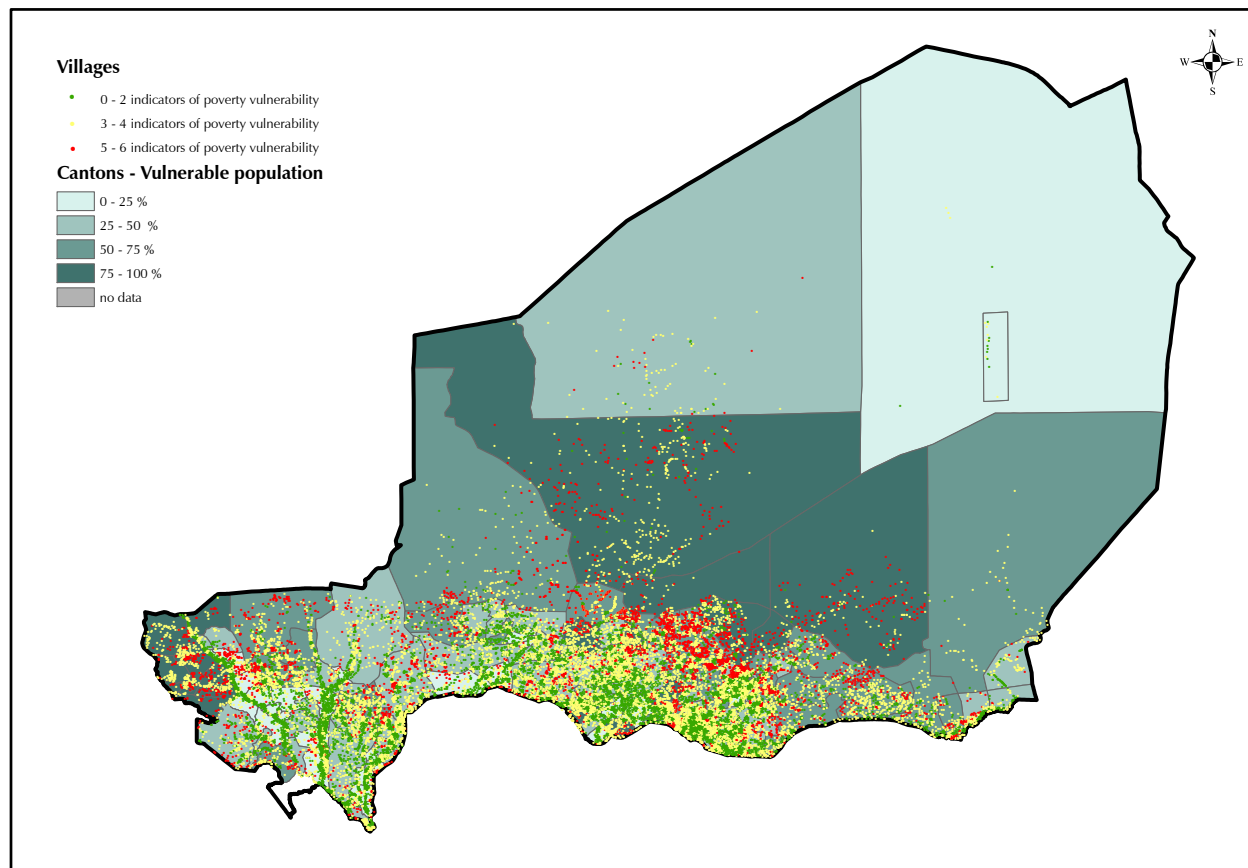


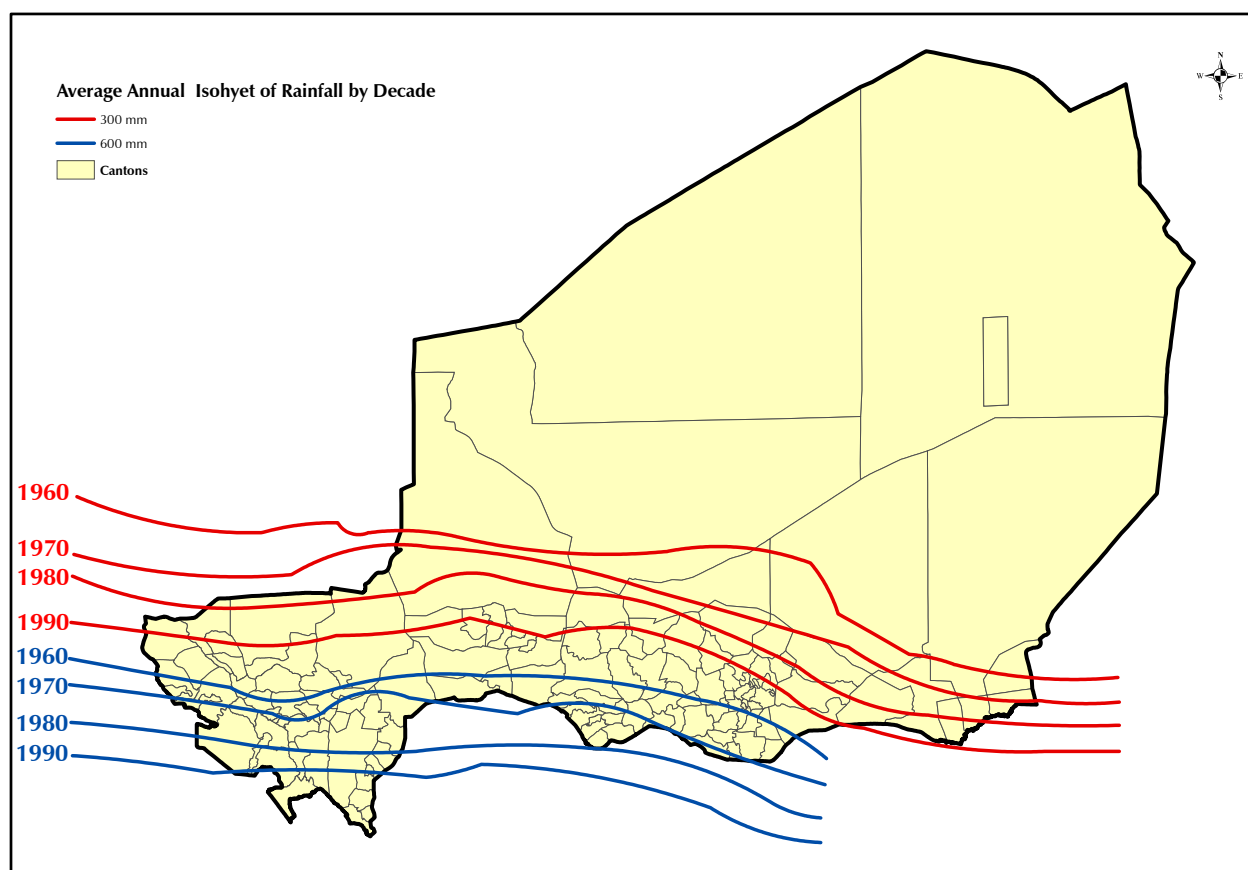
Identifying Populations at Risk - Niger Example

Combining Databases for Enhanced Understanding



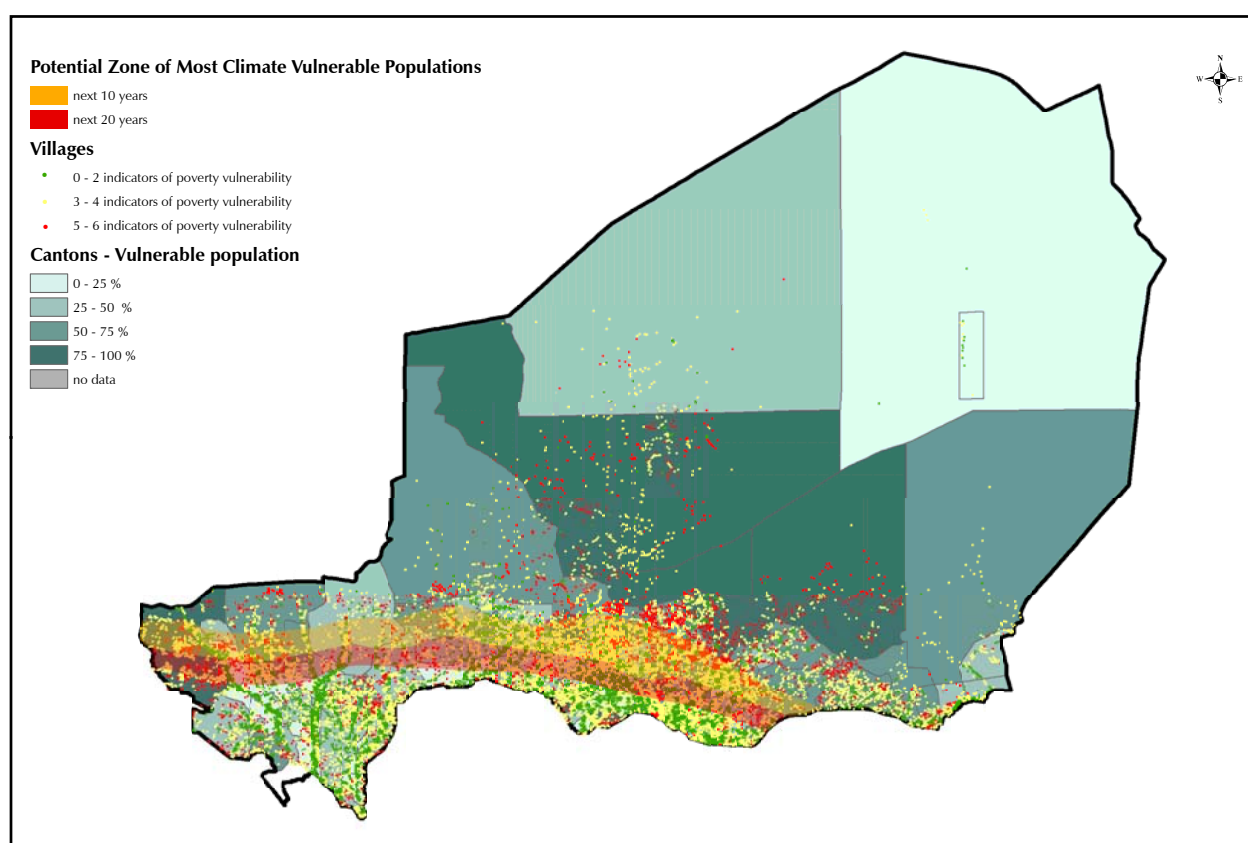
Locating Villages at Risk

Using village-level census, climate and land use information, Stone ranked each village according to six living conditions indicators: availability of water; availability of health care; availability of markets; ability to grow crops from rainfall; proximity to roads; and proximity to schools. We then symbolized each village --- green, yellow, and red --- to display increasing levels of poverty vulnerability. Poverty levels were then averaged for each Canton. Cantons with the darker shades have the highest percentage of vulnerable populations.



Downward Rainfall Trends - 1960 to 1990

Rainfed agriculture typically requires 350 mm/year to grow crops successfully. This map shows the demarcation between rainfall lower on average than 300 mm/yr to the north and equal to or higher than 300 mm/yr to the south. Over the years rainfall amounts have been decreasing and the 300 mm isohyet has been moving south. This is a significant decrease that is placing populations above the line at risk for starvation.



Layered Image: Populations Most Vulnerable to Migration

When the historic rainfall data is combined with village data, populations at risk can be summarized. It is then possible to identify the number of people who might be forced to migrate. Adding other datasets, such as ethnicity, would provide additional information about potential conflicts and migration.