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Rivers at Risk for International Violent Conflict

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ABSTRACT

The issue of international violent conflict caused by freshwater scarcity has become more important as freshwater becomes an issue of environmental security. Case studies have been done on the river basins presumed to be a cause of violent conflict, but few empirical studies have been completed. A study by Hauge & Ellingsen comparing several environmental factors to economic, social and political factors found freshwater scarcity to be a cause of conflict but secondary to economic and political factors. Using a group of 500+ dyads of contingent countries, this study looks for trends in international violent conflict and international river basins. Several variables are used in this study, including Toset et al's river boundary classification idea. Toset, et al. divided rivers as "upstream/downstream," "country boundary" and "mixed categories," finding the "upstream/downstream" category to have the most conflict. Other variables include the percentage of river basin area, based off Wolf, et al.'s data and the length of the country boundary between contingent country dyads. International violent conflict data spans from 1946 to 2000 and is limited to conflicts having 1000 battle-deaths or more, incorporating the number of battle deaths for intensity of war(s). This data was analyzed using several statistical models and further illustrated with a "Rivers at Risk" map, which illustrates rivers, which appear to be at a higher or lower risk of violent conflict.