

Thomas F. Homer-Dixon, "Environmental Scarcities and Violent Conflict"

Basic points: as world population increases, renewable resources will become more scarce. Environmental scarcities have already contributed to violent conflicts in many parts of the developing world, and this will increase, although most violence will remain sub-national and diffuse.

This paper presents results of a three year project examining environmental change and conflict. It put forward three hypotheses linking environmental changes and conflict.

1. Decreasing supplies of physically controllable environmental resources such as clean water and good land will provoke "simple scarcity" conflicts or resource wars.
2. Large population movements caused by environmental stress will induce "group-identity" conflicts, especially ethnic clashes.
3. Severe environmental scarcity will simultaneously increase economic deprivation and disrupt key social institutions, which in turn will cause "deprivation" conflicts such as civil strife and insurgency.

For each of these hypotheses the project selected to cases to study in depth. These cases were selected because they were areas where it appeared likely that there was a link between environmental change and conflict. This was done to try to disprove the null hypothesis, that environmental scarcity does not cause violent conflict.

Four general findings:

1. In the coming decades, resource degradation will contribute much more to social turmoil than will climate change or ozone depletion, whose primary effects will be insofar as they cause resource scarcity.
2. Environmental scarcity, which is in part subjective, has three main causes:
  - a. environmental change – the human-induced decline in quality or quantity of renewable resources, like clean water or fisheries
  - b. population growth, which means resources must be divided among more people
  - c. unequal social distribution, which means that many people have fewer resources available
3. The above causes interact. Two common ways are:
  - a. resource capture, in which decreasing quality and quantity of resources combine with environmental changes to cause elites to shift resource distribution in their favor
  - b. ecological marginalization, in which unequal access to resources and population growth cause migration to ecologically sensitive areas and overuse of resources, which causes environmental change
4. Societies can avoid turmoil if they are able to adapt so that scarcity doesn't cause suffering either by using domestic resources more sensibly and providing alternative employment for those with limited access to resources or by focusing on producing goods and services that can be traded on the international market for needed resources. These require social and technical ingenuity to enact. Unfortunately, this ingenuity is generally concentrated in richer countries that need it less.

Testing the hypotheses:

Hypothesis 1:

There is little evidence suggesting that simple scarcity causes interstate conflict. Non-renewable resources like oil may cause war, but renewable resources seldom do.

Hypothesis 2:

There is much more evidence supporting the idea that environmental scarcity causes population movement which in turn causes conflict. Still, the amount of migration that will occur and the conflict that this migration will cause vary greatly with social and political factors of each case.

Hypothesis 3:

There is some evidence that environmental scarcity undermines institutions, most importantly the state, and thus causes conflict. Still, more research is required to determine the exactly how strong these effects are. [Note: this becomes a rather broad area, given the inclusion of unequal distribution of resources as a cause of environmental scarcity. Marxist movements, for example, are thus largely included into this category.]

The processes involved in the second and third hypotheses often interact, creating a more complex system of effects.

Implications for international security:

While there is little reason to believe that there will be interstate wars over resources, the process of internal conflict and destabilization could have the effect of weakening countries, lowering their commitments to international agreements, and increasing the flow of refugees. It is also possible that some states will turn to dictatorship and may even attack neighbors in order to divert attention from internal problems.