

# Environmental Factors as Triggers for Violent Conflict: Empirical Evidence from the 'FAST' Data Base

Heinz Krumpfenacher

## Research question

In the past decades, natural resources have attracted considerable attention as a source of conflict. Depending on the respective theoretical premises, some scholars have argued that scarcity of renewable natural resources inevitably leads to violence in countries of the global South. Others have tried to show that it is not scarcity, but abundance of natural resources which creates problems<sup>1</sup>. But are these scholars right? Is there a direct link between the lack of or the existence of natural resources and violence? In order to answer these questions, we looked at the FAST data base<sup>2</sup>, which contains conflictive and cooperative data for over 20 countries, covering a time span in between four to six years.

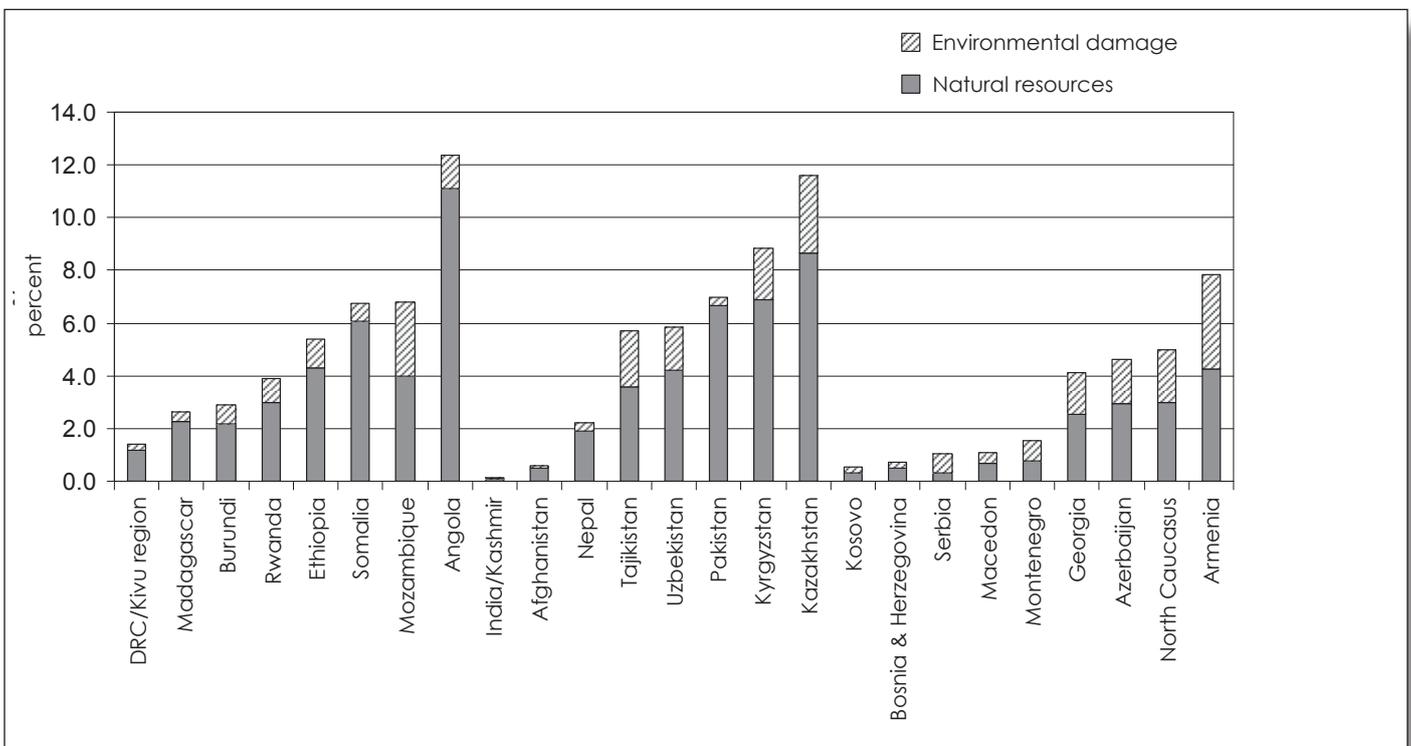
## Frequency of environment-related events

If we look at the percentage of events, which are somehow related to environmental issues (environmental damage and/or natural resources),

we see at first glance a huge difference between the various countries. For example, in oil-rich countries such as Angola or Kazakhstan, more than eleven percent of all events, which from a conflict/cooperation viewpoint are considered to be relevant, are linked in one way or the other to the environment. On the contrary, in countries such as Afghanistan, India/Kashmir, or Kosovo, this percentage tends to be much less; indeed it is almost nil (see Table 1). Overall, the percentage of events with an environmental background is 4.5, with around 3.5 percent falling in the category of 'natural resources' and only around one percent of all events is tied to environmental damage.

These results coincide with an earlier study we conducted within the ENVSEC<sup>3</sup> program on the Ferghana Valley. There, we found that out of the approximately 2,000 events, eight percent were related to 'natural resources' and three percent to 'environmental damage'. Thus, the Ferghana Valley shows a slightly higher incidence of environmentally-caused conflictive/cooperative

Figure 1: Percentage of environmentally-induced events to all events



<sup>1</sup> For an overview regarding the competing concepts, see Brauch, 2008, pp. 27–45.

<sup>2</sup> FAST (*Früherkennung und Analyse von Spannungen und Tatsachenermittlung* or Early Recognition of Tensions and Factfinding) is an event data-based political early warning program covering 25 countries/regions in Africa, Asia, and Europe. Its objective is the early recognition of potential crisis situations and windows of opportunity for peacebuilding. FAST was run by Swisspeace on behalf of a number of development agencies in Europe and North America. For further information see <<http://www.swisspeace.org>>.

<sup>3</sup> The ENVSEC-initiative is a joint program by UNEP, UNDP, OSCE, UNECE, REC, and NATO that has three key objectives: (1) assessment of environment and security risks, (2) capacity-building and institutional development to strengthen environmental cooperation, and (3) the integration of environmental and security concerns and priorities in international and national policy-making (for further information see: <<http://www.envsec.org>>).

events than the average of the 25 countries, which were monitored within the FAST program.

### Frequency of environment-related events per event type

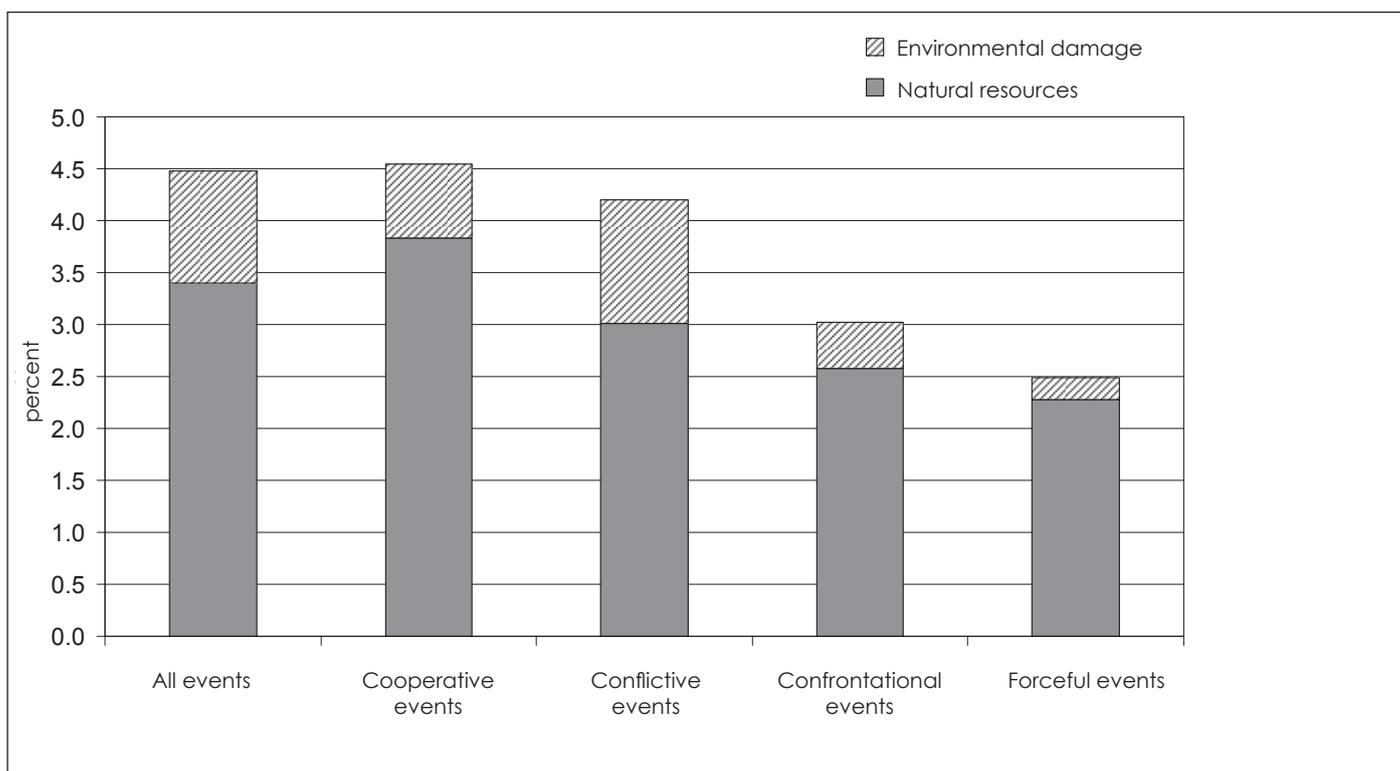
Assessing these results, it is important to keep in mind that the FAST data base contains exclusively events that are of importance to the escalation or de-escalation of sub-national, national, or international conflicts. This means that we do not only store events that comprise the use of force or violence, but also events that contribute to an easing of tension, the de-escalation of conflict, and/or peacebuilding. Thus both, conflictive, confrontational, and forceful events as well as cooperative events can have an environmental dimension. Table 2 shows that half of the events that have an environmental/resource aspect are of a cooperative nature (cooperative vs. conflictive, confrontational, or forceful events). Violence as such (that is events, which entail force) amounts to 2.5 percent of all events only, while cooperative events account for 4.5 percent of all events.

Again, the Ferghana example reveals some other interesting facts. In the Tajik and Uzbek parts of the Ferghana Valley, we observe a pattern that resembles the global trend—salient environmental events are mostly linked to conflict. Nevertheless, this does not hold true for the Kyrgyz part. Here, the links between reported environmental events and cooperation are slightly stronger. Hence, Kyrgyzstan might be an interesting testing ground for examining environmental factors conducive to peace.

### Conclusion

What are the main results of our very cursory descriptive analysis of the FAST conflict and cooperation data from an environmental perspective? First, given that only 4.5 percent of all relevant events are linked to environmental issues ('natural resources' or 'environmental damage'), empirical evidence suggests that there is actually no direct link between environmental parameters and political violence. Environmental factors undoubtedly play a crucial role in explaining political escalation and de-escalation processes. The causal relationship,

Figure 2: Event type and environment



however, is not linear. Neither the scarcity of land or water nor the abundance of oil or gas drives a society straight down the road to violent conflict. Resources like water and land or environmental damage can be important ingredients in a complex blend of political, cultural, and economical factors that eventually breed violence.

The institutional settings of the societies concerned, the structure and type of political authority, as well as global mechanisms at play and the historical context are just as important as, if not more, the actual availability of land or water in both explaining and resolving conflicts. Trivial as it may seem, this point is actually of crucial relevance given the propensity of decision-makers and policy institutions to draw on single-sided resource scarcity or resource abundance-based arguments and discourses.

## References

Brauch, Hans Guenter. 2008. "Globalization and Environmental Challenges: Reconceptualizing Security in the 21<sup>st</sup> Century." In Hans Guenter Brauch, Ursula Oswald Spring, Czeslaw Mesjasz, John Grin, Pal Dunay, Navnita Chadha Behera, Béchir Chourou, Patricia Kameri-Mbote, P.H. Liotta, eds. *Globalization and Environmental Challenges: Reconceptualizing Security in the 21st Century*. Hexagon Series on Human and Environmental Security and Peace, Berlin / Heidelberg / New York: Springer-Verlag, Vol. 3, pp. 27–45.