

Locating the frequency and concentration of forest conflicts: preliminary results based on a systematic compilation of empirical cases

Blas MOLA-YUDEGO, David GRITTEN

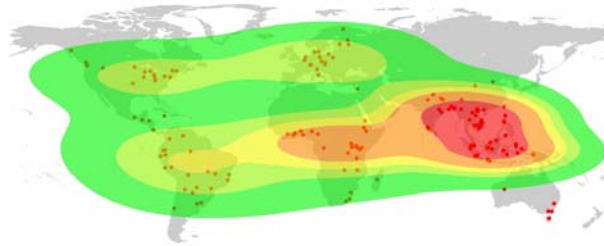
Faculty of Forest Sciences, University of Joensuu, P.O. Box 111, FI-80101 Joensuu, Finland

Conflicts regarding natural resource management are often deeply complex, presenting a broad scope of causes and actors, with intricate relations and degrees of intensity (e.g. Gritten and Saastamoinen 2009).

The present research aims at presenting ways to analyse the frequency and typology of forest conflicts, based on a systematic screening and location of cases.

Concentration pattern

a) Global level



b) Local level

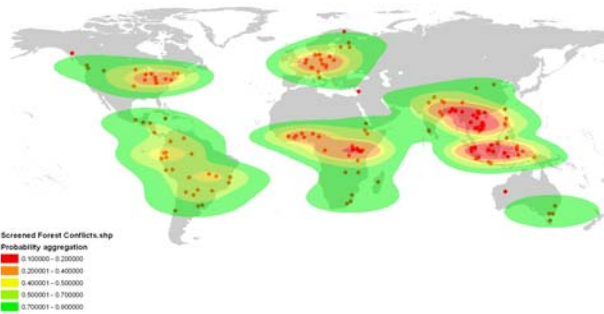


Fig 1. Percent volume contours of forest conflict occurrence based on the location of forest conflicts screened. The global level (a) and local level (b) are defined by using different levels of kernel bandwidth using Worton (1989) as a reference value.

Location of ENGOS involved

(only 9 representative cases selected)

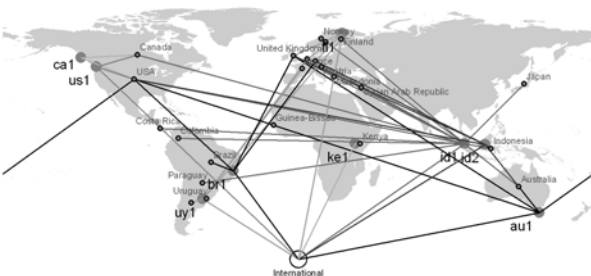


Fig 2. Links between ENGOS screened and 9 example forest conflicts.

For feedback: blas.mola@joensuu.fi david.gritten@joensuu.fi

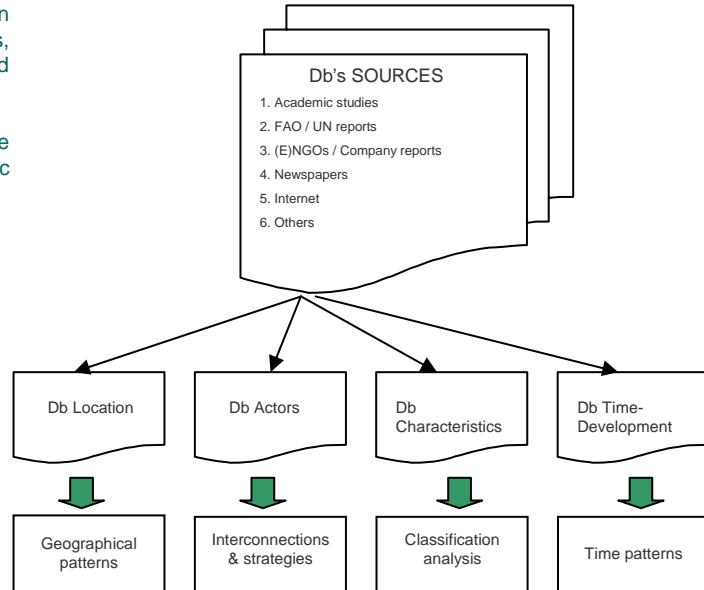


Fig 3. Summarised structure of the databases constructed as a basis for further studied.

Material and methods

A set of databases were constructed, covering 183 identified forest conflicts. The sources included: academic literature, international and local NGOs and ENGOS, companies' reports and local and international newspapers, among others (Fig 3).

Each case was geo-referenced, and the actors are categorised in order to allow for analysis and comparisons. The location database was the foundation for a geo-statistic methodology based on *hot-spot* associations (Silverman, 1986), in order to identify areas where forest conflicts are concentrated. The method also allows estimating a probability of occurrence of a forest conflict, given a geographical location, and based on the existing observed data. The locations were defined at global and more local scales by modifying a bandwidth reference value based in Worton (1989).

LIMITATIONS

DEFINITION of forest conflict

CLASSIFICATION methodology

ACCESSIBILITY to data

(eg barriers: linguistic, media coverage...)

Results and discussion

The preliminary results suggest a high frequency of forest conflicts in richly ecological regions of south-east Asia, often associated with activities by the forest industries, as well as weak governance (Fig 1).

The work also raises questions linked to future research regarding the intensity, magnitude and media coverage of conflicts related to forest management and the role of ENGOS within this (Fig 2).

Future research that compares the characteristics of the conflicts and the strategies of the actors involved including the levels of networking and the temporal dimension of the links, based on, e.g. the political system and the degree of development of the countries involved would be a logical progression from the work presented here.

Finally, although more cases are needed to be as exhaustive as possible in order to get solid conclusions, the methods and results of this approach can serve as a basis of further research, in order to identify common socio-economical factors that can be interlinked with the conflicts.

A better understanding of the processes and geographical factors involved in forest conflicts can contribute to conflict management, as well as having direct policy and educational applications.

References

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- Silverman B. W. 1986. Density Estimation for Statistics and Data Analysis. Chapman and Hall, London.
- Worton B. J. 1989. Kernel methods for estimating the utilization distribution in home-range studies. Ecology 70: 164-168