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Contribution to the understanding of typology and importance of forest-related conflicts in South East Europe region

DIJANA VULETIĆ[1*]
MERSUDIN AVDIBEGOVIĆ[2]
MAKEDONKA STOJANOVSKA[3]
RADOVAN NEVENIĆ[4]
HAJRI HASKA[5]
STJEPAN POSAVEC[6]
SILVIJA KRAJTER[1]
LEONIDA PERI[5]
BRUNO MARIĆ[2]

[1]Croatian Forest Research Institute,
Cvjetno naselje 41
10450 Jastrebarsko, Croatia

[2]Faculty of Forestry, University of Sarajevo,
Zagrebačka 20
71000 Sarajevo, Bosnia and Herzegovina

[3]University »St. Kiril and Method«,
Faculty of Forestry
Blv. Aleksandar Makedonski 66,
1000 Skopje, FYR Macedonia

[4]Institute of Forestry, Kneza Višeslava 3,
11030 Belgrade, Serbia

[5]Agricultural University of Tirana,
Faculty of Forest Sciences
1029 Kamez Koder, Tirana, Albania

[6]Faculty of Forestry, University of Zagreb,
Svetošimunska 25, 10002 Zagreb, Croatia

Correspondence:
Dijana Vuletić
Croatian Forest Research Institute
Cvjetno naselje 41, 10450 Jastrebarsko,
Croatia
E-mail: dijanav@sumins.hr

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Abstract

Background and Purpose: *The forest related conflicts has not been often a research topic in SEE. The first regional survey was conducted in five countries: Albania, Bosnia and Herzegovina, Croatia, Macedonia and Serbia, under the scope of the FOPER project. The aim of the study was to identify the most frequent forest related conflicts in terms of types, conflicts attributes, actors, their attitudes and power relations, as well as to investigate more in-depth nature of conflicts and the way how they've been managed and how it influenced forest policy development.*

Materials and Methods: *Analytical framework consisted of progressive triangle with three conflict attributes-substance (S), relation (R) and procedure (P) [13] embedded in four concepts- culture (CU), conflicts (CO), conflict management (CM) and policy development (PD) [12]. In total 840 semi-structured interviews were sent to decision makers resulted in response rate of 60%. Results were statistically analyzed by using methods of descriptive and inferential statistics, such as correlation analysis, logistic regression and decision path models.*

Results and Conclusions: *Analytical framework proved appropriate for studying forest related conflicts in SEE. The most frequent conflicts were between forestry and (1) Nature protection, (2) Wood processing industry, (3) Grazing and overgrazing, (4) Building and construction, and (5) Water management, with significant differences among countries involved. Conflict management depended on the culture, as an aggregate variable comprising education, professional competences, communication skills and previous experience.*

Abbreviations:
SEE – South East Europe
FOPER – Strengthening the capacities in forest policy and economics education and research in Western Balkans
C – Conflict
CM – Conflict management
PD – Policy development
CU – Culture
EU – European Union
USA – United States of America

INTRODUCTION

Conflicts can occur in different settings and at different levels *(1),* where forestry and nature protection are often potential conflict areas *(2)*. Forestry related conflicts can be found in context of different approaches in setting forest management *(3, 4)* or caused by conflicting forestry legislation on one side and environmental and nature protection legislation on the other side *(5),* where lack of cross-sectoral dialogue and sharing responsibilities in management of protected areas *(6)* can add to the severity of disputes. Forestry related conflicts in protected areas in SEE region were manifested in wide range of actions, from silent conflict far away from public, over disputes, argues and discussions on meetings and public forums up to intensive lobbying and political influence. Overlapping legislation, struggle for competencies, different interests, values and attitudes of forestry and nature conservation sector is likely source of these conflicts *(7, 8)*. Marić *et al. (9)* conclude that conflicts between forestry and wood-processing industry were caused by differences in demand and supply, way of selling and, of course, wood assortments prices.

In the context of EU accession, prevailing global trends in nature protection seem to be a binding framework for creating forest policies at the national level (*10*). Emerging of non-governmental sector leads to the new directions in forest policy through launching different actions intend to change day-to-day forest management practices. Possible forest resources shortage, induced by numerous initiatives to establish new protected areas, might seriously endanger economic viability of forest companies but also jeopardize employment of rural population. This leads to various cross-sectoral conflicts and disputes between national policies and local management practices. Competing values and forest related demands of different stakeholders as well as power distribution among them often leads to different types of forest-related conflicts.

The aim of the research was to identify the most often forest related conflicts according to their typology, actors involved and intensity. Solid knowledge on existing conflict types, understanding their roots as well as possible evaluation of conflict management instruments used so far would help to provide recommendations for developing successful conflict management strategies (*11*). When managed conflicts may be constructive in a way that learning from experience could lead to better policy development (*12*).

Theoretical framework

The conflict management progress triangle (*13*) was adopted as analytical framework of this research because it can serve as a basic model for understanding the nature of a conflict situation. Its design suggests the importance of determining the substantive, procedural and relationship factors in any conflict. Within these dimensions, other conflict elements such as interdependence, parties, roles, goals, issues and sources of incompatibility can be reviewed. This analytical framework was modified and

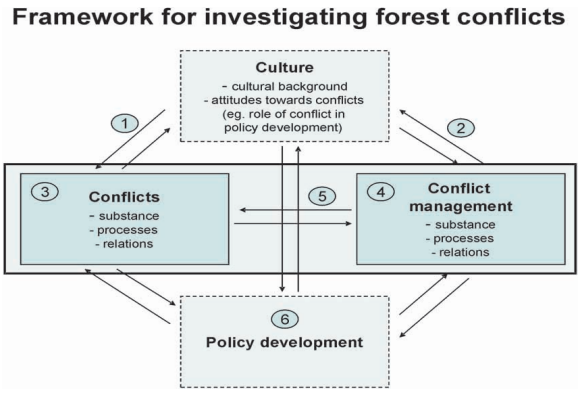

Figure 1. *Conceptual framework (12).*

expanded with the cultural perspectives of the conflicts and conflict management (*12*) and on that basis the final conceptual framework in this research was developed (Figure 1.)

As an assessment is a first step in a process of constructive conflict management, this triangle may be useful as an assessment tool. The substance dimension of conflict refers to sources of conflicts and what conflicts are about (money, power, emotions, ideologies, values, information etc.). The process dimension is about the way, in which conflict was occurred, aspect of space and time, how it develops (institutionally or personally, democratically or autocratically) and what might be the consequences for policy development. The relations dimension refers to actors and relations between them, power distribution, level of trusts, knowledge and skills they possess as well as creating alliances and lobbies.

In line with the objective this research focus on understanding of the major stakeholders' attitudes towards the conflicts and their views on conflicts' impact on policy development. Several research questions were raised, as follows:

– *What types of forest-related conflicts exist?*

– What are the attitudes of involved actors towards forest related conflicts as a phenomenon?

– *How do Forest Related Conflicts and their management influence the policy development processes?*

– What is the role of cultural background in conflict management?

Conflict management approaches also have the same three main attributes. In successful conflict management, the type of management approach corresponds with main conflict attributes. Substantive conflict (e.g. harvesting versus conservation of rare species) might be solved by substance-oriented approach (e.g. creating multipurpose management plan or by excluding one of these two activities in the area of concern). Procedural-oriented approach can be used to manage procedural conflict (e.g. possible conflict about nature conservation act can be managed by organizing the public debates in local communities). Following the same logic, relations-oriented

approach (e.g. fair compensation policy) can be used to manage stakeholders' relations (e.g. conflict between different stakeholders regarding ownership and using rights.). The process of conflict management starts by identification of conflict, involving stakeholders and doing first steps in the establishing the communication between confronted stakeholders.

Values, policies, markets and resources all have strong cultural dimensions. Changes in any of these aspects result in changes in conflict culture. The management of conflict culture refers to attempts to influence the societal aspects that result in the emergence of the specific types of conflicts in certain types of societies. Differences between involved parties in terms of attitudes, images, language and culture specific for each social group cause many conflicts *(14)*. On the other hand, different cultural aspects might cause very intensive conflicts even if the parties share the same values. The cultural aspects also influence the type of approaches used by stakeholders to manage conflicts. Depends on different cultural aspect, conflict solutions differ in terms of time, costs, quality and sustainability.

Conflicts can impact policy development in both, positive and negative way, depending on how they are managed. This impact depends also on conflict intensity and its relevance in given political environment (*15*). Sometimes very intensive conflicts (e.g. devastation of huge forest areas) have limited political relevance due to many reasons (forestry is not highly ranked in the political agenda, the politicians are involved in conflicts, there is lack of information about the conflicts etc.). As it is already stated, readiness of political actors to change the situation is the essential preconditions for any conflict impact on policy development (*16*).

MATERIALS AND METHODS

Research methodology allowed making between-countries comparison on decision making and management levels. The research included investigation on types of conflicts, their origin, main actors and power relations between them in several SEE countries. Horizontal and vertical mapping of conflict actors has been done accordingly with the research on level of appearance of conflicts and existing conflict management strategies.

A semi-structured questionnaire was designed and distributed to the top and middle level decision makers within the all relevant actors as follows: ministries of forestry, nature protection and physical planning at all levels, directors of public forest companies and public forest administration, directors of wood-processing enterprises, managers of protected areas and water management authorities, representatives of the most important environmental NGOs and professional association, heads of forest research institutions and representatives of private forest owners associations, representatives of economy of chamber and international institutions.

After the pre-testing and corrections based on the feedback results, 840 questionnaires were sent either by e-mail or fax, together with the initial information about the project as well as explanation of possible benefits the respondents might have from the results of the study. Two reminders were sent to all the respondents who did not respond. The survey was conducted during the period October 2008 – February 2009 and resulted in 60% response rate. Data were analysed using SPSS program and different statistical methods were applied such as descriptive statistics (*17*), correlation analysis, decision path models and logistic regression models (*18*).

RESULTS

From total of 840 sent questionnaires 505 responses were received with different response rates among countries: Albania 66% (107), B&H 68% (136), Croatia 37% (60), Macedonia 58% (94) and Serbia 67% (108). Respondents were grouped in three main groups: Administration, Profit oriented organizations and Non profit oriented organizations (Figure 2).

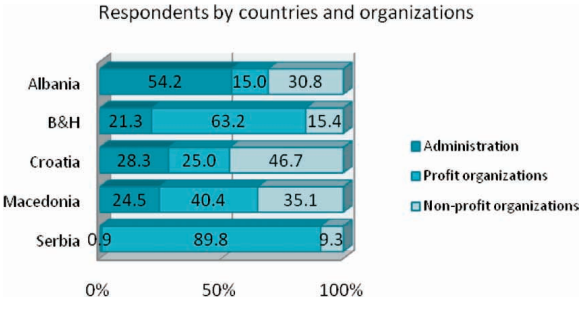

Figure 2. *Sample structure by countries.*

The differences among countries in sample structure have been taken in to account during all further analysis. On regional level 49.9% respondents were from profit oriented organizations and the rest were equally distributed among administration and non-profit oriented organizations. Macedonia and B&H are closest to that average but in Serbia profit organizations prevailed, while in Croatia non-profit organizations and in Albania administration dominated. Impact of sample structure was confirmed as significant only on procedural dimension of conflict management and on the cultural part in general.

To find out what types of conflict are present in the region respondents were asked to mark on list of eleven different conflicts those which they were aware of and to assess their frequency and seriousness on the scale from 1 – very often or serious to 3 – rare or rather not serious. The possibility of not knowing the answer was envisaged too.

From that question we get the list of existing conflicts in the countries and region was formed together with their importance. There were several most important conflicts in the region: between Forestry and (1) Nature protection, (2) Wood processing industry, (3) Grazing and overgrazing, (4) Building and construction, and (5) Water management, with significant differences among countries. Also

it is important to note here that there are some conflicts important only in one country like between forestry and using of non-wood forest products in Albania and forestry and forest utilization and harvesting in Macedonia. The same position had wood processing industry which is most important in B&H (*9*) but due to its expected development it was consider of high importance on regional level too. Based on this findings further analysis included only most important conflicts and their management.

Open-ended question resulted in the list of 26 different issues over which the parties disagree was defined and the list was based on the different dimensions of conflict that were recognized. Results confirmed existence of three dimensions (**S**ubstance-**P**rocedure-**R**elation) in conflict **(C)** and conflict management **(CM)** with majority of conflicts referring to substance part (290 or 57.4%), something less in procedural (171 or 33.9%) and few in relational part (21 or 4.2%), with 23 (4.6%) cases in which respondents gave no answer. Conflict management has similar but more equable distribution based on predefined list of possible CM actions. Respondents were asked to mark all applied CM activities (Table 1) and results show following distribution among dimensions: substance (284 or 56.2%), procedure (324 or 64.2%) and relation (364 or 72.1%) with 70 (13.9%) cases in which respondents gave no answer. In average respondents marked 4 applied CM activities.

TABLE 1

Predefined answers to conflict management questions.

Conflict management activities	Predefined dimension
Change of management goals	Substance
Change of property rights	Substance
Change of responsibilities	Substance
Change of responsible persons	Substance
Introduce joint strategic planning	Procedure
Introduce participatory planning methods	Procedure
Improve legislations and rulebooks	Procedure
Improve implementation of laws	Procedure
Organize discussion tables	Relations
Organize joint professional events	Relations
Organize educational workshops	Relations
Facilitate communication between actors	Relations

Successful CM happens when C and CM dimensions coincide (Figure 3) and may lead to policy development (PD).

On regional level every fourth case of C matched with applied CM by its dimension, which was recognized as a basis for policy development. Interrelations and influence of C and CM on policy development will not be further elaborated in this paper.

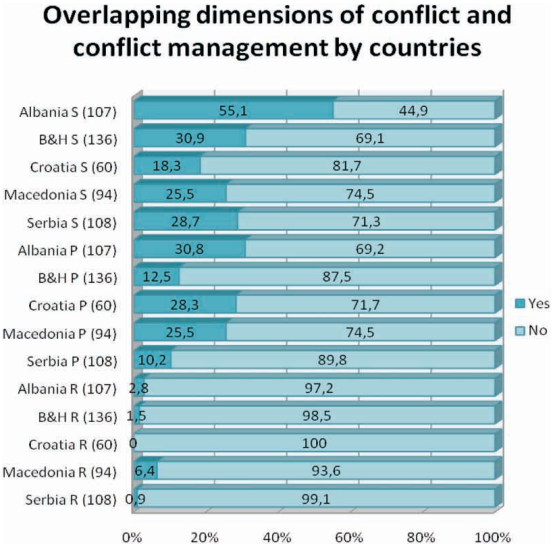

Figure 3. *Corresponding of C and CM dimensions.*

Cultural background as an aggregated variable comprised eight variables: Attitudes towards forest management, Attitudes towards nature protection, Attitudes towards participation, Education background, Professional competencies, Communication skills, Attitude towards conflicts and previous experience. Respondents were asked to grade the importance of each variable as influencing factor on conflict situations from 1 – very important to 3 – not important. Influence of each cultural variable was tested by Spearman's correlation test; statistically significant correlation was confirmed only between procedural dimension of *conflicts* and Education background, Professional competencies, Communication skills and Previous experience, where correlation between conflict and the communication skills were the strongest. Different cultural background influence conflicts strongly in its procedural dimensions having an impact on the way in which conflict occur, aspect of space and time or its development than in substance or relation one.

Strong correlation existed between variables of all three dimensions of CM and different culture related variables. In substantive part of conflict education, competencies and experience had an impact on CM; in procedural part competencies and previous experience, the attitudes towards participation and communication skills played important role too; and in relational part the attitude toward conflict together with education and competencies were also important.

In order to investigate relation between four elements of conceptual framework (C, CM, CU and PD) we used logistic regression analysis in path model development. By this model we assessed direct and indirect influences of independent variables on chosen dependent variable, where we chose the variable policy development as dependent one.

With other three independent variables (C q3a_spr, CM q4a_spr and CU q6) we were able to explain with

statistical significance the 44% variability of PD q5a_spr variable (Figure 4) (R^2 = 0.44 derived from regression analysis with all independent variables), where influence of variables CM and CU were statistically significant. Other 56% of variability of PD was a result of influence of different factors and random variability. The model proved strong enough.

Model functioning of the two levels: direct and indirect influences of independent on dependent variables. The strongest direct but negative influence on PD had CU (–0,539); followed by CM direct and positive influence (0,236). Strongest indirect influence on PD had C via CU (–0,209 × –0,539 = 0,113) as positive to PD by lowering negative influence of CU alone. In the end CU had some indirect negative influence on PD via CM (–0,336 × 0,236 = –0,079) lowering its positive influence on PD.

Applying path model on national data confirmed regional results and its applicability on both levels. Mathematical approaches as this one by providing systematic information gives us more insight into the nature of conflicts *(19)* or any other studied phenomenon.

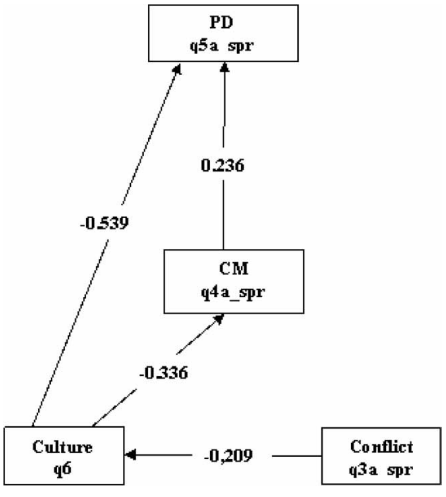

Figure 4. *Path model showing influences of different variables on PD by its direction and strength presented by values of* R^2.

DISCUSSION AND CONCLUSIONS

Studying the typology of forestry related conflicts in SEE region revealed conflicts between forestry and nature protection as most important on regional level, which is in line with findings from Central and Eastern European countries (*15*). Conflicts with wood processing industry grazing and overgrazing, and building and construction followed. Although in some countries certain types of conflicts were more important than in other like conflict between forestry and wood processing industry in B&H (*9*), regional data were consistent enough for forming one sample. Using conceptual framework of progress triangle (*13*) enriched with concepts of culture and policy development (*12*) relations among C and CM were explored in respect to their substantive, procedural and relationship dimensions. Significant level of matching between C and CM dimension revealed a margin for successful CM and possible PD. In forest related conflicts often many actors with differing values and demands are involved *(1)* CM depends on actors' social networks (*21*). In order to better understand relations between C, CM and CU path model was used (*18,19*).

CU strongly and negatively influences PD which points to great difference between involved parties in different elements of CU. Education, professional competencies, communication skills and previous experience influenced significantly PD. This model can also point out drivers of conflict (*16*) which could be in: policy design, policy frames, scientific disagreement and uncertainty, political and interest group strategy, media framing, statutory and administrative language, and distrust. For the purpose of this paper data were analyzed only on regional level, but it is possible to investigate the influence of variables on each element of aggregated variables as well as direction of these influences.

The conflicting situations especially in forestry are worth dealing with. This phenomenon has its roots in multi-objective forest management (*1*) and involvement of many stakeholders with different goals.

Although in many ways similar, situation in this region is different to situations in EU or USA due to recent changes in societies and economies and more attention needs to be given to emerging or latent conflicts which might increase in future (*20*).

With this research we succeeded to draw the picture of conflict typology in this region but there are still some areas and actors with which forestry might be in conflict in future (chemical industry, civil organizations or else) that should be involved in future research. Further research should involve in-depth analysis on policy and decision making level. Despite the fact that most actors expected from the top-down approach that there is still space to start inverse, bottom-up process.

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