

Table of Contents

1	Introduction	4
2	Environmental disputes	5
2.1	What are environmental disputes like?	5
2.1.1	Definition based on the discussion at the coordination meeting in Zürich, 1992.....	6
2.1.2	Environmental degradation as a cause for conflicts	8
2.1.3	The “Darfur example”	9
2.2	Conflict Types	10
3	Barriers to conflict resolution	12
3.1	Defining conflict resolution	12
3.2	Barriers	13
3.2.1	Tactical and strategic barriers	13
3.2.2	Psychological barriers	15
3.2.3	Institutional, organizational or structural barriers.....	16
4	Overcoming barriers to conflict resolution.....	17
4.1	Success in environmental disputes.....	20
4.2	Effectiveness	21
4.3	Alternative dispute resolution (ADR)	22
4.4	Specialists environmental courts.....	23
5	Case studies.....	23
5.1	Case study: Kyoto protocol.....	23
5.1.1	The experiment performed by Minski et. al. (2008).....	25
5.1.2	USA and Canada.....	27
5.2	Case study: Conflicts over bio-energy in Europe.....	28
6	Conclusion	29

7	Reference list	30
7.1	Literature	30
7.2	Internet references	33

Table of figures

Figure 1: “*Environmental conflicts according to Homer-Dixon (1991)*”, Tanev (2014), page 10.

Figure 2: “*The Negotiator’s Dilemma*”, Watkins (2000), page 4.

Figure 3: “*Overcoming the different barrier types*”, Tanev (2014), page 19.

1 Introduction

“Energy requires attention: Energy and natural resources are essential for companies to operate. They are therefore crucial for both States and private investors. Consequently the energy sector and the sector of natural resources are sectors where conflicts frequently arise.”

- Johann Billet (Billet J., 2009, p.11)

The current Bachelor thesis has focused on contributing to a better understanding of how important environment and energy sources are for global economy. It also refers to their role in arguments. The centerpiece of this thesis is to give an introduction to the term “environmental disputes” and to explain the reason why such conflicts arise. The paper analyzes the different types of disputes, resolution barriers and how to overcome these barriers. By means of case studies it provides practical overview of the essentials of dispute resolution when it comes to the energy industry and environment. The paperwork considers, among other things, the planning of dispute resolution clauses, the effective use of international arbitration, the management of large-scale energy disputes, success and effectiveness in environmental arguments and overcoming the barriers of conflict resolution. It shows the importance of the topic and why there are constant struggles over different environmental issues between countries and organizations.

The thesis is organized as it follows. The definition of environmental disputes is presented at the beginning of this paper. A brief explanation of the possible environmental conflict types is provided in this part of the thesis. Afterwards the barriers of conflict resolution are discussed. Different barriers types are also outlined in this part of the paperwork. The fourth part of the paper explains success and effectiveness in overcoming these barriers. It also defines alternative dispute resolution (ADR). Some historical examples of environmental conflicts are discussed in section five. Different motives, statements and positions of the parties participating in these arguments are present in this chapter as well. The conclusion summarizes the results and rounds of this thesis.

2 Environmental disputes

Environmental issues play a vital role for society nowadays. The different policies, concepts and ideas of every nation and company are the main reason why conflicts occur. In their paperwork “Towards a theory of environmental dispute resolution”, Susskind and Weinstein state that “almost every effort to protect or enhance environmental quality is perceived as a challenge, at least at the outset, by groups or individuals whose economic self-interest-or political beliefs-are threatened” (Susskind et. al., 1980, p. 311). The authors claim that though the rising popularity of “green” groups and organizations and the environmental protection efforts made by private sector, there will always be difference in interests between parties. This is also a reason why this kind of argument is “unique” and hard to resolve.

2.1 What are environmental disputes like?

First of all, a definition of the term “environmental dispute” is necessary to be given. Different explanations of this concept can be found. Some authors even state, that a clear definition of it is impossible to be given (e.g. Libiszewski, Bingham etc.). Most studies are based on empirical examples such as arguments over water resources, pollution abatement costs or responsibilities for the global climate change. On one hand these cases try to illustrate the link between environment and conflict, but on the other they are far from presenting a precise concept or model. The examples could be interpreted differently and therefore could lead to misunderstanding of the situation.

Although there are mainly cases which try to describe the term “environmental conflict” some number of different definitions can be found, as well. For example, Moore defines environmental disputes as “tensions, disagreements, altercations, debates, competitions, contests, conflicts, or fights over some element of the natural environment” (Moore, 2000, p.3). Other authors refer to the term as “when one or more parties involved in a decision making process disagree about an action which has potential to have an impact upon the environment” (Blackburn et. al., 1995, p.1-2). Susskind defines environmental conflicts as “disagreements among stakeholders in a range of public disputes which involve environmental quality or natural resource management” (Susskind et. al., 1998, p. 16). Some scholars, who weren’t able to describe the term fully, while

doing a research in resolving environmental problems, did different categorization of conflicts. A good example is the paperwork by Bingham, where she reviews six categories of environmental arguments in order to explain the meaning behind “environmental dispute” easier to the readers (e.g. land use, natural resource management and use of public lands, water resources, energy, air quality and toxics etc.).

Overall, there are many different explanations of the term “environmental dispute”. All aforementioned examples show us that there is a “need” to define the term more precisely, so that the reader could follow the paperwork easily.

According to Libiszewski (2004) the best way to explain “environmental disputes” is to segment the question into several smaller ones. In order to clarify the term three questions are needed to be replied: what does “environmental” in environmental conflicts mean, what is meant by “conflict” and how do environmental problems lead to violent conflicts (Libiszewski, 2004, p.3). This thesis concentrates on every element of the natural environment including issues of natural resource management, energy generation, development, industrialization, environmental pollution and damage and every aspect of the “man-made” or built environment. The word “conflict” is used with its proper meaning in everyday language – a dispute, an argument, disagreement between parties. The term ranges from disputes between individuals to wars between states. It expresses itself with parties using political and economic sanctions or sides, which just verbally attack each other. The struggle “radical environmentalists versus industry” could be called an environmental conflict as well (Libiszewski, 2004, p.7-8). Basically, the high importance of the environment and energy sector to the nowadays society is the main reason why there are incessant fights over resources, pollution abatement etc. This problem will be considered closely in the next few chapters of the current paperwork.

2.1.1 Definition based on the discussion at the coordination meeting in Zürich, 1992

The so-called *Environment and Conflict Project* (ENCOP) is a project managed by Swiss Peace Foundation in Bern and the Center for Security Studies and Conflict Research at the Swiss Federal Institute of Technology in Zürich. Its main purpose is to investigate the relationship between environmental problems and actual or possible violent conflicts. The project also tries to

find peaceful solutions to conflicts (Spillmann et. al., 1995, p.3). These organizations also allege that environmental factors are reason for violent conflicts. At the first world-wide conference of ENCOP over environmentally induced arguments the participants concluded that there should be an exact definition of the term “environmental disputes”, so that the organization could function normally. Without such explanation the project would not be able to operate correctly.

The conference took place on the 1st of May 1992 in Zürich. Theoretical and methodological questions related to the relationship between environmental change and violent conflicts were firstly discussed in details. The participants came up with the following definition of environmental disputes: “Environmental Conflicts manifest themselves as political, social, economic, ethic, religious or any territorial conflicts, or conflicts over resources or national interests, or any other type of conflict. They are traditional conflicts induced by an environmental degradation.” (Libiszewski, 2004, p. 14) They also claimed that environmental arguments are in most cases characterized by disagreement in the fields of overuse of renewable resources, pollution or impoverishment of the space of living. Their research program focused on violent conflicts, actual and potential ones, with high or low intensity. Basically, after analyzing disputes influenced by environmental factors and regions with serious environmental degradation, the conclusion of this conference was that there are a lot of elements which lead or could lead to a serious and violent conflict (e.g. war between countries) (Libiszewski, 2004, p. 14).

Critics on the conference are not certainly missing. Some scholars and economists (e.g. Moore (2000), Blackburn (1995)) think that this definition is too specific. There are more disagreement fields which could lead to an environmental dispute – for example, non-renewable resources are also an “apple of discord” (e.g. oil arguments in the Middle East). Another thing is that the definition created in Zürich focuses rather on violent conflicts (e.g. wars). After reading the description the reader is under the impression that there is not a peaceful possibility to negotiate over natural resources or other environmental issues, which is, of course, not true.

The conference continued with some statements about all kinds of environmental problems. (Spillmann et. al., 1995, p.6). They were all supported with findings, empirical studies or theories. One of the most interesting observations was the fact that the humanity transforms the environment on the globe and that this transformation does not affect only the nature but also social and political systems and therefore it can produce conflict. At the conference it was

asserted that water shortage is the biggest environmental problem (for the time being) and is most likely to lead to violent arguments. Global climate change was considered as a “dispute trigger” as well. Another intriguing conclusion made by the participants at the conference was that most violent environmental disputes ever analyzed, took place in ecologically sensitive regions of countries in the developing world. The most affected territories were in Africa and Asia (Spillmann et. al., 1995, p. 7-9).

These findings are obviously of high significance. They are even being widely discussed nowadays. The main focus of the current thesis is not on the observations from the ENCOP conference in Zurich 1992, but it will try to explain them and make the issue understandable for the readers in the last section of the paper, by means of case studies and examples.

2.1.2 Environmental degradation as a cause for conflicts

According to Libiszewski (2004) the issue of resource degradation has gained significance for the 21st century. The problem of resource depletion is in the past. For example, “the greenhouse effect or the damages caused by its production may lead to environmental degradation” (Libiszewski, 2004, p.5). As it is mentioned, the author regards this as a possible motive for environmental dispute. He also suggests that an environmental conflict is actually an argument between two parties, which happened because of environmental scarcity of a resource or pollution of the environment. This means that a renewable resource is being overused. Its consumption is much higher than its replenishment.

Rees (1991) introduces a differentiation of the concept resource scarcity. She distinguishes four types of resource shortage – physical, geopolitical, socio-economic and environmental scarcity. The first one applies to a resource that has a limited amount. Geopolitical insufficiency means that the resources are basically unequally distributed around the globe and some countries count on deliveries from others. The next one describes the difference of purchasing power among countries. Regions with lower “shopping possibilities” find themselves in situations in which they can’t provide the needed power to the community. The last type of resource scarcity is shortage caused by environmental degradation and the “failure” of humanity to manage the resource sector (Rees, 1991, p. 23).

2.1.3 The “Darfur example”

In his article Libiszewski (2004) adopts the ideas of Spillmann (1995) and Rees (1991) and uses them in his paperwork. A good example which supports his statements is Darfur. This territory is situated in South Sudan, Africa. The case is very suitable for describing environmental degradation as a cause of dispute. The nature of this conflict is resource scarcity. The paperwork written by King and Osman (2004) describes the situation in Darfur profoundly and in the end they conclude that environmental degradation is actually the reason why people struggle there.

The soil erosion there and the depletion of productive lands in the region of Darfur make living in this part of the world much harder. This leads to a so-called ‘ecological migration’ of the people of Sudan and more precisely a mass population movement in search for better conditions for farming and pasture. The peaceful coexistence of the community in the regions, where the people of Darfur migrate, is threatened even by the thought of distributing land and resources over higher number of persons. This happens because of the resource scarcity and fruitful land in Sudan. King and Osman (2004) also state at the beginning of their article that “the situation was destined to incite local tensions and provoke violent resource-based conflicts” (King et. al., 2004, p. 12). Many factors have influenced the dispute. The most significant ones are the lack of water, ecological disproportion, deforestation, higher need for natural resources, cooperation scarce and incorrect management of the government over available resources (King et. al., 2004, p. 12).

The “Darfur example” shows that it is possible for an environmental conflict to occur in a developing country (as in this case with South Sudan). This also proves Spillmann’s theory (1995). The territory of Darfur finds itself in Africa and is “ecologically sensitive region”. Statistical data, which Spillmann (1995) provides in his paperwork, confirms the definition he suggests. The author took into account only environmental disputes which happened till the year of 1995 in his research. This is the reason why there was doubtfulness in this theory and the explanation of the term was questioned. It is not sure that in the future environmental arguments will occur mostly in developing countries with ecologically sensitive regions, but the Darfur case (2004) contributes to validation of Spillmann’s definition.

According to Rees (1991) Darfur is a perfect example of an environmental conflict where all differentiation types are present. The insufficiency of water, soil and trees represents the physical scarcity of the region. The territory itself is in central Africa and therefore it has not so many resources compared to other countries (e.g. Russia, U.S.A. etc.). South Sudan is basically a country with low purchasing power. Low GDP, negative growth rate, high inflation and unemployment are some of the problems of the country, which confirm its economic instability (data was taken from the official site of the “IMF Global Financial Stability Report”, URL 1). The false management of existing resources in the country and the failure to adopt sustainable methods can be indicated as environmental scarcity.

2.2 Conflict Types

There are three types of environmental disputes. In his work: “On the Threshold: Environmental Changes and Acute Conflicts” (1991) Homer-Dixon discusses two issues, which help him distinguish the different conflict classes. Firstly, he answers the question “what are the important social effects of environmental change” and basing on the result the author suggests the types of conflicts, which are most likely to result from the mentioned social effects (Homer-Dixon, 1991, p. 87).

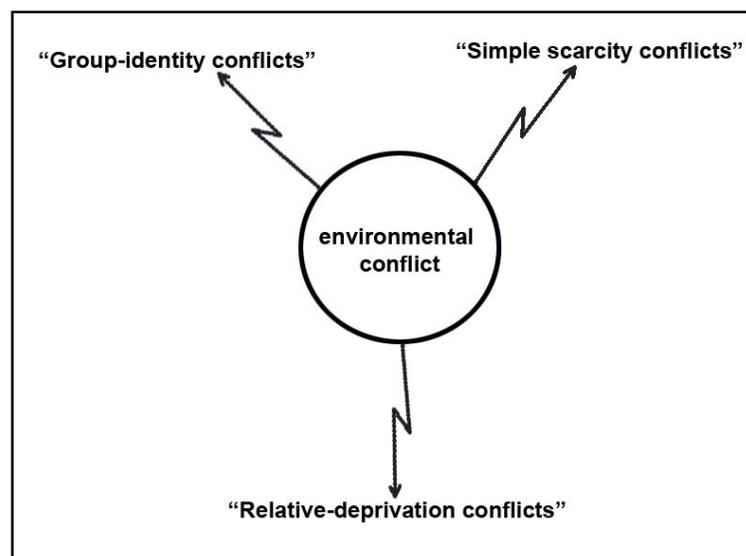


Figure 1: “Environmental conflicts according to Homer-Dixon (1991)”

The three theoretical perspectives of environmental conflict are:

- “Simple scarcity conflicts” – the lack of drinkable water, fish, agriculturally productive land etc. could easily “spark” a conflict. These renewable resources are essential for human survival. The problem is that their shortage in some part of the world is extremely high. Basically, the lack of simple resources and goods leads to arguments among the community (Homer-Dixon, 1991, p. 106-107).
- “Group-identity conflicts” – these conflicts are likely to happen as a result of immigration. People immigrate because of resource scarcity (e.g. Mexicans emigrate from Mexico to USA and Canada). The possibility of tension between ethnic or cultural groups in the “Hostland” is high, mainly because of their differences (Homer-Dixon, 1991, p. 108-109).
- “Relative-deprivation conflicts” – the difference in community’s layers describes this type of conflict. Developing societies, which produce less wealth because of environmental problems, are “hot spots” for violent disputes between different classes in them. This happens because lower status groups are more disappointed than others. “Elites will use their power to maintain, as best they can, access to a constant standard of living despite a shrinking economic pie.” (Homer-Dixon, 1991, p. 109).

The author mentions that it is possible to typify the conflicts or to name them differently. He also states that the three types should be considered as ideal types. Their “pure” form in reality is questionable. In most cases the disputes are a mixture between types (Homer-Dixon, 1991, p. 106).

Generally, there are groups in society with different conception and ideas of how the environment and the world as a whole should be “structured”. Their dissimilar political and economical power is the main reason for that. People tend to search for a better place to live according to their desires and opportunities, so the scarce of simple resources, misunderstanding between emigrants and community of a certain region or just disagreement between different layers of society could easily trigger an environmental conflict.

3 Barriers to conflict resolution

Why do negotiations fail when there is a conflict resolution possibility and what would be beneficial for both parties? Even if parties achieve dispute resolution, this settlement often costs a lot and is not optimal. Why is that? What kind of barriers hinder successful negotiations effective outcome? All these questions will be answered in the next part of the paper in order to provide a clarification of the meaning of dispute resolution for the readers.

3.1 Defining conflict resolution

In some cases disputes are unavoidable. Advantageous conflict resolution for both parties, which is also above their aspiration levels, is not always possible. Even if a possibility for such settlement exists it is not necessary that it occurs. There are many examples which prove that statement. Disputes remain even if there is a resolution that serves better the interests of both sides (e.g. conflicts in the Middle East, Yugoslavia). In everyday life constant struggles, which impose avoidable costs on both parties, can be witnessed. In some situations where a resolution is achieved, it turns out that this resolution is not effective at all. Alternative decisions could have been much adequate for both parties (Arrow et. al., 1995, p. 3). A good example for ineffective conflict resolution is given in the paperwork “Barriers to conflict resolution” by Arrow et. al. (1995). When a married couple with a child wants to divorce and spends a couple of years fighting over the custody of the child in court, they will pay a lot of “avoidable costs” – financial for the parents and psychical for the child. If they could have settled without court, they would have saved a lot of expenses. In this example it is also mentioned that the family classifies as middle-class (with middle-income). Spending so much money (about 37.000 dollars) on lawyers and experts was not an optimal decision made by the parents (Arrow et. al., 1995, p. 4).

Overall, a harmless disagreement could easily lead to violent dispute, where both parties are stubborn and not willing to accept the effective solution of the problem. Arguments can be settled differently. The negotiations can be peaceful and cooperative, but also competitive or even threatening. Mediation, litigation and diplomacy are some methods which help parties to reach an efficient agreement easier. However, it is not necessary that these would work positively on negotiations. Conflict resolution achieved with them are not necessary the best ones

or the most efficient. This leads to the conclusion that reaching the optimal solution in a dispute is not easy at all. Curiously, many negotiated issues are unsuccessful in satisfying the needs of the involved parties. The next part of the paper discusses barriers to conflict resolution, which are one of the main drawbacks of disputes settlement.

3.2 Barriers

According to Arrow et. al. (1995) there are three types of barriers to conflict resolution¹. They all hinder the negotiation process and prevent its successful solution. The authors also state that “different arenas of conflict, even different specific disputes, may bring into play very different resolution barriers.” (Arrow et. al., 1995, p. 7)

3.2.1 Tactical and strategic barriers

The disputing parties often fail to accomplish an efficient resolution because of their rational way of thinking. They adopt different tactics and strategies, which prevent them from achieving the highest efficiency in a certain case. These kinds of barriers arise basically from calculated attempts of the disputants to maximize their outcomes. The parties want to increase the “pie” as a whole and also try to get the bigger “slice of this pie”. Conflict participants can influence the outcome of their negotiation in various ways. Often the strategies used, not only minimize the “pie”, but also reduce both joint outcome and the possibility to get the largest possible “slice” (Arrow et. al., 1995, p. 8).

¹ There are a lot of sources which describe different types of barriers to conflict resolution. Most of them state that they are based on the work of Arrow et. al. (1995). Some scholars classify the barriers differently. They suggest more types and provide more examples as an addition to the paperwork by Arrow et. al. (1995). For instance, Epstein et. al. (2005) discuss ten barriers to dispute resolution. Some of them overlap the classes Arrow created (e.g. misunderstanding the loss/risk analysis, failure to communicate and listen or partisan perception, judgemental overconfidence and wrong baselines), but there are also new ones suggested by Epstein (e.g. inadequate planning and preparation, grief or false first impressions and perceptions). Another example is the work written by Joesting (1998). The author claims that there are basically six types of barriers to conflict resolution – avoidance, non-assertiveness, misanalysis, escalation, dirty fighting and competing.

Keeping information a secret or lying about your interests could also be part of a strategy or tactic. The “negotiators dilemma” (Lax et. al., 1986, p. 158) describes this issue. The disputants have to choose if they want to exchange correct information or asymmetric one. Accurate information makes it possible for the parties to extend the “pie”, to create additional value. On one hand, knowing interests and goals of the other party could create a “win-win” situation (Fisher et. al., 1991, p. 125) but on the other hand, participants in a negotiation tend to give asymmetric information and mislead the counterparty. They are motivated to take advantage of honest behavior of the other disputant and based on received information to extend their personal outcome. In general, such strategies could lead to disability to recognize the most efficient conflict resolution (Arrow et. al., 1995, p. 8).

		Them	
		<i>Be truthful about interests</i>	<i>Seek to mislead</i>
Us	<i>Be truthful about interests</i>	We make modest gains and so do they.	We gain a little, they gain a lot.
	<i>Seek to mislead</i>	We gain a lot, they gain a little.	We get nothing and so do they.

Figure 2: *The Negotiator’s Dilemma; Watkins (2000), page 4.*

Another example is the intransigent bargaining tactics (“Hardball” tactic). In such cases arguing over how to divide the pie may shrink it, even if both parties are provided with the necessary information, which helps them achieve the most efficient outcome. Again, these strategies could be rational when it comes to maximizing your own part of the “pie”, but irrational for achieving efficient joint-outcome. It is logical that suggesting ridiculously low offer can either offend the counterparty or force it to agree on a more favorable settlement (which has its own disadvantages – e.g. for the future relationship strength). Overall, both sides spend avoidable money on the process of resolving the conflict (Arrow et. al., 1995, p. 10).

3.2.2 Psychological barriers

In a conflict, all of the parties are represented by human beings. The disputants have their own way of thinking, mental functions and behavior. Psychology (which includes verbal and body language) plays a huge role when trying to overcome in an argument. These barriers often prevent effective dispute resolution, because parties tend to subordinate to different beliefs and therefore they don't act rationally. Based on their own evaluation disputants are likely to jump to conclusions about their counterparty. This “disturbs” the settlement process because parties don't act the way they should (Arrow et. al., 1995, p. 10).

It is not easy to define the term “psychological barriers”. Arrow et. al. (1995) provides some example in his paperwork in order to clarify the meaning of the concept. The “equity or justice seeking” case is a situation in which disputants want to act in a fair way (e.g. fifty-fifty split). They want neither of the parties to be disadvantaged and everyone to be happy at the end of the day. This happens as they strive for having a good future relationship or this is just their bias, their way of thinking. Another example is the “biases in assimilation” barrier. This is “the tendency for people to see and remember, what their theories, beliefs and expectations on one hand and their needs, wishes and self-interests on the other hand, dispose them to see” (Arrow et. al., 1995, p. 13). People do not succeed in recognizing the influence of such biases while disputing, which also brings about inefficient conflict resolution.

More types of psychological barriers mentioned in the article are “reactive” devaluation of compromises and concerns and loss aversion. The first one indicates the evaluation of compromises made by the counterparty or a third neutral party, while the second type of barriers show that decision makers are likely to attach more weight to prospective losses than to prospective gains. Judgemental overconfidence describes the disputants’ tendency to overestimate the situation. In general, they are overconfident about their success. Dissonance reduction and avoidance indicate disputants in unsuccessful negotiations, who try to reduce the amount of psychic regret (Festinger 1957, p. 1). The “theory of cognitive dissonance” is centerpiece of this psychological barrier. (Arrow et. al., 1995, p. 18).

Psychological barriers affect every dispute, every negotiation. Environmental conflicts are no exception. For example, Russia threatened that they were going to stop exporting gas, which

would have devastating results for Europe (McElroy, 2014, URL 2). Some politicians allege that their overconfidence hinders the possibility of effectively resolving the Russia-Ukraine dispute.

3.2.3 Institutional, organizational or structural barriers

The third category indicates that basically there are individuals and interest groups, involved in the conflict, which differ from the participants. No motives, biases or behavior are included in this conception. The main issue is the way institutions manage the dispute (Arrow et. al., 1995, p. 19).

The so-called barriers of information transfer indicate (a.k.a. restricted channels of information and communication barriers) that sometimes channels of communication are not present or restricted. They could be so limited in a way that parties have no opportunity to negotiate or to share information about priorities, interests or desires. Hence reaching an efficient agreement is highly improbable. These barriers could be bureaucratic, institutional or even political. A good example is when countries put an end to their diplomatic relations (e.g. because of environmental dispute between them). In such a case countries are likely to restrict communication between citizens, entrepreneurs, politicians etc. of both lands (Arrow et. al., 1995, p. 20).

As a whole, conflicts and negotiation are often influenced by multiple interests groups (when we discuss environmental disputes, a good example for multiple interests groups would be WWF or Greenpeace). Hence a number of structural problems arise. Frequently people who are affected by argument cannot or are not willing to be at the negotiation. It is also possible that their presence is prevented by legal, ethical, political or religious constraints. The likelihood of resolving the conflict effectively can be either higher or lower, because of the multiple interests groups. The problem is that different risks, interests and stakes are involved. Another issue is that these groups may be “poorly equipped” (e.g. non-financed organization) (Arrow et. al., 1995, p. 20). An appropriate example would be a dispute over waste disposal (environmental dispute). Where the waste should be placed and how it should be handled are issues which affect all citizens of a certain land. Of course, it is not possible to represent the opinion of each one of them. This is the reason why such multiple interests groups exist – to speak for all affected people of a certain conflict.

In their paperwork Pratt and Zeckhauser describe another barrier type called “the principle/agent problem” (Pratt et. al., 1985, p.2). It often happens that an agent represents a certain party in a dispute. It is possible that the agent’s interests differ from interests of the party he represents. This problem is not always related with financial costs and benefits. The possibility that these same agents have ideological incentives and they just want to cooperate exists, as well. Their incentive could also be gaining higher reputation. The main problem is that “third parties bring their own mix of strategic concerns and psychological biases to the negotiation process” (Arrow et. al., 1995, p. 22).

4 Overcoming barriers to conflict resolution

Dispute resolution is not an “easy job”. As stated in the previous part of the paper there are a lot of barriers which prevent the effective settlement of an agreement. Different dispute resolution techniques and bodies are also available. Watkins (2000) analyzes the paperwork written by Arrow et. al. (1995) and suggests some conflict resolution techniques.

Parties often find ways to increase confidence when they do not trust each other. Some cooperation techniques are listed in the article written by Watkins (2000). It is likely that both parties arrange to observe their actions, so that mutual uncertainty is reduced. This technique is called the “verification regime”. Another way to overcome strategic barriers is to engage small steps, in which you emphasize on future gains and therefore contribute to the main aim of dispute – to resolve it effectively (incrementalism). “Hostage-taking” is also a popular strategy. Each party deposits resources (e.g. money, obligations, even land could be “deposited”) into a specific account which is managed by an independent party. The basic idea is that the disputants will be fined with the deposit if they do not cooperate. The “outside guarantors” is a similar technique to the previous one. It involves external parties which are guarantors of the agreement (Watkins, 2000, p.6).

Structural barriers could also cause a lot of problems to the disputants. In order to avoid such barriers parties need to be prepared for cooperation. When parties are locked into incompatible positions the best way to overcome this problematic situation is to focus on interests and opportunities in order to increase the size of the “pie”. The lack of time pressure could also be a

problem. The solution to it is to set up action-forcing events. It is possible that the wrong parties are at the table or there are too many of them at the negotiation. In the first case, the best action is to invite allies and attempt to exclude adversaries, in the second one, convincing some parties to be represented by others could reduce their number (Watkins, 2000, p.3).

Overcoming the psychological barriers is also hard. Mediators often help parties separately, which is beneficial for resolving a conflict. Sometimes bringing together representatives of the disputants for a certain period of time could also be beneficial for conflict settlement. Basically the effect of psychological barriers can be reduced through legitimizing dissent (e.g. explicitly encouraging dissenting points view), involving outsiders, setting up parallel evaluation processes, establishing clear breakpoints, reality testing (e.g. using role-plays) (Watkins, 2000, p.12).

Overall, several techniques may turn out to be useful when it comes to overcoming institutional barriers. Strong leadership and coalition building are just one of them. Conflict resolution techniques such as secret diplomacy or multi-stage negotiation processes are also widely used. Beginning to discuss in general and proceed to details can provide the opportunity to “control” the argument. Monitoring agent’s behavior, when managing principal-agent problems, is also a possibility to resolve conflicts effectively despite all the barriers. Watkins (2000) states, that it is very important to “understand the rules of the game”, when it comes to legal and governance restrictions. If disputants become well acquainted with the systems (legal and governance systems), they could avoid the institutional barriers (Watkins, 2000, p.15).

Watkins (2000) also discusses the cultural barriers and the difficulty of analyzing and overcoming them. The diversity of cultures has always threatened resolutions to disputes. It is likely that different nations have different ways to communicate and different decision-making processes. The best strategy to overcome cultural barriers is to learn about the culture of your counterpart. Investing in things like living in a foreign country (region) for a while or learning the language, may be very useful. If this is not achievable, gaining knowledge about the culture itself (geography, history, politics) could help you understand their cultural norms. Another possibility is to hire a person who knows a lot about the culture. He could be a “cultural interpreter”. Watkins (2000) warns that this person should be someone who you can depend on and someone who really knows the cultural context (Watkins, 2000, p.20).

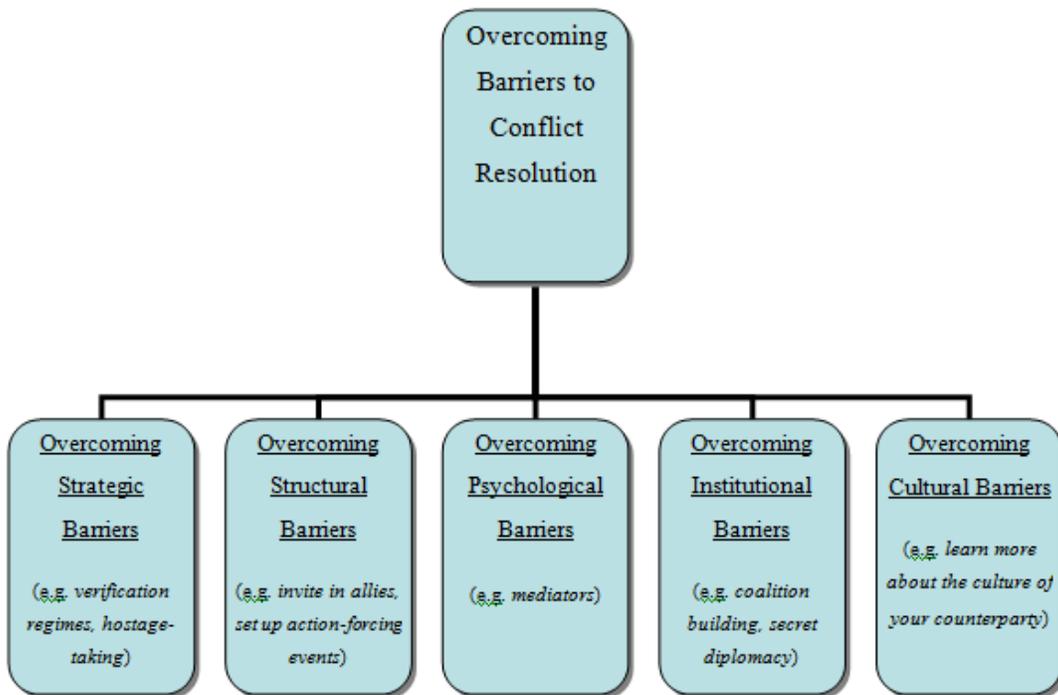


Figure 3: *Overcoming the different barrier types*

Generally, “detecting” barriers to conflict resolution and anticipating them as soon as possible is always recommended. All mentioned techniques can also be used to resolve environmental conflicts. The different types of barriers to agreement apply to such disputes. They prevent them from resolving.

When an environmental conflict arises, it is not necessary that parties aim to reach a settlement, which makes them both better off. Personal interests play a huge role in environmental negotiations. A “win-win resolution” or making a decision in favor of humanity is not always the case. Parties often tend to avoid effective environmental conflict resolutions. The next part of the current paperwork will analyze the meaning of “success” in environmental disputes.

4.1 Success in environmental disputes

Defining “successful” environmental conflict resolution is essential for evaluating the argument outcome. “Most people involved in an environmental dispute seek successful resolution. But what is “successful” resolution like?” (Moore, 1996, p. 152). Many scholars have already discussed the issue, but up to now there is still no unified definition of the term. The factors contributing to success or failure of settlement effort are paid attention to.

Moore (1996) argues that most studies, which discuss the topic, are not objective. They concentrate on the definitions provided by the researchers, mediators, agents etc. and not on the judgment of the people involved in the dispute (Moore, 1996, p. 152). For example, Buckle and Thomas-Buckle (1986) stated that mediators and participants in the conflict basically give different definitions of the term. Wondolleck and Yafee (1994) examined the definitions of success made only by people which had “bridging” function in an environmental conflict. Though there are some researches taking into account the views of both mediators and participants (Susskind and Ozawa, 1983).

Susskind and Ozawa (1983) discussed a wider definition of the concept “successful environmental conflict resolution”. The definition included fairness, efficiency and stability of the agreement. They focused on the outcome. Several questions were taken into account when discussing the term - is the agreement acceptable for both parties, is the result fair to the community, does the result maximize joint gains and recognize past precedents, is the way the agreement is reached a cost-effective one and does the process improve rather than aggravate relationships between parties. According to some scholars (Moore, 1996) the results of Susskind and Ozawa are reliable mainly because they focused on both mediators and participants. Their research was not one-sided.

Conflict resolutions which seem to be unsuccessful to one participant can be regarded as successful by other participants. There are categories of success described by participants. The different dimensions are politically-orientated, interest-orientated, responsibility-orientated and relationship-orientated success (Moore, 1996, p. 153). Some people define the outcome of the conflict as a success if they get what they want on paper (e.g. contract). Moore (1996) calls this product-orientated success. The author discusses that having their interests recognized and

protected (politically- and interest-orientated) and developing relationships and responsibilities (relationship- and responsibility-orientated) could also be defined as success by the participants (Moore, 1996, p. 167).

A good example explaining this problem is an environmental dispute from the 80-ies. The Department of Conservation and Land Management (CALM) in Australia started to worry about the preservation of the Fitzgerald River National Park. Having killed a lot of native plant species the soil problem was a main organization concern. They wanted to restrict the park for vehicles in order to keep the soil cleaner. Unfortunately that way most of the people were not able to “use” the national park properly. It was too big to be travelled over on foot and local people weren’t ready to give up from being able to drive in it. This led to a conflict between local communities and CALM. Eventually the organization won and cars were banned from the Fitzgerald River National Park. CALM defined the dispute as successful because of the “agreement on paper”, but actually there are other things that need to be considered. For example, the relationship with the community was ruined (Moore, 1996, p. 154). Basically this case is known for its product-orientated success and relationship-orientated failure.

4.2 Effectiveness

The lack of common definition of the term effectiveness in environmental disputes is also a huge problem when trying to overcome the barriers to conflict resolution. Most of the case studies rather discuss than show empirical evidence of the concept (e.g. O’Leary, 1995). The word “success” is too general. When it comes to environmental conflicts, it indicates that the dispute resolution is whether successful or unsuccessful. The word effectiveness signifies something that is adequate, enough and useful (Todd, 2001, p. 99). Overall, it is not necessary that a resolution is successful and at the same time effective.

Susskind and Cruikshank (1987) described efficiency in relation to whether the resolution process cost more than traditional processes, whether the dispute settlement took more time and whether there were any joint gains not distributed among participants (Todd, 2001, p. 100). The reduction in time spent and the paid costs are one of the basic variables, which define if a certain outcome is effective. Both parties are likely to succeed and achieve their goals in an

environmental dispute, but the question is – at what price? When the process took more time as usual and therefore apply unnecessary costs, the dispute resolution can be successful, but not so effective.

4.3 Alternative dispute resolution (ADR)

Sometimes a third party is included in the argument. Its role is to help resolve the dispute. Alternative dispute resolution is a collective term, which describes that parties could resolve argument through assisting of a third party. The main idea is to avoid litigation costs. ADR includes mediation, arbitration and neutral evaluation. Some scholars allege that there are hybrid models of ADR. They are built on the basic processes of negotiation, mediation and arbitration (Menkel-Meadow, 2001, p. 9507).

Mediation is “a process in which a third party (usually neutral and unbiased) facilitates a negotiated consensual agreement among parties, without rendering a formal decision” (Menkel-Meadow, 2001, p. 9507). Some studies show that mediation is a very efficient way to resolve an environmental dispute. Sipe and Stiftel (1995) analyzed 19 mediated environmental conflicts in Florida. The results speak for themselves – over 70 per cent of the cases were resolved. As we know reaching an agreement does not necessary mean successful and effective resolution (see sections 4.1 and 4.2 of the current paper). In all resolved cases the participants were satisfied with the mediation process, the mediator itself and the achieved settlement. They also stated that they saved money and time by using mediation (Sipe et. al., 1995, p. 139). Undoubtedly the effectiveness of mediators in environmental disputes is high. The only criticism over the work of Sipe and Stiftel is the fact that they examined only 19 environmental disputes, which is not enough to make an undisputed statement that mediators are an effective ADR.

Arbitration is performed by a single third party or a panel of arbitrators, which delivers a decision, in terms less formal than a court. The arbitrator(s) is/are most often chosen by the parties themselves. The neutral evaluation (also known as advisory opinion) includes a neutral third party, which only evaluates and judges the situation, proposing (in most cases) a certain resolution to the dispute. Of course, the parties have the decision in their own hands, taking into account the neutral evaluation (Menkel-Meadow, 2001, p. 9507). There are not many analysis of

how effective arbitration and neutral evaluation are when it comes to resolving and environmental dispute. Jacobs et. al. (2009) suggest that arbitration should be preferred to litigation mainly because of its advantages. No empirical data have been provided in this case.

The alternatives to litigation have advantages and disadvantages. On one hand ADR's are more affordable, accessible time efficient compared to litigation processes. They are controlled by the disputants and are more flexible. They are orientated towards a "win-win" resolution where the outcome satisfies both parties and also benefits them. On the other hand mediators and arbitrators need to be people you trust. A deception is also possible (Boulle L., 2011, pp. 57-66).

4.4 Specialists environmental courts

The so-called specialists environmental courts and tribunals have gained popularity lately (Prenston, 2013, p. 1). Many countries already have a specialists environmental court (e.g. New Zealand, Australia, Denmark, Canada etc.). In lands where such courts are not available, prosecutions for environmental disputes are handled in the criminal courts (Macrory, 2010, p. 1). The disadvantages in this case are obvious – more waiting time, indirect access to environmental justice and lower expertise. The pros for absence of a specialists environmental court are the extra costs the government have to pay. Overall, "Should be environmental courts created?" is a question that concerns many countries and is constantly a topic for debates.

5 Case studies

5.1 Case study: Kyoto protocol

The situation around the Kyoto protocol is probably the most appropriate example for an environmental dispute. The protocol from Kyoto is highly contradictory. It was created by the United Nations Framework Convention on Climate Change (UNFCCC). The aim of this organization is to stabilize greenhouse gas concentrations in earth's atmosphere, which happens due to human activities such as burning fossil fuels and deforestation. The Kyoto protocol tries to guide all participating developed countries to reduce their greenhouse gas emissions. Nowadays

the trend is that the greenhouse gas emissions are growing positive. According to the Kyoto protocol they need to reach a turning point and afterwards to indicate negative growth (it basically describes an inverted U-curve). This whole process occurs with the help of political negotiations between the leaders of countries all over the world (Huang et. al., 2007, p. 239).

“Climate change represents the largest social dilemma humans have ever faced, where individual actors maximize their personal gain by emitting greenhouse gases into the atmosphere even though this is detrimental to the collective global good” (Raihani, 2009, p. 47). Cooperation between countries is needed in order to overcome the environmental degradation. Unfortunately this is very difficult because everyone in “the game” has to participate. There is no space for free-riders. Raihani (2009) suggests that the world needs to establish a system which is supposed to encourage cooperation and punish free-riders. This kind of strategy could be based on rewards and sanctions. Effective environmental policy has to “foster cooperation” and at the same time take actions against “uncertainty and irrationalism” (Raihidi, 2009, p.47).

According to Scott et. al. (2010) scientists have already proven that the greenhouse gas emissions are harmful for humanity. We have to attempt to change the amount of gases we emit. Otherwise this could have negative consequences for many of the world’s ecosystems (which also affect humanity) (Scott et. al., 2010). As we know, the Kyoto protocol aims to resolve this problem by means of an inverted U-curve. This curve is also called the environmental Kuznets curve, named after the winner of the Nobel Prize in economics Dr. S. Kuznets. His hypothesis states that the quality of earth’s environment declines with the economic growth. This relation can be expressed with a bell-shaped curve (Huang et. al., 2007, p. 239). Basically, the Kyoto protocol tries to solve the problem using Kuznets hypothesis.

There is huge pressure on countries and firms to reduce the greenhouse gases they emit. Every participant pays a certain cost in order to lower the damaging gases, but actually the benefits are shared between all people (saving the world’s ecosystem and increasing life quality for each person on earth). This is the reason why some participants who are economically reasonable and rational tend to free-ride. Their incentive is obvious – they will let others pay the abatement costs (e.g. costs of installing a filter) and benefit from the whole situation (Raihidi, 2009, p.48). The lack of cooperation, which could be harmful for every participant in a certain game, is called “the tragedy of the commons”.

5.1.1 The experiment performed by Milinski et. al. (2008)

An experiment made by Milinski et. al. (2008) describes the actions of the Kyoto protocol's participants. It is also a perfect example for the "tragedy of the commons", when it comes to resolving an environmental problem. Preserving the environment is "probably the biggest public good game" (Dreber and Nowak, 2008, p. 1). It affects personally every human being on earth. However, people still do not seem to be highly interested in winning this game. The simple experiment made by Milinski et. al. (2008) proves that. The idea is the following – there are six players and the so-called "climate account". Each of the participants gets 40 Euros. The game has ten rounds. In each round the participants have to decide how much money are they willing to send to the "climate account". They can choose between the amount of 0, 2 and 4 Euros. The main goal is to achieve at least 120 Euros at the end of the experiment. This will mean that the environment is saved and each participant will receive the rest in his private account. If this is not the case, then the climate has a 90 per cent chance to worsen and therefore all players will lose their money. The idea is simple – if the participants cooperate, they will save environment and probably win some small amount of money. Otherwise they will lose everything. The investments of 0, 2 or 4 Euros are named "selfish", "fair" or "altruistic". Milinski et. al. (2008) called them that way because if all use the "fair" option, then the "climate account" will reach precisely 120 Euros and if one contributes more, then his decision is "altruistic" and therefore he will receive less at the end of the experiment. However, participants may avoid paying in order to maximize their own gains taking the risk of losing everything, when the amount of 120 Euros is not reached. These players are also known as free-riders. They rely on altruistic participants to save the environment (Dreber and Nowak, 2008, p. 1).

The results of the experiment were astonishing. Ten groups of people took part in it. Five of them saved the climate and the other five did not. The more interesting part of the results is that the groups that failed were very close to reaching their target. Their average was 113 Euro. Dreber and Nowak (2008) suggest that this is the worst possible outcome of the experiment – being just a few Euros short to win. The most common behavior that was observed was that the altruists in the first rounds of the game contributed less or became free-riders at the end of it. Probably they felt that "they had already contributed enough" (Dreber and Nowak, 2008, p. 1).

Based on the results of the experiment and collected data from environmental institutes around the globe, Dreber and Nowak (2008) made some statements about the current situation on the planet. USA has a high level of emissions per capita – twice as much as the UK and three times more than France. What the authors stated is that in this case the US is a “free-rider”, UK plays “fair” and France is “altruistic” (Dreber and Nowak, 2008, p. 1). Of course, this is a reason for dispute. The Kyoto protocol tries to avoid this inequality, although many critics believe that the protocol is not managed correctly and will not achieve its goals.

Basically, some countries may want to contribute less than “fair” and that is why many other countries (mainly the richer ones) were not so enthusiastic about the Kyoto protocol. When establishing the Kyoto protocol, countries such as Australia, Norway, France, USA etc. agreed to participate, but there were many other countries that wanted a formal agreement in order to take part in the Kyoto protocol (Greenwood, 2011, p.1).

The conflict provoked by the need of reducing the greenhouse gas emissions on earth is mainly between rich and poor countries. The negotiations over international climate preservation are strongly affected by disputes and the need for emission reducing strategies. On one hand, rich countries have more wealth than poor and therefore they might be prepared better to contribute in order to reach the collective target. They might be willing to pay higher price and increase their life quality. On the other hand, poor countries cannot afford to pay the same amount rich countries do. This would mean that they will have to spend a higher proportion of their resources and consequently reduce their life quality (Milinski et. al., 2011, pp. 807-808). The thing that poor countries could do is to contribute less and to hope that the rich countries will invest more. That is why environmental conflicts on national scale arise. Conflicting mutual expectations between wealthy countries and poor ones is one of the main reasons why humanity has not “saved” the climate on earth yet. Milinski et. al. (2011) did an experiment which included rich participants and poor participants. The main idea was to recreate the current situation on the planet. This experiment resembles his previous one, only this time the wealthy players (who represented the rich countries) had to choose if they want to invest more than poor players (who represented the poor countries) in order to reach an intermediate emission reduction target or a final emission reduction target. The intermediate target is accompanied with a certain climate destruction chance, while reaching the final one means that there is no risk for the climate on

earth. Most surprisingly the players less often reached the final target than the intermediate one. (Milinski et. al., 2011, p. 807). The experiment clearly shows that the rich countries might not be always willing to invest more than the poor countries.

5.1.2 USA and Canada

Unfortunately, the relationship between participants in the Kyoto protocol is not an exception. The inequity of emission reduction obligations between developing countries and developed ones in the protocol is the “apple of discord” and reason for arising conflicts. The Kyoto protocol divides its participants in a couple of groups. The biggest greenhouse gas emitters are the US, China, Russia and India. Nevertheless, the protocol divides these four participants into different groups. On one hand, developing countries such as China and India are not obliged to lower their emissions drastically. On the other hand, developed countries (e.g. USA) have to meet much stricter requirements (Peterson et. al., 2006, p. 619). The first major conflict arose when the US government did not ratify the protocol. They were not willing to participate because they believed that this would affect the economy of the country negatively. The president Bush supported by the American Senate argued that the country would face an economic downturn and energy shortage if they participated in the Kyoto protocol (Reynolds, 2001, URL 3). The next blow for the protocol was Canada withdrawal from it in 2011. The country stated that the protocol is not efficient and the biggest polluters on the planet do not participate in it (Peterson et. al., 2006, p. 619).

The Kyoto protocol is a conflict topic which concerns every human being, because its aim is to save the environment and therefore to improve our life quality. The best way to reduce harmful greenhouse gases is still to be found, but what can be learned from this case is that countries around the world need to cooperate and not constantly dispute in order to meet their personal interests. There are tactical and strategic barriers, which prevent the resolution of this environmental dispute.

5.2 Case study: Conflicts over bio-energy in Europe

Bio-energy is produced from biological raw materials (e.g. bio-ethanol is a bio fuel made of rice, potato, maize, wheat etc.). These raw materials are also known as biomass (Gupta et. al., 2014, p. 23). The fossil fuels are energy source much harmful to the environment than bio-energy. The main advantage of bio-energy sources is that they are biodegradable and nontoxic. Not every region is fossil fuel-rich, but the production of bio-fuel, for example, is possible almost everywhere on dry land. Basically, those are the reason why Europe has shown interest in bio-energy production lately (Söderberg et. al., 2012, p. 112).

The goal of EU is to achieve 20 per cent renewable energy by 2020. Increasing bio-energy production could be beneficial. The main problem is that conflicts regarding this issue arise slowly. The possibility of both environmental and socio-economical disputes is high. Several economic sectors are concerned when it comes to using bio-mass and bio-fuels – forestry, agriculture, energy and transport sectors (Söderberg et. al., 2012, p. 112).

Using trees for energy provokes a lot of questions. This conflict is multi-sided. On one hand, there are the environmental groups. They are concerned how this type of energy is being promoted. Their main argument is that this kind of energy is not completely harmless. Forests are not infinite. Paper and books industry are also concerned about the new “bio-ideas” of EU. Their point of view is clear. They simply want to protect their interests. They fear the future competition of forest bio-mass producers (Söderberg et. al., 2012, p. 112). On the other hand, there are people who strongly believe in environmental friendliness of bio-energy and they are positive about its beneficial influence over the life quality in Europe.

The leading renewable energy source in Europe is bio-energy. Nowadays it provides around 70 per cent of renewable energy consumption in the continent (ENER-EMOS, 2010). The bio-energy case is a perfect example which shows that organizational, institutional and partly psychological barriers are a huge problem when trying to cope with an environmental conflict. As it was suggested in the current paperwork, using mediators or building coalitions may help overcome those barriers and settle the argument.

6 Conclusion

This thesis studied the ways to resolve a conflict. Particularly, environmental disputes were considered. Environment and resources are undoubtedly of great significance to mankind. Some scholars even state that preservation of environment and energy sources are the most essential issues. That is why they play a big part in arguments. There are different environmental conflict types and different barriers which prevent them from resolving. The “perfect” method for overcoming those barriers is yet to be found.

Overall, humanity needs to improve itself in order to resolve environmental disputes more successfully and efficiently. Many factors could influence the policy approach of a country, organization or individual and thus each disputant decides on his own which strategy to rely on. The current paperwork provided a couple of examples, which clearly showed that in some cases achieving personal goals is more important for argument participants than achieving collective ones.

7 Reference list

7.1 Literature

Arrow K., Mnookin R., Ross L., Tversky A. and Wilson R., 1995. “*Barriers to Conflict Resolution*”, W. W. Norton and Company, New York, pp. 1-28.

Billet J., 2009. “*Alternative Dispute Resolution in the Energy Sector*”. Association for International Arbitration (ed.), p. 11.

Bingham G., 1986. “*Resolving Environmental Disputes: A Decade of Experience*”, The Conservation Foundation, p. 30.

Blackburn J. and Bruce W., 1995. “*Introduction in Mediating environmental conflicts: Theory and Practice*”, Westport Conn, Quorum Books USA, pp. 1-2.

Boulle L., 2011. “*Mediation: Principles, Processes, Practice*”, Third Edition, pp. 54-66.

Buckle L. and Thomas-Buckle S., 1986. “*Placing Environmental Mediation in Context: Lessons from “Failed” Mediators*”, Environmental Impact Assessment Review 6, pp. 55-70.

Dreber A. and Nowak M., 2008. “*Gambling for Global Goods*”, Available at: www.pnas.org/cgi/doi/10.1073/pnas.0800033105, last accessed on 20.07.2014, pp. 1-2.

ENER-EMOS, 2010. “*Energy Market Observation System*”. European Commission, Brussels

Epstein J. and Epstein S., 2005. “*Top Ten Barriers to Dispute Resolution*”, TIDA, p.1

Festinger L., 1957. “*A Theory of Cognitive Dissonance*”, Stanford University Press, p. 1.

Fisher R., Ury W. and Patton B., 1991. “*Getting to Yes: Negotiating an agreement without giving in*”, Sydney: Century Business, ed. 2, pp. 125-126.

Greenwood G., 2011. “*Evolution of Strategies for the Collective-Risk Social Dilemma Relating to Climate Change*”, EPLA 95, pp. 1-6.

- Gupta V.**, Potumarthi R., O'Donovan A., Kubicek C., Sharma G. and Tuohy M., 2014. “*Bioenergy Research: An Overview on Technological Developments and Bioresources*”, *Bioenergy Research: Advances and Applications*, p. 23.
- Homer-Dixon T.**, 1991. “*On the Threshold: Environmental Changes and Acute Conflict*”, *International Security*, Vol. 16, No.2, pp. 76-116.
- Huang W.**, Lee G. and Wu C., 2008. “*GHG Emissions, GDP Growth and the Kyoto Protocol: A revisit of Environmental Kuznets Curve hypothesis*”, *Energy Policy* 36, pp. 239-247.
- Jackson P.**, 2010. “*Resolving Environmental Disputes*”, UNEP Global Judges Programme, pp. 2-15.
- Jacobs K.**, Botts B., Macchiavello G., Arocena and Robirosa P., 2009. “*International Arbitration and Other Environmental Dispute Resolution Strategies*”, Baker Botts LLP, pp. 1-5.
- Joesting L.**, 1998. “*Barriers to Conflict Management*”, University of North Carolina, pp. 1-2.
- King M.** and Osman M., 2004. “*Environmental Degradation as a Cause of Conflict in Darfur*”, University of Peace, Switzerland, p.12.
- Lax D.** and Sebenius J., 1986. “*The Manager as Negotiator*”, New York 1986, p. 158.
- Libiszewski S.**, 2004. “What is Environmental Conflict?”, Center for Security Studies Zürich, ISN, ed. Spillman K. and Bächler G., pp. 1-14.
- Macrory R.**, 2010. “*Environmental Courts and Tribunals in England and Wales – a Tentative New Dawn*”, *Journal of Court Innovation*, p. 1.
- Menkel-Meadow C.**, 2001. “*Mediation, Arbitration, and Alternative Dispute Resolution (ADR)*”, *International Encyclopedia of the Social & Behavioral Sciences*, pp. 9507-9512.
- Milinski M.**, Roehl T. and Marotzke J., 2011. “*Cooperative interaction of rich and poor can be catalyzed by intermediate climate targets*”, *Climate Change* 109, pp. 807-814.

Milinski M., Sommerfeld R., Krambeck H., Reed F., Marotzke J. , 2008. “*The collective-risk social dilemma and the prevention of simulated dangerous climate change*”, Proc Natl Acad Sci USA 105, pp. 2291–2294.

Moore S., 1996, “Defining “Successful” Environmental Dispute Resolution: Case Studies from Public Land Planning in the USA and Australia”, Institute for Environmental Science, Murdoch University, Environmental Impact Assess Rev. 1996, pp. 151-169.

Moore S., 2000. “*The Practice of Cooperative Environmental Conflict Resolution in Developing Countries*”, Environmental Dispute Resolution, p. 162.

O’Leary R., 1995. “*Environmental mediation: what do we know and how do we know it?*”, Blackburn J, editor. Mediating environmental conflicts, theory and practice. Westport, CT: Quorum Books. pp. 17-32.

Prenston B., 2013. “*Characteristics of successful environmental courts and tribunals*”, Eco Forum Global Annual Conference Guiyang: The 3rd Environmental Justice Seminar, p. 1.

Peterson T. and Rose A., 2006. “*Reducing Conflicts between Climate Policy and Energy Policy in the US: The Important Role of the States*”, Energy Policy 34, pp. 619-631.

Pratt J. and Zeckenhauer R., 1985. “*Principles and Agents: The Structure of Business*”, Harvard Business School Press, p.2.

Raihani N. and Aitken D., 2009. “Uncertainty, rationality and cooperation in the context of climate change”, Climate Change 108, pp. 47-55.

Rees J., 1991. “*Resources and the Environment. Scarcity and Sustainability*”, London, New York, p. 23.

Sipe N. and Stiffler B., 1995. “Mediating Environmental Enforcement Disputes: How Well does it Work?”, Environ Impact Assess Rev 15, pp. 139-156.

Söderberg C., Eckerberg K., 2012. “*Rising Policy Conflicts in Europe over Bio-energy and Forestry*”, Forest Policy and Economics 33, pp. 112-119.

Spillmann K. and Bächler G., 1995. “*Environment and Conflict Project: Interantional Project on Violence and Conflicts caused by Environmental Degradation and Peaceful Conflict Resolution*”, Occasion Paper Number 14, pp. 1-10.

Stott P., Gillett N., Hegerl G., Karoly D., Stone D., Zhang X., Zwiers F., 2010. “*Detection and attribution of climate change: a regional perspective*”. WIREs Clim Change. World Climate Change 34.

Susskind L. and Cruikshank J., 1987. “*Breaking the impasse*”, New York: Basic Books, pp. 1-20.

Susskind L. and Ozawa C., 1983. “*Mediated Negotiations in the Public Sector: Mediator Accountability and the Public Interests Problem*”, America Behavior Scientists 27, pp. 255-279.

Susskind L. and Secunda J., 1998. “*Environmental Conflict Resolution: The American Experience in Environmental Conflict Resolution*”, Christopher Napier, London: Cameron May, p. 16.

Susskind L. and Weinstein A., 1980. “*Towards a Theory of Environmental Dispute Resolution*”. Rev 11, Vol. 9, issue 2, pp. 311-313.

Todd S., 2001. “*Measuring the effectiveness of environmental dispute settlement efforts*”, Environmental Impact Assessment Review 21, pp. 97-110.

Watkins M., 2000. “*Diagnosing and Overcoming Barriers to Agreement*”, Harvard Business School Publishing, Boston, pp. 1-20.

Wondolleck J. and Yaffee L., 1994. “*Building Bridges Across Agency Boundaries: In Search of Excellence in the USFS*”, Ann Arbon: School of Natural Resources and Environment, pp. 1-12.

7.2 Internet references

URL1: *Global Financial Stability Report*, 2014. www.imf.org/external/data.htm, last accessed on 10.07.2014.

URL2: McElroy D., 2014. “*Putin mocks the West and threatens to turn off gas supplies*”.
<http://www.telegraph.co.uk/news/worldnews/europe/russia/10684333/Putin-mocks-the-West-and-threatens-to-turn-off-gas-supplies.html>, last accessed on 12.07.2014.

URL 3: Reynolds P., 2001. “*Kyoto: Why did the US pulled out?*”, available at:
<http://news.bbc.co.uk/2/hi/americas/1248757.stm>, last accessed on 23.07.2014.